

FCC - TEST REPORT

Report Number	:	64.790.26.80038.01	Date of Issue:	2025-12-24
Model/HVIN	:	588-x, 528-x (-x=blank, -1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, indicates different colour)		
Product Type	:	Electric Breast Pump		
Applicant	:	Shantou Huihengqi Electronic Technology Co., Ltd.		
Address	:	501, 5/F, Block C, 301, 3/F, Block A, 14A Industrial Zone, Longhu District, 515000 Shantou, Guangdong, PEOPLE'S REPUBLIC OF CHINA		
Manufacturer	:	Shantou Huihengqi Electronic Technology Co., Ltd.		
Address	:	501, 5/F, Block C, 301, 3/F, Block A, 14A Industrial Zone, Longhu District, 515000 Shantou, Guangdong, PEOPLE'S REPUBLIC OF CHINA		
Factory	:	Shantou Huihengqi Electronic Technology Co., Ltd.		
Address	:	501, 5/F, Block C, 301, 3/F, Block A, 14A Industrial Zone, Longhu District, 515000 Shantou, Guangdong, PEOPLE'S REPUBLIC OF CHINA		
Test Result	:	☒ Positive ☐ Negative		
Total pages including Appendices	:	49		

Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object in question. It does not imply a general statement regarding the quality of products from regular production. For further details please see Testing, Certification, Validation and Verification Regulations, chapter A-3.3.

1 Table of Contents

1	Table of Contents.....	2
2	Details about the Test Laboratory.....	3
3	Description of the Equipment Under Test.....	4
4	Summary of Test Standards	5
5	Summary of Test Results.....	6
6	General Remarks	7
7	Test Setups	8
7.1	Radiated test setups	8
7.2	Conducted RF test setups	9
7.3	AC Power Line Conducted Emission test setups	9
8	Systems test configuration	10
9	Technical Requirement	11
9.1	Conducted Emission.....	11
9.2	Conducted Output Power	14
9.3	6 dB Bandwidth.....	17
9.4	Power spectral density.....	20
9.5	Spurious RF conducted emissions	23
9.6	Band edge testing	27
9.7	Spurious radiated emissions for transmitter	30
10	Test Equipment List.....	48
11	System Measurement Uncertainty	49

2 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch
5F & 8F East, Communication Building, No.163 Pingyun Road,
Huangpu Ave. West
Guangzhou 510656
P.R. China

Telephone: 86 20 3815 3415

FCC Registration No.: 141693

FCC Designation Number: CN1408

3 Description of the Equipment Under Test

Product:	Electric breast pump
Model no.:	588-x, 528-x (-x=blank, -1, -2, -3, -4, -5, -6, -7, -8, -9, -10, -11, -12, indicates different colour)
FCC ID:	2BSODWBP528
Options and accessories:	NIL
Ratings:	DC 5V, 1.0A Battery type: DC 3.7V, 1100mAh Li-ion battery
RF Transmission Frequency:	2402MHz-2480MHz (for BLE-1Mbps)
No. of Operated Channel:	40
Modulation:	GFSK
Antenna Type:	PCB antenna
Antenna Gain:	0.5dBi
Description of the EUT:	The EUT is an Electric breast pump, supports BLE-1Mbps function, operates at 2402 – 2480MHz.

NOTE 1: The above EUT's information is declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.



4 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2024 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators

All the test methods were according to KDB 558074 D01 15.247 Meas Guidance v05r02 Measurement Guidance and ANSI C63.10-2020.

5 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C						
Test Condition		Test Site	Test Result			Test Environment
			Pass	Fail	N/A	
§15.207	Conducted emission AC power port	Site 1	☒	☐	☐	T: 22.4°C H: 51.6%
§15.247 (b) (3)	Conducted peak output power	Site 1	☒	☐	☐	T: 22.4°C H: 51.6%
§15.247(a)(2)	6dB bandwidth and 99% Occupied Bandwidth	Site 1	☒	☐	☐	T: 24.1°C H: 52.3%
§15.247(e)	Power spectral density	Site 1	☒	☐	☐	T: 22.4°C H: 51.6%
§15.247(d)	Spurious RF conducted emissions	Site 1	☒	☐	☐	T: 22.4°C H: 51.6%
§15.247(d)	Band edge	Site 1	☒	☐	☐	T: 22.4°C H: 51.6%
§15.247(d) & §15.209 & §15.205	Spurious radiated emissions for transmitter	Site 1	☒	☐	☐	T: 24.6°C H: 43.7%
§15.203	Antenna requirement	See note 2	☒	☐	☐	--

Note 1: N/A=Not Applicable.

Note 2: The EUT use a PCB antenna, which gain of antenna is 0.5dBi. In accordance to §15.203, it is considered sufficiently to comply with the provisions of this section.

Note 3: T=Temperature, H=Humidity

6 General Remarks

This submittal(s) (test report) is intended for FCC ID: 2BSODWBP528 complies with Section 15.207, 15.205, 15.209, 15.247 of the FCC Part 15, Subpart C rules.

The two series models 588-x, 528-x are identical except the appearance.

All models used same BT module.

So the model 528 was selected to perform full test.

SUMMARY:

All tests according to the regulations cited on page 5 were:

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: 2025-05-27

Testing Start Date: 2025-05-30

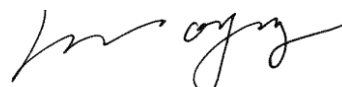
Testing End Date: 2025-06-19

– TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch –

Reviewed by:

Prepared by:

Tested by:



Mike Zhuo
Senior Project Manager

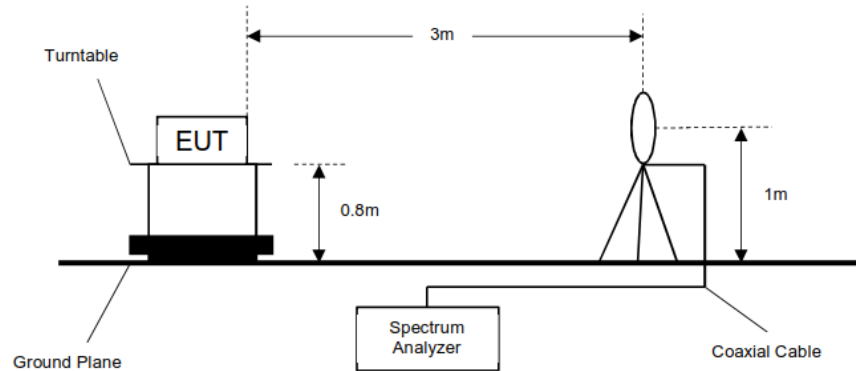
Kevin Ouyang
Project Manager

Joe Chi
Test Engineer

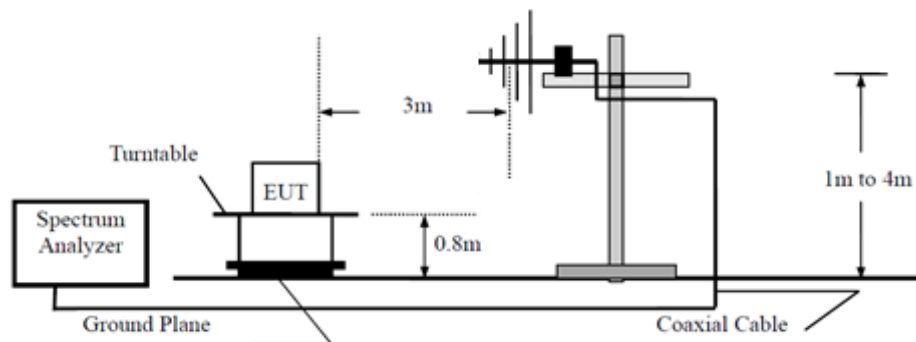
7 Test Setups

7.1 Radiated test setups

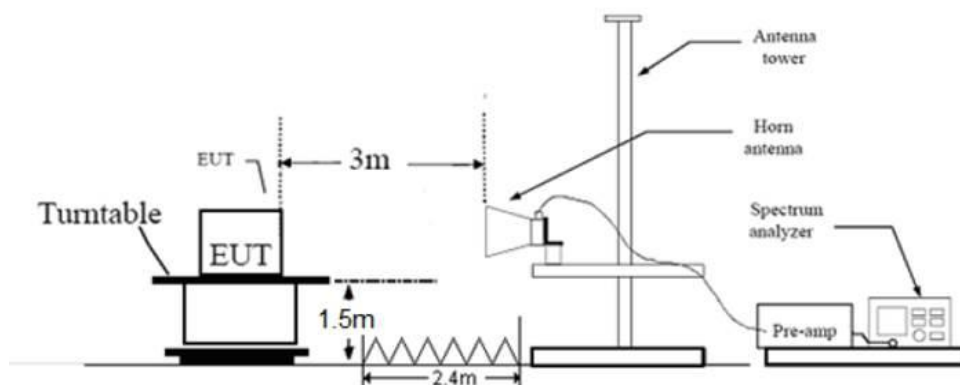
9kHz - 30MHz



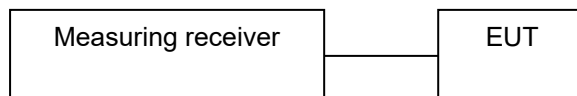
30MHz-1GHz



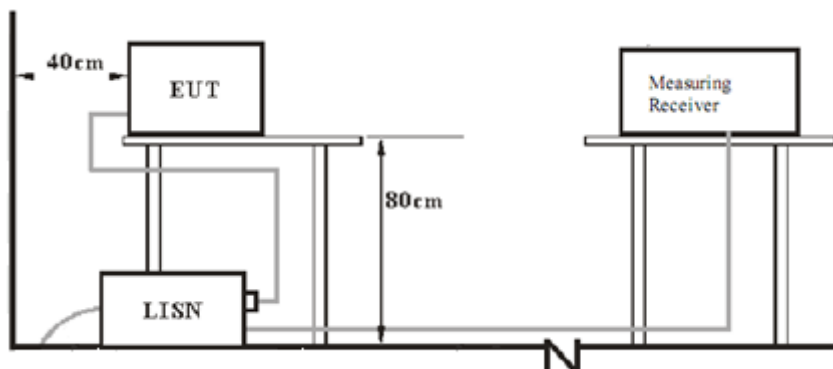
Above 1GHz



7.2 Conducted RF test setups



7.3 AC Power Line Conducted Emission test setups



8 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.	REMARK
Notebook	LENOVO	X220	---

Test software information:

Test Software Version	MacroGiga Test 2.9	
Modulation	Setting TX Power	Packet Type
GFSK	3	Pn9

The system was configured to non-hopping mode, testing channel 0, 19, 39.

9 Technical Requirement

9.1 Conducted Emission

Test Method

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. Both sides of AC line were checked for maximum conducted interference.
6. The frequency range from 150 kHz to 30 MHz was searched.
7. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

Limit

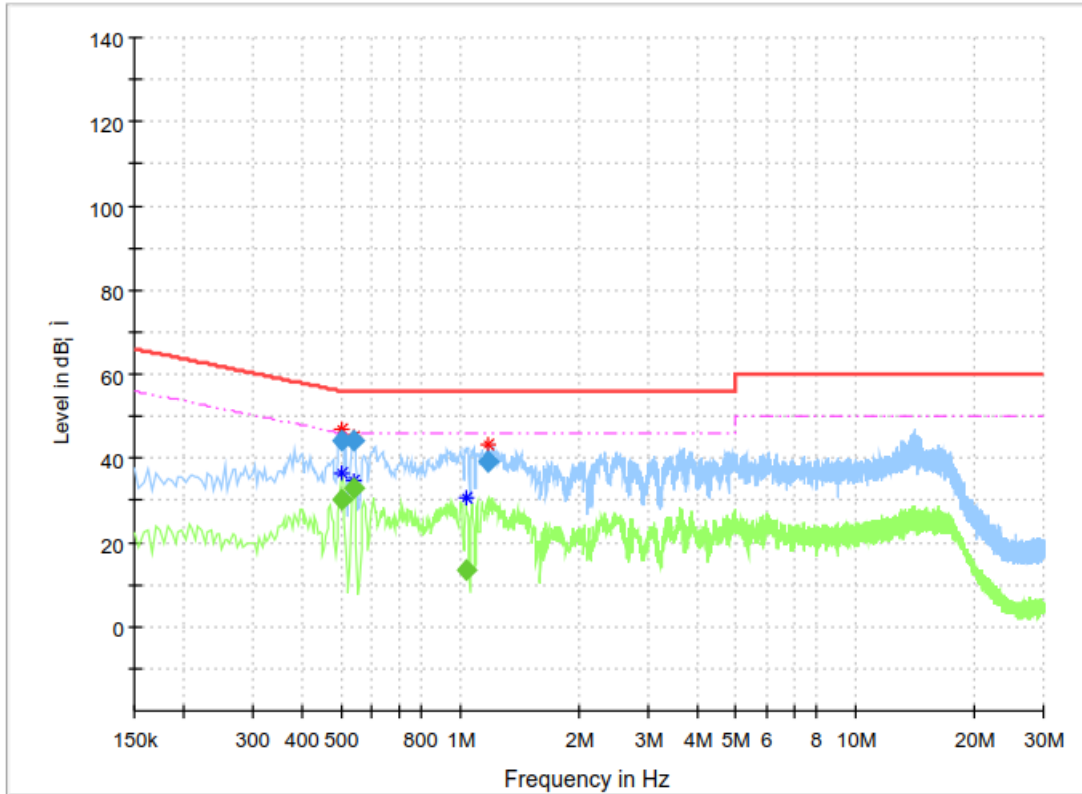
According to §15.207, conducted emissions limit as below:

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

Remark: “*” Decreasing linearly with logarithm of the frequency

Conducted Emission

Product Type : Electric breast pump
 M/N : 528
 Operating Condition : Charging+ BLE communication mode
 Test Specification : L
 Comment : AC 120V/60Hz

