

FCC TEST REPORT

(Part 15, Subpart C)

Applicant:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany

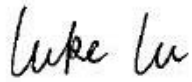
Manufacturer or Supplier:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany
Product:	Tablet
Brand Name:	i.safe MOBILE
Model Name:	M945A01
Marketing Name:	IS945.1, IS945.M1, IS945.2, IS945.RG
FCC ID:	2AACZ-M945A01
Date of tests:	Jun. 05, 2024 ~ Jul. 17, 2024 Sep. 05, 2025 ~ Nov. 27, 2025

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart C, Section 15.247**

☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Hanwen Xu Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
	
Date: Nov. 27, 2025	Date: Nov. 27, 2025

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
PSU-QSU2509050111RF02	Original release	Nov. 27, 2025



1. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	TEST LAB*
15.207	AC Power Conducted Emission	Compliance	A
15.205 15.209	Radiated Emissions	Compliance	A/B
15.247(d)	Out of band Emission Measurement	Compliance	B
15.247(a)(2)	6dB bandwidth	Compliance	B
15.247(b)	Conducted Output power	Compliance	B
15.247(e)	Power Spectral Density	Compliance	B
15.203	Antenna Requirement	Compliance	B

Note :

1. Except RSE and AC Power Conducted Emission, other data please refer to Appendix B.
2. The data of this report refers to report: W7L-P24050018RF02 (Model name: M940A01, FCC ID: 2AACZ-M940A01). All components, RF parameters, and hardware versions of M945A01 are the same as M940A01, except for the operating system and software version. The detail differences from the original source are as listed below:

No.	Description	Original	New
1	software version	IS940_ROW_00.00_2_20240605	IS945_00.00_1_20250829
2	operating system	Linux	Windows
3	Model name	M940A01	M945A01
4	Marketing Name	IS940.1, IS940.M1, IS940.2, IS940.RG	IS945.1, IS945.M1, IS945.2, IS945.RG

Please note: Marketing Name IS945.1, IS945.M1, IS945.2, IS945.RG, Each model only has the same hardware and software parameters due to the naming of the sales region.

This report verify power and RSE worst case. The verify results of conducted power are similar or lower. The RSE was verified based on the maximum value of the verify results of conducted power. So this report only replaces the data of RSE (802.11b_CH6& BLE S2_CH19) and Bandedge(802.11b & BLE 1M), other data is copied from report W7L-P24050018RF02 (Model name: M940A01, FCC ID: 2AACZ-M940A01).

3. The original test in Lab B and verify test in Lab A.



Test Report No.: PSU-QSU2509050111RF02

***Test Lab Information Reference**

Lab A:

Huarui 7Layers High Technology (Suzhou) Co., Ltd.

Lab Address:

Tower N, Innovation Center, 88 Zuyi Road, High-tech District, Suzhou City, Anhui Province, China

Accredited Test Lab Cert 6613.01

The FCC Site Registration No. is 434559; The Designation No. is CN1325.

Lab B:

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

Lab Address:

Room B37, Warehouse A5, No.3 Chiwan 4th Road, Zhaoshang Street, Nanshan District
Shenzhen, Guangdong, People's Republic of China

Accredited Test Lab Cert 3939.01

The FCC Site Registration No. is 525120; The Designation No. is CN1171

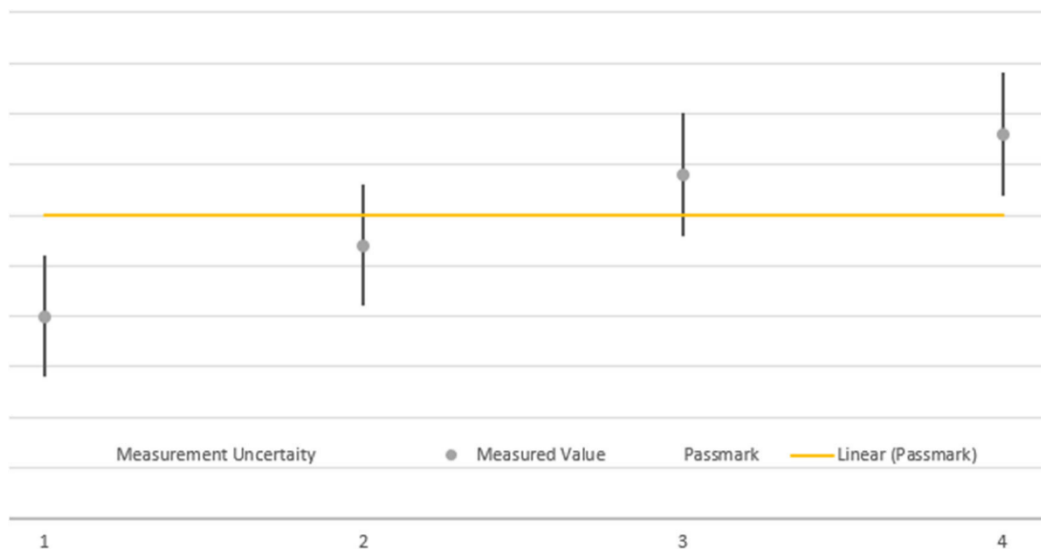


1.1 MEASUREMENT UNCERTAINTY

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

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Tablet	
BRAND NAME*	i.safe MOBILE	
MODEL NAME*	M945A01	
MARKETING NAME*	IS945.1, IS945.M1, IS945.2, IS945.RG	
NOMINAL VOLTAGE*	5Vdc (adapter or host equipment) 3.7Vdc (Li-ion, battery)	
MODULATION *	BLE	GFSK
	2.4G WIFI	DSSS,OFDM,OFDMA
TRANSMISSION RATE*	BT_LE: 0.125 Mbps /0.5 Mbps /1 Mbps/2 Mbps	
	802.11b: 11/5.5/2.0/1.0 Mbps	
	802.11g: 54/48/36/24/18/9/6 Mbps	
	802.11n(HT20)/ax(HE20): up to 144.4 Mbps	
	802.11n(HT40)/ax(HE40): up to 300 Mbps	
	802.11ax 20 (RU242): up to 286.8Mbps	
	802.11ax 40 (RU484): up to 573.5Mbps	
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20/40) /ax(HE20/40) 2402-2480MHz for BT-LE(GFSK) 2412-2462MHz for ax(20M RU242)/ax (40M RU484)	
MAX. OUTPUT POWER	WLAN: 208.73mW (Maximum)	
	BT-LE: 9.38mW (Maximum)	
ANTENNA TYPE*	BLE	ANT 8: PIFA Antenna with 0.75dBi gain for BLE
	2.4G WIFI	ANT 8: PIFA Antenna with 0.75dBi gain ANT 9: PIFA Antenna with 1.4dBi gain
HW VERSION*	V01	
SW VERSION*	IS945_00.00_1_20250829	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	USB cable: with shielded cable, w/o ferrite core, 1.0 meter	

NOTE:

- *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.



2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

3. EUT operating function.:

MODULATION MODE	TX/RX FUNCTION
802.11b	2TX /2RX
802.11g	2TX /2RX
802.11n(HT20)/ax(HE20)	2TX /2RX
802.11n(HT40)/ax(HE40)	2TX /2RX
802.11ax (20MHz RU 242)	2TX /2RX
802.11ax (40MHz RU 484)	2TX /2RX
BT_LE(1MHz)	1TX /1RX
BT_LE(2MHz)	1TX /1RX
BT_LE(S2)	1TX /1RX
BT_LE(S8)	1TX /1RX

4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
5. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
6. EUT only supports full RU, and the SU power is greater than RU, so RU mode is overwritten with SU test.

7. List of Accessory:

ACCESSORIES	BRAND	MANUFACTURER	MODEL	SPECIFICATION
AC Adapter	N/A	SHENZHEN SHI YINGYUAN POWER SUPPLY TECHNOLOGY CO., LTD.	ICP12-050-2000B	I/P: 100-240Vac, 0.5A, O/P: 5Vdc, 2A
Battery	N/A	BMZ Company Limited	MBP940AA01	Capacity : 3.7Vdc, 8160mAh
USB Cable	N/A	Winpower Technology Co., LTD	PROTECTOR 2.0	Signal Line, 1.0meter

2.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20), 802.11ax20 (HE20); 802.11ax20 (RU 242):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

7 channels are provided for 802.11n (HT40), 802.11ax40 (HE40); 802.11ax40 (RU 484):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422 MHz	7	2442 MHz
4	2427 MHz	8	2447 MHz
5	2432 MHz	9	2452 MHz
6	2437 MHz		

40 channels are provided for BT-LE (GFSK):

BT-LE							
CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480



2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 4 photographs of the test configuration for reference.

2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	-

Where **RE<1G**: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

RADIATED 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).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	6	DSSS	1.0
BT-LE	0 to 39	19	GFSK	1.0

RADIATED 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).

- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
BT-LE	0 to 39	0, 19, 39	GFSK	1.0

**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).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11ax 40 (RU 484)	3 to 9	9	OFDMA	MCS0

BANDEDGE MEASUREMENT:

- ☒ 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).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	0.125&0.5&1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0
802.11ax 20 (RU 242)	1 to 11	1,11	OFDMA	MCS0
802.11ax 40 (RU 484)	3 to 9	3 ,9	OFDMA	MCS0

**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).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	1.0
802.11g	1 to 11	1, 6, 11	OFDM	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	MCS0
802.11ax HE20	1 to 11	1, 6, 11	OFDM	MCS0
802.11n HT40	3 to 9	3,6,9	OFDM	MCS0
802.11ax HE40	3 to 9	3,6,9	OFDM	MCS0
BT-LE	0 to 39	0,19, 39	GFSK	0.125&0.5&1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0
802.11ax 20 (RU 242)	1 to 11	1, 11	OFDMA	MCS0
802.11ax 40 (RU 484)	3 to 9	3, 9	OFDMA	MCS0

TEST CONDITION			
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	23deg. C, 70%RH	DC 5V By Adapter	Hanwen Xu
RE≥1G	23deg. C, 70%RH	DC 5V By Adapter	Jace Hu /Hanwen Xu
PLC	25deg. C, 52%RH	DC 5V By Adapter	Hanwen Xu
APCM	25deg. C, 60%RH	DC 3.7V By Battery	James Fu

2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix B.

2.4 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, Section 15.247

KDB 558074 D01 DTS Meas Guidance v05r02

ANSI C63.10-2020

Note :

1. All test items have been performed and recorded as per the above standards.
2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.



2.5 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.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	USB Line: Shielded, Detachable 1m;



3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	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.
3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 TEST INSTRUMENTS

Lab B:

Date of tests: Jun. 05, 2024 ~ Jul. 17, 2024

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR3	101900	Feb. 14,24	Feb. 13,25
EMC32 test software	Rohde&Schwarz	EMC32	NA	NA	NA
LISN network	Rohde&Schwarz	ENV216	101922	Mar. 10,24	Mar. 09,25

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12/24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



3.1.3 TEST PROCEDURES

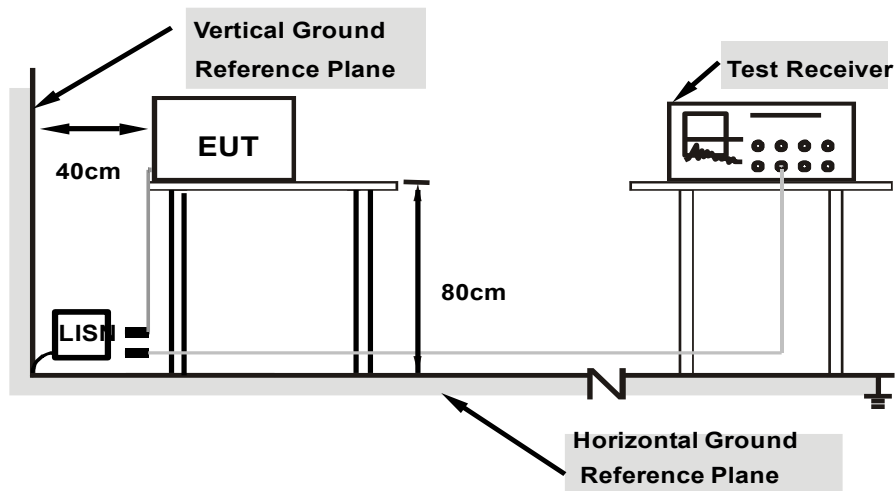
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling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

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.1.4 DEVIATION FROM TEST STANDARD

No deviation.

