

## FCC Test Report (WLAN)

**Report No.:** RF170816E06F

**FCC ID:** 2AMAF-DPE109A104A

**Test Model:** DPE109A

**Series Model:** DPE104A

**Received Date:** Feb. 06, 2015

**Test Date:** Feb. 06 to Oct. 05, 2015; May 16, 2018

**Issued Date:** Aug. 31, 2018

**Applicant:** TAIJET BOINTEC CORPORATION LIMITED

**Address:** 4F., No.114, Zhouzi St., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

**Lab Address:** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**Test Location (1):** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
Taiwan R.O.C.

**Test Location (2):** No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin  
Chu Hsien 307, Taiwan R.O.C.

**FCC Registration /** 723255 / TW2022 for Test Location (1)  
**Designation Number:** 736135 / TW0004 for Test Location (2)



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### Release Control Record

| Issue No.    | Description       | Date Issued   |
|--------------|-------------------|---------------|
| RF170816E06F | Original release. | July 27, 2018 |

## 1 Certificate of Conformity

**Product:** 802.11 abgn/AC+BT4.2, 2T2R, mini PCIe Card

**Brand:** BOINTEC

**Test Model:** DPE109A

**Series Model:** DPE104A

**Sample Status:** ENGINEERING SAMPLE

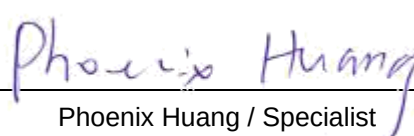
**Applicant:** TAIJET BOINTEC CORPORATION LIMITED

**Test Date:** Feb. 06 to Oct. 05, 2015; May 16, 2018

**Standards:** 47 CFR FCC Part 15, Subpart C (Section 15.247)  
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

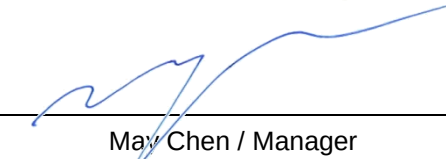
Prepared by

:  
  
Phoenix Huang / Specialist

Date:

July 27, 2018

Approved by :

  
May Chen / Manager

Date:

July 27, 2018

## 2 Summary of Test Results

| 47 CFR FCC Part 15, Subpart C (Section 15.247) |                                              |        |                                                                                     |
|------------------------------------------------|----------------------------------------------|--------|-------------------------------------------------------------------------------------|
| FCC Clause                                     | Test Item                                    | Result | Remarks                                                                             |
| 15.207                                         | AC Power Conducted Emission                  | PASS   | Meet the requirement of limit.<br>Minimum passing margin is -16.14dB at 1.96875MHz. |
| 15.205 /<br>15.209 /<br>15.247(d)              | Radiated Emissions and Band Edge Measurement | PASS   | Meet the requirement of limit.<br>Minimum passing margin is -1.4dB at 2483.5MHz.    |
| 15.247(d)                                      | Antenna Port Emission                        | PASS   | Meet the requirement of limit.                                                      |
| 15.247(a)(2)                                   | 6dB bandwidth                                | PASS   | Meet the requirement of limit.                                                      |
| 15.247(b)                                      | Conducted power                              | PASS   | Meet the requirement of limit.                                                      |
| 15.247(e)                                      | Power Spectral Density                       | PASS   | Meet the requirement of limit.                                                      |
| 15.203                                         | Antenna Requirement                          | PASS   | Antenna connector is IPEX, SMA RP Plug and I-PEX MH4 not a standard connector.      |

### 2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

| Measurement                        | Frequency      | Expanded Uncertainty (k=2) (±) |
|------------------------------------|----------------|--------------------------------|
| Conducted Emissions at mains ports | 150kHz ~ 30MHz | 2.86 dB                        |
| Radiated Emissions up to 1 GHz     | 30MHz ~ 1GHz   | 5.43 dB                        |
| Radiated Emissions above 1 GHz     | 1GHz ~ 6GHz    | 3.65 dB                        |
|                                    | 6GHz ~ 18GHz   | 3.88 dB                        |
|                                    | 18GHz ~ 40GHz  | 4.11 dB                        |

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT (WLAN)

|                       |                                                                                                                                                                                                             |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product               | 802.11 abgn/AC+BT4.2, 2T2R, mini PCIe Card                                                                                                                                                                  |
| Brand                 | BOINTEC                                                                                                                                                                                                     |
| Test Model            | DPE109A                                                                                                                                                                                                     |
| Series Model          | DPE104A                                                                                                                                                                                                     |
| Status of EUT         | ENGINEERING SAMPLE                                                                                                                                                                                          |
| Power Supply Rating   | 3.3Vdc from host equipment                                                                                                                                                                                  |
| Modulation Type       | CCK, DQPSK, DBPSK for DSSS<br>64QAM, 16QAM, QPSK, BPSK for OFDM<br>256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz                                                                              |
| Modulation Technology | DSSS, OFDM                                                                                                                                                                                                  |
| Transfer Rate         | 802.11b: up to 11Mbps<br>802.11a/g: up to 54Mbps<br>802.11n : up to 300Mbps<br>802.11ac: up to 866.7Mbps                                                                                                    |
| Operating Frequency   | <b>2.4GHz:</b> 2.412 ~ 2.472GHz<br><b>5GHz:</b> 5.18 ~ 5.24GHz, 5.26 ~ 5.32GHz, 5.50 ~ 5.72GHz, 5.745 ~ 5.825GHz                                                                                            |
| Number of Channel     | <b>2.4GHz:</b><br>802.11b, 802.11g, 802.11n (HT20): 13<br>802.11n (HT40): 9<br><b>5GHz:</b><br>802.11a, 802.11n (HT20), 802.11ac (VHT20): 25<br>802.11n (HT40), 802.11ac (VHT40): 12<br>802.11ac (VHT80): 6 |
| Output Power          | <b>2.4GHz:</b> 509.97mW<br><b>5GHz:</b><br><b>5.18 ~ 5.24GHz:</b> 114.377mW<br><b>5.26 ~ 5.32GHz:</b> 113.137mW<br><b>5.50 ~ 5.72GHz:</b> 104.278mW<br><b>5.745 ~ 5.825GHz:</b> 157.439mW                   |
| Antenna Type          | Refer to Note                                                                                                                                                                                               |
| Antenna Connector     | Refer to Note                                                                                                                                                                                               |
| Accessory Device      | NA                                                                                                                                                                                                          |
| Data Cable Supplied   | NA                                                                                                                                                                                                          |

Note:

1. There are Bluetooth technology and WLAN technology used for the EUT.
2. The EUT has two model names which are identical to each other in all aspects except for the following table:

| Model No. | Description                |
|-----------|----------------------------|
| DPE109A   | Just for marketing purpose |
| DPE104A   |                            |

Note: From the above models, model: DPE109A was selected as representative model for the test and its data was recorded in this report.

3. The EUT incorporates a MIMO function.

| 2.4GHz Band     |                 |                       |     |
|-----------------|-----------------|-----------------------|-----|
| MODULATION MODE | DATA RATE (MCS) | TX & RX CONFIGURATION |     |
| 802.11b         | 1 ~ 11Mbps      | 2TX                   | 2RX |
| 802.11g         | 6 ~ 54Mbps      | 2TX                   | 2RX |
| 802.11n (HT20)  | MCS 0~7         | 2TX                   | 2RX |
|                 | MCS 8~15        | 2TX                   | 2RX |
| 802.11n (HT40)  | MCS 0~7         | 2TX                   | 2RX |
|                 | MCS 8~15        | 2TX                   | 2RX |
| VHT20           | MCS 0~8 Nss=1   | 2TX                   | 2RX |
|                 | MCS 0~8 Nss=2   | 2TX                   | 2RX |
| VHT40           | MCS 0~9 Nss=1   | 2TX                   | 2RX |
|                 | MCS 0~9 Nss=2   | 2TX                   | 2RX |

| 5GHz Band        |                 |                       |     |
|------------------|-----------------|-----------------------|-----|
| MODULATION MODE  | DATA RATE (MCS) | TX & RX CONFIGURATION |     |
| 802.11a          | 6 ~ 54Mbps      | 2TX                   | 2RX |
| 802.11n (HT20)   | MCS 0~7         | 2TX                   | 2RX |
|                  | MCS 8~15        | 2TX                   | 2RX |
| 802.11n (HT40)   | MCS 0~7         | 2TX                   | 2RX |
|                  | MCS 8~15        | 2TX                   | 2RX |
| 802.11ac (VHT20) | MCS 0~8 Nss=1   | 2TX                   | 2RX |
|                  | MCS 0~8 Nss=2   | 2TX                   | 2RX |
| 802.11ac (VHT40) | MCS 0~9 Nss=1   | 2TX                   | 2RX |
|                  | MCS 0~9 Nss=2   | 2TX                   | 2RX |
| 802.11ac (VHT80) | MCS 0~9 Nss=1   | 2TX                   | 2RX |
|                  | MCS 0~9 Nss=2   | 2TX                   | 2RX |

Note: The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

4. The antenna gain was declared by client; please refer to the following table:

| Antenna Set 1                           |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
|-----------------------------------------|---------|-----------------------|-------------------------|-----------------------------------|---------------------------------|-------------------------|---------------------|----------------------|-------------------|
| Transmitter Circuit                     | Brand   | Model                 | Ant. Type               | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | 2.4GHz Cable Loss (dBi) | 5G Cable Loss (dBi) | Connector Type       | Cable Length (mm) |
| Chain (0)                               | WNC     | 81-EBJ15.005          | PIFA                    | 3.00                              | Band 1&2: 2.56                  | 1.15                    | Band 1&2: 1.70      | IPEX                 | 300               |
|                                         |         |                       |                         |                                   | Band 3: 4.76                    |                         | Band 3: 1.74        |                      |                   |
|                                         |         |                       |                         |                                   | Band 4: 4.76                    |                         | Band 4: 1.79        |                      |                   |
| Chain (1)                               | WNC     | 81-EBJ15.005          | PIFA                    | 3.62                              | Band 1&2: 3.08                  | 1.15                    | Band 1&2: 1.70      | IPEX                 | 300               |
|                                         |         |                       |                         |                                   | Band 3: 3.31                    |                         | Band 3: 1.74        |                      |                   |
|                                         |         |                       |                         |                                   | Band 4: 2.42                    |                         | Band 4: 1.79        |                      |                   |
| Antenna Set 2                           |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Transmitter Circuit                     | Brand   | Model                 | Ant. Type               | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | 2.4GHz Cable Loss (dBi) | 5G Cable Loss (dBi) | Ant. Connector Type  | Cable Length (mm) |
| Chain (0)                               | INPAQ   | DAM-I6-H-DB-800-10-17 | Dipole                  | 1.13                              | Band 1&2: 1.33                  | 2.0±0.5                 | 4.0±0.5             | SMA RP Plug          | 900               |
|                                         |         |                       |                         |                                   | Band 3: -0.63                   |                         |                     |                      |                   |
|                                         |         |                       |                         |                                   | Band 4: -0.97                   |                         |                     |                      |                   |
| Chain (1)                               | INPAQ   | DAM-I6-H-DB-800-10-17 | Dipole                  | 1.29                              | Band 1&2: 1.94                  | 2.0±0.5                 | 4.0±0.5             | SMA RP Plug          | 900               |
|                                         |         |                       |                         |                                   | Band 3: -0.49                   |                         |                     |                      |                   |
|                                         |         |                       |                         |                                   | Band 4: -0.93                   |                         |                     |                      |                   |
| *The RF cable is use with antenna set 2 |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Cable Spec.                             |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Brand                                   |         | Model                 | 2.4GHz cable loss (dBi) |                                   | 5GHz cable loss (dBi)           | Cable Length (mm)       |                     | Cable Connector Type |                   |
| INPAQ                                   |         | 14012-00040100        | -0.35                   |                                   | -0.39                           | 42                      |                     | IPEX to SMA RP Plug  |                   |
| Antenna Set 3                           |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Transmitter Circuit                     | Brand   | Model                 | Ant. Type               | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | Connector Type          |                     | Cable Length (mm)    |                   |
| Chain (0)                               | Molex   | 479504012             | Dipole                  | 2.13                              | 2.81                            | I-PEX MH4               |                     | 300                  |                   |
| Chain (1)                               | Molex   | 479504012             | Dipole                  | 2.13                              | 2.81                            | I-PEX MH4               |                     | 300                  |                   |
| Antenna Set 4                           |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Transmitter Circuit                     | Brand   | Model                 | Ant. Type               | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | Ant. Connector Type     |                     |                      |                   |
| Chain (0)                               | BOINTEC | TWRN-9161202-101      | Dipole                  | 2.0                               | 2.0                             | RP SMA                  |                     |                      |                   |
| Chain (1)                               | BOINTEC | TWRN-9161202-101      | Dipole                  | 2.0                               | 2.0                             | RP SMA                  |                     |                      |                   |
| *The RF cable is use with antenna set 4 |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Cable Spec.                             |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Brand                                   |         | Model                 | 2.4GHz cable loss (dBi) |                                   | 5GHz cable loss (dBi)           | Cable Length (mm)       |                     | Cable Connector Type |                   |
| Bointec                                 |         | TWRB-003EQ01-210      | 0.27                    |                                   | 0.21                            | 210                     |                     | IPEX to RP SMA       |                   |
| Antenna Set 5                           |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Transmitter Circuit                     | Brand   | Model                 | Ant. Type               | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | Ant. Connector Type     |                     |                      |                   |
| Chain (0)                               | BOINTEC | TWRN-9161201-102      | Dipole                  | 3.17                              | 2.61                            | RP SMA                  |                     |                      |                   |
| Chain (1)                               | BOINTEC | TWRN-9161201-102      | Dipole                  | 3.17                              | 2.61                            | RP SMA                  |                     |                      |                   |
| *The RF cable is use with antenna set 5 |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Cable Spec.                             |         |                       |                         |                                   |                                 |                         |                     |                      |                   |
| Brand                                   |         | Model                 | 2.4GHz cable loss (dBi) |                                   | 5GHz cable loss (dBi)           | Cable Length (mm)       |                     | Cable Connector Type |                   |
| Bointec                                 |         | TWRB-003EQ01-300      | 0.3                     |                                   | 0.24                            | 300                     |                     | IPEX to RP SMA       |                   |

**Note:**

1. Above antenna gains of antenna are Total (H+V).
2. For Testing, we select the highest gain on each frequency band for calculation and testing. (except for Radiated emission test)
3. The Bluetooth technology will fix transmission on Chain (0)
5. For Testing, we select the highest gain on each frequency band for calculation and testing and the detail information as below:

| Transmitter Circuit | Brand | Model        | Ant. Type | 2.4GHz Gain with cable loss (dBi) | 5GHz Gain with cable loss (dBi) | 2.4GHz Cable Loss (dBi) | 5G Cable Loss (dBi) |
|---------------------|-------|--------------|-----------|-----------------------------------|---------------------------------|-------------------------|---------------------|
| Chain (0)+(1)       | WNC   | 81-EBJ15.005 | PIFA      | 3.62                              | Band 1&2: 3.08                  | 1.15                    | Band 1&2: 1.70      |
|                     |       |              |           |                                   | Band 3: 4.76                    |                         | Band 3: 1.74        |
|                     |       |              |           |                                   | Band 4: 4.76                    |                         | Band 4: 1.79        |

6. For radiated emission test, PIFA antenna (Antenna Set 1) and Dipole (Antenna Set 5) was selected as representative adapter for the test and its data was recorded in this report.
7. The EUT was pre-tested under the following modes:

| Test Mode     | Guard Interval  |
|---------------|-----------------|
| Mode A        | 400ns GI        |
| <b>Mode B</b> | <b>800ns GI</b> |

From the above modes, the worst case was found in **Mode B**. Therefore only the test data of the mode was recorded in this report.

8. WLAN/BT coexistence mode:

◆ 2x2 WLAN + BT:

- 5GHz 802.11a/an (or 11ac) transmit concurrent with BT.
- 2.4GHz: timely shared coexistence.

9. The emission (conducted & radiated emission) of the simultaneous operation (WiFi <5GHz> & Bluetooth) have been evaluated and no non-compliance found. The detail combinations of transmitters / frequencies / modes as below table

| Mode                     | Available Channel | Tested Channel | Modulation Technology |
|--------------------------|-------------------|----------------|-----------------------|
| 5 GHz (802.11ac (VHT40)) | 38 to 159         | 159            | OFDM                  |
| + Bluetooth (EDR)        | 0 to 78           | 0              | GFSK                  |

10. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

### 3.2 Description of Test Modes

13 channels are provided for 802.11b, 802.11g and 802.11n (HT20), VHT20:

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 1       | 2412MHz   | 8       | 2447MHz   |
| 2       | 2417MHz   | 9       | 2452MHz   |
| 3       | 2422MHz   | 10      | 2457MHz   |
| 4       | 2427MHz   | 11      | 2462MHz   |
| 5       | 2432MHz   | 12      | 2467MHz   |
| 6       | 2437MHz   | 13      | 2472MHz   |
| 7       | 2442MHz   |         |           |

9 channels are provided for 802.11n (HT40), VHT40:

| Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|
| 3       | 2422MHz   | 8       | 2447MHz   |
| 4       | 2427MHz   | 9       | 2452MHz   |
| 5       | 2432MHz   | 10      | 2457MHz   |
| 6       | 2437MHz   | 11      | 2462MHz   |
| 7       | 2442MHz   |         |           |

### 3.2.1 Test Mode Applicability and Tested Channel Detail

| EUT CONFIGURE MODE | APPLICABLE TO |       |     |      | DESCRIPTION |
|--------------------|---------------|-------|-----|------|-------------|
|                    | UE $\geq$ 1G  | UE<1G | PLC | APCM |             |
| -                  | √             | √     | √   | √    | -           |

Where **UE  $\geq$  1G:** Unwanted Emission above 1GHz  
**PLC:** Power Line Conducted Emission  
**UE < 1G:** Unwanted Emission below 1GHz  
**APCM:** Antenna Port Conducted Measurement

#### Unwabted Emission Test (Above 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE    | AVAILABLE CHANNEL | TESTED CHANNEL   | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|------------------|-----------------------|-----------------|------------------|
| 802.11b | 1 to 13           | 1, 6, 11, 12, 13 | DSSS                  | 1               | 1                |
| 802.11g | 1 to 13           | 1, 6, 11, 12, 13 | OFDM                  | 6               | 6                |
| VHT20   | 1 to 13           | 1, 6, 11, 12, 13 | OFDM                  | 6.5             | 6.5              |
| VHT40   | 3 to 11           | 3, 6, 9, 10, 11  | OFDM                  | 13.5            | 13.5             |

#### Unwabted Emission Test (Below 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE    | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| 802.11g | 1 to 13           | 6              | OFDM                  | 6               | 6.5              |

#### Power Line Conducted Emission Test:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE    | AVAILABLE CHANNEL | TESTED CHANNEL | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|----------------|-----------------------|-----------------|------------------|
| 802.11g | 1 to 13           | 6              | OFDM                  | 6               | 6.5              |

### **Antenna Port Conducted Measurement:**

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ Following channel(s) was (were) selected for the final test as listed below.

| MODE    | AVAILABLE CHANNEL | TESTED CHANNEL   | MODULATION TECHNOLOGY | MODULATION TYPE | DATA RATE (Mbps) |
|---------|-------------------|------------------|-----------------------|-----------------|------------------|
| 802.11b | 1 to 13           | 1, 6, 11, 12, 13 | DSSS                  | 1               | 1                |
| 802.11g | 1 to 13           | 1, 6, 11, 12, 13 | OFDM                  | 6               | 6                |
| VHT20   | 1 to 13           | 1, 6, 11, 12, 13 | OFDM                  | 6.5             | 6.5              |
| VHT40   | 3 to 11           | 3, 6, 9, 10, 11  | OFDM                  | 13.5            | 13.5             |

### **Test Condition:**

| APPLICABLE TO | ENVIRONMENTAL CONDITIONS | INPUT POWER (System) | TESTED BY     |
|---------------|--------------------------|----------------------|---------------|
| UE≥1G         | 22deg. C, 67%RH          | 120Vac, 60Hz         | Robert Cheng  |
|               | 23deg. C, 67%RH          | 120Vac, 60Hz         | Robert Cheng  |
|               | 22deg. C, 66%RH          | 120Vac, 60Hz         | Weiwei Lo     |
| UE<1G         | 24deg. C, 68%RH          | 120Vac, 60Hz         | Tim Ho        |
| PLC           | 20deg. C, 60%RH          | 120Vac, 60Hz         | Barry Lee     |
| APCM          | 15deg. C, 57%RH          | 120Vac, 60Hz         | Anderson Chen |

### 3.3 Duty Cycle of Test Signal

If duty cycle of test signal is  $\geq 98\%$ , duty factor is not required.

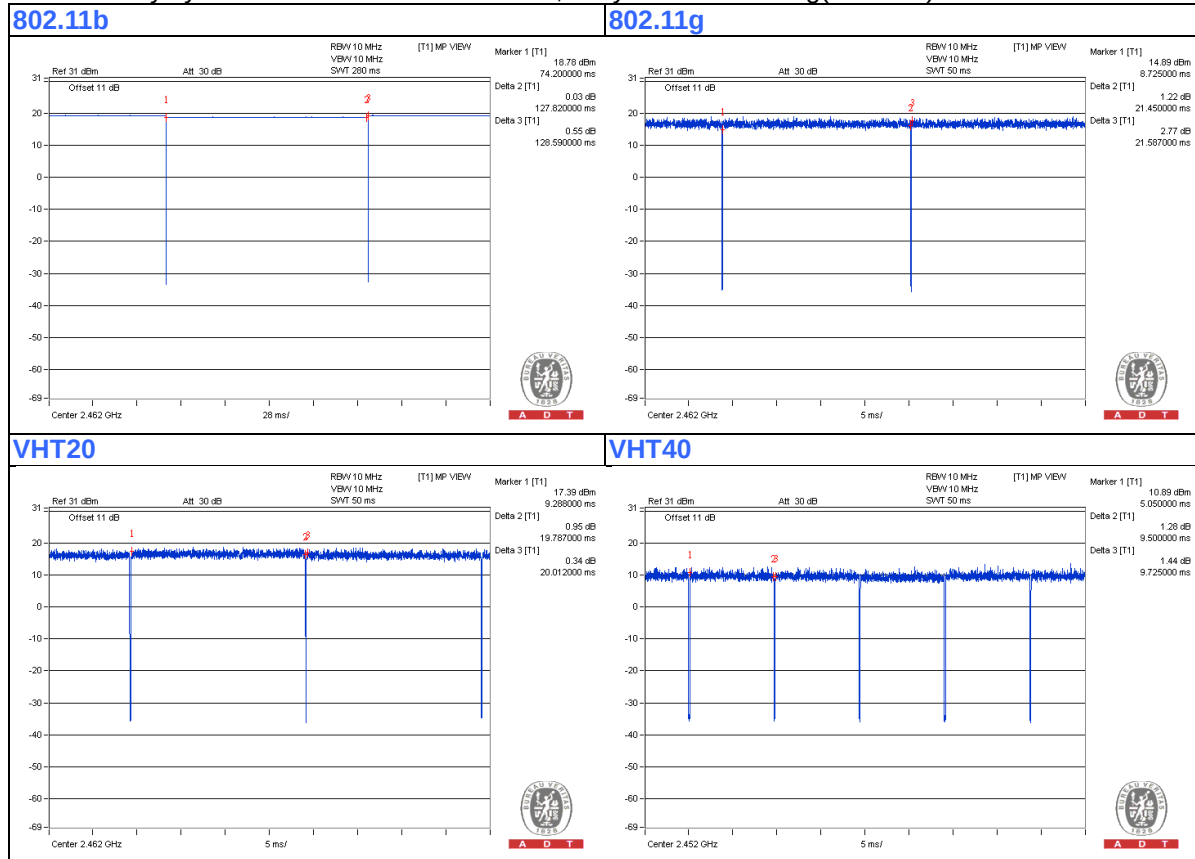
If duty cycle of test signal is  $< 98\%$ , duty factor shall be considered.

**802.11b**: Duty cycle =  $127.82 \text{ ms} / 128.59 \text{ ms} = 0.994$

**802.11g**: Duty cycle =  $21.45 \text{ ms} / 21.587 \text{ ms} = 0.994$

**VHT20**: Duty cycle =  $19.787 \text{ ms} / 20.012 \text{ ms} = 0.989$

**VHT40**: Duty cycle =  $9.5 \text{ ms} / 9.725 \text{ ms} = 0.977$ , Duty factor =  $10 * \log(1/0.977) = 0.1$



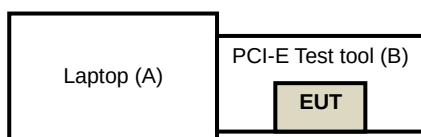
### 3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| ID | Product         | Brand               | Model No. | Serial No. | FCC ID  | Remarks            |
|----|-----------------|---------------------|-----------|------------|---------|--------------------|
| A. | Laptop          | DELL                | E5430     | 4YV4VY1    | FCC DoC | Provided by Lab    |
| B. | PCI-E Test tool | Qualcomm<br>Atheros | NA        | NA         | NA      | Supplied by Client |

Note: All power cords of the above support units are non-shielded (1.8m).

#### 3.4.1 Configuration of System under Test



### 3.5 General Description of Applied Standards

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

**FCC Part 15, Subpart C (15.247)**

**KDB 558074 D01 DTS Meas Guidance v04**

**KDB 662911 D01 Multiple Transmitter Output v02r01**

**ANSI C63.10-2013**

All test items have been performed and recorded as per the above standards.

## 4 Test Types and Results

### 4.1 Unwanted Emission and Bandedge Measurement (Radiated Versus Conducted)

#### 4.1.1 Limits of Unwanted Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

| Frequencies (MHz) | Field Strength (microvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009 ~ 0.490     | 2400/F(kHz)                       | 300                           |
| 0.490 ~ 1.705     | 24000/F(kHz)                      | 30                            |
| 1.705 ~ 30.0      | 30                                | 30                            |
| 30 ~ 88           | 100                               | 3                             |
| 88 ~ 216          | 150                               | 3                             |
| 216 ~ 960         | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

**Note:**

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

#### 4.1.2 Test Instruments

##### For Above 1GHz:

| DESCRIPTION & MANUFACTURER       | MODEL NO. | SERIAL NO.                      | CALIBRATED DATE | CALIBRATED UNTIL |
|----------------------------------|-----------|---------------------------------|-----------------|------------------|
| MXE EMI Receiver<br>Agilent      | N9038A    | MY51210105                      | July 21, 2014   | July 20, 2015    |
| Horn_Antenna<br>AISI             | AIH.8018  | 0000320091110                   | Aug. 27, 2014   | Aug. 26, 2015    |
| Pre-Amplifier<br>Agilent         | 8449B     | 3008A02578                      | June 24, 2014   | June 23, 2015    |
| RF Cable                         | NA        | 131205<br>131214<br>SNMY23684/4 | Jan. 16, 2015   | Jan. 15, 2016    |
| Spectrum Analyzer<br>R&S         | FSV40     | 100964                          | July 05, 2014   | July 04, 2015    |
| Pre-Amplifier<br>EMCI            | EMC184045 | 980143                          | Jan. 16, 2015   | Jan. 15, 2016    |
| Horn_Antenna<br>SCHWARZBECK      | BBHA 9170 | 9170-424                        | Aug. 26, 2014   | Aug. 25, 2015    |
| RF Cable                         | NA        | RF104-121<br>RF104-204          | Dec. 11, 2014   | Dec. 10, 2015    |
| Antenna Tower & Turn Table<br>CT | NA        | NA                              | NA              | NA               |
| SPECTRUM ANALYZER<br>R&S         | FSP 40    | 100060                          | May 08, 2014    | May 07, 2015     |
| Power Meter<br>Anritsu           | ML2495A   | 1014008                         | Apr. 30, 2014   | Apr. 29, 2015    |
| Power Sensor<br>Anritsu          | MA2411B   | 0917122                         | Apr. 30, 2014   | Apr. 29, 2015    |

##### Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. G.
- 3 The CANADA Site Registration No. is IC 7450H-2.
4. Tested Date: Feb. 06 to 11, 2015

**For Below 1GHz:**

| DESCRIPTION & MANUFACTURER                     | MODEL NO.                | SERIAL NO.                 | CALIBRATED DATE | CALIBRATED UNTIL |
|------------------------------------------------|--------------------------|----------------------------|-----------------|------------------|
| MXE EMI Receiver<br>Agilent                    | N9038A                   | MY50010156                 | Aug. 11, 2014   | Aug. 10, 2015    |
| Pre-Amplifier <sup>(*)</sup><br>EMCI           | EMC001340                | 980142                     | Jan. 13, 2014   | Jan. 12, 2016    |
| Loop Antenna <sup>(*)</sup><br>Electro-Metrics | EM-6879                  | 264                        | Dec. 16, 2014   | Dec. 15, 2016    |
| RF Cable                                       | NA                       | LOOPCAB-001<br>LOOPCAB-002 | Jan. 18, 2015   | Jan. 17, 2016    |
| Pre-Amplifier<br>Mini-Circuits                 | ZFL-1000VH2<br>B         | AMP-ZFL-04                 | Nov. 12, 2014   | Nov. 11, 2015    |
| Trilog Broadband Antenna<br>SCHWARZBECK        | VULB 9168                | 9168-361                   | Feb. 27, 2014   | Feb. 26, 2015    |
| RF Cable                                       | NA                       | CHHCAB_001                 | Oct. 05, 2014   | Oct. 04, 2015    |
| Software                                       | ADT_Radiated<br>_V8.7.07 | NA                         | NA              | NA               |
| Antenna Tower & Turn Table<br>CT               | NA                       | NA                         | NA              | NA               |

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. \*The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. H.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Feb. 09, 2015

#### 4.1.3 Test Procedures

Following FCC KDB 558074 D01 DTS Meas. Guidance:

Radiated versus Conducted Measurements.

The unwanted emission limits in both the restricted and non-restricted bands are based on antenna-port conducted measurements in conjunction with cabinet emissions tests are permitted to demonstrate compliance.

The following steps was performed:

- a. Cabinet emissions measurements. Radiated measurement was performed to ensure that cabinet emissions are below the emission limits. For the cabinet-emission measurements the antenna was replaced by a termination matching the nominal impedance of the antenna.
- b. Conducted tests was performed using equipment that matches the nominal impedance of the antenna assembly used with the EUT
- c. EIRP calculation. A value representative of an upper bound on out-of-band antenna gain (in dBi) shall be added to the measured antenna-port conducted emission power to compute EIRP within the specified measurement bandwidth. (For emissions in the restricted bands, additional calculations are required to convert EIRP to field strength at the specified distance.) The upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands or 2 dBi, whichever is greater
- d. EIRP adjustments for multiple outputs. (Follow the procedures specified in FCC KDB Publication 662911)

e. For all of Radiation emission test

**For Radiated emission below 30MHz**

- e-1.1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- e-1.2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- e-1.3. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- e-1.4. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e-1.5. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

**Note:**

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.
- 2. KDB 414788 OATS and Chamber Correlation Justification
  - Based on FCC 15.31(f)(2) : measurements may be performed at a distance closer than that specified in the regulations; however, an attempts should be made to avoid making measurements in the near field.
  - OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

**For Radiated emission above 30MHz**

- e-2.1. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- e-2.2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- e-2.3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e-2.4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e-2.5. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- e-2.6. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

**Note:**

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
- 3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle  $\geq$  98%) for Average detection (AV) at frequency above 1GHz.
- 4. All modes of operation were investigated and the worst-case emissions are reported.

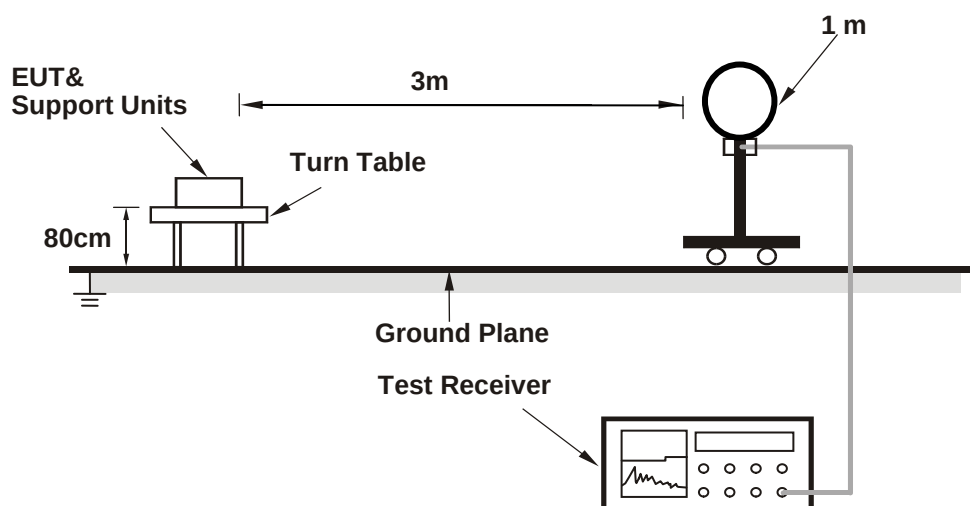
#### 4.1.4 Deviation from Test Standard

No deviation.

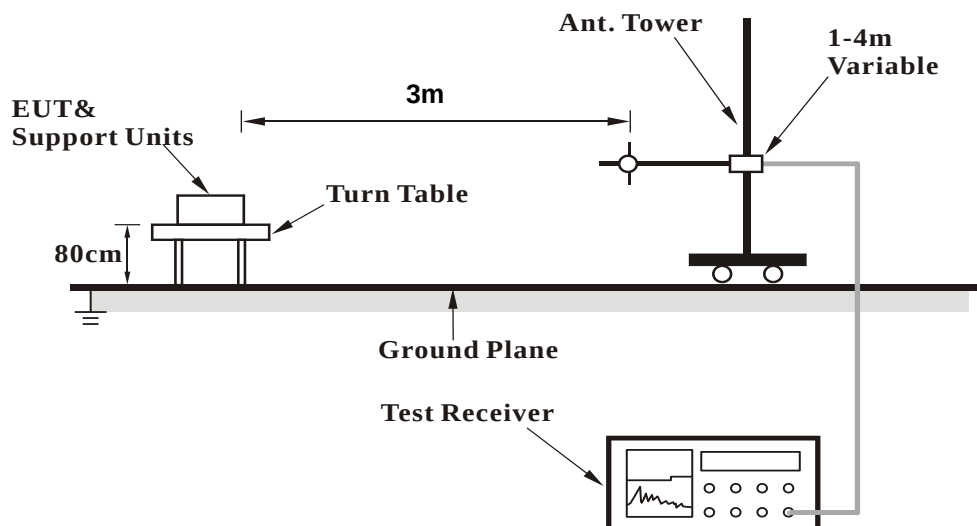
#### 4.1.5 Test Setup

**For Radiated configuration:**

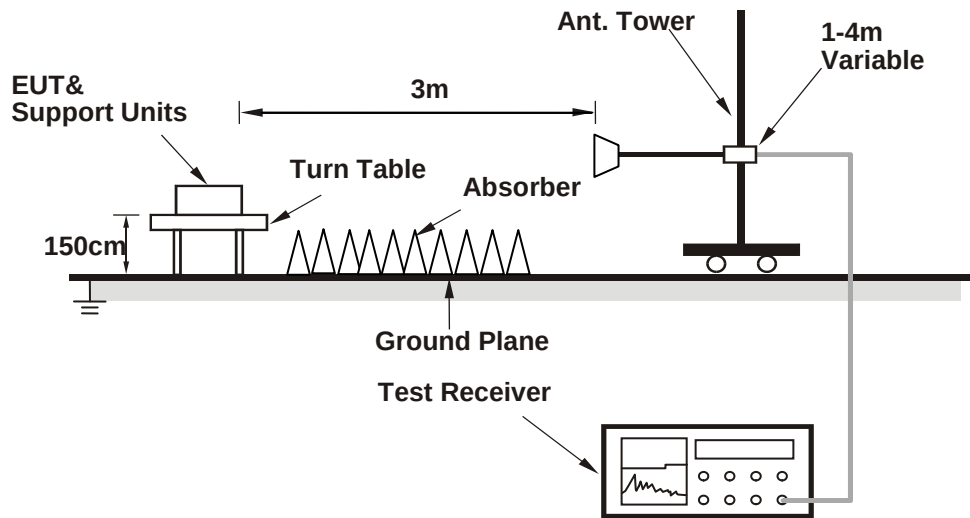
**For Radiated emission below 30MHz**



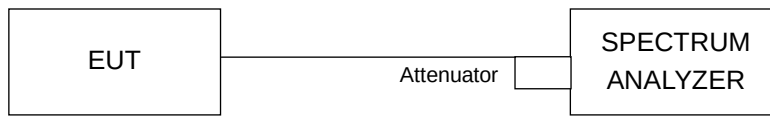
**For Radiated emission 30MHz to 1GHz**



## For Radiated emission above 1GHz



## For Conducted configuration:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

### 4.1.6 EUT Operating Conditions

- Connected the EUT with the Laptop which is placed on on the testing table.
- Controlling software (QRCT Version 3.0 33.0) has been activated to set the EUT on specific status.

#### 4.1.7 Test Results (Radiated Measurement)

| Radiated versus Conducted Measurement                                                                                                                                                                                                                                                                                                                                                             |                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Conducted measurement                                                                                                                                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/> Radiated measurement |
| <p><u>For Radiated measurement:</u><br/>The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation)</p> <p><u>For Conducted measurement:</u><br/>The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).</p> |                                                          |

Radiated test was done with 50ohm terminator on antenna port

Above 1GHz Data

802.11b

|                 |              |                   |              |
|-----------------|--------------|-------------------|--------------|
| CHANNEL         | TX Channel 1 | DETECTOR FUNCTION | Peak (PK)    |
| FREQUENCY RANGE | 1GHz ~ 25GHz |                   | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 53.3 PK                 | 74.0           | -20.7       | 1.55 H             | 56                   | 47.59            | 5.71                     |
| 2                                                   | 4824.00     | 49.4 AV                 | 54.0           | -4.6        | 1.55 H             | 56                   | 43.69            | 5.71                     |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 53.2 PK                 | 74.0           | -20.8       | 1.57 V             | 53                   | 47.49            | 5.71                     |
| 2                                                   | 4824.00     | 49.1 AV                 | 54.0           | -4.9        | 1.57 V             | 53                   | 43.39            | 5.71                     |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |              |                              |              |
|------------------------|--------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 54.1 PK                       | 74.0              | -19.9          | 1.65 H                   | 56                         | 48.20                  | 5.90                           |
| 2                                                   | 4874.00        | 50.5 AV                       | 54.0              | -3.5           | 1.65 H                   | 56                         | 44.60                  | 5.90                           |
| 3                                                   | 7311.00        | 53.8 PK                       | 74.0              | -20.2          | 1.00 H                   | 226                        | 40.63                  | 13.17                          |
| 4                                                   | 7311.00        | 40.8 AV                       | 54.0              | -13.2          | 1.00 H                   | 226                        | 27.63                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 54.5 PK                       | 74.0              | -19.5          | 1.72 V                   | 54                         | 48.60                  | 5.90                           |
| 2                                                   | 4874.00        | 50.3 AV                       | 54.0              | -3.7           | 1.72 V                   | 54                         | 44.40                  | 5.90                           |
| 3                                                   | 7311.00        | 54.1 PK                       | 74.0              | -19.9          | 1.07 V                   | 262                        | 40.93                  | 13.17                          |
| 4                                                   | 7311.00        | 41.2 AV                       | 54.0              | -12.8          | 1.07 V                   | 262                        | 28.03                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 11 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 55.8 PK                       | 74.0              | -18.2          | 1.55 H                   | 65                         | 49.69                  | 6.11                           |
| 2                                                   | 4924.00        | 51.0 AV                       | 54.0              | -3.0           | 1.55 H                   | 65                         | 44.89                  | 6.11                           |
| 3                                                   | 7386.00        | 54.2 PK                       | 74.0              | -19.8          | 1.00 H                   | 241                        | 41.02                  | 13.18                          |
| 4                                                   | 7386.00        | 41.2 AV                       | 54.0              | -12.8          | 1.00 H                   | 241                        | 28.02                  | 13.18                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 54.1 PK                       | 74.0              | -19.9          | 1.48 V                   | 65                         | 47.99                  | 6.11                           |
| 2                                                   | 4924.00        | 50.1 AV                       | 54.0              | -3.9           | 1.48 V                   | 65                         | 43.99                  | 6.11                           |
| 3                                                   | 7386.00        | 54.4 PK                       | 74.0              | -19.6          | 1.00 V                   | 265                        | 41.22                  | 13.18                          |
| 4                                                   | 7386.00        | 41.3 AV                       | 54.0              | -12.7          | 1.00 V                   | 265                        | 28.12                  | 13.18                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 12 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4934.00        | 55.0 PK                       | 74.0              | -19.0          | 1.50 H                   | 57                         | 48.85                  | 6.15                           |
| 2                                                   | 4934.00        | 50.5 AV                       | 54.0              | -3.5           | 1.50 H                   | 57                         | 44.35                  | 6.15                           |
| 3                                                   | 7401.00        | 54.7 PK                       | 74.0              | -19.3          | 1.02 H                   | 233                        | 41.53                  | 13.17                          |
| 4                                                   | 7401.00        | 41.6 AV                       | 54.0              | -12.4          | 1.02 H                   | 233                        | 28.43                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4934.00        | 54.3 PK                       | 74.0              | -19.7          | 1.47 V                   | 60                         | 48.15                  | 6.15                           |
| 2                                                   | 4934.00        | 50.4 AV                       | 54.0              | -3.6           | 1.47 V                   | 60                         | 44.25                  | 6.15                           |
| 3                                                   | 7401.00        | 54.4 PK                       | 74.0              | -19.6          | 1.02 V                   | 272                        | 41.23                  | 13.17                          |
| 4                                                   | 7401.00        | 41.3 AV                       | 54.0              | -12.7          | 1.02 V                   | 272                        | 28.13                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 13 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 56.0 PK                       | 74.0              | -18.0          | 1.52 H                   | 66                         | 49.81                  | 6.19                           |
| 2                                                   | 4944.00        | 51.0 AV                       | 54.0              | -3.0           | 1.52 H                   | 66                         | 44.81                  | 6.19                           |
| 3                                                   | 7416.00        | 54.6 PK                       | 74.0              | -19.4          | 1.00 H                   | 243                        | 41.45                  | 13.15                          |
| 4                                                   | 7416.00        | 41.5 AV                       | 54.0              | -12.5          | 1.00 H                   | 243                        | 28.35                  | 13.15                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 54.2 PK                       | 74.0              | -19.8          | 1.48 V                   | 66                         | 48.01                  | 6.19                           |
| 2                                                   | 4944.00        | 50.5 AV                       | 54.0              | -3.5           | 1.48 V                   | 66                         | 44.31                  | 6.19                           |
| 3                                                   | 7416.00        | 55.2 PK                       | 74.0              | -18.8          | 1.00 V                   | 272                        | 42.05                  | 13.15                          |
| 4                                                   | 7416.00        | 41.8 AV                       | 54.0              | -12.2          | 1.00 V                   | 272                        | 28.65                  | 13.15                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

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|                        |              |                          |              |
|------------------------|--------------|--------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 1 | <b>DETECTOR FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                          | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 48.6 PK                 | 74.0           | -25.4       | 1.55 H             | 59                   | 42.89            | 5.71                     |
| 2                                                   | 4824.00     | 34.9 AV                 | 54.0           | -19.1       | 1.55 H             | 59                   | 29.19            | 5.71                     |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 48.3 PK                 | 74.0           | -25.7       | 1.49 V             | 55                   | 42.59            | 5.71                     |
| 2                                                   | 4824.00     | 35.1 AV                 | 54.0           | -18.9       | 1.49 V             | 55                   | 29.39            | 5.71                     |

## REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |              |                              |              |
|------------------------|--------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 51.7 PK                       | 74.0              | -22.3          | 1.55 H                   | 60                         | 45.80                  | 5.90                           |
| 2                                                   | 4874.00        | 38.4 AV                       | 54.0              | -15.6          | 1.55 H                   | 60                         | 32.50                  | 5.90                           |
| 3                                                   | 7311.00        | 54.2 PK                       | 74.0              | -19.8          | 1.02 H                   | 227                        | 41.03                  | 13.17                          |
| 4                                                   | 7311.00        | 40.9 AV                       | 54.0              | -13.1          | 1.02 H                   | 227                        | 27.73                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 51.6 PK                       | 74.0              | -22.4          | 1.48 V                   | 65                         | 45.70                  | 5.90                           |
| 2                                                   | 4874.00        | 38.1 AV                       | 54.0              | -15.9          | 1.48 V                   | 65                         | 32.20                  | 5.90                           |
| 3                                                   | 7311.00        | 53.9 PK                       | 74.0              | -20.1          | 1.00 V                   | 252                        | 40.73                  | 13.17                          |
| 4                                                   | 7311.00        | 41.1 AV                       | 54.0              | -12.9          | 1.00 V                   | 252                        | 27.93                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 11 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 48.4 PK                       | 74.0              | -25.6          | 1.56 H                   | 60                         | 42.29                  | 6.11                           |
| 2                                                   | 4924.00        | 34.9 AV                       | 54.0              | -19.1          | 1.56 H                   | 60                         | 28.79                  | 6.11                           |
| 3                                                   | 7386.00        | 54.4 PK                       | 74.0              | -19.6          | 1.00 H                   | 222                        | 41.22                  | 13.18                          |
| 4                                                   | 7386.00        | 41.2 AV                       | 54.0              | -12.8          | 1.00 H                   | 222                        | 28.02                  | 13.18                          |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|---------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                               | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                 | 4924.00        | 48.5 PK                       | 74.0              | -25.5          | 1.43 V                   | 59                         | 42.39                  | 6.11                           |
| 2                                                 | 4924.00        | 35.1 AV                       | 54.0              | -18.9          | 1.43 V                   | 59                         | 28.99                  | 6.11                           |
| 3                                                 | 7386.00        | 53.6 PK                       | 74.0              | -20.4          | 1.00 V                   | 244                        | 40.42                  | 13.18                          |
| 4                                                 | 7386.00        | 41.1 AV                       | 54.0              | -12.9          | 1.00 V                   | 244                        | 27.92                  | 13.18                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 12 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4934.00        | 48.0 PK                       | 74.0              | -26.0          | 1.60 H                   | 64                         | 41.85                  | 6.15                           |
| 2                                                   | 4934.00        | 34.7 AV                       | 54.0              | -19.3          | 1.60 H                   | 64                         | 28.55                  | 6.15                           |
| 3                                                   | 7401.00        | 54.5 PK                       | 74.0              | -19.5          | 1.04 H                   | 216                        | 41.33                  | 13.17                          |
| 4                                                   | 7401.00        | 41.6 AV                       | 54.0              | -12.4          | 1.04 H                   | 216                        | 28.43                  | 13.17                          |

| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|---------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                               | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                 | 4934.00        | 48.0 PK                       | 74.0              | -26.0          | 1.45 V                   | 56                         | 41.85                  | 6.15                           |
| 2                                                 | 4934.00        | 34.6 AV                       | 54.0              | -19.4          | 1.45 V                   | 56                         | 28.45                  | 6.15                           |
| 3                                                 | 7401.00        | 53.3 PK                       | 74.0              | -20.7          | 1.00 V                   | 230                        | 40.13                  | 13.17                          |
| 4                                                 | 7401.00        | 41.1 AV                       | 54.0              | -12.9          | 1.00 V                   | 230                        | 27.93                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 13 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 48.4 PK                       | 74.0              | -25.6          | 1.58 H                   | 67                         | 42.21                  | 6.19                           |
| 2                                                   | 4944.00        | 35.1 AV                       | 54.0              | -18.9          | 1.58 H                   | 67                         | 28.91                  | 6.19                           |
| 3                                                   | 7416.00        | 54.4 PK                       | 74.0              | -19.6          | 1.05 H                   | 223                        | 41.25                  | 13.15                          |
| 4                                                   | 7416.00        | 41.1 AV                       | 54.0              | -12.9          | 1.05 H                   | 223                        | 27.95                  | 13.15                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 48.9 PK                       | 74.0              | -25.1          | 1.47 V                   | 66                         | 42.71                  | 6.19                           |
| 2                                                   | 4944.00        | 35.5 AV                       | 54.0              | -18.5          | 1.47 V                   | 66                         | 29.31                  | 6.19                           |
| 3                                                   | 7416.00        | 53.8 PK                       | 74.0              | -20.2          | 1.00 V                   | 231                        | 40.65                  | 13.15                          |
| 4                                                   | 7416.00        | 41.1 AV                       | 54.0              | -12.9          | 1.00 V                   | 231                        | 27.95                  | 13.15                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

## VHT20

|                        |              |                          |              |
|------------------------|--------------|--------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 1 | <b>DETECTOR FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                          | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 48.2 PK                 | 74.0           | -25.8       | 1.60 H             | 51                   | 42.49            | 5.71                     |
| 2                                                   | 4824.00     | 34.8 AV                 | 54.0           | -19.2       | 1.60 H             | 51                   | 29.09            | 5.71                     |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4824.00     | 48.4 PK                 | 74.0           | -25.6       | 1.53 V             | 65                   | 42.69            | 5.71                     |
| 2                                                   | 4824.00     | 35.0 AV                 | 54.0           | -19.0       | 1.53 V             | 65                   | 29.29            | 5.71                     |

### REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |              |                              |              |
|------------------------|--------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 51.6 PK                       | 74.0              | -22.4          | 1.56 H                   | 74                         | 45.70                  | 5.90                           |
| 2                                                   | 4874.00        | 38.4 AV                       | 54.0              | -15.6          | 1.56 H                   | 74                         | 32.50                  | 5.90                           |
| 3                                                   | 7311.00        | 53.7 PK                       | 74.0              | -20.3          | 1.00 H                   | 218                        | 40.53                  | 13.17                          |
| 4                                                   | 7311.00        | 40.5 AV                       | 54.0              | -13.5          | 1.00 H                   | 218                        | 27.33                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 51.4 PK                       | 74.0              | -22.6          | 1.48 V                   | 50                         | 45.50                  | 5.90                           |
| 2                                                   | 4874.00        | 37.9 AV                       | 54.0              | -16.1          | 1.48 V                   | 50                         | 32.00                  | 5.90                           |
| 3                                                   | 7311.00        | 54.0 PK                       | 74.0              | -20.0          | 1.00 V                   | 239                        | 40.83                  | 13.17                          |
| 4                                                   | 7311.00        | 41.1 AV                       | 54.0              | -12.9          | 1.00 V                   | 239                        | 27.93                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 11 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 48.7 PK                       | 74.0              | -25.3          | 1.57 H                   | 75                         | 42.59                  | 6.11                           |
| 2                                                   | 4924.00        | 35.2 AV                       | 54.0              | -18.8          | 1.57 H                   | 75                         | 29.09                  | 6.11                           |
| 3                                                   | 7386.00        | 54.6 PK                       | 74.0              | -19.4          | 1.06 H                   | 236                        | 41.42                  | 13.18                          |
| 4                                                   | 7386.00        | 41.3 AV                       | 54.0              | -12.7          | 1.06 H                   | 236                        | 28.12                  | 13.18                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 48.9 PK                       | 74.0              | -25.1          | 1.49 V                   | 53                         | 42.79                  | 6.11                           |
| 2                                                   | 4924.00        | 35.2 AV                       | 54.0              | -18.8          | 1.49 V                   | 53                         | 29.09                  | 6.11                           |
| 3                                                   | 7386.00        | 53.6 PK                       | 74.0              | -20.4          | 1.04 V                   | 237                        | 40.42                  | 13.18                          |
| 4                                                   | 7386.00        | 40.8 AV                       | 54.0              | -13.2          | 1.04 V                   | 237                        | 27.62                  | 13.18                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 12 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4934.00        | 48.6 PK                       | 74.0              | -25.4          | 1.53 H                   | 87                         | 42.45                  | 6.15                           |
| 2                                                   | 4934.00        | 35.3 AV                       | 54.0              | -18.7          | 1.53 H                   | 87                         | 29.15                  | 6.15                           |
| 3                                                   | 7401.00        | 54.0 PK                       | 74.0              | -20.0          | 1.05 H                   | 224                        | 40.83                  | 13.17                          |
| 4                                                   | 7401.00        | 41.0 AV                       | 54.0              | -13.0          | 1.05 H                   | 224                        | 27.83                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4934.00        | 49.4 PK                       | 74.0              | -24.6          | 1.46 V                   | 59                         | 43.25                  | 6.15                           |
| 2                                                   | 4934.00        | 35.5 AV                       | 54.0              | -18.5          | 1.46 V                   | 59                         | 29.35                  | 6.15                           |
| 3                                                   | 7401.00        | 53.3 PK                       | 74.0              | -20.7          | 1.07 V                   | 251                        | 40.13                  | 13.17                          |
| 4                                                   | 7401.00        | 40.5 AV                       | 54.0              | -13.5          | 1.07 V                   | 251                        | 27.33                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 13 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 49.2 PK                       | 74.0              | -24.8          | 1.58 H                   | 59                         | 43.01                  | 6.19                           |
| 2                                                   | 4944.00        | 35.5 AV                       | 54.0              | -18.5          | 1.58 H                   | 59                         | 29.31                  | 6.19                           |
| 3                                                   | 7416.00        | 54.0 PK                       | 74.0              | -20.0          | 1.10 H                   | 248                        | 40.85                  | 13.15                          |
| 4                                                   | 7416.00        | 41.0 AV                       | 54.0              | -13.0          | 1.10 H                   | 248                        | 27.85                  | 13.15                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4944.00        | 49.5 PK                       | 74.0              | -24.5          | 1.52 V                   | 43                         | 43.31                  | 6.19                           |
| 2                                                   | 4944.00        | 35.6 AV                       | 54.0              | -18.4          | 1.52 V                   | 43                         | 29.41                  | 6.19                           |
| 3                                                   | 7416.00        | 53.3 PK                       | 74.0              | -20.7          | 1.04 V                   | 232                        | 40.15                  | 13.15                          |
| 4                                                   | 7416.00        | 40.6 AV                       | 54.0              | -13.4          | 1.04 V                   | 232                        | 27.45                  | 13.15                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

# VHT40

|                        |              |                          |              |
|------------------------|--------------|--------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 3 | <b>DETECTOR FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                          | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4844.00     | 48.8 PK                 | 74.0           | -25.2       | 1.56 H             | 72                   | 43.02            | 5.78                     |
| 2                                                   | 4844.00     | 35.2 AV                 | 54.0           | -18.8       | 1.56 H             | 72                   | 29.42            | 5.78                     |
| 3                                                   | 7266.00     | 54.8 PK                 | 74.0           | -19.2       | 1.07 H             | 208                  | 41.60            | 13.20                    |
| 4                                                   | 7266.00     | 41.5 AV                 | 54.0           | -12.5       | 1.07 H             | 208                  | 28.30            | 13.20                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 4844.00     | 48.4 PK                 | 74.0           | -25.6       | 1.42 V             | 72                   | 42.62            | 5.78                     |
| 2                                                   | 4844.00     | 34.9 AV                 | 54.0           | -19.1       | 1.42 V             | 72                   | 29.12            | 5.78                     |
| 3                                                   | 7266.00     | 53.7 PK                 | 74.0           | -20.3       | 1.02 V             | 259                  | 40.50            | 13.20                    |
| 4                                                   | 7266.00     | 41.0 AV                 | 54.0           | -13.0       | 1.02 V             | 259                  | 27.80            | 13.20                    |

## REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |              |                              |              |
|------------------------|--------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 48.7 PK                       | 74.0              | -25.3          | 1.53 H                   | 55                         | 42.80                  | 5.90                           |
| 2                                                   | 4874.00        | 35.2 AV                       | 54.0              | -18.8          | 1.53 H                   | 55                         | 29.30                  | 5.90                           |
| 3                                                   | 7311.00        | 54.7 PK                       | 74.0              | -19.3          | 1.00 H                   | 212                        | 41.53                  | 13.17                          |
| 4                                                   | 7311.00        | 41.6 AV                       | 54.0              | -12.4          | 1.00 H                   | 212                        | 28.43                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4874.00        | 48.7 PK                       | 74.0              | -25.3          | 1.47 V                   | 49                         | 42.80                  | 5.90                           |
| 2                                                   | 4874.00        | 35.4 AV                       | 54.0              | -18.6          | 1.47 V                   | 49                         | 29.50                  | 5.90                           |
| 3                                                   | 7311.00        | 53.4 PK                       | 74.0              | -20.6          | 1.05 V                   | 255                        | 40.23                  | 13.17                          |
| 4                                                   | 7311.00        | 41.0 AV                       | 54.0              | -13.0          | 1.05 V                   | 255                        | 27.83                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |              |                              |              |
|------------------------|--------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 9 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4904.00        | 48.5 PK                       | 74.0              | -25.5          | 1.53 H                   | 64                         | 42.48                  | 6.02                           |
| 2                                                   | 4904.00        | 35.3 AV                       | 54.0              | -18.7          | 1.53 H                   | 64                         | 29.28                  | 6.02                           |
| 3                                                   | 7356.00        | 54.9 PK                       | 74.0              | -19.1          | 1.09 H                   | 238                        | 41.72                  | 13.18                          |
| 4                                                   | 7356.00        | 41.5 AV                       | 54.0              | -12.5          | 1.09 H                   | 238                        | 28.32                  | 13.18                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4904.00        | 47.9 PK                       | 74.0              | -26.1          | 1.44 V                   | 59                         | 41.88                  | 6.02                           |
| 2                                                   | 4904.00        | 34.6 AV                       | 54.0              | -19.4          | 1.44 V                   | 59                         | 28.58                  | 6.02                           |
| 3                                                   | 7356.00        | 54.0 PK                       | 74.0              | -20.0          | 1.01 V                   | 248                        | 40.82                  | 13.18                          |
| 4                                                   | 7356.00        | 41.4 AV                       | 54.0              | -12.6          | 1.01 V                   | 248                        | 28.22                  | 13.18                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 10 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4914.00        | 48.8 PK                       | 74.0              | -25.2          | 1.53 H                   | 60                         | 42.73                  | 6.07                           |
| 2                                                   | 4914.00        | 35.7 AV                       | 54.0              | -18.3          | 1.53 H                   | 60                         | 29.63                  | 6.07                           |
| 3                                                   | 7371.00        | 54.8 PK                       | 74.0              | -19.2          | 1.11 H                   | 251                        | 41.63                  | 13.17                          |
| 4                                                   | 7371.00        | 41.7 AV                       | 54.0              | -12.3          | 1.11 H                   | 251                        | 28.53                  | 13.17                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4914.00        | 47.5 PK                       | 74.0              | -26.5          | 1.46 V                   | 65                         | 41.43                  | 6.07                           |
| 2                                                   | 4914.00        | 34.4 AV                       | 54.0              | -19.6          | 1.46 V                   | 65                         | 28.33                  | 6.07                           |
| 3                                                   | 7371.00        | 53.5 PK                       | 74.0              | -20.5          | 1.00 V                   | 247                        | 40.33                  | 13.17                          |
| 4                                                   | 7371.00        | 40.9 AV                       | 54.0              | -13.1          | 1.00 V                   | 247                        | 27.73                  | 13.17                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

|                        |               |                              |              |
|------------------------|---------------|------------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 11 | <b>DETECTOR<br/>FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz  |                              | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 48.8 PK                       | 74.0              | -25.2          | 1.50 H                   | 58                         | 42.69                  | 6.11                           |
| 2                                                   | 4924.00        | 35.3 AV                       | 54.0              | -18.7          | 1.50 H                   | 58                         | 29.19                  | 6.11                           |
| 3                                                   | 7386.00        | 54.6 PK                       | 74.0              | -19.4          | 1.07 H                   | 227                        | 41.42                  | 13.18                          |
| 4                                                   | 7386.00        | 41.1 AV                       | 54.0              | -12.9          | 1.07 H                   | 227                        | 27.92                  | 13.18                          |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 4924.00        | 48.6 PK                       | 74.0              | -25.4          | 1.40 V                   | 59                         | 42.49                  | 6.11                           |
| 2                                                   | 4924.00        | 35.1 AV                       | 54.0              | -18.9          | 1.40 V                   | 59                         | 28.99                  | 6.11                           |
| 3                                                   | 7386.00        | 53.9 PK                       | 74.0              | -20.1          | 1.00 V                   | 233                        | 40.72                  | 13.18                          |
| 4                                                   | 7386.00        | 41.4 AV                       | 54.0              | -12.6          | 1.00 V                   | 233                        | 28.22                  | 13.18                          |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

**Below 1GHz Data:**  
**802.11g**

|                        |              |                              |                 |
|------------------------|--------------|------------------------------|-----------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR<br/>FUNCTION</b> | Quasi-Peak (QP) |
| <b>FREQUENCY RANGE</b> | Below 1GHz   |                              |                 |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |                |                               |                   |                |                          |                            |                        |                                |
|-----------------------------------------------------|----------------|-------------------------------|-------------------|----------------|--------------------------|----------------------------|------------------------|--------------------------------|
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 165.99         | 39.3 QP                       | 43.5              | -4.2           | 2.00 H                   | 228                        | 52.48                  | -13.22                         |
| 2                                                   | 247.69         | 39.3 QP                       | 46.0              | -6.7           | 1.00 H                   | 284                        | 53.32                  | -14.06                         |
| 3                                                   | 282.39         | 42.5 QP                       | 46.0              | -3.5           | 1.00 H                   | 292                        | 55.06                  | -12.60                         |
| 4                                                   | 432.02         | 39.3 QP                       | 46.0              | -6.7           | 2.00 H                   | 217                        | 47.78                  | -8.50                          |
| 5                                                   | 698.38         | 38.9 QP                       | 46.0              | -7.1           | 1.00 H                   | 236                        | 42.24                  | -3.33                          |
| 6                                                   | 898.01         | 41.8 QP                       | 46.0              | -4.2           | 1.00 H                   | 162                        | 41.69                  | 0.14                           |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |                |                               |                   |                |                          |                            |                        |                                |
| NO.                                                 | FREQ.<br>(MHz) | EMISSION<br>LEVEL<br>(dBuV/m) | LIMIT<br>(dBuV/m) | MARGIN<br>(dB) | ANTENNA<br>HEIGHT<br>(m) | TABLE<br>ANGLE<br>(Degree) | RAW<br>VALUE<br>(dBuV) | CORRECTION<br>FACTOR<br>(dB/m) |
| 1                                                   | 122.78         | 38.4 QP                       | 43.5              | -5.1           | 2.00 V                   | 293                        | 53.14                  | -14.73                         |
| 2                                                   | 299.76         | 35.1 QP                       | 46.0              | -10.9          | 1.00 V                   | 306                        | 47.20                  | -12.09                         |
| 3                                                   | 499.53         | 41.5 QP                       | 46.0              | -4.5           | 1.50 V                   | 199                        | 48.74                  | -7.20                          |
| 4                                                   | 599.44         | 35.8 QP                       | 46.0              | -10.2          | 1.50 V                   | 302                        | 40.54                  | -4.72                          |
| 5                                                   | 697.07         | 35.6 QP                       | 46.0              | -10.4          | 2.00 V                   | 306                        | 38.92                  | -3.36                          |
| 6                                                   | 902.66         | 40.1 QP                       | 46.0              | -6.0           | 2.00 V                   | 309                        | 39.83                  | 0.22                           |

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

#### 4.1.8 Test Results (Conducted Measurement)

| Radiated versus Conducted Measurement                                                                                                                                                                                                                                                                                                                                                                   |                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| <input checked="" type="checkbox"/> Conducted measurement                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Radiated measurement |
| <p><u>For Radiated measurement:</u></p> <p>The level of unwanted emissions was measured when radiated by the cabinet or structure of the equipment with the antenna connector(s) terminated by a specified load (cabinet radiation)</p> <p><u>For Conducted measurement:</u></p> <p>The level of unwanted emissions was measured as their power in a specified load (conducted spurious emissions).</p> |                                               |

| Conducted Measurement Factor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a. The composite gain will be used when signal support the correlated signal.<br/>(Composite gain = <math>3.62\text{dBi} + 10\log(2) = 6.63\text{dBi}</math>)</p> <p>b. For the out of band spurious the gain for the specific band may have been used rather than the highest gain across all bands.</p> <p>c. For the band edge the gain for the specific band may have been used.</p> <p>d. In restricted bands below 1000 MHz, add upper bound on ground plane reflection:<br/>For <math>f = 30 - 1000</math> MHz, add 4.7 dB.</p> <p>Note: The conducted emission test was considered some factor to compute test result.</p> |

**Above 1GHz Data**  
**802.11b - Channel 1**

**Conducted spurious emission table**

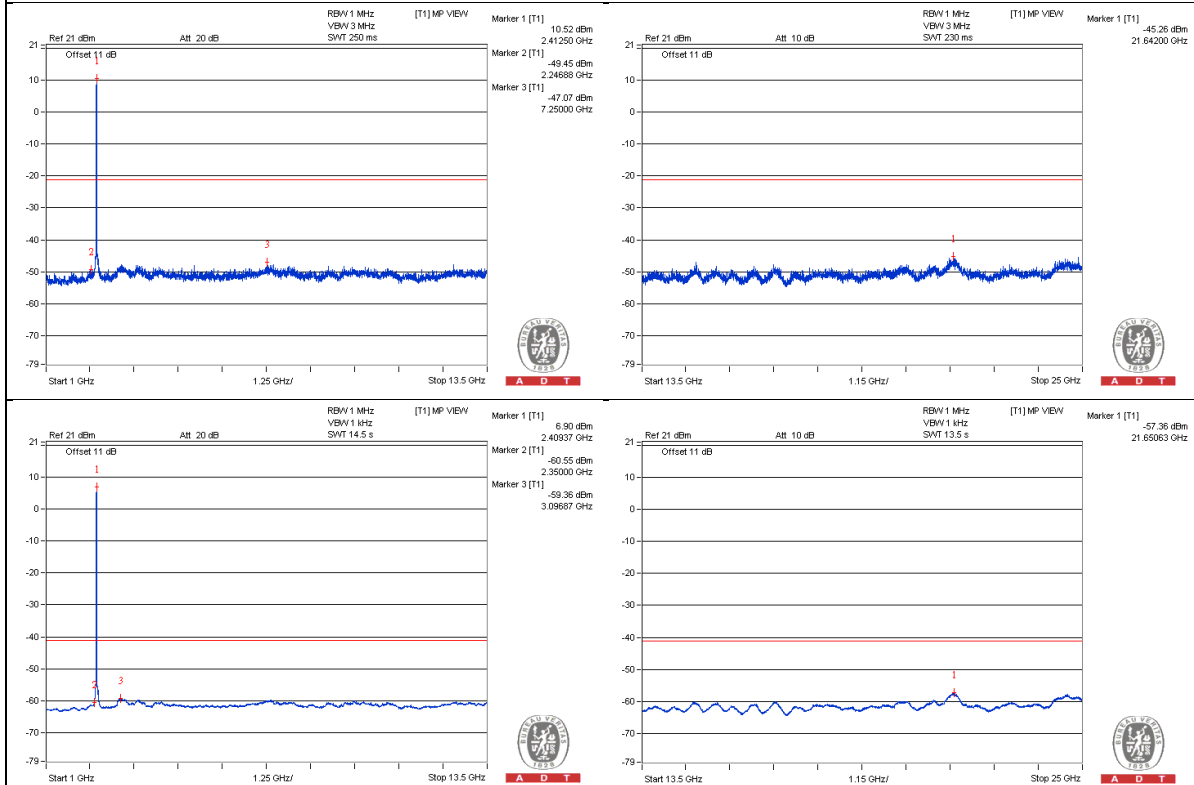
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1609.375 PK     | 52.1                    | 74             | -21.9       | -53.29          | -52.36 | 6.63                   | -43.16           |
| 2   | 1606.25 AV      | 41.81                   | 54             | -12.19      | -63.15          | -63.04 | 6.63                   | -53.45           |
| 3   | 4825 PK         | 54.49                   | 74             | -19.51      | -50.83          | -50.03 | 6.63                   | -40.77           |
| 4   | 4821.875 AV     | 45.4                    | 54             | -8.6        | -61.48          | -58.15 | 6.63                   | -49.86           |

Note :

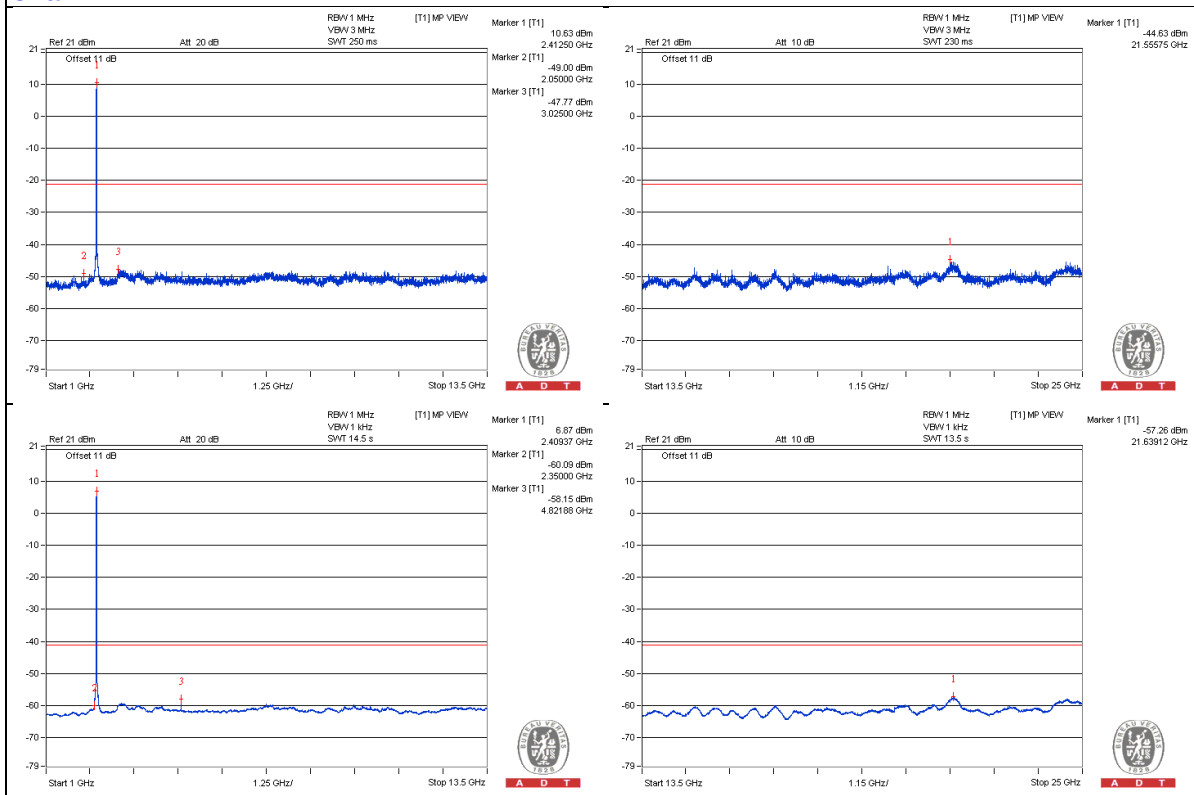
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

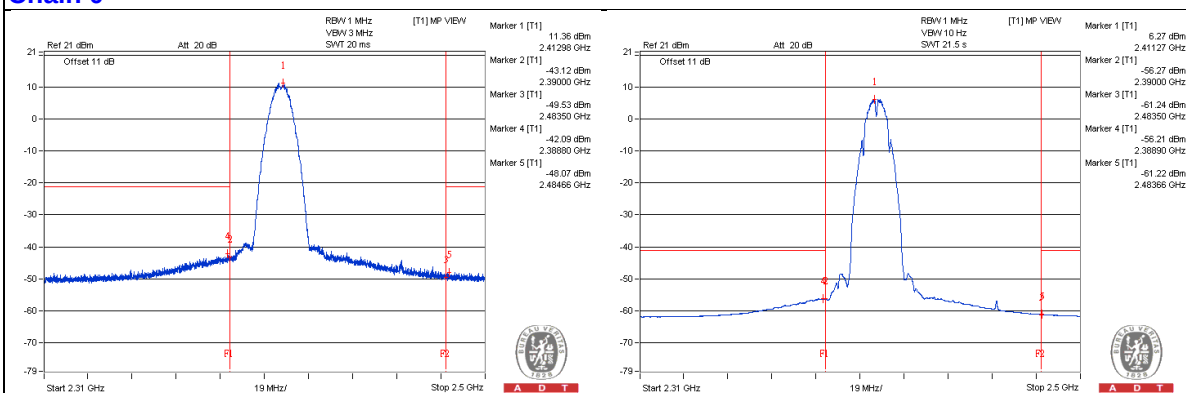
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2387.1875 PK    | 62.53                   | 74             | -11.47      | -43.36          | -41.56 | 6.63                   | -32.73           |
| 2   | 2389.99 AV      | 49.58                   | 54             | -4.42       | -56.25          | -54.55 | 6.63                   | -45.68           |
| 3   | 2484.4675 PK    | 56.56                   | 74             | -17.44      | -48.92          | -47.83 | 6.63                   | -38.7            |
| 4   | 2483.66 AV      | 43.81                   | 54             | -10.19      | -61.22          | -60.97 | 6.63                   | -51.45           |

Note :

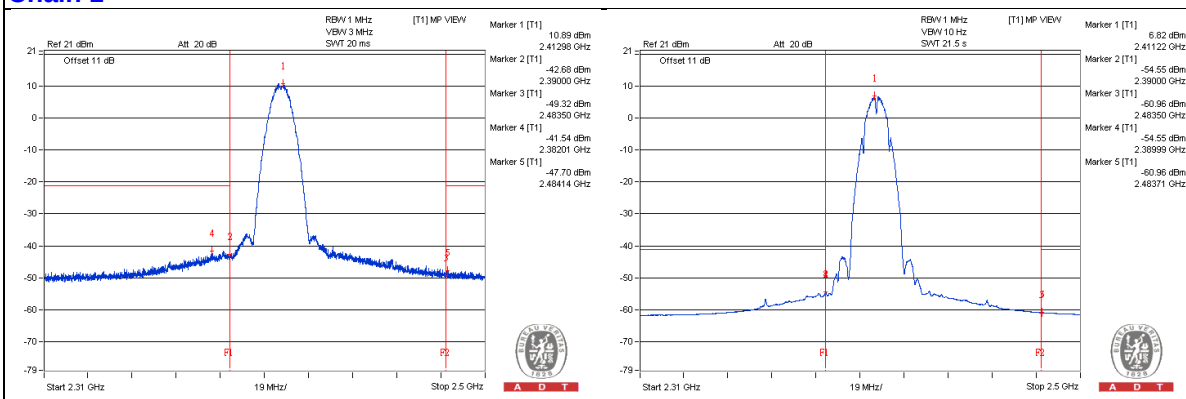
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### 802.11b - Channel 6

#### Conducted spurious emission table

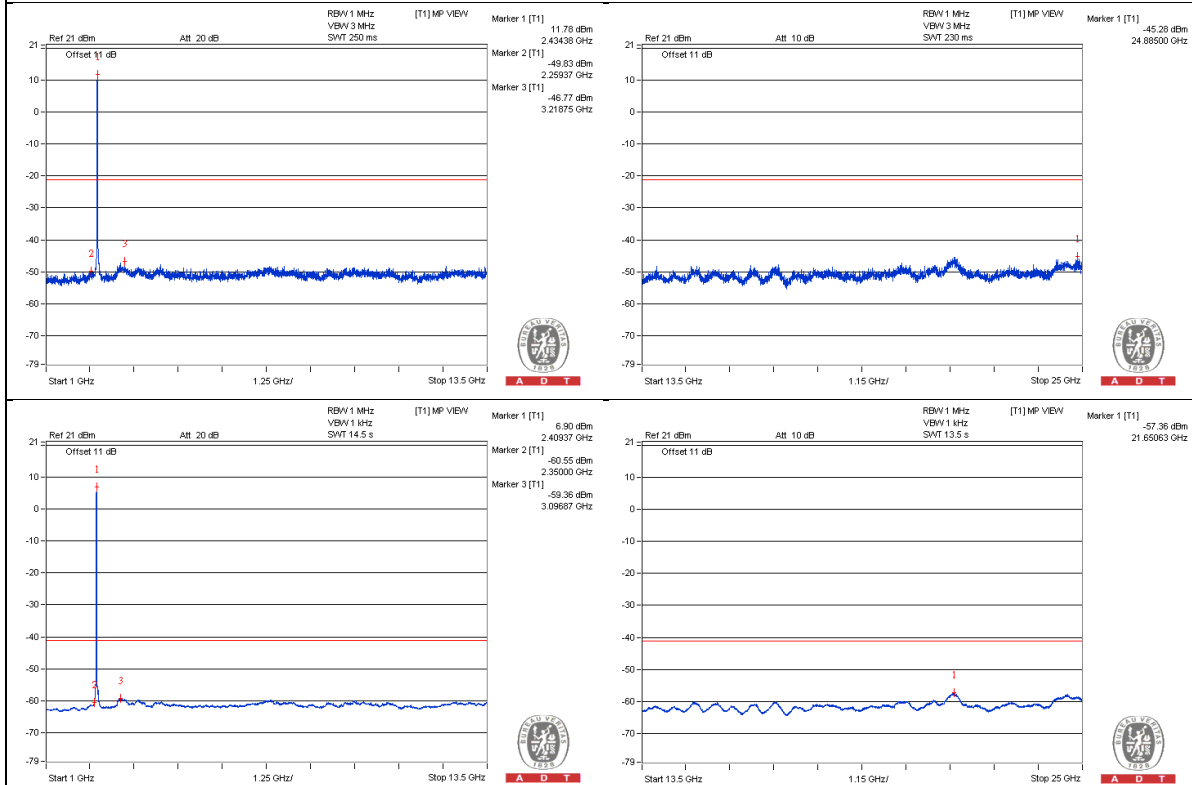
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1625 PK         | 51.37                   | 74             | -22.63      | -53.19          | -53.9  | 6.63                   | -43.89           |
| 2   | 1625 AV         | 41.91                   | 54             | -12.09      | -63.05          | -62.94 | 6.63                   | -53.35           |
| 3   | 4875 PK         | 54.65                   | 74             | -19.35      | -50.41          | -50.1  | 6.63                   | -40.61           |
| 4   | 4871.875 AV     | 45.77                   | 54             | -8.23       | -61.73          | -57.52 | 6.63                   | -49.49           |
| 5   | 7312.5 PK       | 56.07                   | 74             | -17.93      | -48.87          | -48.8  | 6.63                   | -39.19           |
| 6   | 7312.5 AV       | 45.17                   | 54             | -8.83       | -60.32          | -59.21 | 6.63                   | -50.09           |

Note :

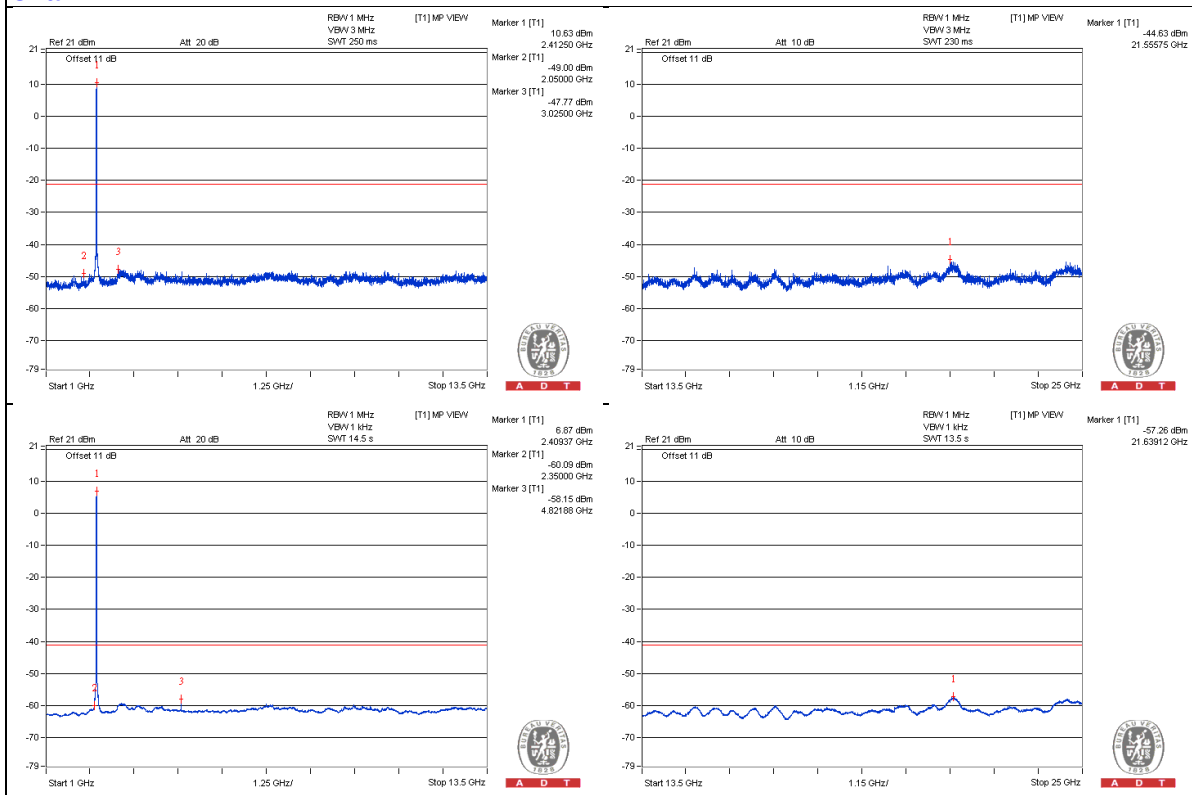
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

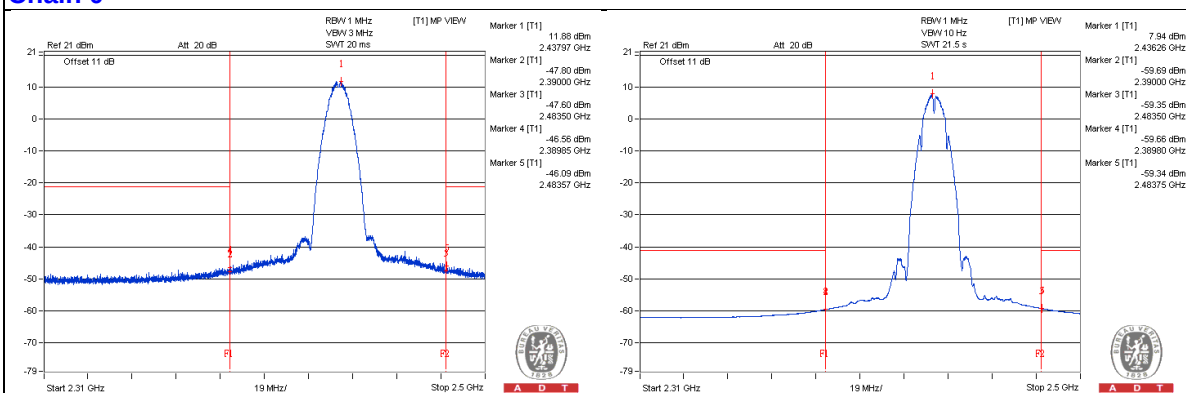
| No. | Frequency (MHz) | Emission Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2388.945 PK     | 58.69                   | 74             | -15.31      | -46.98          | -45.55 | 6.63                   | -36.57           |
| 2   | 2388.8975 AV    | 46.73                   | 54             | -7.27       | -59.84          | -56.96 | 6.63                   | -48.53           |
| 3   | 2483.9925 PK    | 58.57                   | 74             | -15.43      | -46.96          | -45.78 | 6.63                   | -36.69           |
| 4   | 2484.895 AV     | 46.47                   | 54             | -7.53       | -59.47          | -57.59 | 6.63                   | -48.79           |

Note :

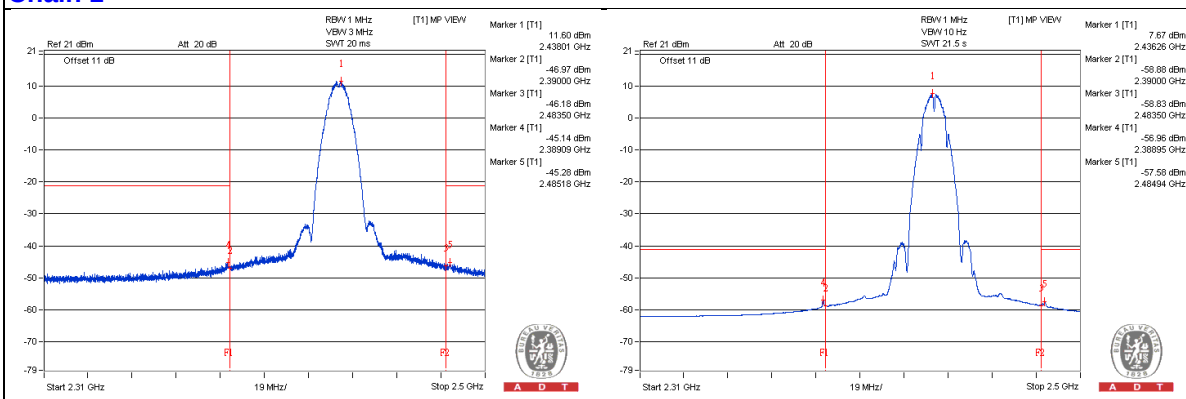
Emission Level (dBUV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### 802.11b - Channel 11

#### Conducted spurious emission table

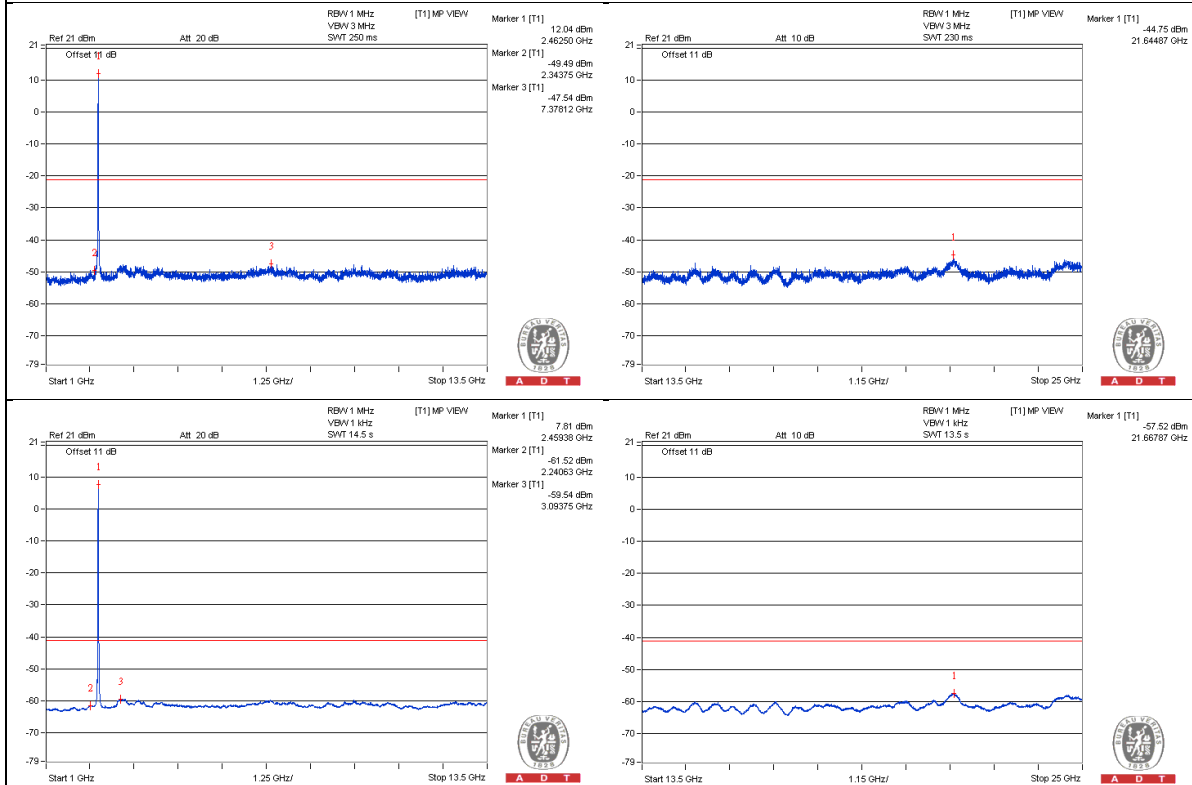
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4925 PK         | 53.89                   | 74             | -20.11      | -51.37          | -50.67 | 6.63                   | -41.37           |
| 2   | 4921.875 AV     | 45.07                   | 54             | -8.93       | -61.64          | -58.55 | 6.63                   | -50.19           |
| 3   | 7384.375 PK     | 56.07                   | 74             | -17.93      | -49.23          | -48.47 | 6.63                   | -39.19           |
| 4   | 7387.5 AV       | 44.75                   | 54             | -9.25       | -60.29          | -60.01 | 6.63                   | -50.51           |

Note :

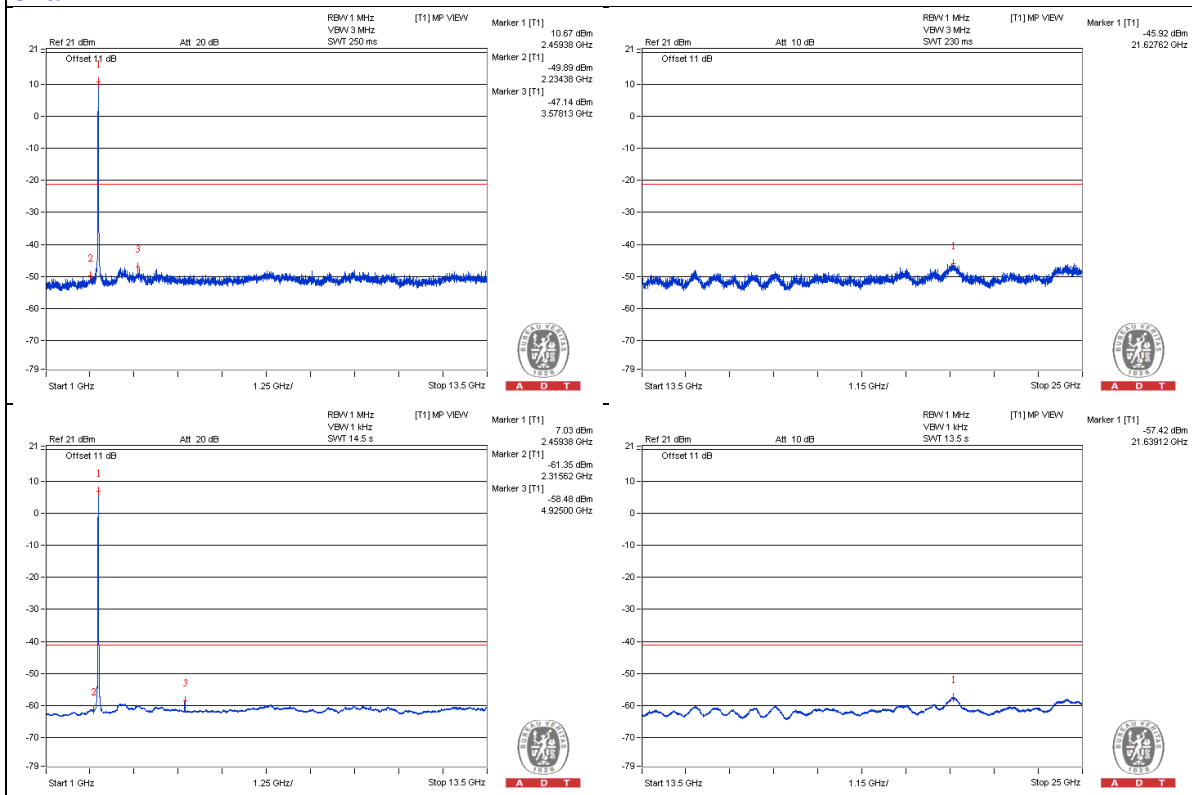
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

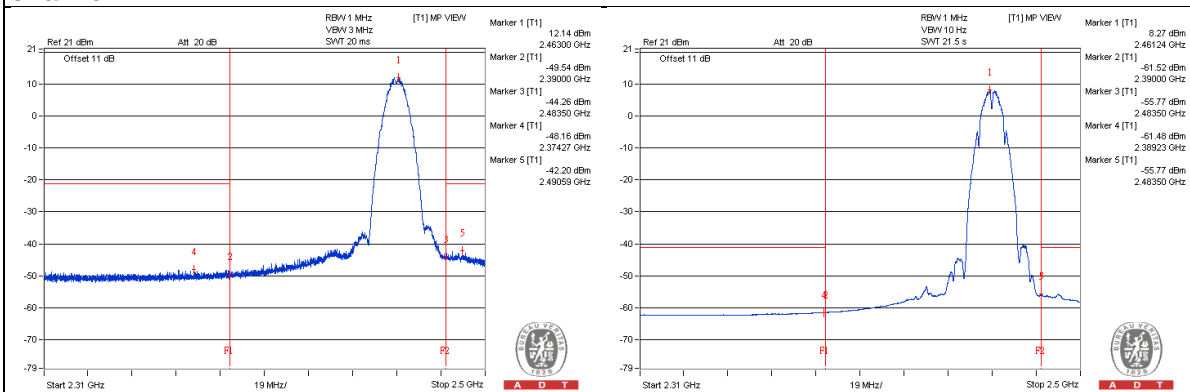
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2387.9 PK       | 56.57                   | 74             | -17.43      | -48.71          | -47.99 | 6.63                   | -38.69           |
| 2   | 2389.23 AV      | 43.53                   | 54             | -10.47      | -61.48          | -61.27 | 6.63                   | -51.73           |
| 3   | 2483.8025 PK    | 61.99                   | 74             | -12.01      | -43.69          | -42.25 | 6.63                   | -33.27           |
| 4   | 2483.5175 AV    | 49.5                    | 54             | -4.5        | -55.78          | -55.05 | 6.63                   | -45.76           |

Note :

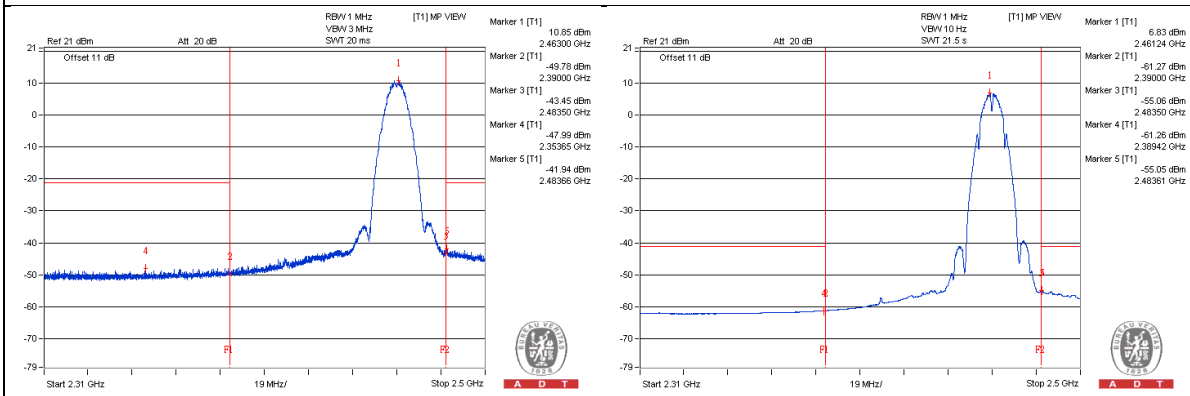
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



### 802.11b - Channel 12

#### Conducted spurious emission table

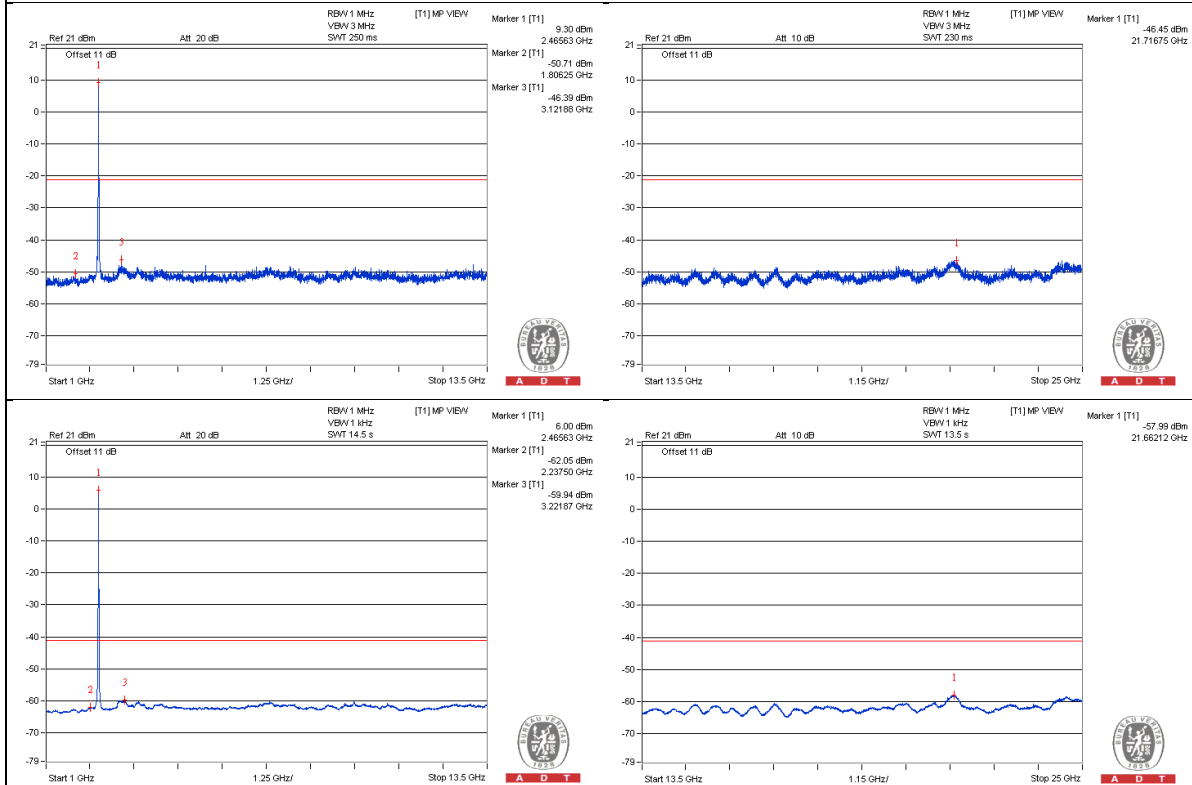
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4934.375 PK     | 53.6                    | 74             | -20.4       | -52.08          | -50.64 | 6.63                   | -41.66           |
| 2   | 4934.375 AV     | 44.13                   | 54             | -9.87       | -62.55          | -59.51 | 6.63                   | -51.13           |
| 3   | 7400 PK         | 54.8                    | 74             | -19.2       | -49.82          | -50.41 | 6.63                   | -40.46           |
| 4   | 7400 AV         | 43.98                   | 54             | -10.02      | -61.02          | -60.83 | 6.63                   | -51.28           |

Note :

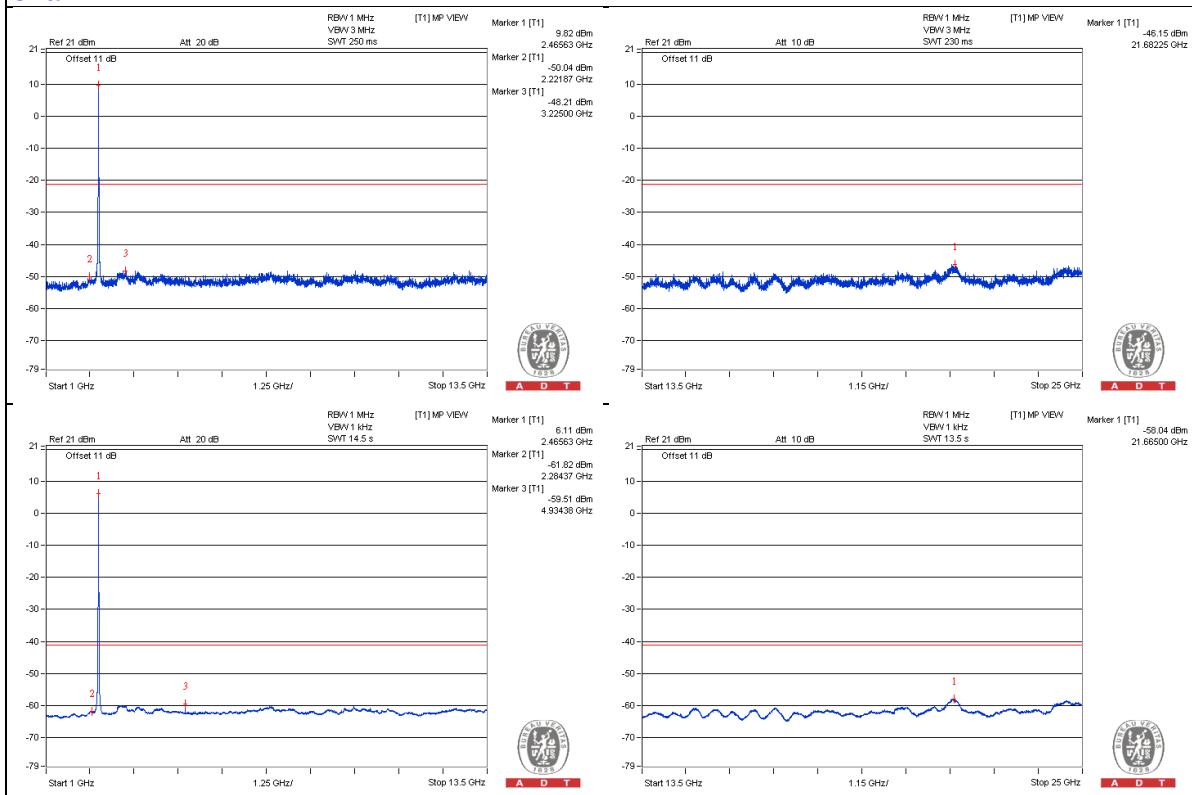
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