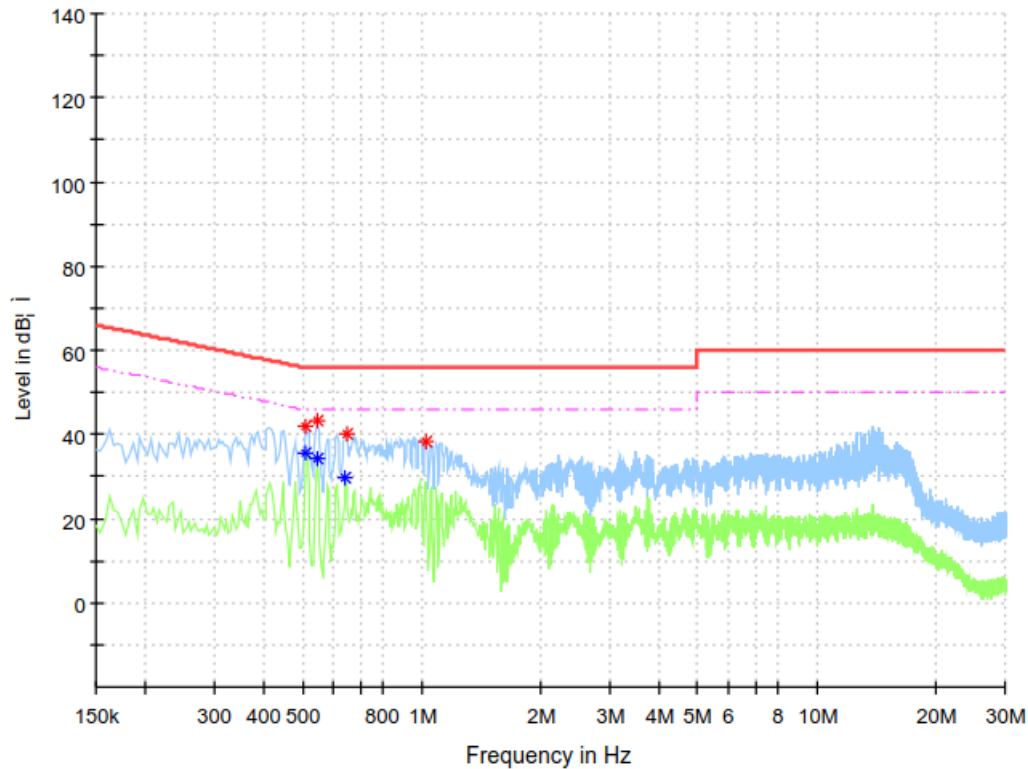


Final Result

Frequency (MHz)	QuasiPeak (dB μ V)	CAverage (dB μ V)	Limit (dB μ V)	Margin (dB)	Line
0.502000	---	30.32	46.00	15.68	L1
0.502000	44.07	---	56.00	11.93	L1
0.538000	---	32.91	46.00	13.09	L1
0.538000	44.12	---	56.00	11.88	L1
1.038000	---	13.30	46.00	32.70	L1
1.178000	39.32	---	56.00	16.68	L1

Conducted Emission

Product Type : Electric breast pump
 M/N : 528
 Operating Condition : Charging+ BLE communication mode
 Test Specification : N
 Comment : AC 120V/60Hz



Critical Freqs

Frequency (MHz)	MaxPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.510000	41.90	---	56.00	14.10	N
0.510000	---	35.52	46.00	10.48	N
0.542000	43.41	---	56.00	12.59	N
0.542000	---	34.28	46.00	11.72	N
0.642000	---	29.57	46.00	16.43	N
0.646000	40.02	---	56.00	15.98	N
1.030000	38.47	---	56.00	17.53	N

Final Result

Frequency (MHz)	QuasiPeak (dBμV)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
---	---	---	---	---	---

9.2 Conducted Output Power

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Use the following test receiver settings:
Span = approximately 5 times the 6dB bandwidth, centered on a channel need to test,
RBW > the 6dB bandwidth of the emission being measured, VBW $\geq$ 3RBW,
Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power and record the results in the test report.
5. Repeat above procedures until all frequencies measured were complete.

Limit

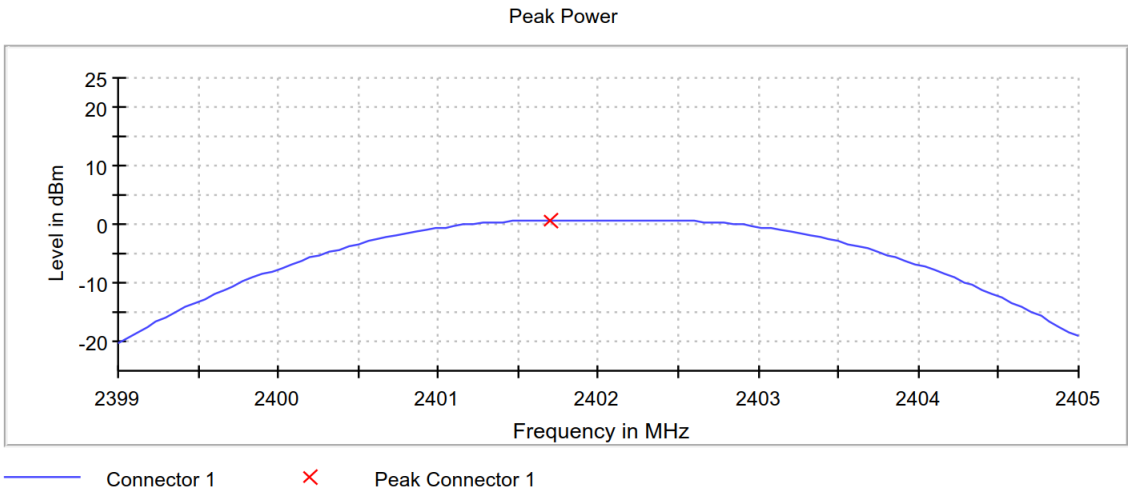
According to §15.247 (b) (3), conducted output power limit as below:

Frequency Range MHz	Limit W	Limit dBm
2400-2483.5	≤ 1	≤ 30

Test Results

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	0.7	≤ 30	Pass
		2440	1.2	≤ 30	Pass
		2480	0.8	≤ 30	Pass

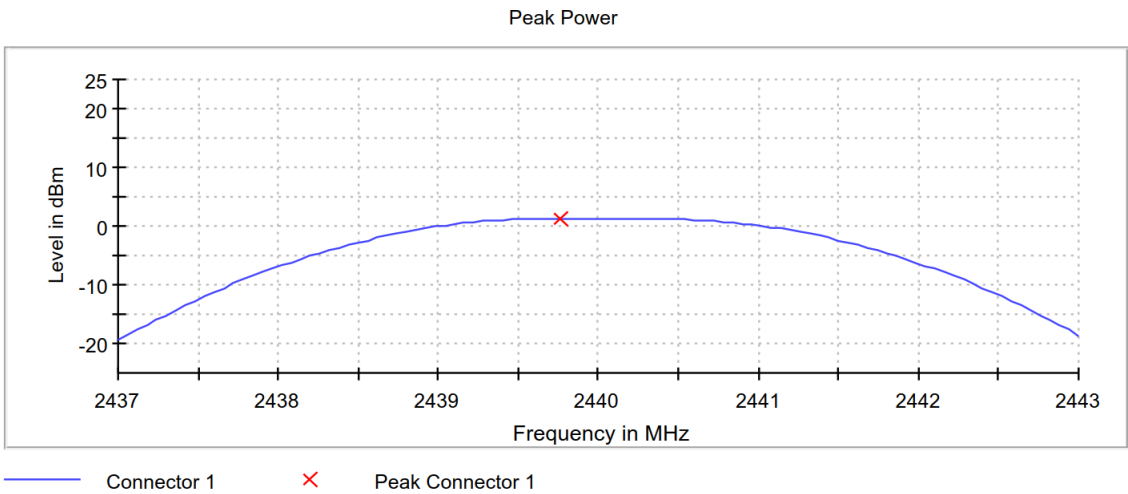
1M_LCH_2402MHz_Ant1_NTNV



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40050 GHz	2.40050 GHz
Stop Frequency	2.40350 GHz	2.40350 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 980.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	4.210 μ s	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_MCH_2440MHz_Ant1_NTNV



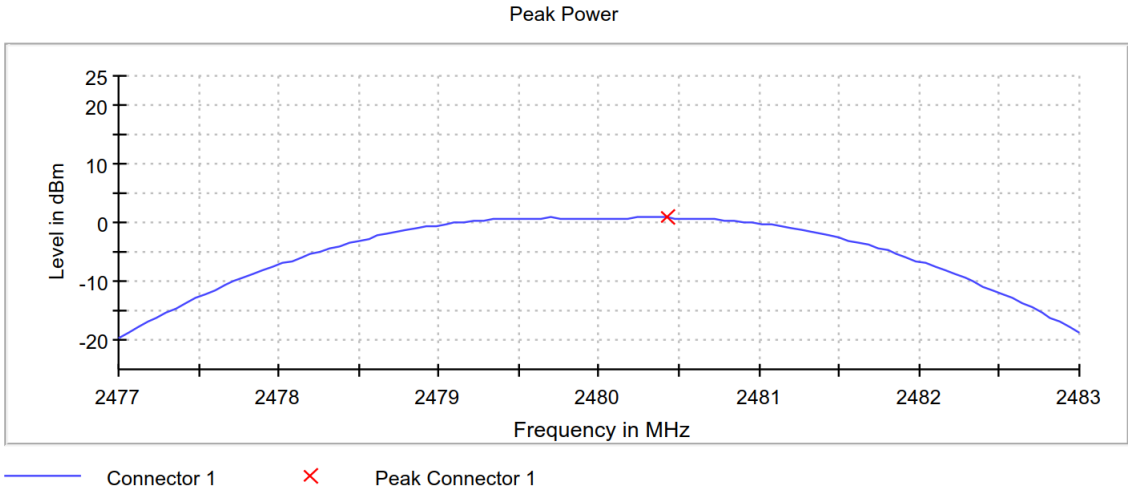
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43850 GHz	2.43850 GHz



Stop Frequency	2.44150 GHz	2.44150 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 960.001 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
SweepTime	4.210 µs	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_HCH_2480MHz_Ant1_NTNV



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47700 GHz	2.47700 GHz
Stop Frequency	2.48300 GHz	2.48300 GHz
Span	6.000 MHz	6.000 MHz
RBW	2.000 MHz	>= 1.000 MHz
VBW	10.000 MHz	>= 6.000 MHz
SweepPoints	101	~ 101
SweepTime	1.000 ms	AUTO
Reference Level	10.000 dBm	10.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak

9.3 6 dB Bandwidth

Test Method for 6 dB Bandwidth

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
RBW=1% to 5% of the occupied bandwidth but not less than 100kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
5. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Limit

6dB bandwidth Limit [kHz]

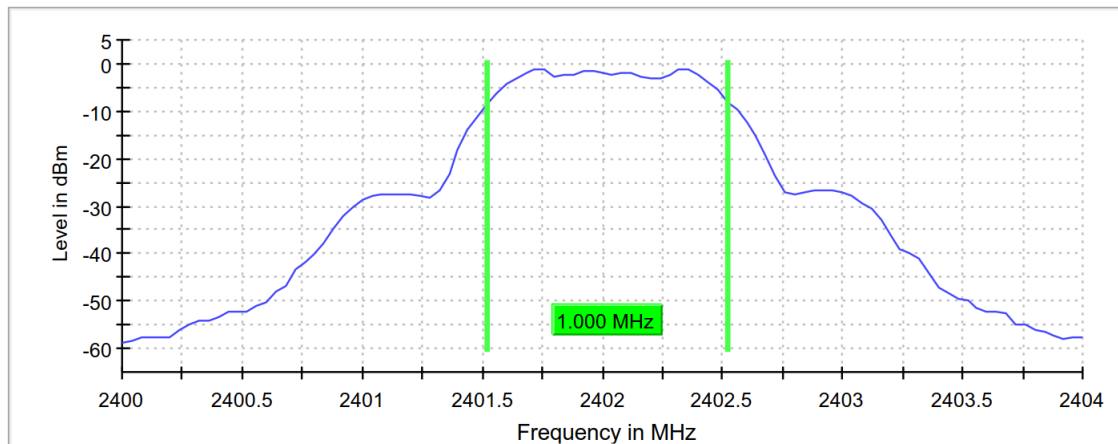
≥ 500

Test result for 6 dB Bandwidth

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.000	≥ 0.5	Pass
		2440	1	1.040	≥ 0.5	Pass
		2480	1	1.000	≥ 0.5	Pass

1M_LCH_2402MHz_Ant1_NTNV

6 dB Bandwidth

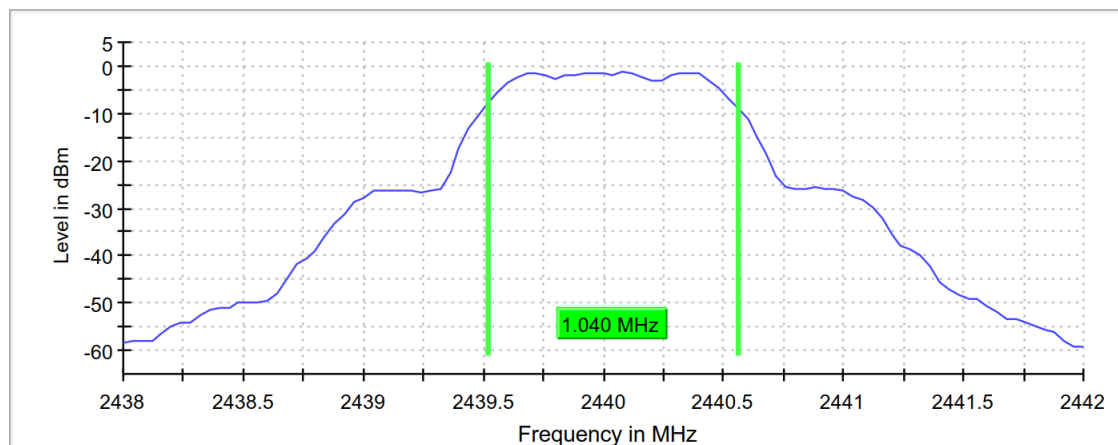


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
SweepTime	41.830 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_MCH_2440MHz_Ant1_NTNV

6 dB Bandwidth

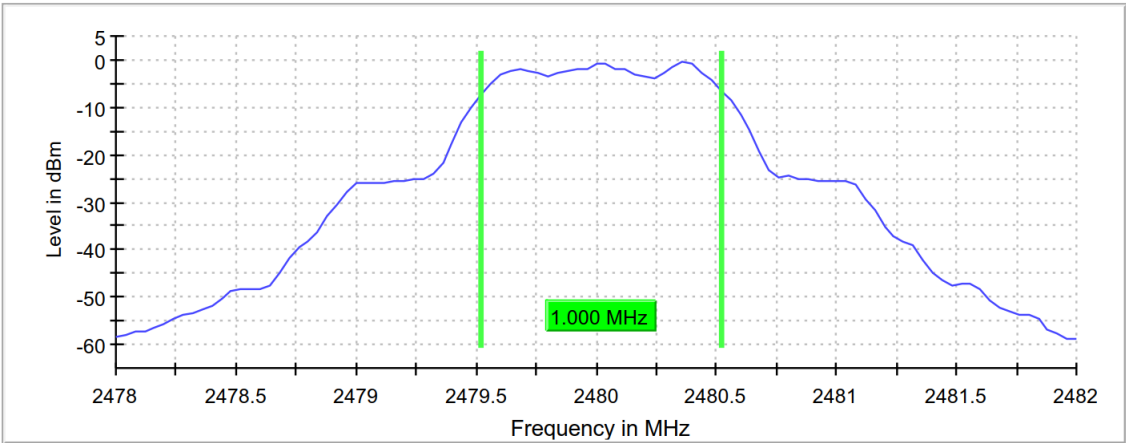


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43800 GHz	2.43800 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
SweepTime	41.830 μ s	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak



1M_HCH_2480MHz_Ant1_NTNV
6 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48200 GHz	2.48200 GHz
Span	4.000 MHz	4.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 80
SweepTime	41.830 μs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

9.4 Power spectral density

Test Method

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance:

1. The RF output of EUT was connected to the spectrum analyzer. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
4. Set analyzer center frequency to DTS channel center frequency. RBW=3kHz, VBW $\geq$ 3RBW, Span=1.5 times DTS bandwidth, Detector=Peak, Sweep=auto, Trace= max hold.
5. Allow trace to fully stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.
6. Repeat above procedures until other frequencies measured were completed.