3.1.5 TEST SETUP



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

**2.Both of LISNs (AMN) are 80 cm from EUT and at least 80
from other units and other metal planes**

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

3.1.6 EUT OPERATING CONDITIONS

- a. Turned on the power and connected of all equipment.
- b. EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.



3.1.7 TEST RESULTS

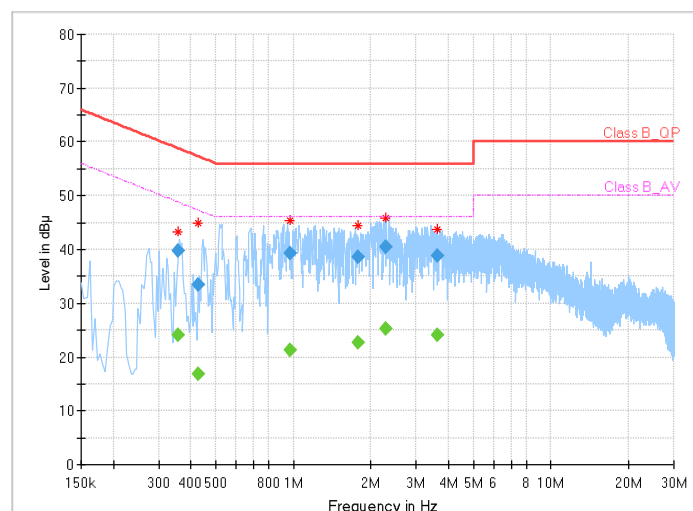
CONDUCTED WORST-CASE DATA:

Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBUV)	CAverage (dBUV)	Limit (dBUV)	Margin (dB)	Line	Filter	Corr. (dB)
0.356000	---	24.00	48.82	24.82	L1	ON	9.8
0.356000	39.87	---	58.82	18.95	L1	ON	9.8
0.428000	---	16.76	47.29	30.53	L1	ON	9.8
0.428000	33.39	---	57.29	23.90	L1	ON	9.8
0.976000	---	21.37	46.00	24.63	L1	ON	9.8
0.976000	39.20	---	56.00	16.80	L1	ON	9.8
1.788000	---	22.75	46.00	23.25	L1	ON	9.8
1.788000	38.50	---	56.00	17.50	L1	ON	9.8
2.292000	---	25.31	46.00	20.69	L1	ON	9.8
2.292000	40.58	---	56.00	15.42	L1	ON	9.8
3.620000	---	24.12	46.00	21.88	L1	ON	9.8
3.620000	38.74	---	56.00	17.26	L1	ON	9.8

- REMARKS:** 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Limit value - Emission level
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.

Full Spectrum



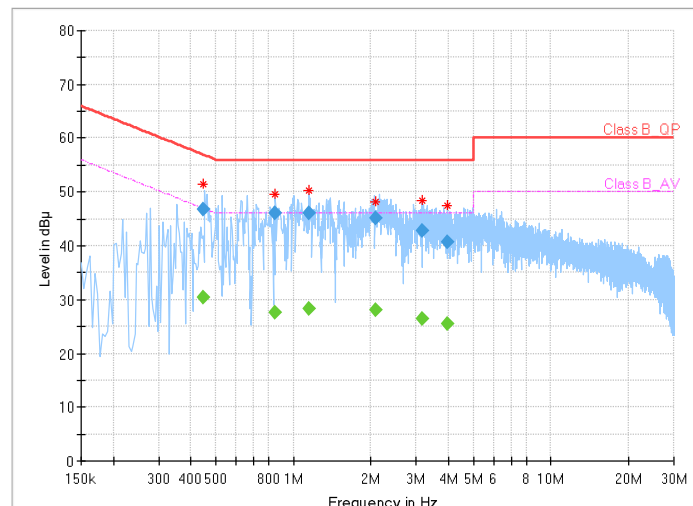


Frequency Range	150KHz ~ 30MHz	Detector Function & Resolution Bandwidth	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power	120Vac, 60Hz	Environmental Conditions	26deg. C, 51%RH
Tested By	Carl Xie		

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.448000	---	30.44	46.91	16.47	N	ON	9.6
0.448000	46.84	---	56.91	10.07	N	ON	9.6
0.848000	---	27.65	46.00	18.35	N	ON	9.7
0.848000	46.15	---	56.00	9.85	N	ON	9.7
1.148000	---	28.25	46.00	17.75	N	ON	9.7
1.148000	46.07	---	56.00	9.93	N	ON	9.7
2.096000	---	27.97	46.00	18.03	N	ON	9.8
2.096000	45.06	---	56.00	10.94	N	ON	9.8
3.164000	---	26.46	46.00	19.54	N	ON	9.8
3.164000	42.71	---	56.00	13.29	N	ON	9.8
3.976000	---	25.43	46.00	20.57	N	ON	9.7
3.976000	40.64	---	56.00	15.36	N	ON	9.7

- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value = Limit value -Emission level
 5. Correction factor = Insertion loss + Cable loss
 6. Emission Level = Correction Factor + Reading Value.

Full Spectrum



**3.2 RADIATED EMISSION MEASUREMENT****3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT**

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

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. As shown in 15.35(b), 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.



3.2.2 TEST INSTRUMENTS

Lab A:

Date of tests: Sep. 05, 2025 ~ Nov. 27, 2025

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pre-Amplifier	R&S	SCU18F1	100815	Aug.29,25	Aug.28,27
Pre-Amplifier	R&S	SCU08F1	101028	Jan.22,24	Jan.21,26
Signal Generator	R&S	SMB100A	182185	Mar.29,24	Mar.28,26
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.24,22	Nov.23,25
3m Fully-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-01Chamber	Nov.23,25	Nov.22,28
3m Semi-anechoic Chamber	TDK	9m*6m*6m	HRSW-SZ-EMC-02Chamber	Aug.20,25	Aug.19,28
EMI TEST Receiver	R&S	ESW44	101973	Mar.28,24	Mar.27,26
Bilog Antenna	SCHWARZBECK	VULB 9163	1264	Jul.04,25	Jul.03,27
Horn Antenna	ETS-LINDGREN	3117	227836	Aug.20,25	Aug.19,27
Horn Antenna (18GHz-40GHz)	Steatite Q-par Antennas	QMS 00880	23486	Jul.15,24	Jul.14,26
Horn Antenna	Steatite Q-par Antennas	QMS 00208	23485	Mar.22,25	Mar.21,27
Loop Antenna	SCHWARZ	HFH2-Z2/Z2E	100976	Jul.08,25	Jul.07,27
WIDEBANDRADIO COMMUNICATION TESTER	R&S	CMW500	169399	Jun.19,24	Jun.18,26
Test Software	ELEKTRA	ELEKTRA4.32	N/A	N/A	N/A
Open Switch and Control Unit	R&S	OSP220	101964	N/A	N/A
DC Source	HYELEC	HY3010B	551016	Jul.31,25	Jul.30,27
Hygrothermograph	DELI	20210528	SZ014	Mar.18,25	Mar.17,27
6DB attenuator	Tonscend Technology Co., Ltd	N/A	23062787	N/A	N/A
PC	LENOVO	E14	HRSW0024	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-7.00M	N/A	N/A	N/A
TMC-AMI18843A(CABLE)	R&S	HF290-NMNM-4.00M	N/A	N/A	N/A
CABLE	R&S	W13.02	N/A	Apr.26,25	Apr.25,26
CABLE	R&S	W12.14	N/A	Apr.26,25	Apr.25,26

NOTE:

1. The calibration interval of the above test instruments is 12/ 24/ 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 434559; The Designation No. is CN1325.

3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 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.
- 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 antenna is a broadband antenna, and its height 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 Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

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 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

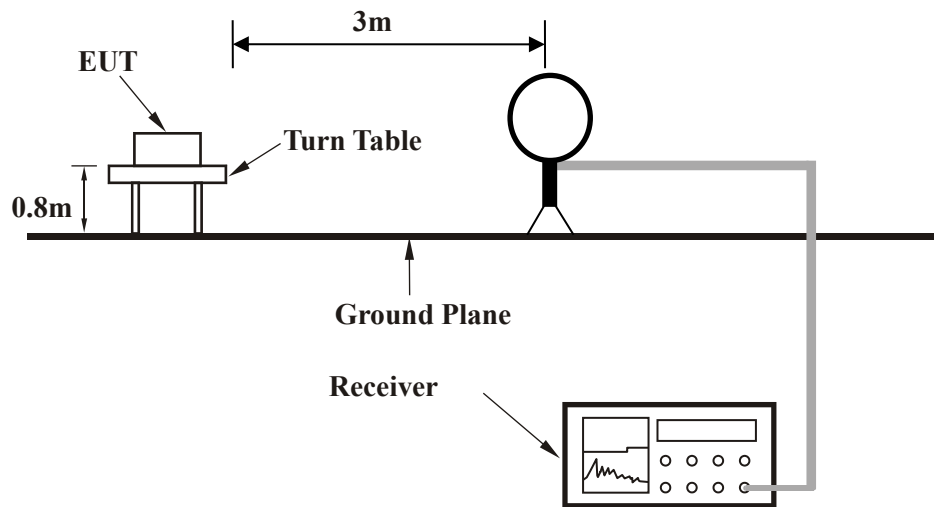
3.2.4 DEVIATION FROM TEST STANDARD

No deviation

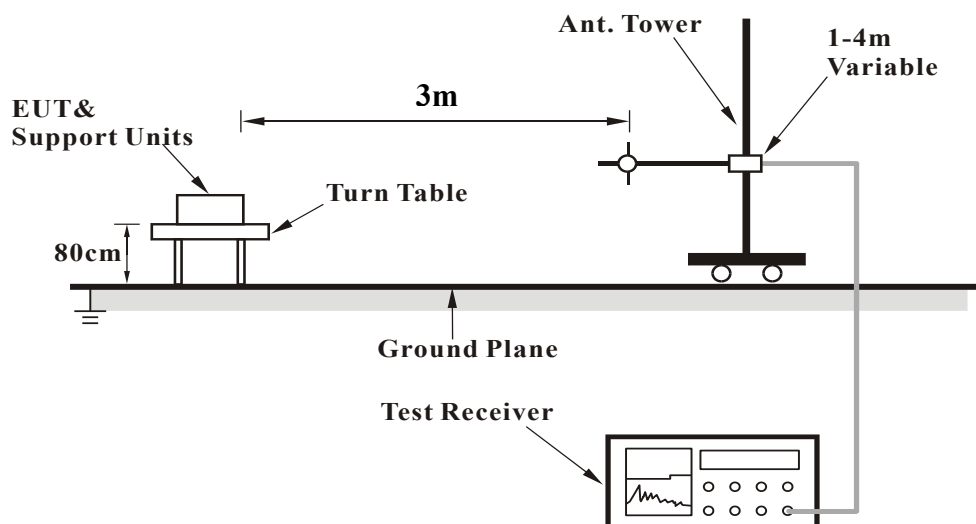


3.2.5 TEST SETUP

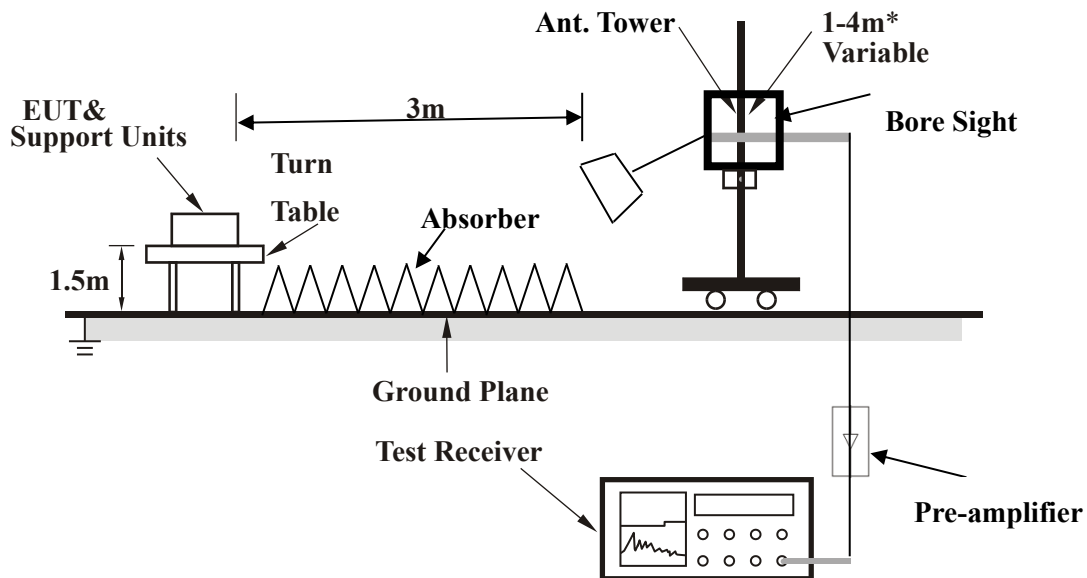
<Frequency Range 9KHz~30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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

3.2.6 EUT OPERATING CONDITIONS

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.