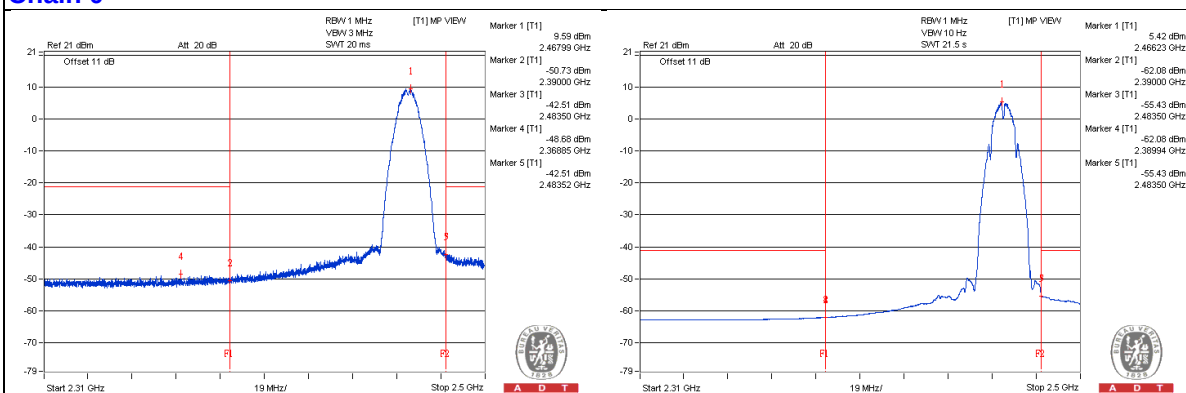
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2372.32 PK      | 55.85                   | 74             | -18.15      | -50.22          | -48.13 | 6.63                   | -39.41           |
| 2   | 2389.99 AV      | 43                      | 54             | -11         | -62.08          | -61.72 | 6.63                   | -52.26           |
| 3   | 2483.5175 PK    | 63.12                   | 74             | -10.88      | -42.51          | -41.16 | 6.63                   | -32.14           |
| 4   | 2483.5175 AV    | 50.92                   | 54             | -3.08       | -55.48          | -52.86 | 6.63                   | -44.34           |

Note :

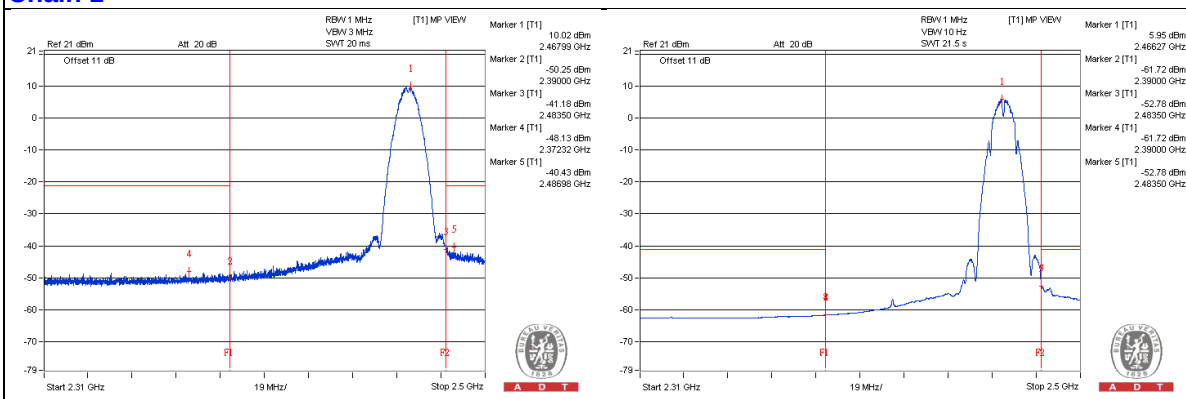
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



### 802.11b - Channel 13

#### Conducted spurious emission table

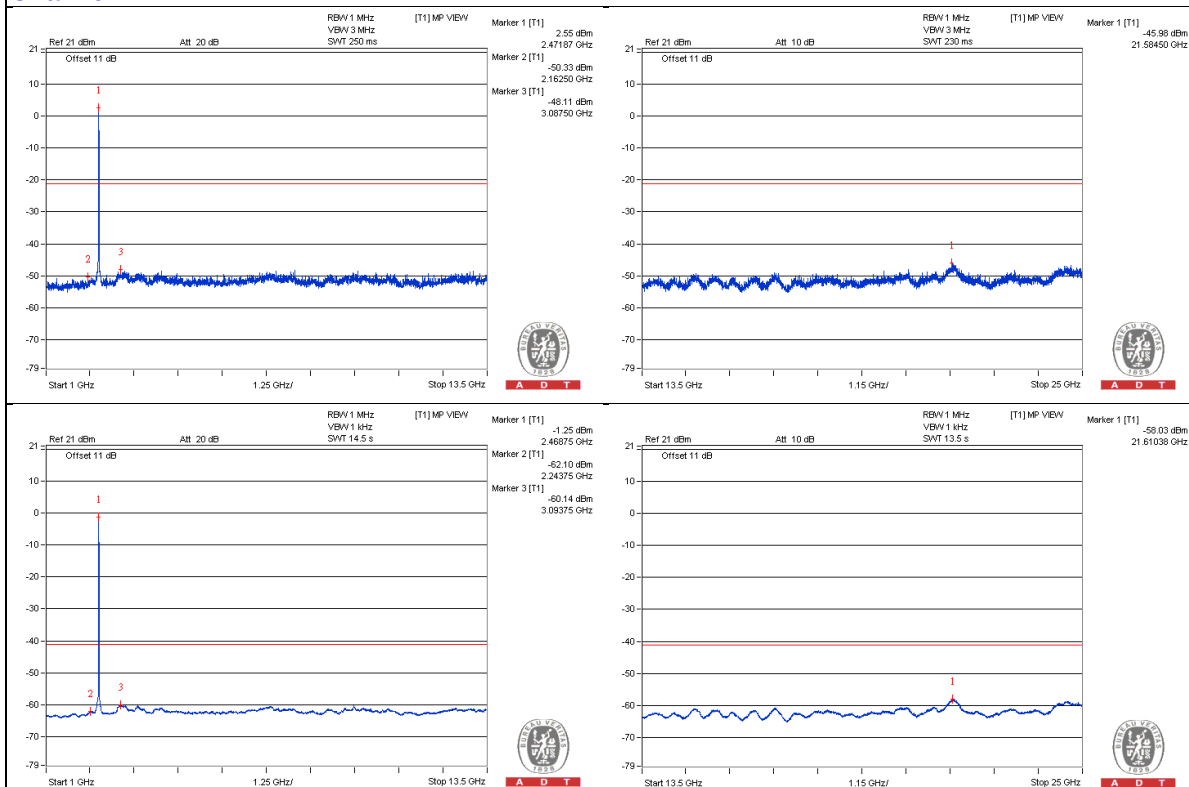
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4943.75 PK      | 52.73                   | 74             | -21.27      | -52.14          | -52.2  | 6.63                   | -42.53           |
| 2   | 4943.75 AV      | 42.35                   | 54             | -11.65      | -62.5           | -62.61 | 6.63                   | -52.91           |
| 3   | 7412.5 PK       | 55.38                   | 74             | -18.62      | -49.21          | -49.86 | 6.63                   | -39.88           |
| 4   | 7418.75 AV      | 44.13                   | 54             | -9.87       | -60.75          | -60.8  | 6.63                   | -51.13           |

Note :

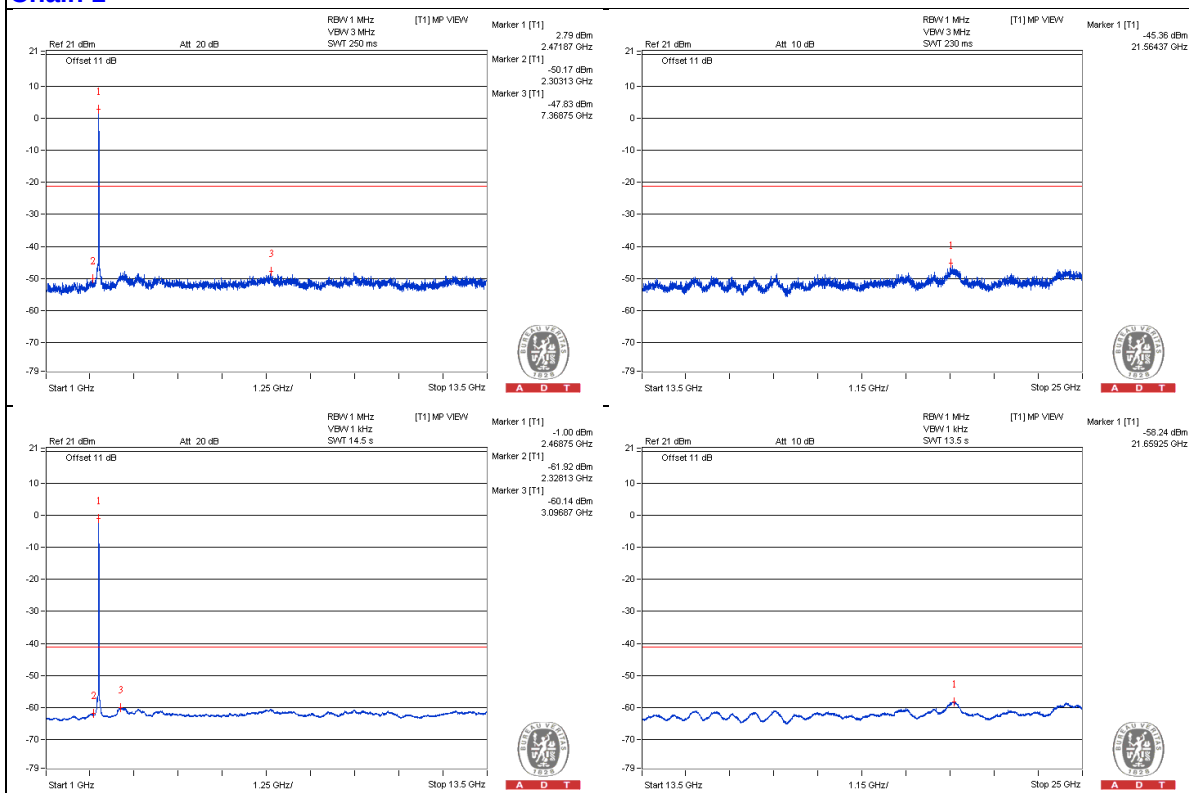
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

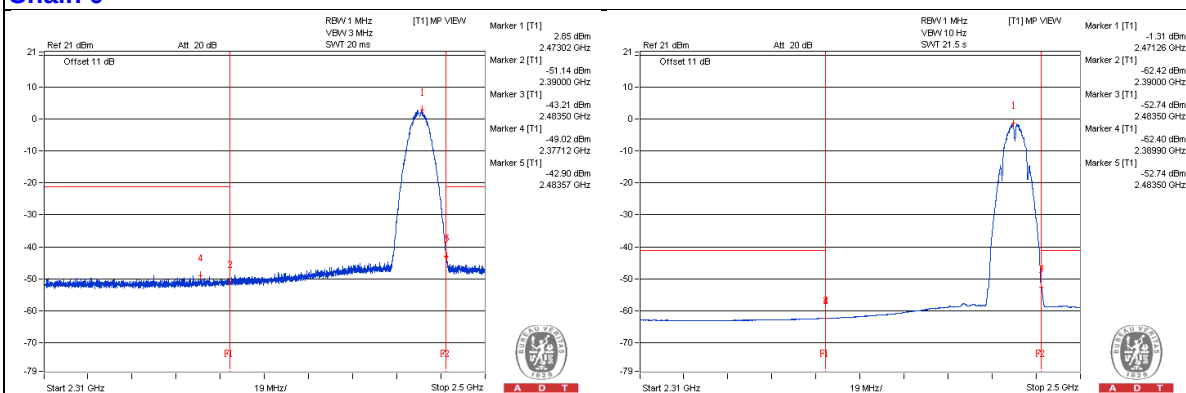
| No. | Frequency (MHz) | Emission Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2381.0125 PK    | 55.66                   | 74             | -18.34      | -49.89          | -48.68 | 6.63                   | -39.6            |
| 2   | 2389.895 AV     | 42.66                   | 54             | -11.34      | -62.4           | -62.08 | 6.63                   | -52.6            |
| 3   | 2483.5175 PK    | 62.79                   | 74             | -11.21      | -43.46          | -41.08 | 6.63                   | -32.47           |
| 4   | 2483.5175 AV    | 51.81                   | 54             | -2.19       | -52.83          | -53.37 | 6.63                   | -43.45           |

Note :

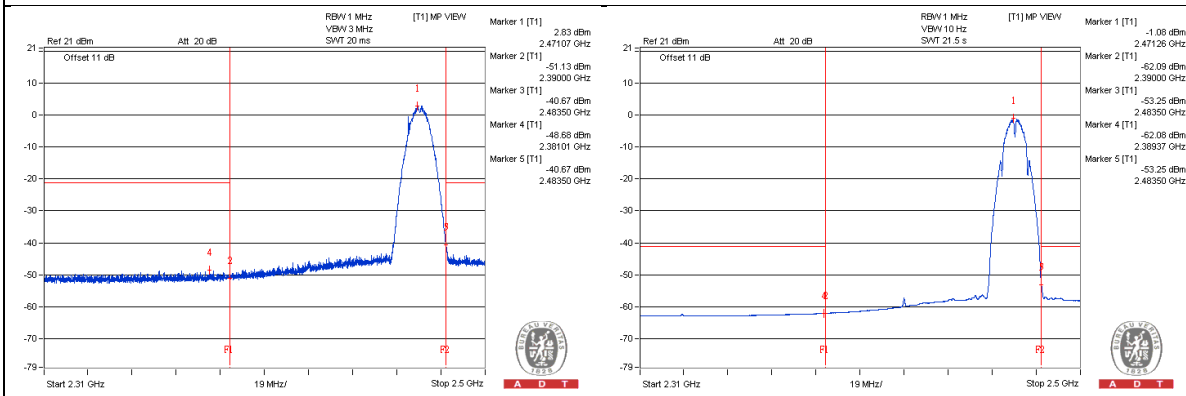
Emission Level (dBUV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### 802.11g - Channel 1

#### Conducted spurious emission table

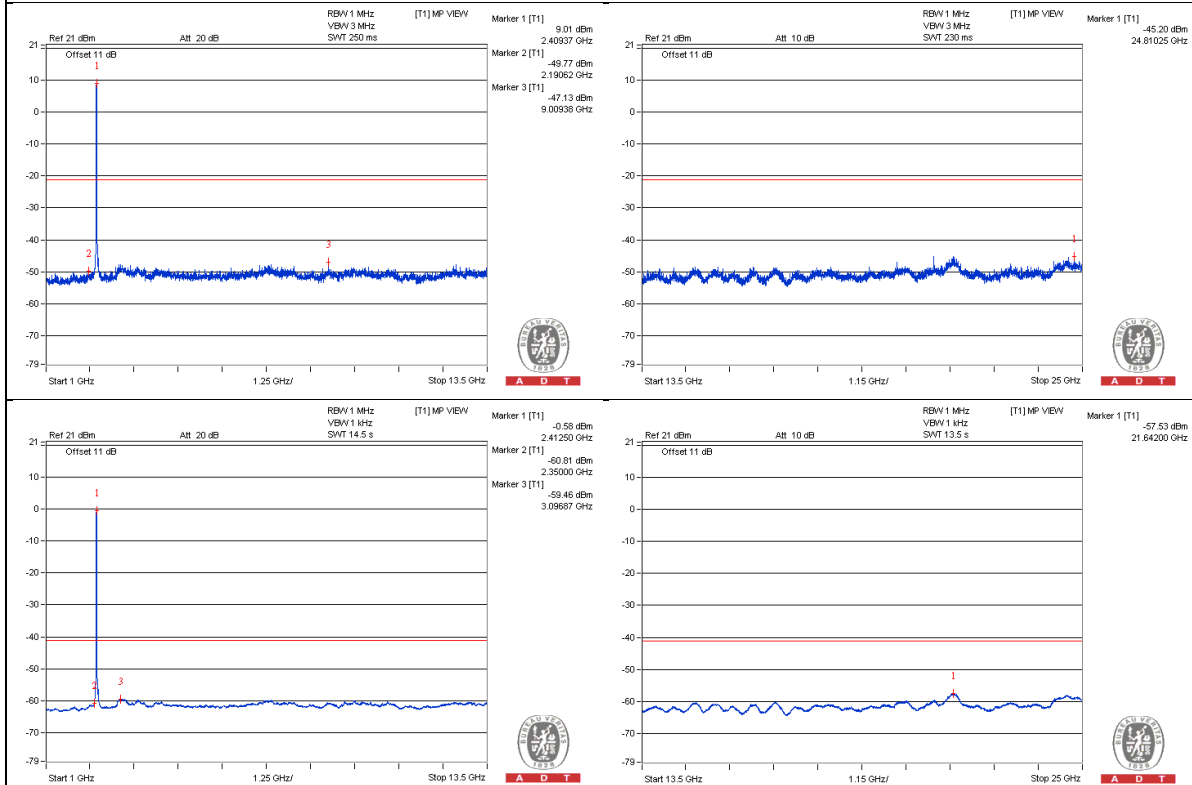
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1609.375 PK     | 52.91                   | 74             | -21.09      | -52.21          | -51.79 | 6.63                   | -42.35           |
| 2   | 1609.375 AV     | 41.85                   | 54             | -12.15      | -63.05          | -63.05 | 6.63                   | -53.41           |
| 3   | 4828.125 PK     | 54.38                   | 74             | -19.62      | -50.76          | -50.3  | 6.63                   | -40.88           |
| 4   | 4828.125 AV     | 43.36                   | 54             | -10.64      | -61.41          | -61.68 | 6.63                   | -51.9            |

Note :

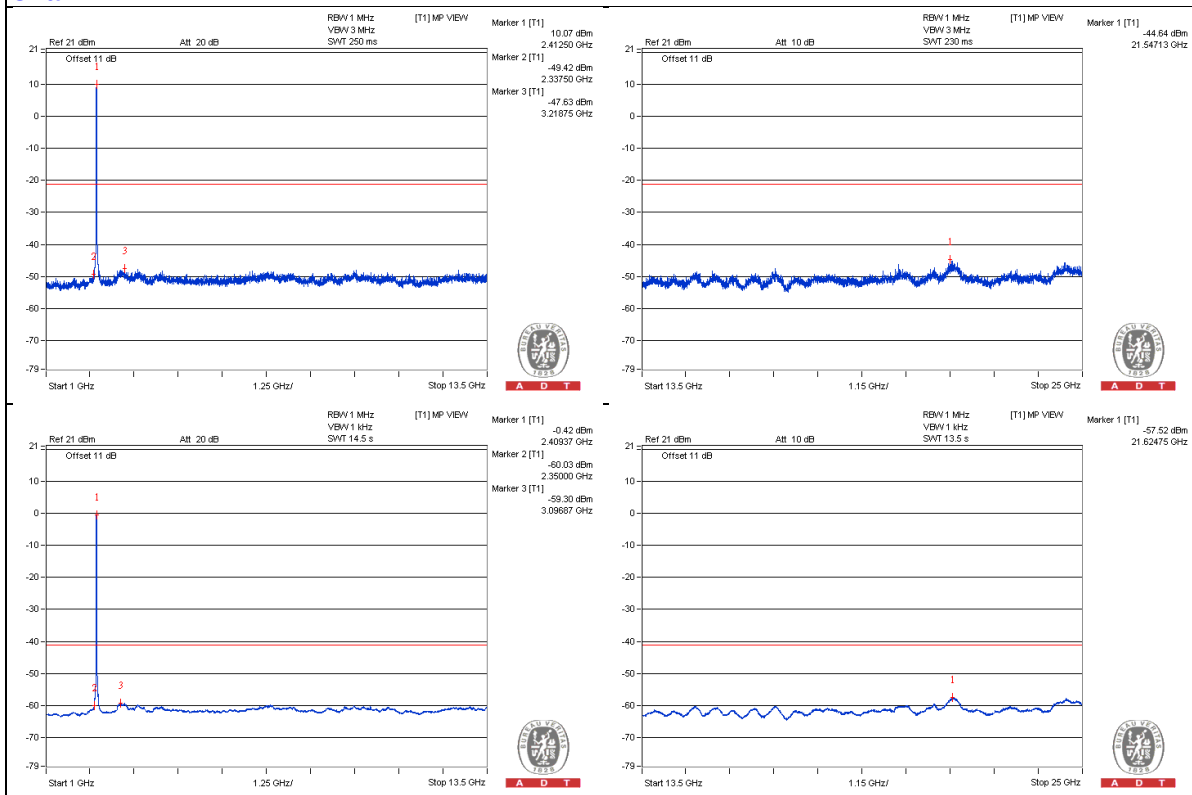
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

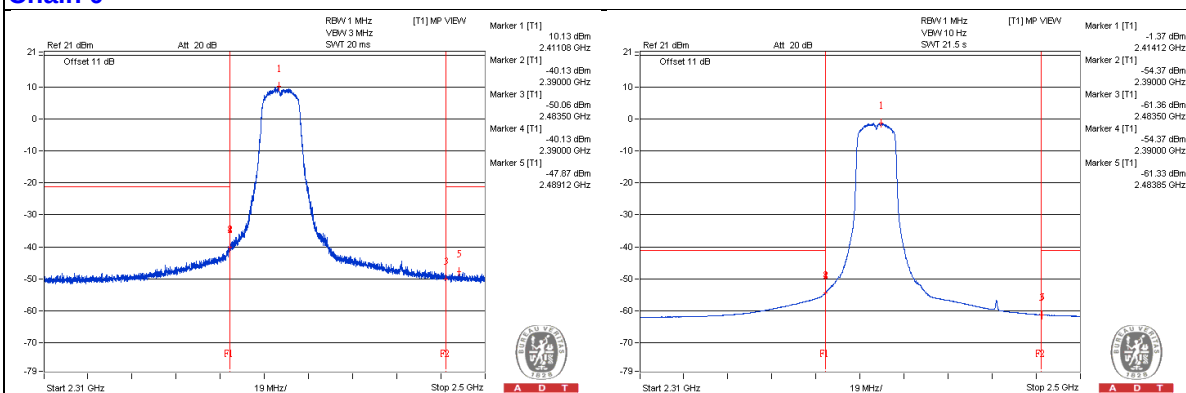
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.705 PK     | 65.5                    | 74             | -8.5        | -40.2           | -38.73 | 6.63                   | -29.76           |
| 2   | 2389.99 AV      | 51.08                   | 54             | -2.92       | -54.37          | -53.33 | 6.63                   | -44.18           |
| 3   | 2491.4975 PK    | 56.55                   | 74             | -17.45      | -48.37          | -48.33 | 6.63                   | -38.71           |
| 4   | 2483.5175 AV    | 43.75                   | 54             | -10.25      | -61.37          | -60.94 | 6.63                   | -51.51           |

Note :

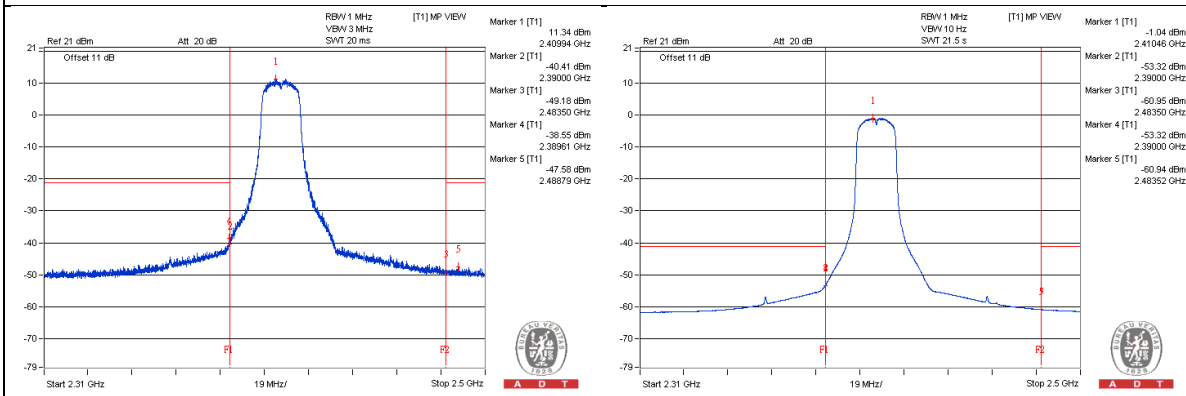
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### 802.11g - Channel 6

#### Conducted spurious emission table

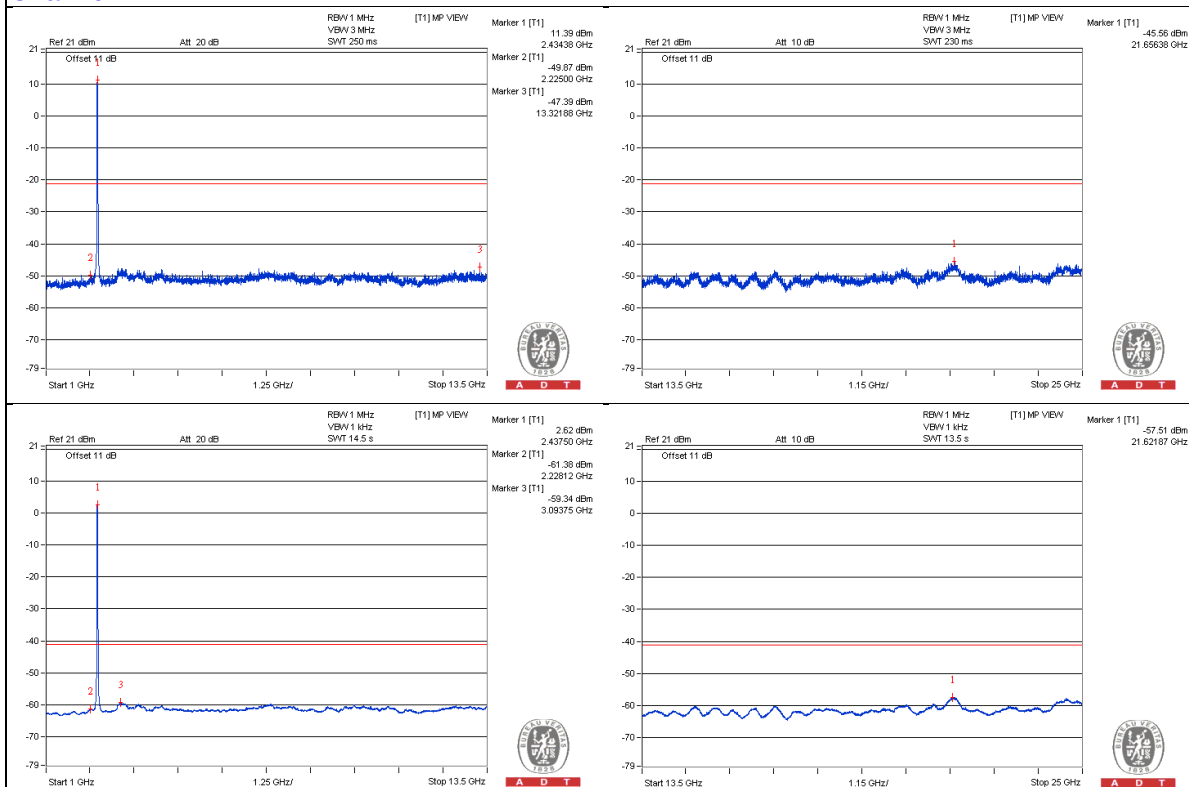
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1625 PK         | 51.75                   | 74             | -22.25      | -53.08          | -53.23 | 6.63                   | -43.51           |
| 2   | 1625 AV         | 41.85                   | 54             | -12.15      | -63.04          | -63.06 | 6.63                   | -53.41           |
| 3   | 4871.875 PK     | 54.29                   | 74             | -19.71      | -50.18          | -51.08 | 6.63                   | -40.97           |
| 4   | 4871.875 AV     | 43.45                   | 54             | -10.55      | -61.64          | -61.26 | 6.63                   | -51.81           |
| 5   | 7315.625 PK     | 55.77                   | 74             | -18.23      | -49.16          | -49.11 | 6.63                   | -39.49           |
| 6   | 7315.625 AV     | 44.87                   | 54             | -9.13       | -60.31          | -59.77 | 6.63                   | -50.39           |

Note :

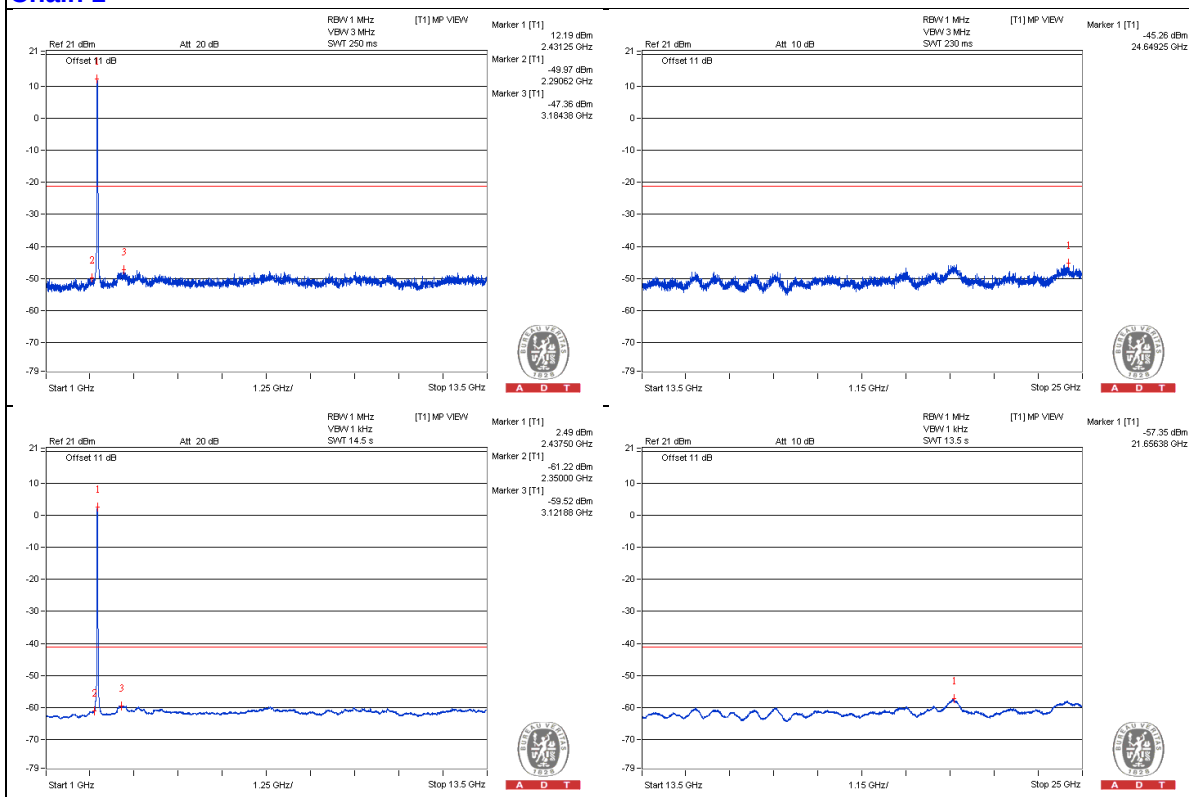
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

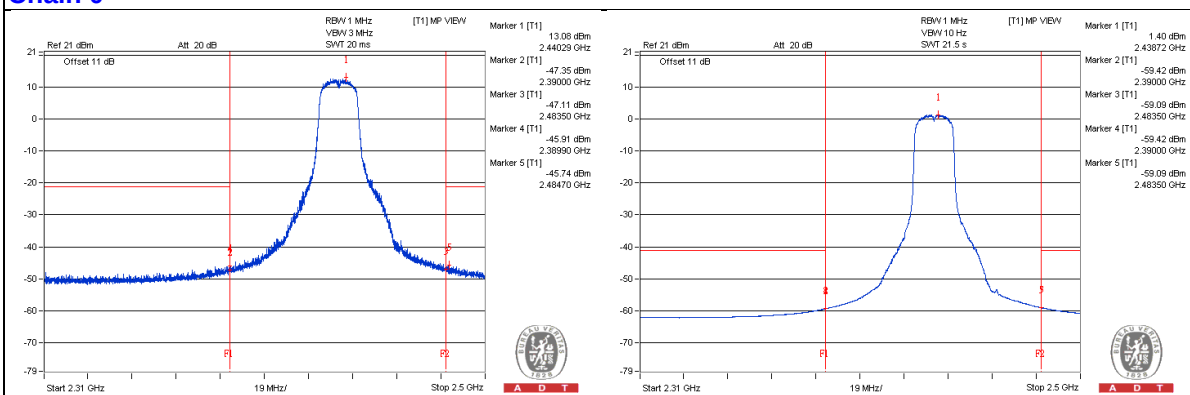
| No. | Frequency (MHz) | Emission Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.99 PK      | 58.97                   | 74             | -15.03      | -47.28          | -44.9  | 6.63                   | -36.29           |
| 2   | 2388.9925 AV    | 46.87                   | 54             | -7.13       | -59.57          | -56.9  | 6.63                   | -48.39           |
| 3   | 2484.705 PK     | 59.19                   | 74             | -14.81      | -45.74          | -45.68 | 6.63                   | -36.07           |
| 4   | 2484.99 AV      | 46.83                   | 54             | -7.17       | -59.33          | -57.09 | 6.63                   | -48.43           |

Note :

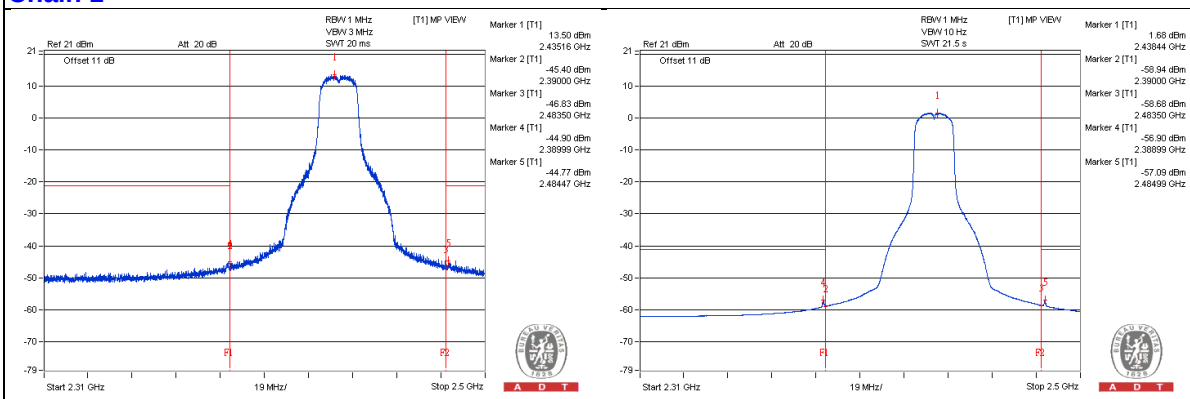
Emission Level (dBUV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



### 802.11g - Channel 11

#### Conducted spurious emission table

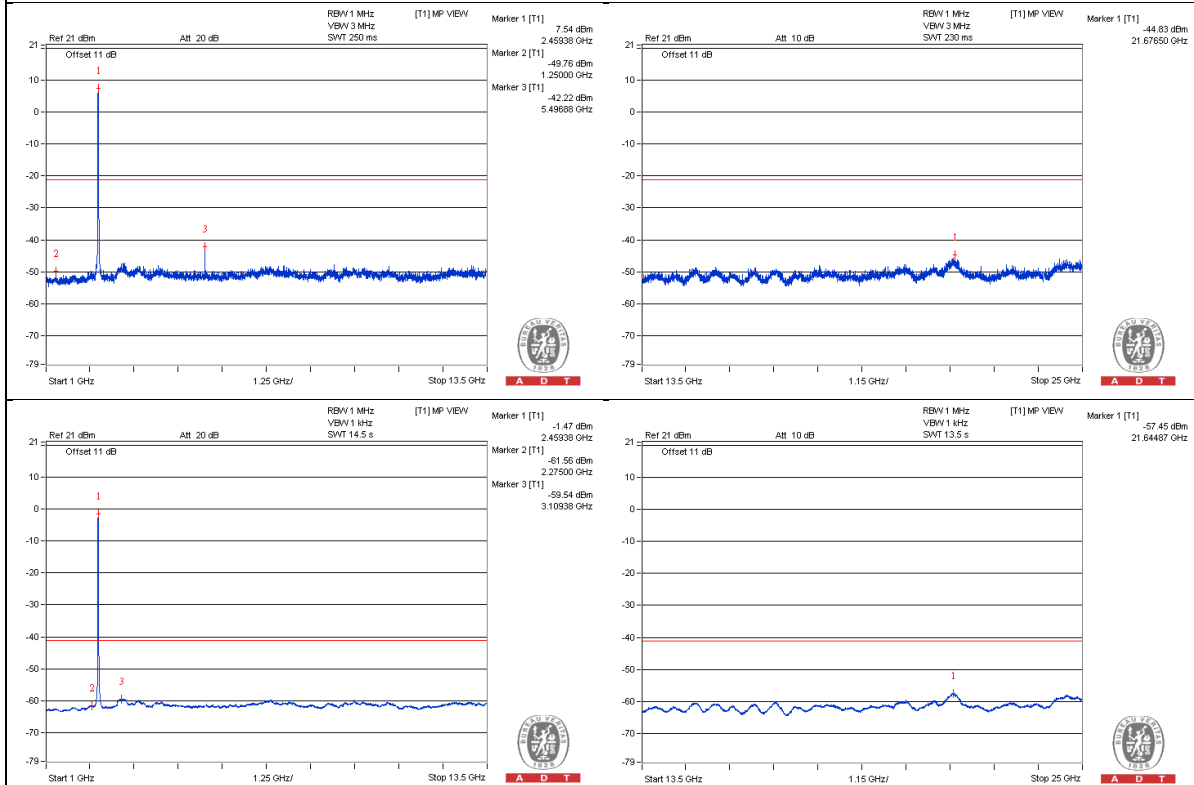
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4925 PK         | 52.83                   | 74             | -21.17      | -51.96          | -52.19 | 6.63                   | -42.43           |
| 2   | 4925 AV         | 43                      | 54             | -11         | -62.08          | -61.73 | 6.63                   | -52.26           |
| 3   | 7384.375 PK     | 56.01                   | 74             | -17.99      | -49.04          | -48.74 | 6.63                   | -39.25           |
| 4   | 7381.25 AV      | 44.76                   | 54             | -9.24       | -60.24          | -60.04 | 6.63                   | -50.5            |

Note :

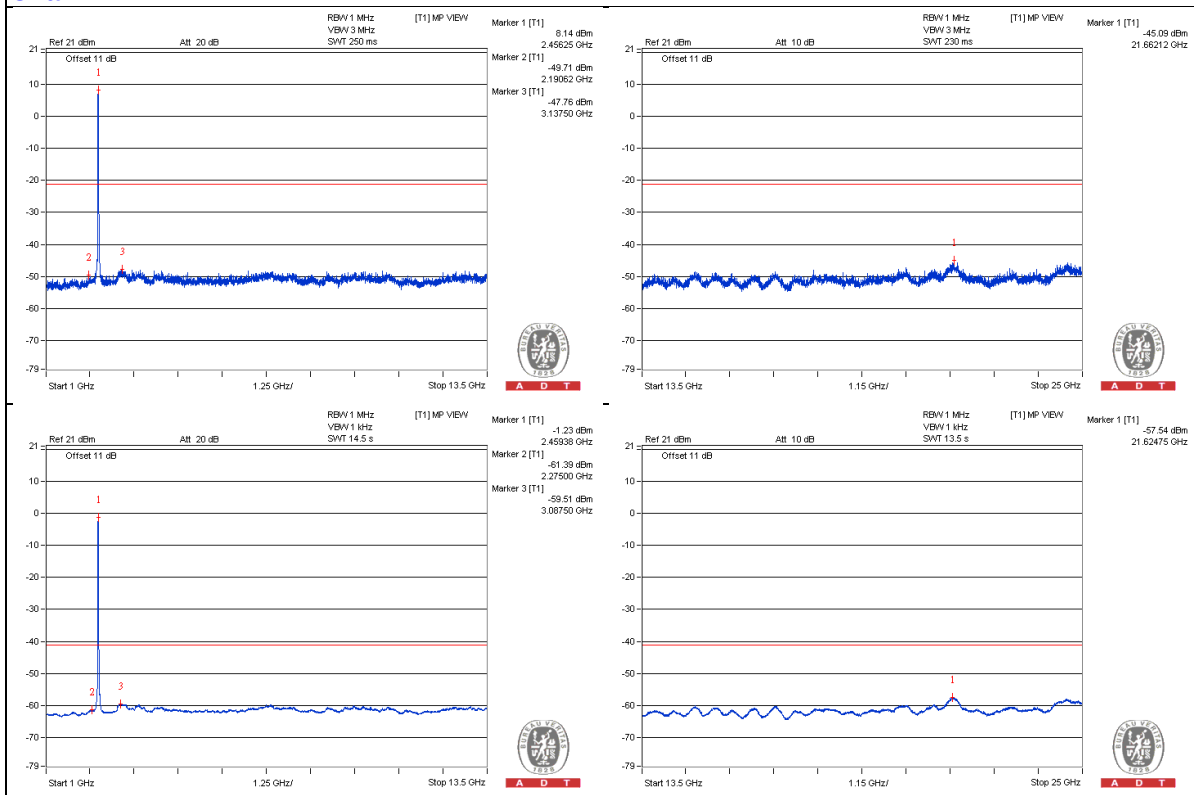
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

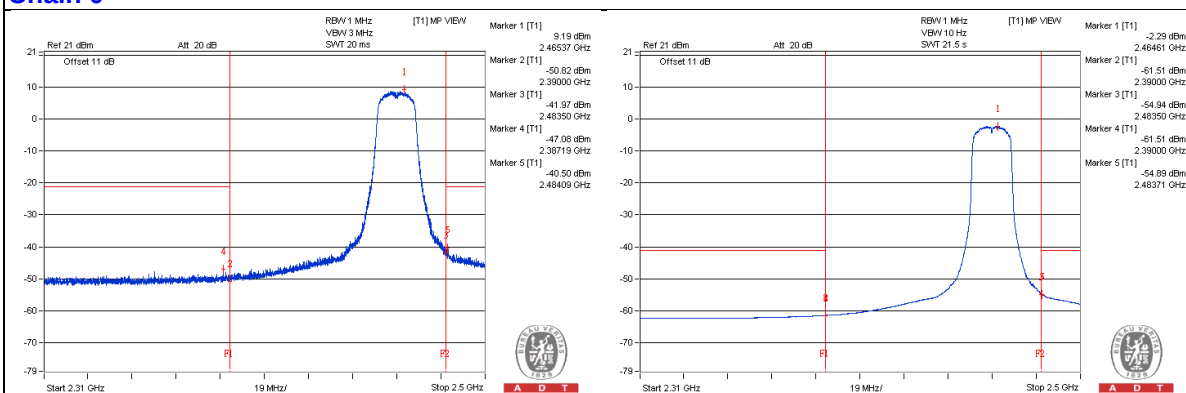
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2387.1875 PK    | 56.72                   | 74             | -17.28      | -47.08          | -49.67 | 6.63                   | -38.54           |
| 2   | 2389.99 AV      | 43.57                   | 54             | -10.43      | -61.51          | -61.16 | 6.63                   | -51.69           |
| 3   | 2483.5175 PK    | 65.53                   | 74             | -8.47       | -41.56          | -37.92 | 6.63                   | -29.73           |
| 4   | 2483.5175 AV    | 51.3                    | 54             | -2.7        | -54.98          | -52.56 | 6.63                   | -43.96           |

Note :

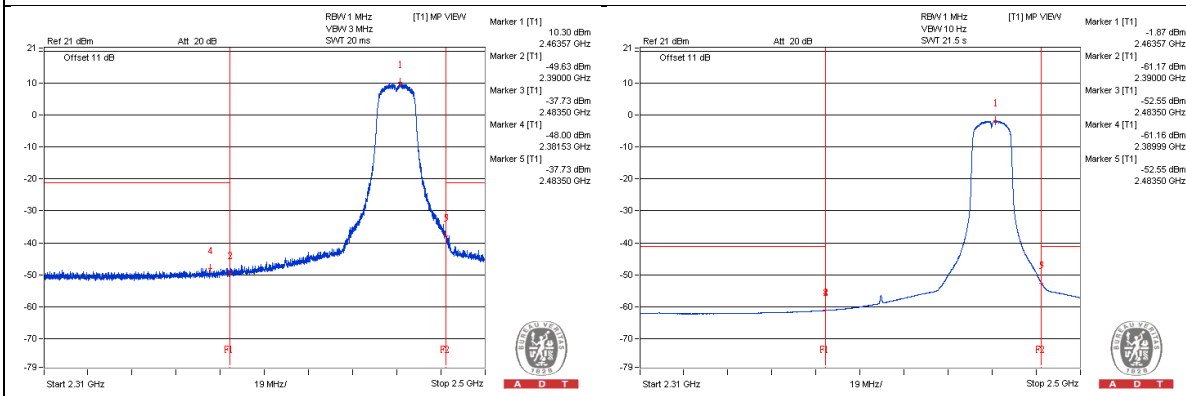
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### 802.11g - Channel 12

#### Conducted spurious emission table

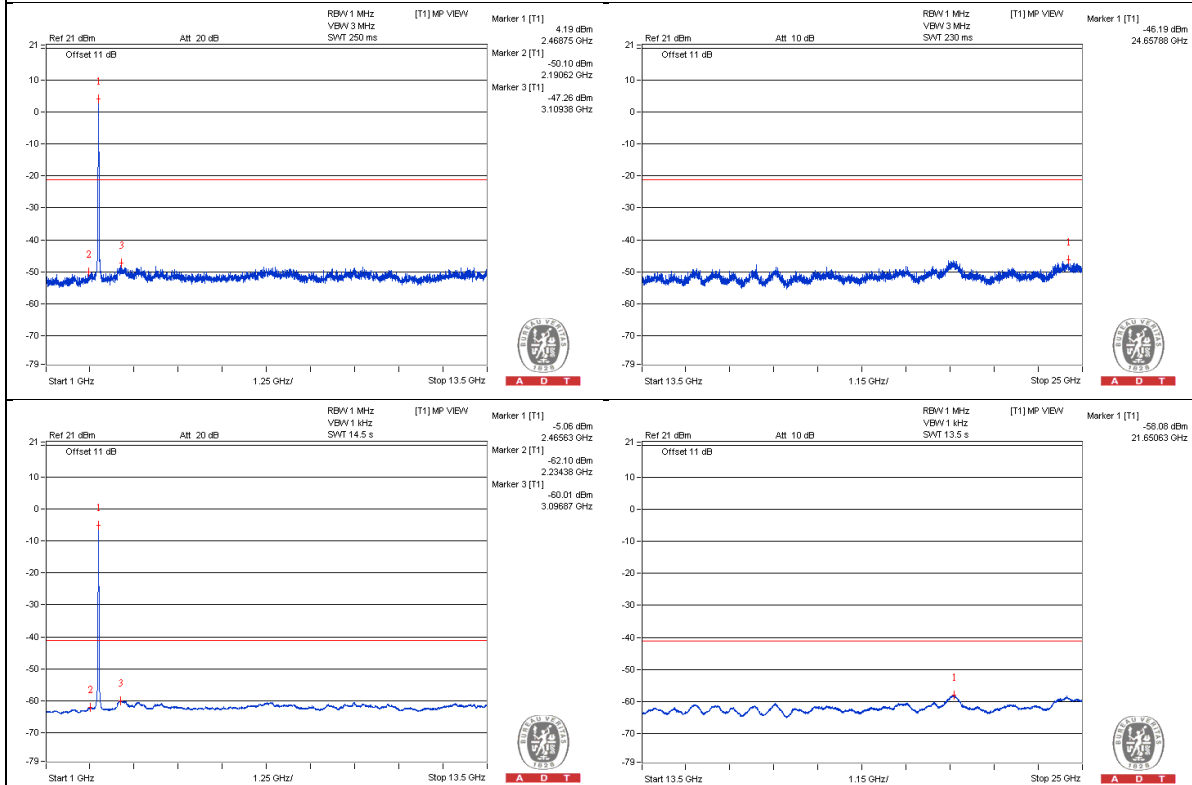
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4931.25 PK      | 53.55                   | 74             | -20.45      | -51.02          | -51.71 | 6.63                   | -41.71           |
| 2   | 4934.375 AV     | 42.38                   | 54             | -11.62      | -62.64          | -62.41 | 6.63                   | -52.88           |
| 3   | 7400 PK         | 54.6                    | 74             | -19.4       | -50.63          | -50    | 6.63                   | -40.66           |
| 4   | 7400 AV         | 43.85                   | 54             | -10.15      | -61.14          | -60.97 | 6.63                   | -51.41           |

Note :