Limit

Limit [dBm/3kHz]

≤ 8

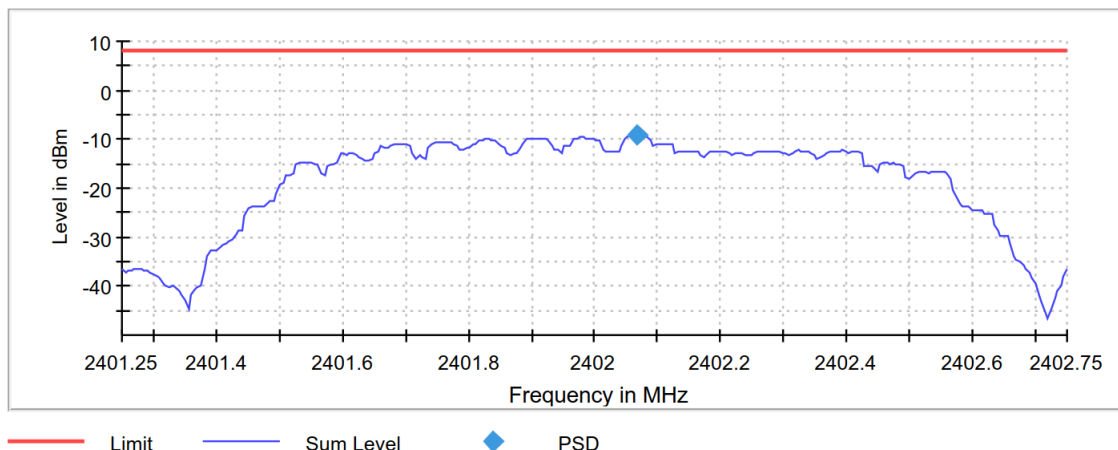
Test Results

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/10kHz)	Correction factor (dB)	Maximum PSD (dBm/3kHz)		Verdict
			ANT1		ANT1	Limit	
1M	SISO	2402	-9.267	5.23	-14.497	≤ 8	Pass
		2440	-8.970	5.23	-14.200	≤ 8	Pass
		2480	-9.765	5.23	-14.995	≤ 8	Pass

Note: Maximum PSD(dBm/3kHz)= Maximum PSD(dBm/10kHz)-10log (10/3)= Maximum PSD (dBm/10kHz)- 5.23

1M_LCH_2402MHz_Ant1_NTNV

Peak Power Spectral Density

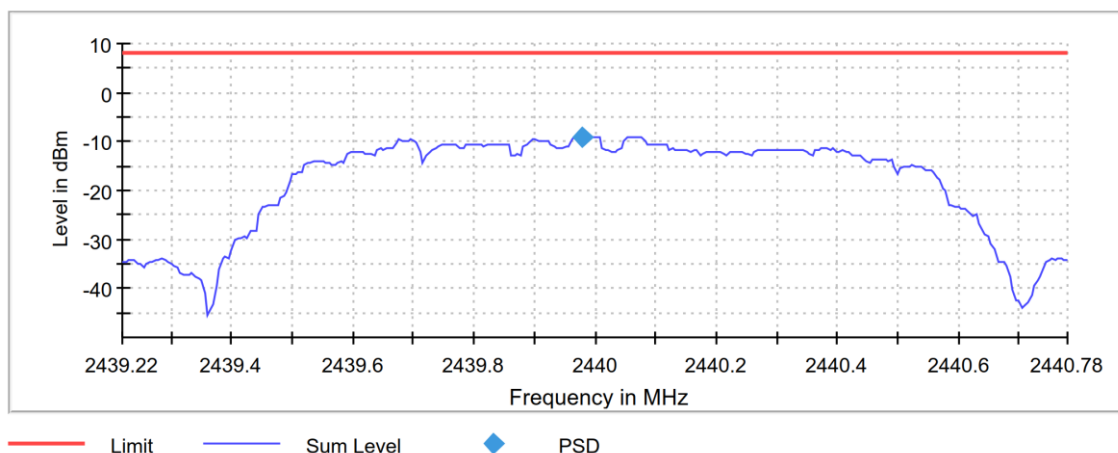


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40125 GHz	2.40125 GHz
Stop Frequency	2.40275 GHz	2.40275 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	300	~ 300
SweepTime	1.500 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_MCH_2440MHz_Ant1_NTNV

Peak Power Spectral Density



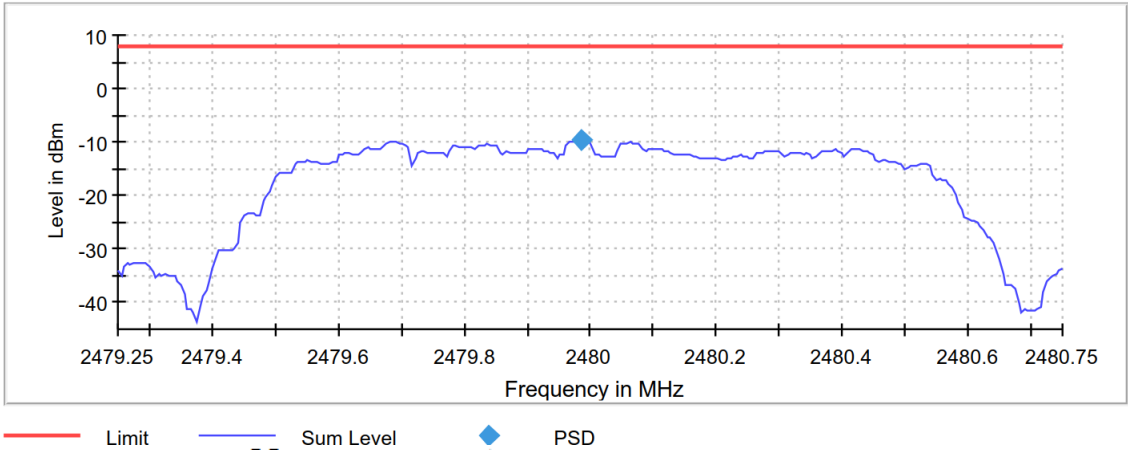
Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.43922 GHz	2.43922 GHz
Stop Frequency	2.44078 GHz	2.44078 GHz
Span	1.560 MHz	1.560 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	312	~ 312
SweepTime	1.560 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak



1M_HCH_2480MHz_Ant1_NTNV

Peak Power Spectral Density



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47925 GHz	2.47925 GHz
Stop Frequency	2.48075 GHz	2.48075 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	300	~ 300
SweepTime	1.500 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

9.5 Spurious RF conducted emissions

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize. Set the marker on the peak of any spurious emission recorded.
5. The level displayed must comply with the limit specified in this Section. Submit these plots.
6. Repeat above procedures until all frequencies measured were complete.

Limit

Frequency Range MHz	Limit (dBc)
30-25000	-20

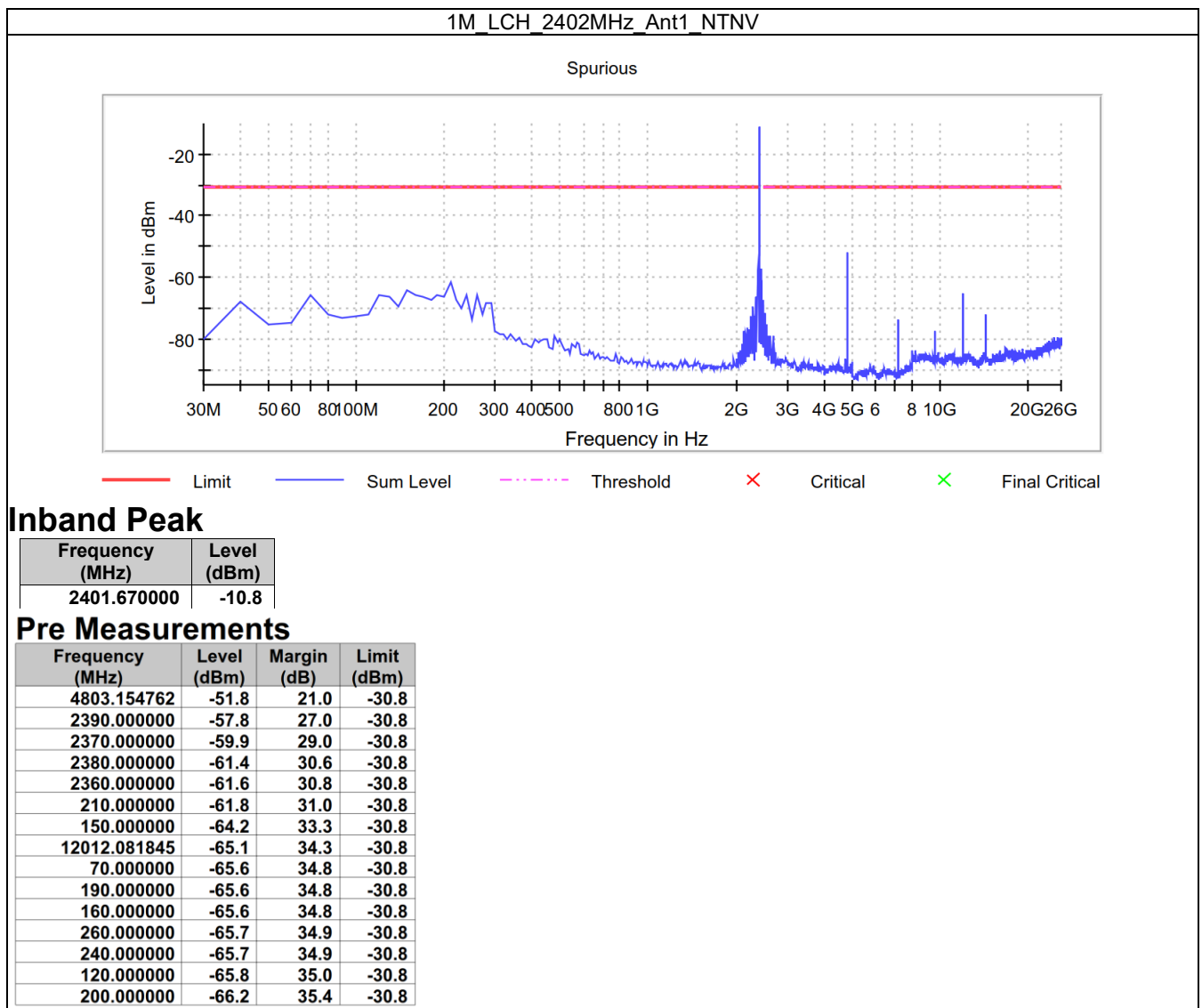
Test Result

Reference level:

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	-10.8
		2440	1	-10.5
		2480	1	-11.9
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.				

Conducted spurious emissions:

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	-10.8	-29.7	Pass
		2440	1	-10.5	-30.3	Pass
		2480	1	-11.9	-31.9	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.						

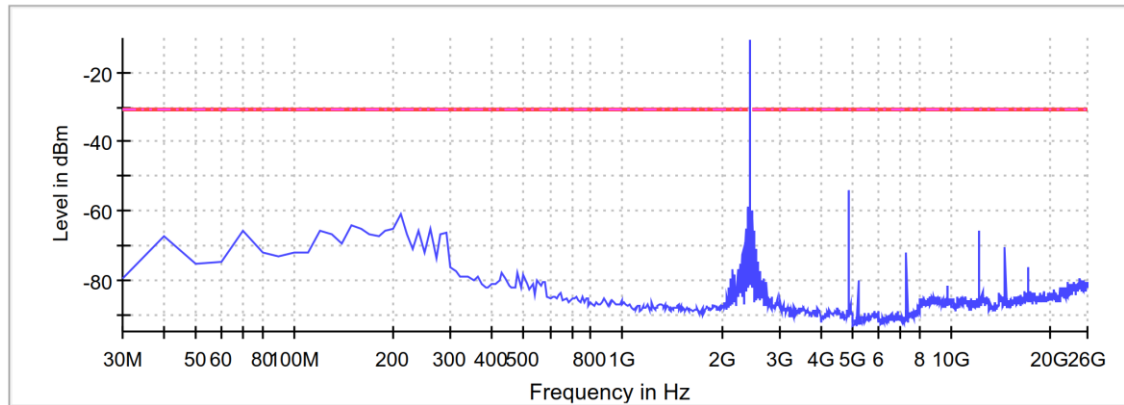


Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
SweepTime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_MCH_2440MHz_Ant1_NTNV

Spurious



— Limit — Sum Level - - - Threshold × Critical × Final Critical

Inband Peak

Frequency (MHz)	Level (dBm)
2440.080000	-10.5

Pre Measurements

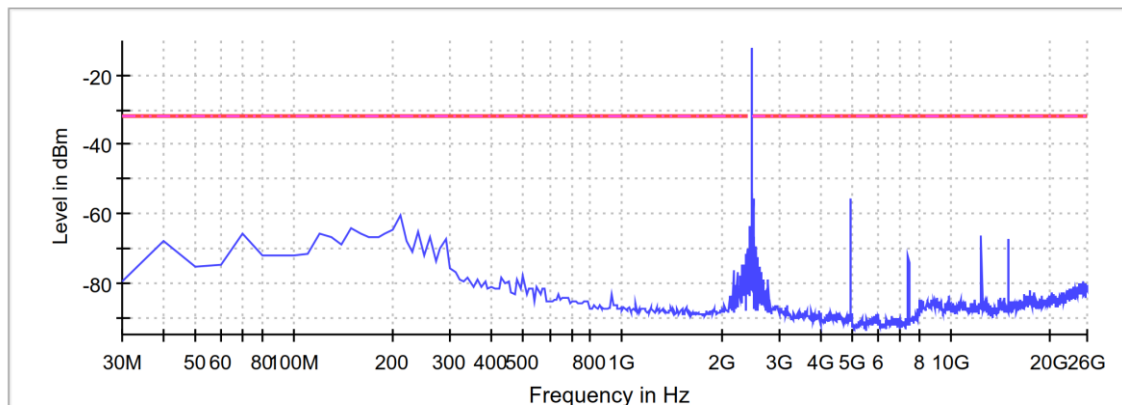
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
4873.144345	-53.9	23.5	-30.5
210.000000	-60.8	30.3	-30.5
150.000000	-64.2	33.7	-30.5
160.000000	-65.1	34.6	-30.5
2360.000000	-65.2	34.7	-30.5
260.000000	-65.3	34.8	-30.5
200.000000	-65.4	34.9	-30.5
70.000000	-65.6	35.1	-30.5
12202.053571	-65.6	35.1	-30.5
190.000000	-65.6	35.2	-30.5
240.000000	-65.7	35.2	-30.5
2513.495536	-65.8	35.3	-30.5
120.000000	-65.8	35.4	-30.5
290.000000	-66.3	35.8	-30.5
280.000000	-66.7	36.2	-30.5

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
SweepTime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_HCH_2480MHz_Ant1_NTNV

Spurious



— Limit — Sum Level - - - Threshold × Critical × Final Critical

Inband Peak

Frequency (MHz)	Level (dBm)
2480.995000	-12.0

Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2493.498512	-55.7	23.7	-32.0
4953.132440	-55.9	23.9	-32.0
210.000000	-60.7	28.7	-32.0
2503.497024	-63.1	31.1	-32.0
150.000000	-64.3	32.3	-32.0
200.000000	-64.7	32.7	-32.0
240.000000	-65.2	33.3	-32.0
70.000000	-65.6	33.6	-32.0
190.000000	-65.6	33.6	-32.0
160.000000	-65.7	33.8	-32.0
120.000000	-65.9	34.0	-32.0
12402.023810	-66.6	34.6	-32.0
130.000000	-66.7	34.7	-32.0
2523.494048	-66.7	34.7	-32.0
260.000000	-66.8	34.8	-32.0

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	238	~ 238
SweepTime	23.700 ms	AUTO
Reference Level	-30.000 dBm	-30.000 dBm
Attenuation	0.000 dB	AUTO
Detector	MaxPeak	MaxPeak

9.6 Band edge testing

Test Method

1. The RF output of EUT was connected to the spectrum analyzer by RF cable. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting, the instrument center frequency is set to the nominal EUT channel center frequency enable the EUT transmit continuously.
3. Use the following spectrum analyzer settings:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
4. Allow the trace to stabilize, use the peak and delta measurement to record the result.
5. The level displayed must comply with the limit specified in this Section.
6. Repeat above procedures until all frequencies measured were complete and submit all the plots.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under § 15.247(b)(3), the attenuation required shall be 30 dB instead of 20 dB.

