



FCC/ISED - TEST REPORT

Report Number : **709502606378-00B** Date of Issue: July 9, 2026

Model : X783

Product Type : 300W 8-Port GaN Desktop Fast Charger

Applicant : Ugreen Group Limited

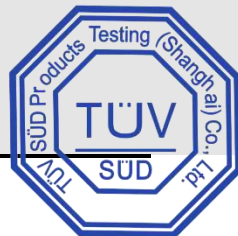
Address : UGREEN Building,Longcheng Industrial Park Longguanxi
Road,Longhua Shenzhen

Manufacturer : Ugreen Group Limited

Address : UGREEN Building,Longcheng Industrial Park Longguanxi
Road,Longhua Shenzhen

Test Result : ☒ **Positive** ☐ **Negative**

Total pages including
Appendices : 66



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2 Report Version

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Report No.	Description of Change	Date of Issue
709502606378-00B	First Issue	July 09, 2026



3 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Products Testing (Shanghai) Co., Ltd.
No.16 Lane, 1951 Du Hui Road,
Shanghai 201108,
P.R. China

Telephone: +86 21 6037 6300

FCC Registration No.: 820234

FCC Designation Number: CN1183

ISED CAB identifier CN0101

IC Registration No.: 31668

4 Description of the Equipment under Test

Product: 300W 8-Port GaN Desktop Fast Charger

Model no.: X783

Identification No. (HVIN) X783

Product Marketing Name (PMN) X783

P/N Code	75752	75752P	75752X	75752A	75752B	75752U	75752JP	75752ZD
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Remark:

- Product Number (P/N) code in the above table, for marketing purpose, will be marked on the marking plate.

FCC ID: 2AQI5-X783

IC: 26850-X783

Options and accessories: N/A

Rating:

Input: 100-240VAC, 50/60Hz, 4.2A Max
 USB-C1/C2/C3 output: 5.0VDC, 3.0A/9.0VDC, 3.0A/15.0VDC, 3.0A/20.0VDC, 5.0A/28.0VDC, 5.0A, 140.0W Max
 USB-C4/C5 output: 5.0VDC, 3.0A/9.0VDC, 3.0A/15.0VDC, 3.0A/20.0VDC, 5.0A, 100.0W Max
 USB-C6 output: 5.0VDC, 3.0A/9.0VDC, 3.0A/12.0VDC, 2.5A/15.0VDC, 2.0A/20.0VDC, 1.5A, 30.0W Max
 USB-A output: 5.0VDC, 3.0A/9.0VDC, 2.0A/12.0VDC, 1.5A/10.0VDC, 2.25A, 22.5W Max
 DC output: 12.0VDC, 12.0A/15.0VDC, 12.0A/20.0VDC, 12.0A, 240.0W Max
 Total Output Power: 300.0W Max

RF Transmission Frequency:

For Bluetooth: 2402~2480MHz
 For 2.4G Wi-Fi: 802.11b/g/n-HT20: 2412~2462 MHz
 802.11n-HT40: 2422~2452 MHz

No. of Operated Channel:

2.4GHz BLE: 40
 2.4GHz Wi-Fi: 13 channels for 802.11b/g/n-HT20
 7 channels for 802.11n-HT40

Channel list

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

2.4GHz Wi-Fi							
802.11b/g/n(HT20)				802.11n(HT40)			
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442	3	2422	8	2447MHz
2	2417	8	2447	4	2427	9	2452MHz
3	2422	9	2452	5	2432		
4	2427	10	2457	6	2437		
5	2432	11	2462	7	2442		
6	2437						

Modulation: 2.4GHz BLE: GFSK
 2.4GHz Wi-Fi: Direct Sequence Spread Spectrum (DSSS) for 802.11b
 Orthogonal Frequency Division Multiplexing (OFDM) for 802.11g/n

Hardware Version: X783-F-A4-20260205

Software Version: V0.1.0

Antenna Type: PCB Antenna

Antenna Gain: 3.75dBi

Description of the EUT: The Equipment Under Test (EUT) is a 300W 8-Port GaN Desktop Fast Charger which support 2.4GHz BLE (support 1/2Mbps data rate) and 2.4GHz Wi-Fi function. We tested it and listed the worst data in this report.