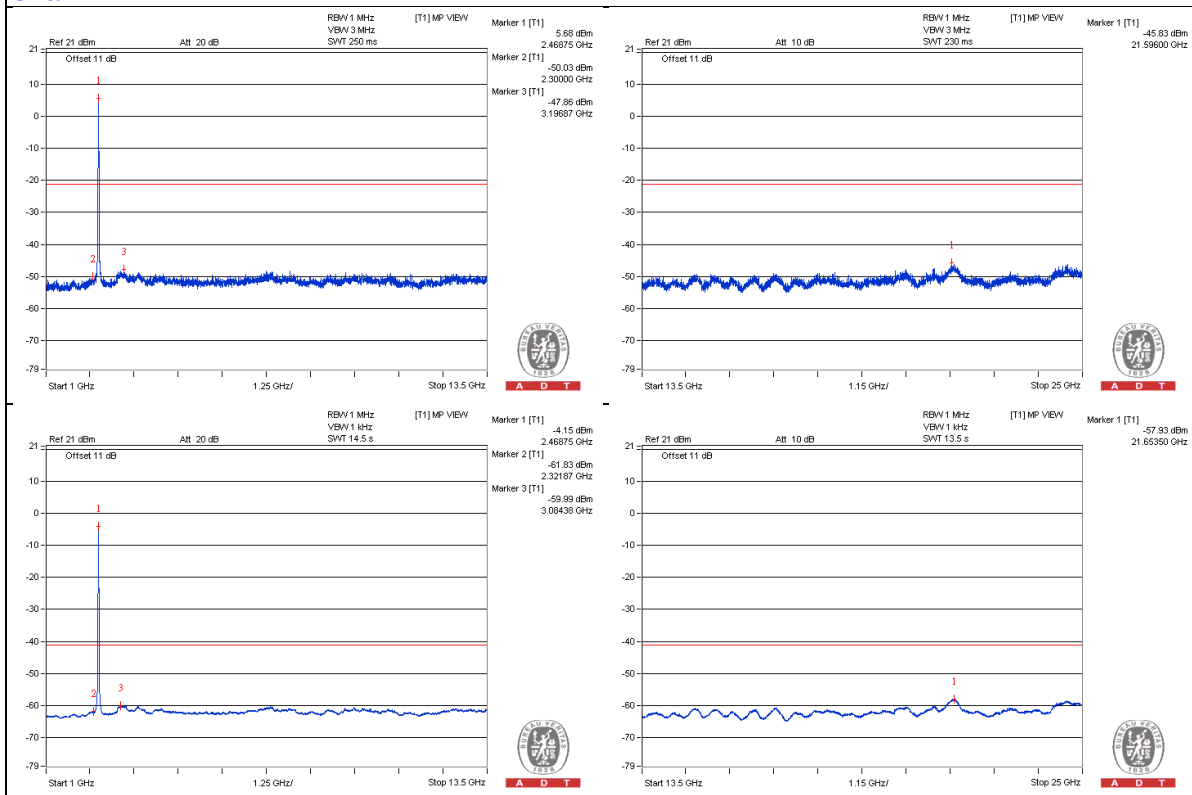
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

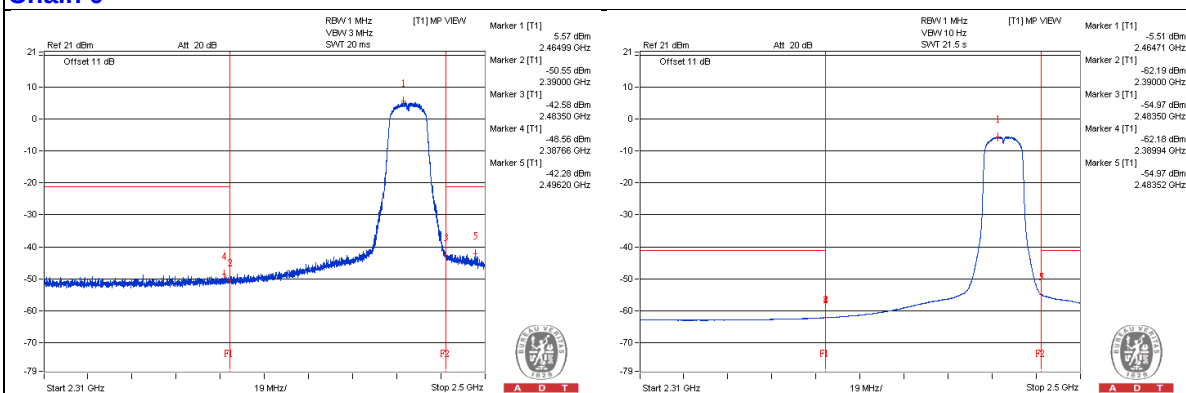
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.0875 PK    | 55.66                   | 74             | -18.34      | -50.05          | -48.56 | 6.63                   | -39.6            |
| 2   | 2389.8475 AV    | 42.97                   | 54             | -11.03      | -62.18          | -61.7  | 6.63                   | -52.29           |
| 3   | 2483.6125 PK    | 64.88                   | 74             | -9.12       | -43.1           | -38.23 | 6.63                   | -30.38           |
| 4   | 2483.5175 AV    | 51.65                   | 54             | -2.35       | -54.97          | -52.02 | 6.63                   | -43.61           |

Note :

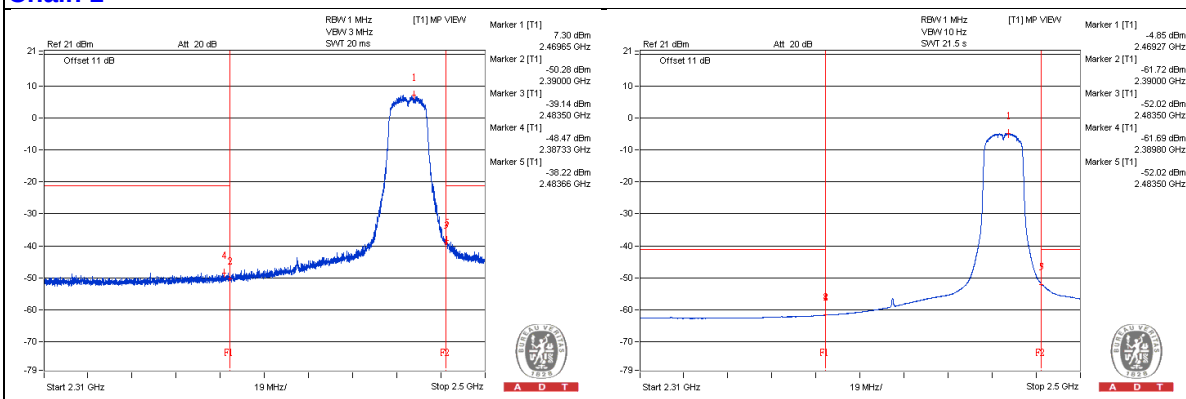
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



### 802.11g - Channel 13

#### Conducted spurious emission table

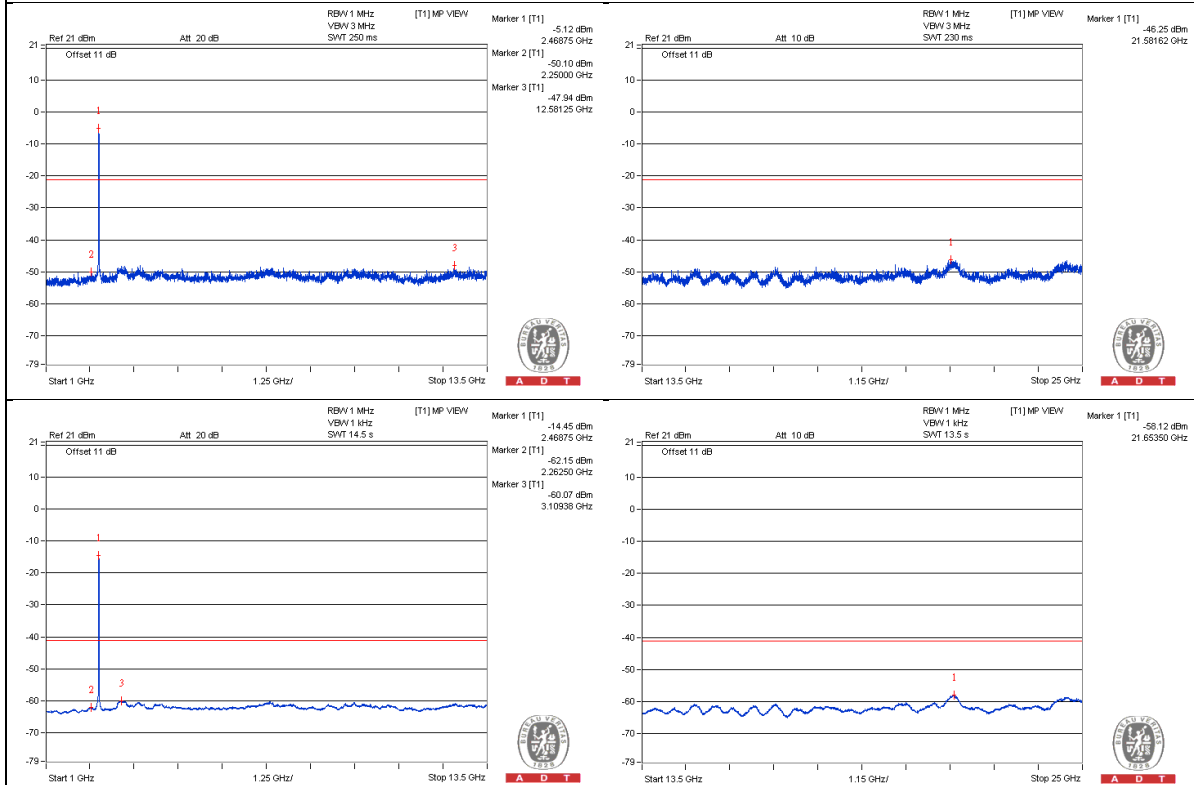
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4946.875 PK     | 52.52                   | 74             | -21.48      | -52.39          | -52.37 | 6.63                   | -42.74           |
| 2   | 4940.625 AV     | 42.42                   | 54             | -11.58      | -62.43          | -62.54 | 6.63                   | -52.84           |
| 3   | 7415.625 PK     | 55.1                    | 74             | -18.9       | -49.81          | -49.79 | 6.63                   | -40.16           |
| 4   | 7415.625 AV     | 44.1                    | 54             | -9.9        | -60.65          | -60.96 | 6.63                   | -51.16           |

Note :

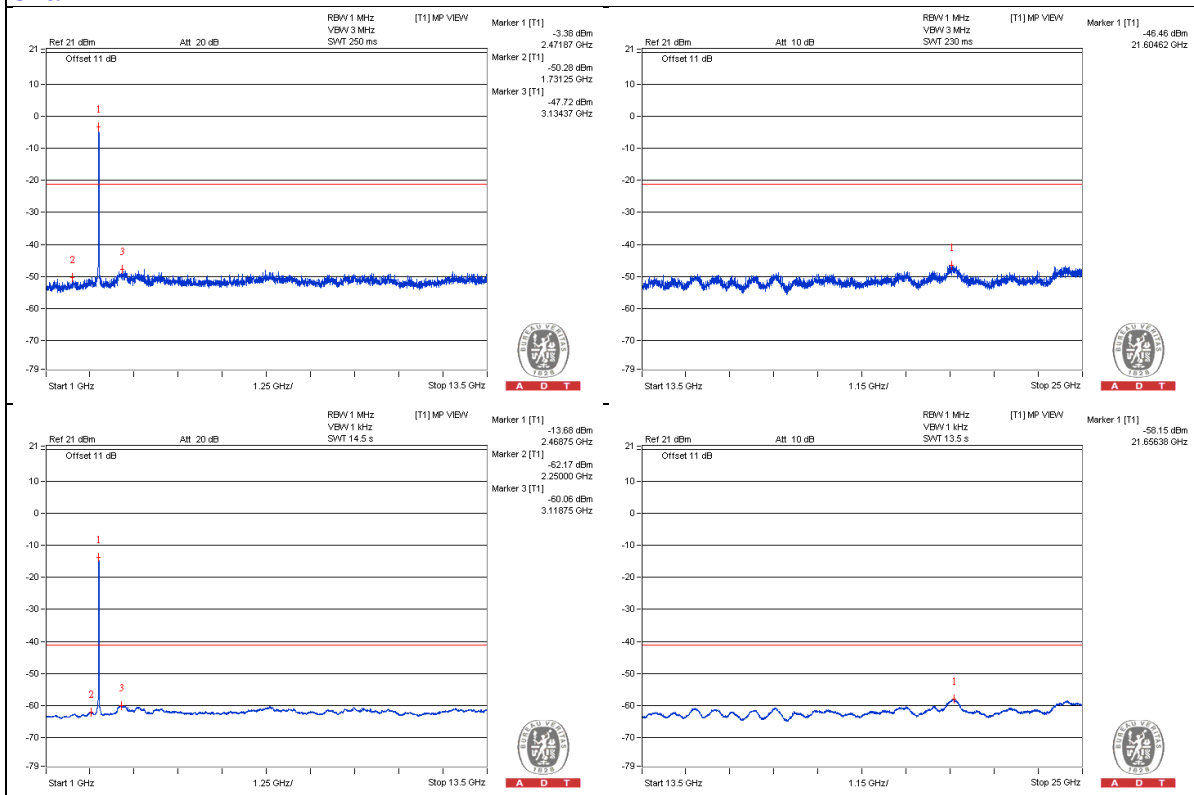
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

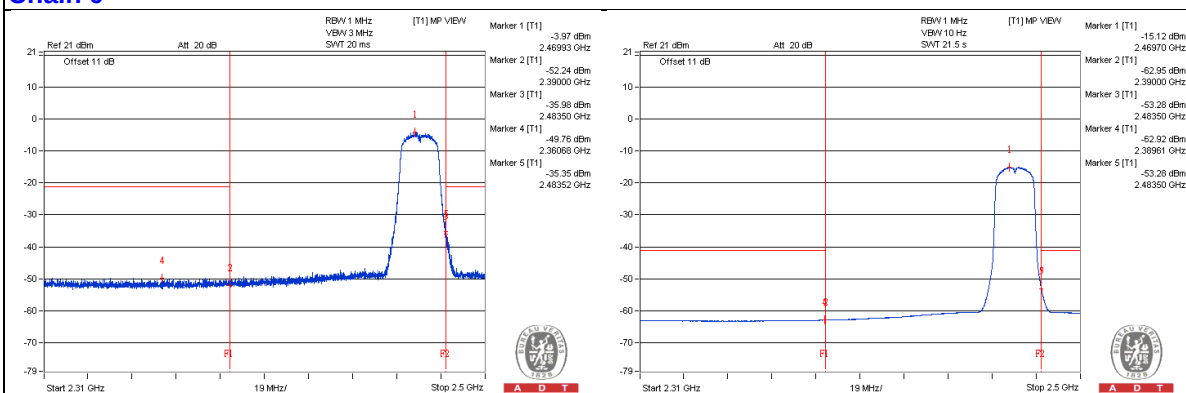
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2387.4725 PK    | 54.57                   | 74             | -19.43      | -50.66          | -50.02 | 6.63                   | -40.69           |
| 2   | 2389.5625 AV    | 41.89                   | 54             | -12.11      | -62.92          | -63.11 | 6.63                   | -53.37           |
| 3   | 2483.5175 PK    | 69.05                   | 74             | -4.95       | -35.35          | -36.42 | 6.63                   | -26.21           |
| 4   | 2483.5175 AV    | 51.94                   | 54             | -2.06       | -53.37          | -52.59 | 6.63                   | -43.32           |

Note :

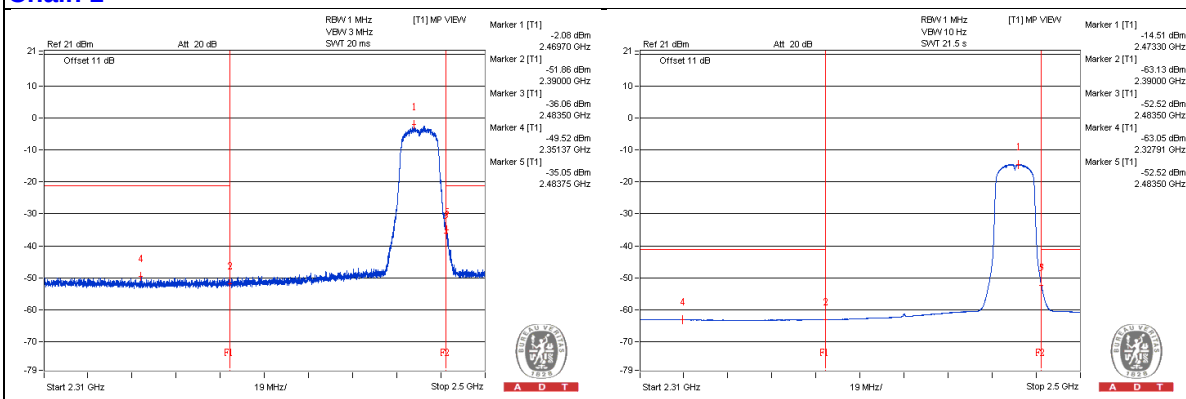
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



# VHT20 - Channel 1

## Conducted spurious emission table

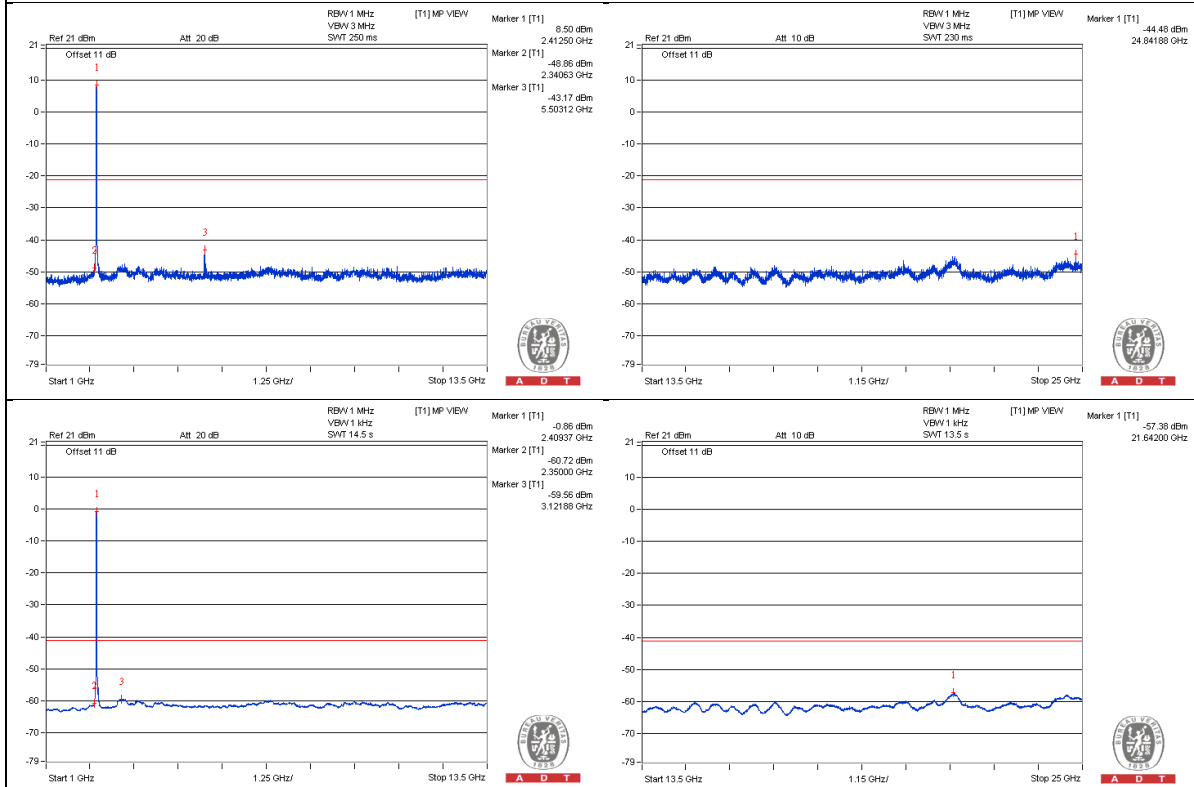
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1609.375 PK     | 51.58                   | 74             | -22.42      | -53.19          | -53.45 | 6.63                   | -43.68           |
| 2   | 1606.25 AV      | 41.76                   | 54             | -12.24      | -63.16          | -63.12 | 6.63                   | -53.5            |
| 3   | 4821.875 PK     | 54.56                   | 74             | -19.44      | -49.95          | -50.77 | 6.63                   | -40.7            |
| 4   | 4821.875 AV     | 43.47                   | 54             | -10.53      | -61.61          | -61.26 | 6.63                   | -51.79           |

Note :

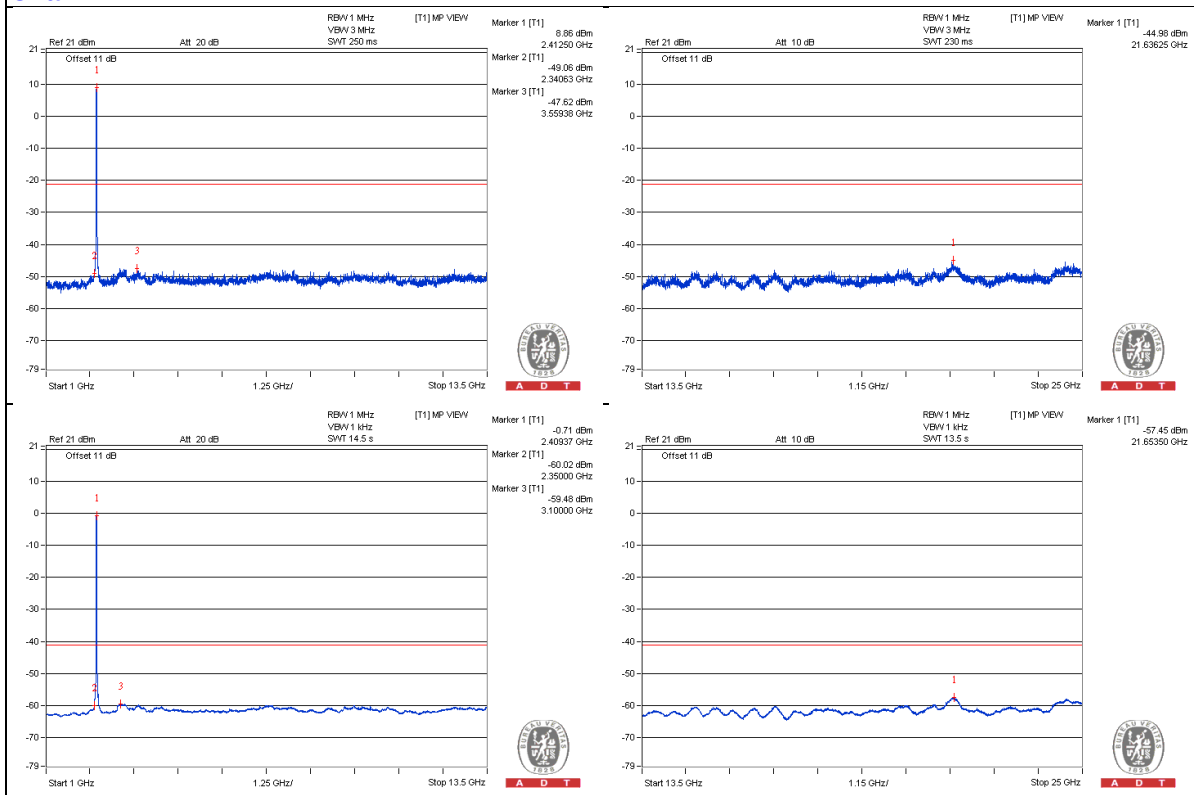
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

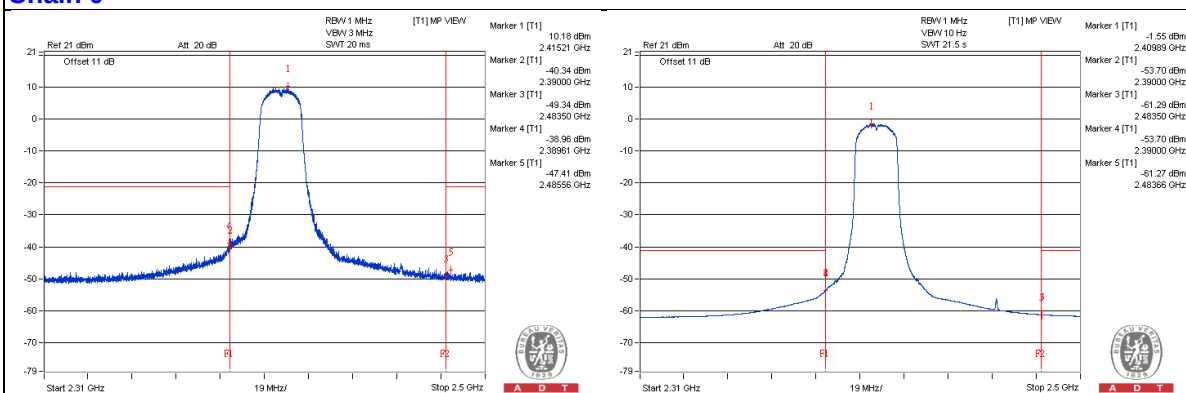
| No. | Frequency (MHz) | Emission Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.61 PK      | 66.35                   | 74             | -7.65       | -38.96          | -38.17 | 6.63                   | -28.91           |
| 2   | 2389.99 AV      | 51.83                   | 54             | -2.17       | -53.71          | -52.52 | 6.63                   | -43.43           |
| 3   | 2485.56 PK      | 56.91                   | 74             | -17.09      | -47.41          | -48.65 | 6.63                   | -38.35           |
| 4   | 2483.5175 AV    | 43.81                   | 54             | -10.19      | -61.28          | -60.91 | 6.63                   | -51.45           |

Note :

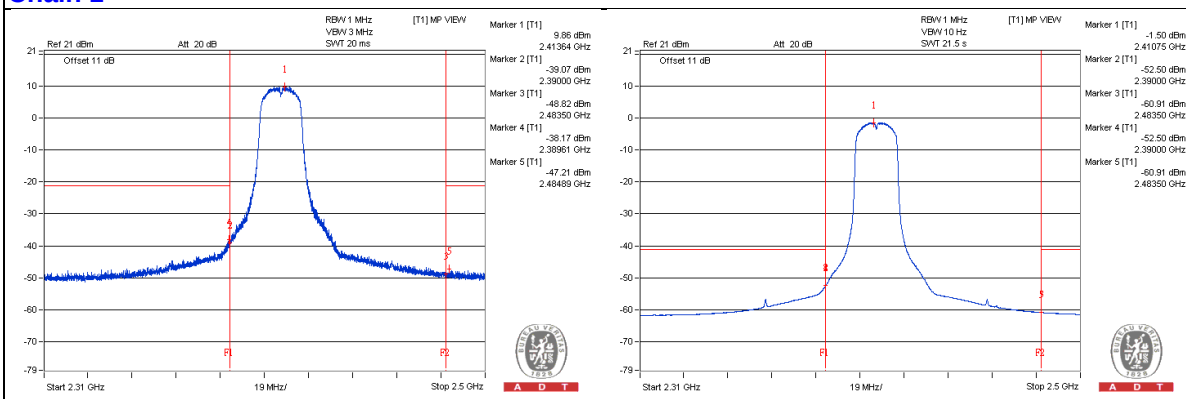
Emission Level (dBUV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



## VHT20 - Channel 6

### Conducted spurious emission table

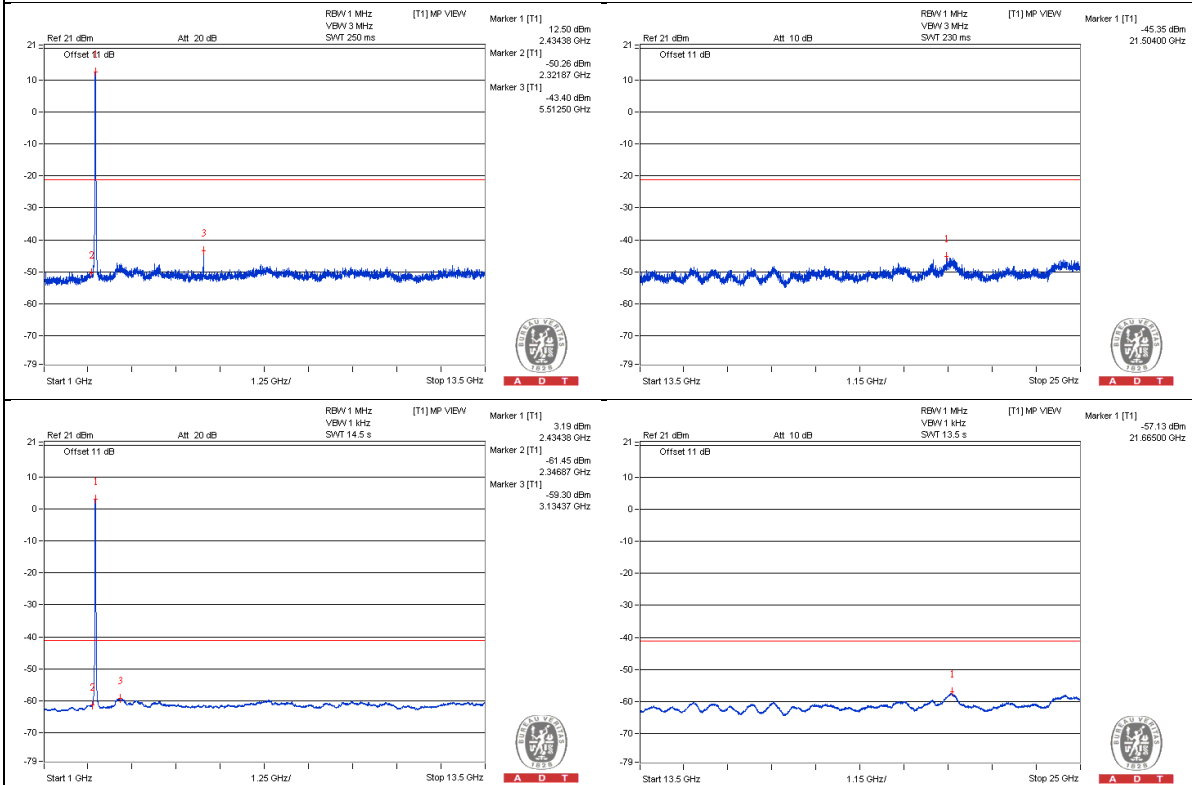
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1625 PK         | 52.09                   | 74             | -21.91      | -53.74          | -52.05 | 6.63                   | -43.17           |
| 2   | 1625 AV         | 41.89                   | 54             | -12.11      | -63.02          | -63    | 6.63                   | -53.37           |
| 3   | 4875 PK         | 53.36                   | 74             | -20.64      | -51.74          | -51.34 | 6.63                   | -41.9            |
| 4   | 4875 AV         | 43.24                   | 54             | -10.76      | -61.75          | -61.58 | 6.63                   | -52.02           |
| 5   | 7312.5 PK       | 55.69                   | 74             | -18.31      | -49.49          | -48.95 | 6.63                   | -39.57           |
| 6   | 7315.625 AV     | 44.97                   | 54             | -9.03       | -60.26          | -59.62 | 6.63                   | -50.29           |

Note :

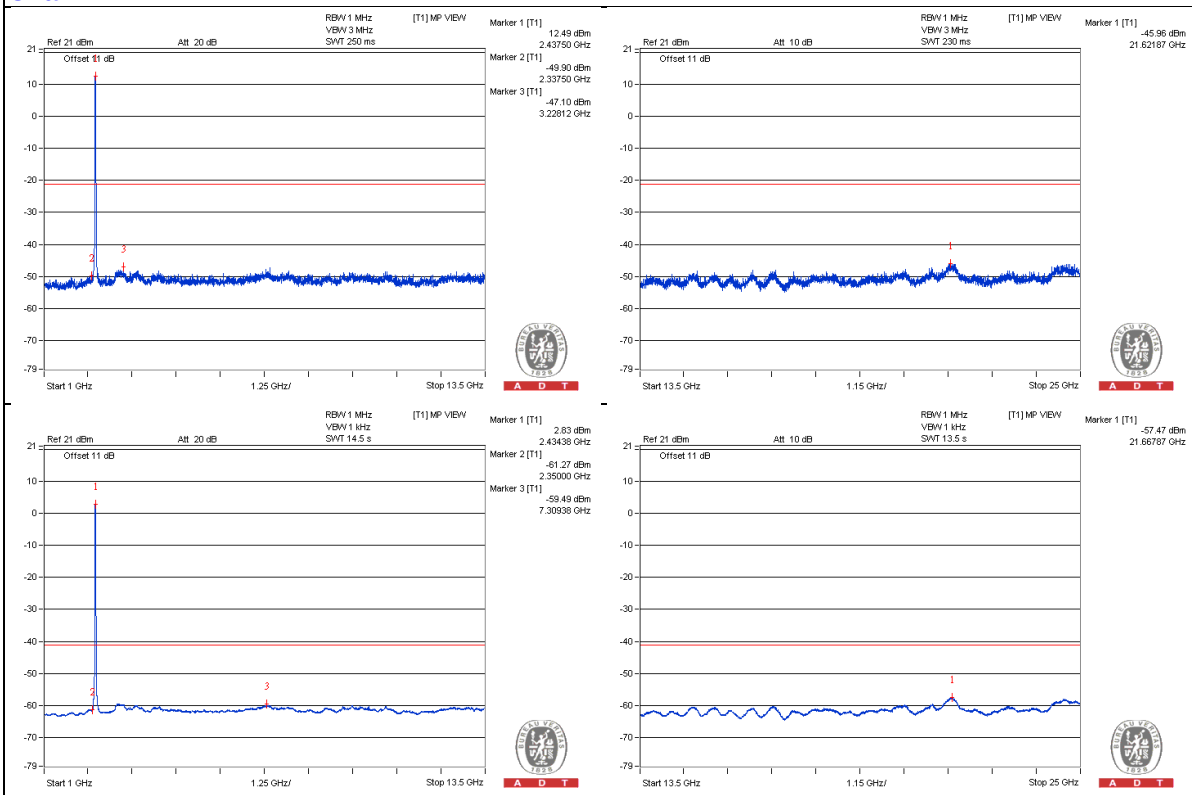
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

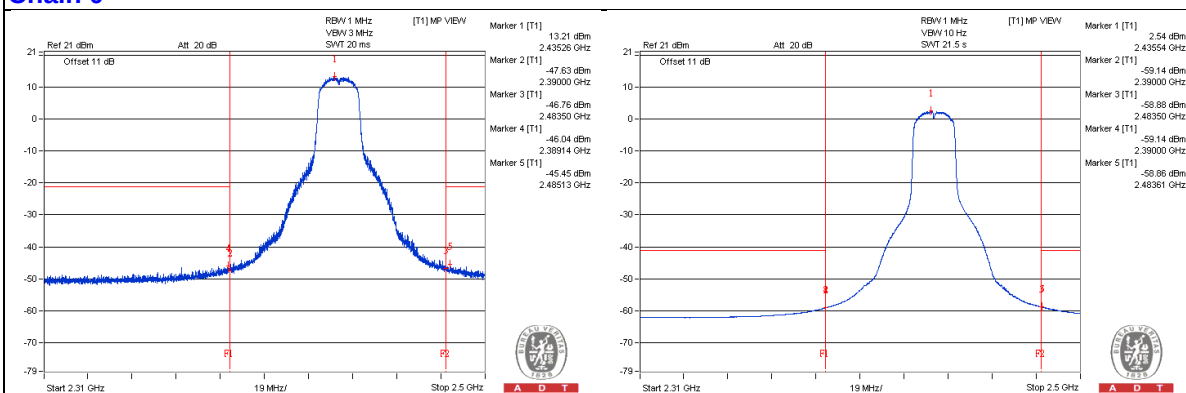
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.135 PK     | 59.18                   | 74             | -14.82      | -46.04          | -45.43 | 6.63                   | -36.08           |
| 2   | 2388.945 AV     | 46.89                   | 54             | -7.11       | -59.3           | -57.01 | 6.63                   | -48.37           |
| 3   | 2485.1325 PK    | 59.5                    | 74             | -14.5       | -45.45          | -45.36 | 6.63                   | -35.76           |
| 4   | 2484.99 AV      | 46.84                   | 54             | -7.16       | -59.15          | -57.19 | 6.63                   | -48.42           |

Note :

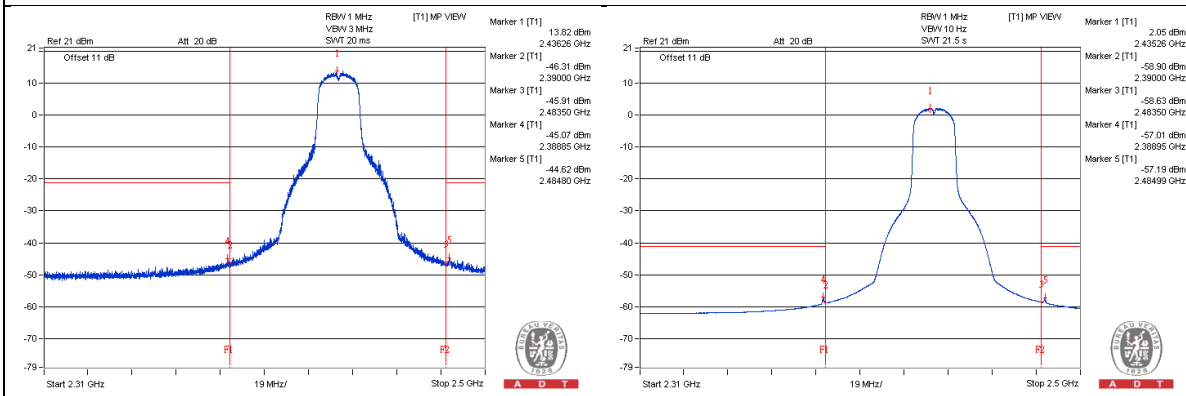
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



## VHT20 - Channel 11

### Conducted spurious emission table

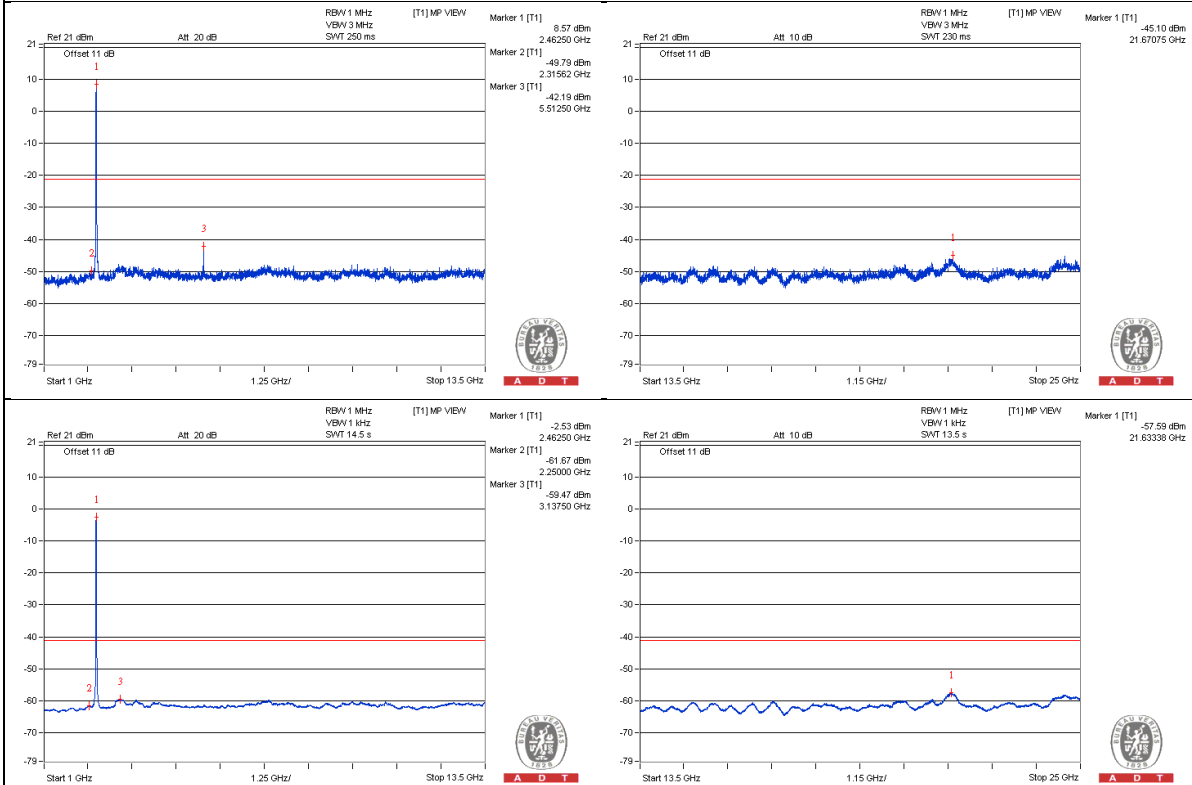
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4928.125 PK     | 53.16                   | 74             | -20.84      | -51.59          | -51.9  | 6.63                   | -42.1            |
| 2   | 4925 AV         | 42.86                   | 54             | -11.14      | -62.09          | -61.99 | 6.63                   | -52.4            |
| 3   | 7384.375 PK     | 55.47                   | 74             | -18.53      | -49.46          | -49.41 | 6.63                   | -39.79           |
| 4   | 7384.375 AV     | 44.63                   | 54             | -9.37       | -60.18          | -60.37 | 6.63                   | -50.63           |

Note :

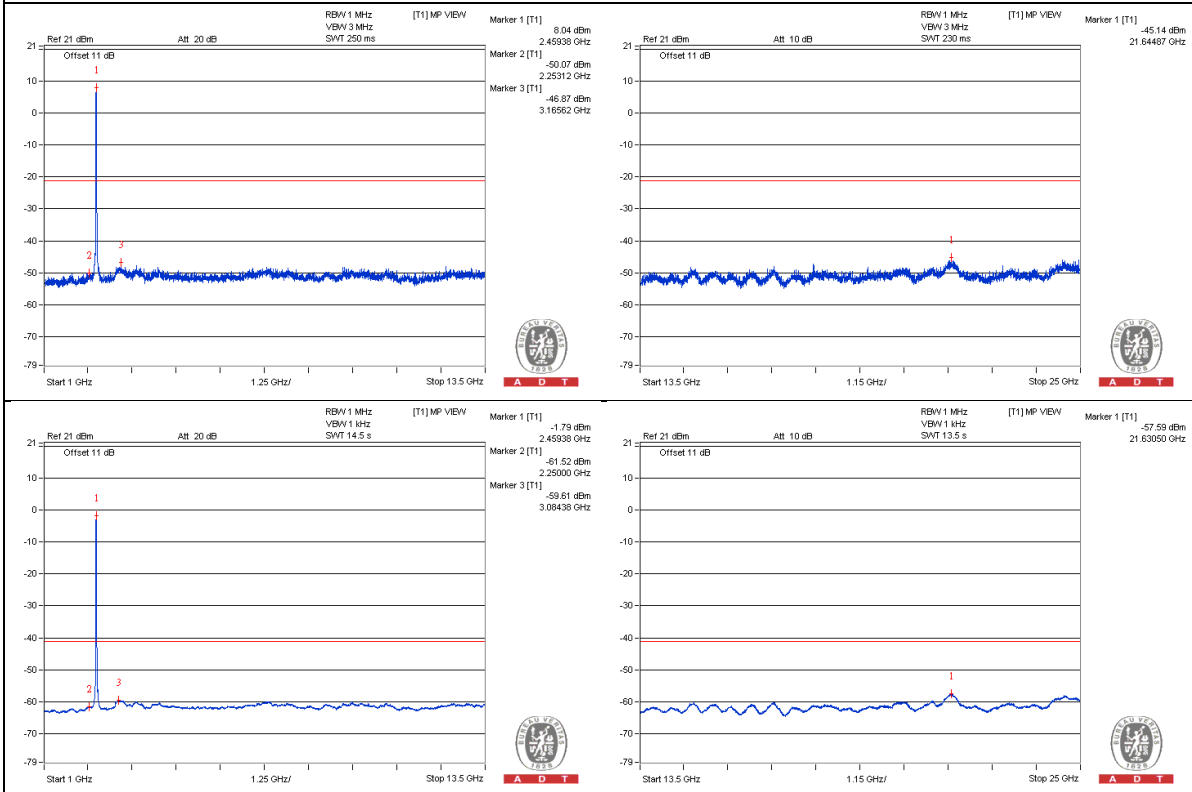
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

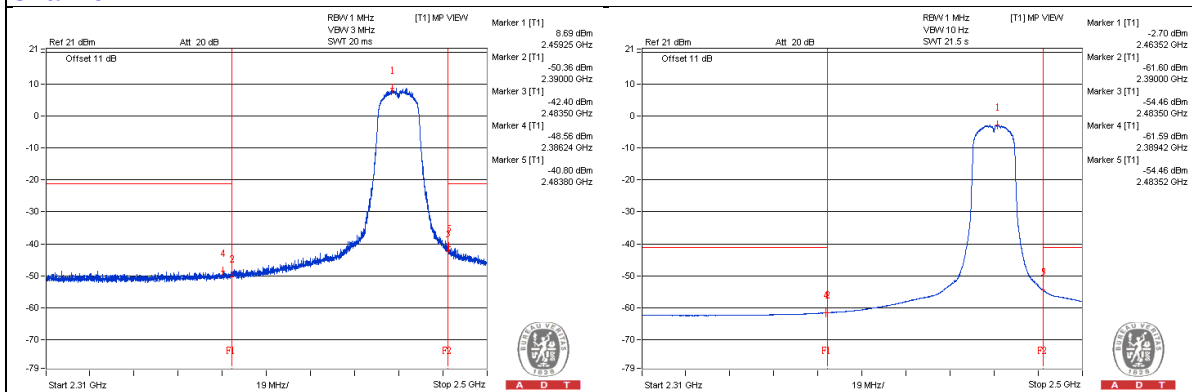
| No. | Frequency (MHz) | Emission Level (dBUV/m) | Limit (dBUV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2313.6575 PK    | 56.09                   | 74             | -17.91      | -48.97          | -48.65 | 6.63                   | -39.17           |
| 2   | 2389.7525 AV    | 43.51                   | 54             | -10.49      | -61.59          | -61.2  | 6.63                   | -51.75           |
| 3   | 2483.66 PK      | 65.54                   | 74             | -8.46       | -42.56          | -37.54 | 6.63                   | -29.72           |
| 4   | 2483.5175 AV    | 51.82                   | 54             | -2.18       | -54.46          | -52.04 | 6.63                   | -43.44           |

Note :

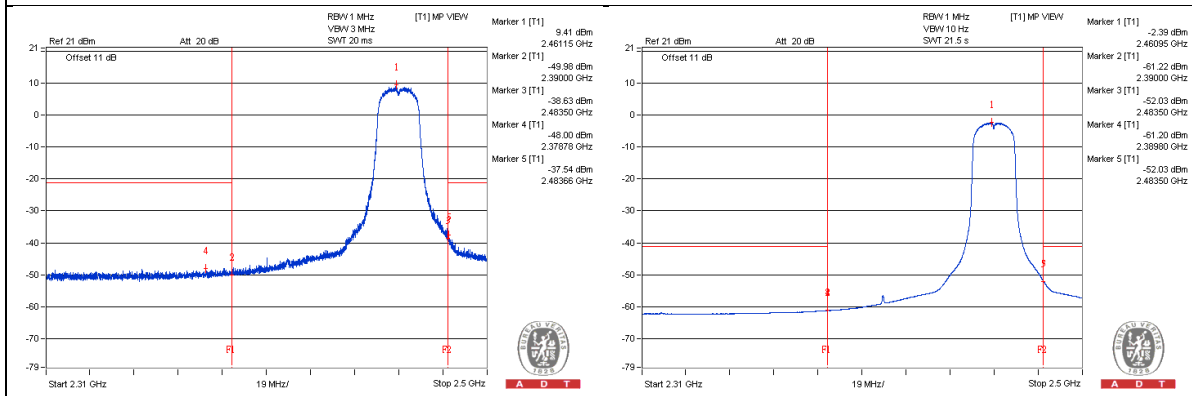
Emission Level (dBUV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



## VHT20 - Channel 12

### Conducted spurious emission table

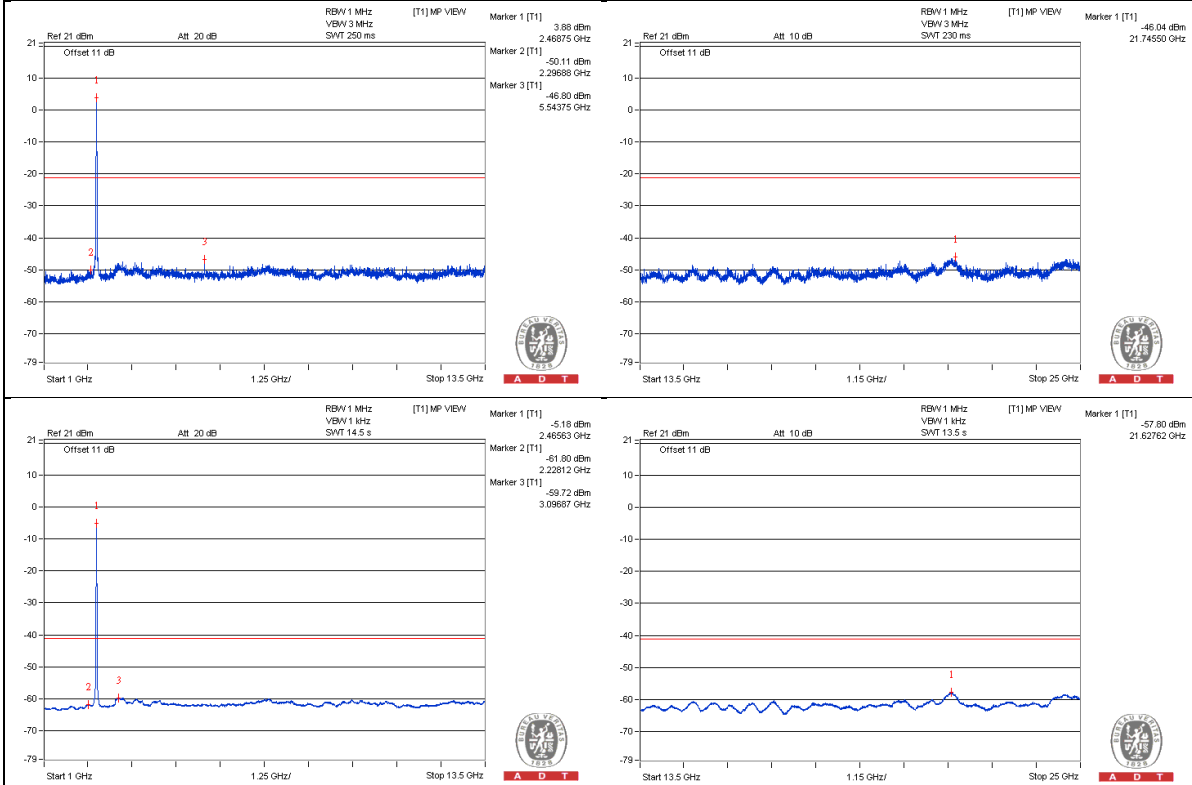
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4937.5 PK       | 53.06                   | 74             | -20.94      | -51.84          | -51.85 | 6.63                   | -42.2            |
| 2   | 4931.25 AV      | 42.88                   | 54             | -11.12      | -62.3           | -61.76 | 6.63                   | -52.38           |
| 3   | 7400 PK         | 55.44                   | 74             | -18.56      | -49.18          | -49.77 | 6.63                   | -39.82           |
| 4   | 7403.125 AV     | 44.23                   | 54             | -9.77       | -60.65          | -60.69 | 6.63                   | -51.03           |

Note :