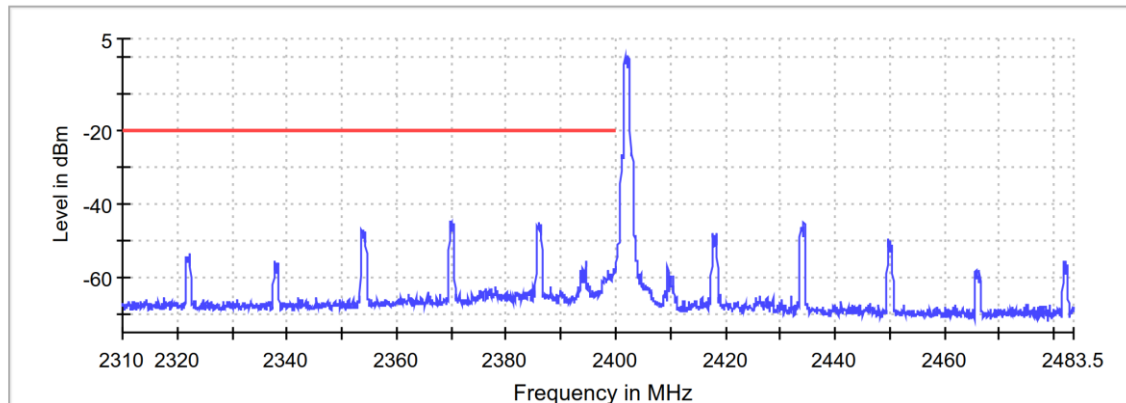
Frequency Range MHz	Limit (dBc)
30-25000	-20

Test result

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	0.2	-19.8	Pass
		2480	1	0.4	-19.6	Pass

1M LCH 2402MHz Ant1 NTVN

Band Edge



— Limit — Sum Level × Fail

Inband Peak

Frequency (MHz)	Level (dBm)
2402.301378	0.2

Measurements

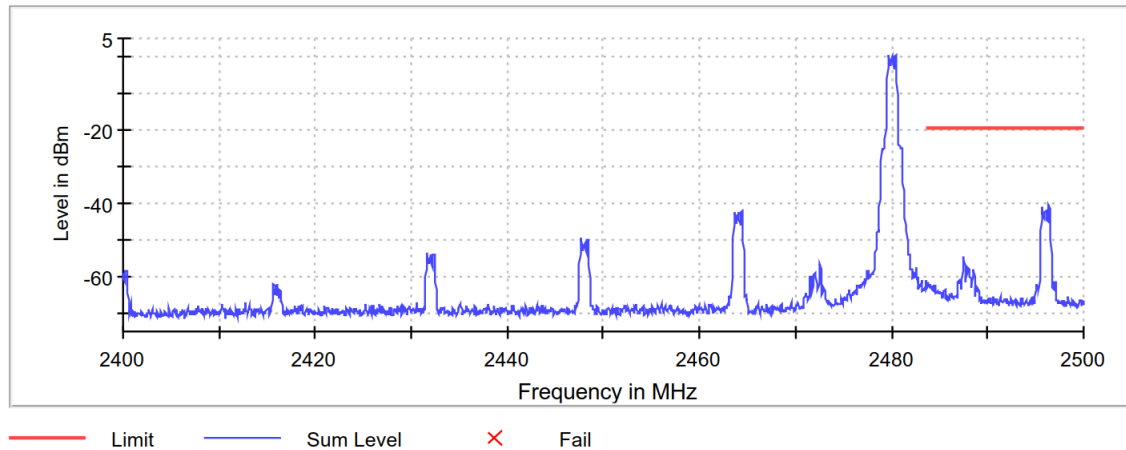
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2369.733185	-44.6	24.8	-19.8	PASS
2369.683157	-44.7	24.9	-19.8	PASS
2386.042246	-44.8	25.0	-19.8	PASS
2369.933296	-45.2	25.4	-19.8	PASS
2386.342412	-45.3	25.6	-19.8	PASS
2370.333519	-45.3	25.6	-19.8	PASS
2369.983324	-45.4	25.7	-19.8	PASS
2370.283491	-45.7	26.0	-19.8	PASS
2369.883268	-45.8	26.0	-19.8	PASS
2385.992218	-45.8	26.0	-19.8	PASS
2370.383546	-45.8	26.0	-19.8	PASS
2369.783213	-46.0	26.2	-19.8	PASS
2386.092273	-46.0	26.2	-19.8	PASS
2370.083380	-46.0	26.2	-19.8	PASS
2386.392440	-46.1	26.3	-19.8	PASS

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.31000 GHz	2.31000 GHz
Stop Frequency	2.40000 GHz	2.40000 GHz
Span	90.000 MHz	90.000 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1800	~ 1800
SweepTime	1.800 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

1M_HCH_2480MHz_Ant1_NTNV

Band Edge



Inband Peak

Frequency (MHz)	Level (dBm)
2480.398143	0.4

Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2496.389058	-40.7	21.0	-19.6	PASS
2495.686930	-41.0	21.4	-19.6	PASS
2496.338906	-41.1	21.5	-19.6	PASS
2495.737082	-41.4	21.8	-19.6	PASS
2495.636778	-41.6	22.0	-19.6	PASS
2496.439210	-41.7	22.0	-19.6	PASS
2496.037994	-41.8	22.1	-19.6	PASS
2496.088146	-42.1	22.5	-19.6	PASS
2495.987842	-42.4	22.8	-19.6	PASS
2495.887538	-43.0	23.4	-19.6	PASS
2495.937690	-43.0	23.4	-19.6	PASS
2495.787234	-43.2	23.6	-19.6	PASS
2496.288754	-43.4	23.8	-19.6	PASS
2496.138298	-43.6	23.9	-19.6	PASS
2495.837386	-44.0	24.3	-19.6	PASS

Measurement 1

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	1670	~ 1670
SweepTime	1.670 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak

9.7 Spurious radiated emissions for transmitter

Test Method

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. Use the following spectrum analyzer settings According to C63.10:
 - 1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz to 120KHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
 - 2) For Peak unwanted emissions Above 1GHz:
Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW ≥ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.
 - 3) Procedures for average unwanted emissions measurements above 1000 MHz
 - a) RBW = 1MHz.
 - b) VBW \ [3 × RBW].
 - c) Detector = RMS (power averaging), if [span / (# of points in sweep)] \ RBW / 2. Satisfying this condition can require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, then the detector mode shall be set to peak.
 - d) Averaging type = power (i.e., rms) (As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode to use linear voltage averaging. Log or dB averaging shall not be used.)
 - e) Sweep time = auto.
 - f) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, then the number of traces shall be increased by a factor of 1 / D, where D is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 100 traces shall be averaged.)
 - g) If tests are performed with the EUT transmitting at a duty cycle less than 98%, then a correction factor shall be added to the measurement results prior to comparing with the emission limit, to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:
 - 1) If power averaging (rms) mode was used in the preceding step e), then the correction factor is $[10 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB shall be added to the measured emission levels.

- 2) If linear voltage averaging mode was used in the preceding step e), then the correction factor is $[20 \log (1 / D)]$, where D is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB shall be added to the measured emission levels.
- 3) If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning ON and OFF with the transmit cycle, then no duty cycle correction is required for that emission(AV) at frequency above 1GHz.

Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under § 15.247(b)(3), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).

Frequency MHz	Field Strength $\mu\text{V/m}$	Field Strength $\text{dB}\mu\text{V/m}$	Detector	Measurement distance meters
0.009-0.490	2400/F(kHz)	48.5-13.8	AV	300
0.490-1.705	24000/F(kHz)	33.8-23.0	QP	30
1.705-30	30	29.5	QP	30
30-88	100	40	QP	3
88-216	150	43.5	QP	3
216-960	200	46	QP	3
960-1000	500	54	QP	3
Above 1000	500	54	AV	3
Above 1000	5000	74	PK	3

Note 1: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 300\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(300\text{m}/3\text{m})$ (Below 30MHz)

Note 2: Limit $3\text{m}(\text{dB}\mu\text{V/m}) = \text{Limit } 30\text{m}(\text{dB}\mu\text{V/m}) + 40\text{Log}(30\text{m}/3\text{m})$ (Below 30MHz)

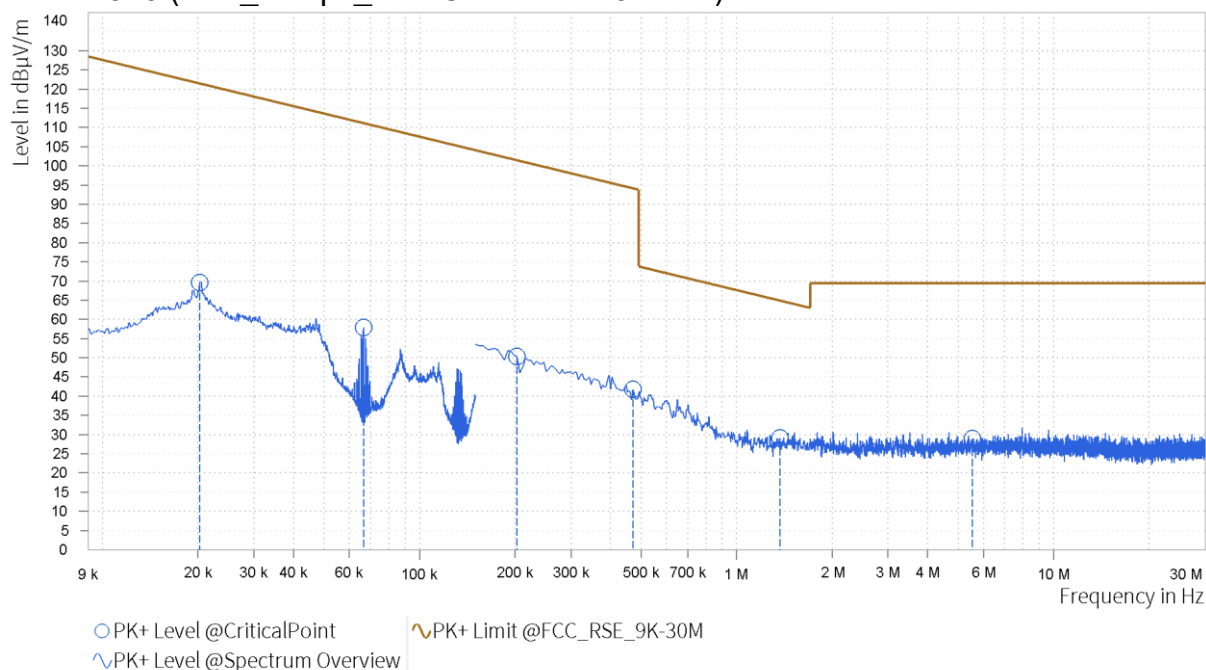
Spurious radiated emissions for transmitter

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Transmitting spurious emission test result as below:

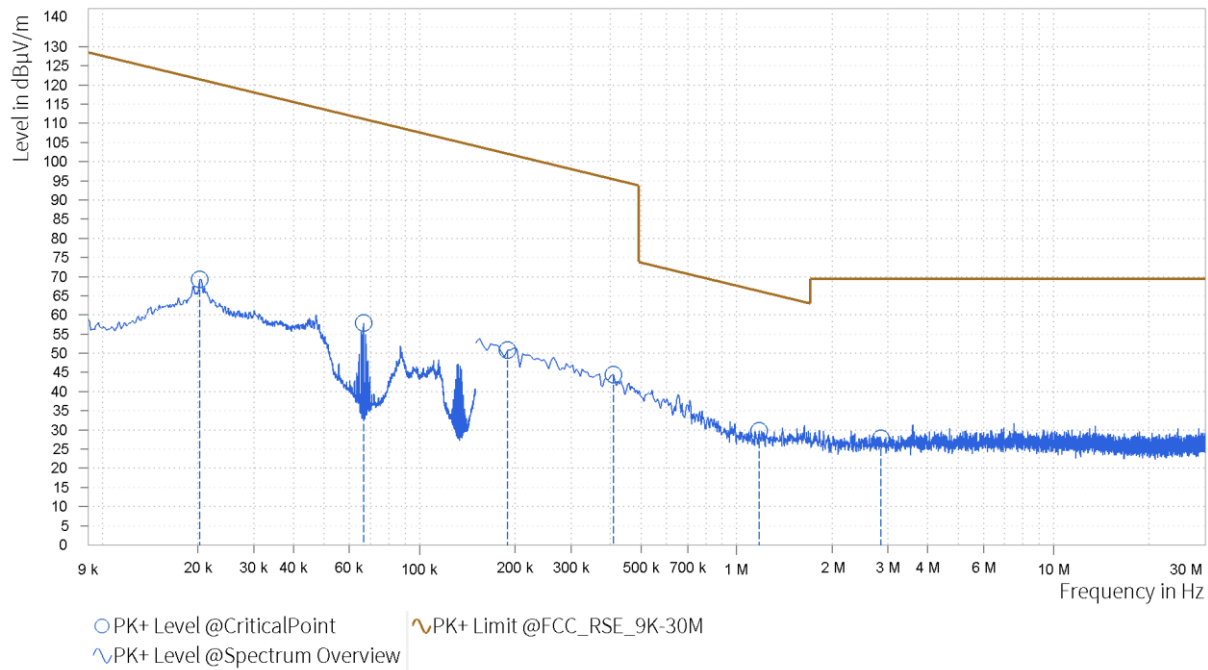
Emission 9kHz-30MHz

Model: 528 (BLE_1Mbps_Low Channel: 2402MHz)



EMI Critical Points

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Antenna Height [m]
1	0.020	69.55	121.45	51.90	20.60	H	1.00
1	0.067	57.93	111.13	53.21	20.67	H	1.00
2	0.203	50.41	101.46	51.06	20.59	H	1.00
2	0.470	41.81	94.15	52.34	20.60	H	1.00
2	1.366	29.08	64.92	35.84	20.61	H	1.00
2	5.536	28.98	69.50	40.52	20.78	H	1.00



