TEST REPORT

CERTIFICATE OF CONFORMITY

Standard:	**47 CFR FCC Part 15, Subpart C (Section 15.247)**
Report No.:	RFBHQZ-WTW-P23030988-4
FCC ID:	AK8J20H105
Product:	WLAN/BT Combo Module(WiFi 6E)
Brand:	FOXCONN
Model No.:	J20H105
Received Date:	2023/3/31
Test Date:	2023/5/24 ~ 2023/6/10
Issued Date:	2023/6/20
Applicant:	Sony Group Corporation
Address:	1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan
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
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Approved by: _____ , **Date:** **2023/6/20**

May Chen / Manager

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Prepared by : Phoebe Wang / Specialist

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Table of Contents

Release Control Record **4**

1 Certificate **5**

2 Summary of Test Results **6**

2.1 Measurement Uncertainty 6
2.2 Supplementary Information 6

3 General Information **7**

3.1 General Description 7
3.2 Antenna Description of EUT 8
3.3 Channel List 9
3.4 Test Mode Applicability and Tested Channel Detail 10
3.5 Duty Cycle of Test Signal 11
3.6 Test Program Used and Operation Descriptions 13
3.7 Connection Diagram of EUT and Peripheral Devices 13
3.8 Configuration of Peripheral Devices and Cable Connections 14

4 Test Instruments **15**

4.1 RF Output Power 15
4.2 Power Spectral Density 15
4.3 6 dB Bandwidth 15
4.4 Conducted Out of Band Emissions 15
4.5 AC Power Conducted Emissions 16
4.6 Unwanted Emissions below 1 GHz 16
4.7 Unwanted Emissions above 1 GHz 17

5 Limits of Test Items **18**

5.1 RF Output Power 18
5.2 Power Spectral Density 18
5.3 6 dB Bandwidth 18
5.4 Conducted Out of Band Emissions 18
5.5 AC Power Conducted Emissions 18
5.6 Unwanted Emissions below 1 GHz 18
5.7 Unwanted Emissions above 1 GHz 19

6 Test Arrangements **20**

6.1 RF Output Power 20
6.1.1 Test Setup 20
6.1.2 Test Procedure 20
6.2 Power Spectral Density 20
6.2.1 Test Setup 20
6.2.2 Test Procedure 20
6.3 6 dB Bandwidth 21
6.3.1 Test Setup 21
6.3.2 Test Procedure 21
6.4 Conducted Out of Band Emissions 21
6.4.1 Test Setup 21
6.4.2 Test Procedure 21
6.5 AC Power Conducted Emissions 22
6.5.1 Test Setup 22
6.5.2 Test Procedure 22
6.6 Unwanted Emissions below 1 GHz 23
6.6.1 Test Setup 23
6.6.2 Test Procedure 24
6.7 Unwanted Emissions above 1 GHz 25
6.7.1 Test Setup 25
6.7.2 Test Procedure 25

7 Test Results of Test Item **26**

7.1 RF Output Power 26
7.2 Power Spectral Density 28
7.3 6 dB Bandwidth 30
7.4 Conducted Out of Band Emissions 32
7.5 AC Power Conducted Emissions 36
7.6 Unwanted Emissions below 1 GHz 38
7.7 Unwanted Emissions above 1 GHz 40

8 Pictures of Test Arrangements 68

9 Information of the Testing Laboratories 69

Release Control Record

Issue No.	Description	Date Issued
RFBHQZ-WTW-P23030988-4	Original release.	2023/6/20

1 Certificate

Product:	WLAN/BT Combo Module(WiFi 6E)
Brand:	FOXCONN
Test Model:	J20H105
Sample Status:	Engineering sample
Applicant:	Sony Group Corporation
Test Date:	2023/5/24 ~ 2023/6/10
Standard:	47 CFR FCC Part 15, Subpart C (Section 15.247)
Measurement procedure:	ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02

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 RF characteristics under the conditions specified in this report.

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Standard / Clause	Test Item	Result	Remark
15.247(b)	RF Output Power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.247(a)(2)	6 dB Bandwidth	Pass	Meet the requirement of limit.
15.247(d)	Conducted Out of Band Emissions	Pass	Meet the requirement of limit.
15.207	AC Power Conducted Emissions	Pass	Minimum passing margin is -16.48 dB at 0.28288 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions below 1 GHz	Pass	Minimum passing margin is -14.8 dB at 54.53 MHz
15.205 / 15.209 / 15.247(d)	Unwanted Emissions above 1 GHz	Pass	Minimum passing margin is -0.1 dB at 2483.50 MHz
15.203	Antenna Requirement	Pass	No antenna connector is used.

Note: Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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:

Parameter	Specification	Expanded Uncertainty (k=2) (±)
Conducted Out of Band Emissions	9 kHz ~ 40 GHz	2.5 dB
AC Power Conducted Emissions	150 kHz ~ 30 MHz	1.9 dB
Unwanted Emissions below 1 GHz	9 kHz ~ 30 MHz	3.1 dB
	30 MHz ~ 1 GHz	5.5 dB
Unwanted Emissions above 1 GHz	1 GHz ~ 18 GHz	5.1 dB
	18 GHz ~ 40 GHz	5.3 dB

The other instruments specified are routine verified to remain within the calibrated levels, no measurement uncertainty is required to be calculated.

2.2 Supplementary Information

There is not any deviation from the test standards for the test method, and no modifications required for compliance.

3 General Information

3.1 General Description

Product	WLAN/BT Combo Module(WiFi 6E)
Brand	FOXCONN
Test Model	J20H105
Status of EUT	Engineering sample
Power Supply Rating	3.3 Vdc from host equipment
Modulation Type	GFSK
Modulation Technology	DTS
Transfer Rate	Up to 2 Mbps
Operating Frequency	2.402 GHz ~ 2.48 GHz
Number of Channel	40
Output Power	82.604 mW (19.17 dBm)

Note:

1. There are WLAN (2.4GHz & 5GHz & 6GHz) and Bluetooth technology used for the EUT.
2. Simultaneously transmission condition.

Condition	Technology	
1	WLAN (2.4GHz)	Bluetooth
2	WLAN (5GHz)	Bluetooth
3	WLAN (6GHz)	Bluetooth
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.		

3. 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 Antenna Description of EUT

1. The antenna information is listed as below.

Antenna NO.	Antenna Net Gain(dBi)	Frequency range (GHz)	Antenna Type
WiFi 0	0.19	2.4~2.4835	Monopole
	1.74	5.15~5.25	
	1.41	5.25~5.35	
	2.97	5.47~5.725	
	2.2	5.725~5.85	
	2.5	5.925~6.425	
	2.76	6.425~6.525	
	2.9	6.525~6.875	
	2.74	6.875~7.125	
WiFi 1	3.5	2.4~2.4835	Monopole
	1.84	5.15~5.25	
	1.9	5.25~5.35	
	2.3	5.47~5.725	
	2.1	5.725~5.85	
	2.3	5.925~6.425	
	1.11	6.425~6.525	
	1.83	6.525~6.875	
	3.66	6.875~7.125	
BT 0	1.5	2.4~2.4835	PIFA
BT 1	0.2	2.4~2.4835	PIFA
Note: Bluetooth has diversity function, the max. gain antenna was chosen for the test.			

* Detail antenna specification please refer to antenna datasheet and/or antenna measurement report.

3.3 Channel List

40 channels are provided for BT-LE:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (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

3.4 Test Mode Applicability and Tested Channel Detail

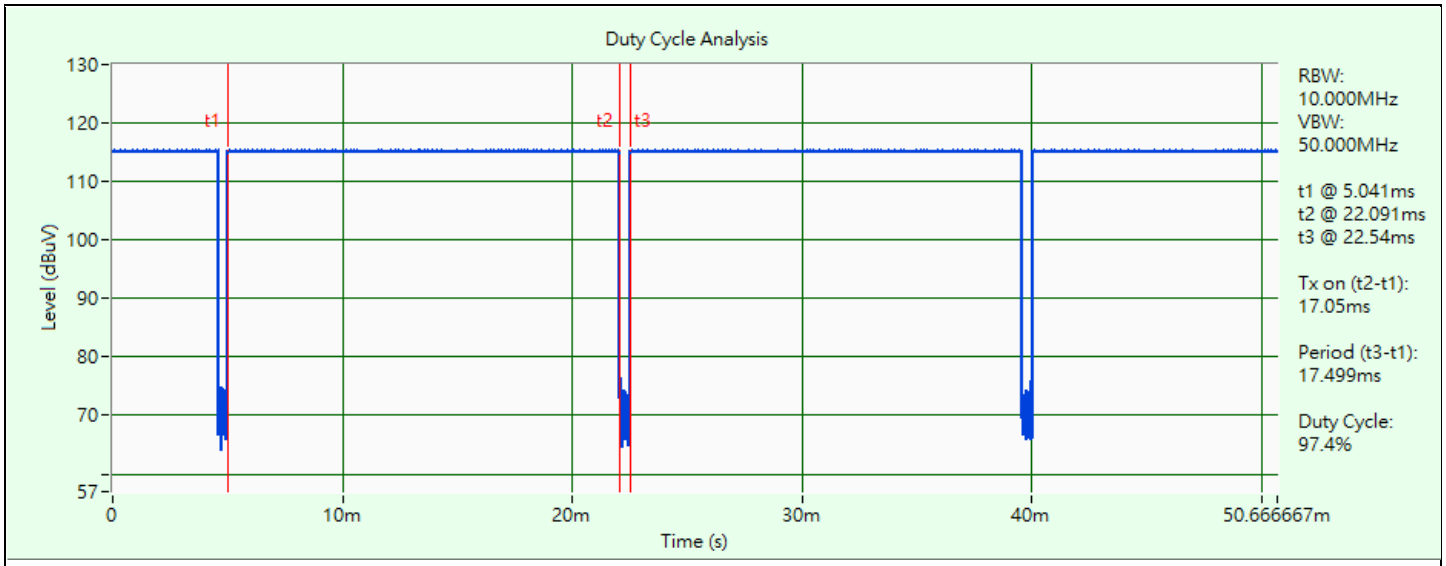
Pre-Scan:	1. EUT can be used in the following ways: X-axis/ Y-axis/ Z-axis. Pre-scan these ways and find the worst case as a representative test condition. 2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
Worst Case:	1. X-axis/ Y-axis/ Z-axis Worst Condition: X-axis

Following channel(s) was (were) selected for the final test as listed below:

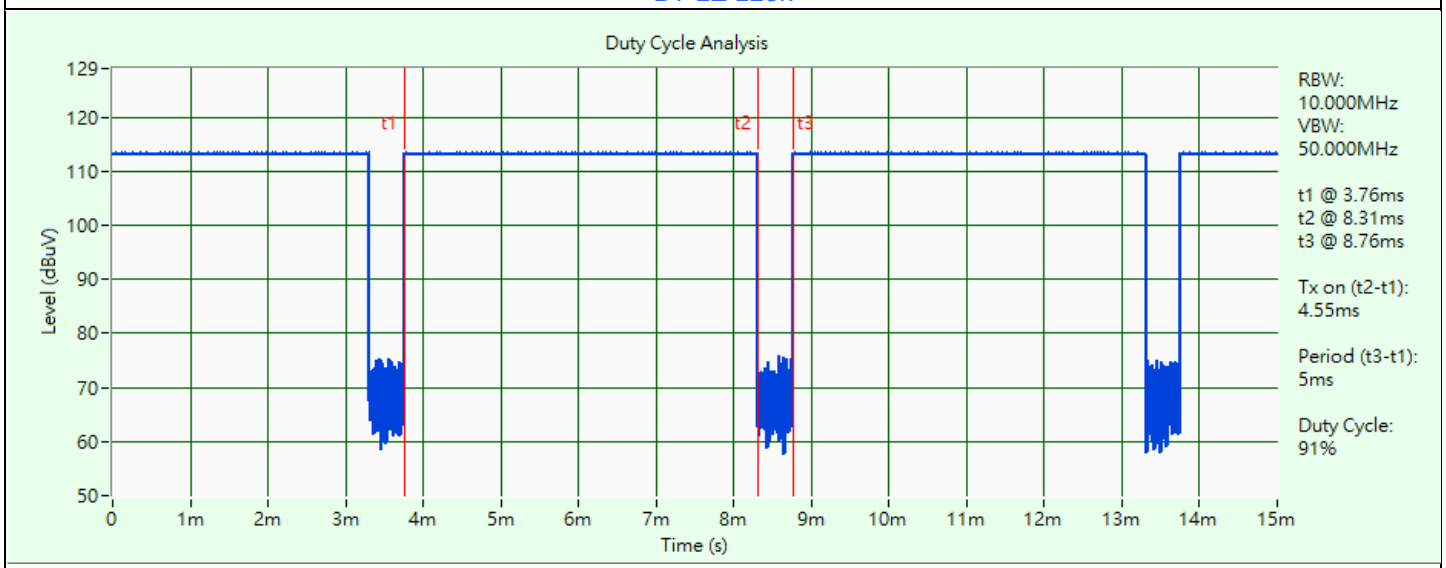
Test Item	Mode	Tested Channel	Modulation	Data Rate Parameter
RF Output Power / Power Spectral Density	BT LE-125K	0, 19, 39	GFSK	125Kb/s
	BT LE-500K	0, 19, 39	GFSK	500Kb/s
	BT-LE 1M	0, 19, 39	GFSK	1Mb/s
	BT-LE 2M	0, 19, 39	GFSK	2Mb/s
6 dB Bandwidth / Conducted Out of Band Emissions	BT LE-125K	0, 19, 39	GFSK	125Kb/s
	BT LE-500K	0, 19, 39	GFSK	500Kb/s
	BT-LE 1M	0, 19, 39	GFSK	1Mb/s
	BT-LE 2M	0, 19, 39	GFSK	2Mb/s
AC Power Conducted Emissions	BT-LE 2M	19	GFSK	2Mb/s
Unwanted Emissions below 1 GHz	BT-LE 2M	19	GFSK	2Mb/s
Unwanted Emissions above 1 GHz	BT LE-125K	0, 19, 39	GFSK	125Kb/s
	BT LE-500K	0, 19, 39	GFSK	500Kb/s
	BT-LE 1M	0, 19, 39	GFSK	1Mb/s
	BT-LE 2M	0, 19, 39	GFSK	2Mb/s

3.5 Duty Cycle of Test Signal

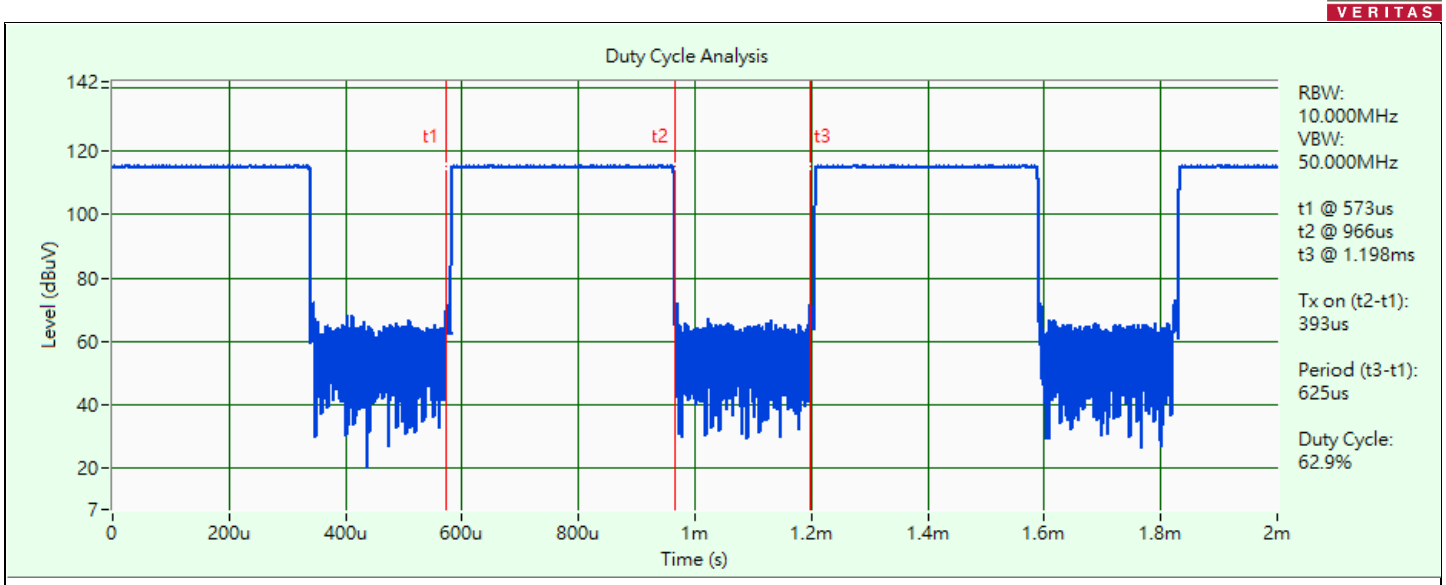
BT-LE 125k: Duty cycle = 17.05 ms / 17.499 ms x 100% = 97.4%, duty factor = 10 * log (1/Duty cycle) = 0.11 dB
BT-LE 500k: Duty cycle = 4.55 ms / 5 ms x 100% = 91.0%, duty factor = 10 * log (1/Duty cycle) = 0.41 dB
BT-LE 1M: Duty cycle = 0.393 ms / 0.625 ms x 100% = 62.9%, duty factor = 10 * log (1/Duty cycle) = 2.01 dB
BT-LE 2M: Duty cycle = 1.082 ms / 1.873 ms x 100% = 57.8%, duty factor = 10 * log (1/Duty cycle) = 2.38 dB