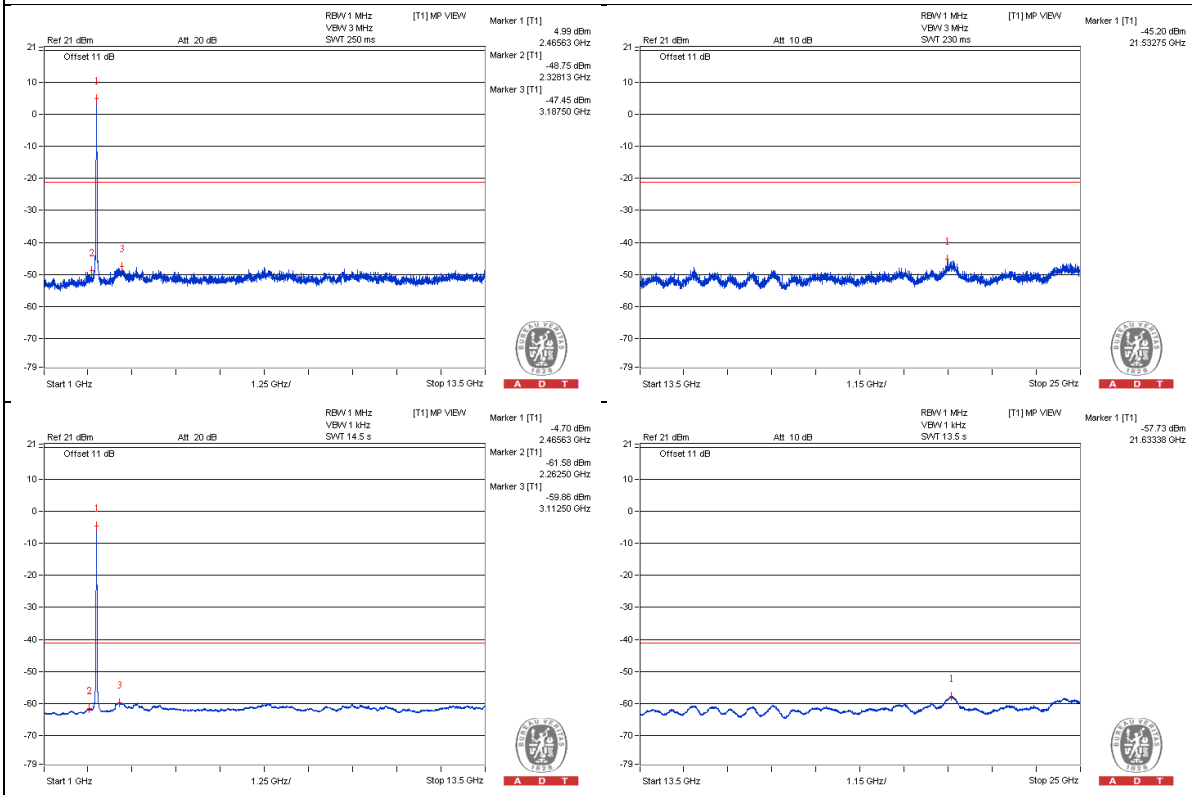
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

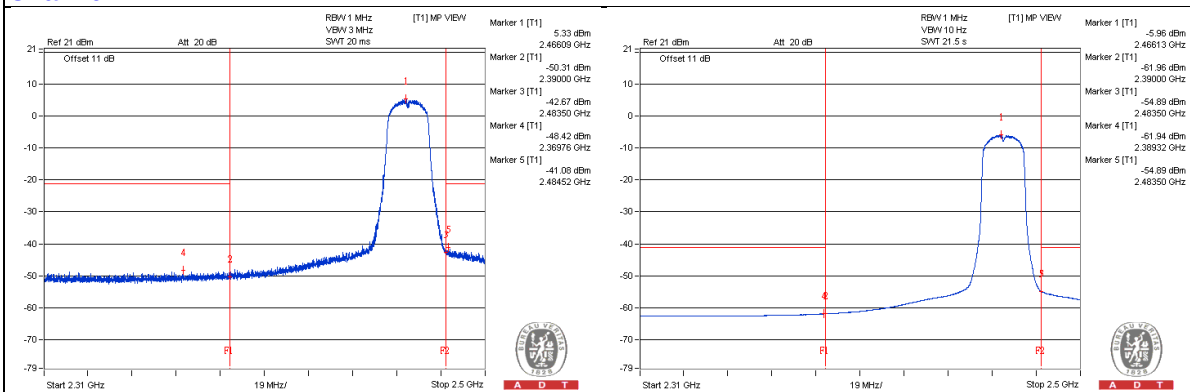
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2388.8025 PK    | 55.91                   | 74             | -18.09      | -49.26          | -48.74 | 6.63                   | -39.35           |
| 2   | 2389.325 AV     | 43.14                   | 54             | -10.86      | -61.94          | -61.58 | 6.63                   | -52.12           |
| 3   | 2484.705 PK     | 64.66                   | 74             | -9.34       | -42.48          | -38.77 | 6.63                   | -30.6            |
| 4   | 2483.5175 AV    | 51.46                   | 54             | -2.54       | -54.89          | -52.36 | 6.63                   | -43.8            |

Note :

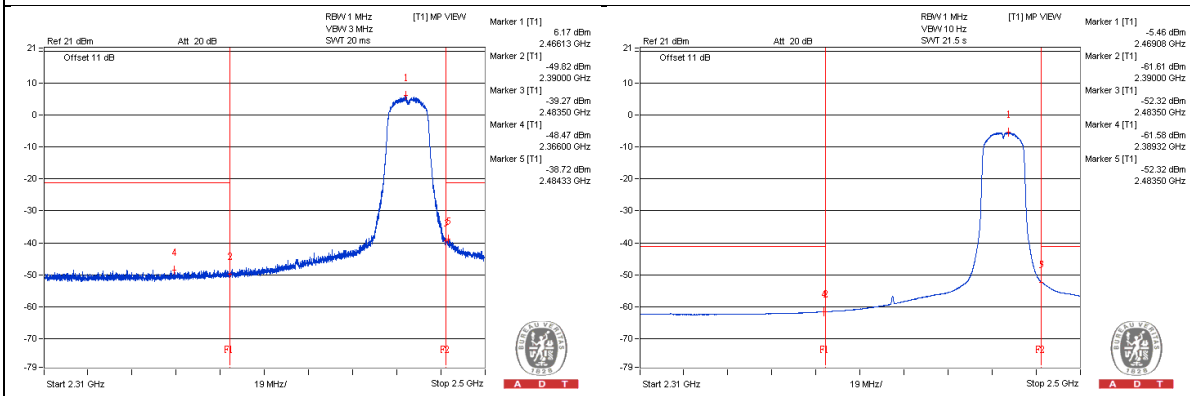
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



### VHT20 - Channel 13

#### Conducted spurious emission table

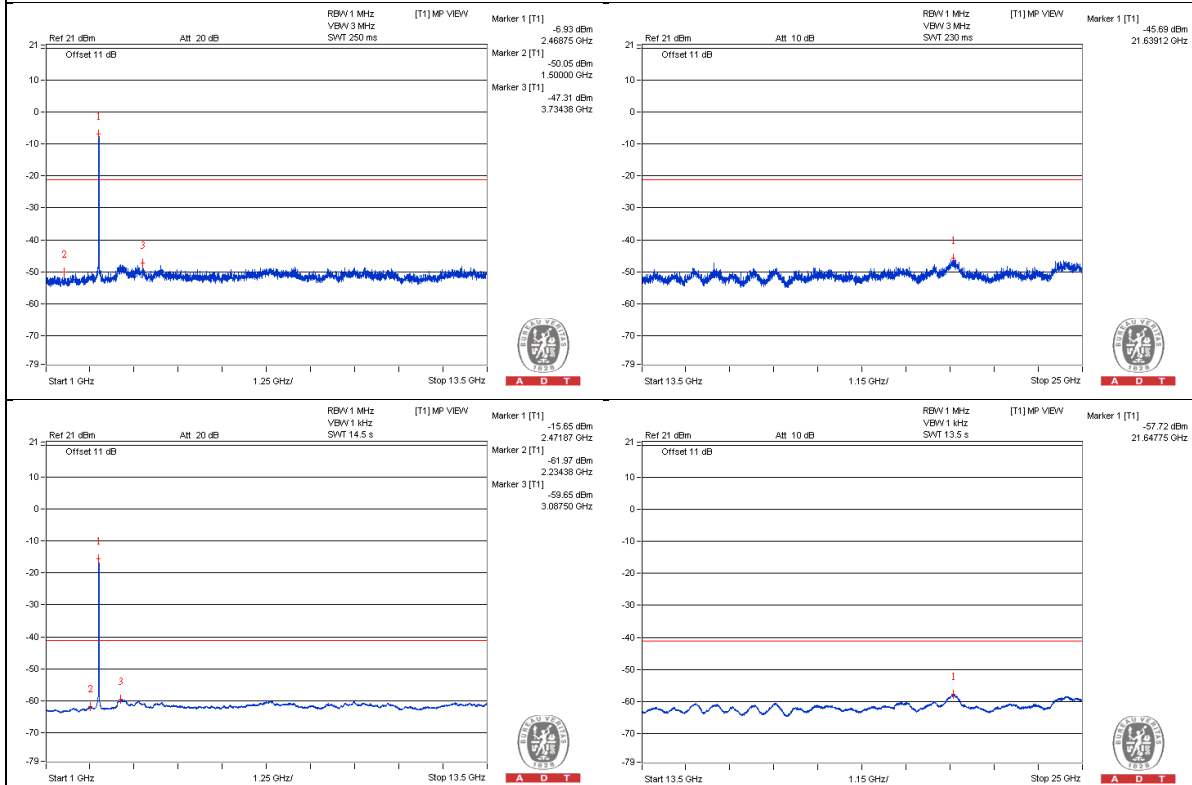
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4943.75 PK      | 53.44                   | 74             | -20.56      | -51.69          | -51.24 | 6.63                   | -41.82           |
| 2   | 4940.625 AV     | 42.73                   | 54             | -11.27      | -62.22          | -62.13 | 6.63                   | -52.53           |
| 3   | 7415.625 PK     | 55.1                    | 74             | -18.9       | -50.35          | -49.31 | 6.63                   | -40.16           |
| 4   | 7418.75 AV      | 44.6                    | 54             | -9.4        | -60.28          | -60.33 | 6.63                   | -50.66           |

Note :

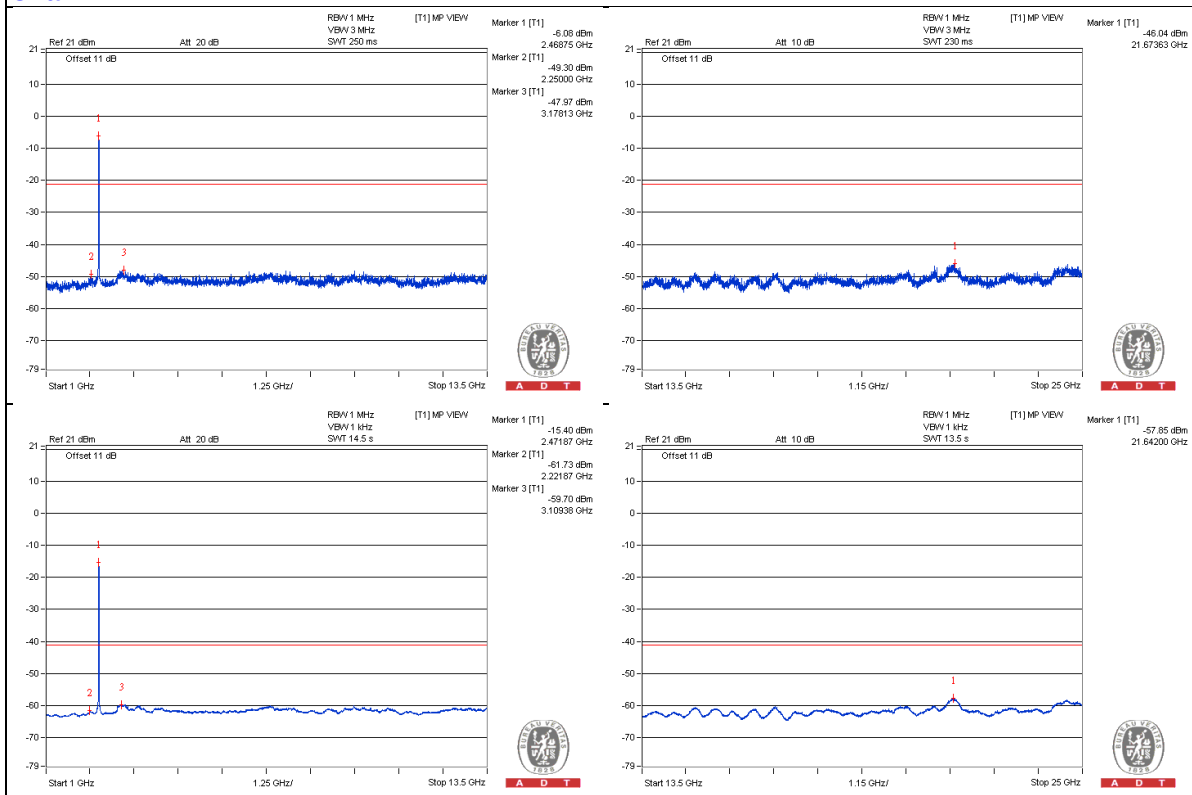
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

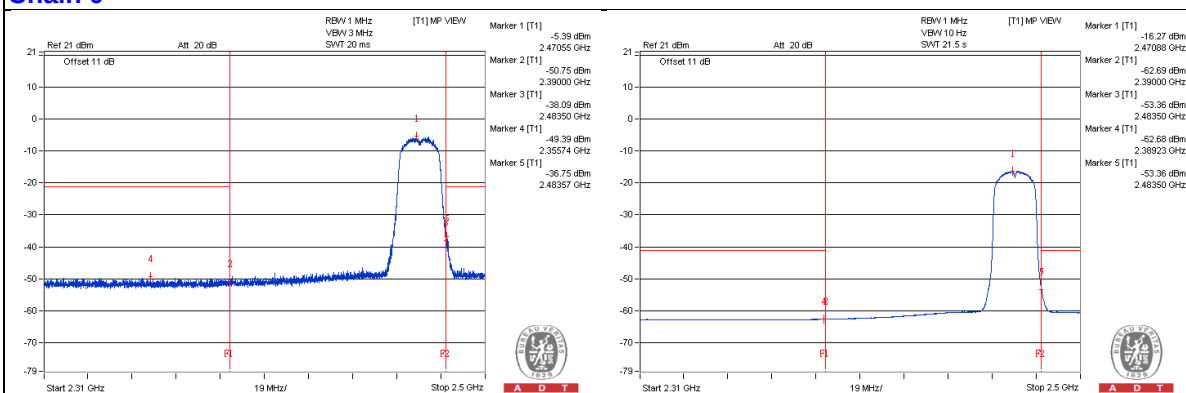
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2375.55 PK      | 54.65                   | 74             | -19.35      | -50.03          | -50.48 | 6.63                   | -40.61           |
| 2   | 2388.66 AV      | 42.13                   | 54             | -11.87      | -62.7           | -62.85 | 6.63                   | -53.13           |
| 3   | 2483.565 PK     | 68.03                   | 74             | -5.97       | -36.75          | -36.99 | 6.63                   | -27.23           |
| 4   | 2483.5175 AV    | 51.75                   | 54             | -2.25       | -53.41          | -52.9  | 6.63                   | -43.51           |

Note :

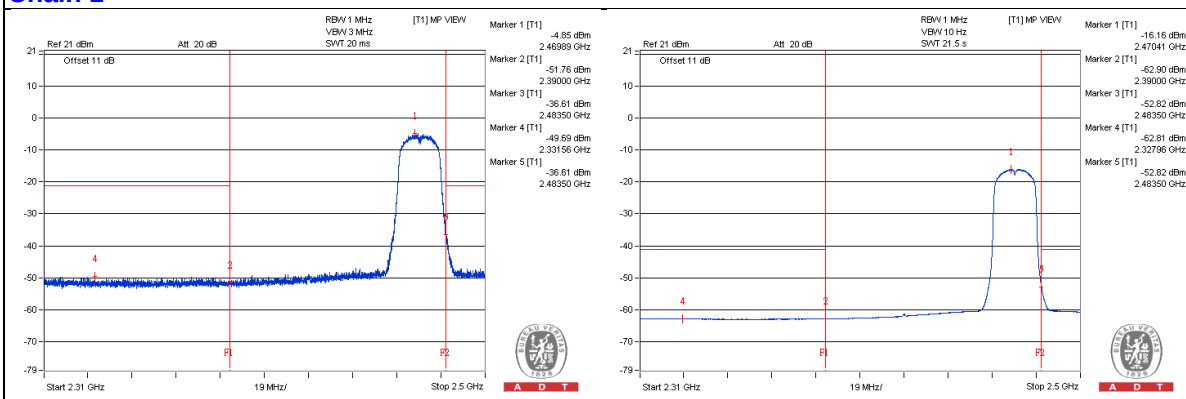
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### VHT40 - Channel 3

#### Conducted spurious emission table

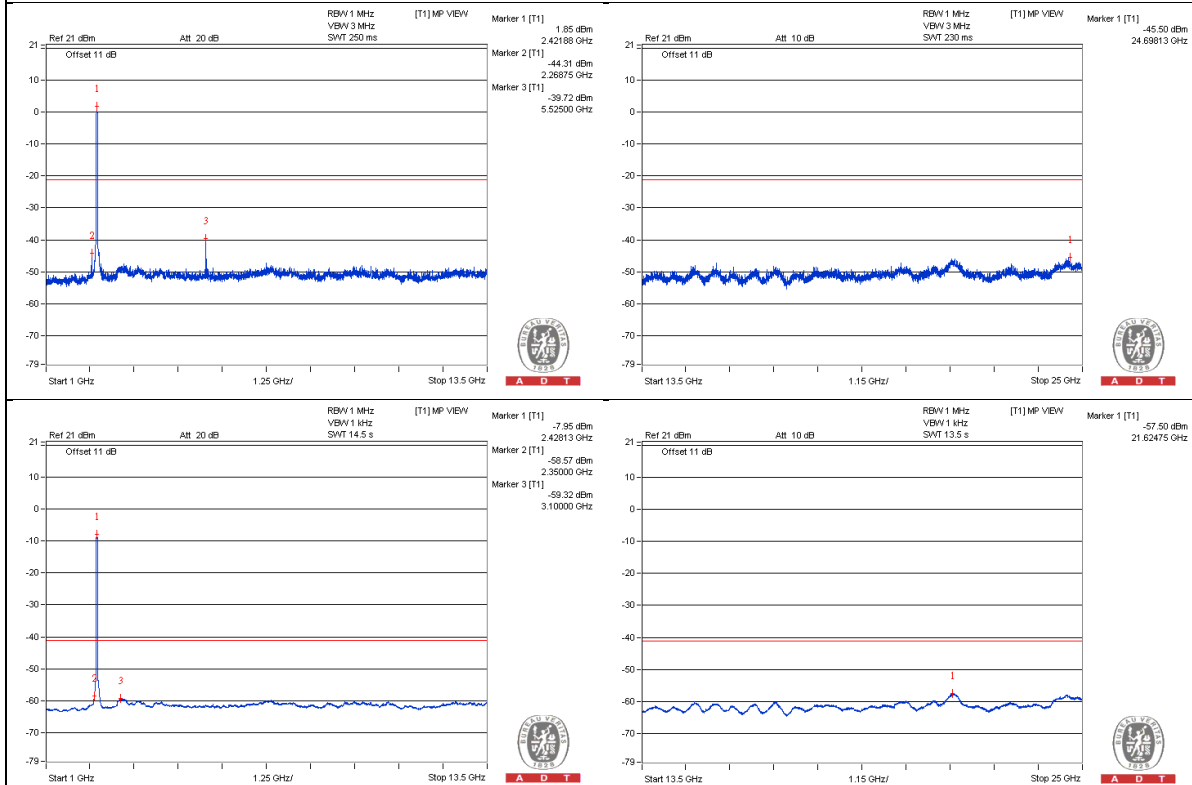
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1615.625 PK     | 51.72                   | 74             | -22.28      | -54.11          | -52.41 | 6.63                   | -43.54           |
| 2   | 1615.625 AV     | 41.75                   | 54             | -12.25      | -63.12          | -63.18 | 6.63                   | -53.51           |
| 3   | 4840.625 PK     | 53.56                   | 74             | -20.44      | -51.43          | -51.25 | 6.63                   | -41.7            |
| 4   | 4840.625 AV     | 43.17                   | 54             | -10.83      | -61.84          | -61.63 | 6.63                   | -52.09           |
| 5   | 7268.75 PK      | 55.53                   | 74             | -18.47      | -48.77          | -50.06 | 6.63                   | -39.73           |
| 6   | 7265.625 AV     | 44.59                   | 54             | -9.41       | -60.29          | -60.33 | 6.63                   | -50.67           |

Note :

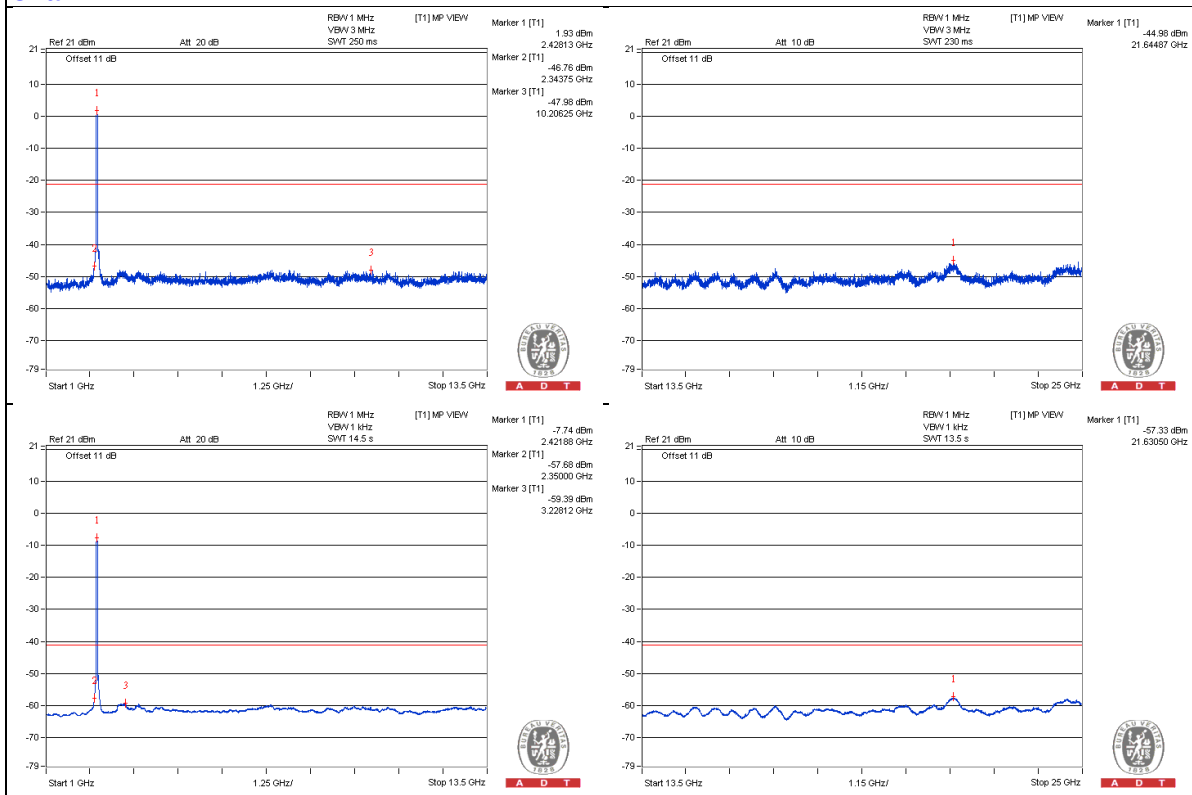
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

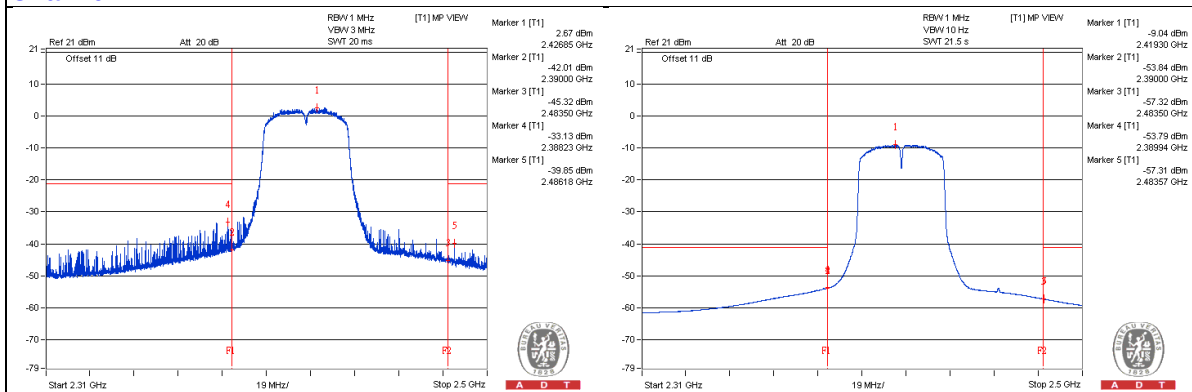
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2388.2325 PK    | 69.3                    | 74             | -4.7        | -33.13          | -41.87 | 6.63                   | -25.96           |
| 2   | 2389.9425 AV    | 51.38                   | 54             | -2.62       | -53.79          | -53.27 | 6.63                   | -43.88           |
| 3   | 2486.1775 PK    | 63.28                   | 74             | -10.72      | -39.85          | -44.64 | 6.63                   | -31.98           |
| 4   | 2483.6125 AV    | 48.03                   | 54             | -5.97       | -57.34          | -56.45 | 6.63                   | -47.23           |

Note :

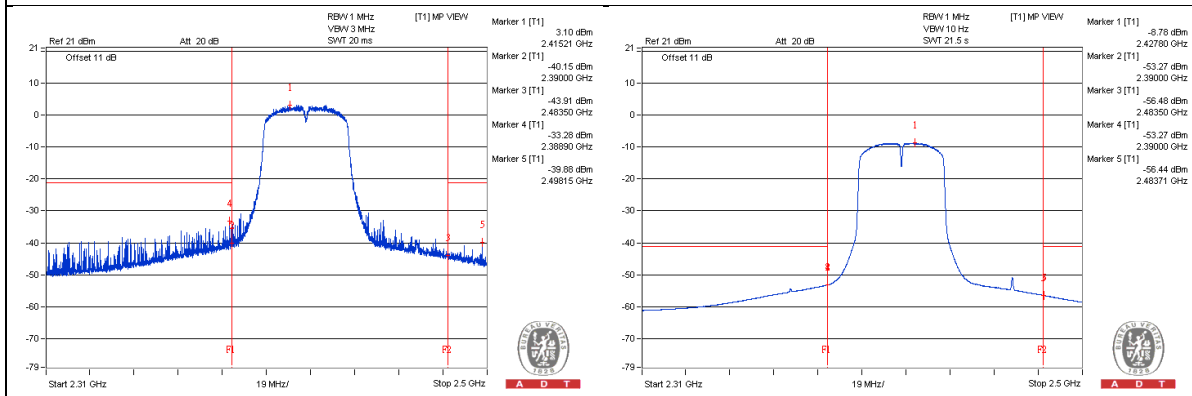
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



# VHT40 - Channel 6

## Conducted spurious emission table

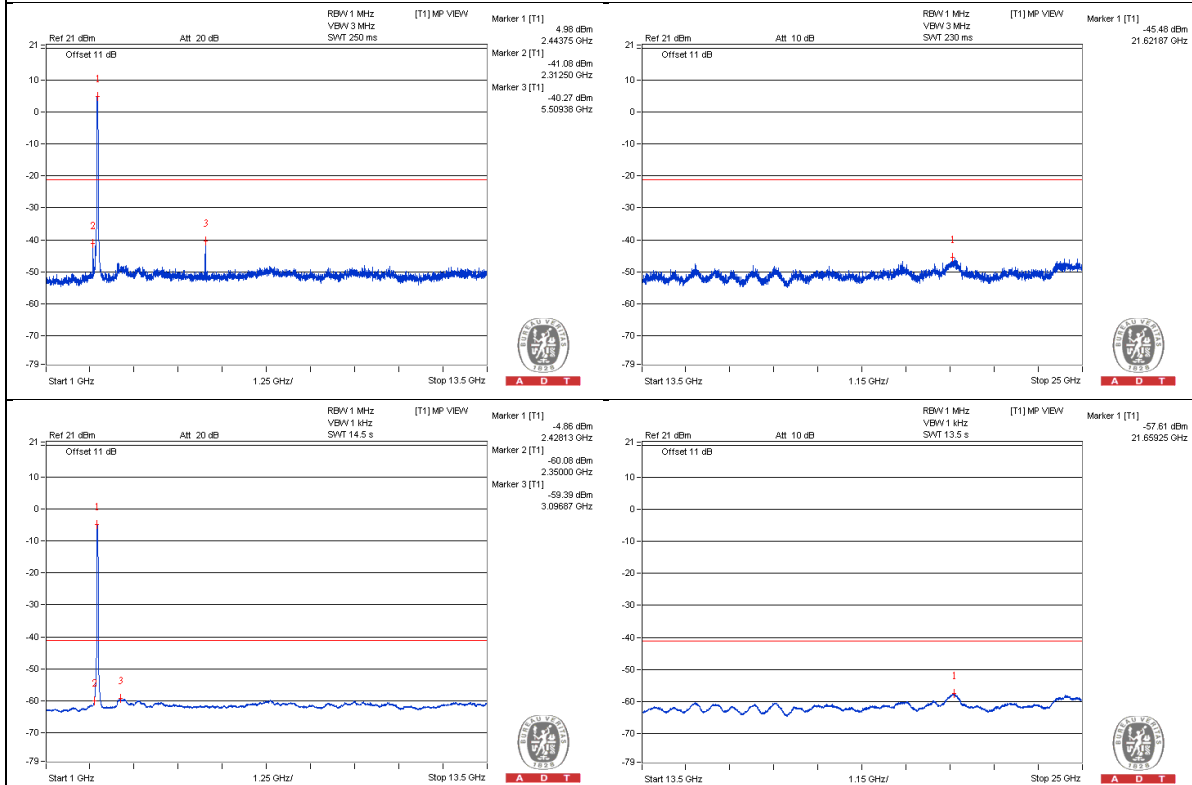
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 1625 PK         | 51.08                   | 74             | -22.92      | -54.29          | -53.39 | 6.63                   | -44.18           |
| 2   | 1625 AV         | 41.78                   | 54             | -12.22      | -63.05          | -63.2  | 6.63                   | -53.48           |
| 3   | 4871.875 PK     | 54.19                   | 74             | -19.81      | -50.54          | -50.88 | 6.63                   | -41.07           |
| 4   | 4871.875 AV     | 43.09                   | 54             | -10.91      | -61.89          | -61.74 | 6.63                   | -52.17           |
| 5   | 7312.5 PK       | 55.18                   | 74             | -18.82      | -49.48          | -49.97 | 6.63                   | -40.08           |
| 6   | 7312.5 AV       | 44.51                   | 54             | -9.49       | -60.39          | -60.4  | 6.63                   | -50.75           |

Note :

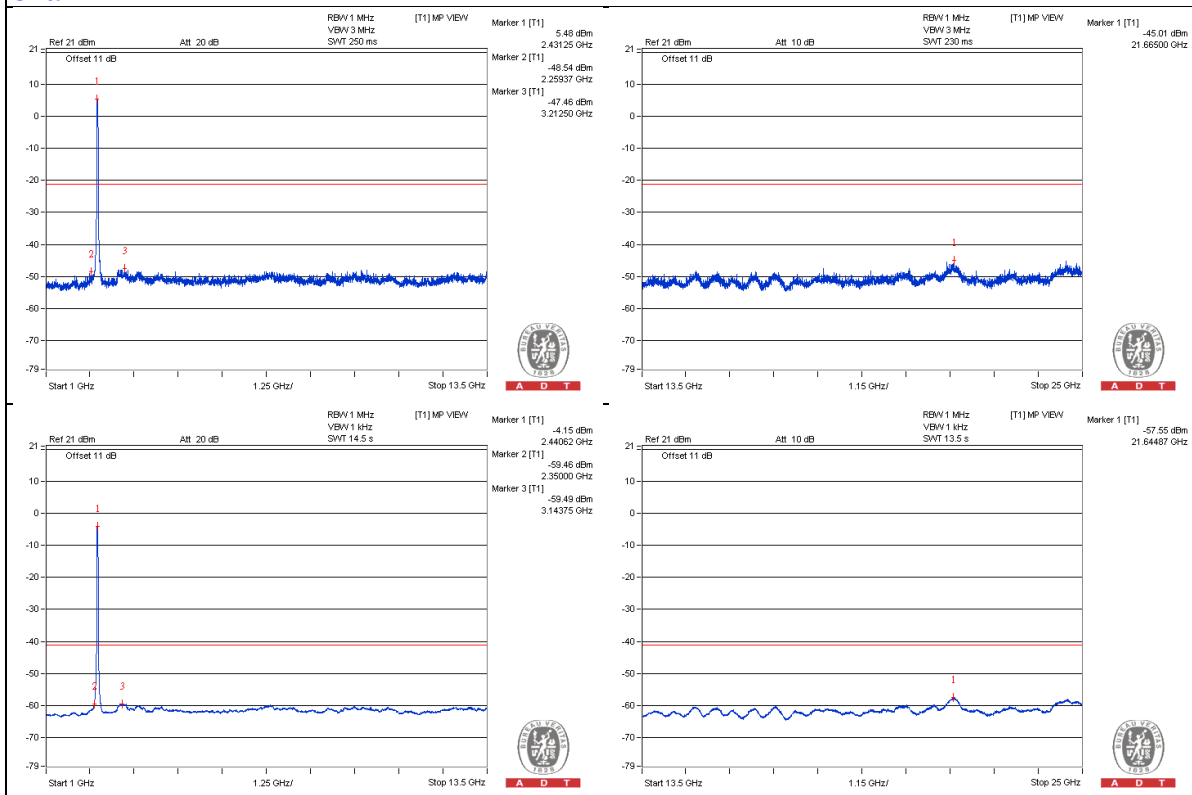
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



### Bandedge table

| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2389.515 PK     | 71.7                    | 74             | -2.3        | -31.69          | -35.54 | 6.63                   | -23.56           |
| 2   | 2389.99 AV      | 52.17                   | 54             | -1.83       | -53.8           | -51.87 | 6.63                   | -43.09           |
| 3   | 2483.755 PK     | 69.84                   | 74             | -4.16       | -37.75          | -33.41 | 6.63                   | -25.42           |
| 4   | 2483.5175 AV    | 54.13                   | 54             | * 0.13      | -51.41          | -50.21 | 6.63                   | -41.13           |

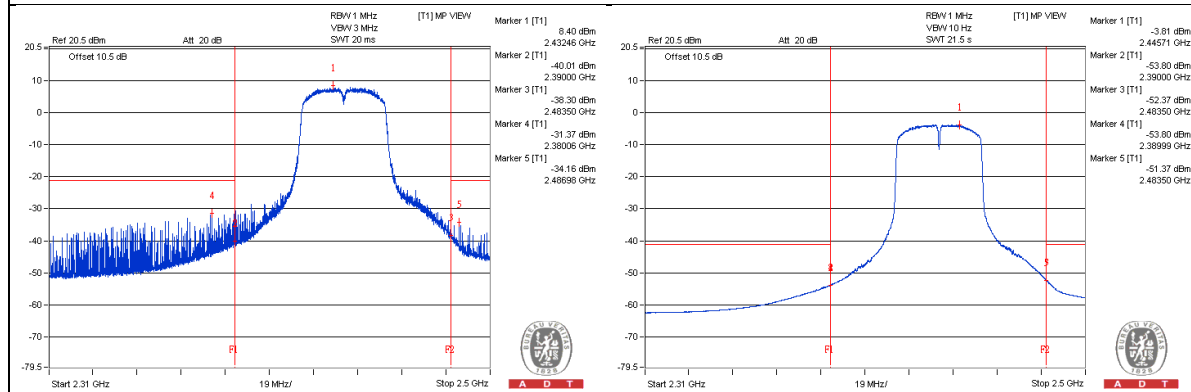
Note :

Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

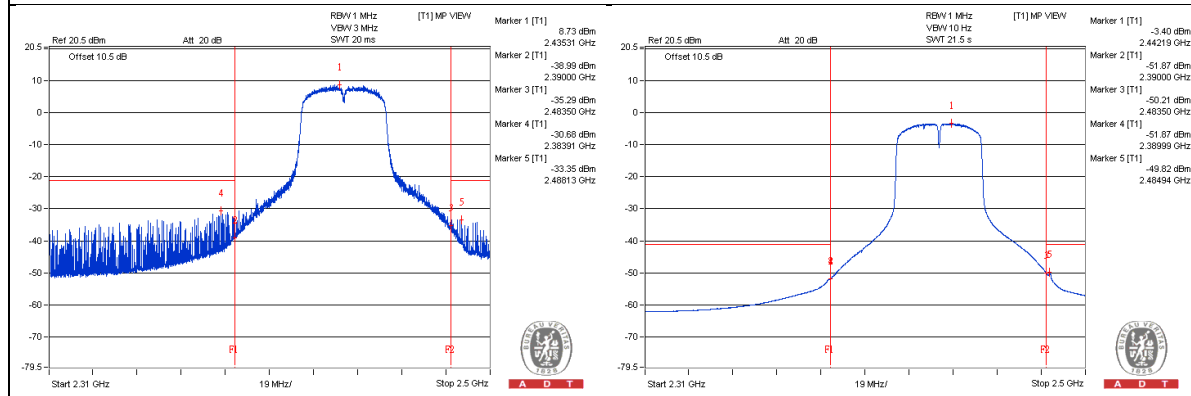
d = measurement distance in 3 meters.

\* The unwanted emission was verified and the test result was passed by radiated measurement.  
(Please refer APPENDIX A)

### Chain 0



### Chain 1



#### VHT40 - Channel 9

##### Conducted spurious emission table

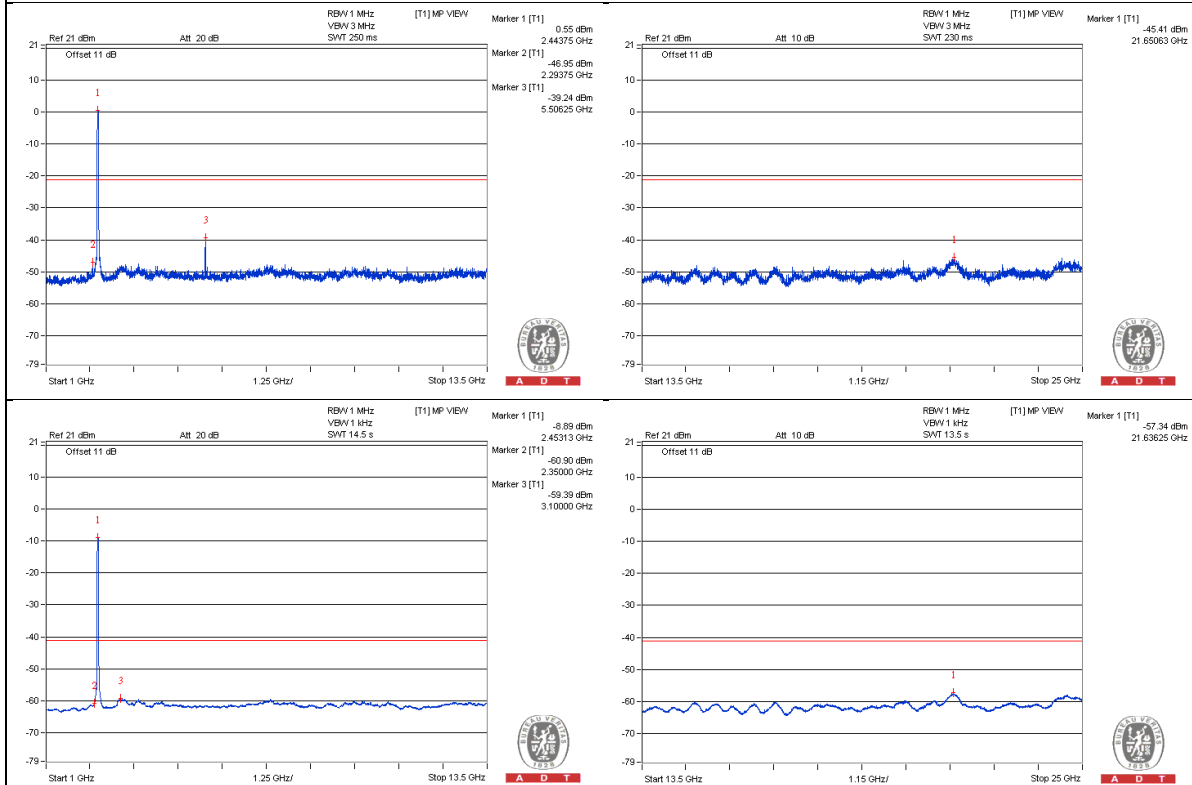
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4906.25 PK      | 53.83                   | 74             | -20.17      | -50.47          | -51.77 | 6.63                   | -41.43           |
| 2   | 4903.125 AV     | 42.91                   | 54             | -11.09      | -61.94          | -62.04 | 6.63                   | -52.35           |
| 3   | 7353.125 PK     | 55.96                   | 74             | -18.04      | -49.15          | -48.74 | 6.63                   | -39.3            |
| 4   | 7359.375 AV     | 45.03                   | 54             | -8.97       | -59.69          | -60.05 | 6.63                   | -50.23           |

Note :

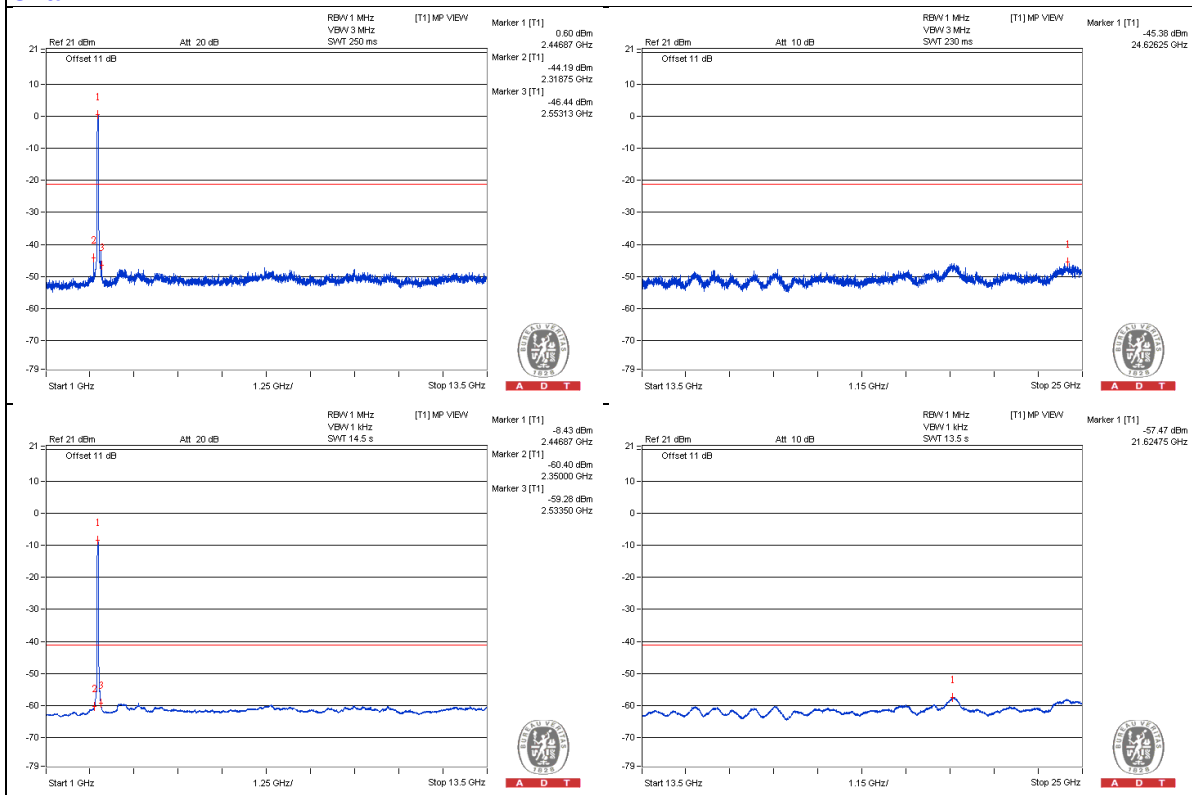
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

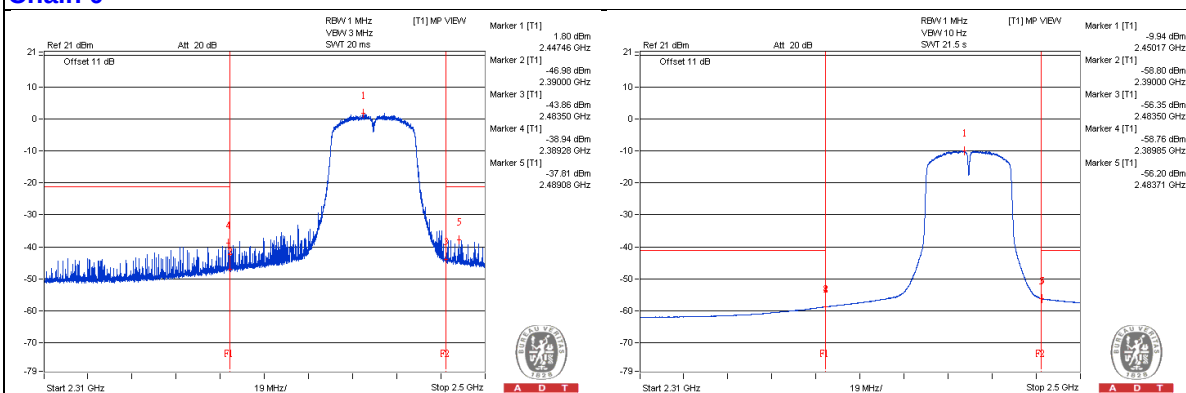
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2384.8125 PK    | 63.78                   | 74             | -10.22      | -46.9           | -38.73 | 6.63                   | -31.48           |
| 2   | 2389.9425 AV    | 46.37                   | 54             | -7.63       | -58.79          | -58.29 | 6.63                   | -48.89           |
| 3   | 2484.7525 PK    | 66.67                   | 74             | -7.33       | -44.1           | -35.82 | 6.63                   | -28.59           |
| 4   | 2483.6125 AV    | 49.28                   | 54             | -4.72       | -56.24          | -55.08 | 6.63                   | -45.98           |

Note :

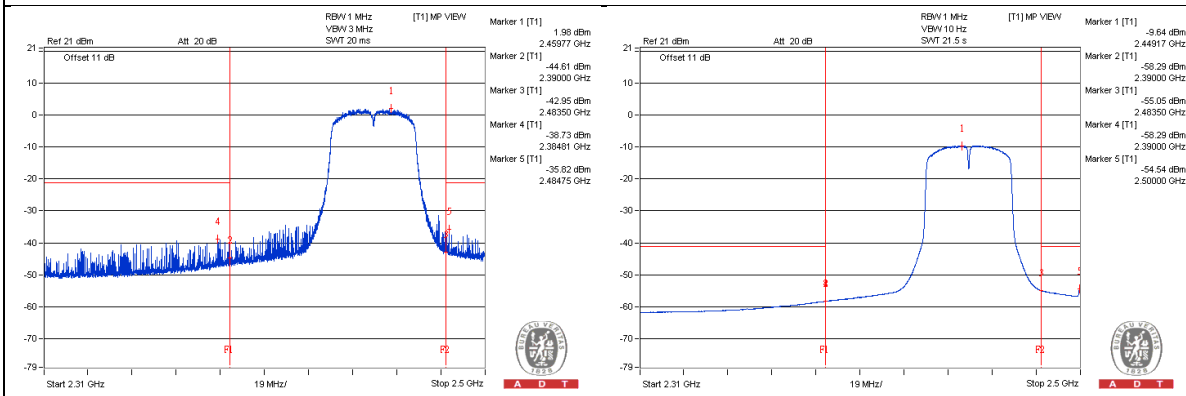
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



#### VHT40 - Channel 10

##### Conducted spurious emission table

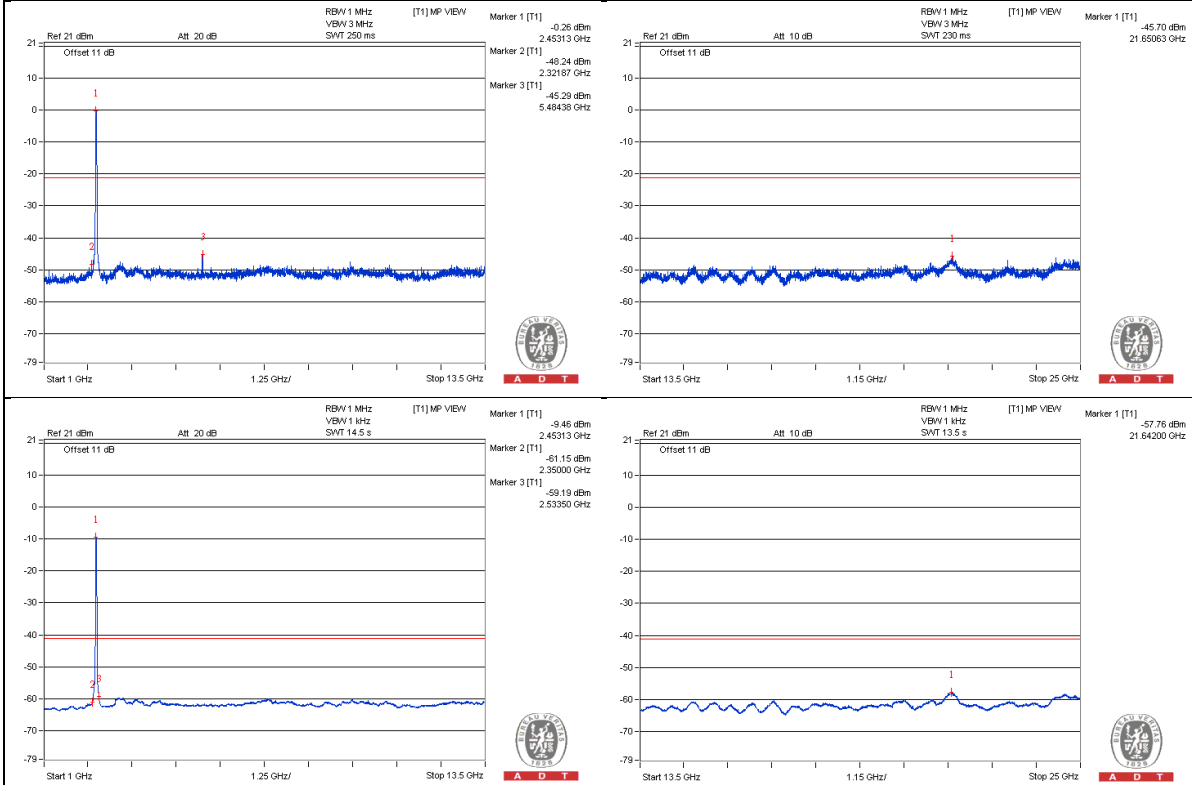
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4918.75 PK      | 53                      | 74             | -21         | -52.34          | -51.5  | 6.63                   | -42.26           |
| 2   | 4915.625 AV     | 42.79                   | 54             | -11.21      | -62.06          | -62.16 | 6.63                   | -52.47           |
| 3   | 7368.75 PK      | 55.4                    | 74             | -18.6       | -49.01          | -50.06 | 6.63                   | -39.86           |
| 4   | 7371.875 AV     | 44.59                   | 54             | -9.41       | -60.26          | -60.36 | 6.63                   | -50.67           |