EMI Critical Points

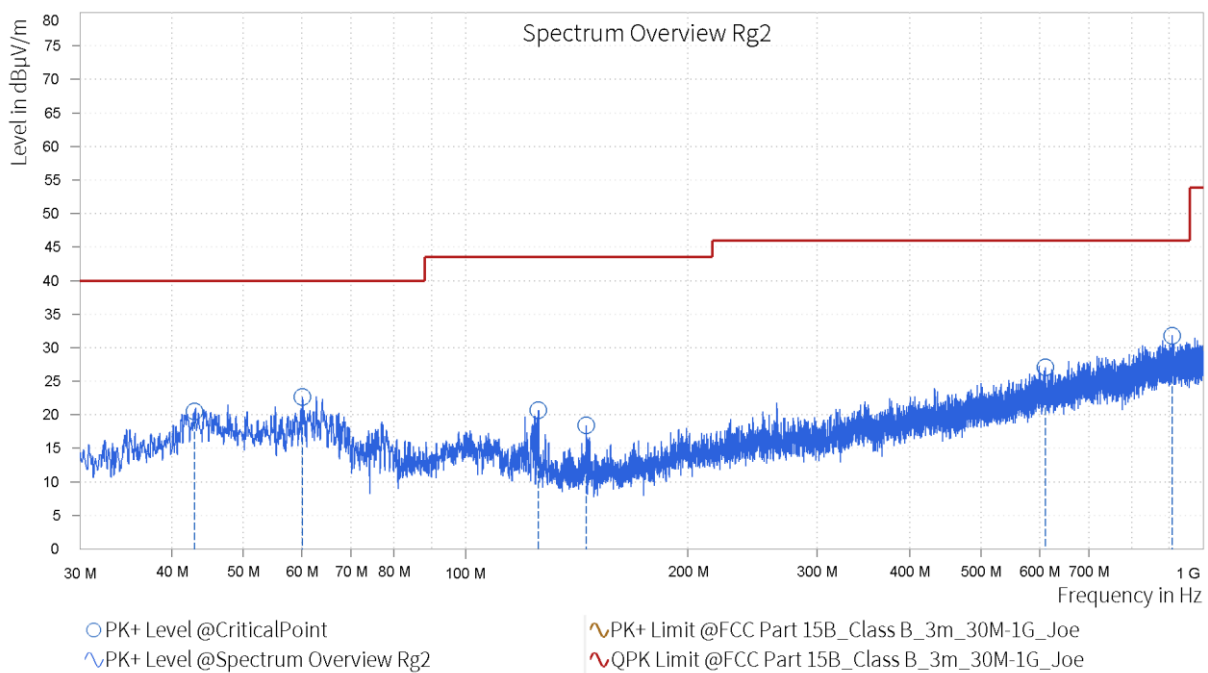
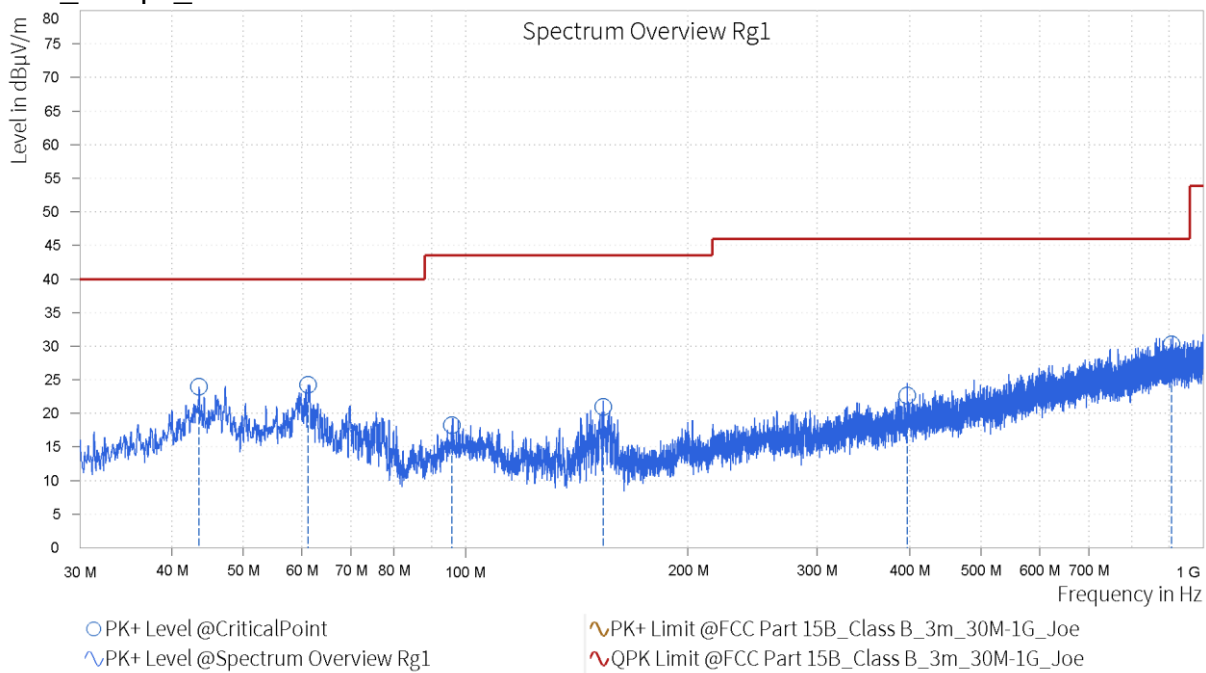
Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Antenna Height [m]
1	0.020	69.23	121.45	52.21	20.60	V	1.00
1	0.067	57.89	111.13	53.24	20.67	V	1.00
2	0.190	50.88	102.05	51.17	20.60	V	1.00
2	0.409	44.49	95.37	50.88	20.61	V	1.00
2	1.177	29.78	66.21	36.43	20.62	V	1.00
2	2.850	27.82	69.50	41.68	20.68	V	1.00

Remark: the test was performed for Low, Middle, High channel, and the worst channel data was recorded in the report.

Emission 30MHz-1GHz

Model: 528

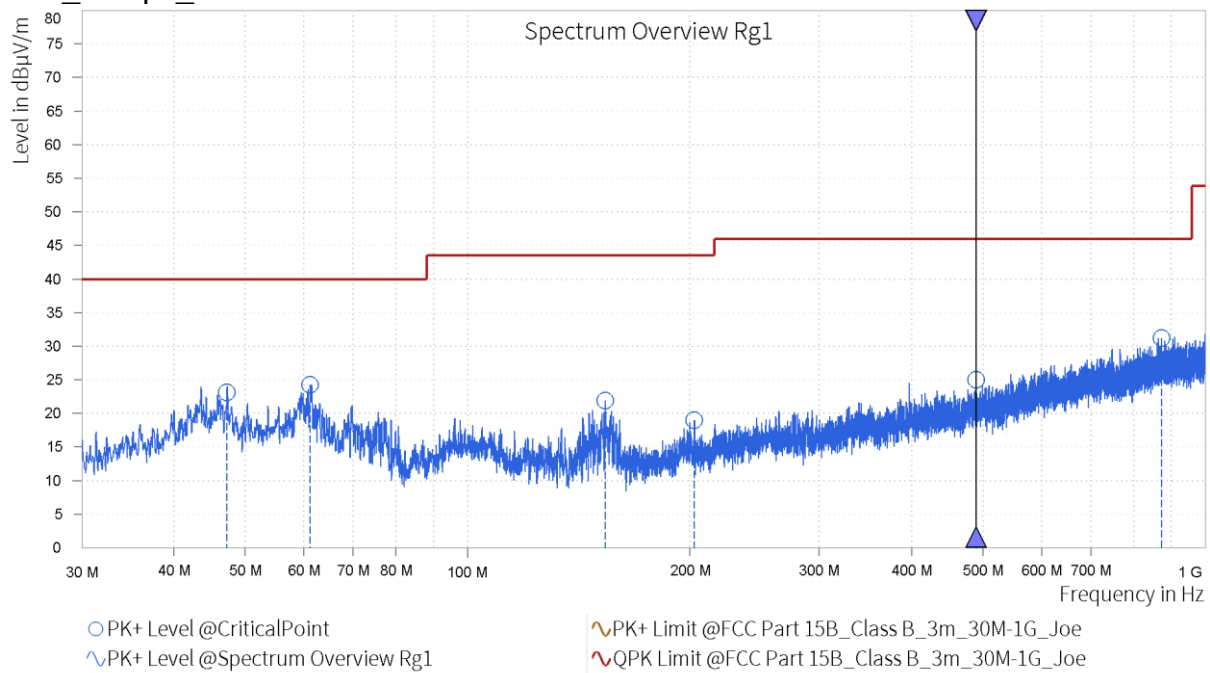
BLE_1Mbps_Low Channel: 2402MHz

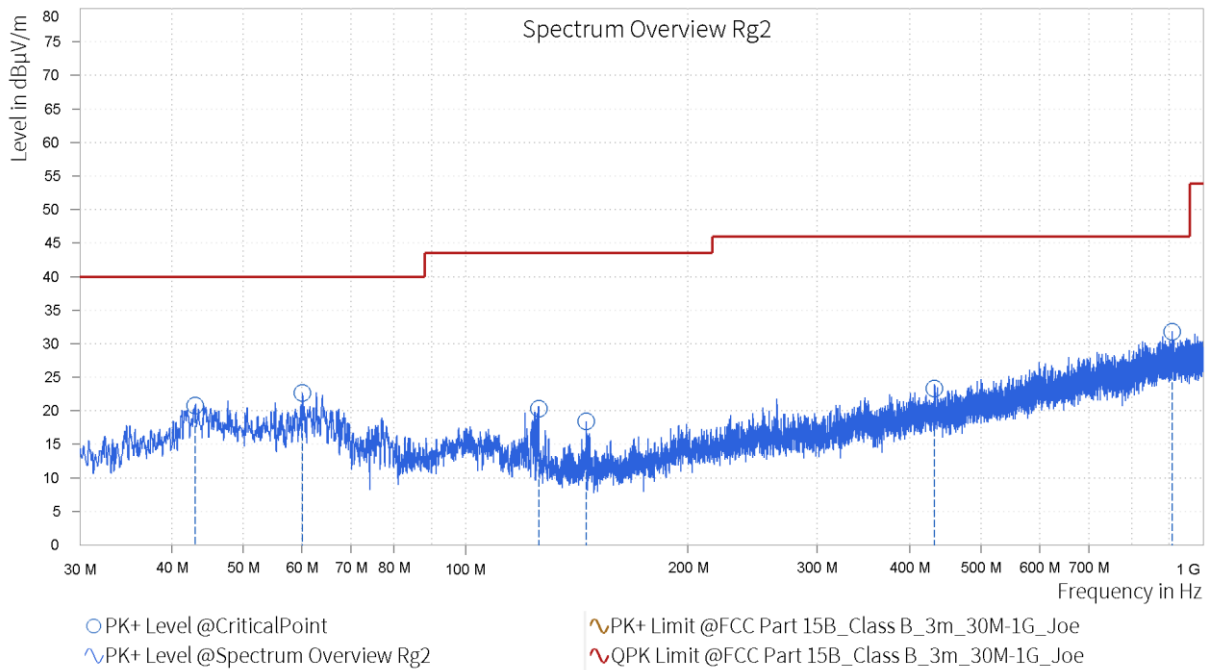


EMI Critical Points

Rg	Frequency [MHz]	PK+ Level [dB μ V/m]	PK+ Limit [dB μ V/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	43.526	24.00	40.00	16.00	-14.10	V	0	1.00
1	61.202	24.26	40.00	15.74	-16.32	V	115.8	1.00
1	95.798	18.24	43.50	25.26	-17.44	V	258.8	1.00
1	153.891	21.01	43.50	22.49	-20.71	V	164.6	1.00
1	397.414	22.65	46.00	23.35	-13.09	V	147.1	1.00
1	906.449	30.26	46.00	15.74	-4.60	V	70.4	1.00
2	42.933	20.53	40.00	19.47	-14.13	H	132.3	1.00
2	60.124	22.69	40.00	17.31	-16.02	H	328.3	1.00
2	125.653	20.66	43.50	22.84	-19.85	H	38.4	1.00
2	145.861	18.39	43.50	25.11	-20.99	H	262.3	1.00
2	611.030	27.05	46.00	18.95	-8.97	H	213.8	1.00
2	907.581	31.77	46.00	14.23	-4.57	H	38.4	1.00

BLE_1Mbps_Middle Channel: 2440MHz

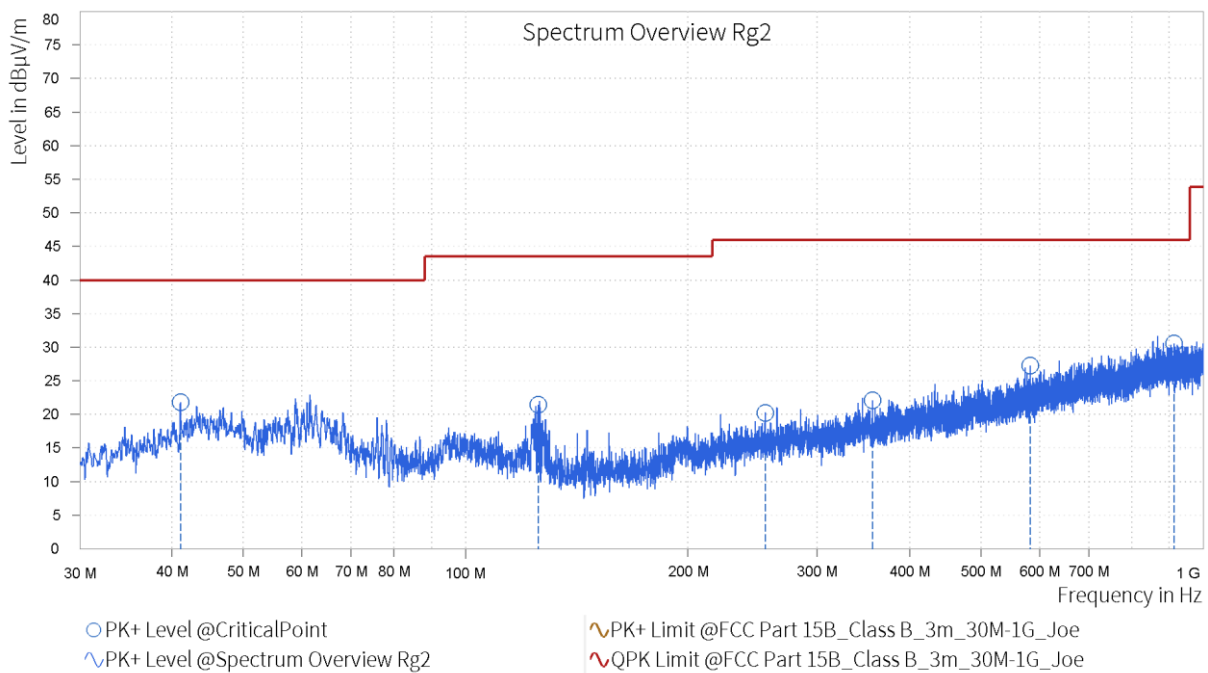
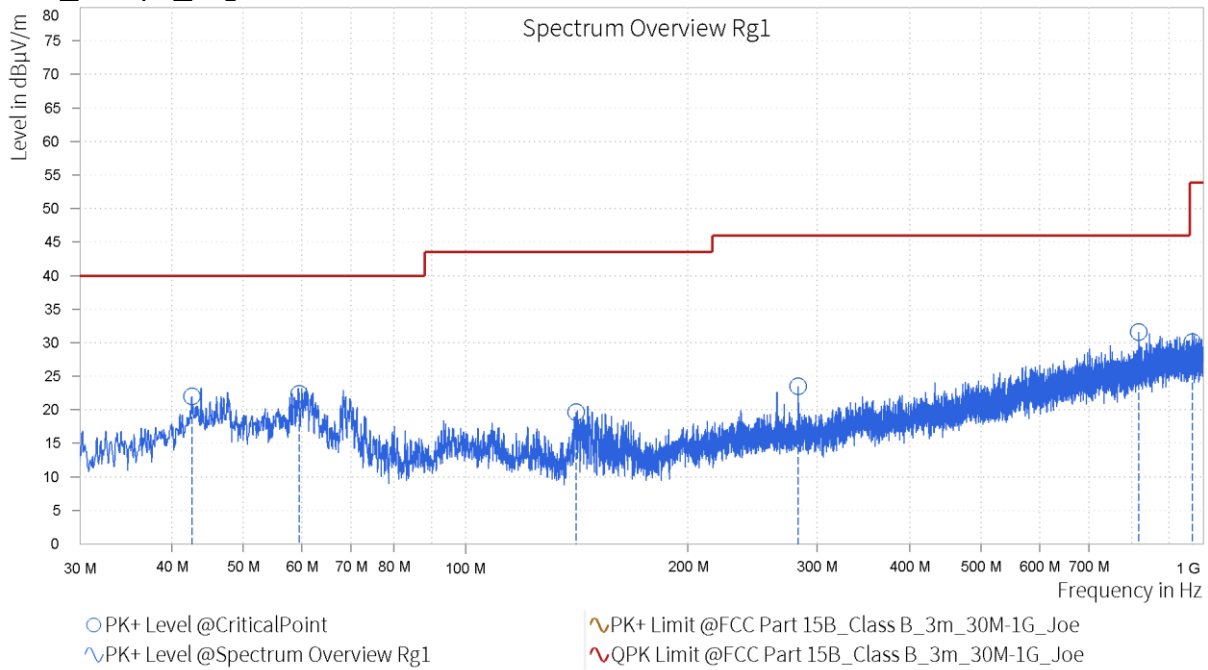