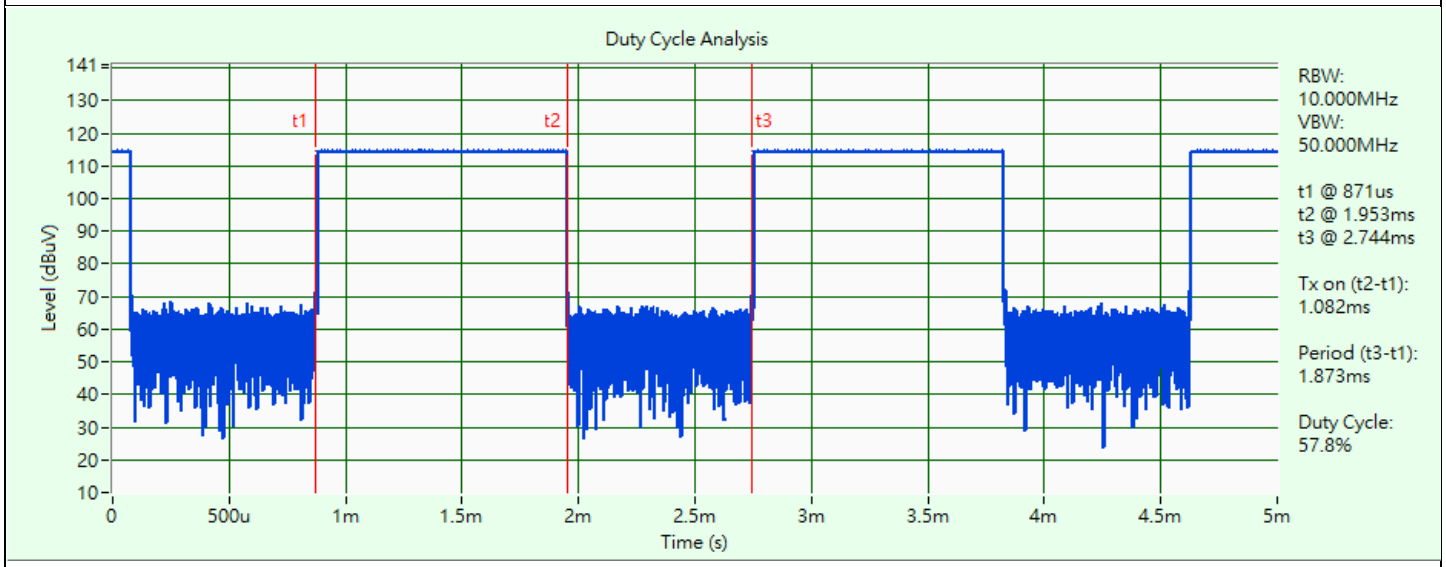
BT-LE 125k



BT-LE 500k



BT-LE 1M



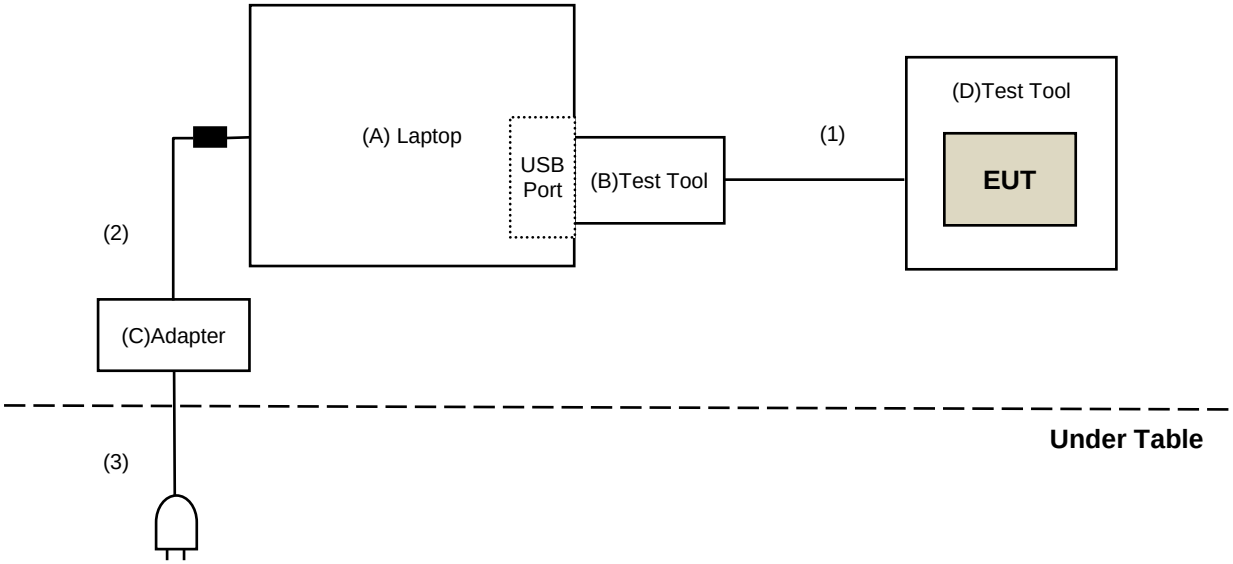
BT-LE 2M

3.6 Test Program Used and Operation Descriptions

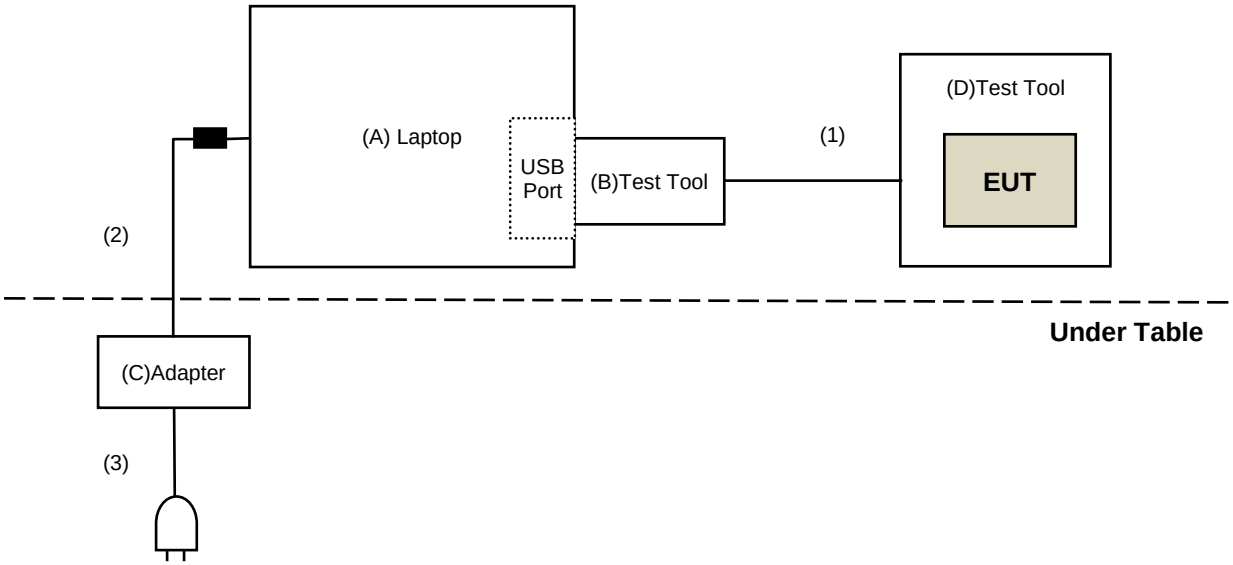
Controlling software (WNC Combo Tool) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

3.7 Connection Diagram of EUT and Peripheral Devices

For AC Power Conducted Emission test



For Unwanted Emission test



3.8 Configuration of Peripheral Devices and Cable Connections

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	Laptop	DELL	E6420	B92T3R1	QDS-BRCM1005-D	Provided by Lab
B	Test Tool	Foxconn	NA	NA	NA	Supplied by applicant
C	Adapter	Dell	FA65NE0-00	NA	NA	Provided by Lab
D	Test Tool	Sony	NA	NA	NA	Supplied by applicant

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1	Console Cable	1	0.3	No	0	Supplied by applicant
2	DC Cable	1	1.8	No	1	Provided by Lab
3	AC Cable	1	1	No	0	Provided by Lab

4 Test Instruments

The calibration interval of the all test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.1 RF Output Power

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	MDCS18N-10	MDCS18N-10-01	2023/3/27	2024/3/26
Power Meter Anritsu	ML2495A	1529002	2022/6/22	2023/6/21
Pulse Power Sensor Anritsu	MA2411B	1726434	2022/6/22	2023/6/21

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/6/10

4.2 Power Spectral Density

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Fixed Attenuator Woken	MDCS18N-10	MDCS18N-10-01	2023/3/27	2024/3/26
MXA Signal Analyzer Keysight	N9020B	MY60112409	2023/2/18	2024/2/17
Software	ADT_RF Test Software V6.6.5.4	N/A	N/A	N/A

Notes:

1. The test was performed in Oven room 2.
2. Tested Date: 2023/6/10

4.3 6 dB Bandwidth

Refer to section 4.2 to get information of the instruments.

4.4 Conducted Out of Band Emissions

Refer to section 4.2 to get information of the instruments.

4.5 AC Power Conducted Emissions

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
50 ohm terminal resistance	N/A	EMC-01	2022/9/27	2023/9/26
EMI Test Receiver R&S	ESCS 30	847124/029	2022/10/14	2023/10/13
Fixed Attenuator STI	STI02-2200-10	005	2022/8/24	2023/8/23
LISN R&S	ESH3-Z5	848773/004	2022/10/18	2023/10/17
RF Coaxial Cable JYEBO	5D-FB	COCCAB-001	2022/8/24	2023/8/23
Software BVADT	BVADT_Cond_V7.3.7.4	N/A	N/A	N/A

Notes:

1. The test was performed in Conduction 1
2. Tested Date: 2023/6/2

4.6 Unwanted Emissions below 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Bi_Log Antenna Schwarzbeck	VULB 9168	9168-406	2022/10/21	2023/10/20
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Fixed Attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-03	2022/12/28	2023/12/27
Loop Antenna Electro-Metrics	EM-6879	264	2023/2/21	2024/2/20
MXE EMI Receiver Keysight	N9038A	MY54450088	2022/7/11	2023/7/10
Preamplifier Agilent	8447D	2944A10636	2023/3/12	2024/3/11
Preamplifier EMCI	EMC330N	980701	2023/2/18	2024/2/17
PXA Signal Analyzer Keysight	N9030B	MY57142938	2023/4/6	2024/4/5
RF Coaxial Cable COMMATE/PEWC	8D	966-4-1	2023/2/18	2024/2/17
		966-4-2	2023/2/18	2024/2/17
		966-4-3	2023/2/18	2024/2/17
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2022/12/19	2023/12/18
		LOOPCAB-002	2022/12/19	2023/12/18
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2023/5/31

4.7 Unwanted Emissions above 1 GHz

Description Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	N/A	N/A
Horn Antenna Schwarzbeck	BBHA 9120D	9120D-783	2022/11/13	2023/11/12
	BBHA 9170	9170-739	2022/11/13	2023/11/12
Preamplifier EMCI	EMC12630SE	980688	2022/10/4	2023/10/3
	EMC184045SE	980387	2022/12/28	2023/12/27
PXA Signal Analyzer Keysight	N9030B	MY57142938	2023/4/6	2024/4/5
RF Coaxial Cable EMCI	EMC-KM-KM-4000	200214	2023/2/20	2024/2/19
	EMC102-KM-KM-1200	160924	2022/12/28	2023/12/27
	EMC104-SM-SM-1200	160922	2022/12/15	2023/12/14
	EMC104-SM-SM-2000	180502	2023/3/27	2024/3/26
	EMC104-SM-SM-6000	210704	2022/11/4	2023/11/3
Software	ADT_Radiated_V8.7.08	N/A	N/A	N/A

Notes:

1. The test was performed in 966 Chamber No. 4.
2. Tested Date: 2023/5/24 ~ 2023/5/31

5 Limits of Test Items

5.1 RF Output Power

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

5.2 Power Spectral Density

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

5.3 6 dB Bandwidth

The minimum of 6 dB Bandwidth Measurement is 0.5 MHz.

5.4 Conducted Out of Band Emissions

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

5.5 AC Power Conducted Emissions

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

Notes:

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 0.50 MHz.

5.6 Unwanted Emissions below 1 GHz

Radiated emissions up to 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB 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

Notes:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).

5.7 Unwanted Emissions above 1 GHz

Radiated emissions above 1 GHz which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20 dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
Above 960	500	3

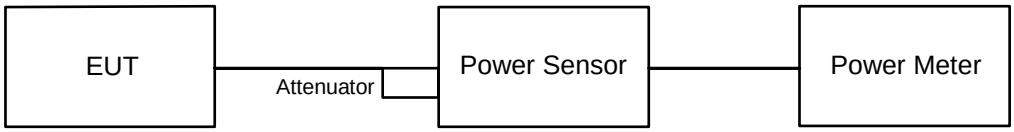
Notes:

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 1000 MHz, 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 20 dB under any condition of modulation.

6 Test Arrangements

6.1 RF Output Power

6.1.1 Test Setup



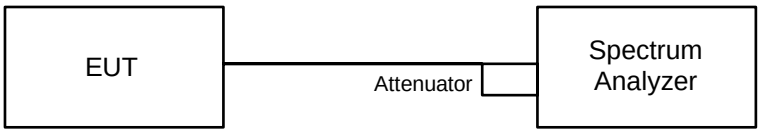
6.1.2 Test Procedure

Peak Power:
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:
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.

6.2 Power Spectral Density

6.2.1 Test Setup

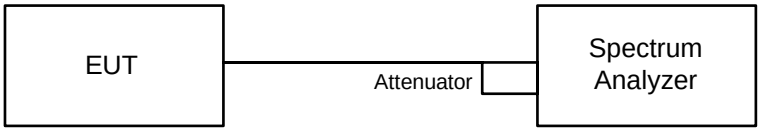


6.2.2 Test Procedure

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set the RBW to: 3 kHz.
d. Set the VBW ≥ 3 × RBW.
e. Detector = peak.
f. Sweep time = auto couple.
g. Trace mode = max hold.
h. Allow trace to fully stabilize.
i. Use the peak marker function to determine the maximum amplitude level within the RBW.

6.3 6 dB Bandwidth

6.3.1 Test Setup

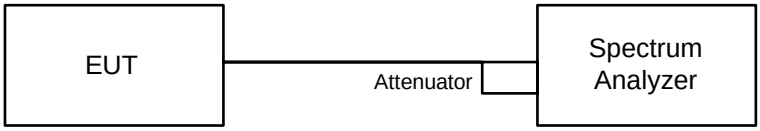


6.3.2 Test Procedure

a. Set resolution bandwidth (RBW) = 100 kHz.
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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.

6.4 Conducted Out of Band Emissions

6.4.1 Test Setup



6.4.2 Test Procedure

MEASUREMENT PROCEDURE REF

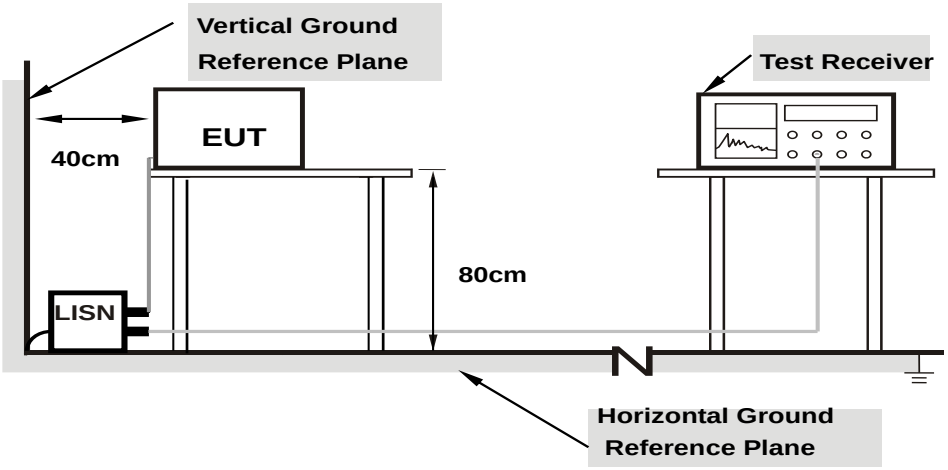
a. Set the RBW = 100 kHz.
b. Set the VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep time = auto couple.
e. Trace mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.
b. Set VBW ≥ 300 kHz.
c. Detector = peak.
d. Sweep = auto couple.
e. Trace Mode = max hold.
f. Allow trace to fully stabilize.
g. Use the peak marker function to determine the maximum amplitude level.

6.5 AC Power Conducted Emissions

6.5.1 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).

6.5.2 Test Procedure

a. The EUT was placed on a 0.8 meter to the top of table and 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/ 50 uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

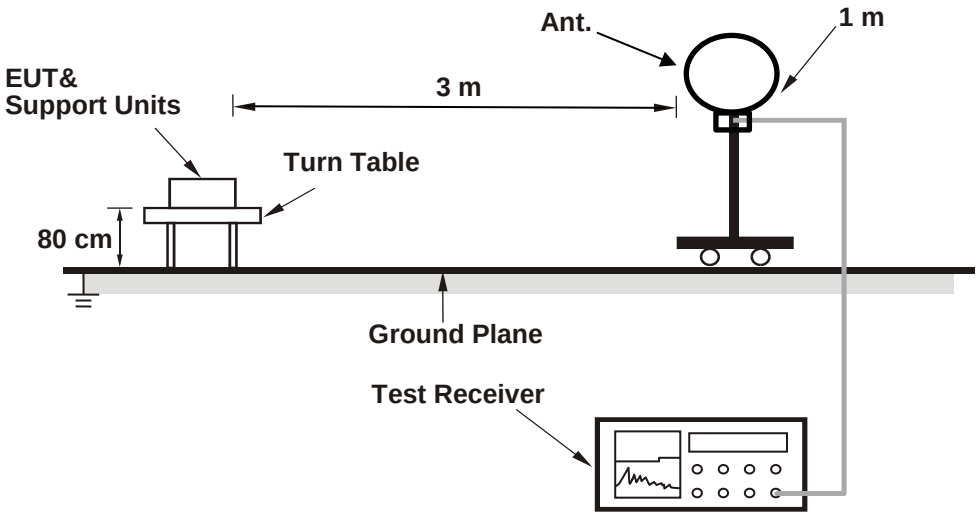
c. The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

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

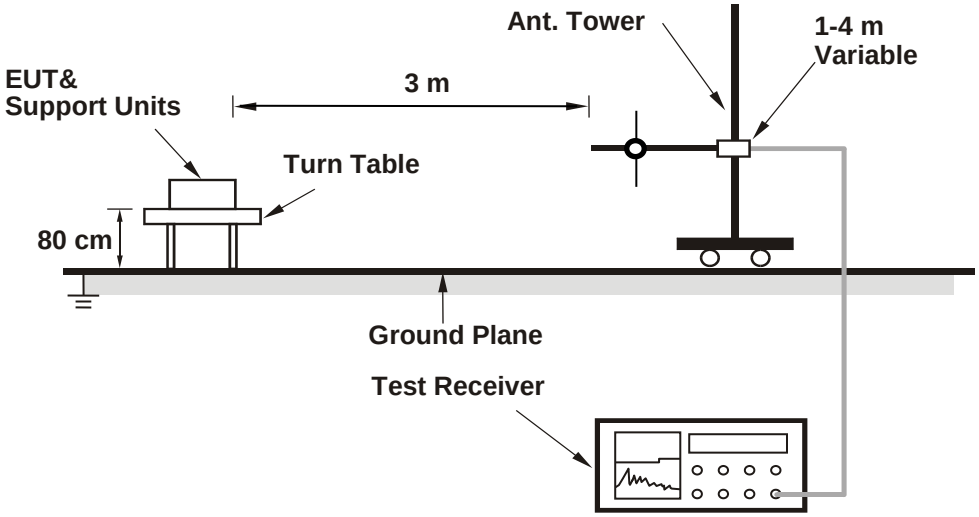
6.6 Unwanted Emissions below 1 GHz

6.6.1 Test Setup

For Radiated emission below 30 MHz



For Radiated emission above 30 MHz



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

6.6.2 Test Procedure

For Radiated emission below 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. 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. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode, except for the frequency band (9 kHz to 90 kHz and 110 kHz to 490 kHz) set to average detect function and peak detect function.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 200 Hz at frequency below 150 kHz.
2. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9 kHz or 10 kHz at frequency (150 kHz to 30 MHz).
3. All modes of operation were investigated and the worst-case emissions are reported.

For Radiated emission above 30 MHz

a. The EUT was placed on the top of a rotating table 0.8 meters 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.