3.2.7 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

802.11b:

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

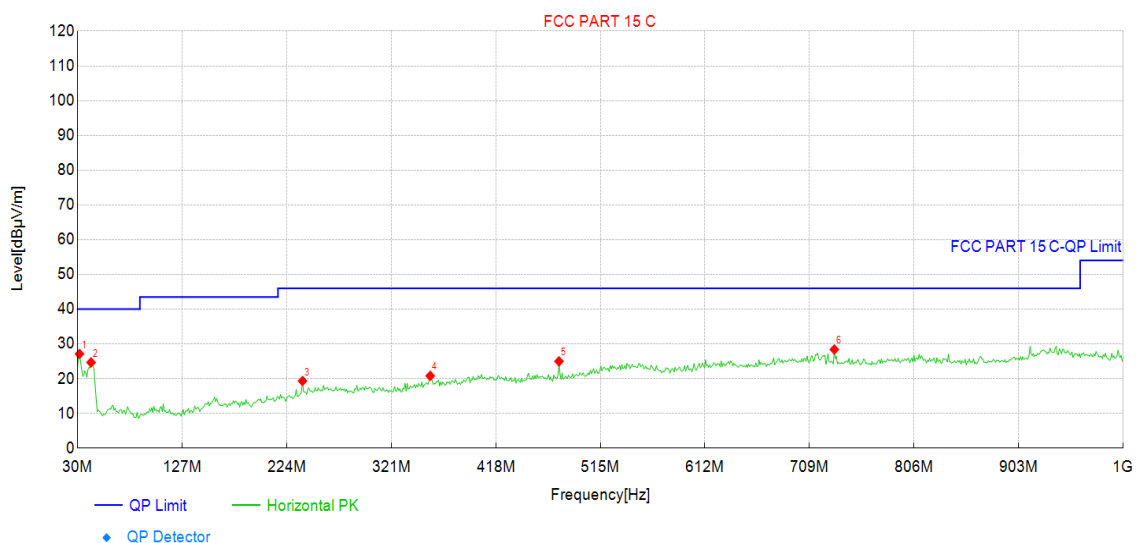
Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	31.9419	51.19	27.12	-	40.00	12.88	100	148	P	Horizont	PAS
2	42.6226	54.16	24.67	-	40.00	15.33	100	358	P	Horizont	PAS
3	238.758	45.49	19.34	-	46.00	26.66	100	155	P	Horizont	PAS
4	357.217	43.02	20.81	-	46.00	25.19	100	294	P	Horizont	PAS
5	476.646	44.50	25.00	-	46.00	21.00	100	22	P	Horizont	PAS
6	732.012	41.83	28.40	-	46.00	17.60	100	241	P	Horizont	PAS

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Limit value – Emission Level.





CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

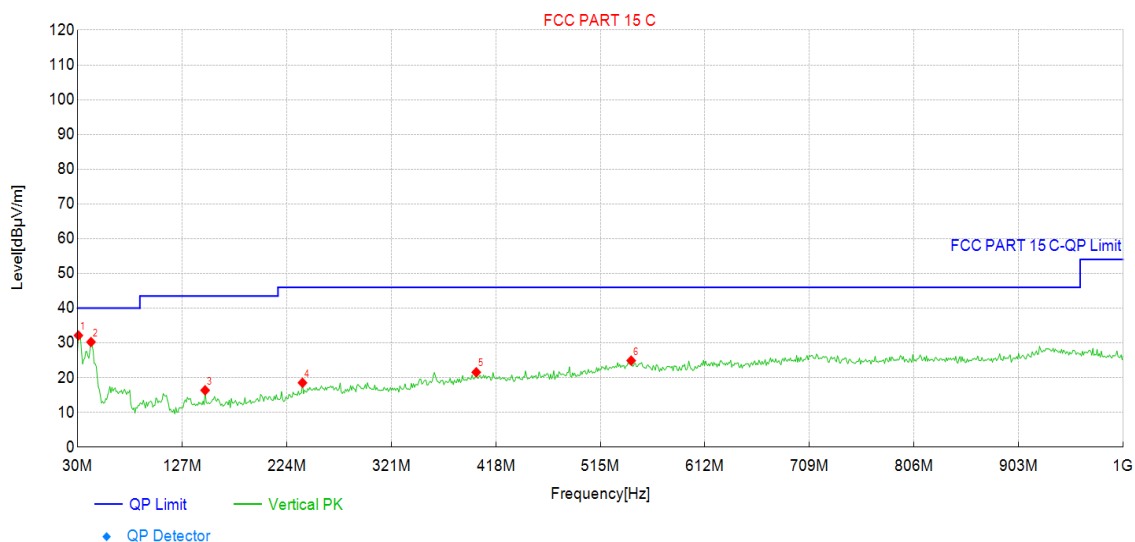
Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor or [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	30.9710	55.62	32.15	-	40.00	7.85	100	229	PK	Vertic	PASS
2	42.6226	59.75	30.26	-	40.00	9.74	100	74	PK	Vertic	PASS
3	148.458	45.99	16.37	-	43.50	27.13	100	48	PK	Vertic	PASS
4	238.758	44.69	18.54	-	46.00	27.46	100	86	PK	Vertic	PASS
5	399.939	41.49	21.56	-	46.00	24.44	100	334	PK	Vertic	PASS
6	543.643	40.85	24.91	-	46.00	21.09	100	201	PK	Vertic	PASS

REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor

Margin value = Emission Level – Limit value.





ABOVE 1GHz WORST-CASE DATA:

Note: 1. For radiated emissions testing , the full testing range of different modes have been scanned , only the worst case harmonic data is reported in the sheet.

2. All other emissions were greater than 20dB below the limit was not recorded

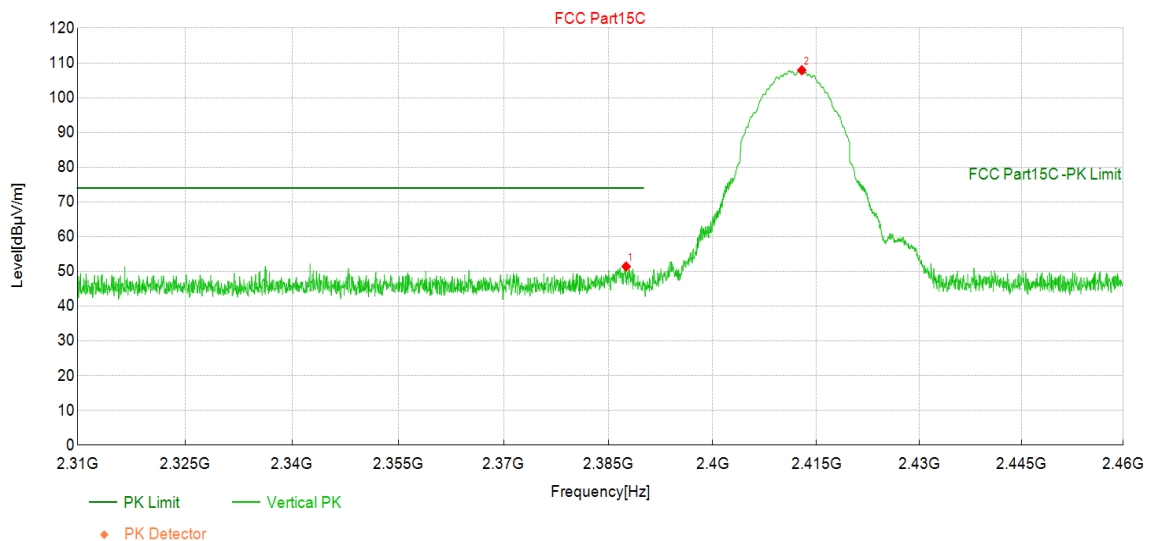
802.11b:

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Suspected Data List

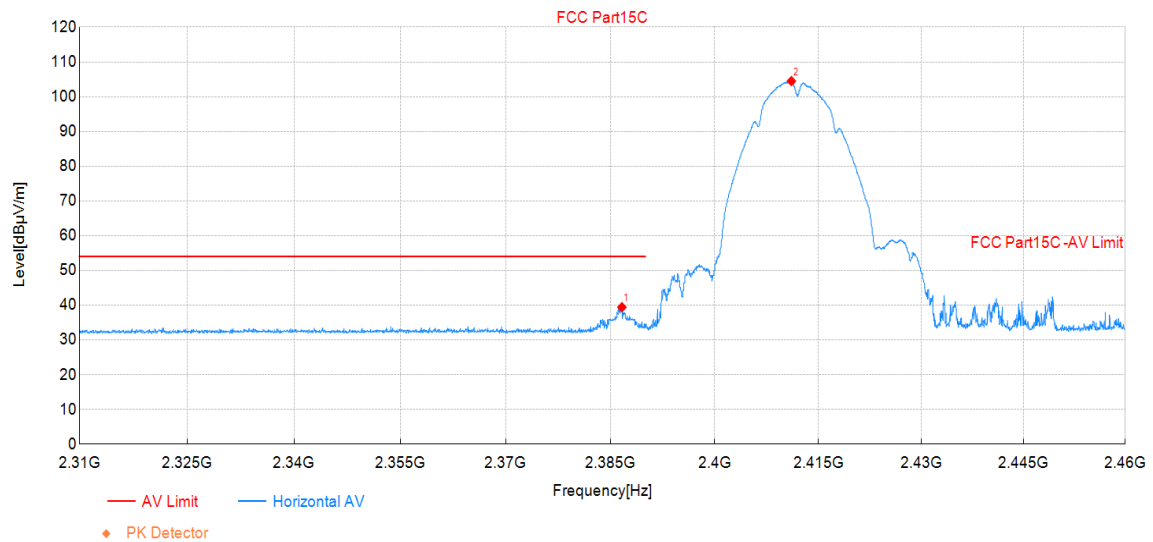
NO	Frequen cy [MHz]	Readin g [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2387.52	15.70	51.41	35.7	74.00	22.59	100	296	PK	Vertic	PASS
2	2412.88	72.20	107.90	35.7	-	-	100	352	PK	Vertic	NA





Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2386.62	3.71	39.41	35.7	54.00	14.59	100	31	AV	Horizont	PAS
2	2411.08	68.78	104.49	35.7	-	-	100	201	AV	Horizont	NA