EMI Critical Points

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	47.191	23.09	40.00	16.91	-13.78	V	258.8	1.00
1	61.202	24.26	40.00	15.74	-16.32	V	115.8	1.00
1	153.837	21.91	43.50	21.59	-20.71	V	164.6	1.00
1	203.145	18.99	43.50	24.51	-17.89	V	359.9	1.00
1	489.187	25.00	46.00	21.00	-11.13	V	241.4	1.00
1	872.176	31.25	46.00	14.75	-4.93	V	305.7	1.00
2	43.041	20.77	40.00	19.23	-14.12	H	38.4	1.00
2	60.124	22.69	40.00	17.31	-16.02	H	328.3	1.00
2	125.707	20.33	43.50	23.17	-19.86	H	38.4	1.00
2	145.861	18.39	43.50	25.11	-20.99	H	262.3	1.00
2	432.496	23.30	46.00	22.70	-12.49	H	328.3	1.00
2	907.581	31.77	46.00	14.23	-4.57	H	38.4	1.00

BLE_1Mbps_High Channel: 2480MHz



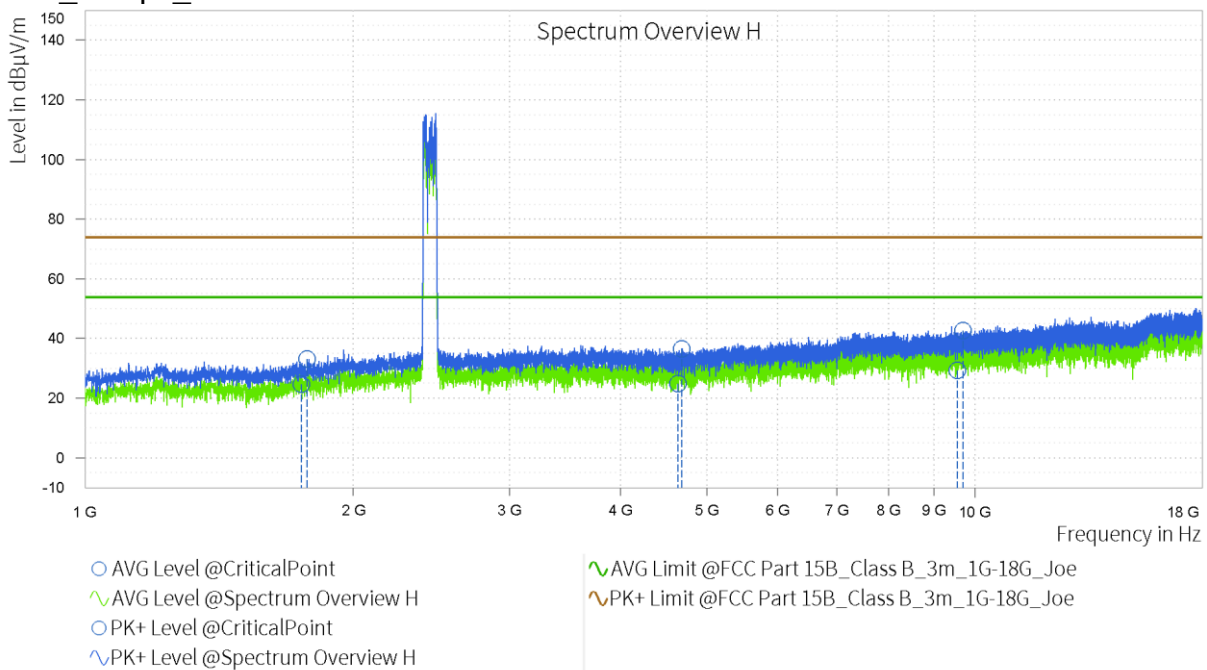
EMI Critical Points

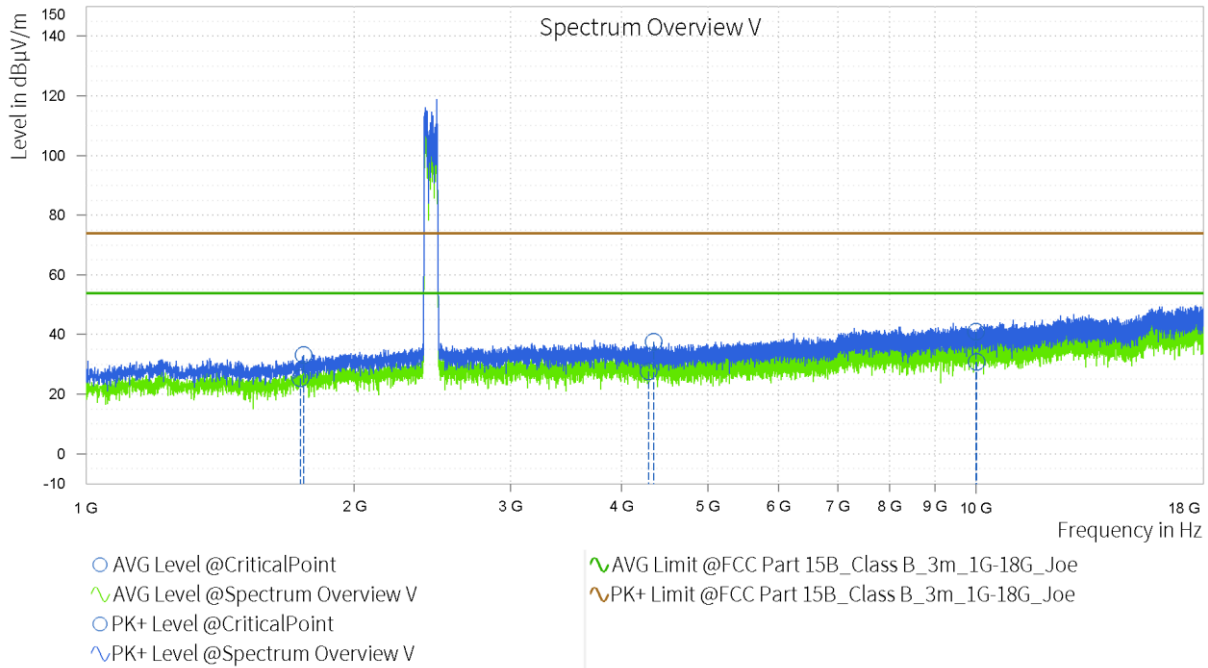
Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	Correction [dB]	Polarization	Azimuth [deg]	Antenna Height [m]
1	42.556	21.99	40.00	18.01	-14.15	V	77.8	1.00
1	59.531	22.38	40.00	17.62	-15.87	V	95.3	1.00
1	141.173	19.65	43.50	23.85	-20.91	V	357.5	1.00
1	282.631	23.47	46.00	22.53	-15.76	V	187.9	1.00
1	818.125	31.60	46.00	14.40	-5.75	V	34.2	1.00
1	967.828	30.11	53.90	23.79	-4.19	V	0	1.00
2	41.101	21.85	40.00	18.15	-14.41	H	170.1	1.00
2	125.437	21.42	43.50	22.08	-19.83	H	305.5	1.00
2	254.986	20.24	46.00	25.76	-15.89	H	239.5	1.00
2	356.405	22.05	46.00	23.95	-14.22	H	204.8	1.00
2	582.900	27.25	46.00	18.75	-9.74	H	46.8	1.00
2	912.646	30.58	46.00	15.42	-4.57	H	13.9	1.00

Emission above 1-18GHz

Model: 528

BLE_1Mbps_Low Channel: 2402MHz



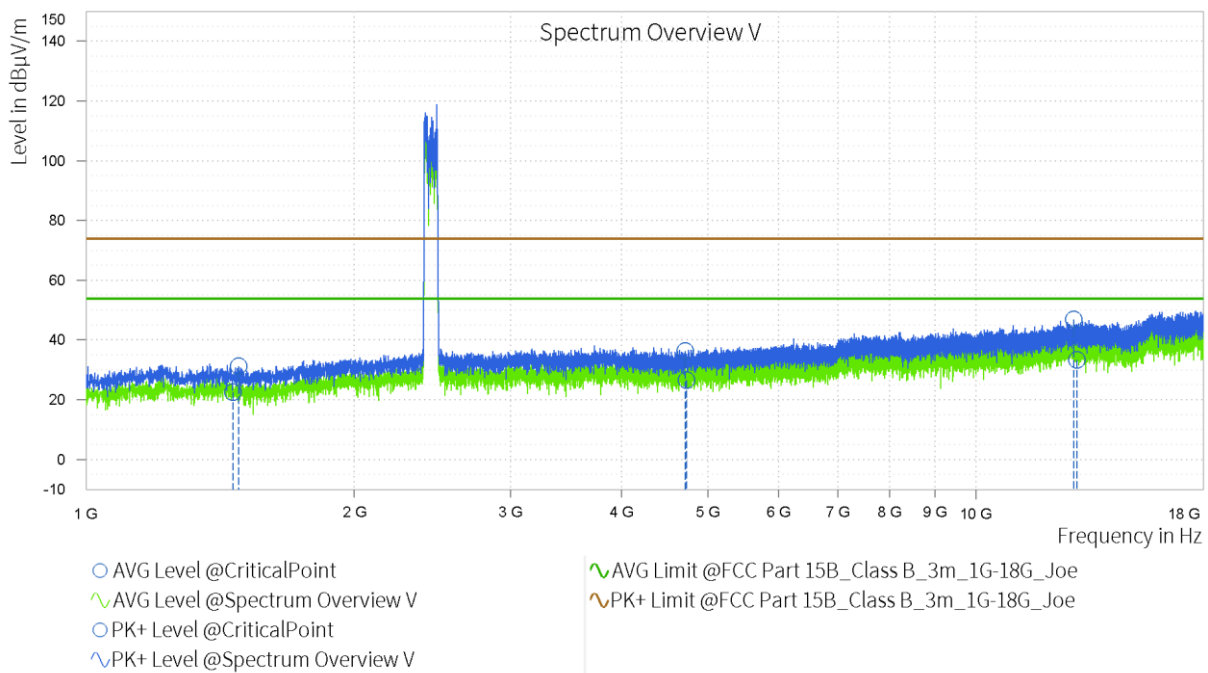
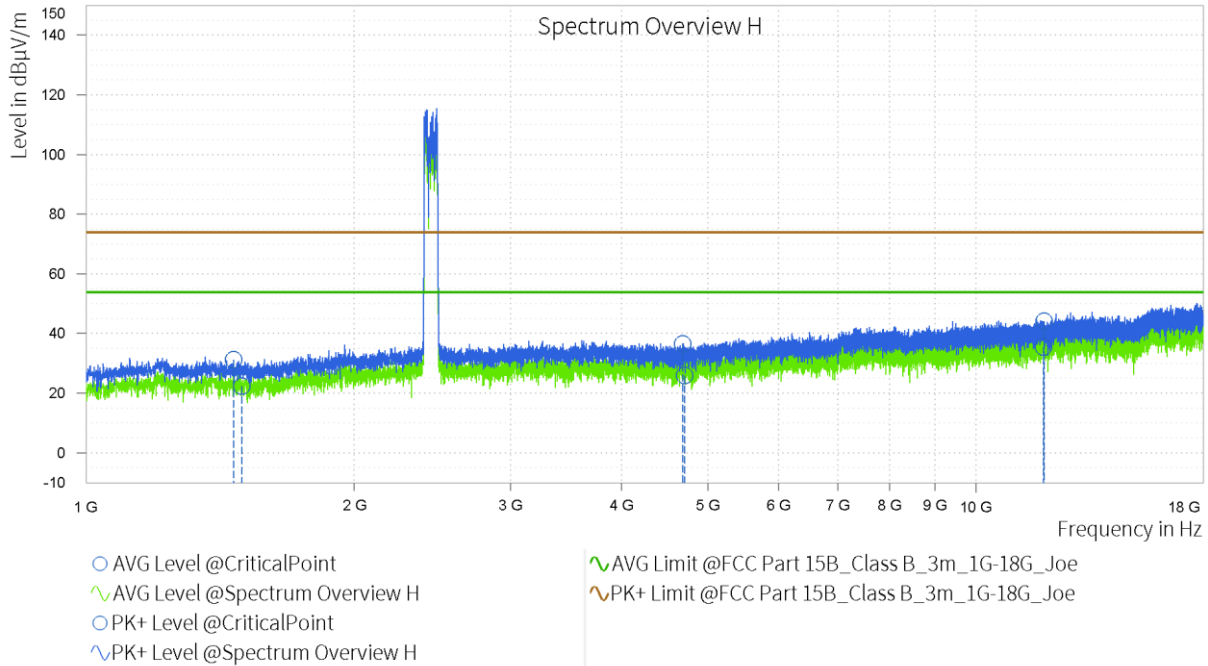


EMI Critical Points

Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization
1	1,741.000		73.90		25.27	53.90	28.63	-20.31	V
1	1,751.500		73.90		24.65	53.90	29.25	-20.22	H
1	1,756.500	33.14	73.90	40.76		53.90		-20.20	V
1	1,776.000	33.16	73.90	40.74		53.90		-19.83	H
1	4,290.000		73.90		27.52	53.90	26.38	-11.35	V
1	4,347.500	37.66	73.90	36.24		53.90		-11.41	V
1	4,635.000		73.90		24.88	53.90	29.02	-10.85	H
1	4,681.500	36.40	73.90	37.50		53.90		-10.83	H
1	9,554.500		73.90		29.21	53.90	24.69	-7.56	H
1	9,693.500	42.69	73.90	31.21		53.90		-7.54	H
1	10,010.500	40.87	73.90	33.03		53.90		-7.17	V
1	10,015.000		73.90		30.76	53.90	23.14	-7.15	V

Remark: Data of measurement over the limit in frequency ranges 1-18GHz are fundamental frequency of BT.