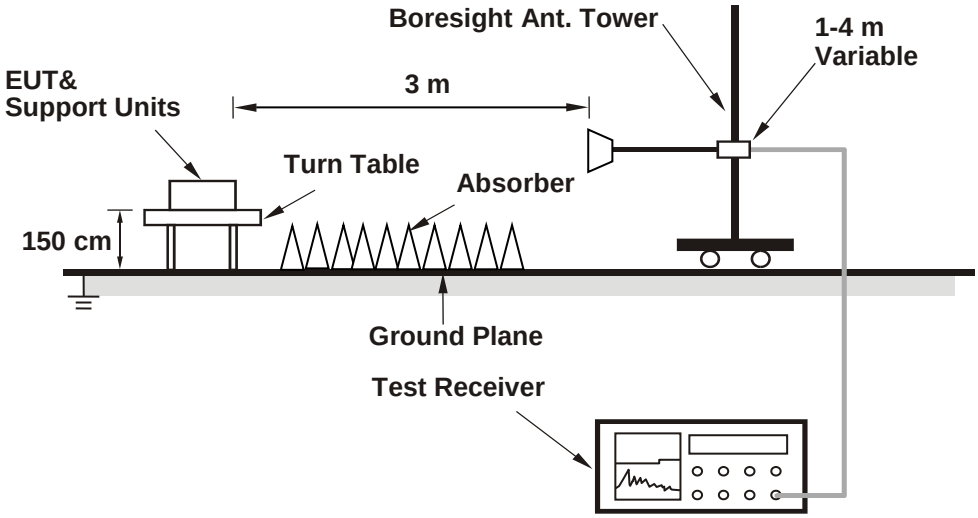
e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

Notes:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 kHz for Quasi-peak detection (QP) at frequency below 1 GHz.
2. All modes of operation were investigated and the worst-case emissions are reported.

6.7 Unwanted Emissions above 1 GHz

6.7.1 Test Setup



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

6.7.2 Test Procedure

a. The EUT was placed on the top of a rotating table 1.5 meters 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.

Notes:

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

7 Test Results of Test Item

7.1 RF Output Power

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Louis Yang

For Peak Power

BT-LE 125k

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	23.335	13.68	30	Pass
19	2440	23.388	13.69	30	Pass
39	2480	22.491	13.52	30	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the output power limit shall not be reduced.

BT-LE 500k

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	23.174	13.65	30	Pass
19	2440	23.335	13.68	30	Pass
39	2480	22.646	13.55	30	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the output power limit shall not be reduced.

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	80.353	19.05	30	Pass
19	2440	82.414	19.16	30	Pass
39	2480	80.91	19.08	30	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the output power limit shall not be reduced.

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Peak Power (mW)	Peak Power (dBm)	Power Limit (dBm)	Test Result
0	2402	80.538	19.06	30	Pass
19	2440	82.604	19.17	30	Pass
39	2480	68.865	18.38	30	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the output power limit shall not be reduced.

For Average Power

BT-LE 125k

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	22.646	13.55
19	2440	22.699	13.56
39	2480	21.928	13.41

BT-LE 500k

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	22.542	13.53
19	2440	22.699	13.56
39	2480	22.029	13.43

BT-LE 1M

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	78.705	18.96
19	2440	80.91	19.08
39	2480	79.25	18.99

BT-LE 2M

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)
0	2402	79.068	18.98
19	2440	81.096	19.09
39	2480	67.453	18.29

7.2 Power Spectral Density

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Louis Yang

BT-LE 125k

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
0	2402	7.60	8	Pass
19	2440	7.50	8	Pass
39	2480	7.28	8	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the power density limit shall not be reduced.

BT-LE 500k

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
0	2402	7.78	8	Pass
19	2440	7.60	8	Pass
39	2480	7.36	8	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the power density limit shall not be reduced.

BT-LE 1M

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
0	2402	4.99	8	Pass
19	2440	5.13	8	Pass
39	2480	4.99	8	Pass

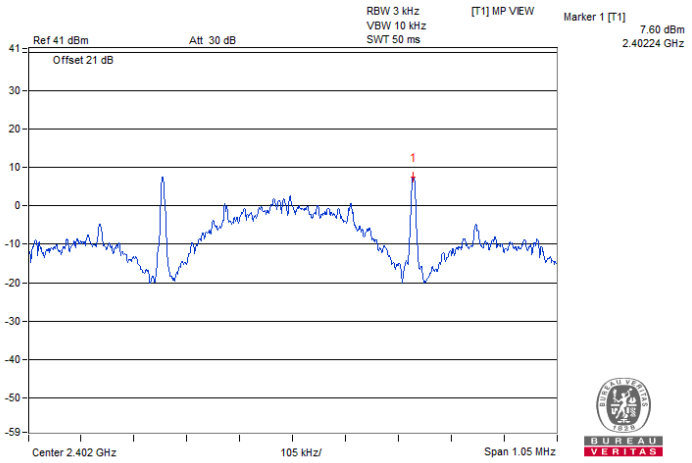
Note: The antenna gain is 1.5 dBi < 6 dBi, so the power density limit shall not be reduced.

BT-LE 2M

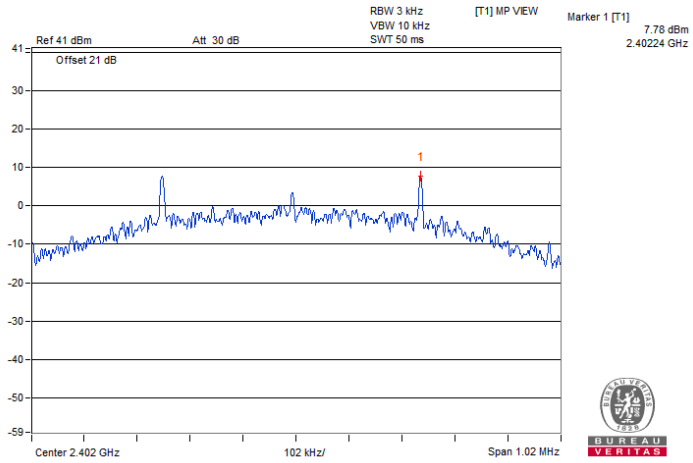
Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Test Result
0	2402	2.20	8	Pass
19	2440	2.40	8	Pass
39	2480	1.43	8	Pass

Note: The antenna gain is 1.5 dBi < 6 dBi, so the power density limit shall not be reduced.

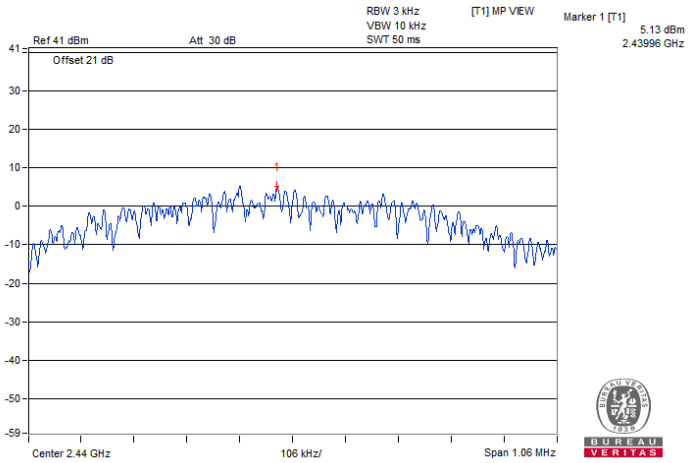
Spectrum Plot of Maximum Value



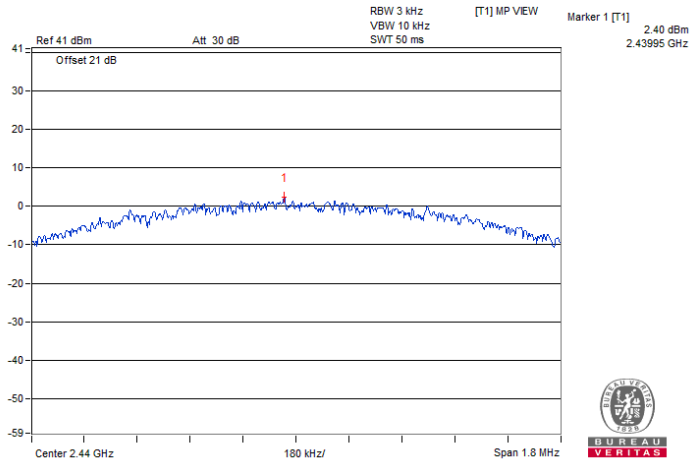
BT-LE 125k : CH 0



BT-LE 500k : CH 0



BT-LE 1M : CH 19



BT-LE 2M : CH 19

7.3 6 dB Bandwidth

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Louis Yang

BT-LE 125k

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
0	2402	0.7	0.5	Pass
19	2440	0.69	0.5	Pass
39	2480	0.7	0.5	Pass

BT-LE 500k

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
0	2402	0.68	0.5	Pass
19	2440	0.67	0.5	Pass
39	2480	0.68	0.5	Pass

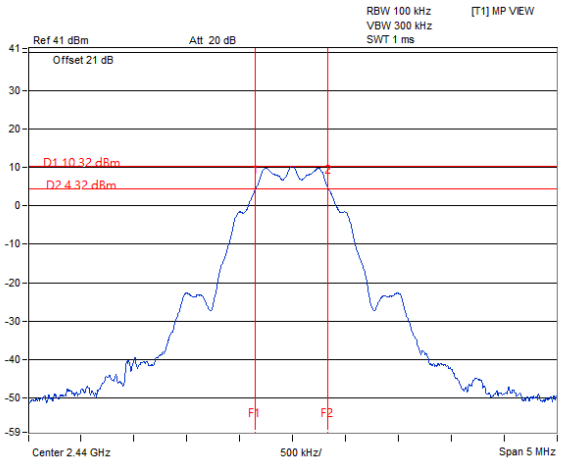
BT-LE 1M

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
0	2402	0.71	0.5	Pass
19	2440	0.71	0.5	Pass
39	2480	0.71	0.5	Pass

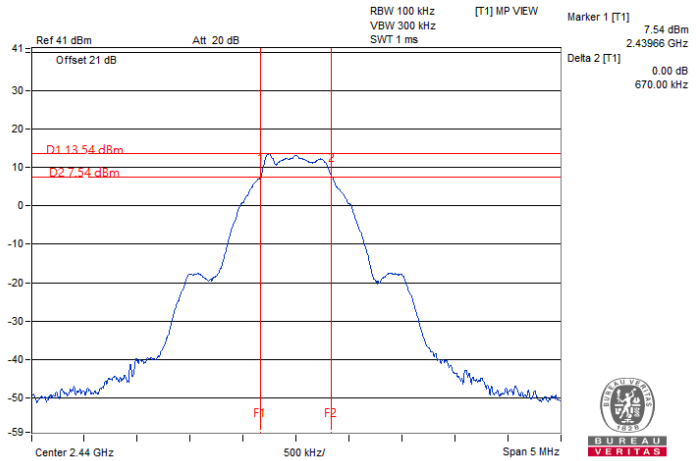
BT-LE 2M

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Test Result
0	2402	1.2	0.5	Pass
19	2440	1.2	0.5	Pass
39	2480	1.2	0.5	Pass

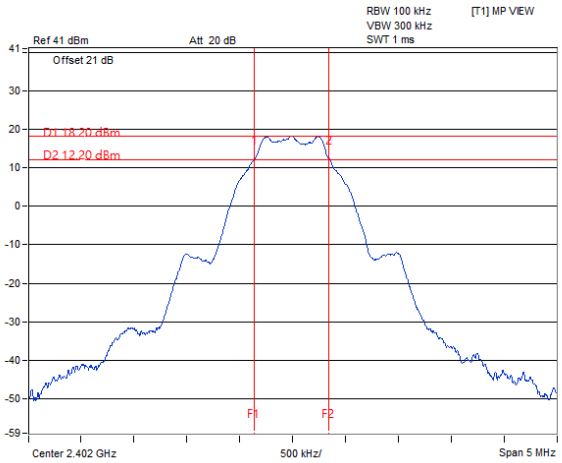
Spectrum Plot of Minimum Value



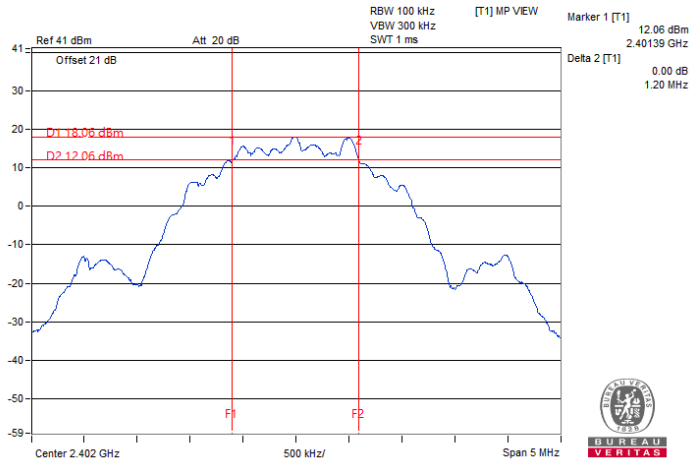
BT-LE 125k : CH 19



BT-LE 500k : CH 19



BT-LE 1M : CH 0

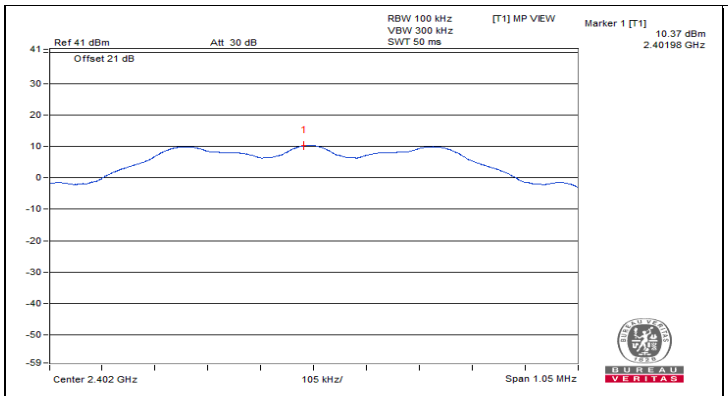


BT-LE 2M : CH 0

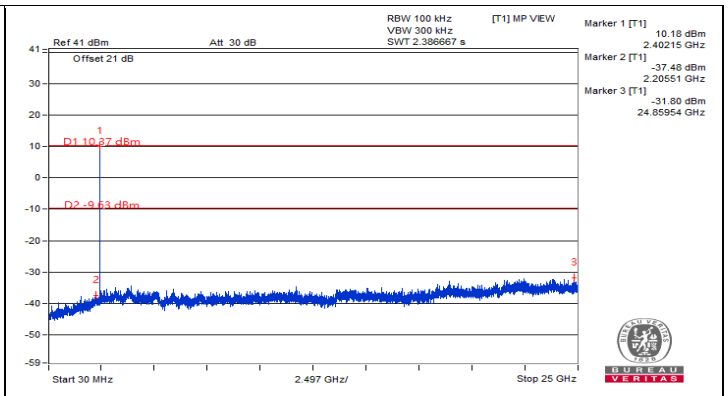
7.4 Conducted Out of Band Emissions

Input Power:	3.3 Vdc	Environmental Conditions:	25°C, 60% RH	Tested By:	Louis Yang