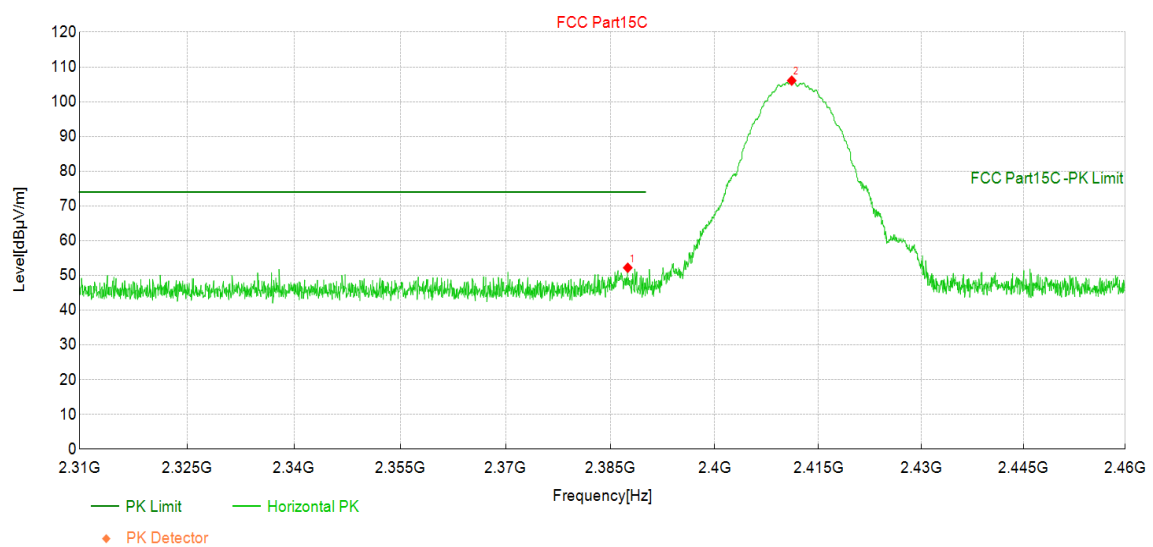




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

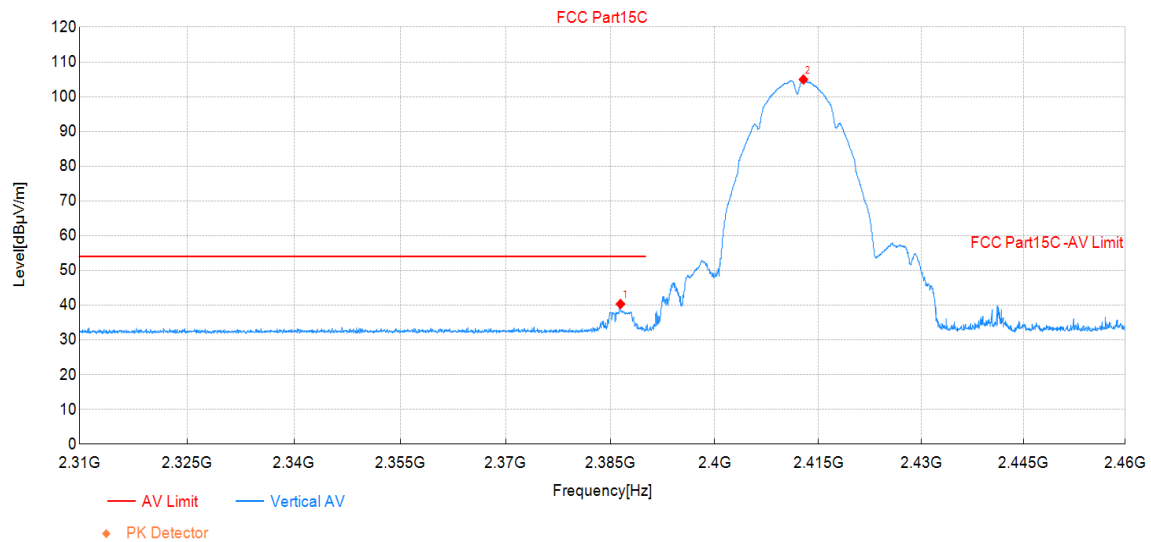
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2387.47	16.51	52.21	35.7	74.00	21.79	100	93	P	Horizont	PAS
2	2411.13	70.34	106.05	35.7	-	-	100	199	P	Horizont	NA





Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2386.42	4.64	40.34	35.7	54.00	13.66	100	210	AV	Vertic	PASS
2	2412.83	69.25	104.95	35.7	-	-	100	348	AV	Vertic	NA



REMARKS:

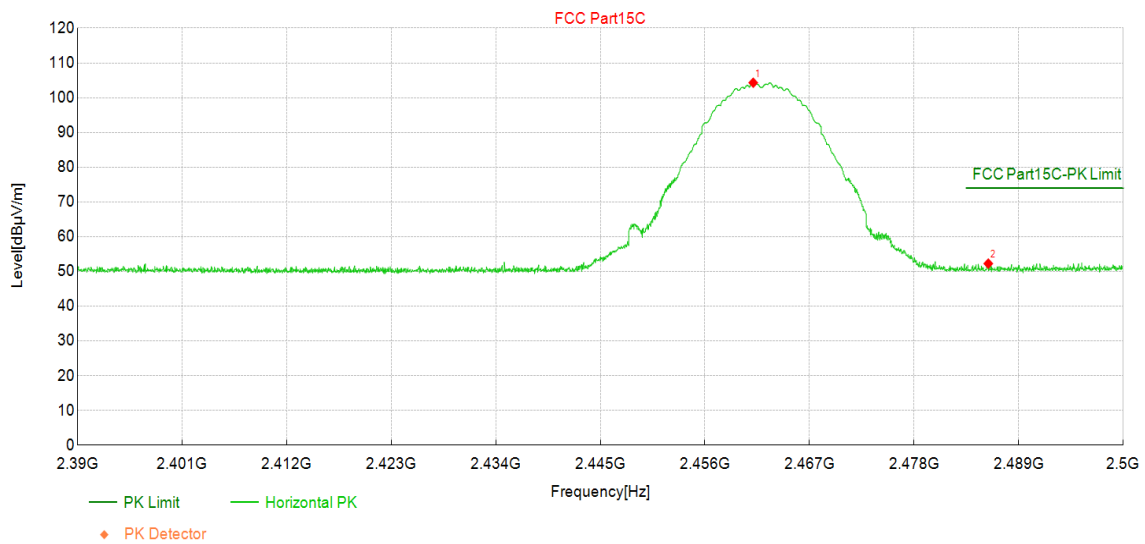
- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
- 2412MHz: Fundamental frequency.



CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M
--

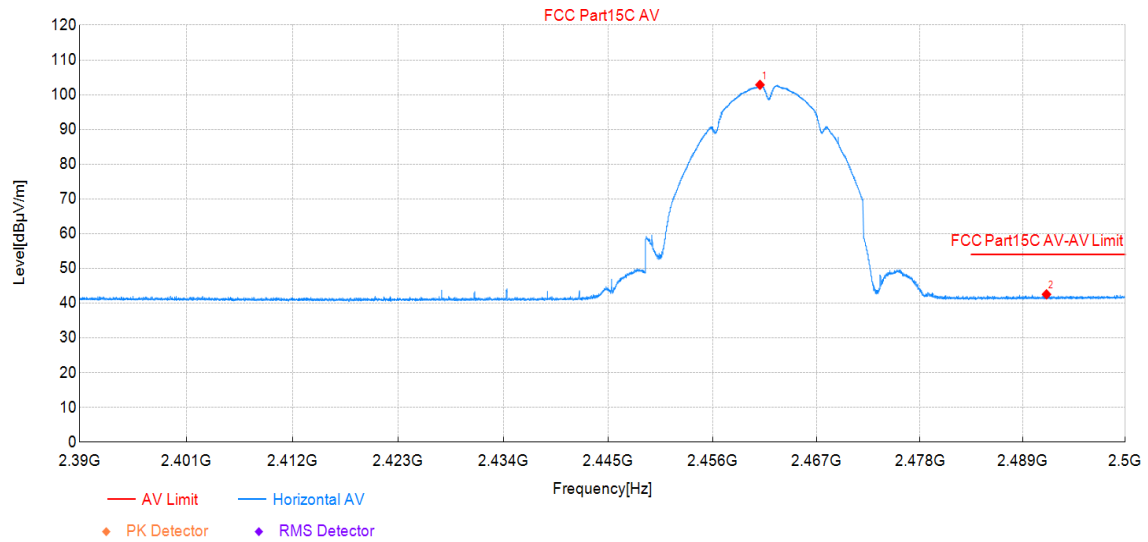
Suspected Data List											
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2461.08	68.54	104.30	35.7	-	-	100	235	P	Horizont	NA
2	2485.80	16.12	52.25	36.1	74.00	21.75	100	282	P	Horizont	PAS





Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2461.01	67.09	102.84	35.7	-	-	100	231	AV	Horizont	NA
2	2491.54	6.34	42.55	36.2	54.00	11.45	100	2	AV	Horizont	PAS

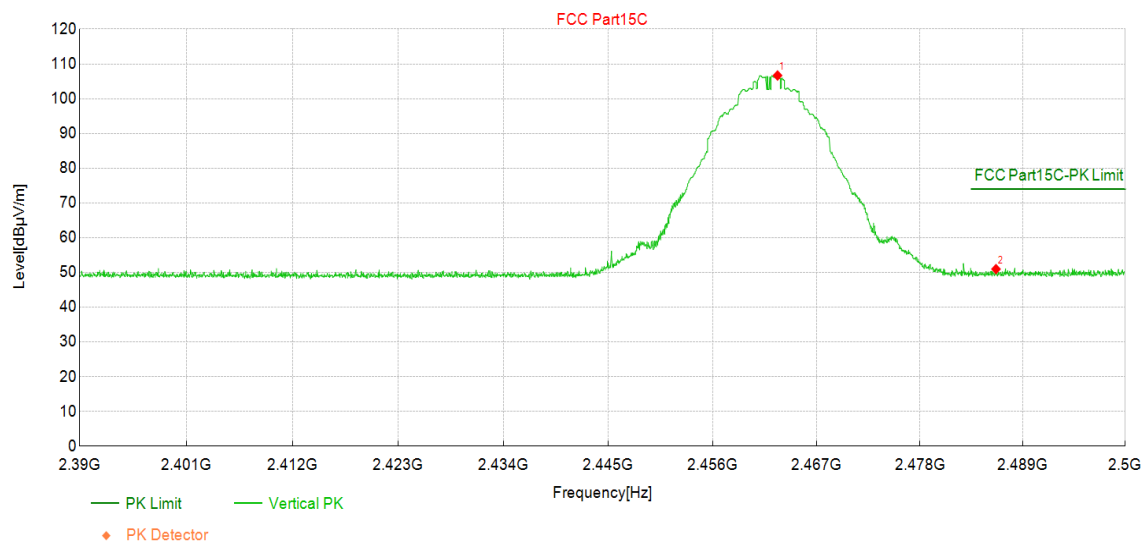




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

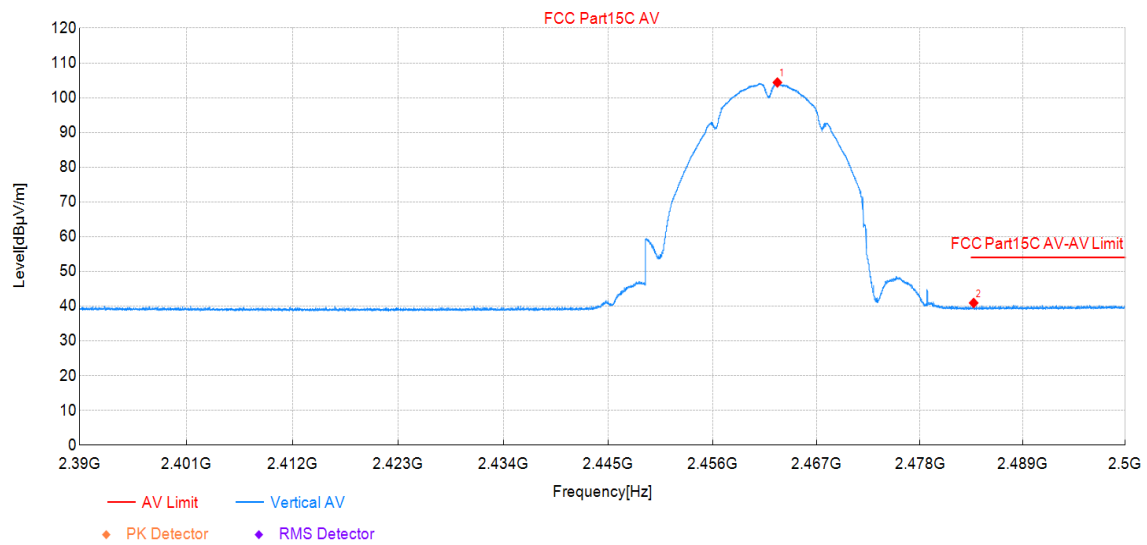
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2462.88	70.89	106.67	35.7	-	-	100	354	PK	Vertic	NA
2	2486.13	14.82	50.96	36.1	74.00	23.04	200	127	PK	Vertic	PASS





Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2462.86	68.60	104.38	35.7	-	-	100	352	AV	Vertic	NA
2	2483.74	4.84	40.93	36.0	54.00	13.07	200	253	AV	Vertic	PASS



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
- 2462MHz: Fundamental frequency.