BLE_1Mbps_Middle Channel: 2440MHz

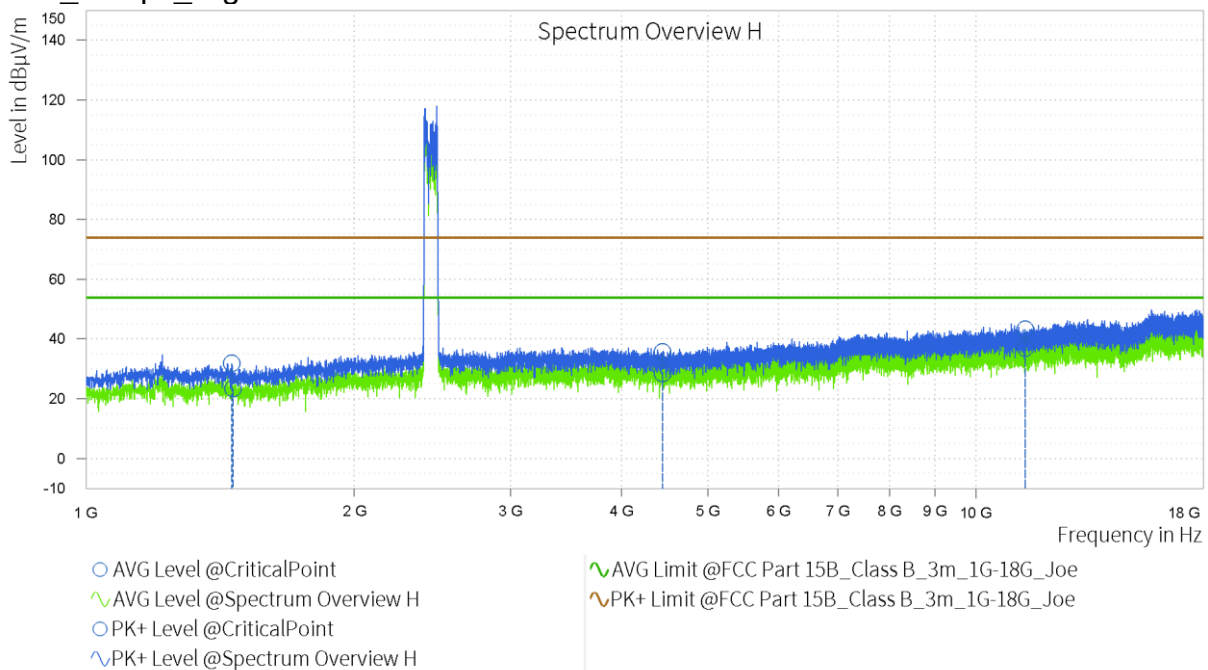


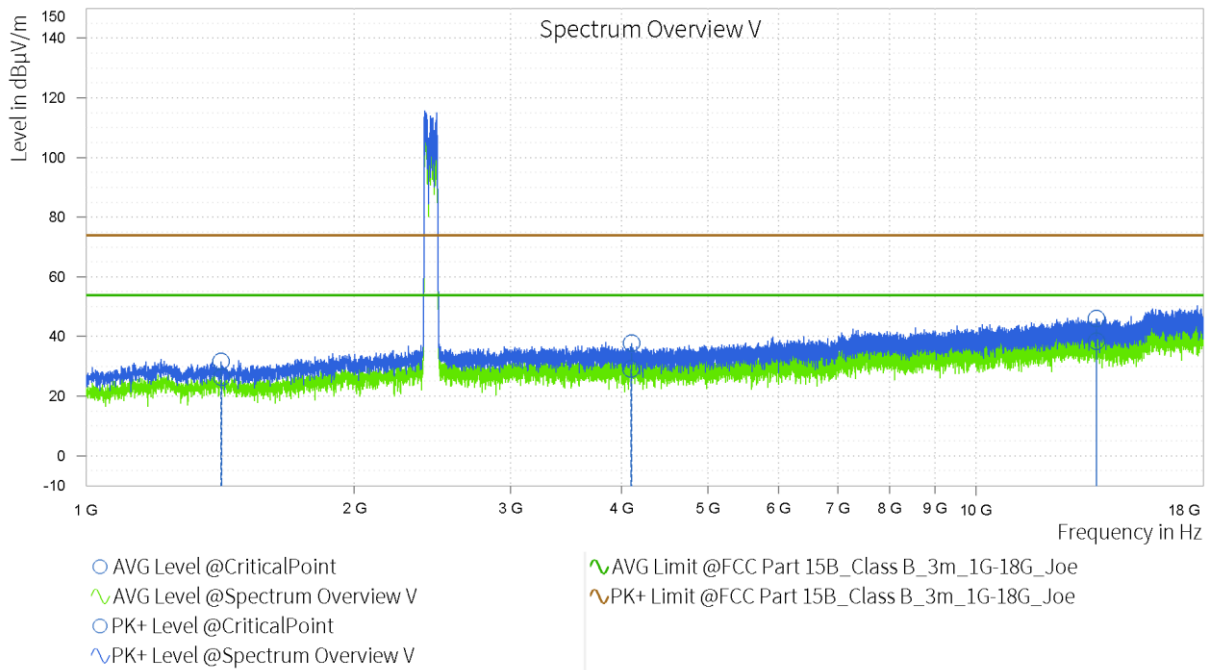
Remark: Data of measurement over the limit in frequency ranges 1-18GHz are fundamental frequency of BT.

EMI Critical Points

Rg	Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization
1	1,463.000		73.90		22.60	53.90	31.30	-21.96	V
1	1,464.500	31.30	73.90	42.60		53.90		-21.96	H
1	1,485.000	31.14	73.90	42.76		53.90		-22.03	V
1	1,495.500		73.90		22.33	53.90	31.57	-22.03	H
1	4,681.500	36.40	73.90	37.50		53.90		-10.83	H
1	4,707.000		73.90		25.89	53.90	28.01	-10.87	H
1	4,714.000	36.23	73.90	37.67		53.90		-10.88	V
1	4,731.000		73.90		26.62	53.90	27.28	-10.91	V
1	11,911.000		73.90		35.39	53.90	18.51	-5.21	H
1	11,932.000	44.10	73.90	29.80		53.90		-5.24	H
1	12,891.500	46.93	73.90	26.97		53.90		-4.17	V
1	12,996.000		73.90		33.23	53.90	20.67	-4.08	V

BLE_1Mbps_High Channel: 2480MHz





EMI Critical Points

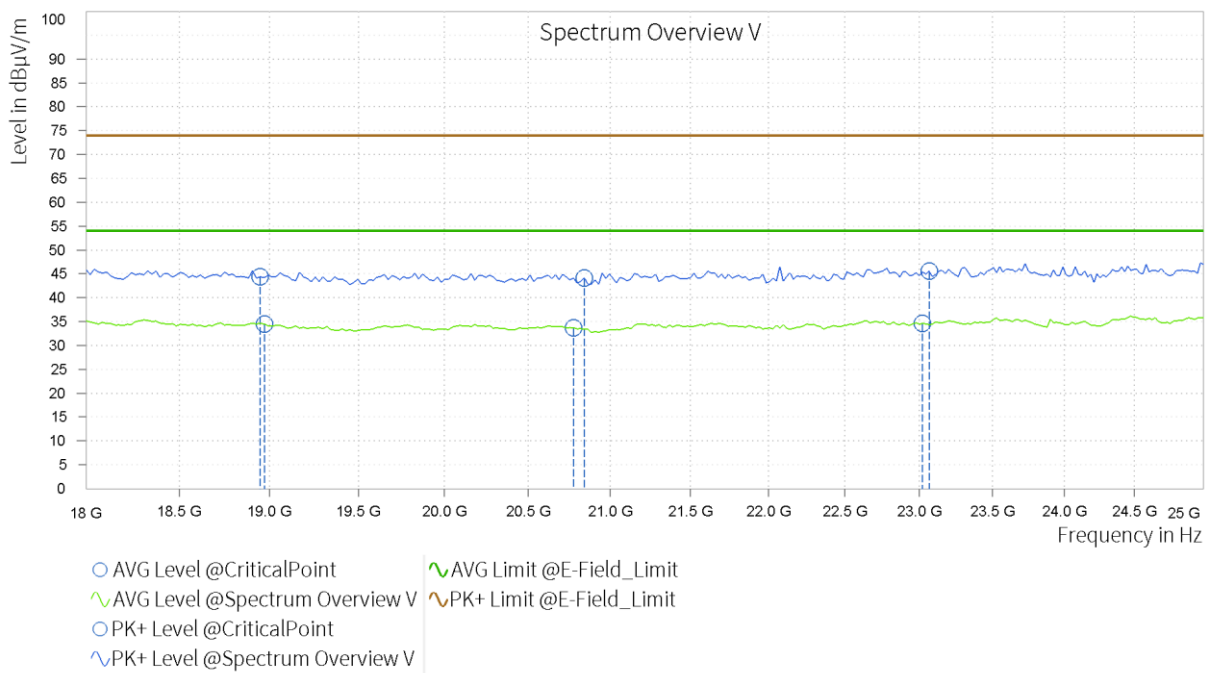
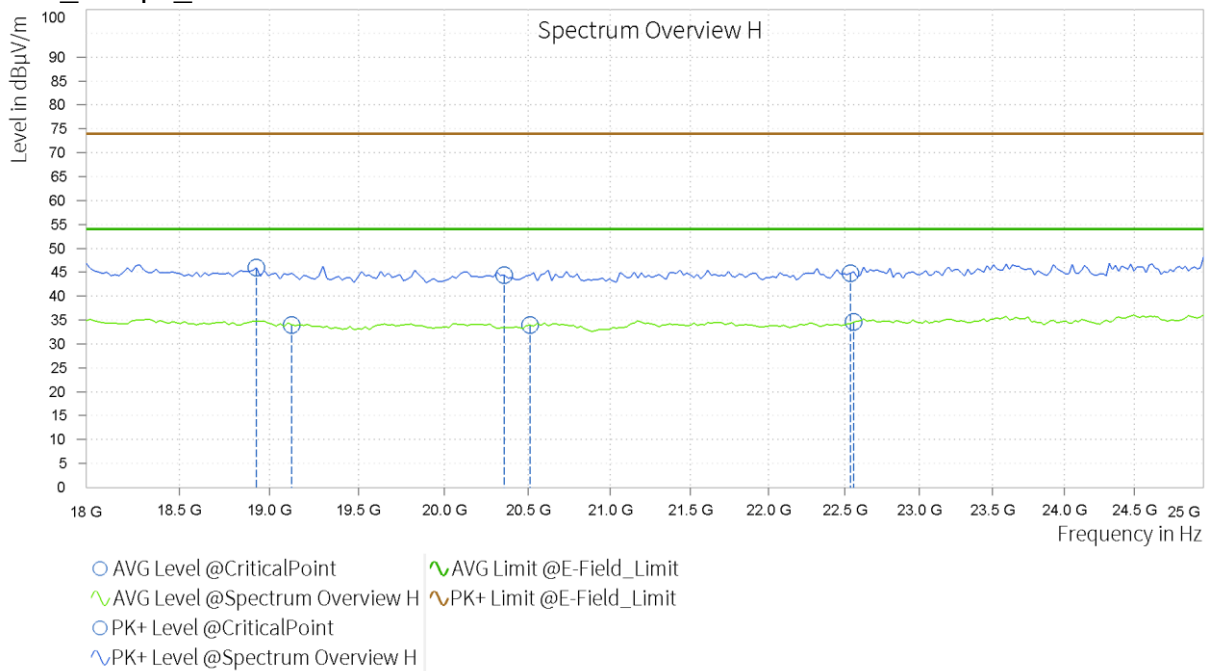
Rg	Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]
1	1,418.000	31.56	73.90	42.34		53.90		-21.78
1	1,421.000	26.41	73.90	47.49		53.90		-21.75
1	1,459.000	31.80	73.90	42.10		53.90		-21.97
1	1,463.000		73.90		23.36	53.90	30.54	-21.96
1	4,099.000		73.90		29.03	53.90	24.87	-12.03
1	4,103.000	37.70	73.90	36.20		53.90		-12.03
1	4,444.500		73.90		28.42	53.90	25.48	-10.92
1	4,447.500	35.76	73.90	38.14		53.90		-10.89
1	11,359.500	43.27	73.90	30.63		53.90		-6.02
1	11,362.000		73.90		37.02	53.90	16.88	-6.02
1	13,653.500	45.91	73.90	27.99		53.90		-4.09
1	13,655.500		73.90		38.47	53.90	15.43	-4.10

Remark: Data of measurement over the limit in frequency ranges 1-18GHz are fundamental frequency of BT.