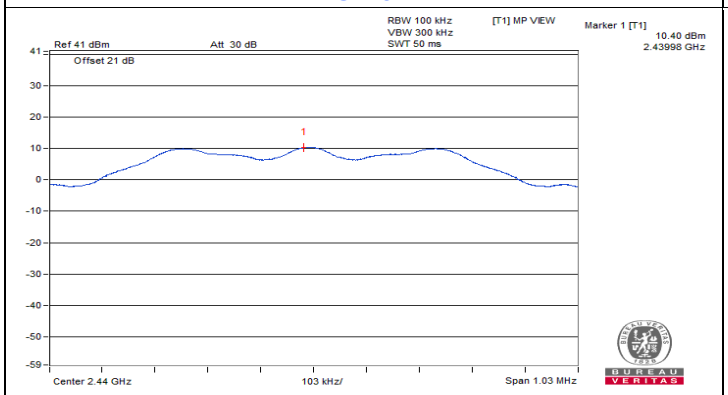
BT-LE 125k



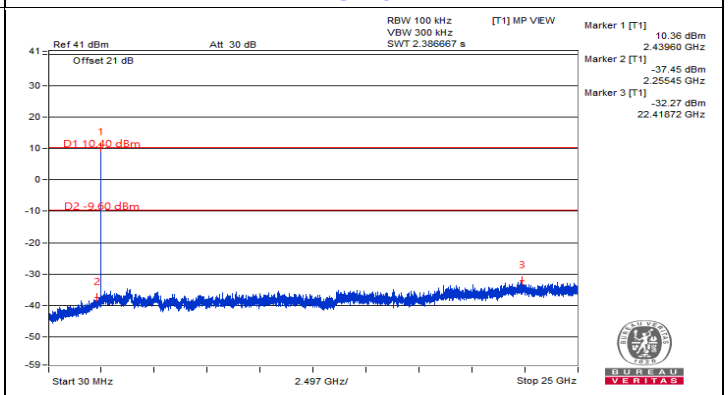
CH 0



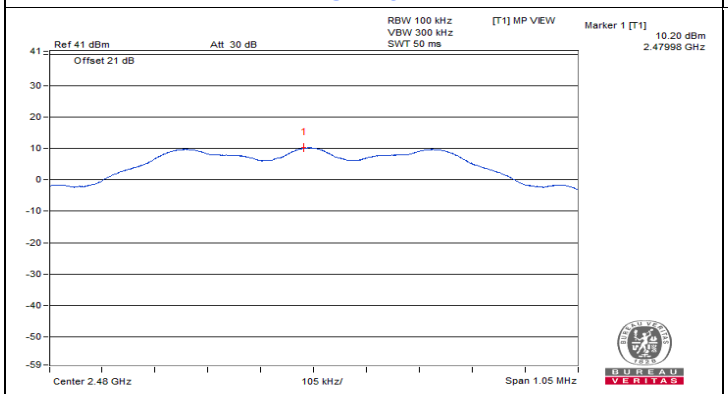
CH 0



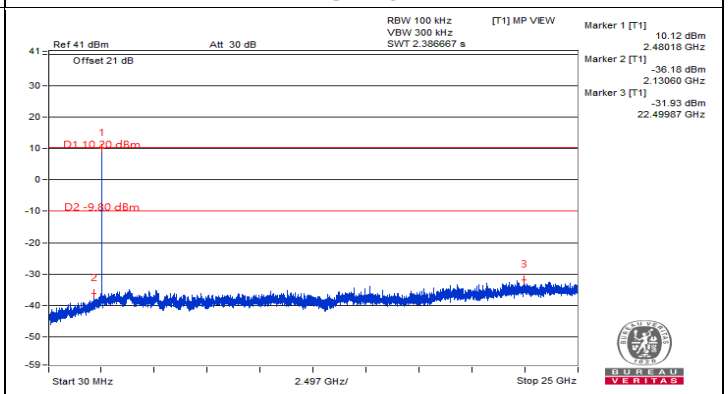
CH 19



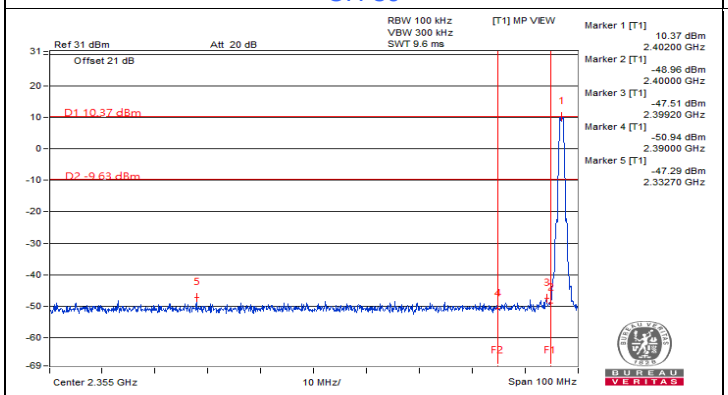
CH 19



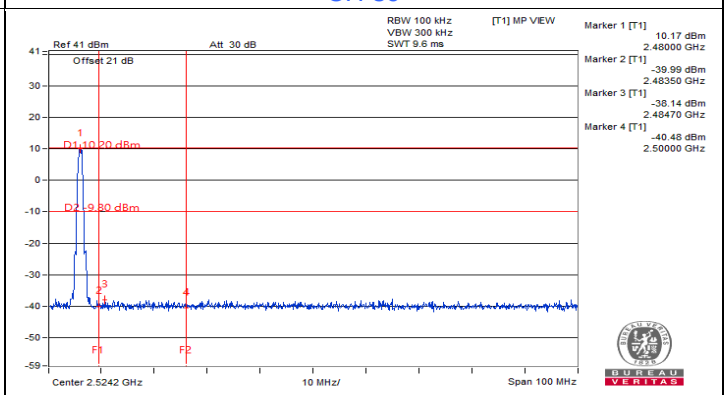
CH 39



CH 39

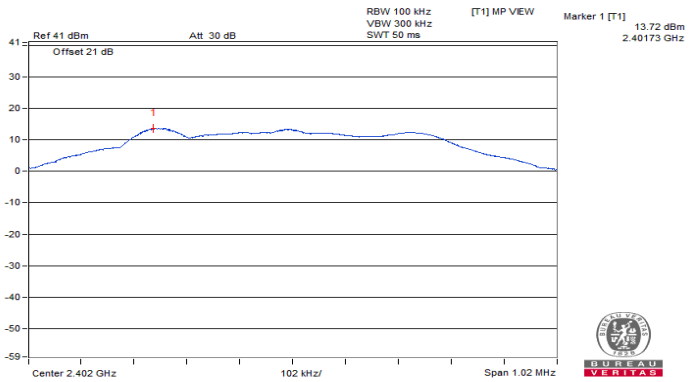


CH 0 Band edge

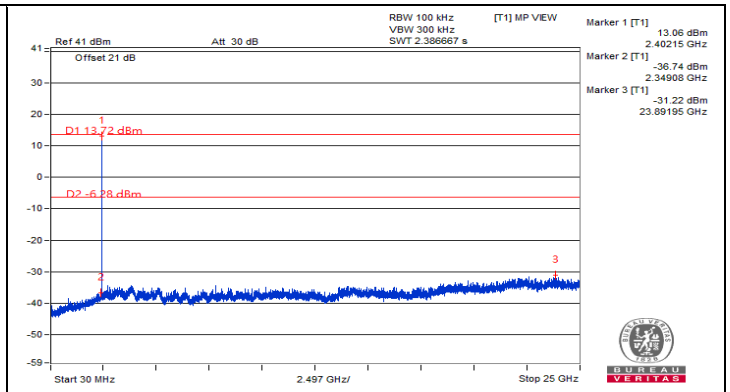


CH 39 Band edge

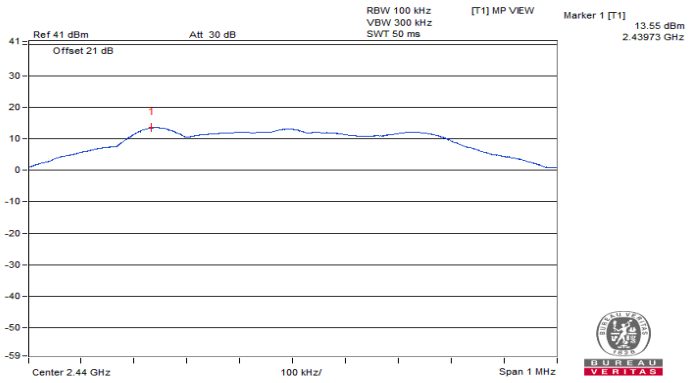
BT-LE 500k



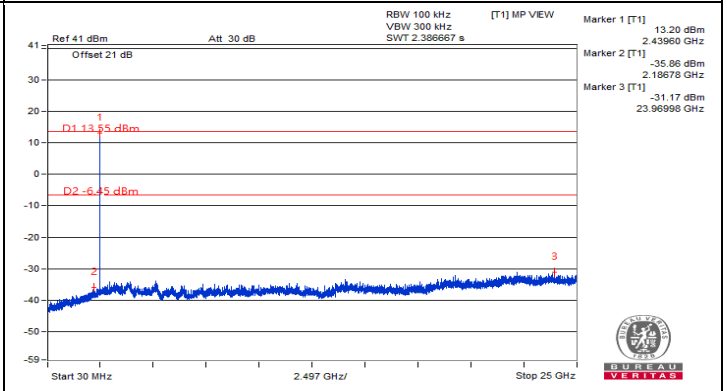
CH 0



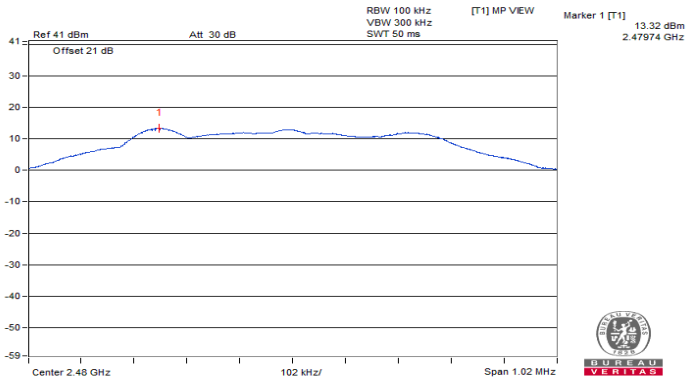
CH 0



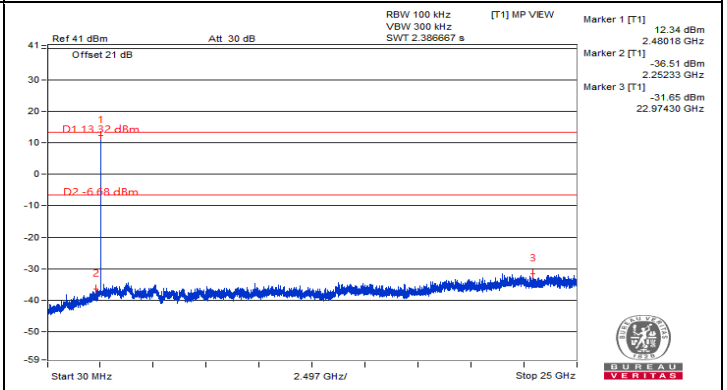
CH 19



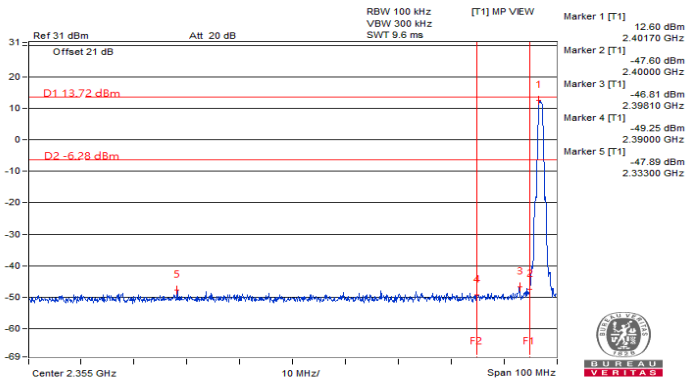
CH 19



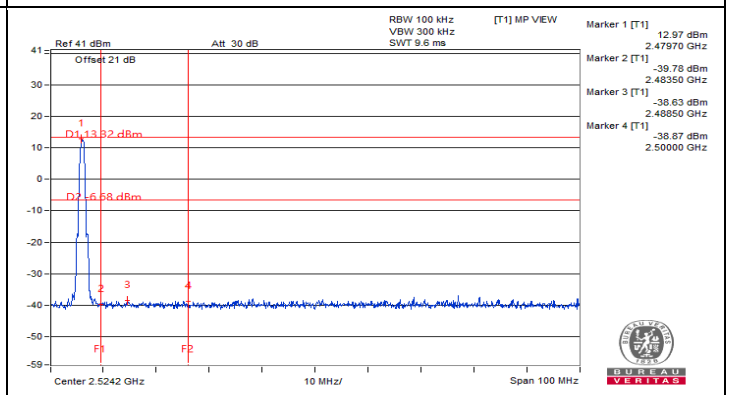
CH 39



CH 39

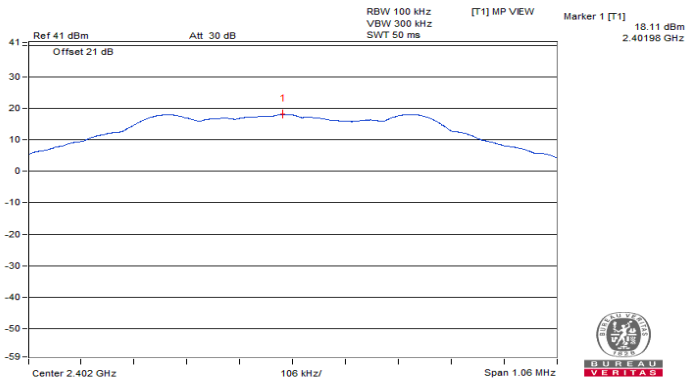


CH 0 Band edge

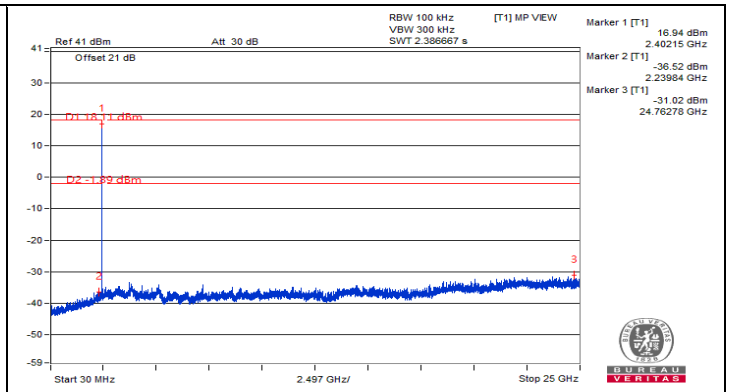


CH 39 Band edge

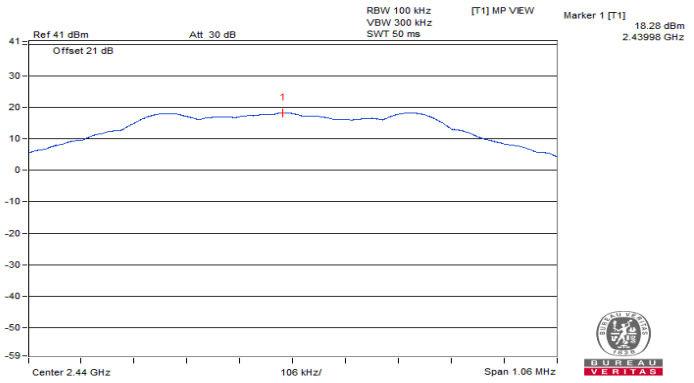
BT-LE 1M



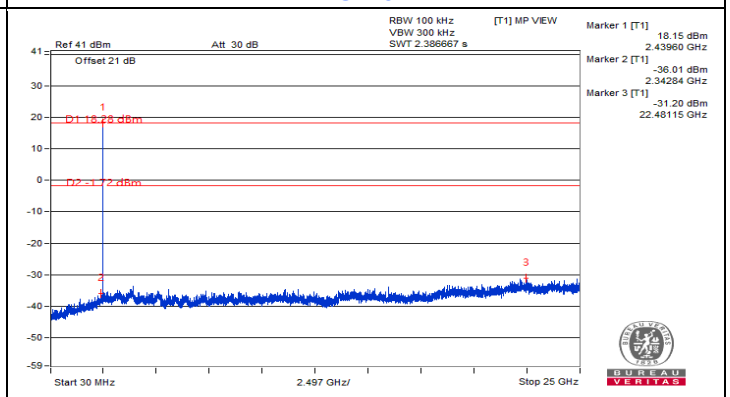
CH 0



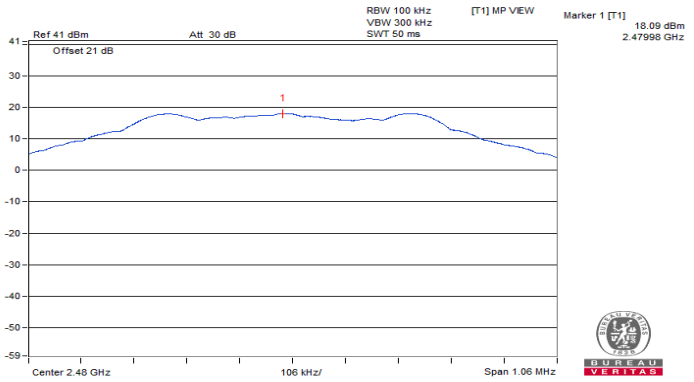
CH 0



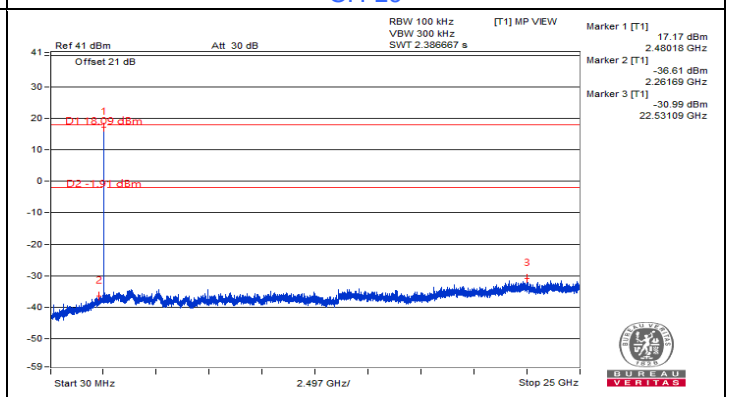
CH 19



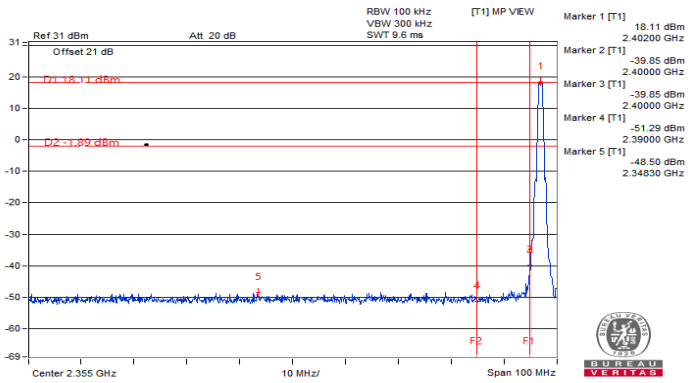
CH 19



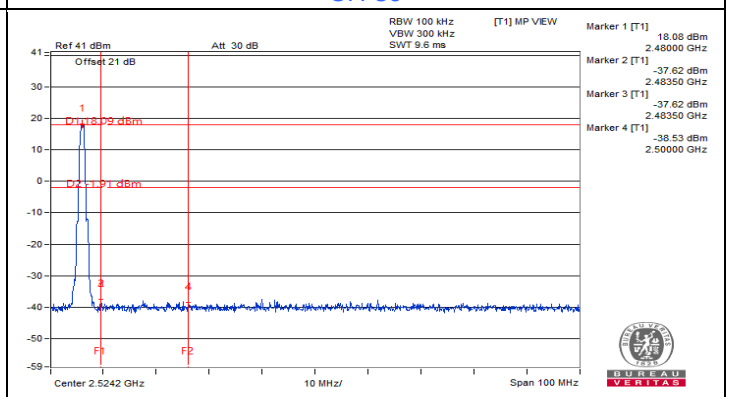
CH 39



CH 39

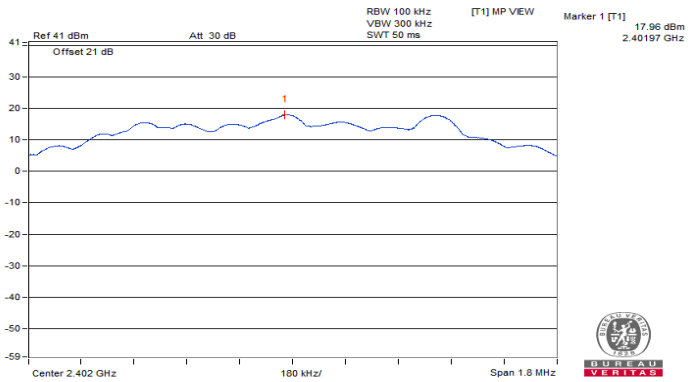


CH 0 Band edge

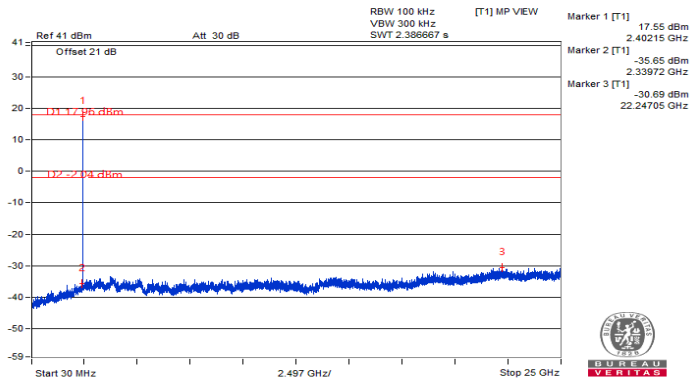


CH 39 Band edge

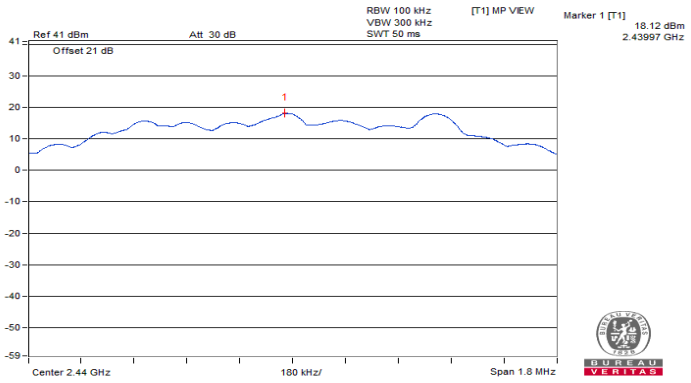
BT-LE 2M



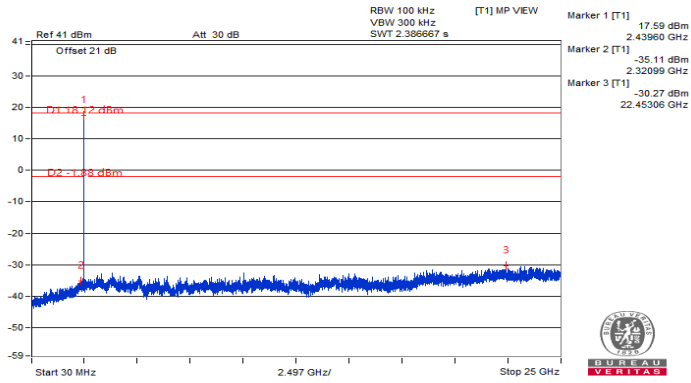
CH 0



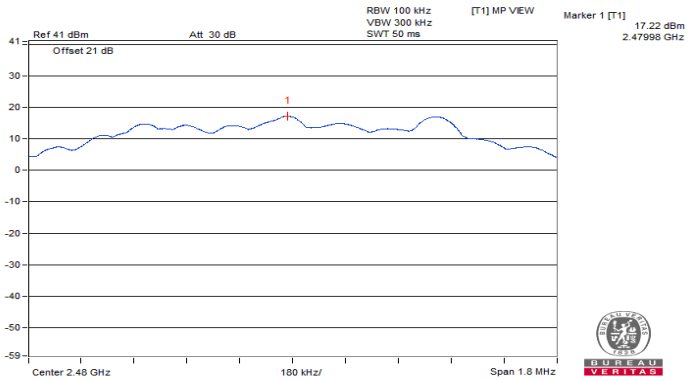
CH 0



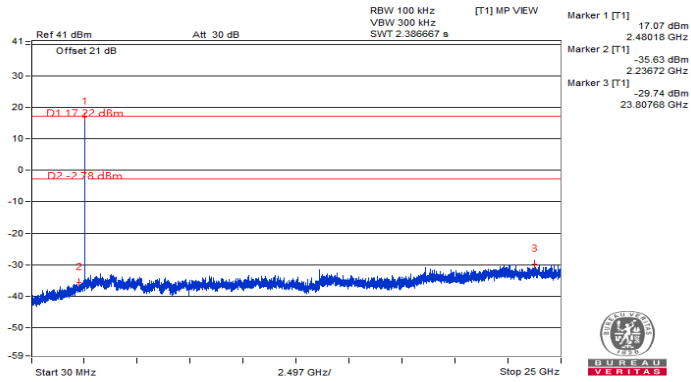
CH 19



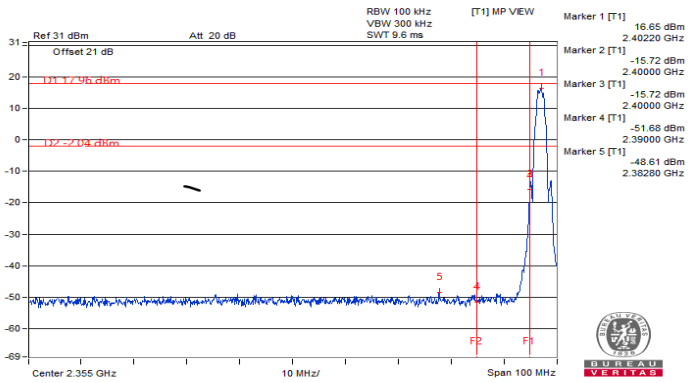
CH 19



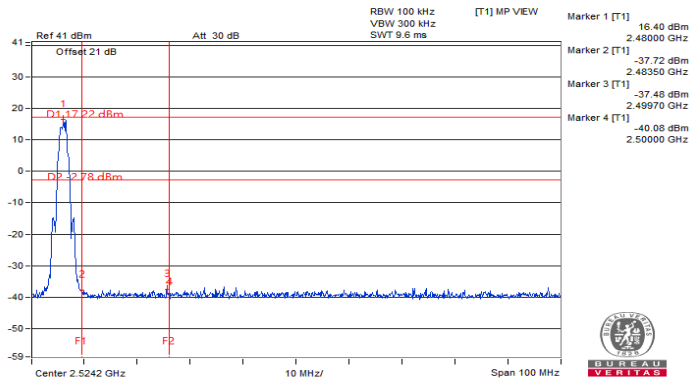
CH 39



CH 39



CH 0 Band edge



CH 39 Band edge

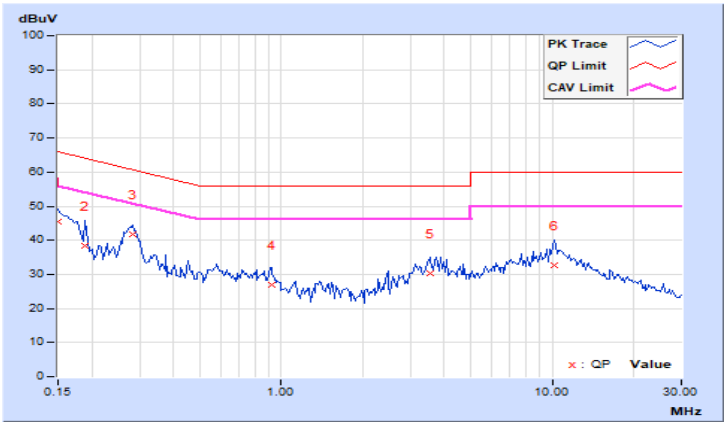
7.5 AC Power Conducted Emissions

RF Mode	BT-LE 2M	**Channel**	CH 19：2440 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Phase Of Power : Line (L)										
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	0.15002	9.97	35.45	21.71	45.42	31.68	66.00	56.00	-20.58	-24.32
2	0.18909	9.97	28.33	14.30	38.30	24.27	64.08	54.08	-25.78	-29.81
3	**0.28288**	**9.97**	**31.65**	**24.28**	**41.62**	**34.25**	**60.73**	**50.73**	**-19.11**	**-16.48**
4	0.91959	10.01	16.79	11.03	26.80	21.04	56.00	46.00	-29.20	-24.96
5	3.55072	10.15	20.23	12.55	30.38	22.70	56.00	46.00	-25.62	-23.30
6	10.17962	10.49	22.07	15.33	32.56	25.82	60.00	50.00	-27.44	-24.18

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

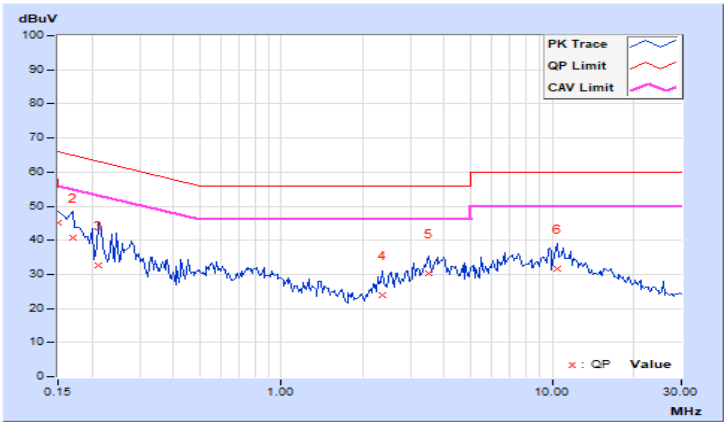


RF Mode	BT-LE 2M	**Channel**	CH 19：2440 MHz
Frequency Range	150kHz ~ 30MHz	**Detector Function & Resolution Bandwidth**	Quasi-Peak (QP) / Average (AV), 9 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Phase Of Power : Neutral (N)										
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	0.15000	10.01	35.18	19.09	45.19	29.10	66.00	56.00	-20.81	-26.90
2	0.16959	10.01	30.59	15.43	40.60	25.44	64.98	54.98	-24.38	-29.54
3	0.21256	10.02	22.72	8.96	32.74	18.98	63.10	53.10	-30.36	-34.12
4	2.36337	10.13	13.77	6.61	23.90	16.74	56.00	46.00	-32.10	-29.26
5	3.51568	10.19	20.15	12.60	30.34	22.79	56.00	46.00	-25.66	-23.21
6	10.48821	10.48	21.06	14.62	31.54	25.10	60.00	50.00	-28.46	-24.90

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



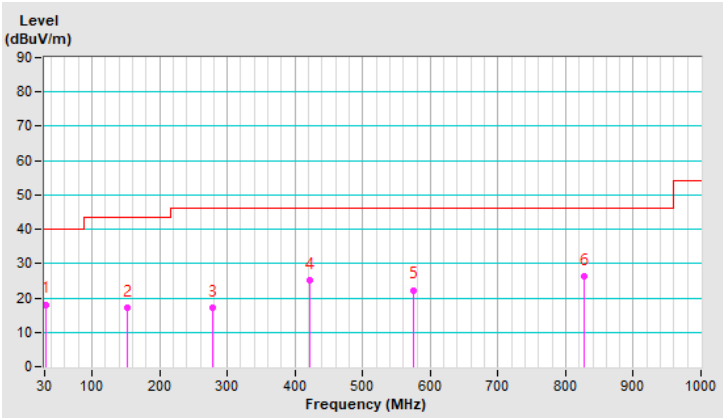
7.6 Unwanted Emissions below 1 GHz

RF Mode	BT-LE 2M	**Channel**	CH 19：2440 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	32.54	18.1 QP	40.0	-21.9	1.50 H	167	32.1	-14.0
2	152.59	17.0 QP	43.5	-26.5	2.50 H	118	30.1	-13.1
3	278.85	17.3 QP	46.0	-28.7	1.50 H	59	30.4	-13.1
4	421.16	25.0 QP	46.0	-21.0	2.00 H	291	34.3	-9.3
5	575.38	22.3 QP	46.0	-23.7	1.50 H	284	28.7	-6.4
6	828.03	26.2 QP	46.0	-19.8	1.50 H	144	28.4	-2.2

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
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