BUREAU VERITAS Test Report No.: PSU-QSU2509050111RF02

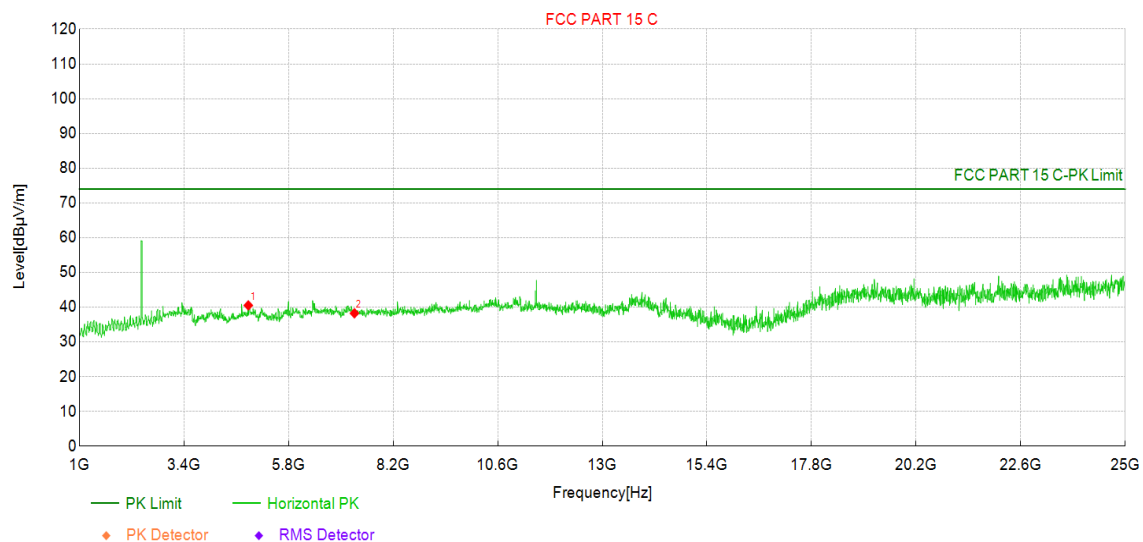
Worst case harmonic:

802.11b

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

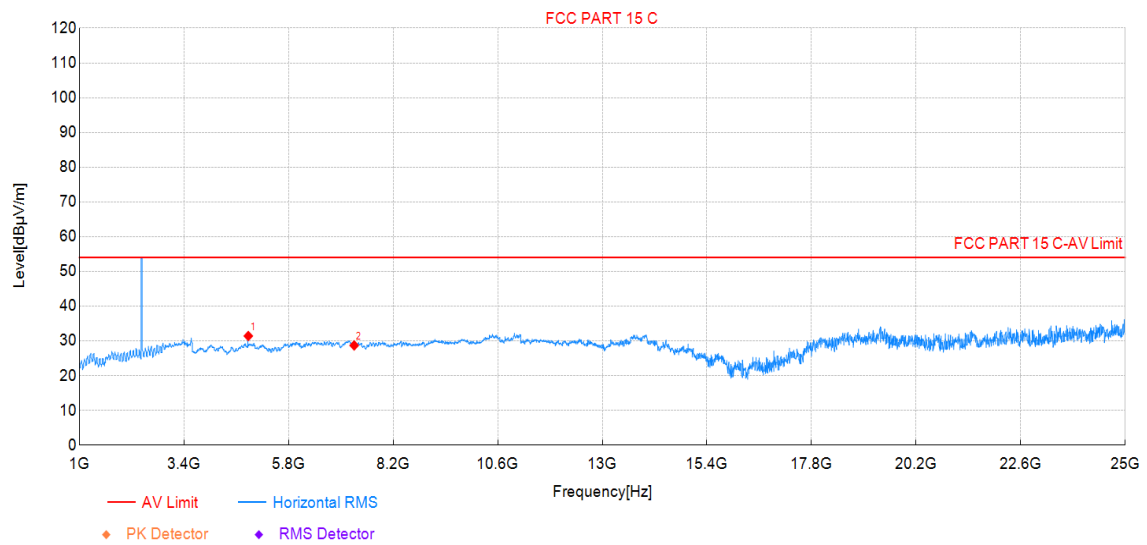
Suspected Data List											
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	4876.00	47.39	40.52	-6.87	74.00	33.48	100	198	P	Horizont	PAS
2	7312.00	41.79	38.25	-3.54	74.00	35.75	100	311	P	Horizont	PAS





Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Marg in [dB]	Heig ht [cm]	Angl e [°]	Det	Pol	Verdi ct
1	4876.00	38.29	31.42	-6.87	54.00	22.5	100	208	RM	Horizon	PAS
2	7306.00	32.26	28.71	-3.55	54.00	25.2	100	360	RM	Horizon	PAS

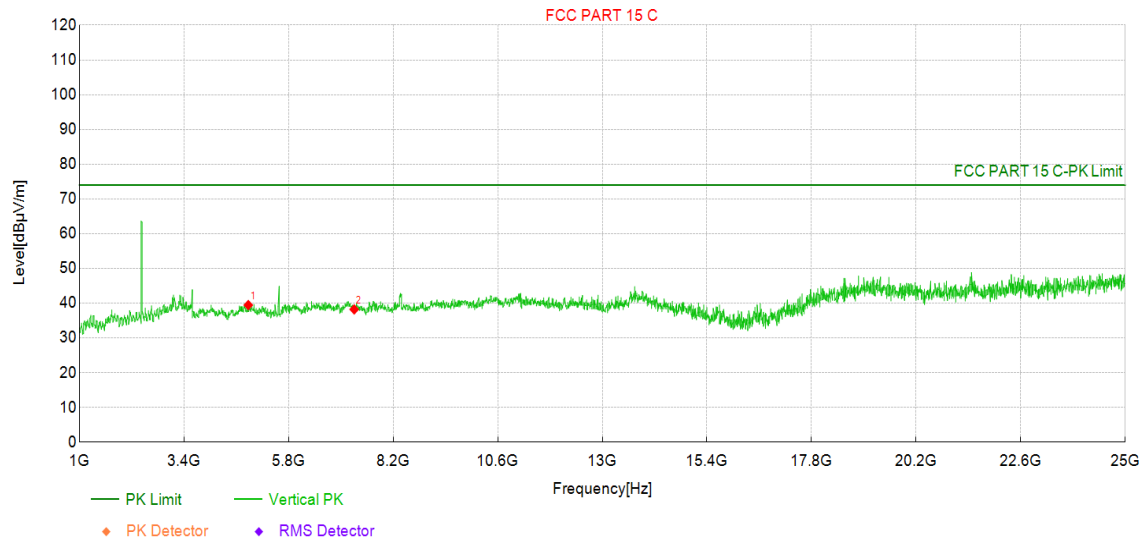




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

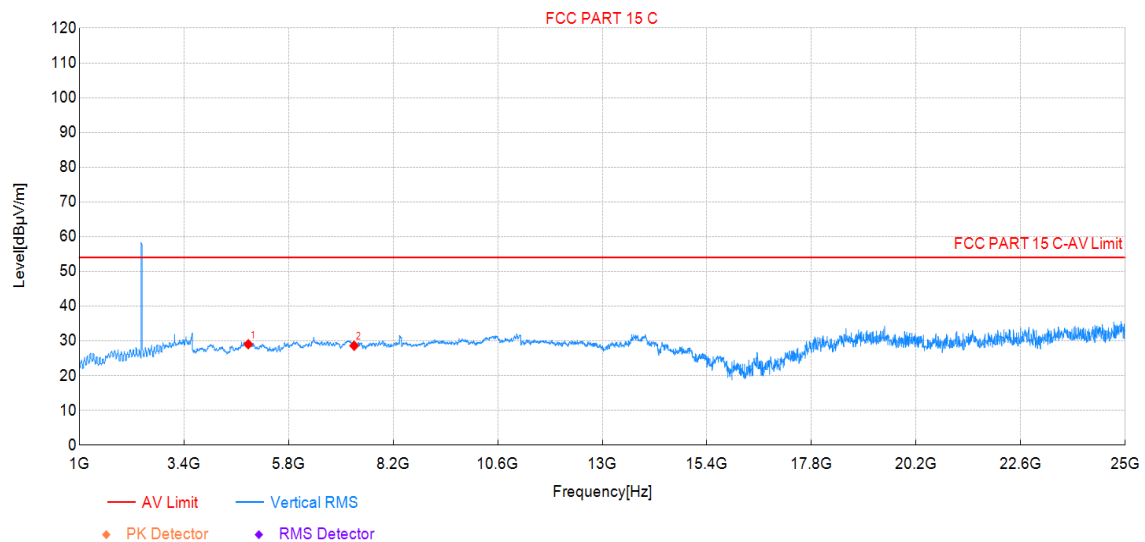
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	4876.00	46.32	39.45	-6.87	74.00	34.55	100	11	PK	Vertic	PASS
2	7306.00	41.76	38.21	-3.55	74.00	35.79	100	181	PK	Vertic	PASS





Suspected Data List

NO	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	Det	Pol	Verdi ct
1	4876.00	35.91	29.04	-6.87	54.00	24.96	100	19	RM	Vertic	PAS
2	7306.00	32.17	28.62	-3.55	54.00	25.38	100	273	RM	Vertic	PAS



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
2. 2452MHz: Fundamental frequency.
3. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.



BUREAU VERITAS Test Report No.: PSU-QSU2509050111RF02

BELOW 1GHz WORST-CASE DATA:

30 MHz – 1GHz data:

BT-LE _1M

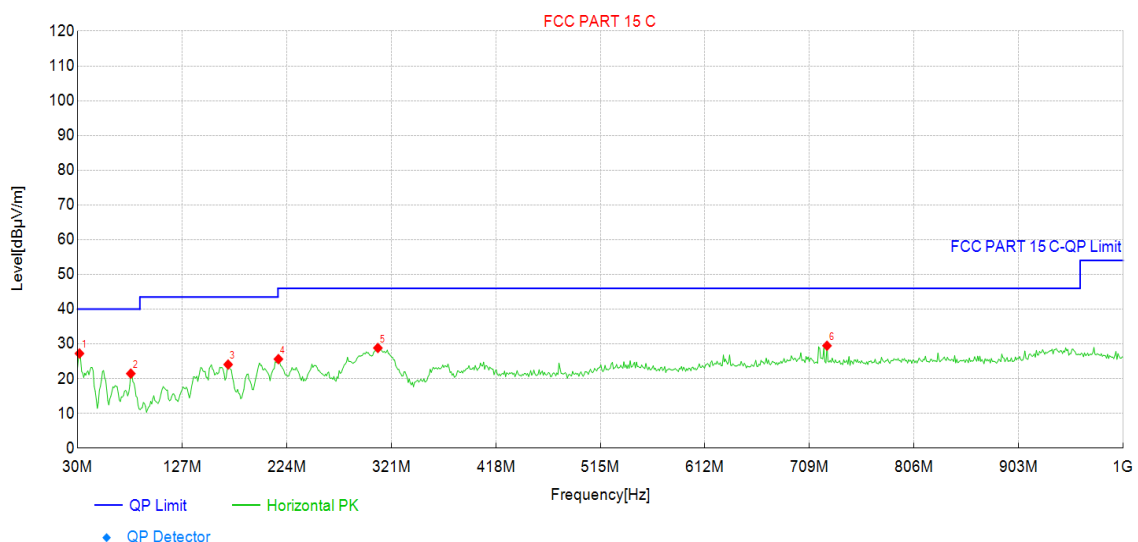
CHANNEL	TX Channel 19	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Suspected Data List											
N O.	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor or [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	31.9419	51.32	27.25	-	40.00	12.75	100	129	P	Horizont	PAS
2	79.5195	53.95	21.46	-	40.00	18.54	100	2	P	Horizont	PAS
3	169.819	53.21	24.07	-	43.50	19.43	100	67	P	Horizont	PAS
4	216.426	53.24	25.64	-	46.00	20.36	100	12	P	Horizont	PAS
5	308.668	53.95	28.84	-	46.00	17.16	100	36	P	Horizont	PAS
6	725.215	42.94	29.48	-	46.00	16.52	100	175	P	Horizont	PAS