Note :

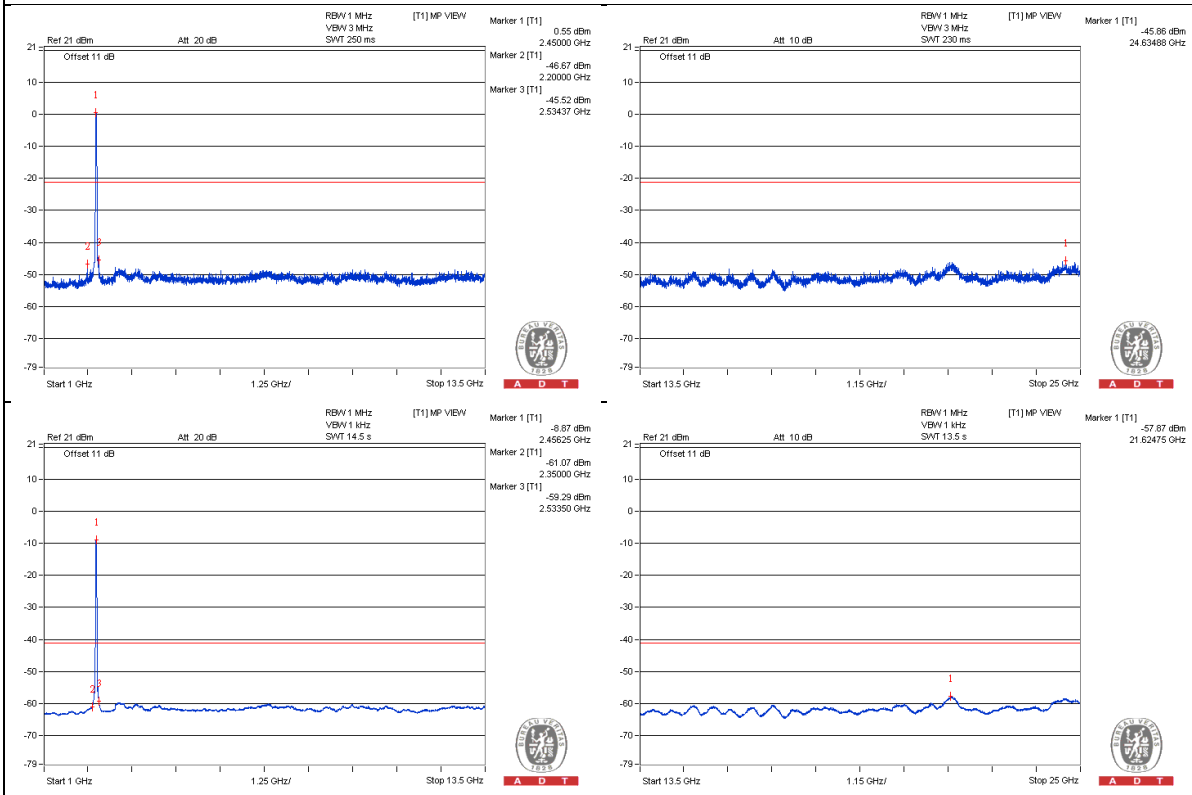
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

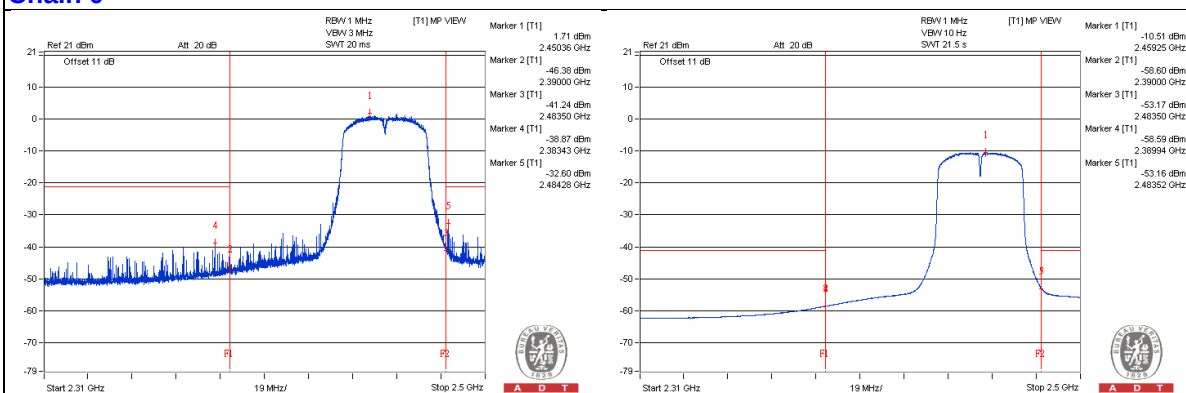
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2383.435 PK     | 63.89                   | 74             | -10.11      | -38.87          | -45.43 | 6.63                   | -31.37           |
| 2   | 2389.9425 AV    | 46.09                   | 54             | -7.91       | -58.59          | -59.04 | 6.63                   | -49.17           |
| 3   | 2484.2775 PK    | 70.07                   | 74             | -3.93       | -32.6           | -39.68 | 6.63                   | -25.19           |
| 4   | 2483.5175 AV    | 52.22                   | 54             | -1.78       | -53.16          | -52.24 | 6.63                   | -43.04           |

Note :

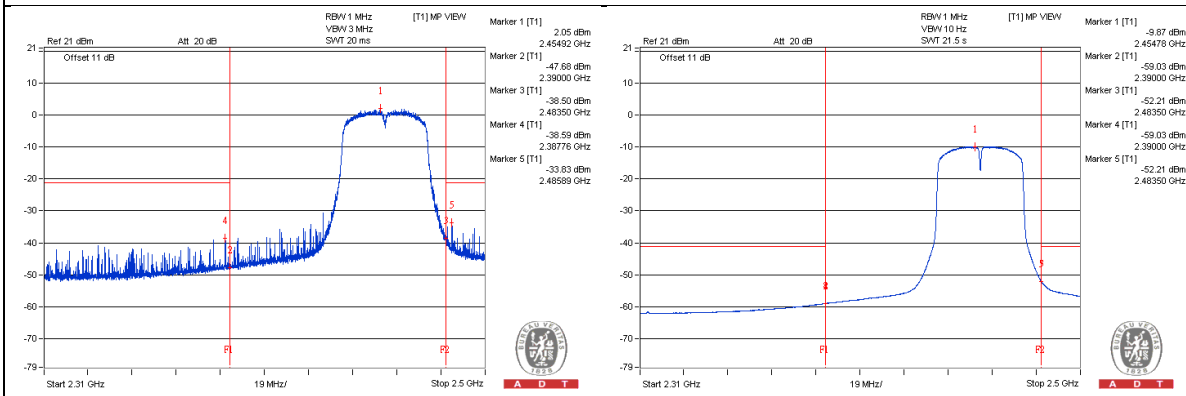
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



# VHT40 - Channel 11

## Conducted spurious emission table

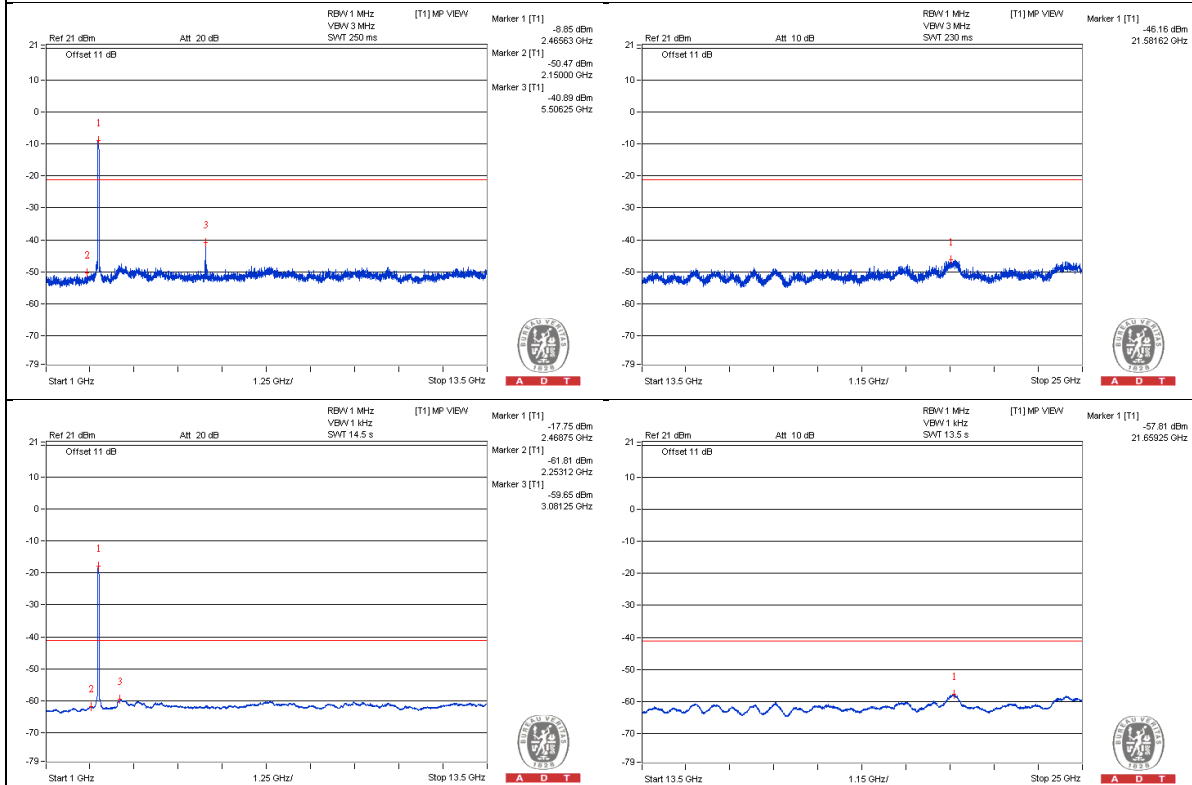
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 4921.875 PK     | 53.82                   | 74             | -20.18      | -50.97          | -51.19 | 6.63                   | -41.44           |
| 2   | 4928.125 AV     | 42.8                    | 54             | -11.2       | -61.98          | -62.23 | 6.63                   | -52.46           |
| 3   | 7381.25 PK      | 56.24                   | 74             | -17.76      | -49.59          | -47.89 | 6.63                   | -39.02           |
| 4   | 7384.375 AV     | 44.46                   | 54             | -9.54       | -60.39          | -60.5  | 6.63                   | -50.8            |

Note :

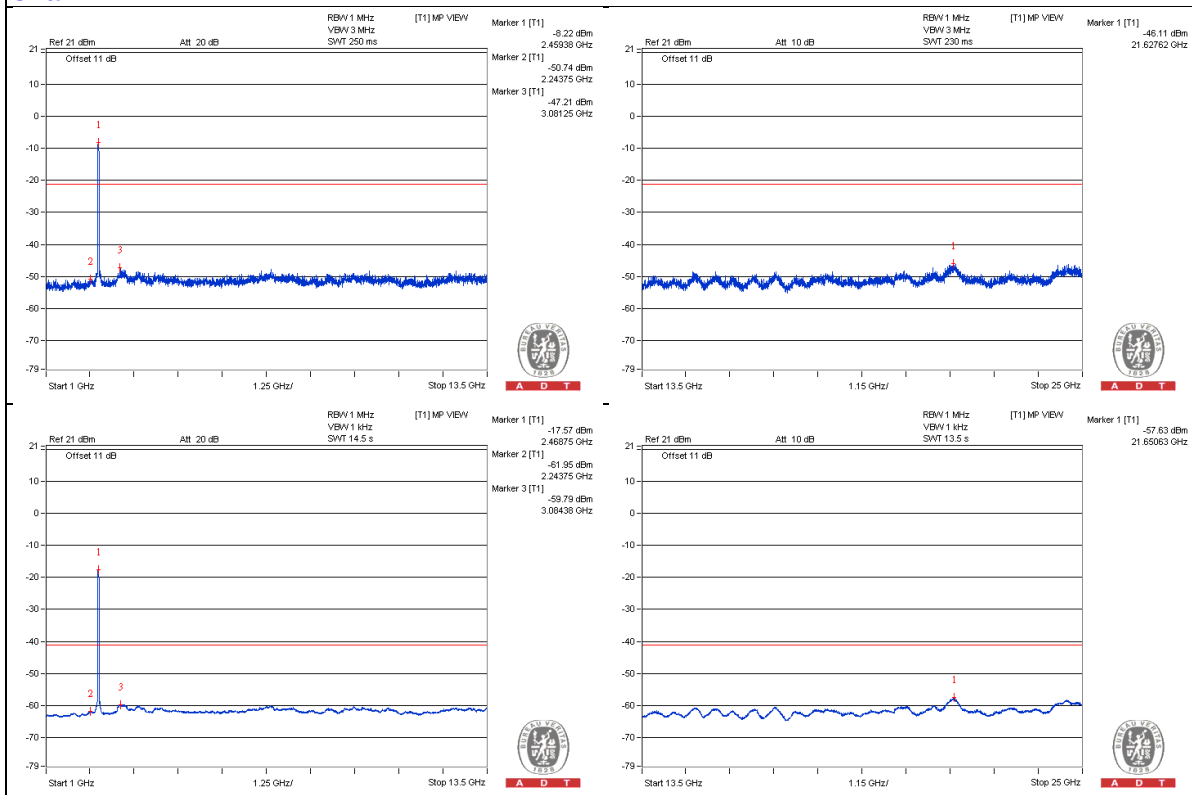
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

## Chain 0



## Chain 1



## Bandedge table

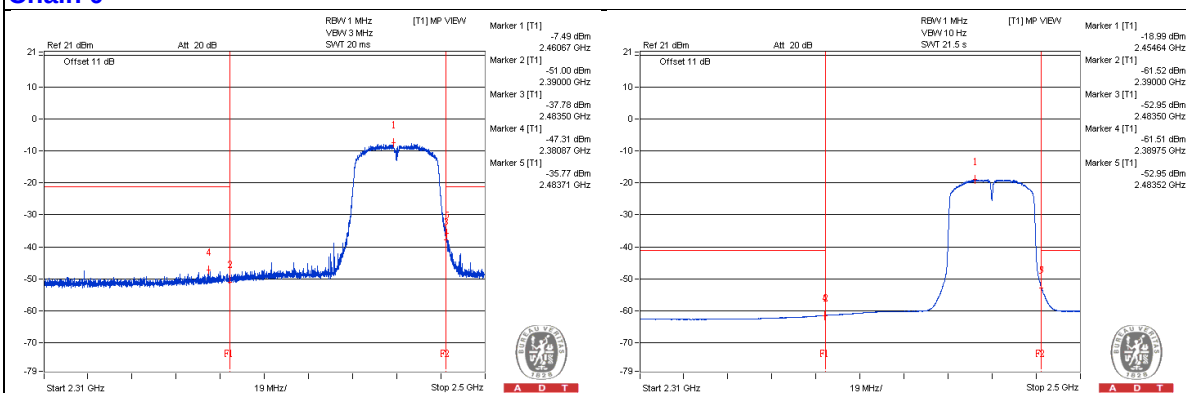
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 2376.9275 PK    | 56.33                   | 74             | -17.67      | -50.81          | -47.1  | 6.63                   | -38.93           |
| 2   | 2389.895 AV     | 43.18                   | 54             | -10.82      | -61.51          | -61.94 | 6.63                   | -52.08           |
| 3   | 2483.7075 PK    | 68.48                   | 74             | -5.52       | -35.77          | -37.19 | 6.63                   | -26.78           |
| 4   | 2483.5175 AV    | 52.27                   | 54             | -1.73       | -52.95          | -52.33 | 6.63                   | -42.99           |

Note :

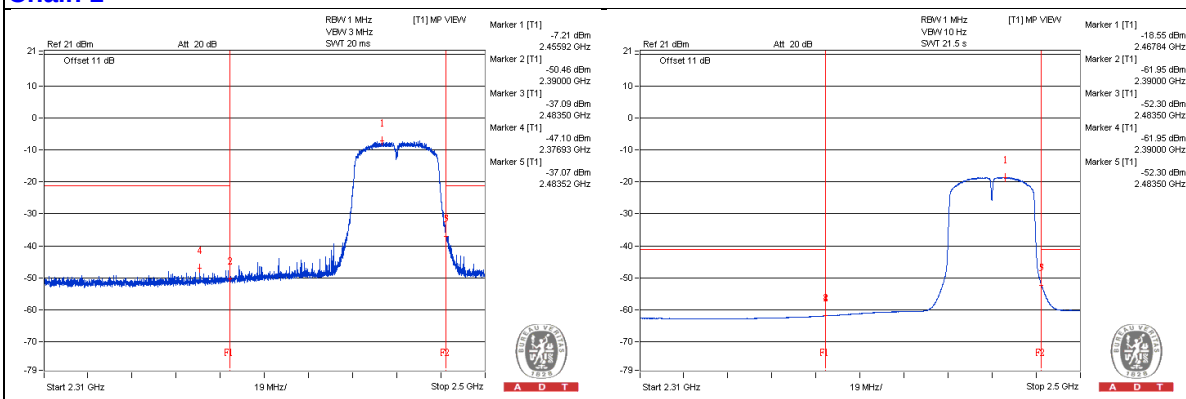
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

### Chain 0



### Chain 1



## Below 1GHz Data

### 802.11g - Channel 6

#### Conducted spurious emission table

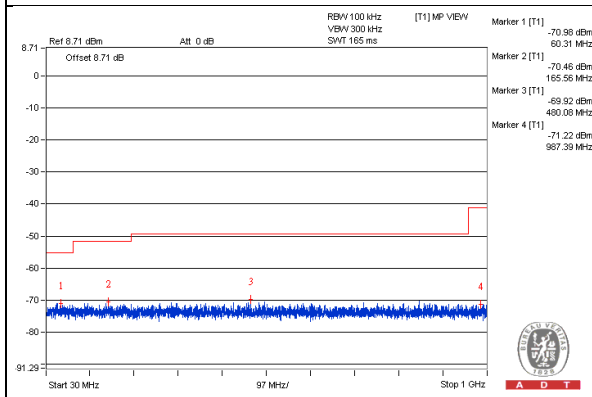
| No. | Frequency (MHz) | Emission Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Raw Value (dBm) |        | Correction Factor (dB) | EIRP Level (dBm) |
|-----|-----------------|-------------------------|----------------|-------------|-----------------|--------|------------------------|------------------|
|     |                 |                         |                |             | Chain0          | Chain1 |                        |                  |
| 1   | 64.92           | 32.88                   | 40             | -7.12       | -71.54          | -72.56 | 6.63                   | -62.38           |
| 2   | 120.695         | 33.39                   | 43.5           | -10.11      | -71.13          | -71.93 | 6.63                   | -61.87           |
| 3   | 316.15          | 33.19                   | 46             | -12.81      | -71.16          | -72.35 | 6.63                   | -62.07           |
| 4   | 511.12          | 33.57                   | 46             | -12.43      | -70.46          | -72.41 | 6.63                   | -61.69           |
| 5   | 613.455         | 33.63                   | 46             | -12.37      | -71.09          | -71.45 | 6.63                   | -61.63           |
| 6   | 936.2225        | 33.7                    | 46             | -12.3       | -71.55          | -70.88 | 6.63                   | -61.56           |

Note :

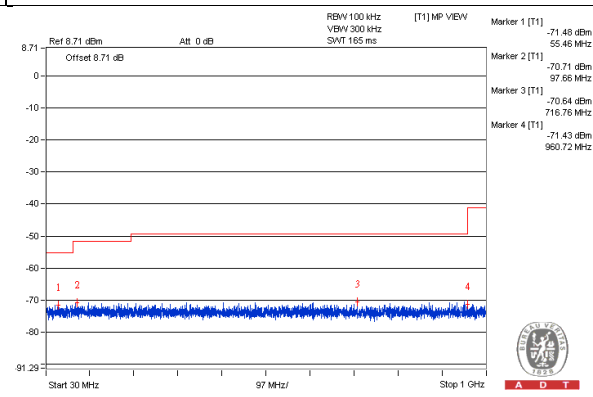
Emission Level (dBuV/m) = EIRP Level (dBm) – 20log(d) + 104.8

d = measurement distance in 3 meters.

#### Chain 0



#### Chain 1



## 4.2 Conducted Emission Measurement

### 4.2.1 Limits of Conducted Emission Measurement

| Frequency (MHz) | Conducted Limit (dBuV) |         |
|-----------------|------------------------|---------|
|                 | Quasi-peak             | Average |
| 0.15 - 0.5      | 66 - 56                | 56 - 46 |
| 0.50 - 5.0      | 56                     | 46      |
| 5.0 - 30.0      | 60                     | 50      |

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

### 4.2.2 Test Instruments

| DESCRIPTION & MANUFACTURER                                                     | MODEL NO.                   | SERIAL NO. | CALIBRATED DATE | CALIBRATED UNTIL |
|--------------------------------------------------------------------------------|-----------------------------|------------|-----------------|------------------|
| Test Receiver<br>ROHDE & SCHWARZ                                               | ESCS 30                     | 100375     | Apr. 29, 2014   | Apr. 28, 2015    |
| Line-Impedance<br>Stabilization Network<br>(for EUT)<br>SCHWARZBECK            | NSLK-8127                   | 8127-522   | Sep. 15, 2014   | Sep. 14, 2015    |
| Line-Impedance<br>Stabilization Network<br>(for Peripheral)<br>ROHDE & SCHWARZ | ENV216                      | 100071     | Nov. 10, 2014   | Nov. 09, 2015    |
| RF Cable<br>(JYEBAO)                                                           | 5DFB                        | COCCAB-001 | Mar. 10, 2014   | Mar. 09, 2015    |
| 50 ohms Terminator                                                             | N/A                         | EMC-03     | Sep. 22, 2014   | Sep. 21, 2015    |
| 50 ohms Terminator                                                             | N/A                         | EMC-02     | Sep. 30, 2014   | Sep. 29, 2015    |
| Software<br>ADT                                                                | BV<br>ADT_Cond_V7.3.7.<br>3 | NA         | NA              | NA               |

#### Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. C.
3. The VCCI Con C Registration No. is C-3611.
4. Tested Date: Feb. 11, 2015

#### 4.2.3 Test Procedures

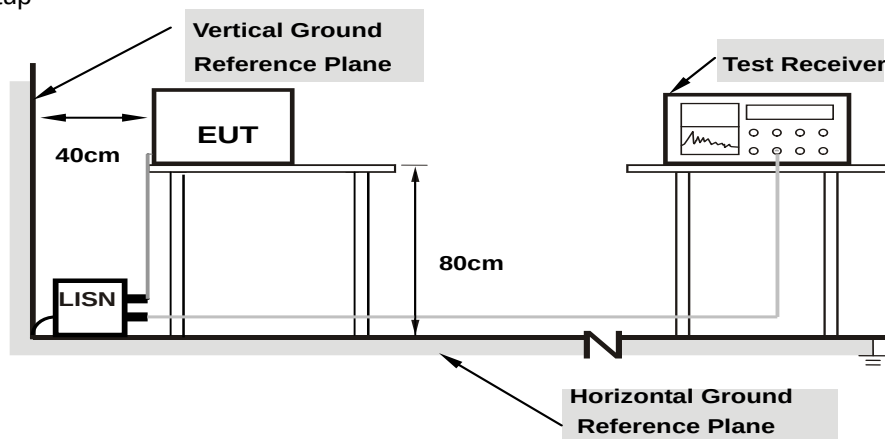
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

**Note:** The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

#### 4.2.4 Deviation from Test Standard

No deviation.

#### 4.2.5 Test Setup



**Note:** 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 4.2.6 EUT Operating Conditions

Same as 4.1.6.

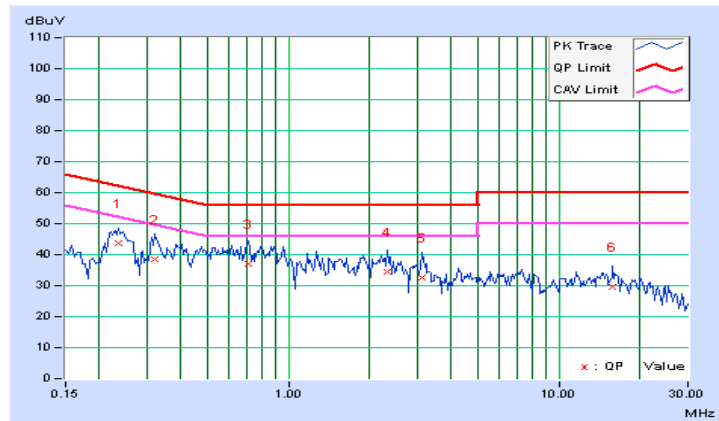
#### 4.2.7 Test Results

| Phase | Line (L) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|-------|----------|-------------------|--------------------------------|
|-------|----------|-------------------|--------------------------------|

| No | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) |       | Emission Level (dBuV) |       | Limit (dBuV) |       | Margin (dB) |        |
|----|-----------------|------------------------|----------------------|-------|-----------------------|-------|--------------|-------|-------------|--------|
|    |                 |                        | Q.P.                 | AV.   | Q.P.                  | AV.   | Q.P.         | AV.   | Q.P.        | AV.    |
| 1  | 0.23594         | 0.07                   | 43.46                | 35.02 | 43.53                 | 35.09 | 62.24        | 52.24 | -18.70      | -17.14 |
| 2  | 0.32188         | 0.08                   | 38.62                | 29.00 | 38.70                 | 29.08 | 59.66        | 49.66 | -20.96      | -20.58 |
| 3  | 0.71250         | 0.11                   | 36.92                | 29.08 | 37.03                 | 29.19 | 56.00        | 46.00 | -18.97      | -16.81 |
| 4  | 2.32422         | 0.19                   | 34.28                | 26.76 | 34.47                 | 26.95 | 56.00        | 46.00 | -21.53      | -19.05 |
| 5  | 3.12500         | 0.22                   | 32.46                | 24.14 | 32.68                 | 24.36 | 56.00        | 46.00 | -23.32      | -21.64 |
| 6  | 15.73047        | 0.60                   | 28.96                | 20.38 | 29.56                 | 20.98 | 60.00        | 50.00 | -30.44      | -29.02 |

#### Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

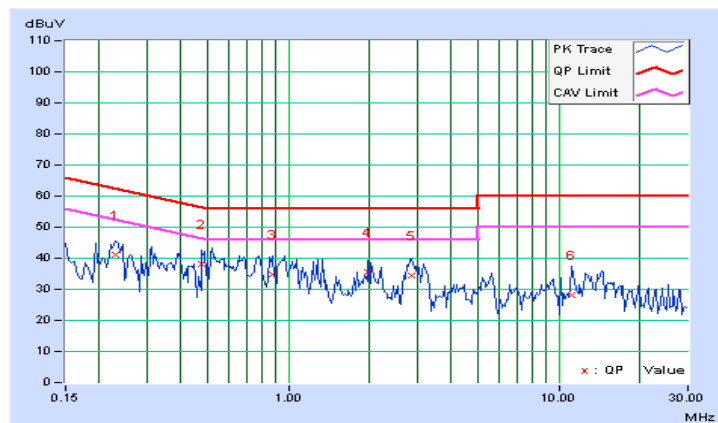


|       |             |                   |                                |
|-------|-------------|-------------------|--------------------------------|
| Phase | Neutral (N) | Detector Function | Quasi-Peak (QP) / Average (AV) |
|-------|-------------|-------------------|--------------------------------|

| No       | Frequency (MHz) | Correction Factor (dB) | Reading Value (dBuV) |              | Emission Level (dBuV) |              | Limit (dBuV) |              | Margin (dB)   |               |
|----------|-----------------|------------------------|----------------------|--------------|-----------------------|--------------|--------------|--------------|---------------|---------------|
|          |                 |                        | Q.P.                 | AV.          | Q.P.                  | AV.          | Q.P.         | AV.          | Q.P.          | AV.           |
| 1        | 0.22812         | 0.06                   | 41.12                | 31.54        | 41.18                 | 31.60        | 62.52        | 52.52        | -21.33        | -20.91        |
| 2        | 0.47813         | 0.10                   | 37.96                | 28.78        | 38.06                 | 28.88        | 56.37        | 46.37        | -18.32        | -17.50        |
| 3        | 0.87266         | 0.12                   | 34.76                | 27.54        | 34.88                 | 27.66        | 56.00        | 46.00        | -21.12        | -18.34        |
| <b>4</b> | <b>1.96875</b>  | <b>0.18</b>            | <b>35.34</b>         | <b>29.68</b> | <b>35.52</b>          | <b>29.86</b> | <b>56.00</b> | <b>46.00</b> | <b>-20.48</b> | <b>-16.14</b> |
| 5        | 2.86719         | 0.21                   | 34.34                | 26.00        | 34.55                 | 26.21        | 56.00        | 46.00        | -21.45        | -19.79        |
| 6        | 11.18359        | 0.50                   | 27.70                | 18.96        | 28.20                 | 19.46        | 60.00        | 50.00        | -31.80        | -30.54        |

**Remarks:**

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

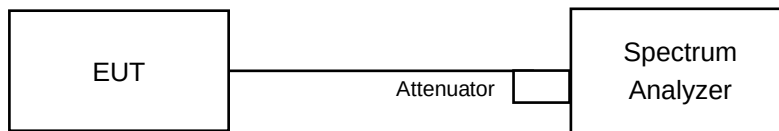


### 4.3 6dB Bandwidth Measurement

#### 4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

#### 4.3.2 Test Setup



#### 4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

#### 4.3.4 Test Procedure

- Set resolution bandwidth (RBW) = 100kHz
- Set the video bandwidth (VBW)  $\geq 3 \times$  RBW, Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

#### 4.3.5 Deviation from Test Standard

No deviation.

#### 4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

#### 4.3.7 Test Result

##### 802.11b

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) |         | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
|         |                 | Chain 0             | Chain 1 |                     |             |
| 1       | 2412            | 8.06                | 8.10    | 0.5                 | Pass        |
| 6       | 2437            | 8.06                | 8.09    | 0.5                 | Pass        |
| 11      | 2462            | 8.03                | 8.11    | 0.5                 | Pass        |
| 12      | 2467            | 8.07                | 8.08    | 0.5                 | Pass        |
| 13      | 2472            | 8.11                | 8.08    | 0.5                 | Pass        |

##### 802.11g

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) |         | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
|         |                 | Chain 0             | Chain 1 |                     |             |
| 1       | 2412            | 15.32               | 15.38   | 0.5                 | Pass        |
| 6       | 2437            | 15.71               | 15.49   | 0.5                 | Pass        |
| 11      | 2462            | 15.81               | 15.49   | 0.5                 | Pass        |
| 12      | 2467            | 15.72               | 15.32   | 0.5                 | Pass        |
| 13      | 2472            | 16.07               | 15.80   | 0.5                 | Pass        |

##### VHT20

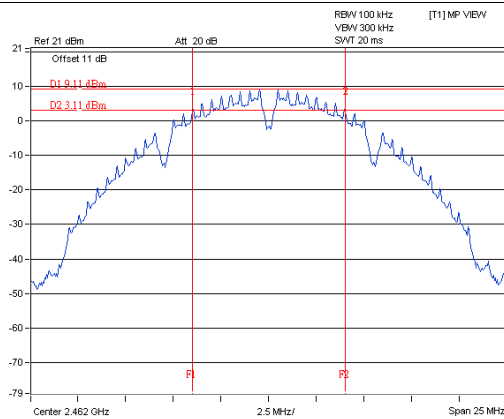
| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) |         | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
|         |                 | Chain 0             | Chain 1 |                     |             |
| 1       | 2412            | 15.13               | 16.26   | 0.5                 | Pass        |
| 6       | 2437            | 15.69               | 15.11   | 0.5                 | Pass        |
| 11      | 2462            | 15.14               | 15.69   | 0.5                 | Pass        |
| 12      | 2467            | 15.73               | 15.16   | 0.5                 | Pass        |
| 13      | 2472            | 16.34               | 15.48   | 0.5                 | Pass        |

##### VHT40

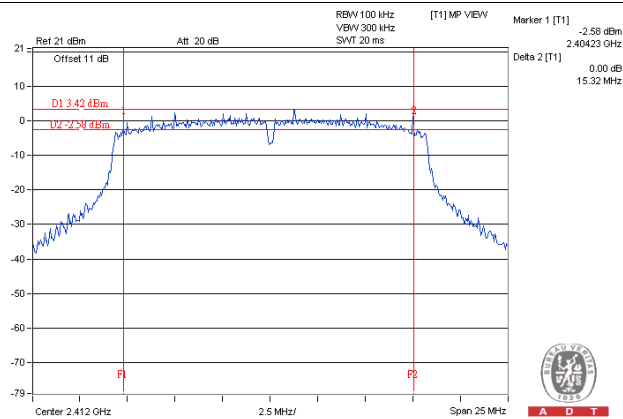
| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) |         | Minimum Limit (MHz) | Pass / Fail |
|---------|-----------------|---------------------|---------|---------------------|-------------|
|         |                 | Chain 0             | Chain 1 |                     |             |
| 3       | 2422            | 32.72               | 34.00   | 0.5                 | Pass        |
| 6       | 2437            | 35.16               | 32.66   | 0.5                 | Pass        |
| 9       | 2452            | 33.80               | 33.81   | 0.5                 | Pass        |
| 10      | 2457            | 35.12               | 35.27   | 0.5                 | Pass        |
| 11      | 2462            | 34.15               | 33.95   | 0.5                 | Pass        |

## Spectrum Plot of Worst Value

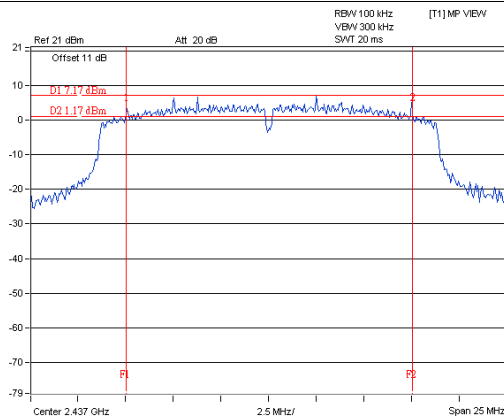
### 802.11b\_Chain 0 / CH11



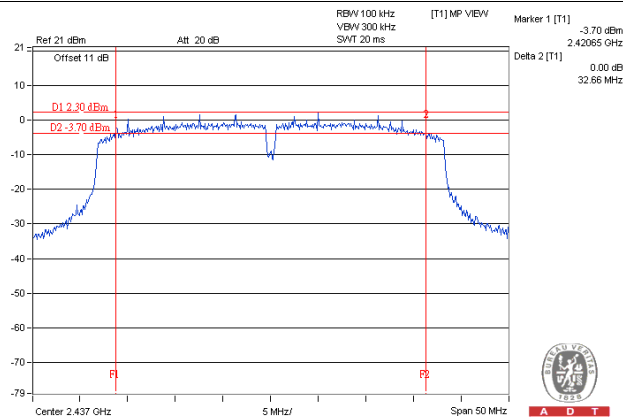
### 802.11g\_Chain 0 / CH1



### VHT20\_Chain 1 / CH6



### VHT40\_Chain 1 / CH6



## 4.4 Conducted Output Power Measurement

### 4.4.1 Limits of Conducted Output Power Measurement

For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

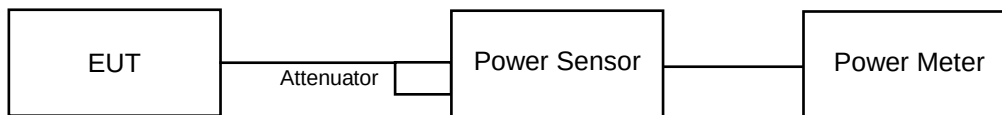
Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  MHz for any  $N_{ANT}$ ;

Array Gain =  $5 \log(N_{ANT}/N_{SS})$  dB or 3 dB, whichever is less for 20-MHz channel widths with  $N_{ANT} \geq 5$ .

For power measurements on all other devices: Array Gain =  $10 \log(N_{ANT}/N_{SS})$  dB.

### 4.4.2 Test Setup



### 4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.4.4 Test Procedures

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

### 4.4.5 Deviation from Test Standard

No deviation.

### 4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

#### 4.4.7 Test Results

#### FOR PEAK POWER

##### 802.11b

| Chan. | Chan. Freq. (MHz) | Peak Power (dBm) |         | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|-------|-------------------|------------------|---------|------------------|-------------------|-------------|-------------|
|       |                   | Chain 0          | Chain 1 |                  |                   |             |             |
| 1     | 2412              | 20.81            | 20.65   | 236.649          | 23.74             | 29.37       | Pass        |
| 6     | 2437              | 21.15            | 21.56   | 273.536          | 24.37             | 29.37       | Pass        |
| 11    | 2462              | 21.36            | 20.65   | 252.918          | 24.03             | 29.37       | Pass        |
| 12    | 2467              | 20.05            | 19.72   | 194.914          | 22.90             | 29.37       | Pass        |
| 13    | 2472              | 13.20            | 12.99   | 40.8             | 16.11             | 29.37       | Pass        |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , therefore the limit needs to reduce, so the power limit shall be reduced to  $30-(6.63-6) = 29.37\text{dBm}$ .

##### 802.11g

| Chan. | Chan. Freq. (MHz) | Peak Power (dBm) |         | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|-------|-------------------|------------------|---------|------------------|-------------------|-------------|-------------|
|       |                   | Chain 0          | Chain 1 |                  |                   |             |             |
| 1     | 2412              | 21.85            | 22.07   | 314.174          | 24.97             | 29.37       | Pass        |
| 6     | 2437              | 24.10            | 24.03   | 509.97           | 27.08             | 29.37       | Pass        |
| 11    | 2462              | 21.07            | 21.36   | 264.711          | 24.23             | 29.37       | Pass        |
| 12    | 2467              | 18.23            | 18.28   | 133.825          | 21.27             | 29.37       | Pass        |
| 13    | 2472              | 8.69             | 8.63    | 14.691           | 11.67             | 29.37       | Pass        |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , therefore the limit needs to reduce, so the power limit shall be reduced to  $30-(6.63-6) = 29.37\text{dBm}$ .

##### VHT20

| Chan. | Chan. Freq. (MHz) | Peak Power (dBm) |         | Total Power (mW) | Total Power (dBm) | Limit (dBm) | Pass / Fail |
|-------|-------------------|------------------|---------|------------------|-------------------|-------------|-------------|
|       |                   | Chain 0          | Chain 1 |                  |                   |             |             |
| 1     | 2412              | 21.58            | 21.65   | 290.098          | 24.63             | 29.37       | Pass        |
| 6     | 2437              | 23.74            | 24.27   | 503.893          | 27.02             | 29.37       | Pass        |
| 11    | 2462              | 21.24            | 21.35   | 269.503          | 24.31             | 29.37       | Pass        |
| 12    | 2467              | 17.76            | 18.02   | 123.091          | 20.90             | 29.37       | Pass        |
| 13    | 2472              | 7.21             | 7.61    | 11.028           | 10.42             | 29.37       | Pass        |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , therefore the limit needs to reduce, so the power limit shall be reduced to  $30-(6.63-6) = 29.37\text{dBm}$ .

#### VHT40

| Chan. | Chan. Freq.<br>(MHz) | Peak Power (dBm) |         | Total<br>Power<br>(mW) | Total Power<br>(dBm) | Limit (dBm) | Pass / Fail |
|-------|----------------------|------------------|---------|------------------------|----------------------|-------------|-------------|
|       |                      | Chain 0          | Chain 1 |                        |                      |             |             |
| 3     | 2422                 | 18.19            | 18.14   | 131.08                 | 21.18                | 29.37       | Pass        |
| 6     | 2437                 | 23.08            | 23.41   | 422.516                | 26.26                | 29.37       | Pass        |
| 9     | 2452                 | 17.17            | 17.39   | 106.947                | 20.29                | 29.37       | Pass        |
| 10    | 2457                 | 17.59            | 17.78   | 117.391                | 20.70                | 29.37       | Pass        |
| 11    | 2462                 | 8.97             | 9.08    | 15.98                  | 12.04                | 29.37       | Pass        |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , therefore the limit needs to reduce, so the power limit shall be reduced to  $30-(6.63-6) = 29.37\text{dBm}$ .

## FOR AVERAGE POWER

### 802.11b

| Chan. | Chan. Freq.<br>(MHz) | Average Power (dBm) |         | Total Power<br>(mW) | Total Power<br>(dBm) |
|-------|----------------------|---------------------|---------|---------------------|----------------------|
|       |                      | Chain 0             | Chain 1 |                     |                      |
| 1     | 2412                 | 18.35               | 18.22   | 134.765             | 21.30                |
| 6     | 2437                 | 18.57               | 18.95   | 150.469             | 21.77                |
| 11    | 2462                 | 18.83               | 18.13   | 141.397             | 21.50                |
| 12    | 2467                 | 17.45               | 17.23   | 108.435             | 20.35                |
| 13    | 2472                 | 10.62               | 10.32   | 22.300              | 13.48                |

### 802.11g

| Chan. | Chan. Freq.<br>(MHz) | Average Power (dBm) |         | Total Power<br>(mW) | Total Power<br>(dBm) |
|-------|----------------------|---------------------|---------|---------------------|----------------------|
|       |                      | Chain 0             | Chain 1 |                     |                      |
| 1     | 2412                 | 15.23               | 15.69   | 70.411              | 18.48                |
| 6     | 2437                 | 18.74               | 18.57   | 146.762             | 21.67                |
| 11    | 2462                 | 14.55               | 14.64   | 57.617              | 17.61                |
| 12    | 2467                 | 11.63               | 11.85   | 29.866              | 14.75                |
| 13    | 2472                 | 2.07                | 2.04    | 3.211               | 5.07                 |

### VHT20

| Chan. | Chan. Freq.<br>(MHz) | Average Power (dBm) |         | Total Power<br>(mW) | Total Power<br>(dBm) |
|-------|----------------------|---------------------|---------|---------------------|----------------------|
|       |                      | Chain 0             | Chain 1 |                     |                      |
| 1     | 2412                 | 15.17               | 15.47   | 68.122              | 18.33                |
| 6     | 2437                 | 18.58               | 19.12   | 153.769             | 21.87                |
| 11    | 2462                 | 14.64               | 14.79   | 59.237              | 17.73                |
| 12    | 2467                 | 11.67               | 11.72   | 29.548              | 14.71                |
| 13    | 2472                 | 0.96                | 0.94    | 2.489               | 3.96                 |

### VHT40

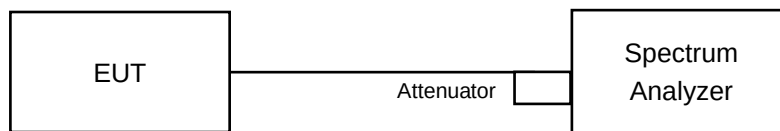
| Chan. | Chan. Freq.<br>(MHz) | Average Power (dBm) |         | Total Power<br>(mW) | Total Power<br>(dBm) |
|-------|----------------------|---------------------|---------|---------------------|----------------------|
|       |                      | Chain 0             | Chain 1 |                     |                      |
| 3     | 2422                 | 11.14               | 11.46   | 26.998              | 14.31                |
| 6     | 2437                 | 16.79               | 17.21   | 100.355             | 20.02                |
| 9     | 2452                 | 10.37               | 10.56   | 22.265              | 13.48                |
| 10    | 2457                 | 10.80               | 10.76   | 23.935              | 13.79                |
| 11    | 2462                 | 1.99                | 2.04    | 3.181               | 5.03                 |

## 4.5 Power Spectral Density Measurement

### 4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz.

### 4.5.2 Test Setup



### 4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.5.4 Test Procedure

- Set analyzer center frequency to DTS channel center frequency.
- Set the span to 1.5 times the DTS bandwidth.
- Set the RBW to:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- Set the VBW  $\geq 3 \times \text{RBW}$ .
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level within the RBW.

### 4.5.5 Deviation from Test Standard

No deviation.

### 4.5.6 EUT Operating Condition

Same as Item 4.3.6

#### 4.5.7 Test Results

##### 802.11b

| TX chain | Channel | Freq. (MHz) | PSD (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass /Fail |
|----------|---------|-------------|----------------|-----------------|----------------------|------------------|------------|
| 0        | 1       | 2412        | -5.47          | 3.01            | -2.46                | 7.37             | Pass       |
|          | 6       | 2437        | -4.83          | 3.01            | -1.82                | 7.37             | Pass       |
|          | 11      | 2462        | -5.77          | 3.01            | -2.76                | 7.37             | Pass       |
|          | 12      | 2467        | -7.22          | 3.01            | -4.21                | 7.37             | Pass       |
|          | 13      | 2472        | -14.03         | 3.01            | -11.02               | 7.37             | Pass       |
| 1        | 1       | 2412        | -6.18          | 3.01            | -3.17                | 7.37             | Pass       |
|          | 6       | 2437        | -4.51          | 3.01            | -1.50                | 7.37             | Pass       |
|          | 11      | 2462        | -5.90          | 3.01            | -2.89                | 7.37             | Pass       |
|          | 12      | 2467        | -5.66          | 3.01            | -2.65                | 7.37             | Pass       |
|          | 13      | 2472        | -13.20         | 3.01            | -10.19               | 7.37             | Pass       |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , so the power density limit shall be reduced to  $8-(6.63-6) = 7.37\text{dBm}$ .

##### 802.11g

| TX chain | Channel | Freq. (MHz) | PSD (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass /Fail |
|----------|---------|-------------|----------------|-----------------|----------------------|------------------|------------|
| 0        | 1       | 2412        | -11.27         | 3.01            | -8.26                | 7.37             | Pass       |
|          | 6       | 2437        | -7.75          | 3.01            | -4.74                | 7.37             | Pass       |
|          | 11      | 2462        | -12.47         | 3.01            | -9.46                | 7.37             | Pass       |
|          | 12      | 2467        | -15.45         | 3.01            | -12.44               | 7.37             | Pass       |
|          | 13      | 2472        | -24.94         | 3.01            | -21.93               | 7.37             | Pass       |
| 1        | 1       | 2412        | -10.55         | 3.01            | -7.54                | 7.37             | Pass       |
|          | 6       | 2437        | -8.04          | 3.01            | -5.03                | 7.37             | Pass       |
|          | 11      | 2462        | -11.59         | 3.01            | -8.58                | 7.37             | Pass       |
|          | 12      | 2467        | -15.45         | 3.01            | -12.44               | 7.37             | Pass       |
|          | 13      | 2472        | -24.49         | 3.01            | -21.48               | 7.37             | Pass       |

Note: Directional gain =  $3.62\text{dBi} + 10\log(2) = 6.63\text{dBi} > 6\text{dBi}$  , so the power density limit shall be reduced to  $8-(6.63-6) = 7.37\text{dBm}$ .

#### VHT20

| TX chain | Channel | Freq. (MHz) | PSD (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass /Fail |
|----------|---------|-------------|----------------|-----------------|----------------------|------------------|------------|
| 0        | 1       | 2412        | -12.05         | 3.01            | -9.04                | 7.37             | Pass       |
|          | 6       | 2437        | -7.76          | 3.01            | -4.75                | 7.37             | Pass       |
|          | 11      | 2462        | -12.77         | 3.01            | -9.76                | 7.37             | Pass       |
|          | 12      | 2467        | -15.29         | 3.01            | -12.28               | 7.37             | Pass       |
|          | 13      | 2472        | -26.17         | 3.01            | -23.16               | 7.37             | Pass       |
| 1        | 1       | 2412        | -11.68         | 3.01            | -8.67                | 7.37             | Pass       |
|          | 6       | 2437        | -8.21          | 3.01            | -5.20                | 7.37             | Pass       |
|          | 11      | 2462        | -11.64         | 3.01            | -8.63                | 7.37             | Pass       |
|          | 12      | 2467        | -14.91         | 3.01            | -11.90               | 7.37             | Pass       |
|          | 13      | 2472        | -26.55         | 3.01            | -23.54               | 7.37             | Pass       |

Note: Directional gain = 3.62dBi + 10log(2) = 6.63dBi > 6dBi , so the power density limit shall be reduced to 8-(6.63-6) = 7.37dBm.

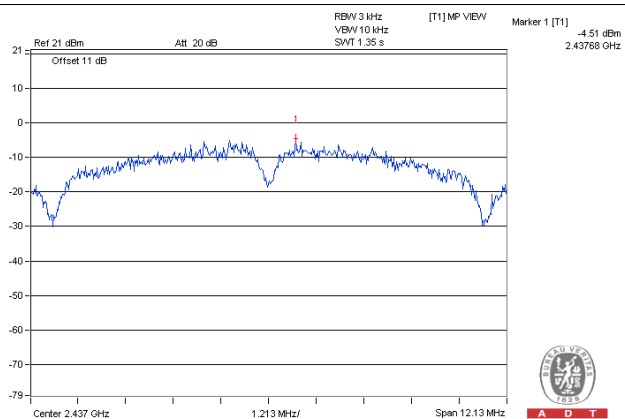
#### VHT40

| TX chain | Channel | Freq. (MHz) | PSD (dBm/3kHz) | 10 log (N=2) dB | Total PSD (dBm/3kHz) | Limit (dBm/3kHz) | Pass /Fail |
|----------|---------|-------------|----------------|-----------------|----------------------|------------------|------------|
| 0        | 3       | 2422        | -18.04         | 3.01            | -15.03               | 7.37             | Pass       |
|          | 6       | 2437        | -11.54         | 3.01            | -8.53                | 7.37             | Pass       |
|          | 9       | 2452        | -19.53         | 3.01            | -16.52               | 7.37             | Pass       |
|          | 10      | 2457        | -19.19         | 3.01            | -16.18               | 7.37             | Pass       |
|          | 11      | 2462        | -27.88         | 3.01            | -24.87               | 7.37             | Pass       |
| 1        | 3       | 2422        | -17.84         | 3.01            | -14.83               | 7.37             | Pass       |
|          | 6       | 2437        | -11.78         | 3.01            | -8.77                | 7.37             | Pass       |
|          | 9       | 2452        | -18.70         | 3.01            | -15.69               | 7.37             | Pass       |
|          | 10      | 2457        | -19.13         | 3.01            | -16.12               | 7.37             | Pass       |
|          | 11      | 2462        | -27.75         | 3.01            | -24.74               | 7.37             | Pass       |

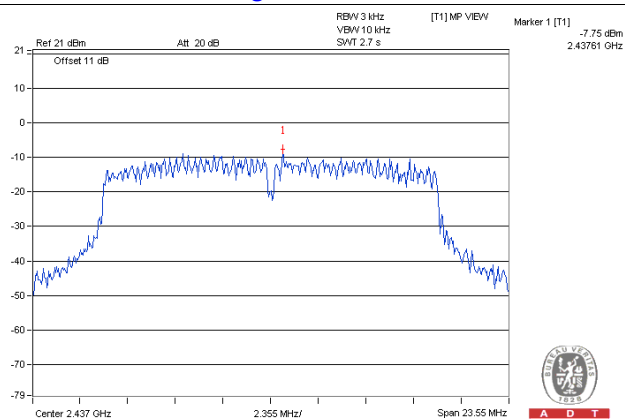
Note: Directional gain = 3.62dBi + 10log(2) = 6.63dBi > 6dBi , so the power density limit shall be reduced to 8-(6.63-6) = 7.37dBm.