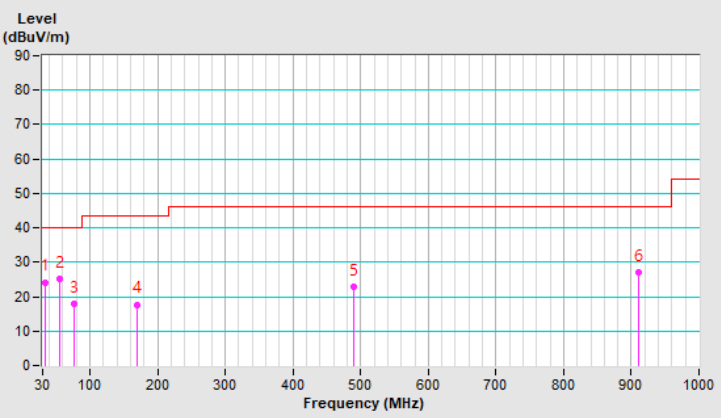


RF Mode	BT-LE 2M	**Channel**	CH 19：2440 MHz
Frequency Range	30 MHz ~ 1 GHz	**Detector Function & Bandwidth**	(QP) RB = 120kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	33.29	24.2 QP	40.0	-15.8	1.00 V	284	38.2	-14.0
2	**54.53**	**25.2 QP**	**40.0**	**-14.8**	**1.50 V**	**326**	**38.4**	**-13.2**
3	77.42	18.0 QP	40.0	-22.0	1.00 V	247	35.4	-17.4
4	168.84	17.7 QP	43.5	-25.8	1.50 V	284	31.2	-13.5
5	490.53	22.9 QP	46.0	-23.1	1.00 V	135	30.8	-7.9
6	910.36	27.0 QP	46.0	-19.0	1.50 V	29	27.9	-0.9

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
4. The other emission levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The emission levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



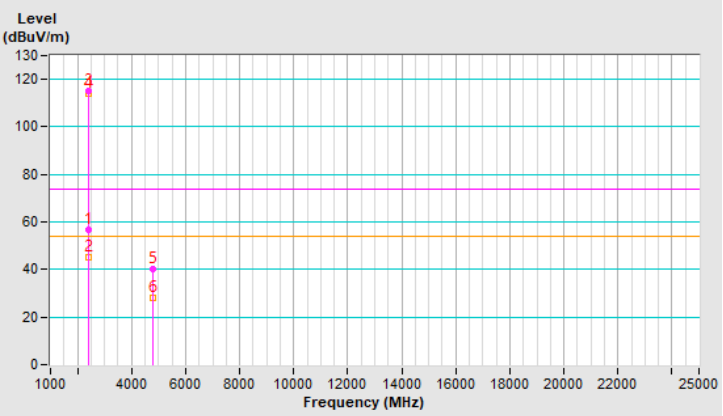
7.7 Unwanted Emissions above 1 GHz

RF Mode	BT-LE 125K	**Channel**	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	2390.00	56.8 PK	74.0	-17.2	1.79 H	268	56.9	-0.1
2	2390.00	44.9 AV	54.0	-9.1	1.79 H	268	45.0	-0.1
3	*2402.00	115.0 PK			1.79 H	268	115.1	-0.1
4	*2402.00	114.0 AV			1.79 H	268	114.1	-0.1
5	4804.00	40.4 PK	74.0	-33.6	1.84 H	274	35.9	4.5
6	4804.00	28.3 AV	54.0	-25.7	1.84 H	274	23.8	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

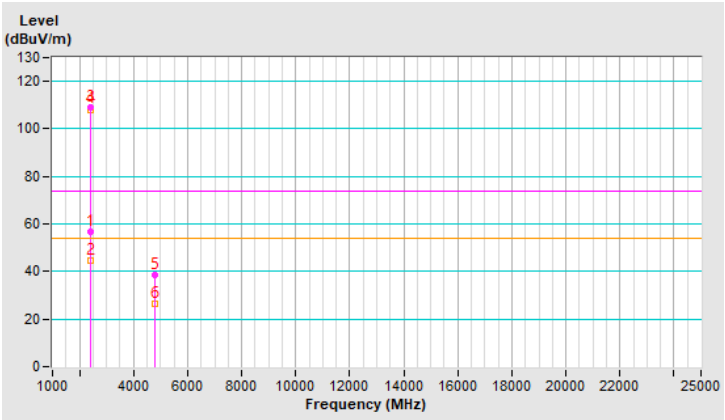


RF Mode	BT-LE 125K	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.7 PK	74.0	-17.3	2.55 V	267	56.8	-0.1
2	2390.00	44.6 AV	54.0	-9.4	2.55 V	267	44.7	-0.1
3	*2402.00	109.3 PK			2.55 V	267	109.4	-0.1
4	*2402.00	108.2 AV			2.55 V	267	108.3	-0.1
5	4804.00	38.3 PK	74.0	-35.7	2.86 V	296	33.8	4.5
6	4804.00	26.3 AV	54.0	-27.7	2.86 V	296	21.8	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

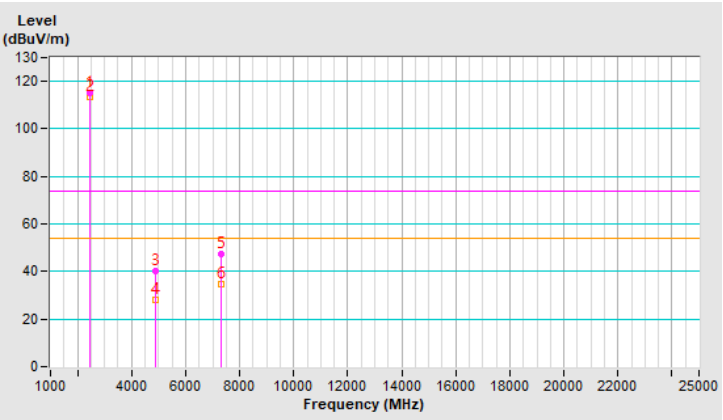


RF Mode	BT-LE 125K	Channel	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	114.9 PK			1.84 H	283	115.0	-0.1
2	*2440.00	113.7 AV			1.84 H	283	113.8	-0.1
3	4880.00	40.2 PK	74.0	-33.8	1.80 H	259	35.6	4.6
4	4880.00	27.9 AV	54.0	-26.1	1.80 H	259	23.3	4.6
5	7320.00	47.5 PK	74.0	-26.5	1.91 H	62	35.8	11.7
6	7320.00	34.8 AV	54.0	-19.2	1.91 H	62	23.1	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

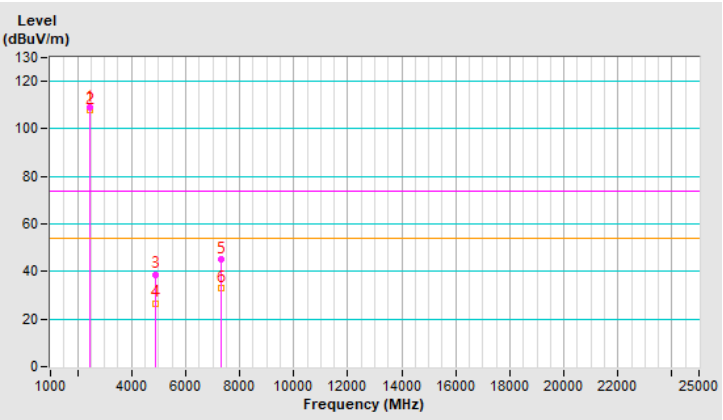


RF Mode	BT-LE 125K	**Channel**	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2440.00	109.1 PK			2.53 V	279	109.2	-0.1
2	*2440.00	108.0 AV			2.53 V	279	108.1	-0.1
3	4880.00	38.8 PK	74.0	-35.2	2.85 V	301	34.2	4.6
4	4880.00	26.7 AV	54.0	-27.3	2.85 V	301	22.1	4.6
5	7320.00	45.3 PK	74.0	-28.7	1.84 V	205	33.6	11.7
6	7320.00	32.9 AV	54.0	-21.1	1.84 V	205	21.2	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

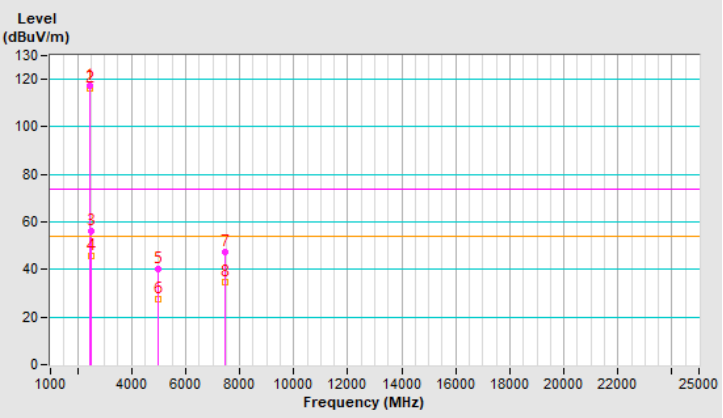


RF Mode	BT-LE 125K	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	117.3 PK			1.72 H	208	117.5	-0.2
2	*2480.00	116.2 AV			1.72 H	208	116.4	-0.2
3	2483.50	56.1 PK	74.0	-17.9	1.72 H	208	56.3	-0.2
4	2483.50	45.8 AV	54.0	-8.2	1.72 H	208	46.0	-0.2
5	4960.00	40.1 PK	74.0	-33.9	1.83 H	264	35.2	4.9
6	4960.00	27.6 AV	54.0	-26.4	1.83 H	264	22.7	4.9
7	7440.00	47.1 PK	74.0	-26.9	1.90 H	48	35.3	11.8
8	7440.00	34.5 AV	54.0	-19.5	1.90 H	48	22.7	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

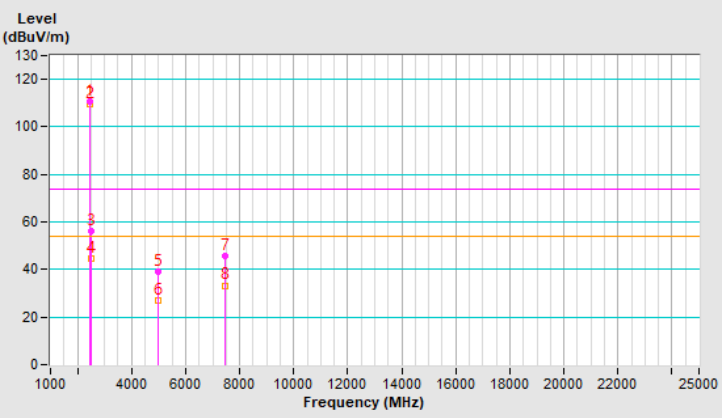


RF Mode	BT-LE 125K	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 100 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	110.7 PK			2.82 V	279	110.9	-0.2
2	*2480.00	109.6 AV			2.82 V	279	109.8	-0.2
3	2483.50	56.0 PK	74.0	-18.0	2.82 V	279	56.2	-0.2
4	2483.50	44.6 AV	54.0	-9.4	2.82 V	279	44.8	-0.2
5	4960.00	39.0 PK	74.0	-35.0	2.84 V	314	34.1	4.9
6	4960.00	27.2 AV	54.0	-26.8	2.84 V	314	22.3	4.9
7	7440.00	45.5 PK	74.0	-28.5	1.80 V	202	33.7	11.8
8	7440.00	33.3 AV	54.0	-20.7	1.80 V	202	21.5	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