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 = Limit value – Emission Level





CHANNEL	TX Channel 19	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

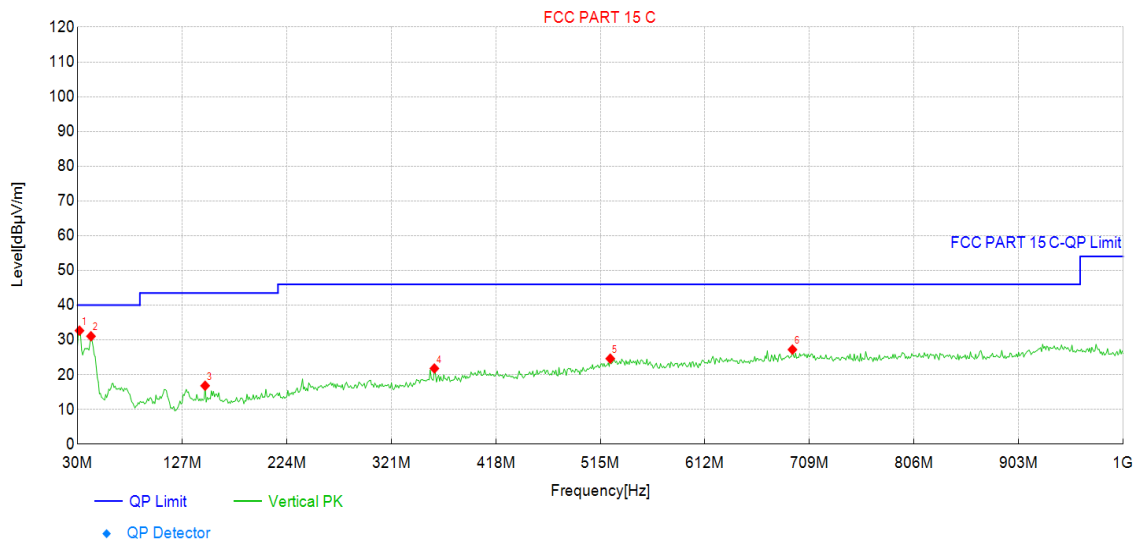
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	31.9419	56.74	32.67	-	40.00	7.33	100	130	PK	Vertic	PASS
2	42.6226	60.55	31.06	-	40.00	8.94	100	224	PK	Vertic	PASS
3	148.458	46.43	16.81	-	43.50	26.69	100	186	PK	Vertic	PASS
4	361.101	43.78	21.78	-	46.00	24.22	100	227	PK	Vertic	PASS
5	524.224	41.44	24.62	-	46.00	21.38	100	296	PK	Vertic	PASS
6	693.173	40.65	27.22	-	46.00	18.78	100	36	PK	Vertic	PASS

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 = Limit value – Emission Level





BUREAU VERITAS Test Report No.: PSU-QSU2509050111RF02
ABOVE 1GHz TEST DATA

Note: 1. For radiated emissions testing , the full testing range of different modes have been scanned , only the worst case harmonic data is reported in the sheet.

2. All other emissions were greater than 20dB below the limit was not recorded

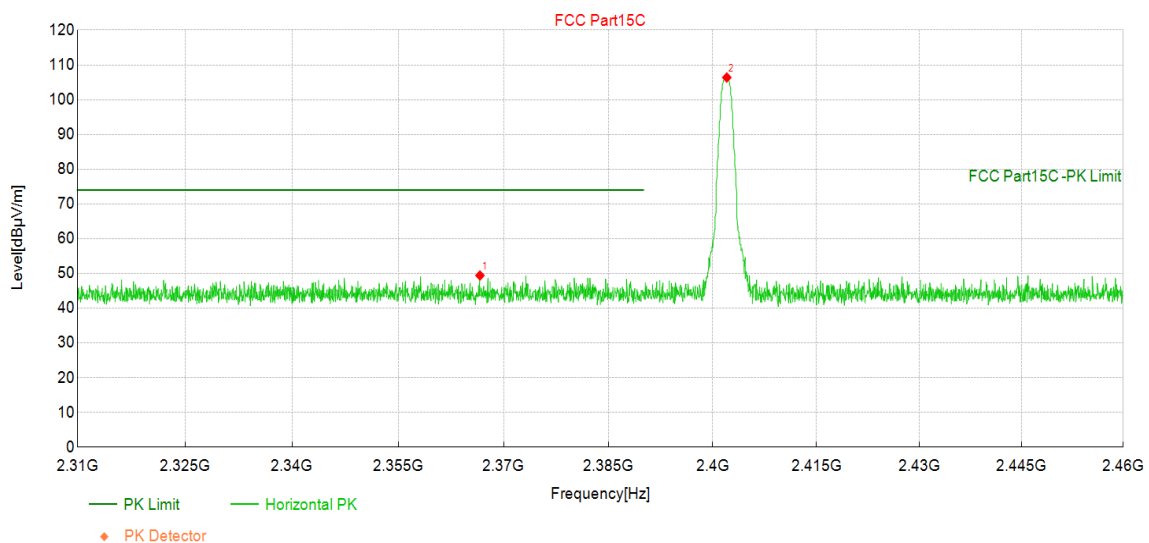
BT-LE _1M

CHANNEL	TX Channel 0	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Suspected Data List

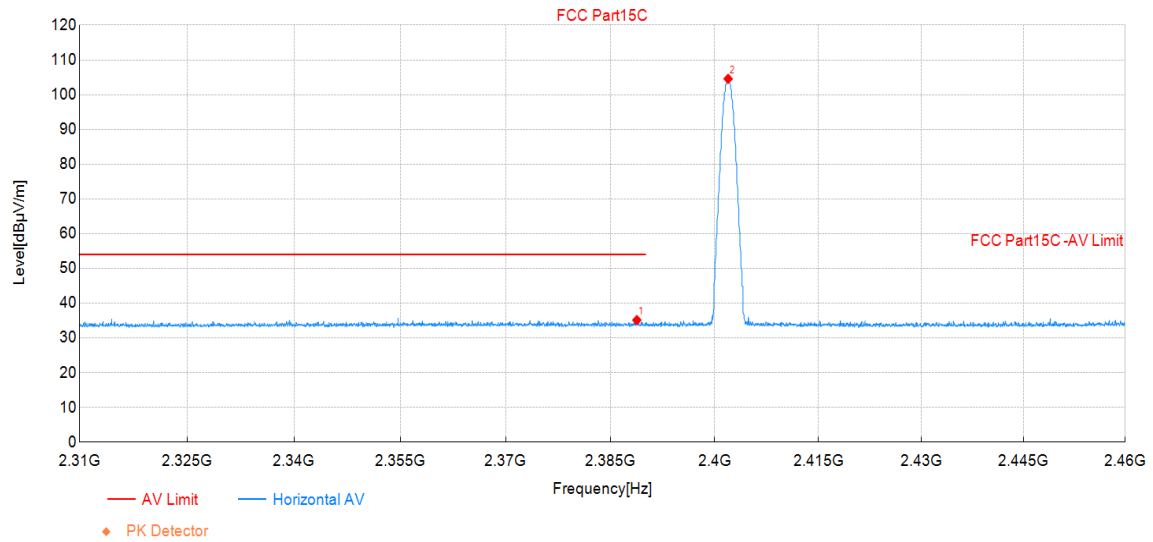
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2366.61	13.78	49.42	35.6	74.00	24.58	100	225	P	Horizont	PAS
2	2402.03	70.65	106.38	35.7	-	-	100	211	P	Horizont	NA





Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2388.77	-0.58	35.13	35.7	54.00	18.87	100	243	AV	Horizont	PAS
2	2401.93	68.83	104.56	35.7	-	-	100	212	AV	Horizont	NA

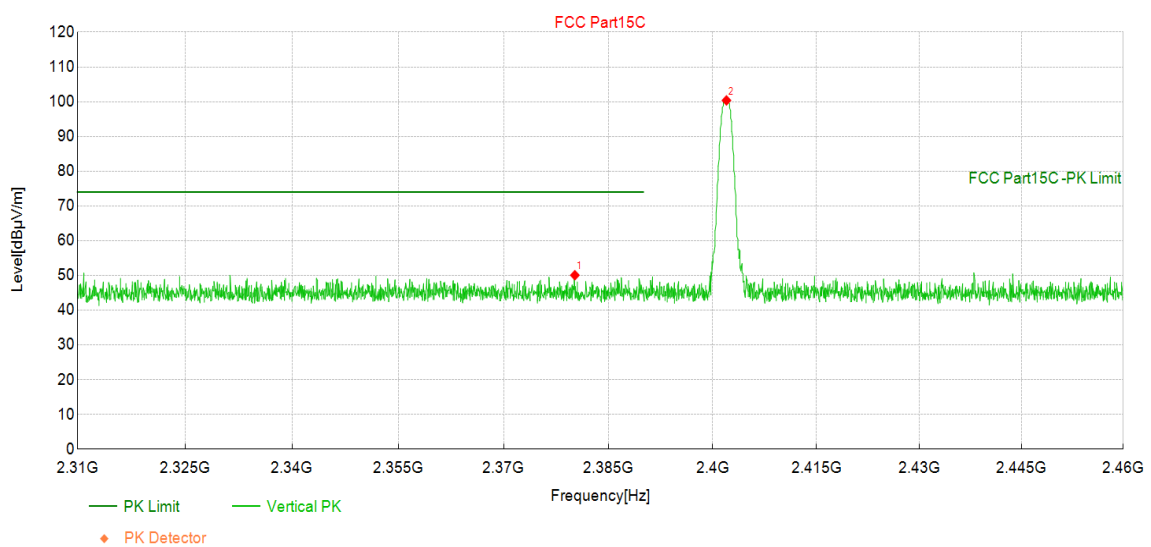




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

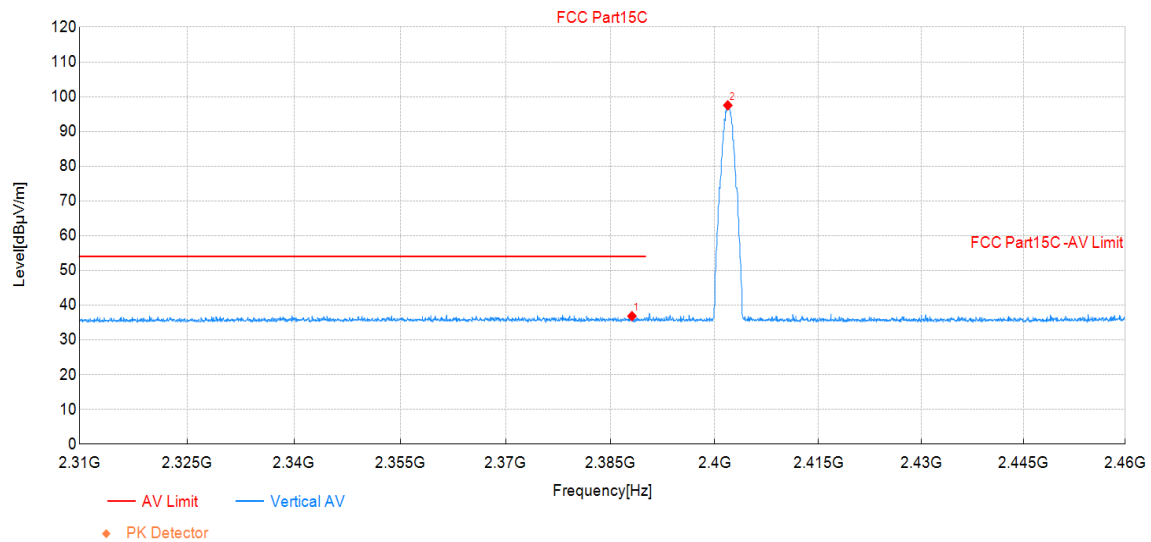
NO	Frequen cy [MHz]	Readin g [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2380.17	14.39	50.07	35.6	74.00	23.93	100	116	PK	Vertic	PASS
2	2401.98	64.64	100.37	35.7	-	-	100	276	PK	Vertic	NA





Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2388.07	1.14	36.85	35.7	54.00	17.15	100	139	AV	Vertic	PASS
2	2401.88	61.78	97.51	35.7	-	-	100	280	AV	Vertic	NA



REMARKS:

- Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
- 2402MHz: Fundamental frequency.