# Spectrum Plot of Worst Value

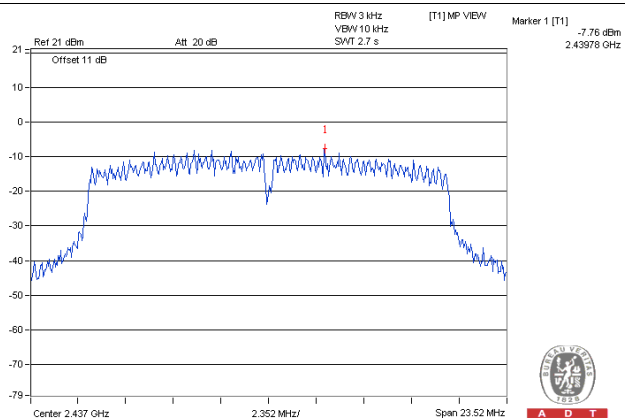
## 802.11b\_Chain 1 / CH6



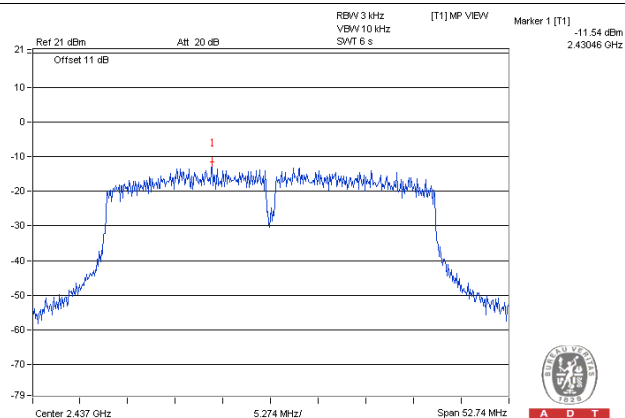
## 802.11g\_Chain 0 / CH6



## VHT20\_Chain 0 / CH6



## VHT40\_Chain 0 / CH6

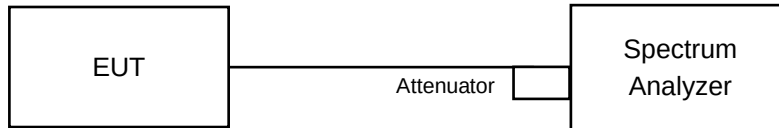


## 4.6 Conducted Out of Band Emission Measurement

### 4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

### 4.6.2 Test Setup



### 4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

### 4.6.4 Test Procedure

#### MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

#### MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

### 4.6.5 Deviation from Test Standard

No deviation.

### 4.6.6 EUT Operating Condition

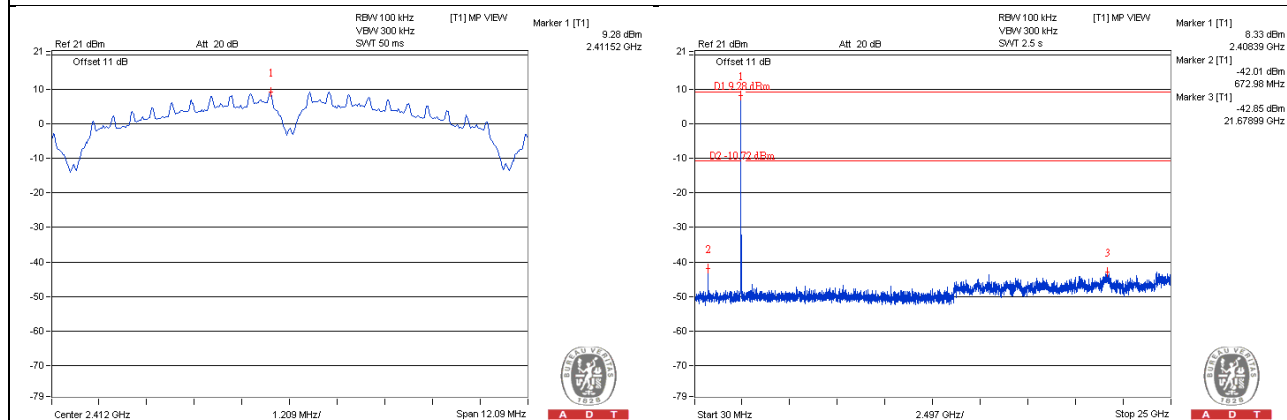
Same as Item 4.3.6

### 4.6.7 Test Results

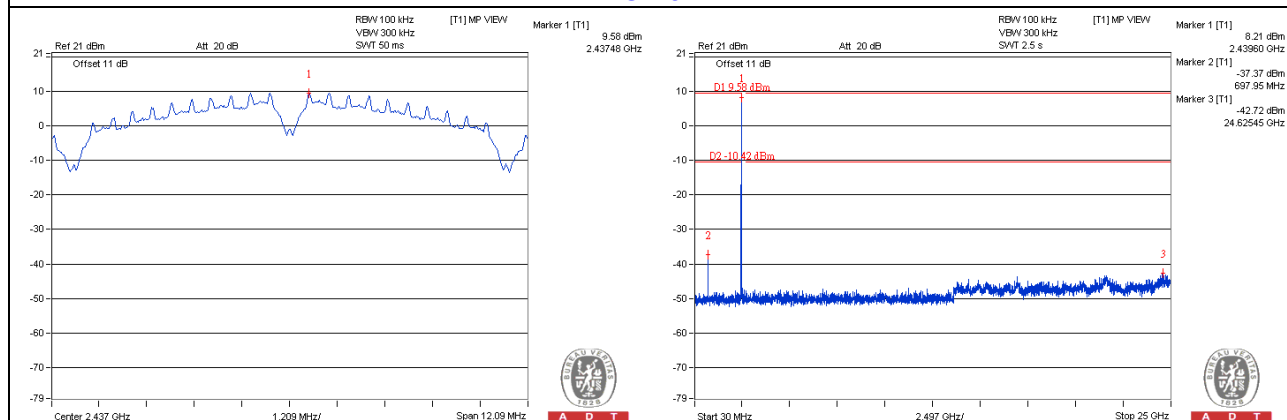
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

## 802.11b Chain 0

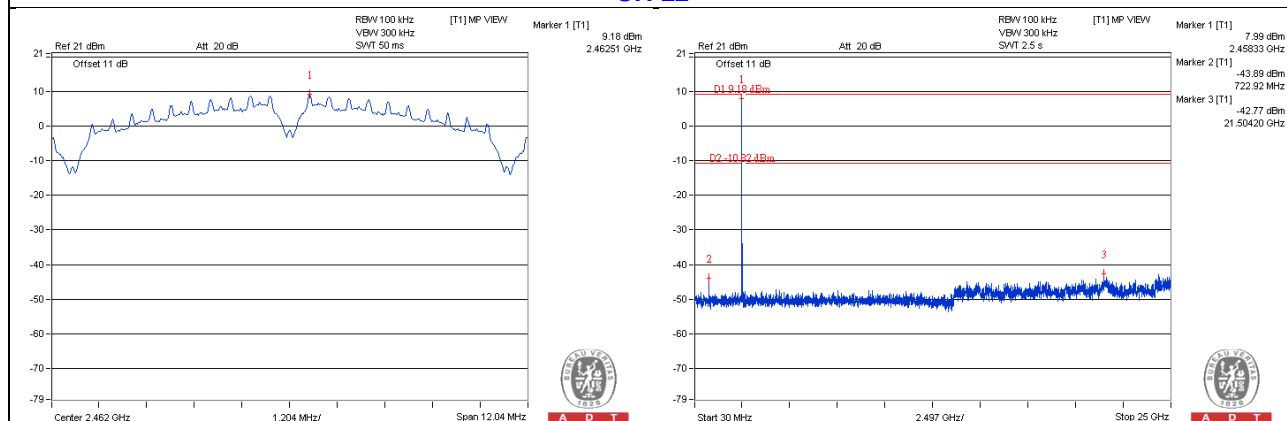
### CH 1



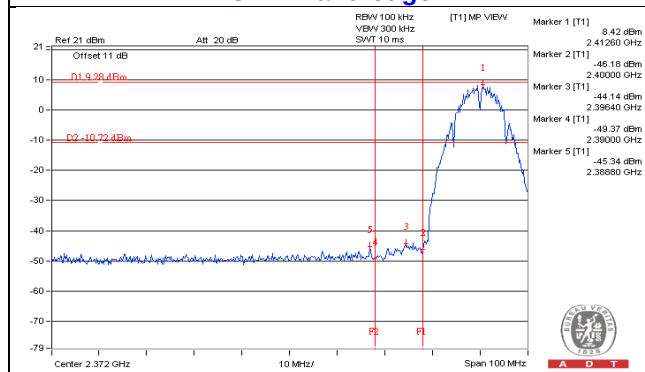
### CH 6



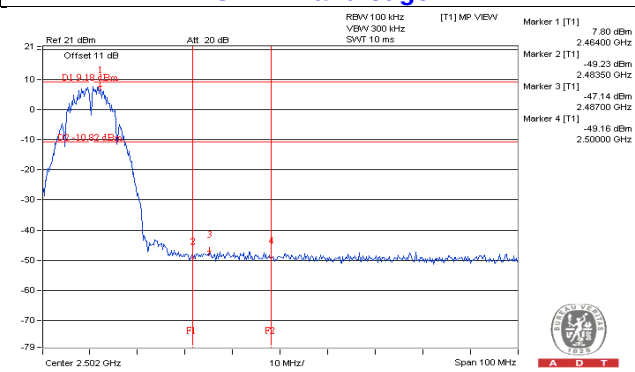
### CH 11



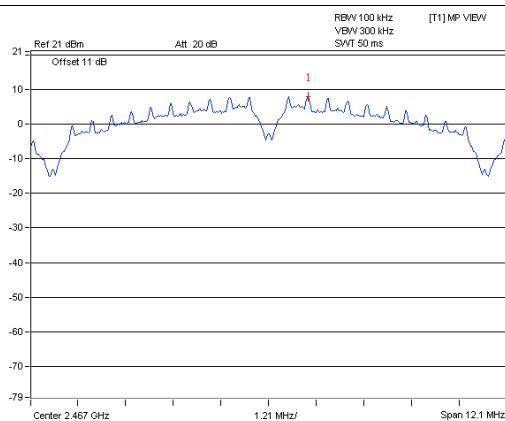
### CH 1 Band edge



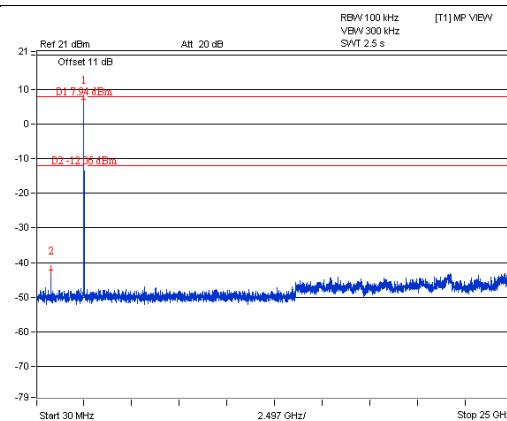
### CH 11 Band edge



## CH 12

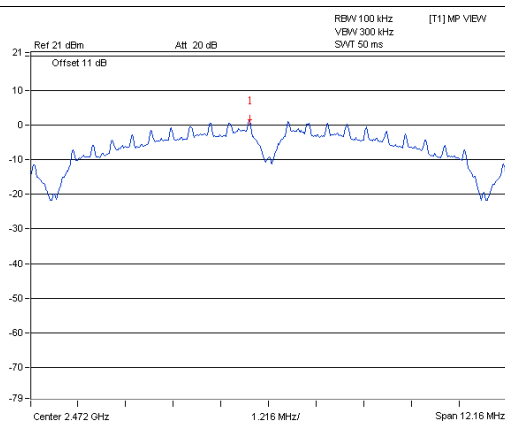


A D T

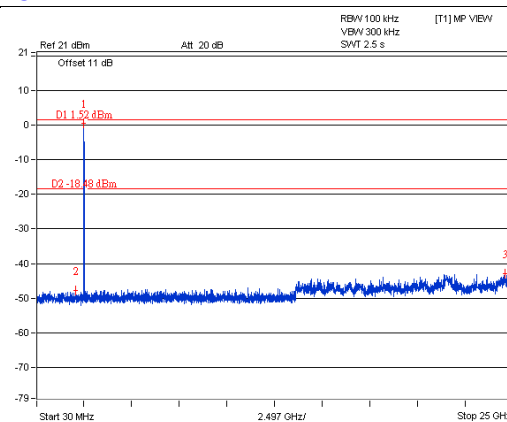


A D T

## CH 13

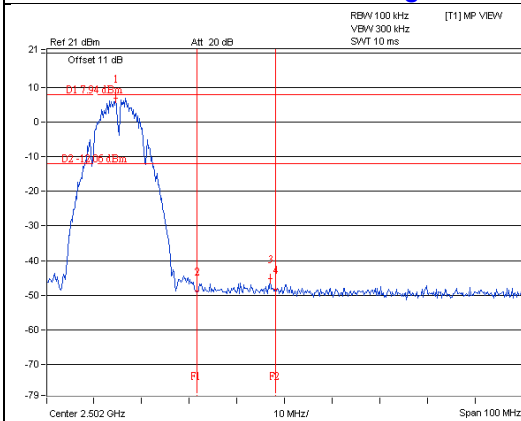


A D T



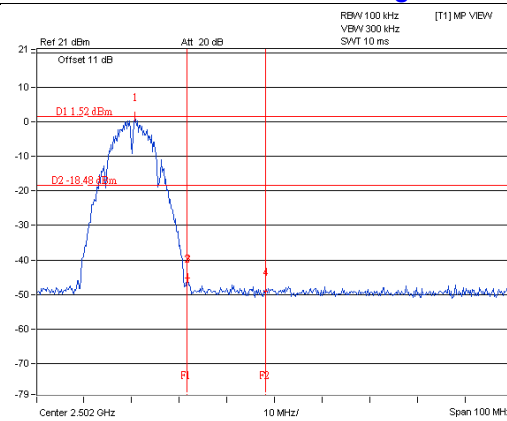
A D T

## CH 12 Band edge



A D T

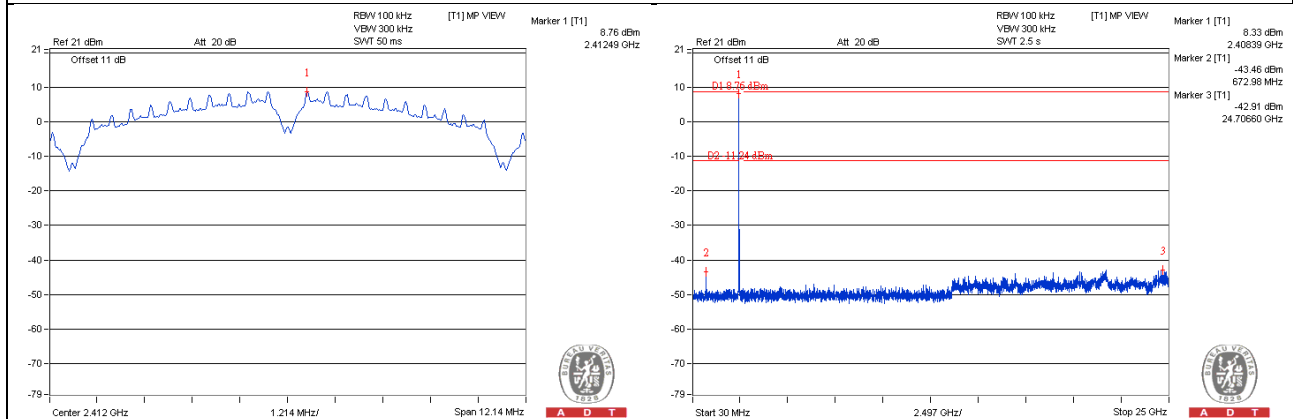
## CH 13 Band edge



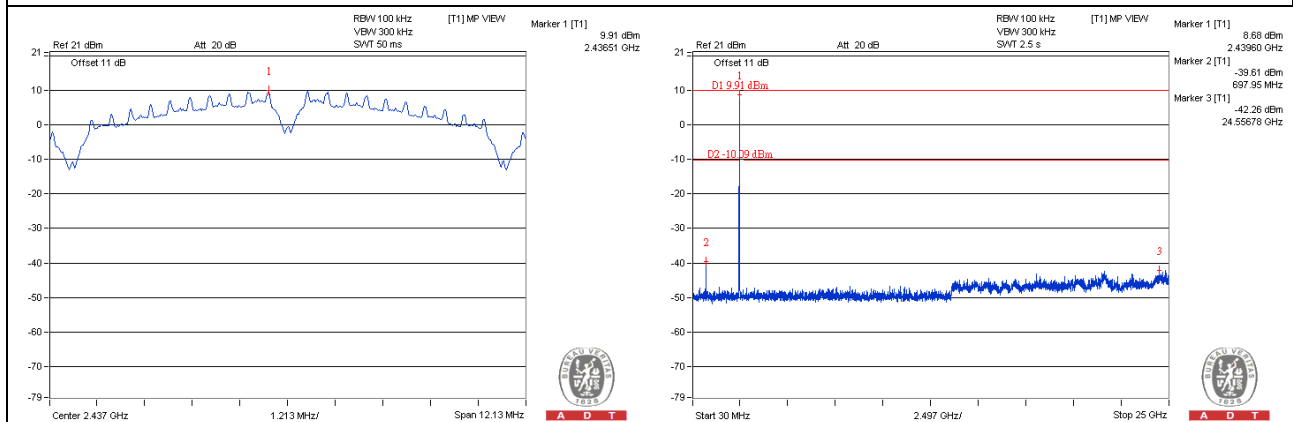
A D T

## Chain 1

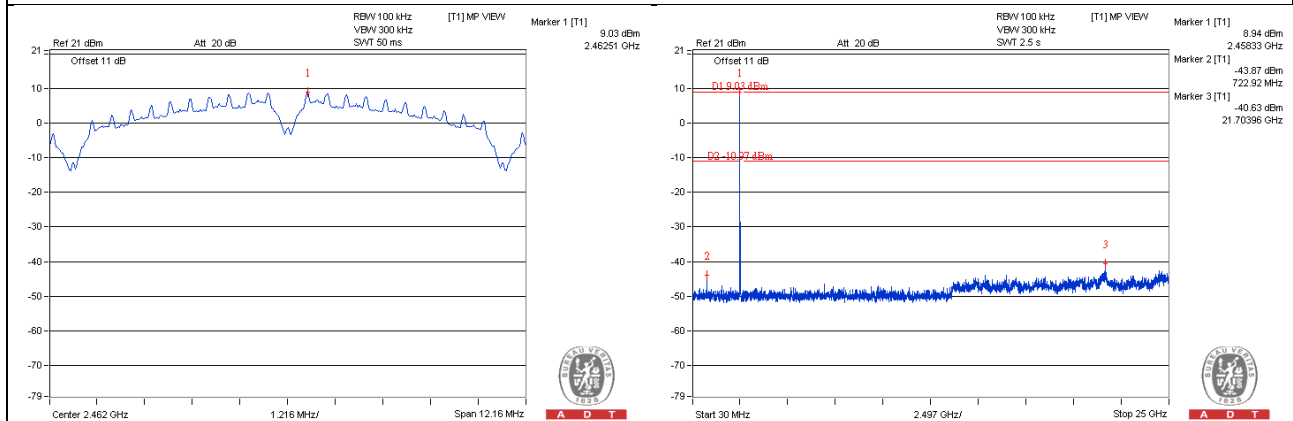
### CH 1



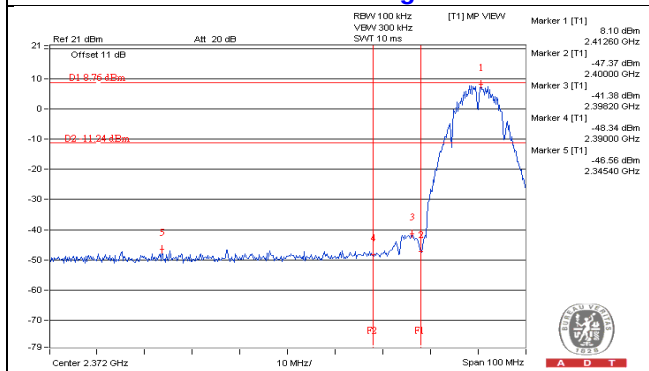
### CH 6



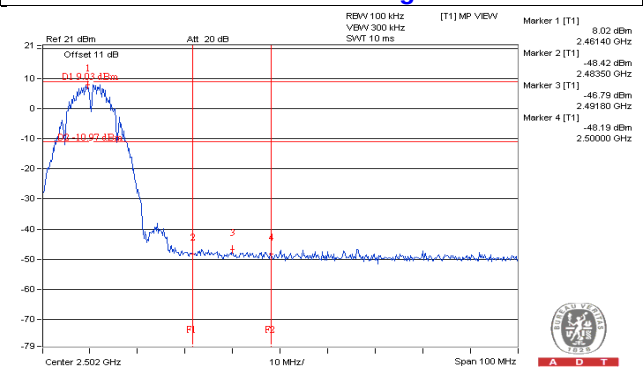
### CH 11



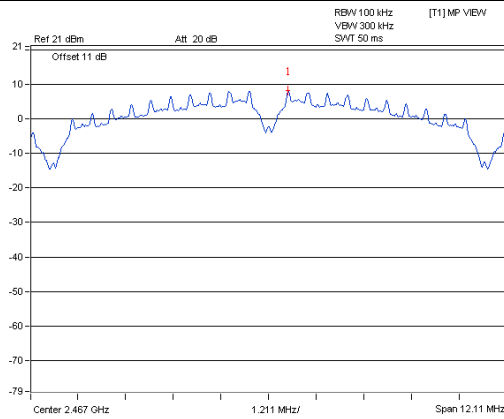
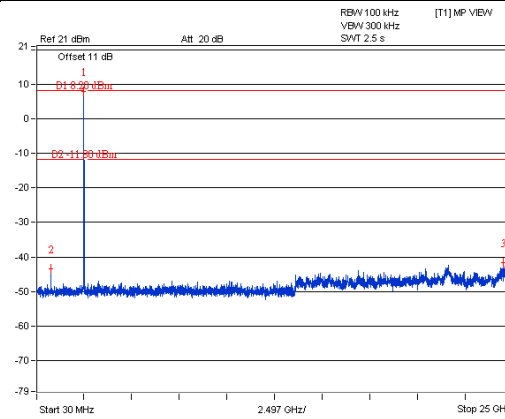
### CH 1 Band edge



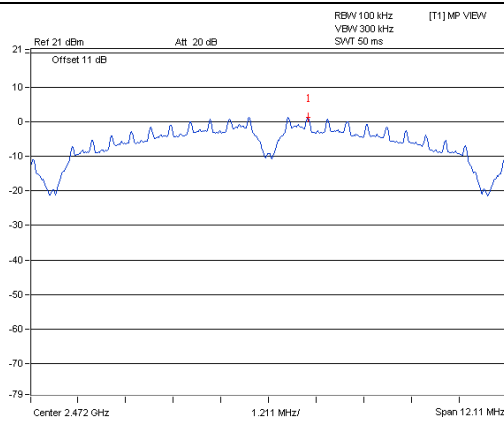
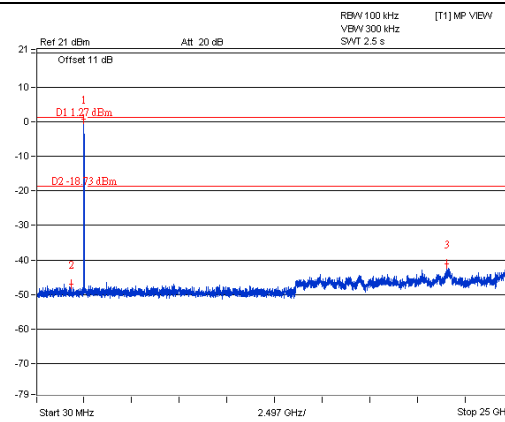
### CH 11 Band edge



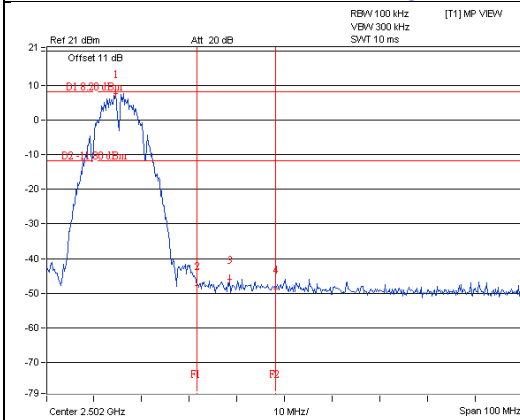
## CH 12



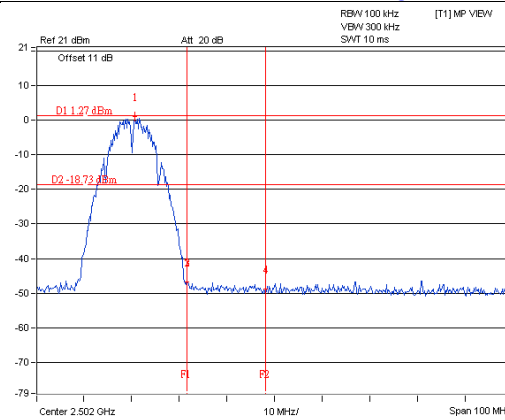
## CH 13



## CH 12 Band edge

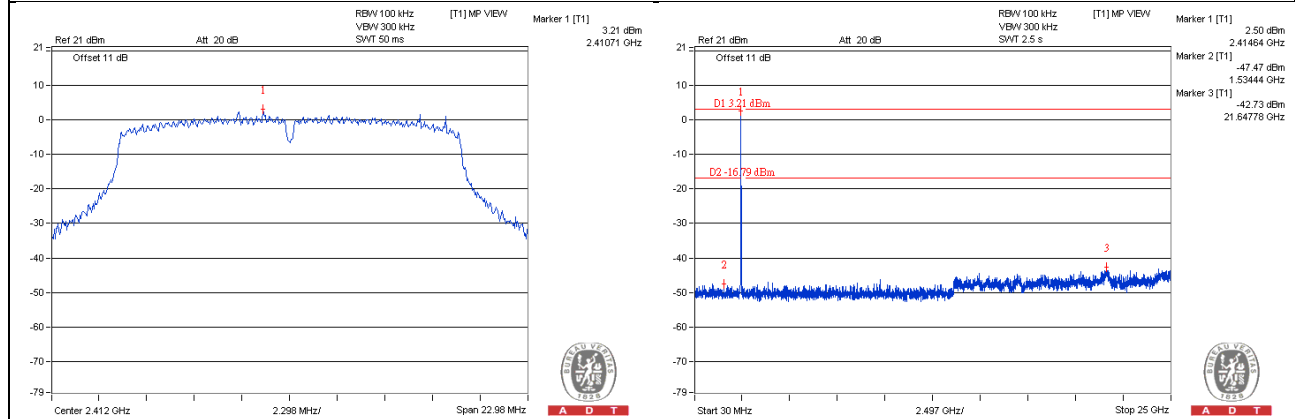


## CH 13 Band edge

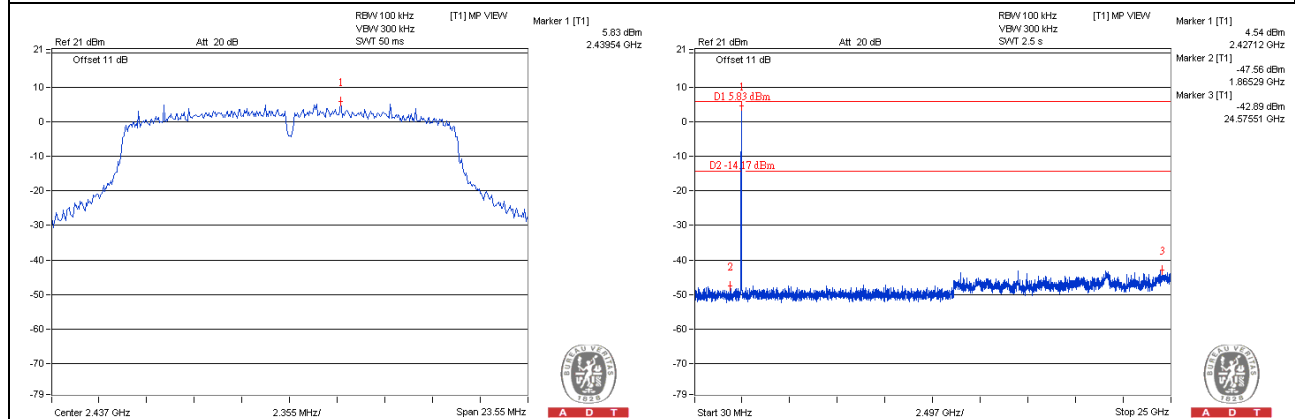


## 802.11g Chain 0

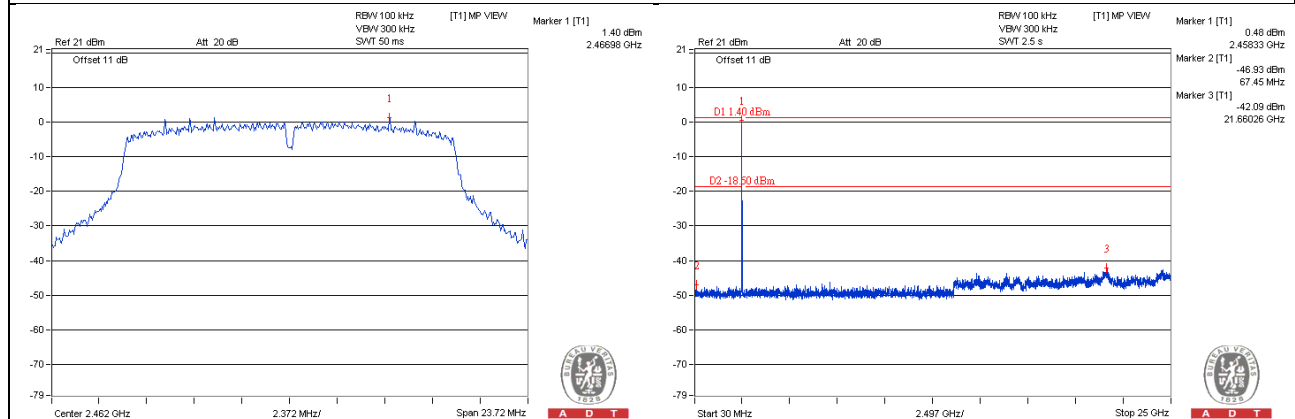
### CH 1



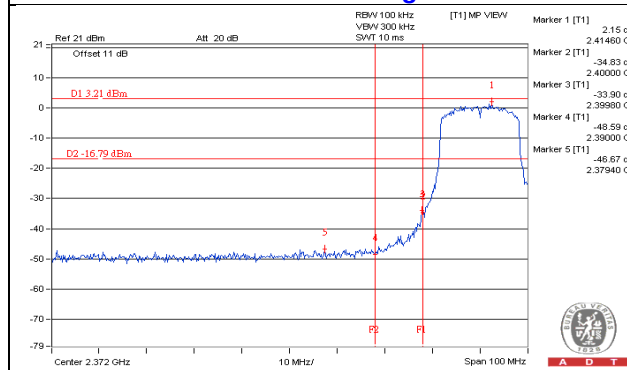
### CH 6



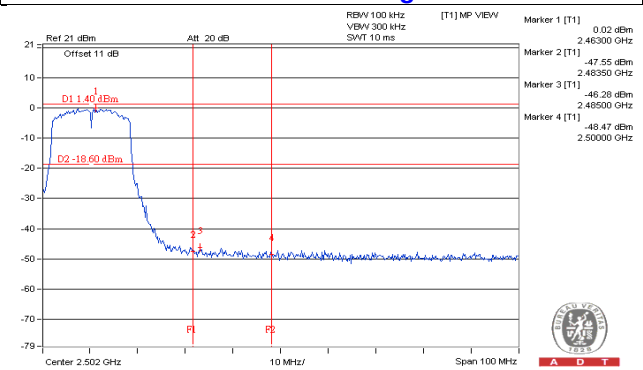
### CH 11



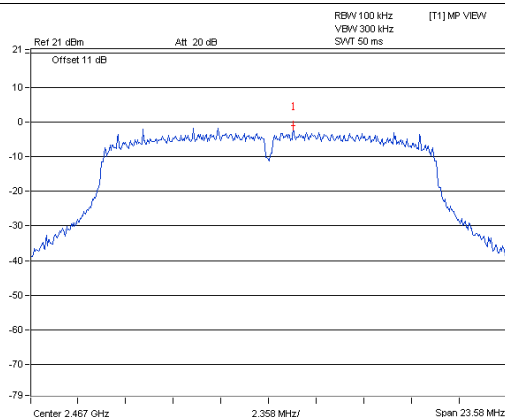
### CH 1 Band edge



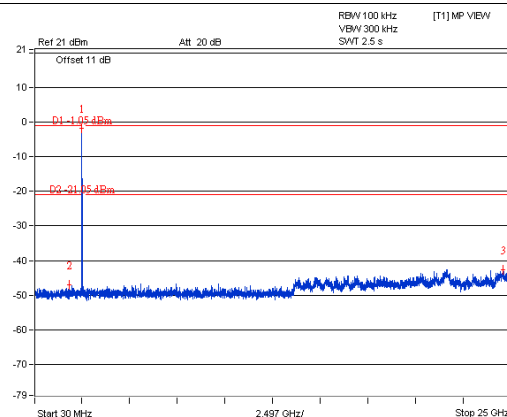
### CH 11 Band edge



## CH 12

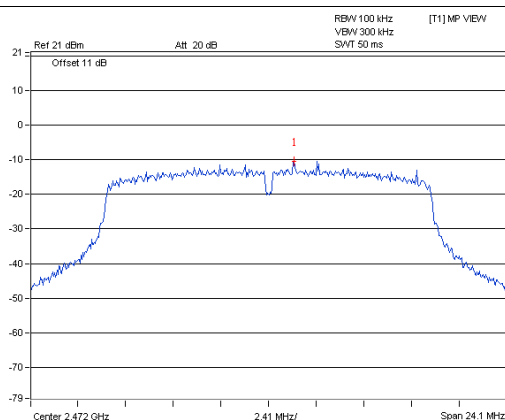


A D T

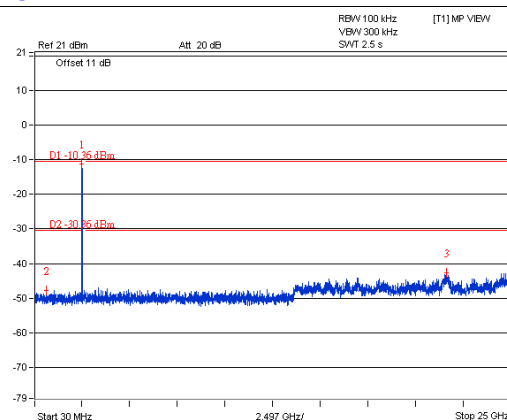


A D T

## CH 13

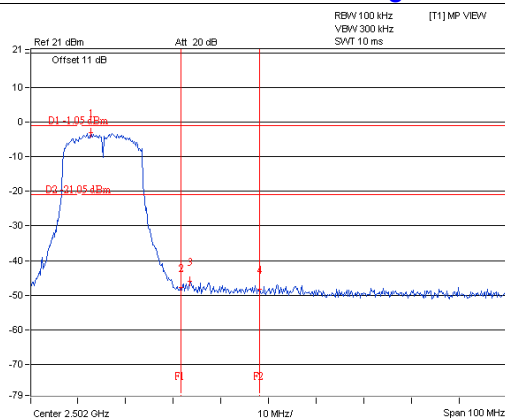


A D T



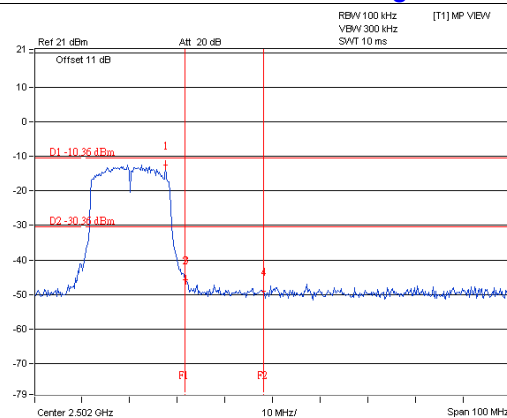
A D T

## CH 12 Band edge



A D T

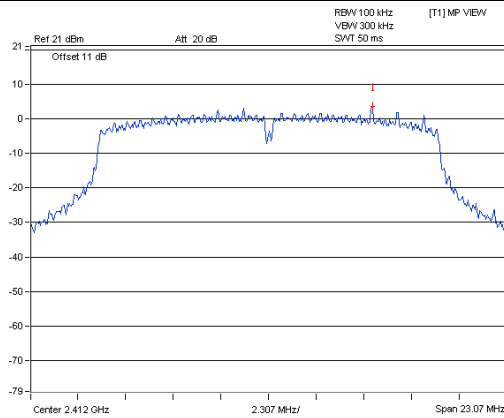
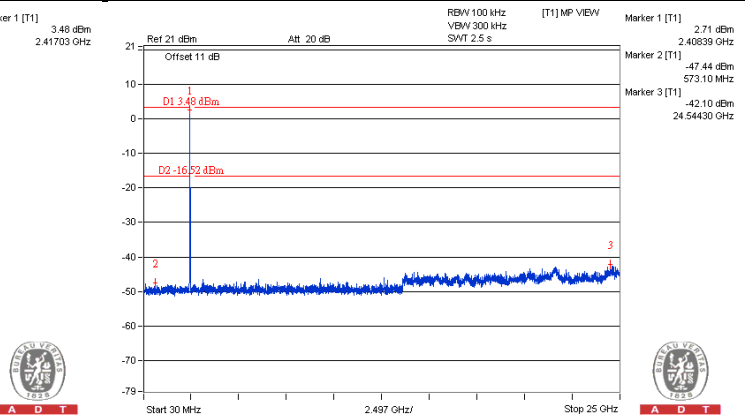
## CH 13 Band edge



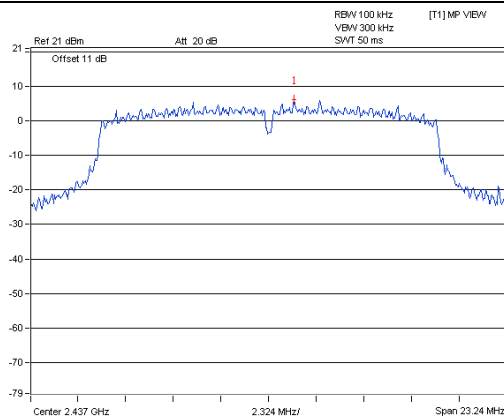
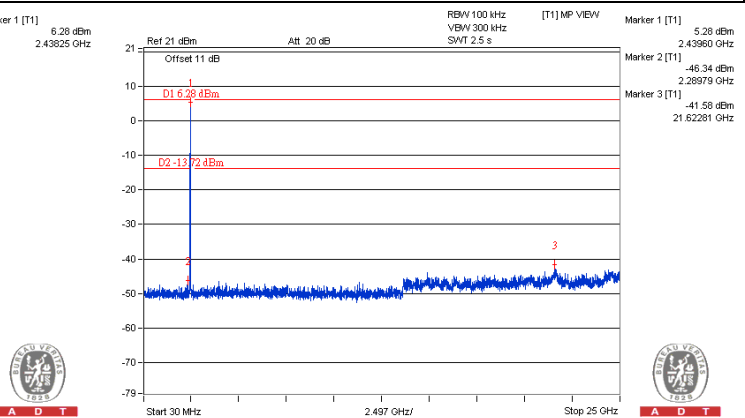
A D T

## Chain 1

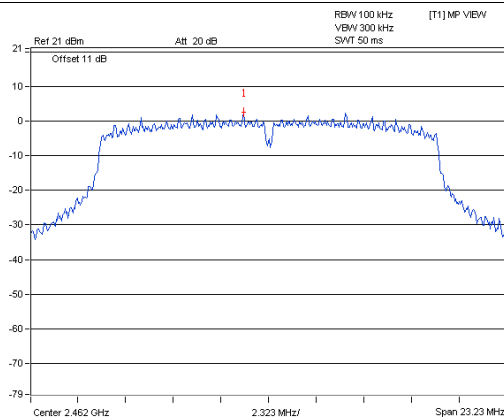
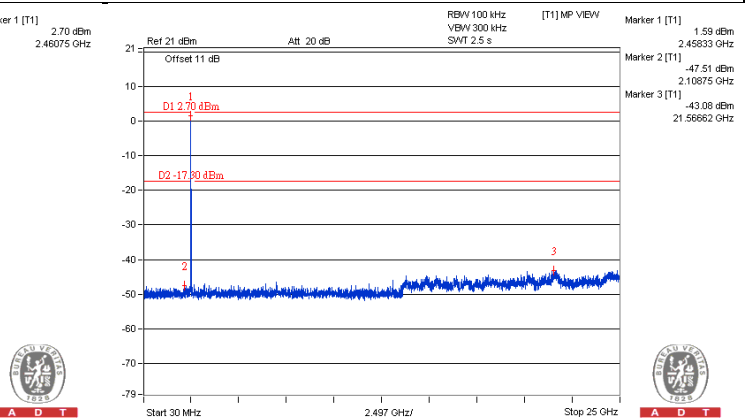
### CH 1



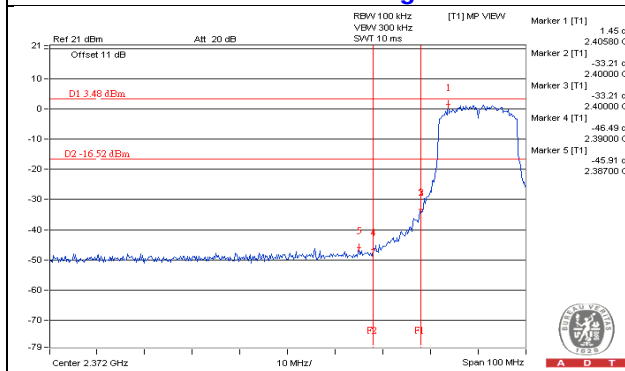
### CH 6



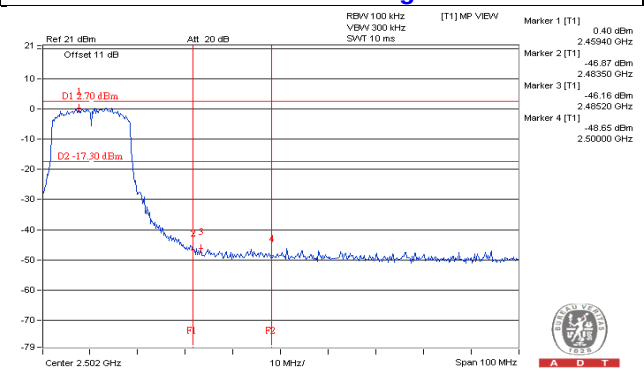
### CH 11



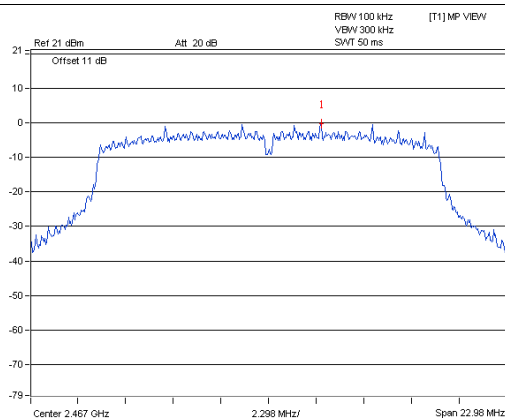
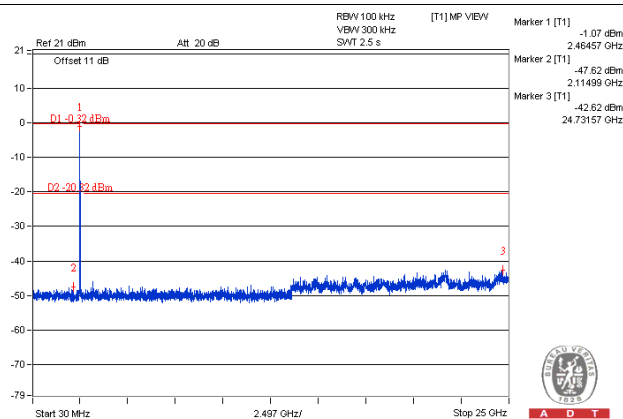
### CH 1 Band edge



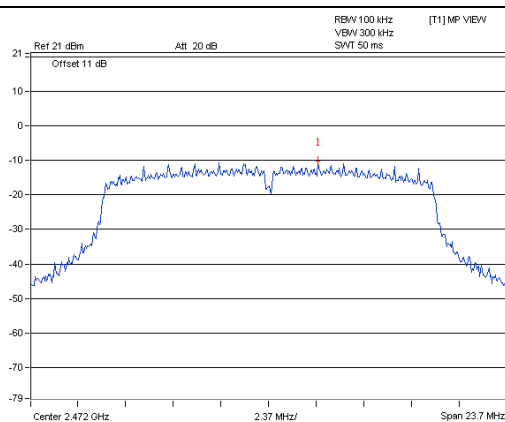
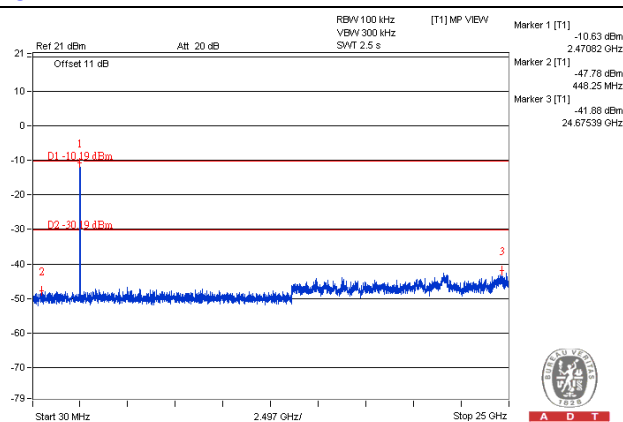
### CH 11 Band edge