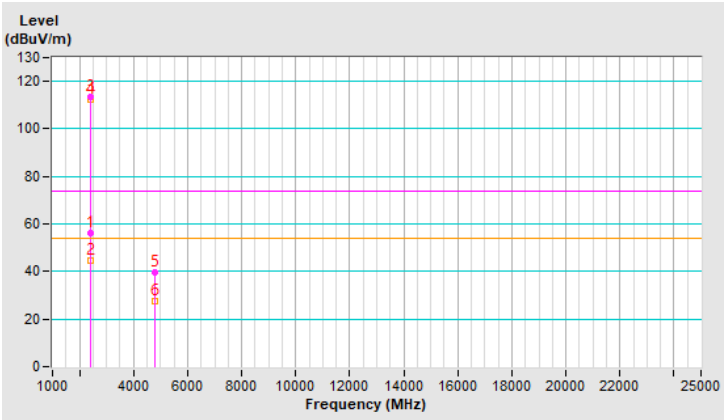


RF Mode	BT-LE 500K	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.2 PK	74.0	-17.8	1.55 H	212	56.3	-0.1
2	2390.00	44.5 AV	54.0	-9.5	1.55 H	212	44.6	-0.1
3	*2402.00	113.4 PK			1.55 H	212	113.5	-0.1
4	*2402.00	112.4 AV			1.55 H	212	112.5	-0.1
5	4804.00	39.6 PK	74.0	-34.4	1.85 H	243	35.1	4.5
6	4804.00	27.5 AV	54.0	-26.5	1.85 H	243	23.0	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

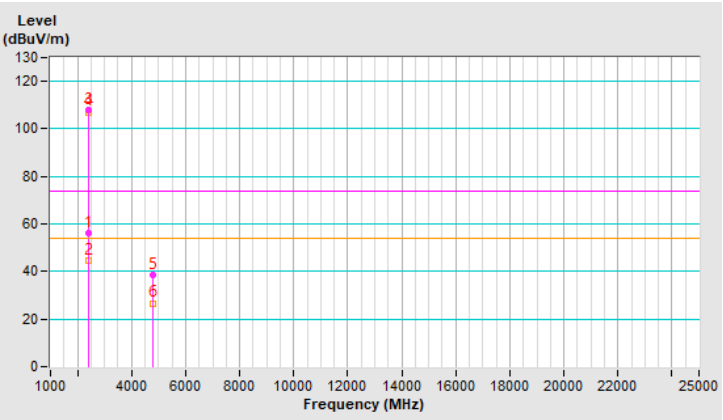


RF Mode	BT-LE 500K	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.2 PK	74.0	-17.8	2.98 V	274	56.3	-0.1
2	2390.00	44.6 AV	54.0	-9.4	2.98 V	274	44.7	-0.1
3	*2402.00	108.0 PK			2.98 V	274	108.1	-0.1
4	*2402.00	107.1 AV			2.98 V	274	107.2	-0.1
5	4804.00	38.5 PK	74.0	-35.5	2.84 V	286	34.0	4.5
6	4804.00	26.7 AV	54.0	-27.3	2.84 V	286	22.2	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

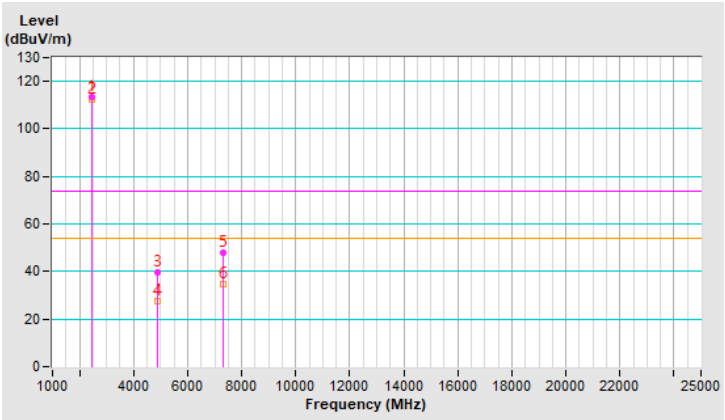


RF Mode	BT-LE 500K	**Channel**	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2440.00	113.2 PK			1.56 H	207	113.3	-0.1
2	*2440.00	112.4 AV			1.56 H	207	112.5	-0.1
3	4880.00	39.7 PK	74.0	-34.3	1.80 H	266	35.1	4.6
4	4880.00	27.6 AV	54.0	-26.4	1.80 H	266	23.0	4.6
5	7320.00	47.7 PK	74.0	-26.3	1.91 H	68	36.0	11.7
6	7320.00	34.9 AV	54.0	-19.1	1.91 H	68	23.2	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

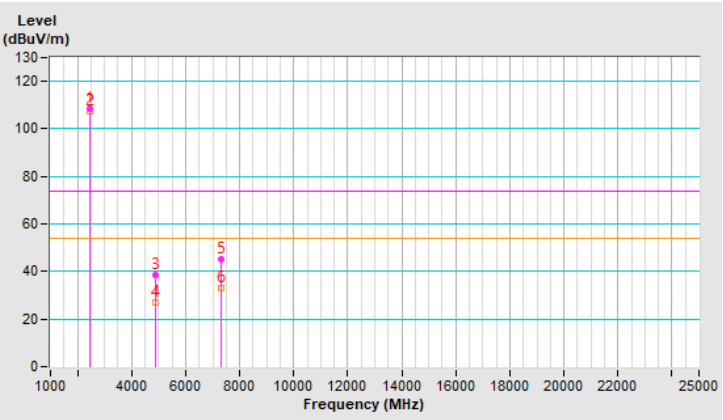


RF Mode	BT-LE 500K	**Channel**	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2440.00	108.5 PK			2.96 V	278	108.6	-0.1
2	*2440.00	107.5 AV			2.96 V	278	107.6	-0.1
3	4880.00	38.7 PK	74.0	-35.3	2.82 V	316	34.1	4.6
4	4880.00	26.9 AV	54.0	-27.1	2.82 V	316	22.3	4.6
5	7320.00	45.4 PK	74.0	-28.6	1.84 V	206	33.7	11.7
6	7320.00	33.2 AV	54.0	-20.8	1.84 V	206	21.5	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

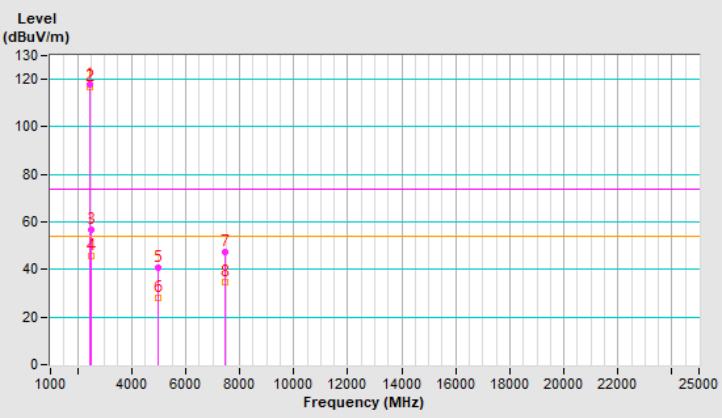


RF Mode	BT-LE 500K	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	117.7 PK			1.60 H	210	117.9	-0.2
2	*2480.00	116.7 AV			1.60 H	210	116.9	-0.2
3	2483.50	56.5 PK	74.0	-17.5	1.60 H	210	56.7	-0.2
4	2483.50	45.9 AV	54.0	-8.1	1.60 H	210	46.1	-0.2
5	4960.00	40.5 PK	74.0	-33.5	1.83 H	269	35.6	4.9
6	4960.00	28.0 AV	54.0	-26.0	1.83 H	269	23.1	4.9
7	7440.00	47.3 PK	74.0	-26.7	1.92 H	54	35.5	11.8
8	7440.00	34.6 AV	54.0	-19.4	1.92 H	54	22.8	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

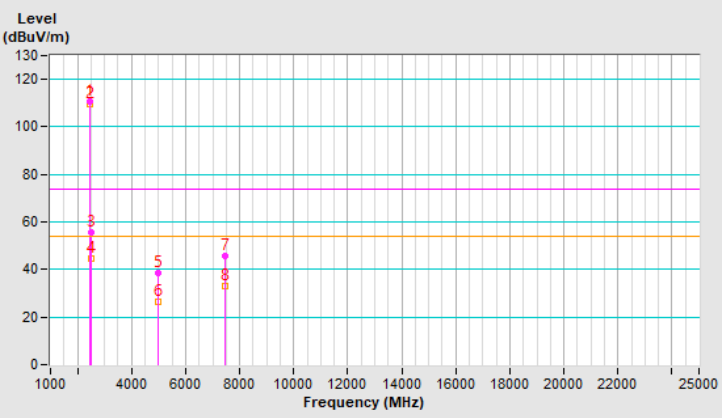


RF Mode	BT-LE 500K	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 300 Hz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	110.8 PK			2.83 V	279	111.0	-0.2
2	*2480.00	109.8 AV			2.83 V	279	110.0	-0.2
3	2483.50	55.4 PK	74.0	-18.6	2.83 V	279	55.6	-0.2
4	2483.50	44.8 AV	54.0	-9.2	2.83 V	279	45.0	-0.2
5	4960.00	38.6 PK	74.0	-35.4	2.89 V	308	33.7	4.9
6	4960.00	26.4 AV	54.0	-27.6	2.89 V	308	21.5	4.9
7	7440.00	45.5 PK	74.0	-28.5	1.81 V	217	33.7	11.8
8	7440.00	33.0 AV	54.0	-21.0	1.81 V	217	21.2	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

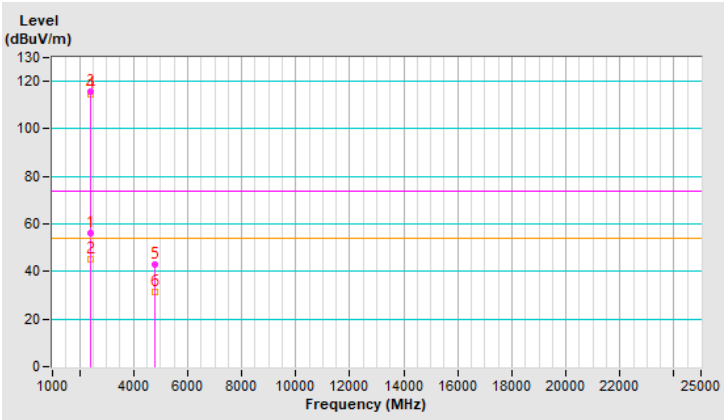


RF Mode	BT-LE 1M	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.4 PK	74.0	-17.6	2.03 H	279	56.5	-0.1
2	2390.00	45.3 AV	54.0	-8.7	2.03 H	279	45.4	-0.1
3	*2402.00	115.6 PK			2.03 H	279	115.7	-0.1
4	*2402.00	114.5 AV			2.03 H	279	114.6	-0.1
5	4804.00	42.8 PK	74.0	-31.2	1.58 H	330	38.3	4.5
6	4804.00	31.2 AV	54.0	-22.8	1.58 H	330	26.7	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

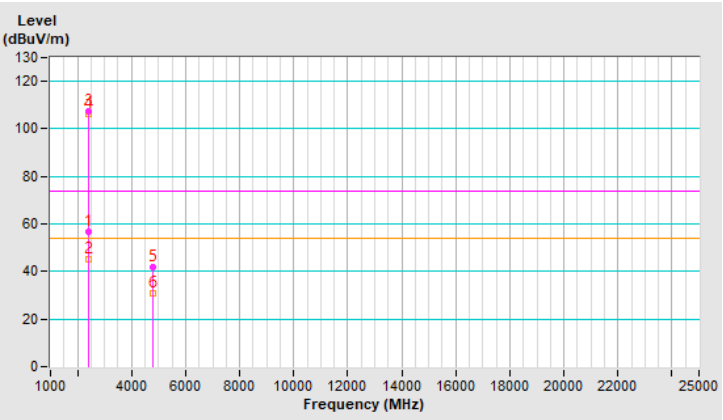


RF Mode	BT-LE 1M	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.6 PK	74.0	-17.4	2.76 V	161	56.7	-0.1
2	2390.00	44.9 AV	54.0	-9.1	2.76 V	161	45.0	-0.1
3	*2402.00	107.6 PK			2.76 V	161	107.7	-0.1
4	*2402.00	106.5 AV			2.76 V	161	106.6	-0.1
5	4804.00	41.8 PK	74.0	-32.2	1.56 V	114	37.3	4.5
6	4804.00	30.7 AV	54.0	-23.3	1.56 V	114	26.2	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

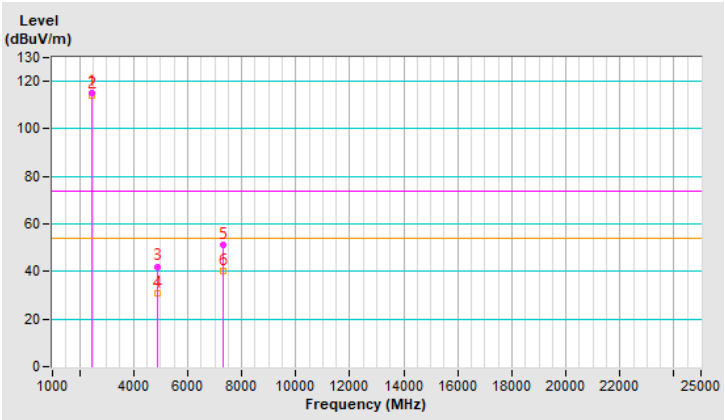


RF Mode	BT-LE 1M	Channel	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	115.4 PK			2.08 H	290	115.5	-0.1
2	*2440.00	114.3 AV			2.08 H	290	114.4	-0.1
3	4880.00	42.1 PK	74.0	-31.9	1.66 H	347	37.5	4.6
4	4880.00	31.0 AV	54.0	-23.0	1.66 H	347	26.4	4.6
5	7320.00	51.2 PK	74.0	-22.8	2.46 H	269	39.5	11.7
6	7320.00	40.3 AV	54.0	-13.7	2.46 H	269	28.6	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

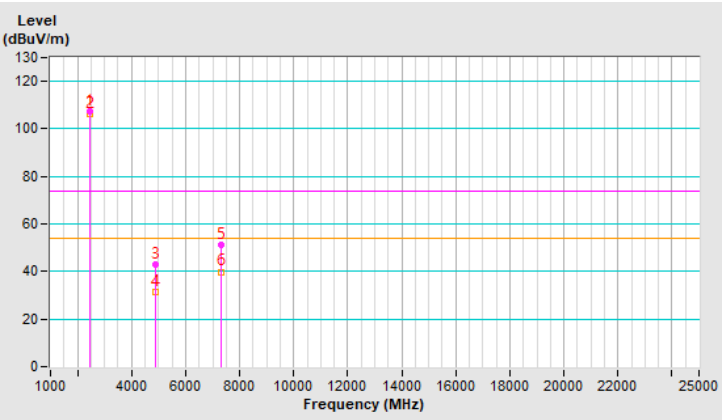


RF Mode	BT-LE 1M	Channel	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	107.6 PK			2.79 V	148	107.7	-0.1
2	*2440.00	106.2 AV			2.79 V	148	106.3	-0.1
3	4880.00	42.9 PK	74.0	-31.1	1.60 V	119	38.3	4.6
4	4880.00	31.6 AV	54.0	-22.4	1.60 V	119	27.0	4.6
5	7320.00	51.0 PK	74.0	-23.0	1.49 V	118	39.3	11.7
6	7320.00	39.9 AV	54.0	-14.1	1.49 V	118	28.2	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

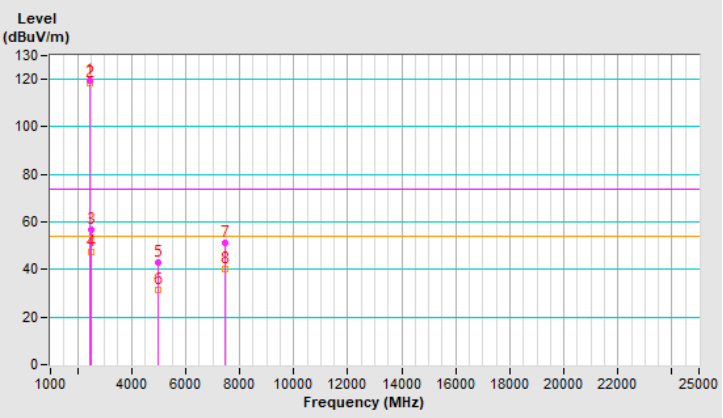


RF Mode	BT-LE 1M	Channel	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2480.00	119.7 PK			2.12 H	275	119.9	-0.2
2	*2480.00	118.6 AV			2.12 H	275	118.8	-0.2
3	2483.50	56.7 PK	74.0	-17.3	2.12 H	275	56.9	-0.2
4	2483.50	47.3 AV	54.0	-6.7	2.12 H	275	47.5	-0.2
5	4960.00	42.8 PK	74.0	-31.2	1.60 H	338	37.9	4.9
6	4960.00	31.4 AV	54.0	-22.6	1.60 H	338	26.5	4.9
7	7440.00	51.2 PK	74.0	-22.8	2.45 H	277	39.4	11.8
8	7440.00	40.1 AV	54.0	-13.9	2.45 H	277	28.3	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

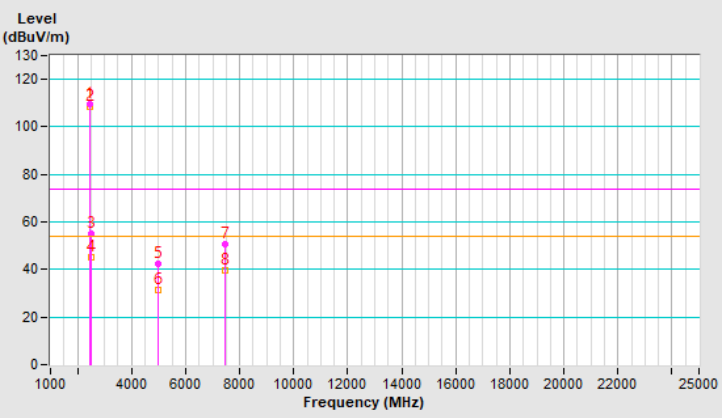


RF Mode	BT-LE 1M	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 3 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	109.7 PK			2.76 V	275	109.9	-0.2
2	*2480.00	108.6 AV			2.76 V	275	108.8	-0.2
3	2483.50	55.3 PK	74.0	-18.7	2.76 V	275	55.5	-0.2
4	2483.50	45.0 AV	54.0	-9.0	2.76 V	275	45.2	-0.2
5	4960.00	42.5 PK	74.0	-31.5	1.59 V	124	37.6	4.9
6	4960.00	31.2 AV	54.0	-22.8	1.59 V	124	26.3	4.9
7	7440.00	50.5 PK	74.0	-23.5	1.51 V	112	38.7	11.8
8	7440.00	39.5 AV	54.0	-14.5	1.51 V	112	27.7	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