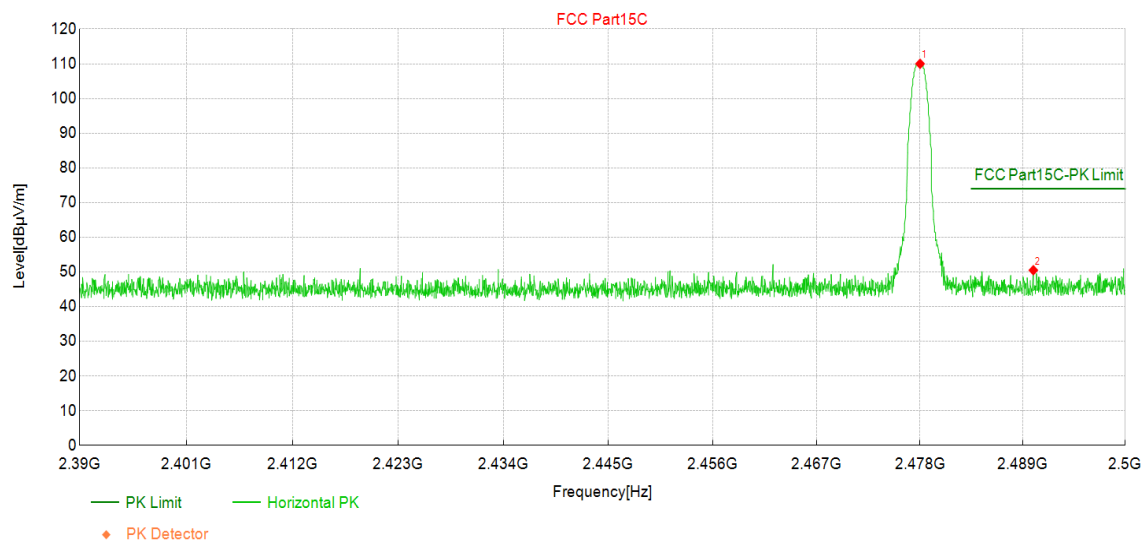


CHANNEL	TX Channel 39	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Suspected Data List

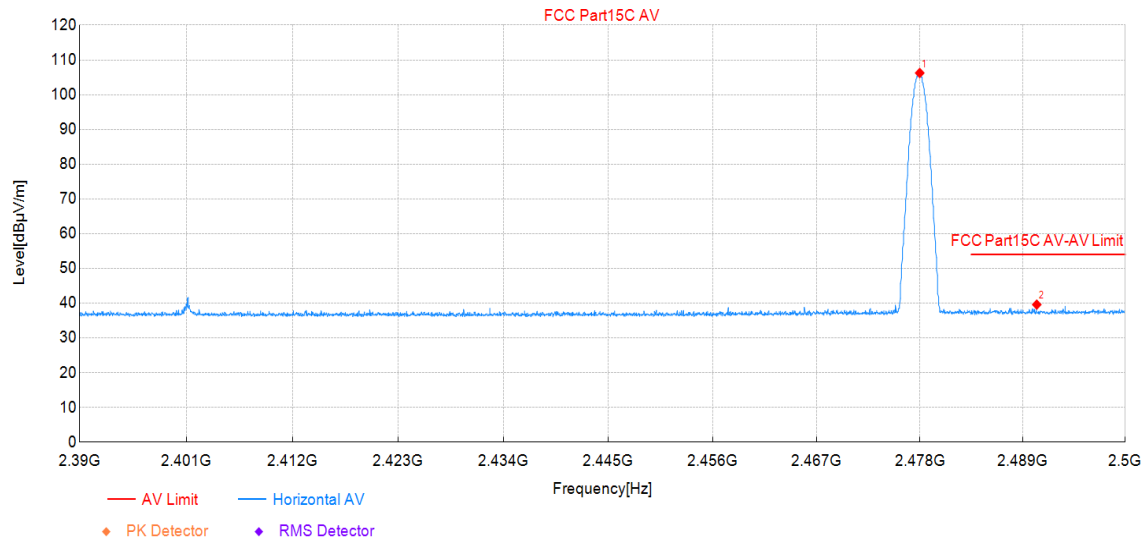
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2478.02	73.99	110.00	36.0	-	-	100	207	P	Horizont	NA
2	2490.13	14.31	50.50	36.1	74.00	23.50	100	80	P	Horizont	PAS





Suspected Data List

N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2477.99	70.23	106.24	36.0	-	-	100	208	AV	Horizont	NA
2	2490.50	3.39	39.59	36.2	54.00	14.41	100	150	AV	Horizont	PAS

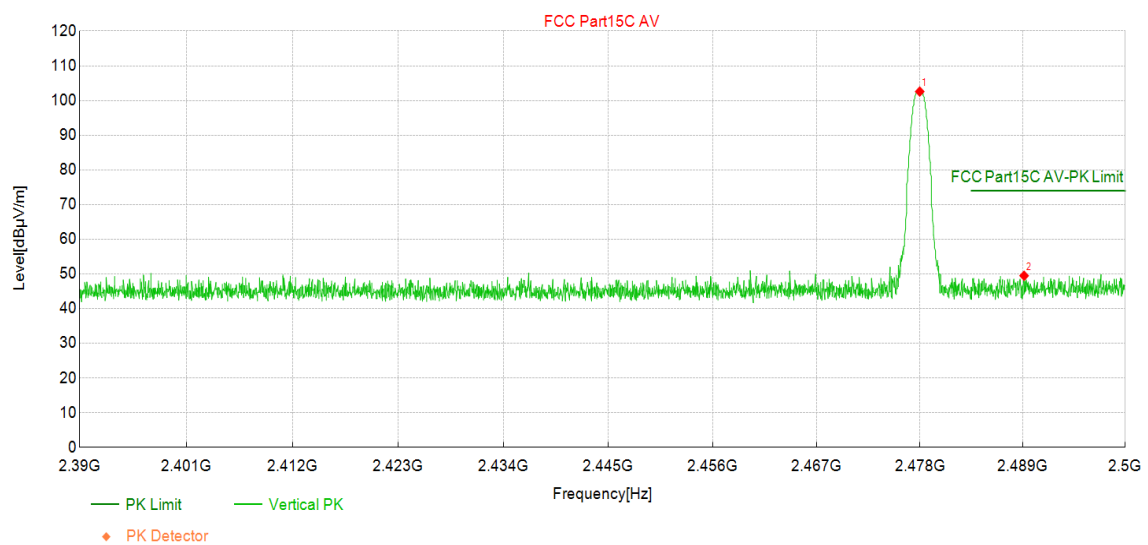




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

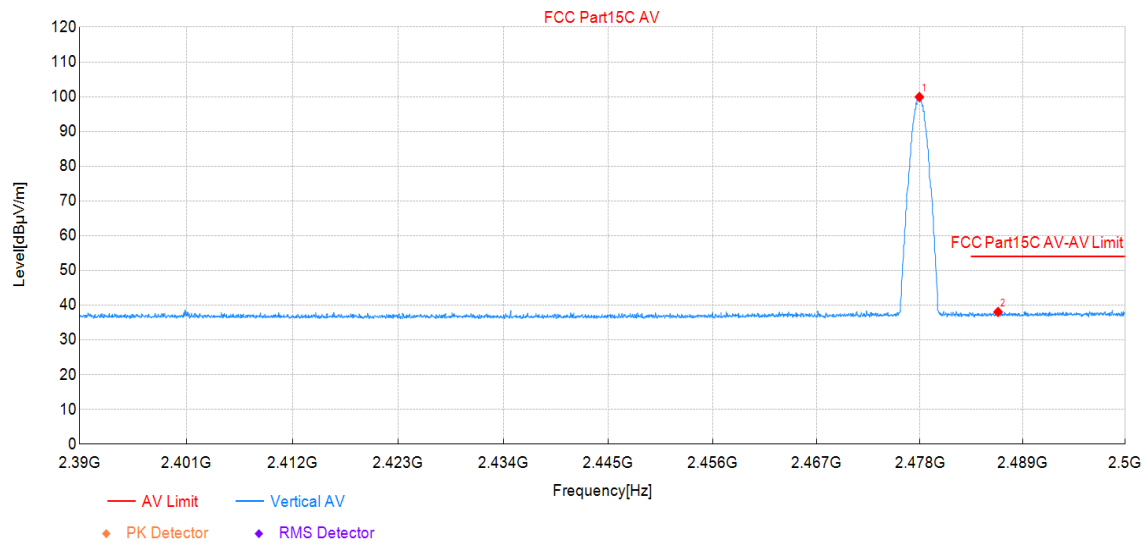
NO	Frequen cy [MHz]	Readin g [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	2477.99	66.57	102.58	36.0	-	-	100	287	PK	Vertic	NA
2	2489.14	13.30	49.48	36.1	74.00	24.52	100	99	PK	Vertic	PASS





Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	2477.95	63.91	99.92	36.0	-	-	100	358	AV	Vertic	NA
2	2486.35	1.91	38.05	36.1	54.00	15.95	100	68	AV	Vertic	PASS



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
2. 2480MHz: Fundamental frequency.



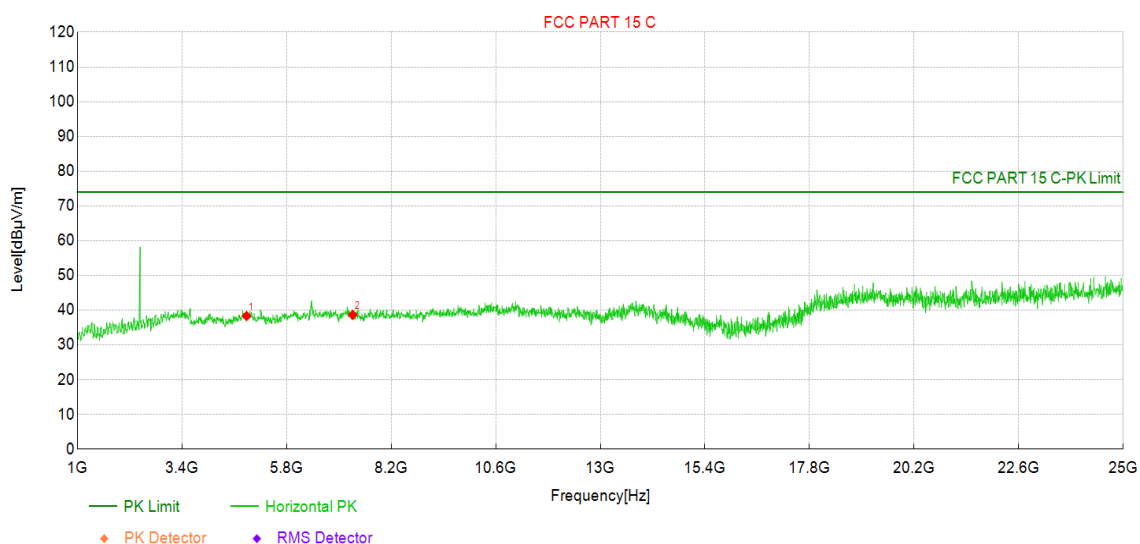
Worst case harmonic:

CHANNEL	TX Channel 19	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

Suspected Data List

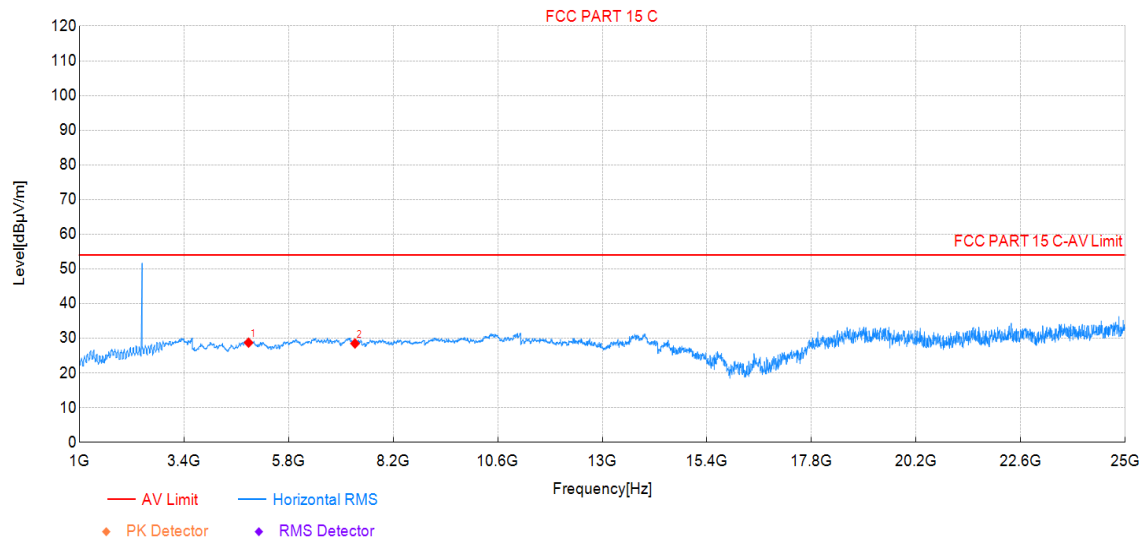
N O.	Frequen cy [MHz]	Readi ng [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	4882.00	45.17	38.32	-6.85	74.00	35.68	100	255	P	Horizont	PAS
2	7318.00	42.18	38.66	-3.52	74.00	35.34	100	46	P	Horizont	PAS





Suspected Data List

NO.	Frequency [MHz]	Reading [dB μ V]	Level [dB μ V/m]	Factor [dB/m]	Limit [dB μ V/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	4882.0000	35.60	28.75	-6.85	54.00	25.25	100	237	RMS	Hori	PASS
2	7324.0000	32.02	28.51	-3.51	54.00	25.49	100	160	RMS	Hori	PASS

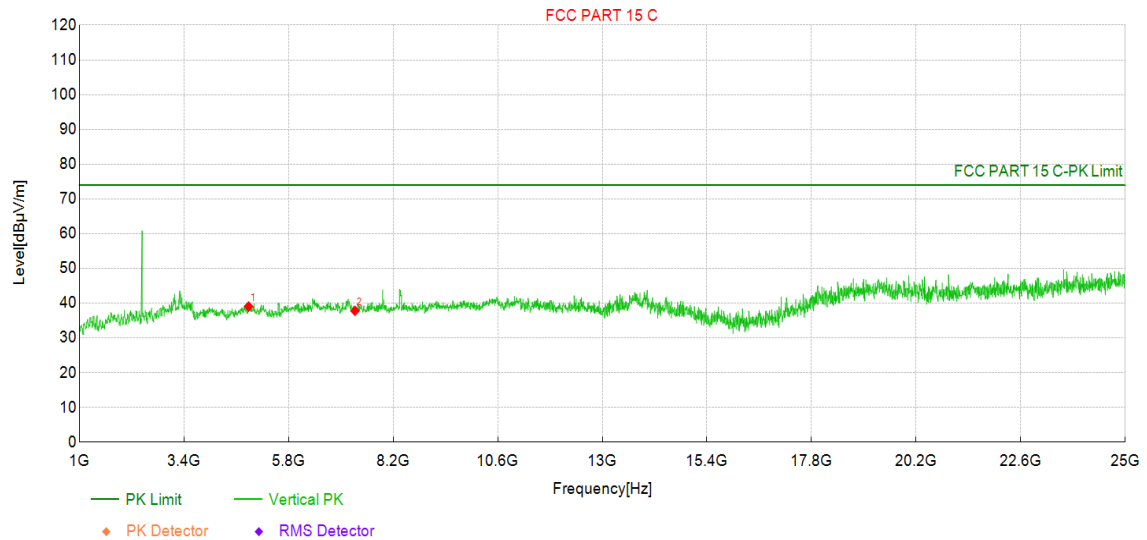




ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

Suspected Data List

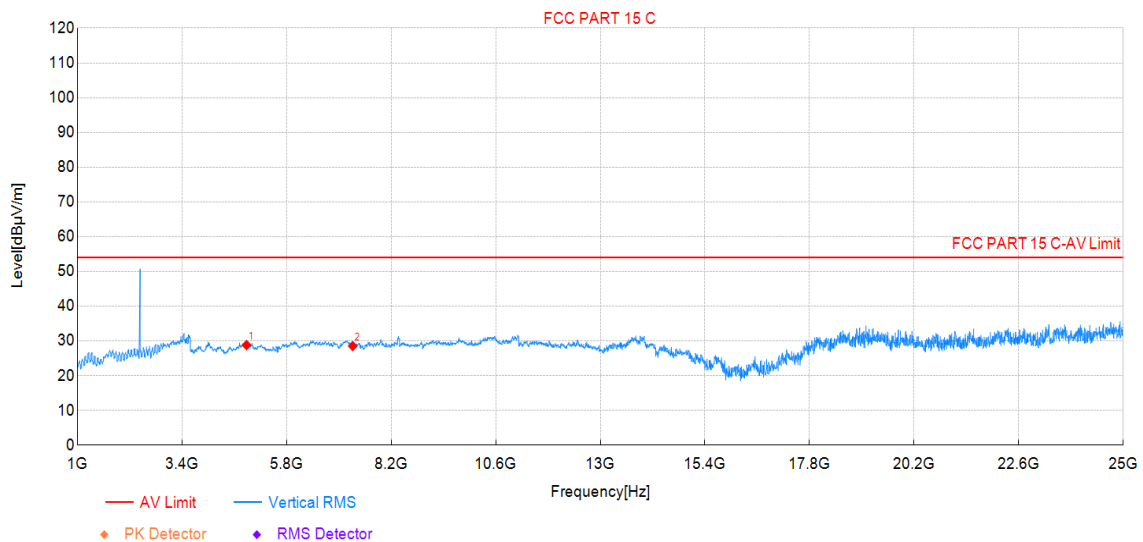
NO	Frequen cy [MHz]	Readin g [dBμV]	Level [dBμV/ m]	Fact or [dB/ m]	Limit [dBμV/ m]	Margi n [dB]	Heig ht [cm]	Angl e [°]	De t	Pol	Verdi ct
1	4882.00	45.91	39.06	-6.85	74.00	34.94	100	290	PK	Vertic	PASS
2	7324.00	41.31	37.80	-3.51	74.00	36.20	100	89	PK	Vertic	PASS





Suspected Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Det	Pol	Verdict
1	4882.00	35.65	28.80	-6.85	54.00	25.20	100	283	RM	Vertic	PAS
2	7318.00	32.05	28.53	-3.52	54.00	25.47	100	173	RM	Vertic	PAS



REMARKS:

1. Emission Level = Read Level+ Antenna Factor + Cable Loss- Preamp Factor
Margin value = Limit value – Emission Level.
2. 2480MHz: Fundamental frequency.
3. For frequency above 18GHz, the emission was tested 20db below the limit so the data not recorded in the sheet.

3.3 6 dB BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum 6dB Bandwidth Measurement is 0.5 MHz.

3.3.2 TEST INSTRUMENTS

Lab B:

Date of tests: Jun. 05, 2024 ~ Jul. 17, 2024

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Meter	ANRITSU	ML2495A	1506002	Feb. 14,24	Feb. 13,25
EXA Signal Analyzer	KEYSIGHT	N9010A-526	MY54510523	Feb. 14,24	Feb. 13,25
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.09,24	May.08,25
Power Sensor	ANRITSU	MA2411B	1339352	Feb. 14,24	Feb. 13,25

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GREGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

3.3.3 TEST PROCEDURE

In accordance with ANSI C63.10-2020 11.8.1 Option 1:

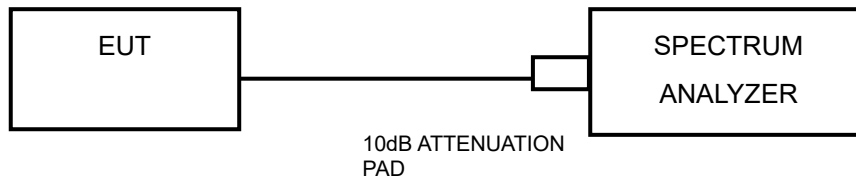
- a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100kHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = peak.
- d) Trace mode = max-hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission by placing two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-6 dB down amplitude”. If a marker is below this “-6 dB down amplitude” value, then it shall be as close as possible to this value.



3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

3.3.5 TEST SETUP



3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.3.7 TEST RESULTS

Please Refer to Appendix B.

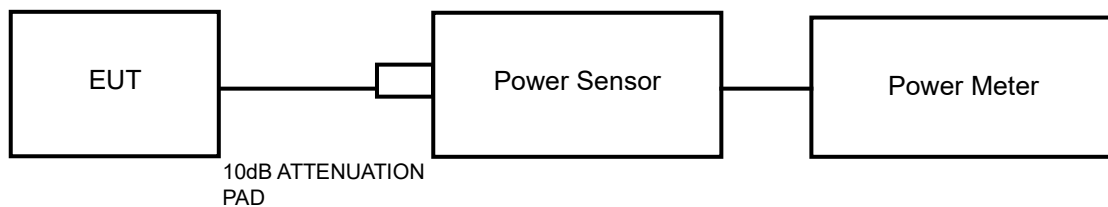


3.4 CONDUCTED OUTPUT POWER

3.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

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

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.4.4 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.

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



3.4.7 TEST RESULTS

3.4.7.1 MAXIMUM PEAK OUTPUT POWER

Please Refer to Appendix B.

3.4.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

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

Please Refer to Appendix B.

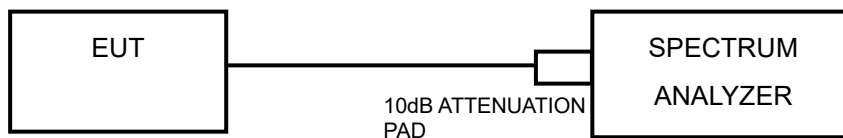


3.5 POWER SPECTRAL DENSITY MEASUREMENT

3.5.7 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

3.5.8 TEST SETUP



3.5.9 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.5.10 TEST PROCEDURE

1. Set the span > 1.5 times the DTS bandwidth
2. Set the RBW = 3 kHz, VBW ≥ 3 x RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

3.5.11 DEVIATION FROM TEST STANDARD

No deviation.

3.5.12 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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3.5.13 TEST RESULTS

Please Refer to Appendix B.

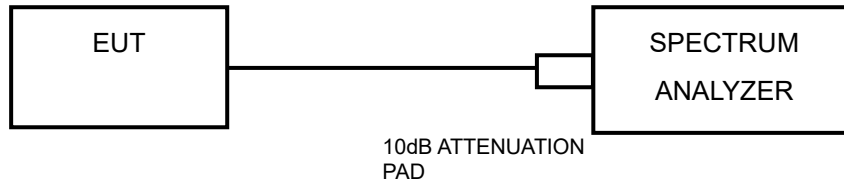


3.6 OUT OF BAND EMISSION MEASUREMENT

3.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

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

3.6.2 TEST SETUP



3.6.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.6.4 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. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

3.6.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.6.7 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix B.



3.7 ANTENNA REQUIREMENTS

3.7.7 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.7.8 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

3.7.9 ANTENNA GAIN

According to FCC KDB 662911 D01 Multiple Transmitter Output v02r01

For CDD transmissions, directional gain is calculated as

Directional gain=GANT +Array Gain, where Array Gain is as follows.

For power spectral density (PSD) measurements on all devices,

Array Gain= 10 log(NANT/ Nss) dB;

For power measurements on IEEE 802.11 devices,Array Gain = 0 dB for NANT≤ 4;

The EUT supports Cyclic Delay Diversity (CDD) mode,

For power measurements,the directional GANT is set equal to the antenna having the highest gain as following formulas.

Directional Gain = Max.Gain + Array Gain.

For PSD measurements,the directional GANT is calculation is following F)2)f)ii of KDB 662911 D01 v02r01.

The directional gain is calculated as following table.

2.4GHz	Ant 8 (dBi)	Ant 9 (dBi)	DG For Power (dBi)	DG For PSD (dBi)	Power Limit Reduction (dB)	PSD Limit Reduction (dB)
	0.75	1.4	1.4	4.09	0.00	0.00

NOTE: DG= directional gain, Power Limit Reduction = DG For Power Gain -6dbi<0

PSD Limit Reduction = DG For PSD – 6dBi<0. Therefore, it is not necessary to reduce maximum peak output power and PSD limit.



4 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

--END--