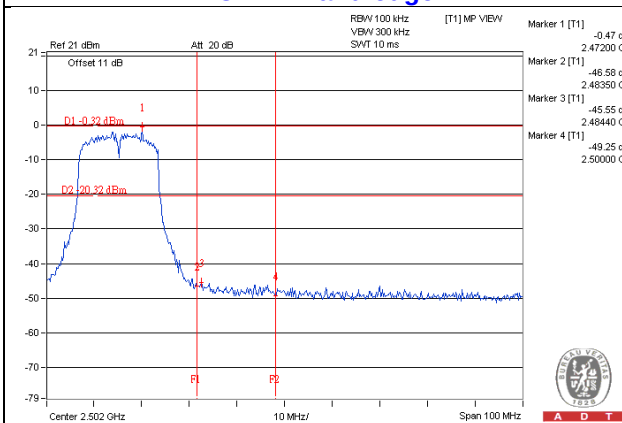
## CH 12



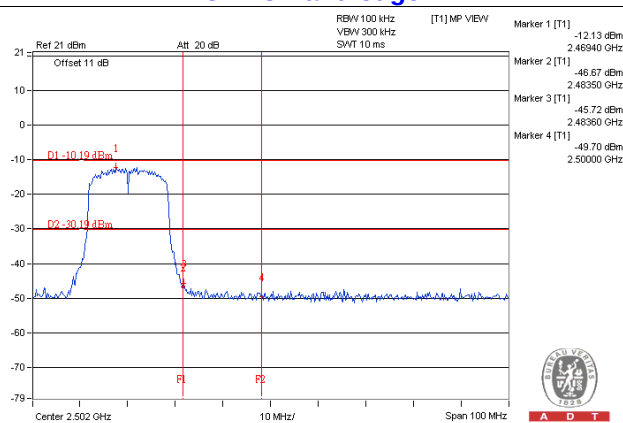
## CH 13



## CH 12 Band edge

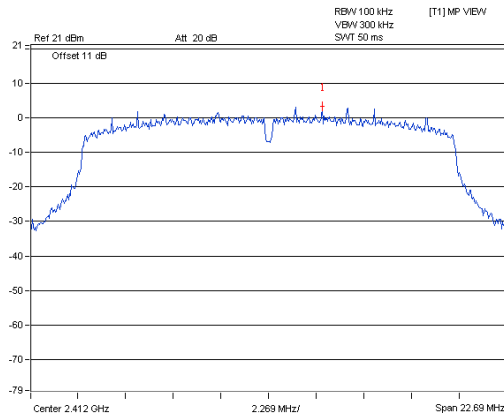


## CH 13 Band edge

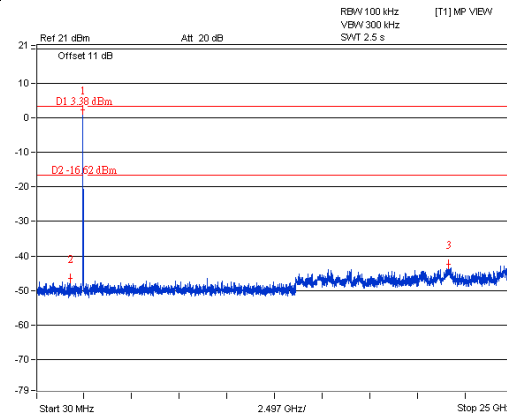


## VHT20 Chain 0

### CH 1

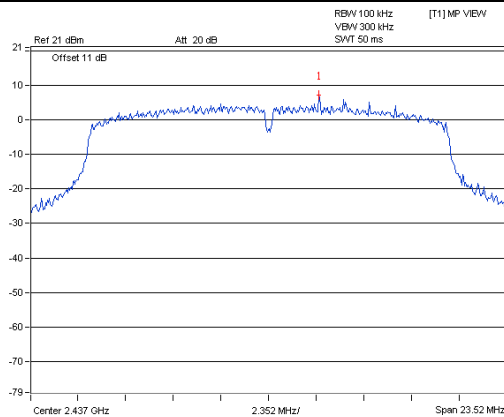


A D T

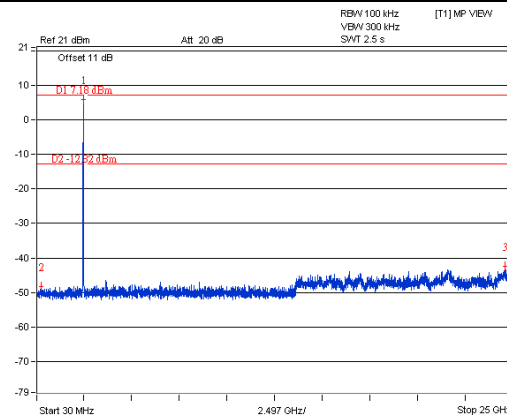


A D T

### CH 6

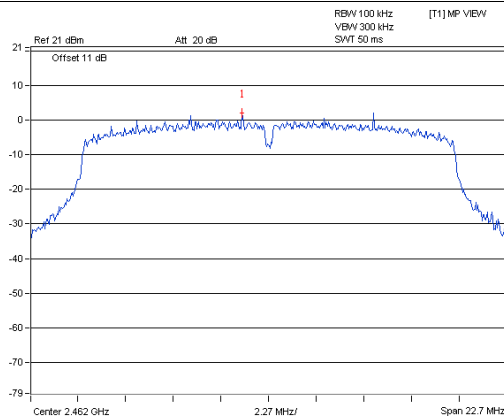


A D T

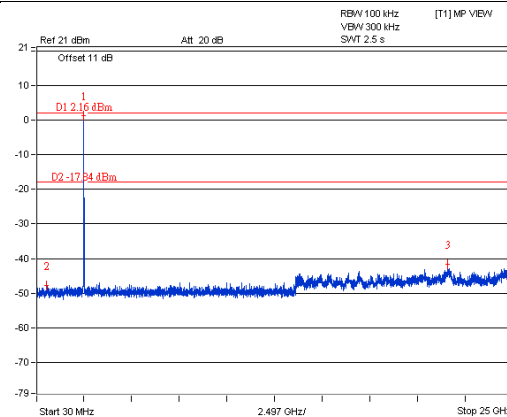


A D T

### CH 11

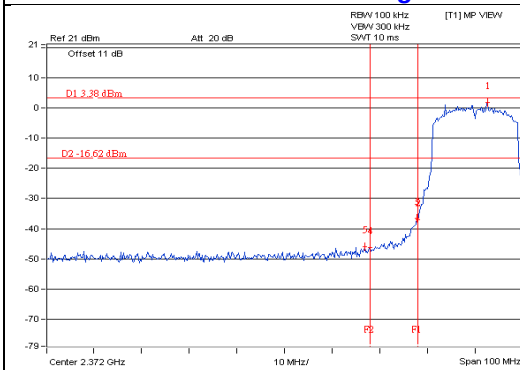


A D T



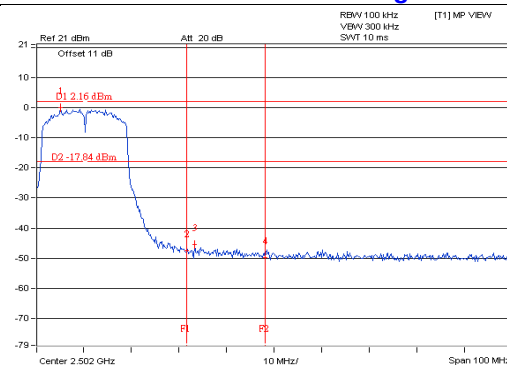
A D T

### CH 1 Band edge



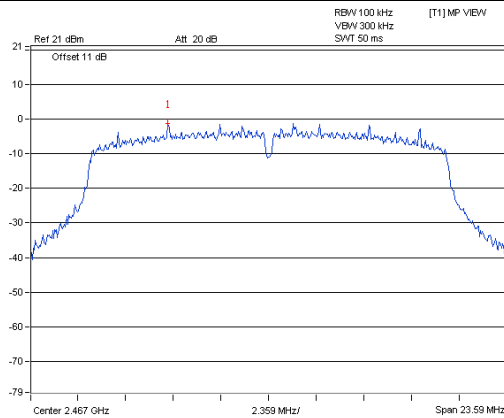
A D T

### CH 11 Band edge

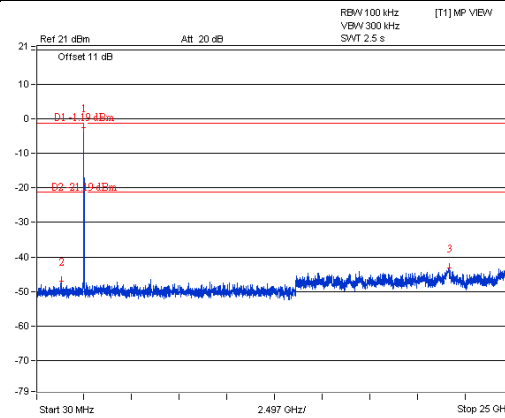


A D T

## CH 12

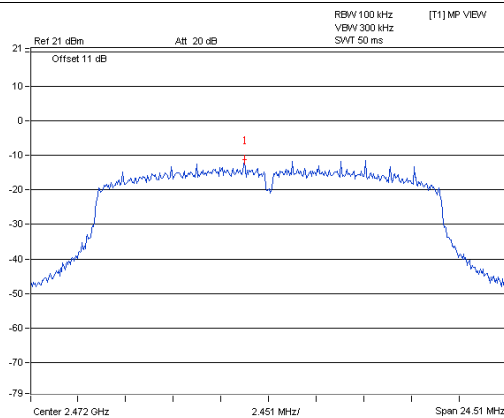


A D T

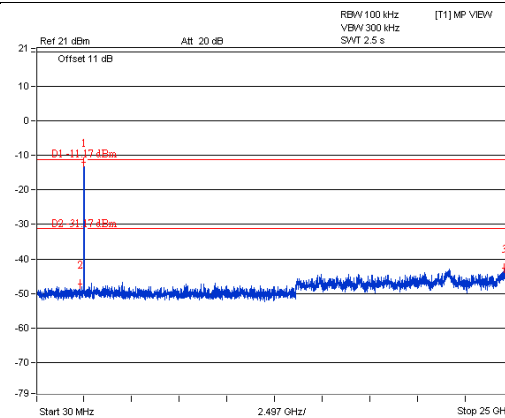


A D T

## CH 13

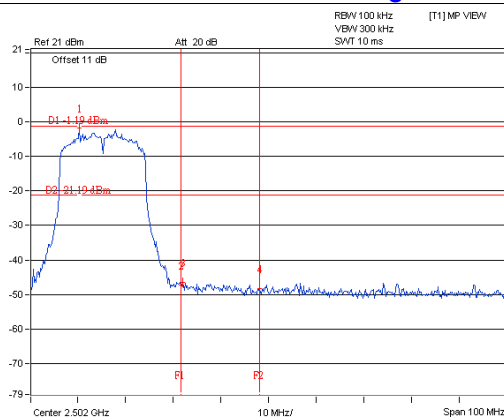


A D T



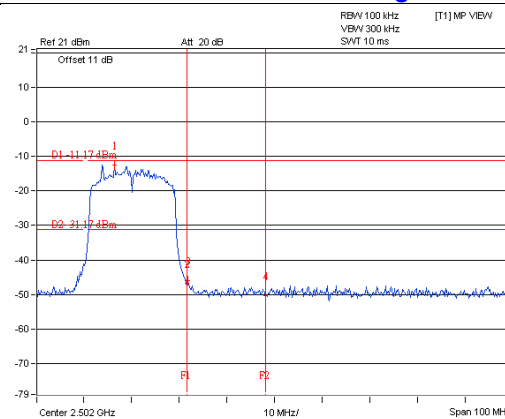
A D T

## CH 12 Band edge



A D T

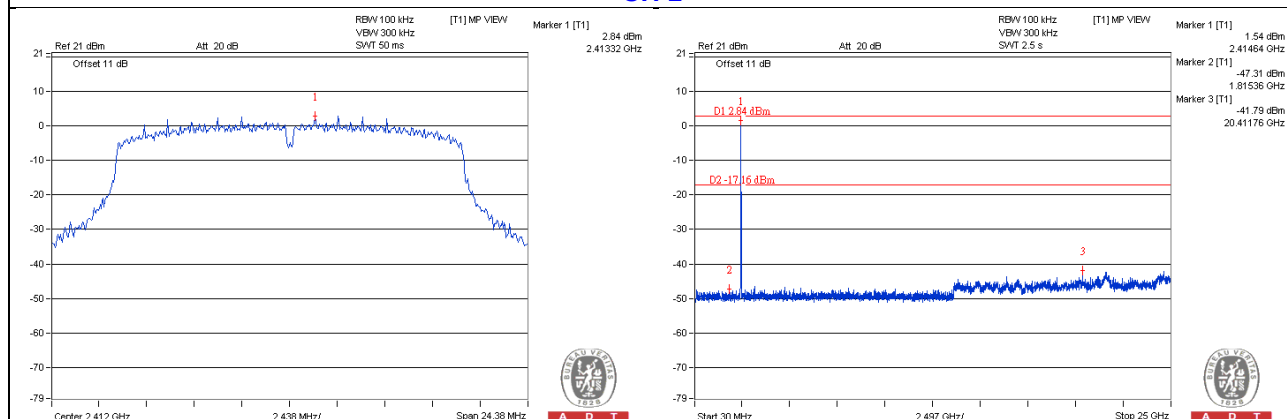
## CH 13 Band edge



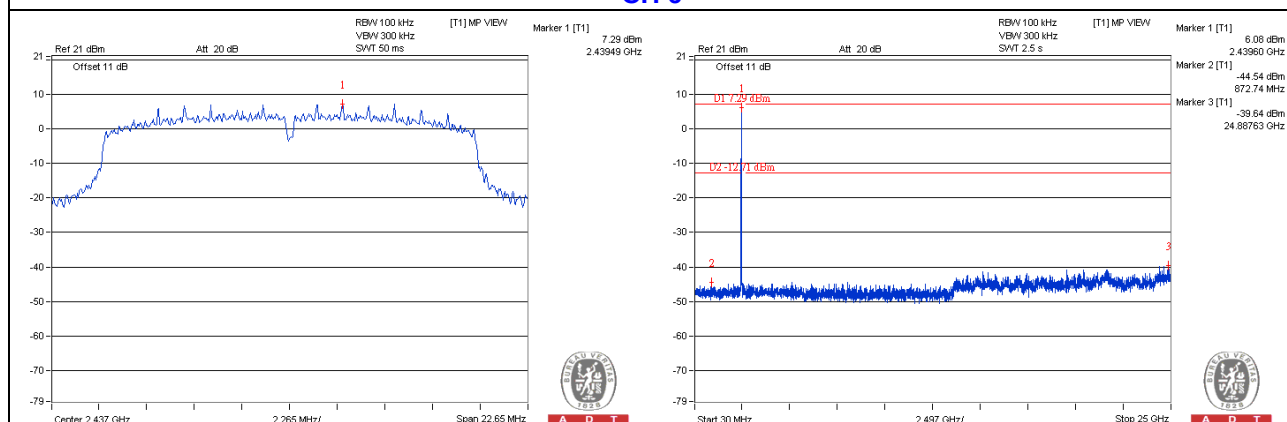
A D T

## Chain 1

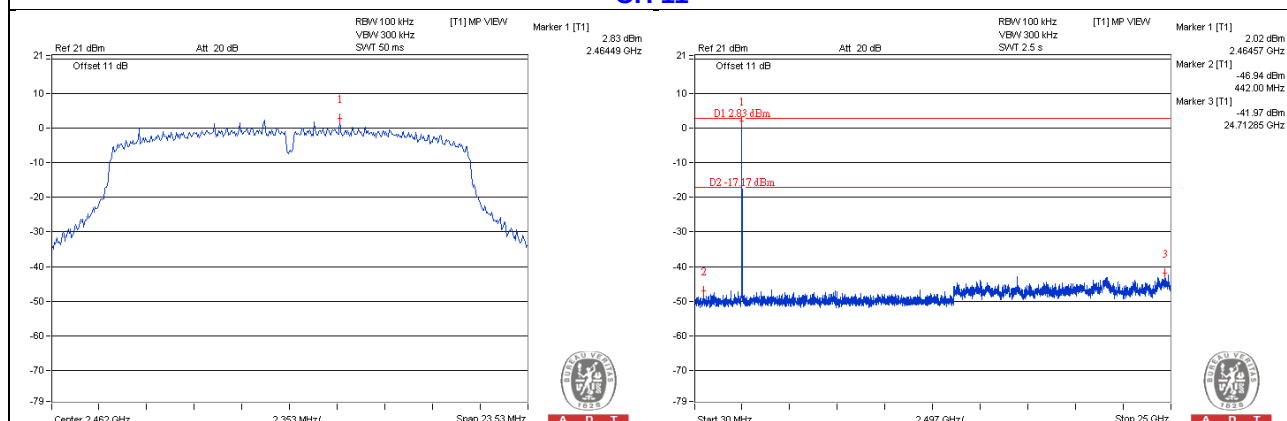
### CH 1



### CH 6

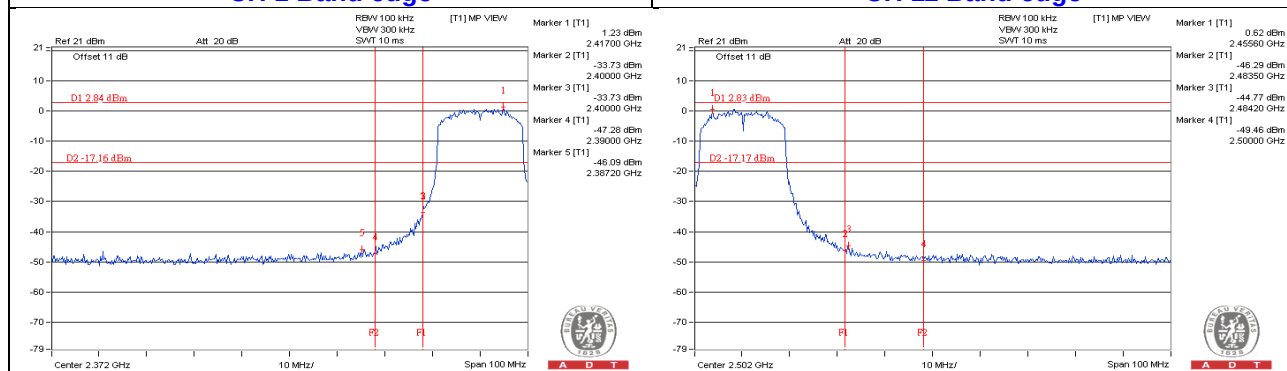


### CH 11

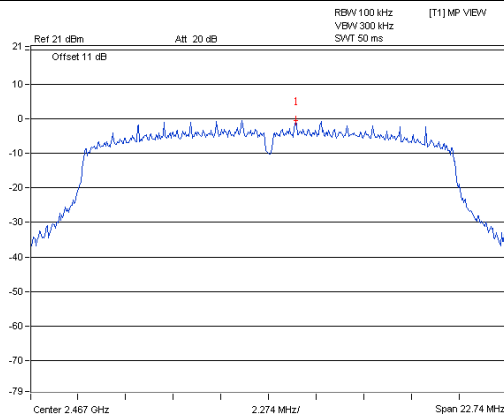
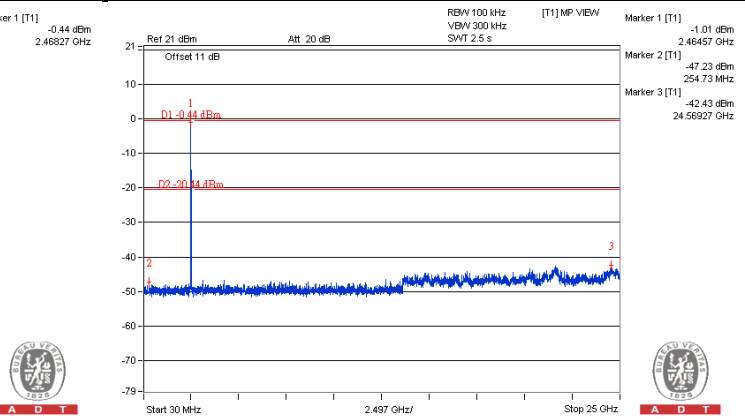


### CH 1 Band edge

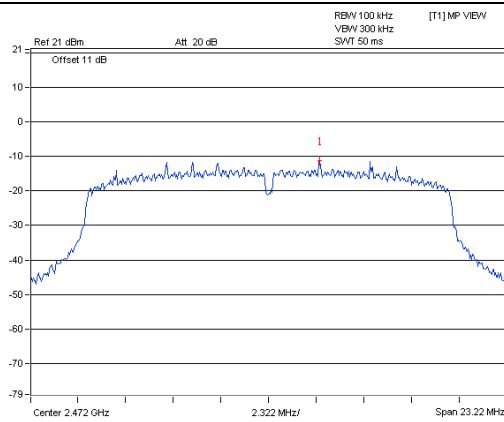
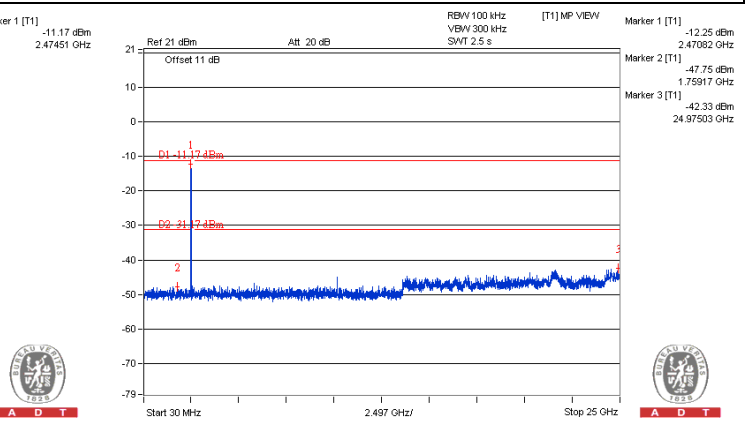
### CH 11 Band edge



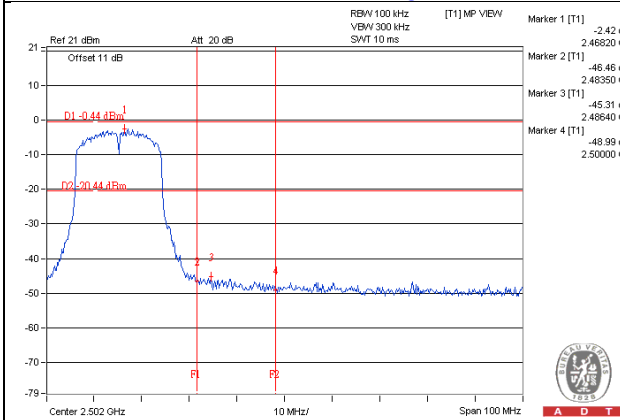
## CH 12



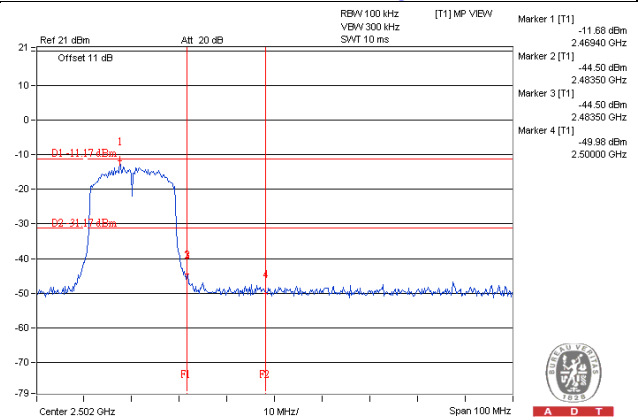
## CH 13



## CH 12 Band edge

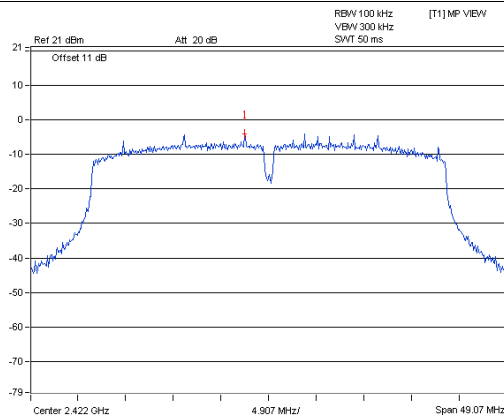
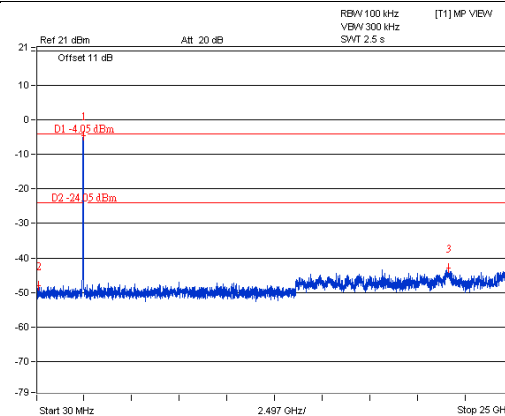


## CH 13 Band edge

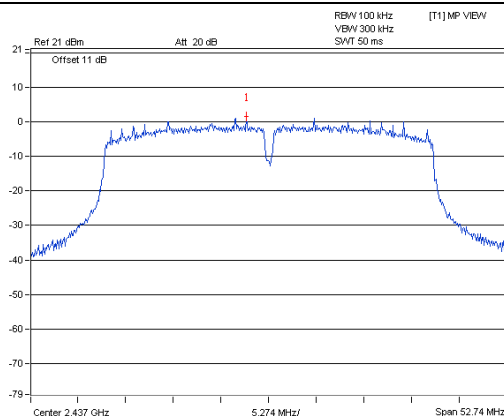
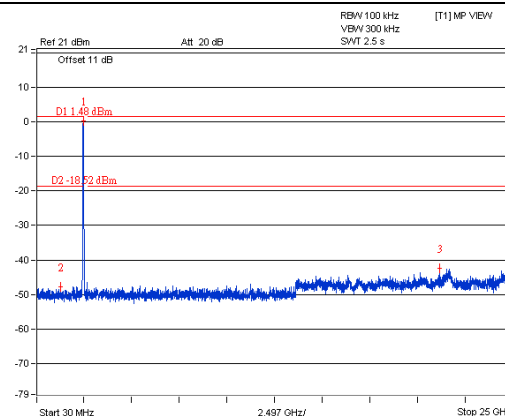


## VHT40 Chain 0

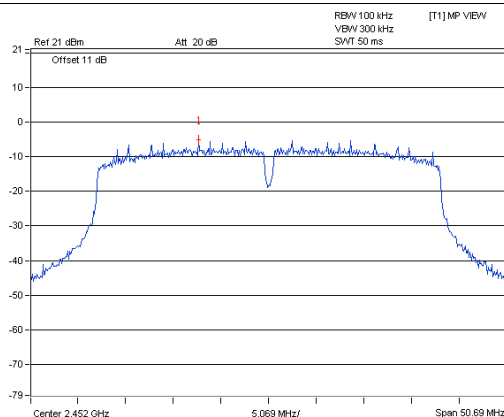
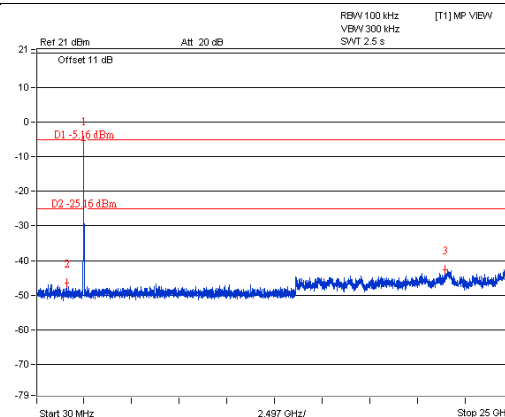
### CH 3



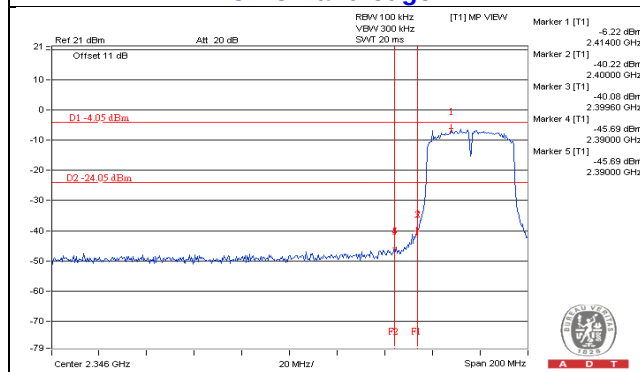
### CH 6



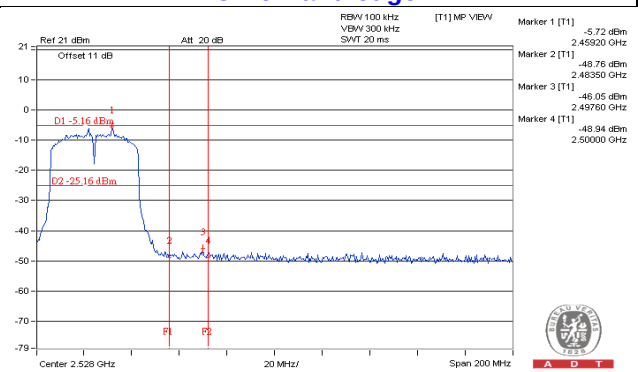
### CH 9



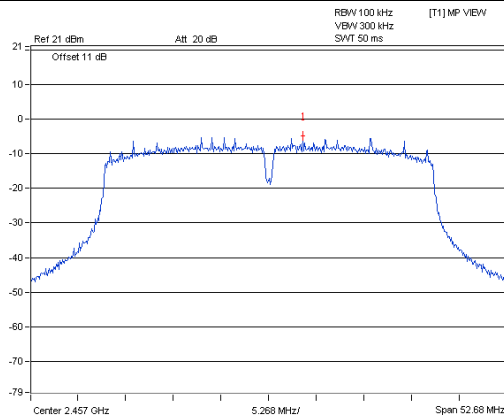
### CH 3 Band edge



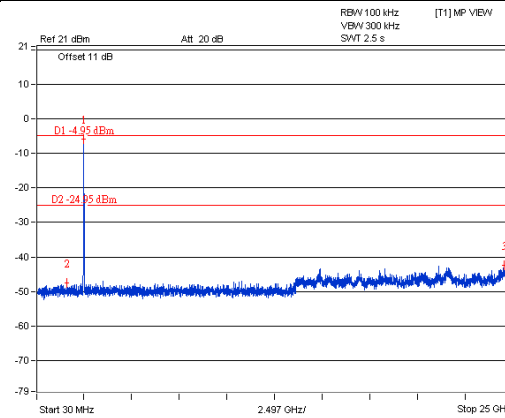
### CH 9 Band edge



### CH 10

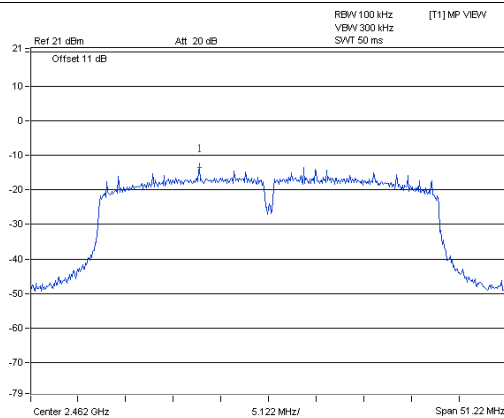


A D T

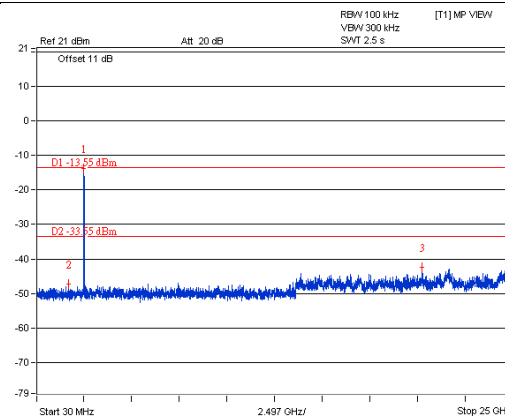


A D T

### CH 11

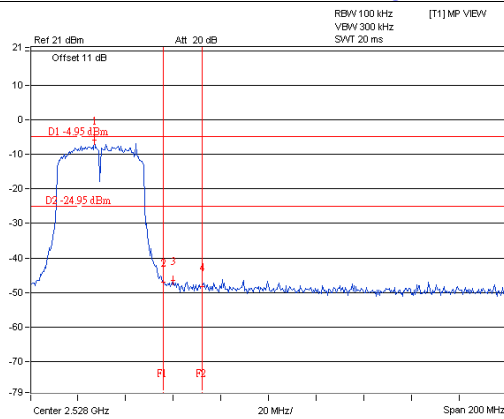


A D T



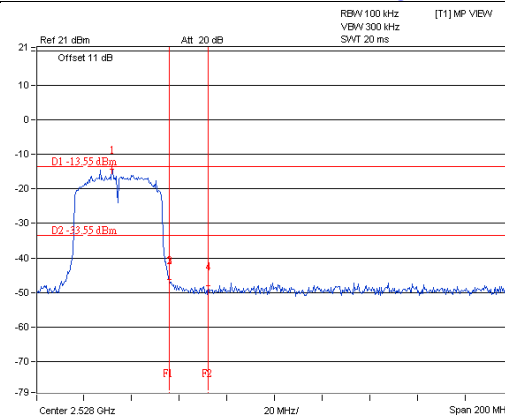
A D T

### CH 10 Band edge



A D T

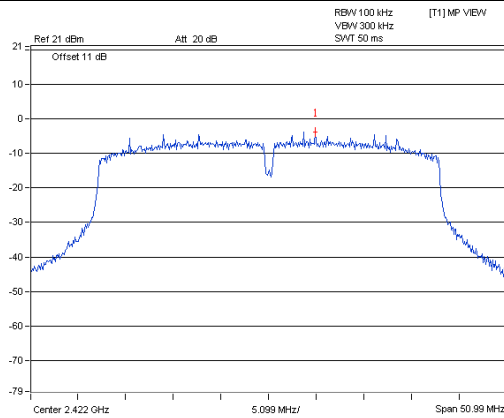
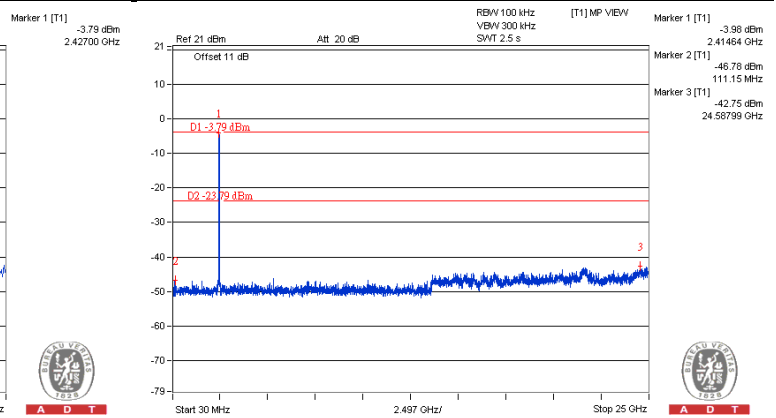
### CH 11 Band edge



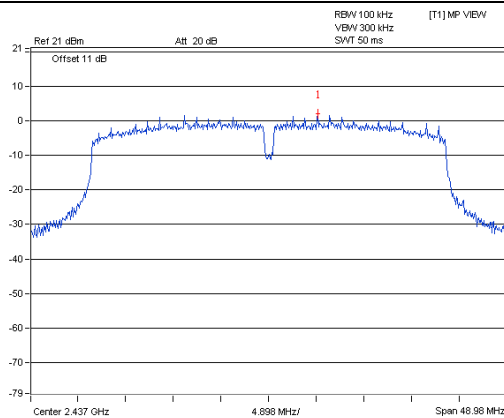
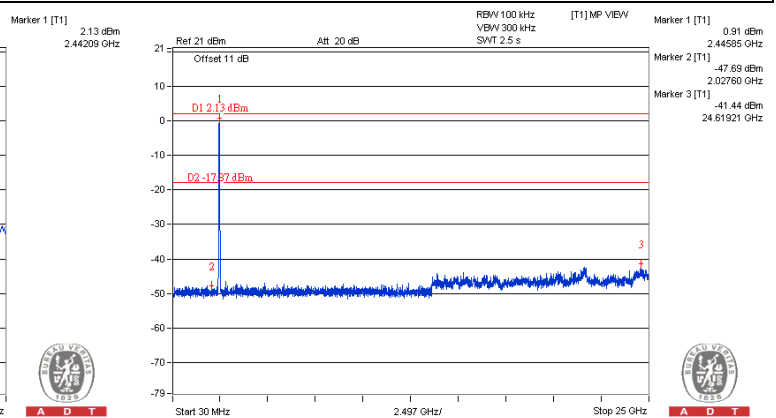
A D T

## Chain 1

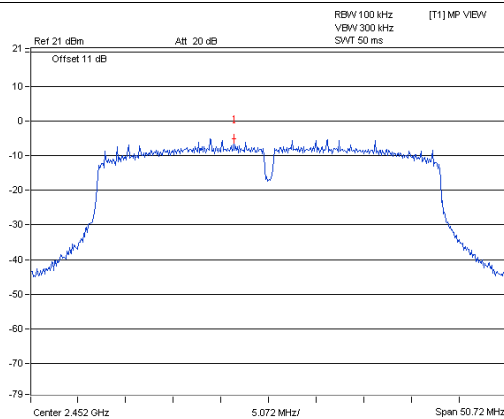
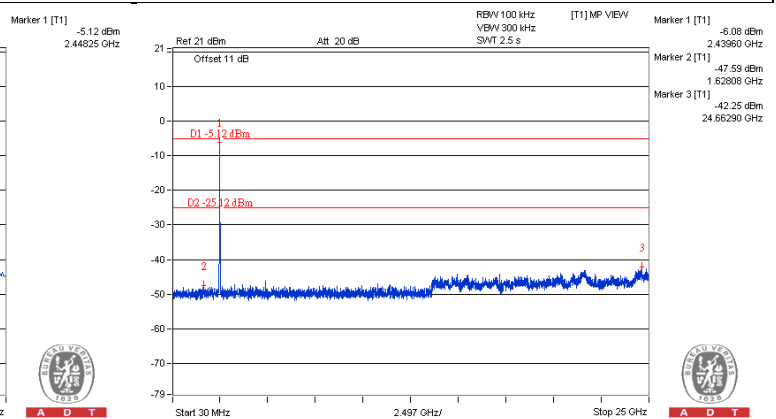
### CH 3



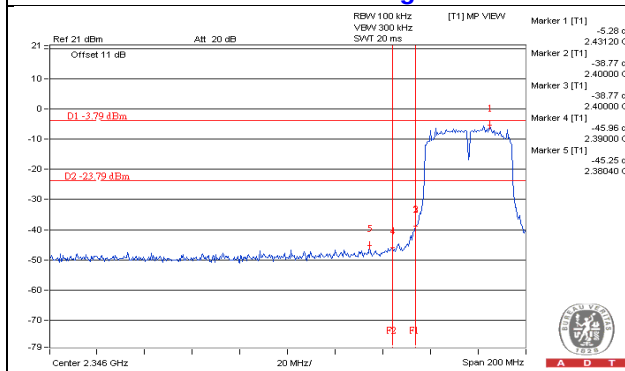
### CH 6



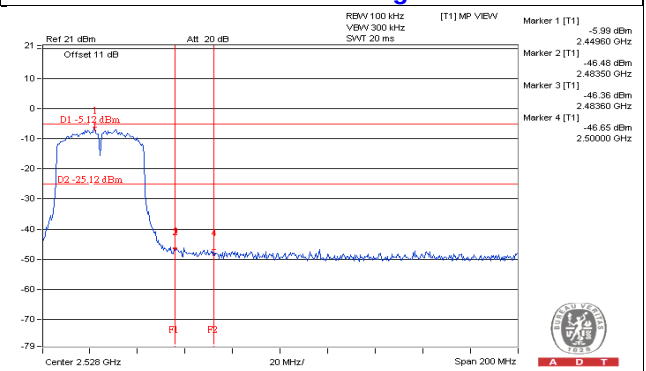
### CH 9



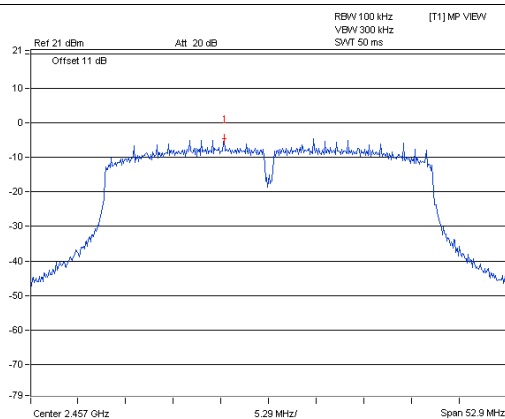
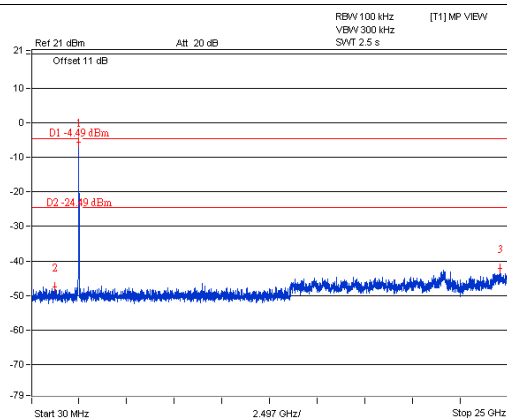
### CH 3 Band edge



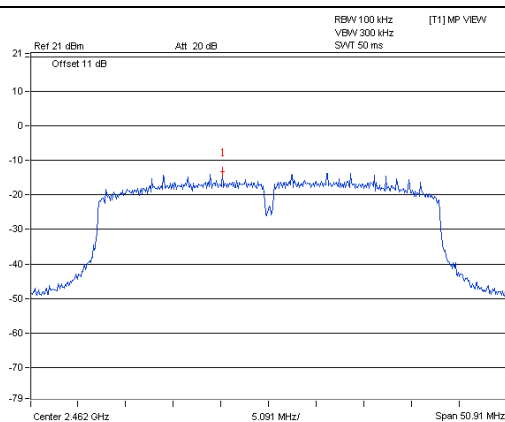
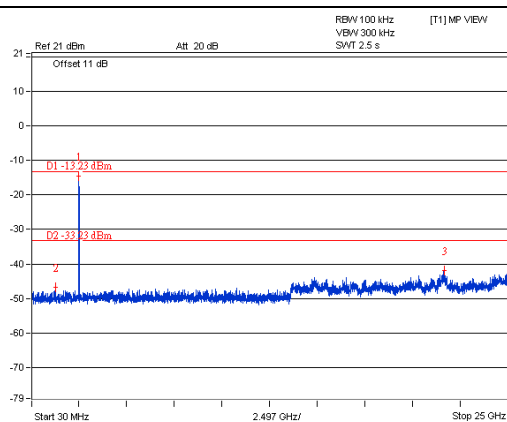
### CH 9 Band edge



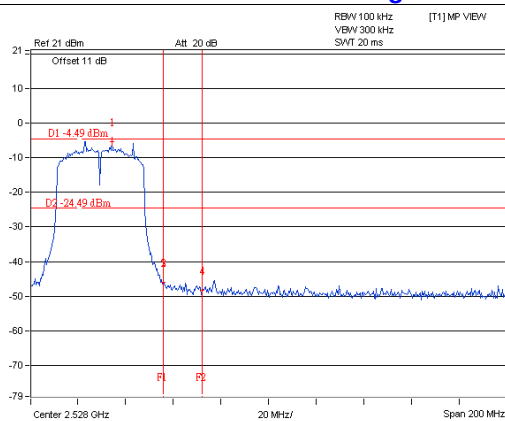
### CH 10



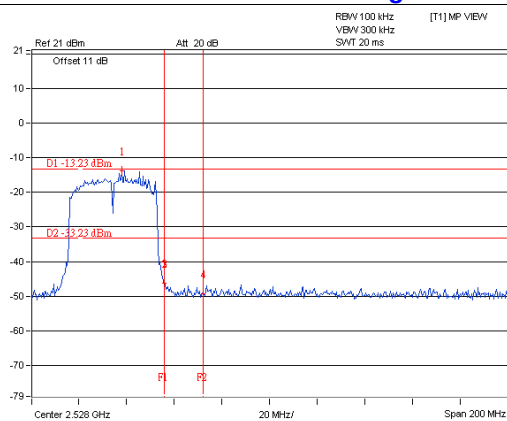
### CH 11



### CH 10 Band edge



### CH 11 Band edge



## 5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

## 6 Appendix A – Radiated Emission Measurement

### 6.1 Limits of Radiated Emission Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

| Frequencies<br>(MHz) | Field Strength<br>(microvolts/meter) | Measurement Distance<br>(meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009 ~ 0.490        | 2400/F(kHz)                          | 300                              |
| 0.490 ~ 1.705        | 24000/F(kHz)                         | 30                               |
| 1.705 ~ 30.0         | 30                                   | 30                               |
| 30 ~ 88              | 100                                  | 3                                |
| 88 ~ 216             | 150                                  | 3                                |
| 216 ~ 960            | 200                                  | 3                                |
| Above 960            | 500                                  | 3                                |

**Note:**

4. The lower limit shall apply at the transition frequencies.
5. Emission level (dBuV/m) = 20 log Emission level (uV/m).
6. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

## 6.2 Test Instruments

### For PIFA Antenna:

| DESCRIPTION & MANUFACTURER       | MODEL NO. | SERIAL NO.                      | CALIBRATED DATE | CALIBRATED UNTIL |
|----------------------------------|-----------|---------------------------------|-----------------|------------------|
| MXE EMI Receiver<br>Agilent      | N9038A    | MY51210105                      | July 21, 2014   | July 20, 2015    |
| Horn_Antenna<br>AISI             | AIH.8018  | 0000320091110                   | Aug. 27, 2014   | Aug. 26, 2015    |
| Pre-Amplifier<br>Agilent         | 8449B     | 3008A02578                      | June 24, 2014   | June 23, 2015    |
| RF Cable                         | NA        | 131205<br>131214<br>SNMY23684/4 | Jan. 16, 2015   | Jan. 15, 2016    |
| Spectrum Analyzer<br>R&S         | FSV40     | 100964                          | July 05, 2014   | July 04, 2015    |
| Pre-Amplifier<br>EMCI            | EMC184045 | 980143                          | Jan. 16, 2015   | Jan. 15, 2016    |
| Horn_Antenna<br>SCHWARZBECK      | BBHA 9170 | 9170-424                        | Aug. 26, 2014   | Aug. 25, 2015    |
| RF Cable                         | NA        | RF104-121<br>RF104-204          | Dec. 11, 2014   | Dec. 10, 2015    |
| Antenna Tower & Turn Table<br>CT | NA        | NA                              | NA              | NA               |

### Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. G.
- 3 The CANADA Site Registration No. is IC 7450H-2.
4. Tested Date: Feb. 06, 2015

**For Dipole Antenna:**

| DESCRIPTION & MANUFACTURER             | MODEL NO.                                                   | SERIAL NO.                 | CALIBRATED DATE | CALIBRATED UNTIL |
|----------------------------------------|-------------------------------------------------------------|----------------------------|-----------------|------------------|
| Test Receiver<br>Keysight              | N9038A                                                      | MY54450088                 | July 08, 2017   | July 07, 2018    |
| Horn_Antenna<br>SCHWARZBECK            | BBHA 9120D                                                  | 9120D-783                  | Dec. 12, 2017   | Dec. 11, 2018    |
| Pre-Amplifier<br>EMCI                  | EMC12630SE                                                  | 980385                     | Jan. 29, 2018   | Jan. 28, 2019    |
| RF Cable                               | EMC104-SM-SM-1200<br>EMC104-SM-SM-2000<br>EMC104-SM-SM-5000 | 160923<br>150318<br>150321 | Jan. 29, 2018   | Jan. 28, 2019    |
| Pre-Amplifier<br>EMCI                  | EMC184045S<br>E                                             | 980387                     | Jan. 29, 2018   | Jan. 28, 2019    |
| Horn_Antenna<br>SCHWARZBECK            | BBHA 9170                                                   | BBHA9170608                | Dec. 14, 2017   | Dec. 13, 2018    |
| RF Cable                               | EMC102-KM-KM-1200                                           | 160925                     | Jan. 29, 2018   | Jan. 28, 2019    |
| Software                               | ADT_Radiated_V8.7.08                                        | NA                         | NA              | NA               |
| Antenna Tower & Turn Table<br>Max-Full | MF-7802                                                     | MF780208410                | NA              | NA               |
| Boresight Antenna Fixture              | FBA-01                                                      | FBA-SIP02                  | NA              | NA               |

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. The CANADA Site Registration No. is 20331-2
4. Tested Date: May 16, 2018

### 6.3 Test Procedures

- a. The EUT was placed on the top of a rotating table 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

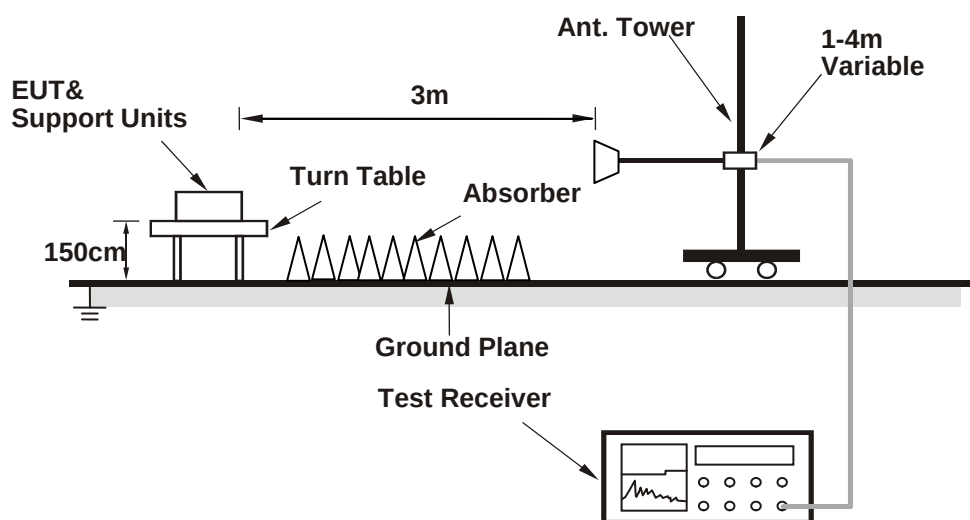
**Note:**

1. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle < 98%) or 10Hz (Duty cycle  $\geq 98\%$ ) for Average detection (AV) at frequency above 1GHz.
3. All modes of operation were investigated and the worst-case emissions are reported.

#### 6.4 Deviation from Test Standard

No deviation.

#### 6.5 Test Setup



For the actual test configuration, please refer to the attached file (Test Setup Photo).

#### 6.6 EUT Operating Conditions

Same as 4.1.6.

## 6.7 Test Results (PIFA Antenna)

The EUT's antenna had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

### VHT40

|                        |              |                          |              |
|------------------------|--------------|--------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                          | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 2485.00     | 65.3 PK                 | 74.0           | -8.7        | 1.06 H             | 205                  | 67.32            | -2.02                    |
| 2                                                   | 2485.00     | 46.2 AV                 | 54.0           | -7.8        | 1.06 H             | 205                  | 48.22            | -2.02                    |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 2485.00     | 66.9 PK                 | 74.0           | -7.1        | 1.06 V             | 301                  | 68.92            | -2.02                    |
| 2                                                   | 2485.00     | 47.3 AV                 | 54.0           | -6.7        | 1.06 V             | 301                  | 49.32            | -2.02                    |

### REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value

## 6.8 Test Results (Dipole Antenna)

### VHT40

|                        |              |                          |              |
|------------------------|--------------|--------------------------|--------------|
| <b>CHANNEL</b>         | TX Channel 6 | <b>DETECTOR FUNCTION</b> | Peak (PK)    |
| <b>FREQUENCY RANGE</b> | 1GHz ~ 25GHz |                          | Average (AV) |

| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M |             |                         |                |             |                    |                      |                  |                          |
|-----------------------------------------------------|-------------|-------------------------|----------------|-------------|--------------------|----------------------|------------------|--------------------------|
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 2483.50     | 57.2 PK                 | 74.0           | -16.8       | 1.51 H             | 75                   | 59.6             | -2.4                     |
| 2                                                   | 2483.50     | 45.1 AV                 | 54.0           | -8.9        | 1.51 H             | 75                   | 47.5             | -2.4                     |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M   |             |                         |                |             |                    |                      |                  |                          |
| NO.                                                 | FREQ. (MHz) | EMISSION LEVEL (dBuV/m) | LIMIT (dBuV/m) | MARGIN (dB) | ANTENNA HEIGHT (m) | TABLE ANGLE (Degree) | RAW VALUE (dBuV) | CORRECTION FACTOR (dB/m) |
| 1                                                   | 2483.50     | 72.6 PK                 | 74.0           | -1.4        | 1.70 V             | 274                  | 75.0             | -2.4                     |
| 2                                                   | 2483.50     | 52.6 AV                 | 54.0           | -1.4        | 1.70 V             | 274                  | 55.0             | -2.4                     |

#### REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value

## 7 Appendix B – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

**Linkou EMC/RF Lab**

Tel: 886-2-26052180

Fax: 886-2-26051924

**Hsin Chu EMC/RF/Telecom Lab**

Tel: 886-3-6668565

Fax: 886-3-6668323

**Hwa Ya EMC/RF/Safety Lab**

Tel: 886-3-3183232

Fax: 886-3-3270892

**Email:** [service.adt@tw.bureauveritas.com](mailto:service.adt@tw.bureauveritas.com)

**Web Site:** [www.bureauveritas-adt.com](http://www.bureauveritas-adt.com)

The address and road map of all our labs can be found in our web site also.

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