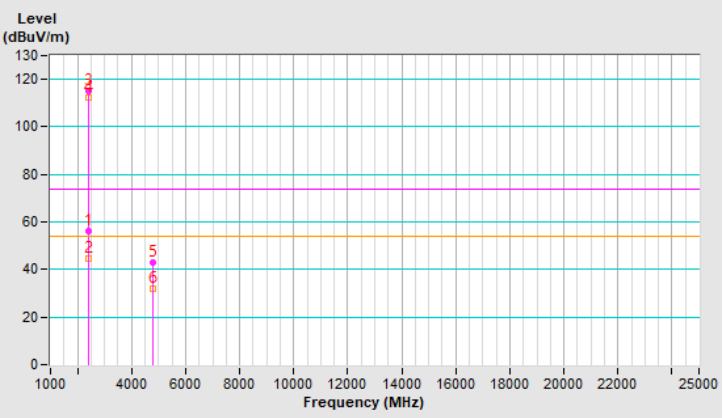


RF Mode	BT-LE 2M	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	56.3 PK	74.0	-17.7	2.06 H	268	56.4	-0.1
2	2390.00	44.7 AV	54.0	-9.3	2.06 H	268	44.8	-0.1
3	*2402.00	115.2 PK			2.06 H	268	115.3	-0.1
4	*2402.00	112.2 AV			2.06 H	268	112.3	-0.1
5	4804.00	43.0 PK	74.0	-31.0	1.61 H	345	38.5	4.5
6	4804.00	31.7 AV	54.0	-22.3	1.61 H	345	27.2	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

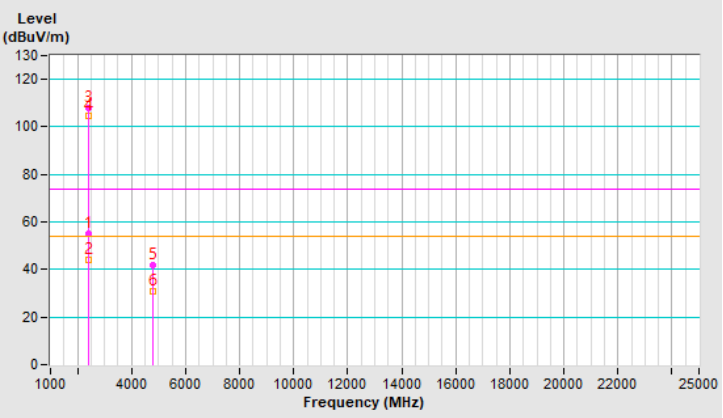


RF Mode	BT-LE 2M	Channel	CH 0：2402 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	2390.00	55.2 PK	74.0	-18.8	2.75 V	160	55.3	-0.1
2	2390.00	44.3 AV	54.0	-9.7	2.75 V	160	44.4	-0.1
3	*2402.00	107.7 PK			2.75 V	160	107.8	-0.1
4	*2402.00	104.6 AV			2.75 V	160	104.7	-0.1
5	4804.00	41.9 PK	74.0	-32.1	1.62 V	128	37.4	4.5
6	4804.00	30.8 AV	54.0	-23.2	1.62 V	128	26.3	4.5

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

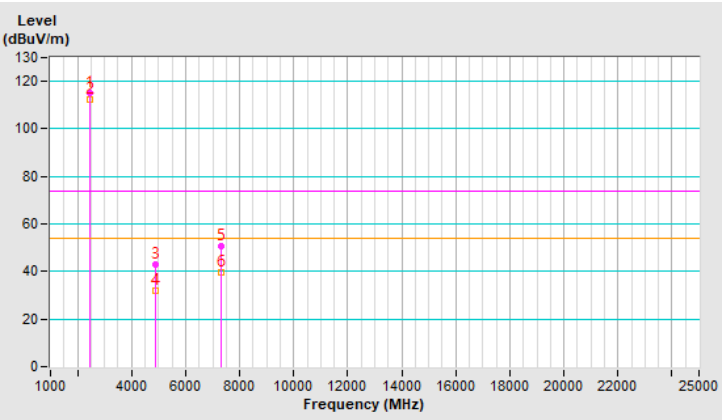


RF Mode	BT-LE 2M	Channel	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	Detector Function & Bandwidth	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	Environmental Conditions	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	*2440.00	114.9 PK			2.08 H	260	115.0	-0.1
2	*2440.00	112.2 AV			2.08 H	260	112.3	-0.1
3	4880.00	43.1 PK	74.0	-30.9	1.56 H	340	38.5	4.6
4	4880.00	31.7 AV	54.0	-22.3	1.56 H	340	27.1	4.6
5	7320.00	50.7 PK	74.0	-23.3	2.41 H	261	39.0	11.7
6	7320.00	39.6 AV	54.0	-14.4	2.41 H	261	27.9	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

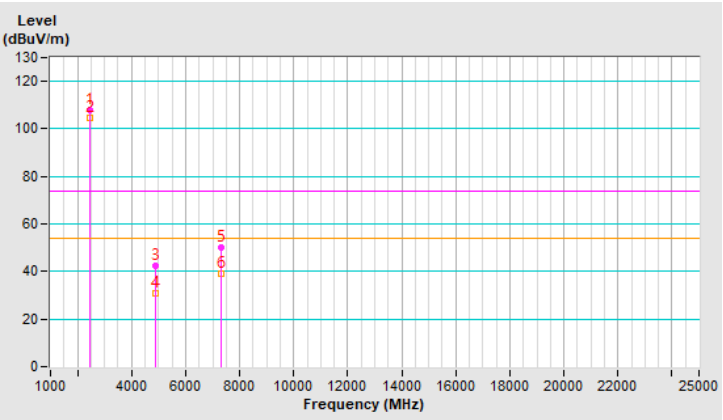


RF Mode	BT-LE 2M	**Channel**	CH 19：2440 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2440.00	108.0 PK			2.71 V	167	108.1	-0.1
2	*2440.00	104.8 AV			2.71 V	167	104.9	-0.1
3	4880.00	42.2 PK	74.0	-31.8	1.58 V	123	37.6	4.6
4	4880.00	30.7 AV	54.0	-23.3	1.58 V	123	26.1	4.6
5	7320.00	49.9 PK	74.0	-24.1	1.49 V	106	38.2	11.7
6	7320.00	39.1 AV	54.0	-14.9	1.49 V	106	27.4	11.7

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.

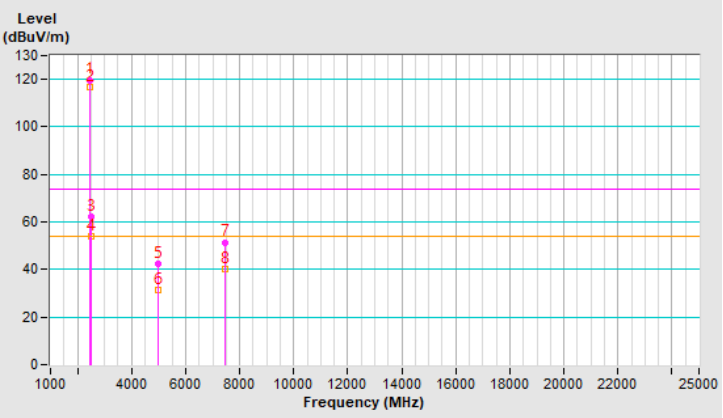


RF Mode	BT-LE 2M	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	119.8 PK			2.08 H	276	120.0	-0.2
2	*2480.00	116.8 AV			2.08 H	276	117.0	-0.2
3	2483.50	62.2 PK	74.0	-11.8	2.08 H	276	62.4	-0.2
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**2.08 H**	**276**	**54.1**	**-0.2**
5	4960.00	42.6 PK	74.0	-31.4	1.63 H	353	37.7	4.9
6	4960.00	31.3 AV	54.0	-22.7	1.63 H	353	26.4	4.9
7	7440.00	51.5 PK	74.0	-22.5	2.49 H	269	39.7	11.8
8	7440.00	40.3 AV	54.0	-13.7	2.49 H	269	28.5	11.8

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
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency, the limit was restricted at the RF Output Power.



RF Mode	BT-LE 2M	**Channel**	CH 39：2480 MHz
Frequency Range	1 GHz ~ 25 GHz	**Detector Function & Bandwidth**	(PK) RB = 1 MHz, VB = 3 MHz (AV) RB = 1 MHz, VB = 1 kHz
Input Power (System)	120 Vac, 60 Hz	**Environmental Conditions**	25°C, 75% RH
Tested By	Ryan Du		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	*2480.00	108.9 PK			2.77 V	276	109.1	-0.2
2	*2480.00	105.9 AV			2.77 V	276	106.1	-0.2
3	2483.50	57.7 PK	74.0	-16.3	2.77 V	276	57.9	-0.2
4	2483.50	47.0 AV	54.0	-7.0	2.77 V	276	47.2	-0.2
5	4960.00	42.3 PK	74.0	-31.7	1.57 V	127	37.4	4.9
6	4960.00	31.1 AV	54.0	-22.9	1.57 V	127	26.2	4.9
7	7440.00	50.7 PK	74.0	-23.3	1.47 V	115	38.9	11.8
8	7440.00	39.5 AV	54.0	-14.5	1.47 V	115	27.7	11.8

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
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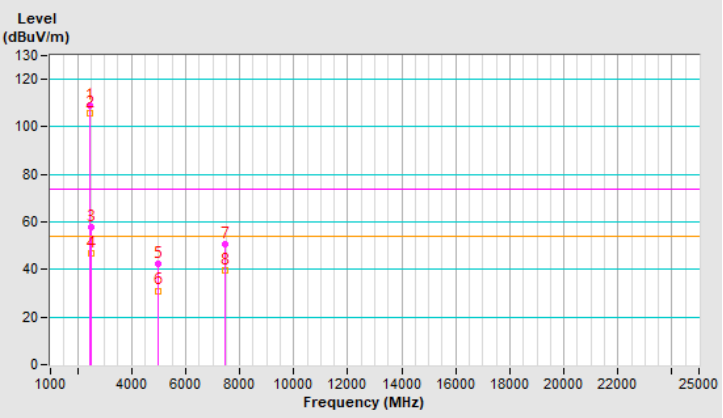
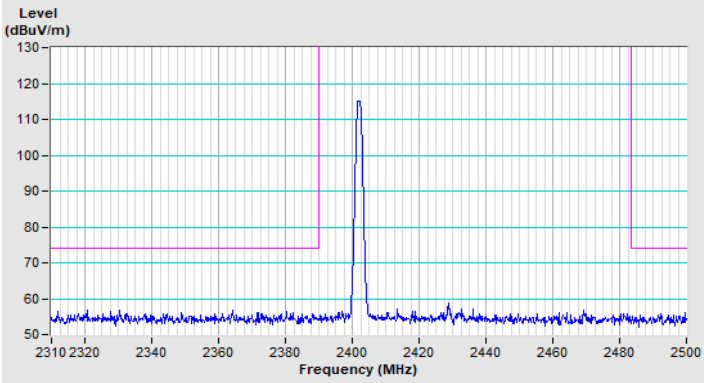
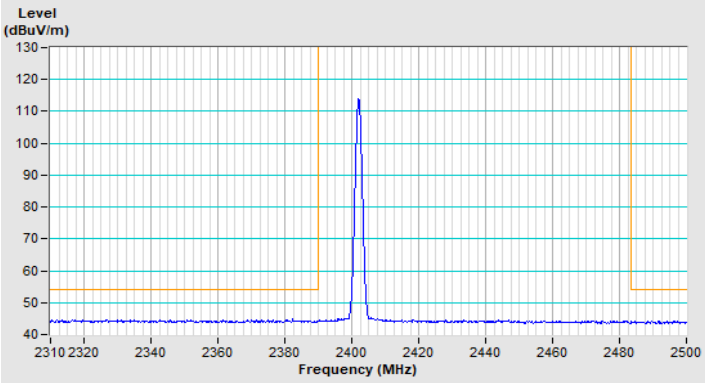


Plot of Band Edge

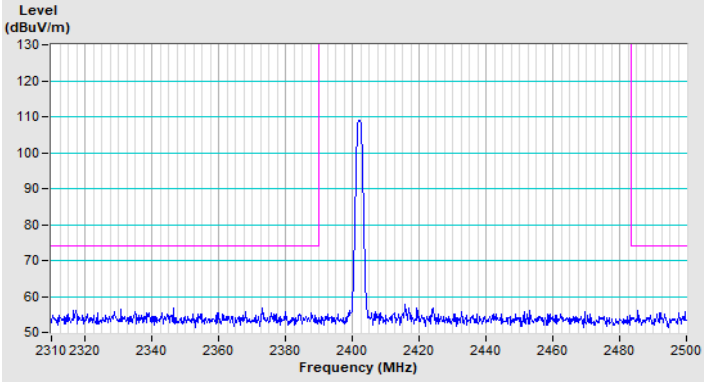
BT-LE 125K Channel 0



Horizontal (Peak)



Horizontal (Average)



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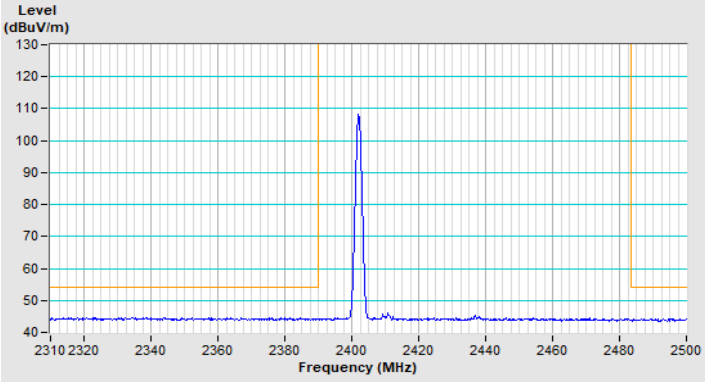
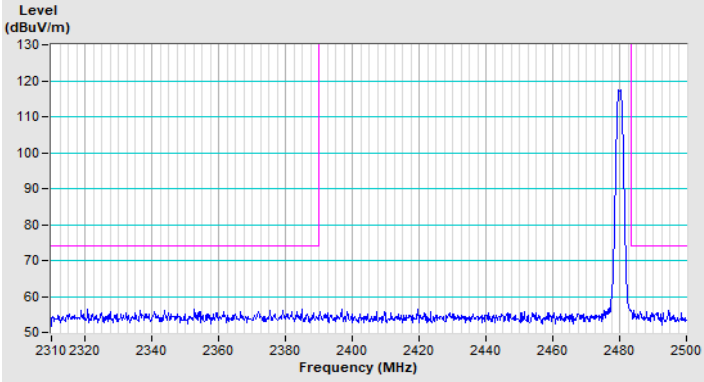


Vertical (Average)

BT-LE 125K Channel 39



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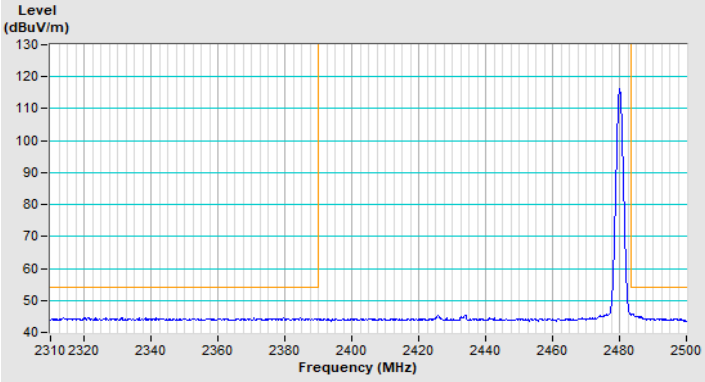
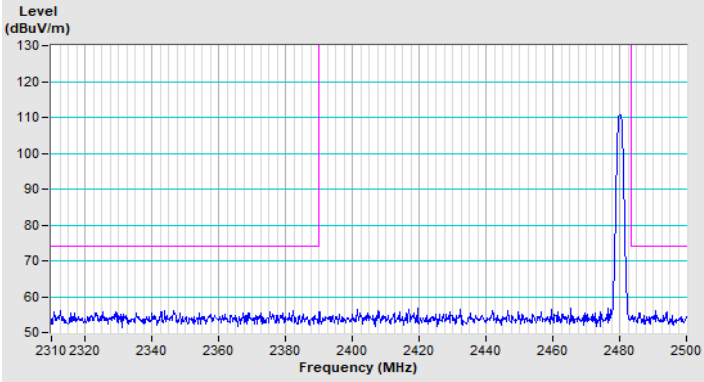
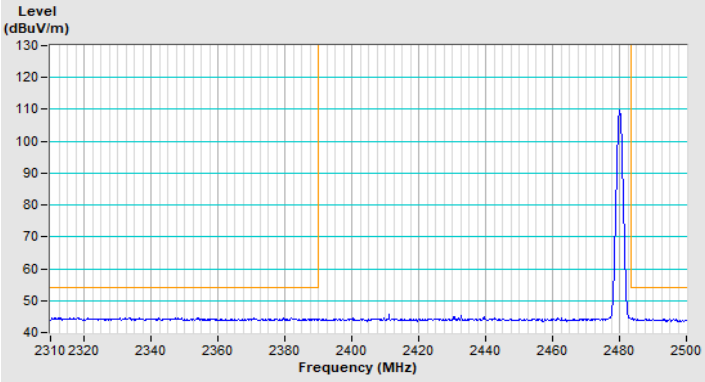


Horizontal (Average)

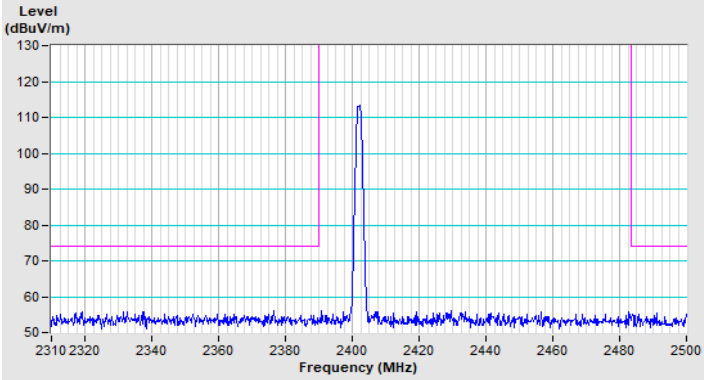


Vertical (Peak)



Vertical (Average)

BT-LE 500K Channel 0



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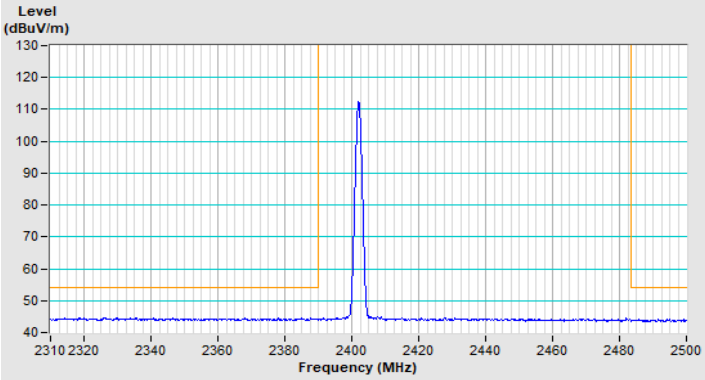