Emission 18GHz-25GHz

Model: 528

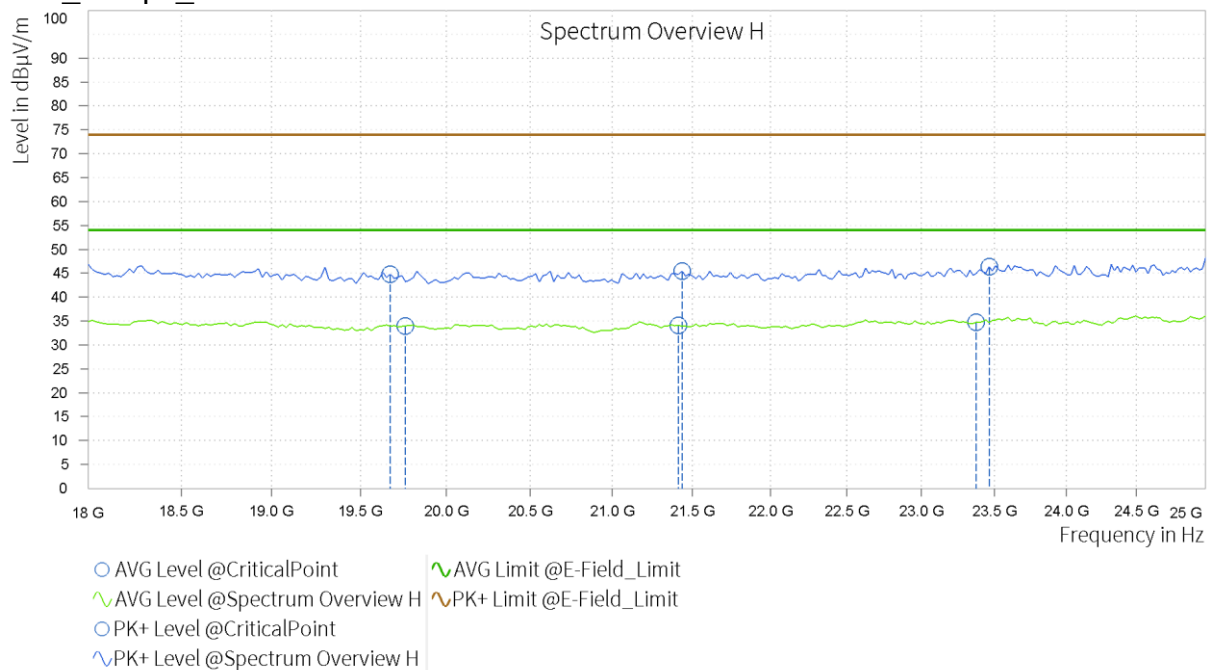
BLE_1Mbps_Low Channel: 2402MHz

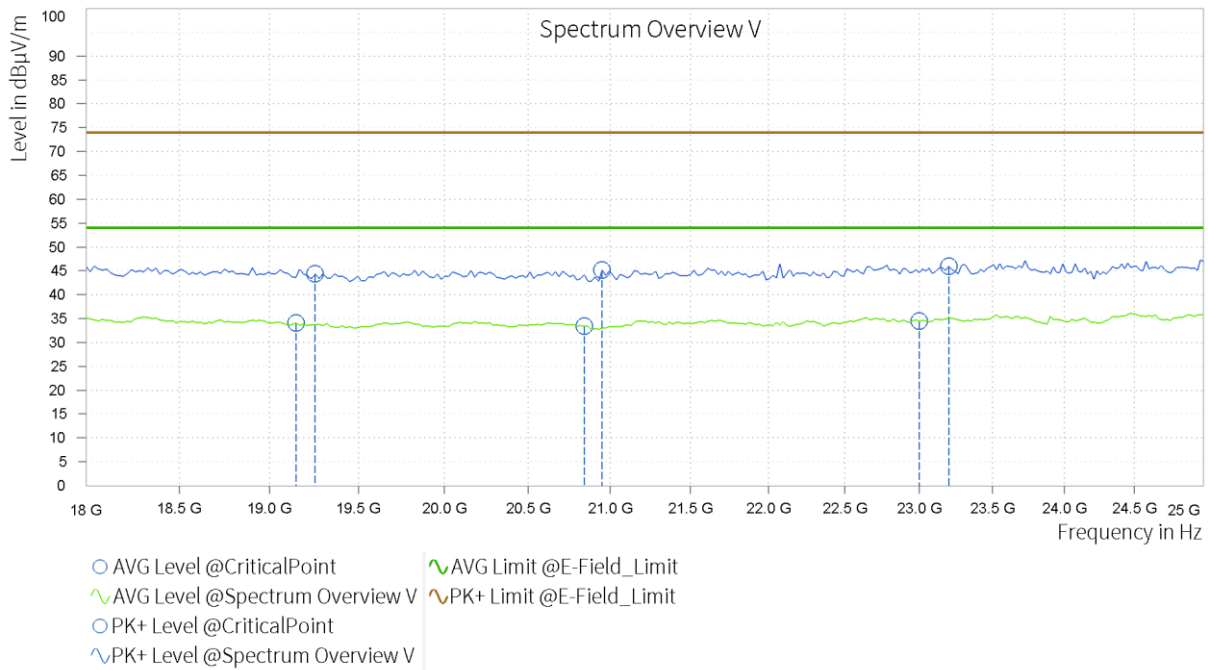


EMI Critical Points

Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization
18,924.925	45.92	74.00	28.08		54.00		-11.52	H
19,123.123		74.00		33.98	54.00	20.02	-11.66	H
20,356.356	44.42	74.00	29.58		54.00		-12.21	H
20,510.511		74.00		33.93	54.00	20.07	-12.34	H
22,536.537	44.79	74.00	29.21		54.00		-11.85	H
22,558.559		74.00		34.55	54.00	19.45	-11.83	H
18,946.947	44.38	74.00	29.62		54.00		-11.44	V
18,968.969		74.00		34.48	54.00	19.52	-11.35	V
20,840.841	44.14	74.00	29.86		54.00		-12.61	V
20,774.775		74.00		33.71	54.00	20.29	-12.47	V
23,065.065	45.55	74.00	28.45		54.00		-11.31	V
23,021.021		74.00		34.61	54.00	19.39	-11.29	V

BLE_1Mbps_Middle Channel: 2440MHz

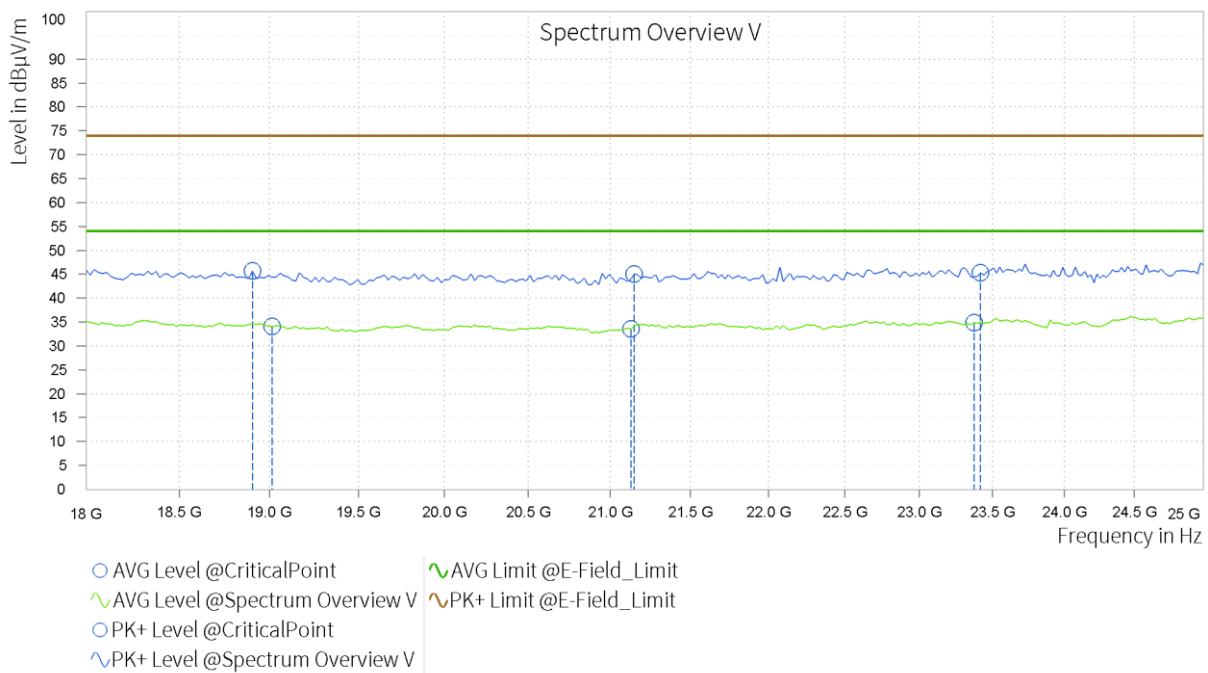
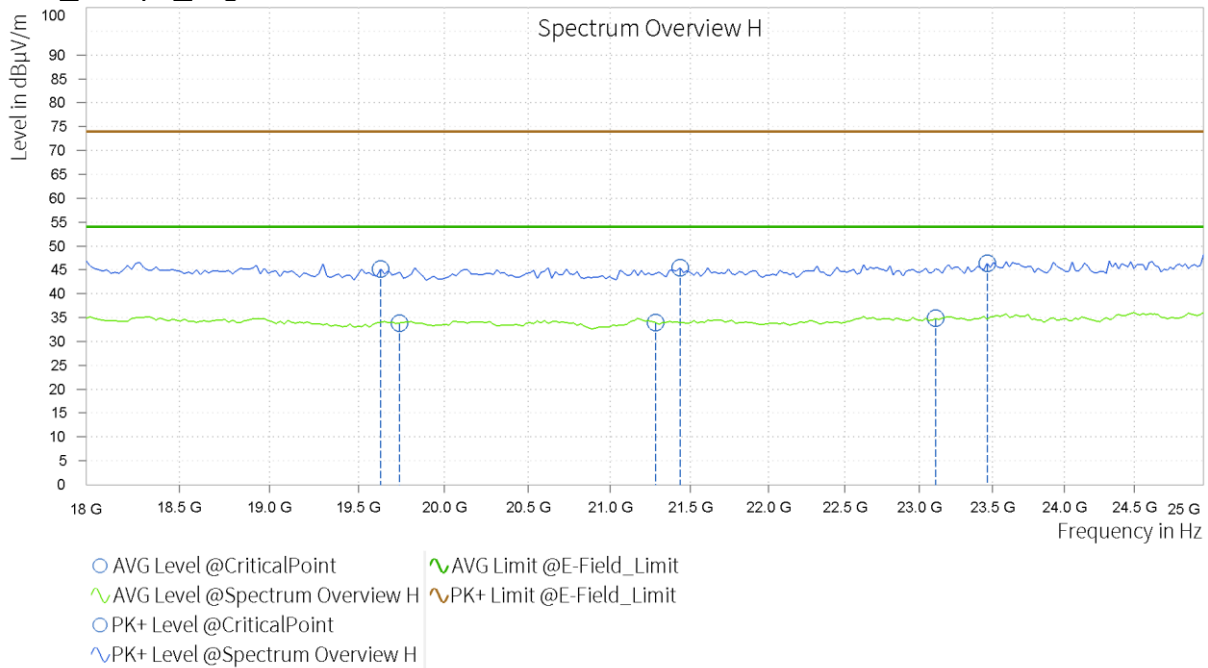




EMI Critical Points

Frequency [MHz]	PK+ Level [dBµV/m]	PK+ Limit [dBµV/m]	PK+ Margin [dB]	AVG Level [dBµV/m]	AVG Limit [dBµV/m]	AVG Margin [dB]	Correction [dB]	Polarization
19,673.674	44.81	74.00	29.19		54.00		-12.00	H
19,761.762		74.00		34.01	54.00	19.99	-11.90	H
21,435.435	45.49	74.00	28.51		54.00		-11.97	H
21,413.413		74.00		34.14	54.00	19.86	-11.97	H
23,461.461	46.43	74.00	27.57		54.00		-10.83	H
23,373.373		74.00		34.72	54.00	19.28	-11.01	H
19,255.255	44.34	74.00	29.66		54.00		-12.05	V
19,145.145		74.00		34.08	54.00	19.92	-11.74	V
20,950.951	45.20	74.00	28.80		54.00		-12.83	V
20,840.841		74.00		33.36	54.00	20.64	-12.61	V
23,197.197	45.91	74.00	28.09		54.00		-11.32	V
22,998.999		74.00		34.49	54.00	19.51	-11.29	V

BLE_1Mbps_High Channel: 2480MHz



EMI Critical Points

Frequency [MHz]	PK+ Level [dBμV/m]	PK+ Limit [dBμV/m]	PK+ Margin [dB]	AVG Level [dBμV/m]	AVG Limit [dBμV/m]	AVG Margin [dB]	Correction [dB]	Polarization
19,629.630	45.21	74.00	28.79		54.00		-12.05	H
19,739.740		74.00		33.86	54.00	20.14	-11.92	H
21,435.435	45.49	74.00	28.51		54.00		-11.97	H
21,281.281		74.00		33.98	54.00	20.02	-12.04	H
23,461.461	46.43	74.00	27.57		54.00		-10.83	H
23,109.109		74.00		34.81	54.00	19.19	-11.33	H
18,902.903	45.64	74.00	28.36		54.00		-11.60	V
19,013.013		74.00		34.06	54.00	19.94	-11.28	V
21,149.149	45.04	74.00	28.96		54.00		-12.43	V
21,127.127		74.00		33.51	54.00	20.49	-12.50	V
23,417.417	45.34	74.00	28.66		54.00		-10.91	V
23,373.373		74.00		34.84	54.00	19.16	-11.01	V

Remark:

- (1) Data of measurement over the limit in frequency ranges 1-18GHz are fundamental frequency of BT.
- (2) Level= Reading Level + Correction Factor
- (3) Above 1GHz: Corrector factor = Antenna Factor + Cable Loss- Amplifier Gain
Below 1GHz: Corrector factor = Antenna Factor + Cable Loss
(The Reading Level is recorded by software which is not shown in the sheet)

10 Test Equipment List

Conducted Emission Test

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal interval (year)	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESR 7	64-2-63-20-002	102240	1	2025-10-28
LISN	SCHWARZBECK	NNLK-8140	64-2-60-20-001	00136	1	2025-10-29
Testing Software	R&S	EMC32	64-2-26-20-003	V 10.60.20	N/A	N/A
10m SAC Control Room	TDK	SAC10-CR	64-2-90-20-007	----	3	2026-09-06

Radiated Emission Test, SAC-3

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal interval (year)	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESW44	64-2-63-24-003	103390	1	2026-07-28
Horn Antenna	Schwarzbeck	BBHA 9120D	64-2-62-20-004	02152	1	2025-11-15
Wave Guide Antenna	ETS	3117	64-2-62-24-005	269095	1	2026-08-06
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9162	64-2-62-20-001	00341	1	2025-10-31
Circular magnetic loop	Schwarzbeck	FESP 5133-7/41	64-2-62-21-002	Circular magnetic loop	1	2026-03-27
3m Semi-anechoic chamber	TDK	SAC-3	64-2-90-20-004	----	3	2026-09-04
Testing Software	R&S	ELEKTRA	64-2-26-24-002	V 5.04.0	N/A	N/A

RF Conducted Test

Description	Manufacturer	Model no.	Equipment ID	Serial no.	Cal interval (year)	Cal. due date
EMI Test Receiver	Rohde & Schwarz	ESW44	64-2-63-24-003	103390	1	2026-07-28
Testing Software	R&S	RF Test Suite	64-2-26-24-001	V 12.00.00	N/A	N/A
10m SAC Control Room	TDK	SAC10-CR	64-2-90-20-007	N/A	3	2026-09-06

11 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

System Measurement Uncertainty	
Test Items	Extended Uncertainty
Uncertainty for Conducted Emission in new shielding room 150kHz-30MHz	2.84dB
Uncertainty for Radiated Emission in 3m chamber 9kHz-30MHz	4.32dB
Uncertainty for Radiated Emission in 3m chamber 30MHz-1000MHz	Horizontal: 4.14dB; Vertical: 5.52dB
Uncertainty for Radiated Emission in 3m chamber 1000MHz-18000MHz	5.13dB
Uncertainty for Radiated Emission in 3m chamber above 18000MHz	5.72
Uncertainty for Conducted RF test with TS 8997	RF Power Conducted: 1.38dB Frequency test involved: 0.6×10 ⁻⁸ or 1%

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2023, clause 4.3.3.

--- END OF REPORT---