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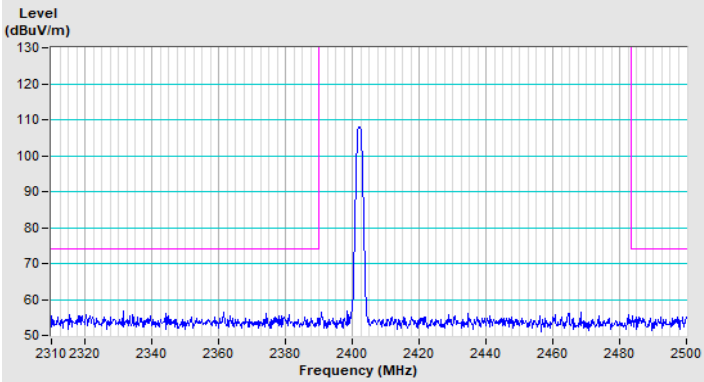
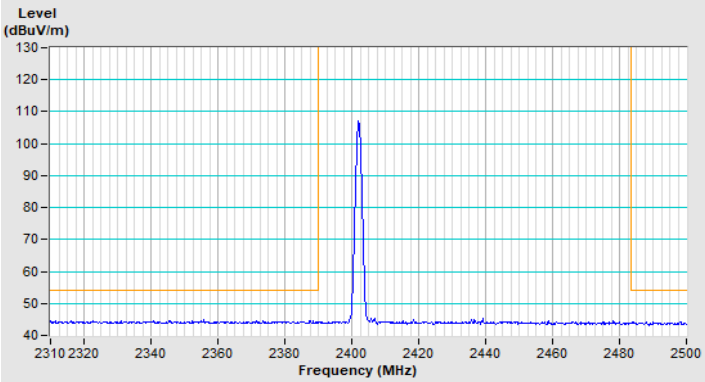
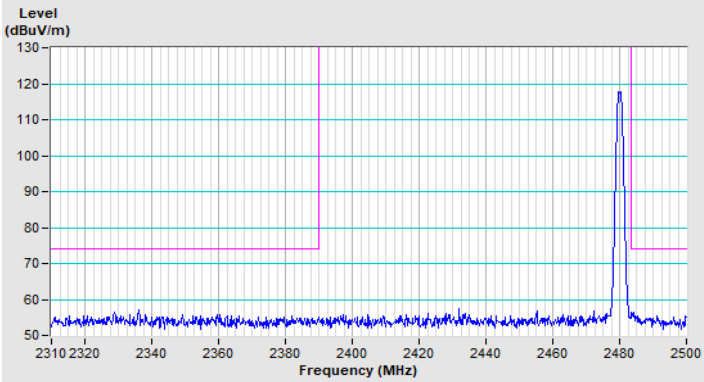


Vertical (Peak)

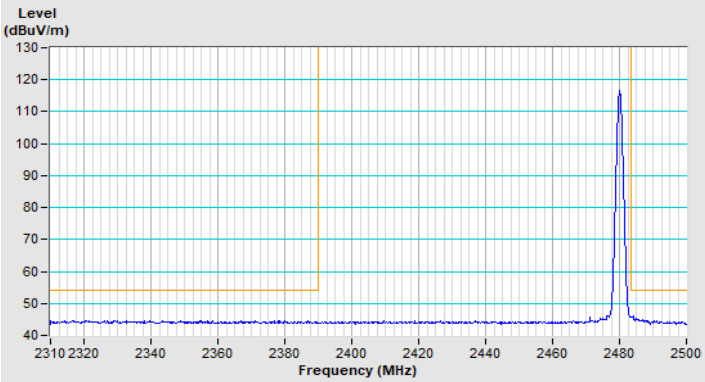


Vertical (Average)

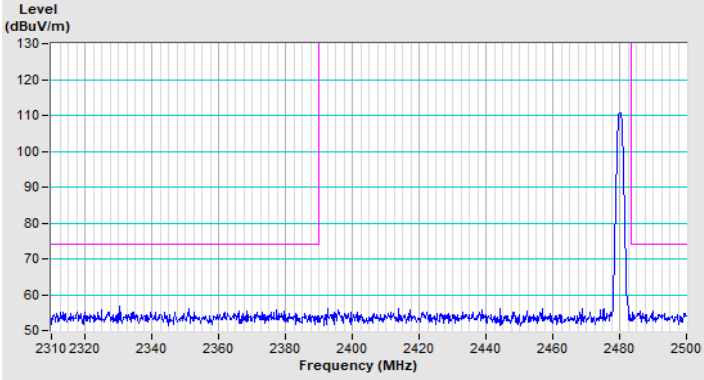
BT-LE 500K Channel 39



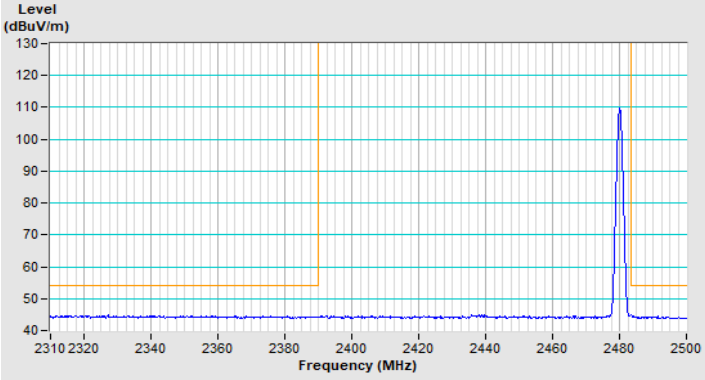
Horizontal (Peak)



Horizontal (Average)

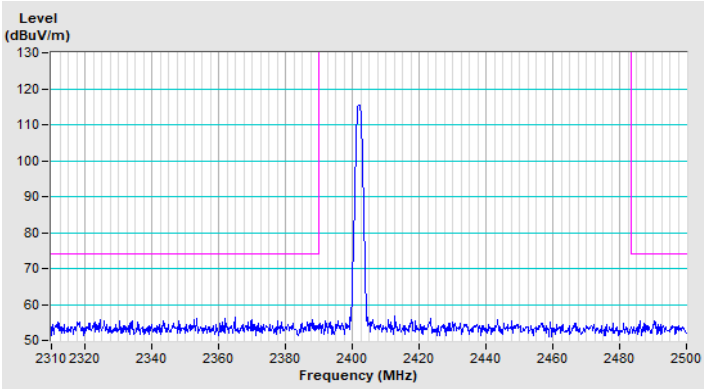


Vertical (Peak)

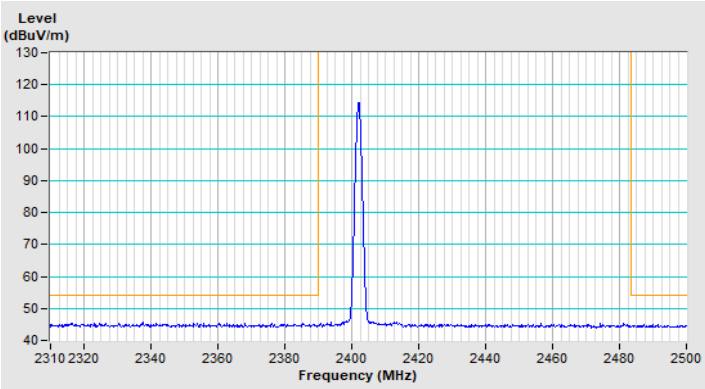


Vertical (Average)

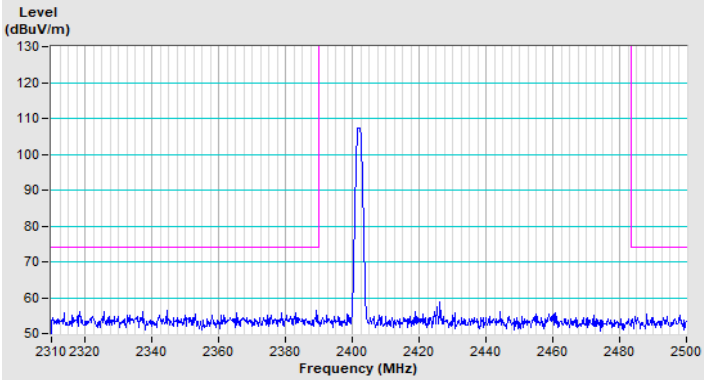
BT-LE 1M Channel 0



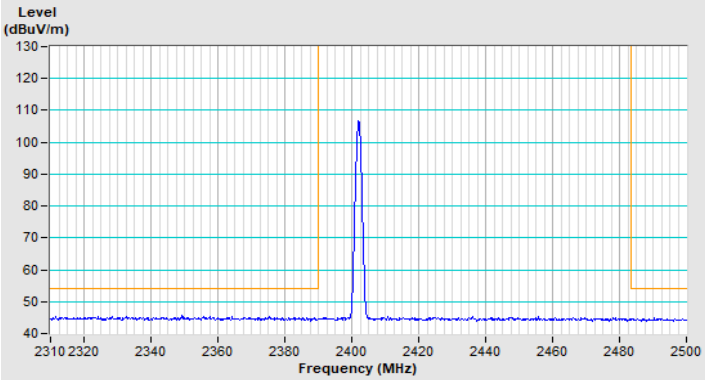
Horizontal (Peak)



Horizontal (Average)

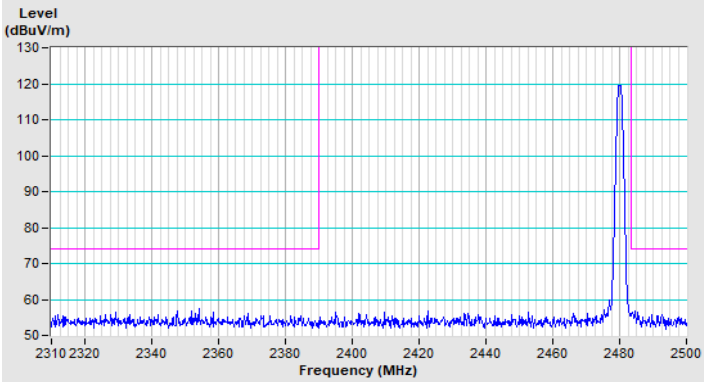


Vertical (Peak)

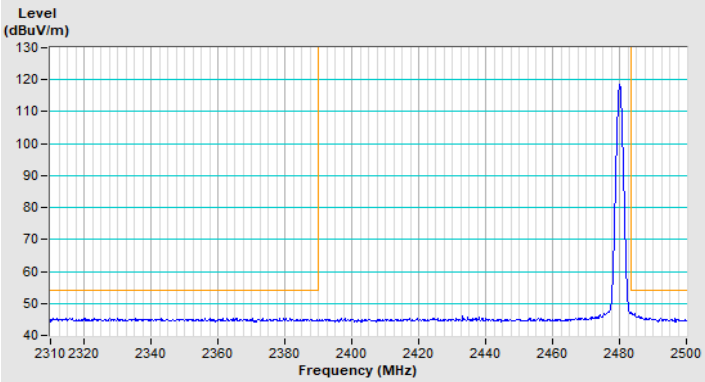


Vertical (Average)

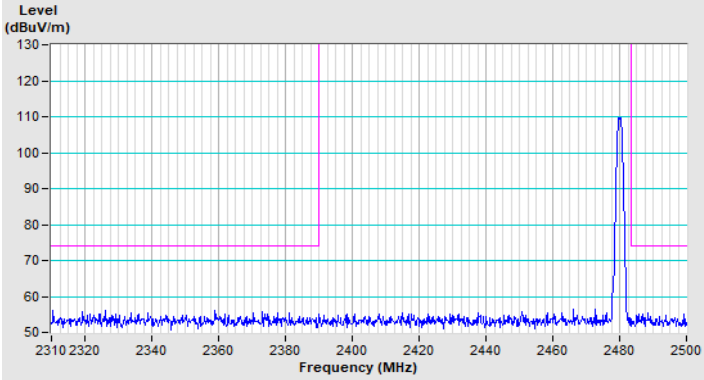
BT-LE 1M Channel 39



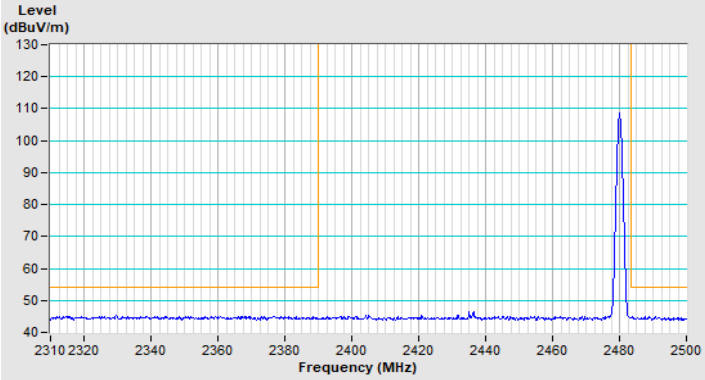
Horizontal (Peak)



Horizontal (Average)

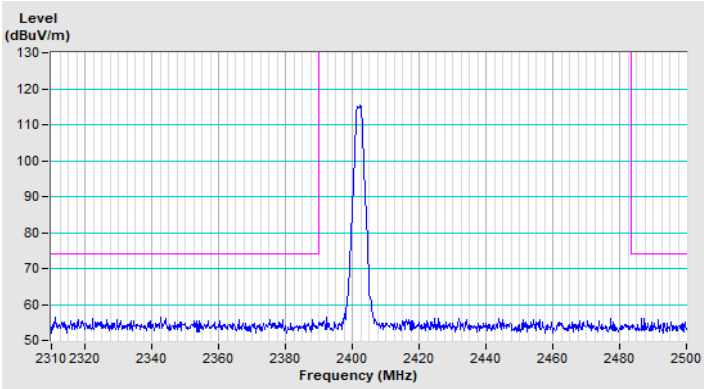


Vertical (Peak)

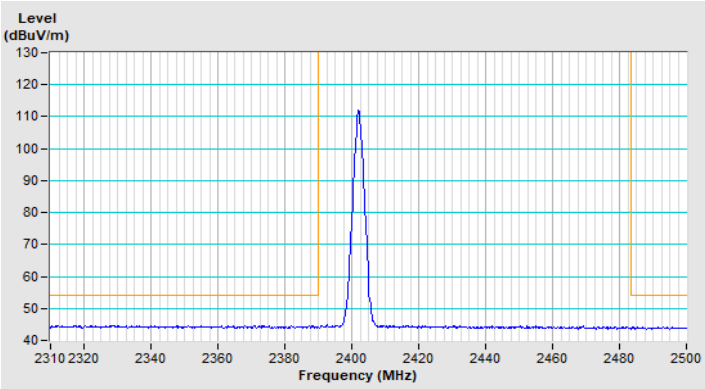


Vertical (Average)

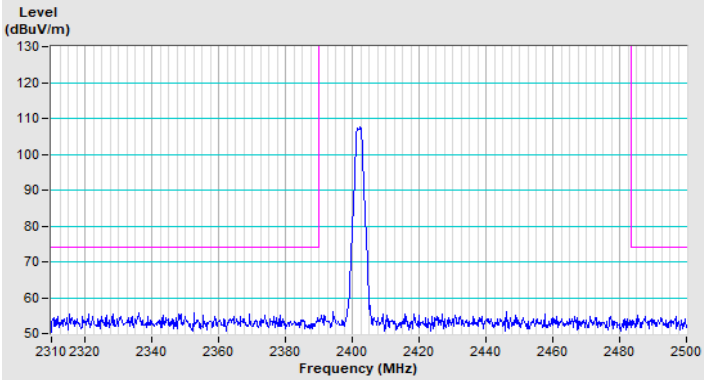
BT-LE 2M Channel 0



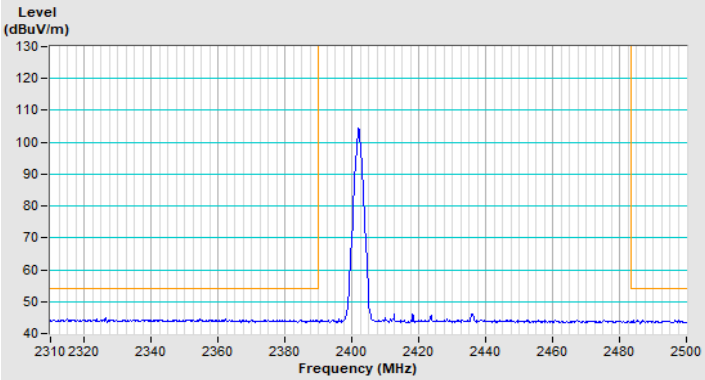
Horizontal (Peak)



Horizontal (Average)

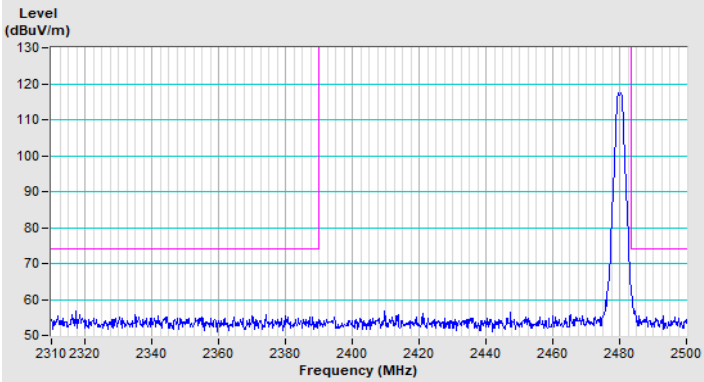


Vertical (Peak)

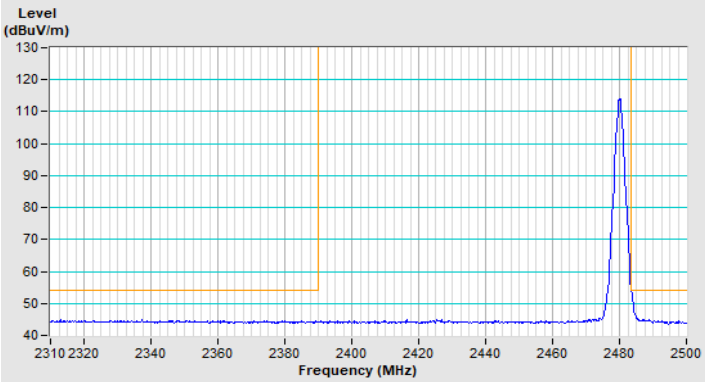


Vertical (Average)

BT-LE 2M Channel 39



Horizontal (Peak)



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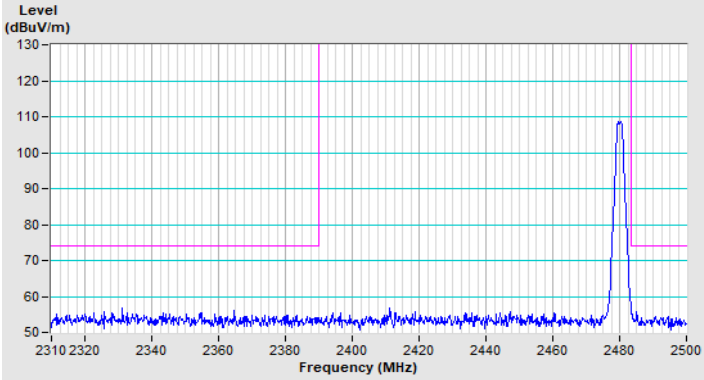
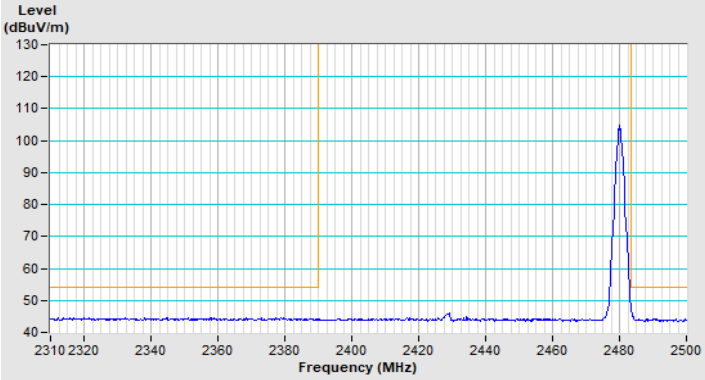


Vertical (Peak)



Vertical (Average)

8 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo)

9 Information of 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:

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

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