Test sample no.: SHA-1050604-1 (Radiated sample)
 SHA-1050604-2 (Conducted sample)

The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment, antenna gain or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart C 10-1-2024 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart C - Intentional Radiators
RSS-Gen Issue 5 April 2018 + Amendment 1 March 2019 + Amendment 2 February 2021	General Requirements for Compliance of Radio Apparatus
RSS-247 Issue 4 July 2025	Digital Transmission Systems, Frequency Hopping Systems and Licence-Exempt Local Area Network Devices in 902-928 MHz, 2400-2483.5 MHz, 5150-5350 MHz, and 5470-5895 MHz bands

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

Note: For ISED, this report is also performed according to ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 standards.

6 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C & RSS-247 Issue 4/RSS-Gen Issue 5						
Test Condition			Test Site	Test Result		
				Pass	Fail	N/A
§15.207	RSS-GEN 8.8	Conducted emission AC power port	Site 1	☒	☐	☐
§15.247 (b) (3)	RSS-247 6.3.2	Conducted peak output power	Site 1	☒	☐	☐
	RSS-247 6.3.2	Equivalent Isotropic Radiated Power	Site 1	☒	☐	☐
§15.247(a)(1)	RSS-247 6.2.1(a) & RSS-Gen 6.7	20dB bandwidth and 99% Occupied Bandwidth	---	☐	☐	☒
§15.247(a)(1)	RSS-247 6.2.3.1(a)	Carrier frequency separation	---	☐	☐	☒
§15.247(a)(1)(iii)	RSS-247 6.2.3.1(b)	Number of hopping frequencies	---	☐	☐	☒
§15.247(a)(1)(iii)	RSS-247 6.2.3.1(b)	Dwell Time - Average Time of Occupancy	---	☐	☐	☒
§15.247(a)(2)	RSS-247 6.3.1(a) & RSS-GEN 6.7	6dB bandwidth and 99% Occupied Bandwidth	Site 1	☒	☐	☐
§15.247(e)	RSS-247 6.3.1 (b)	Power spectral density	Site 1	☒	☐	☐
§15.247(d)	RSS-247 6.6	Spurious RF conducted emissions	Site 1	☒	☐	☐
§15.247(d)	RSS-247 6.6	Band edge	Site 1	☒	☐	☐
§15.247(d) & §15.209 & §15.205	RSS-247 6.6 & RSS-Gen 6.13	Spurious radiated emissions for transmitter	Site 1	☒	☐	☐
§15.203	RSS-Gen 6.8	Antenna requirement	See note 1	☒	☐	☐
--	--	Duty Cycle	Site 1	☒	☐	☐

Remark 1: N/A – Not Applicable.

Note 1: The EUT uses a PCB Antenna, which gain is 3.75dBi. In accordance to §15.203 and RSS-Gen 6.8, it is considered sufficiently to comply with the provisions of this section.

7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AQI5-X783, IC: 26850-X783 complies with Section 15.207, 15.205, 15.209, 15.247 of the FCC Part 15, Subpart C Rules and RSS-247, RSS-GEN. This report is only for 2.4GHz BLE. For 2.4GHz Wi-Fi report, refer to report No. 709502606378-00A

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: July 1, 2026

Testing Start Date: July 2, 2026

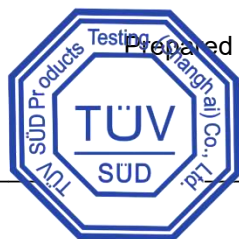
Testing End Date: July 8, 2026

TÜV SÜD Products Testing (Shanghai) Co., Ltd.

Reviewed by:



Hui TONG
Review Engineer



Prepared by:



Jiaxi XU
Project Engineer

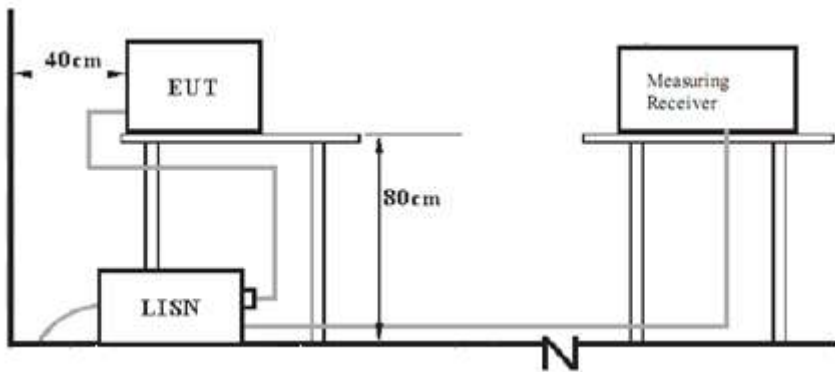
Tested by:



Chengjie GUO
Test Engineer

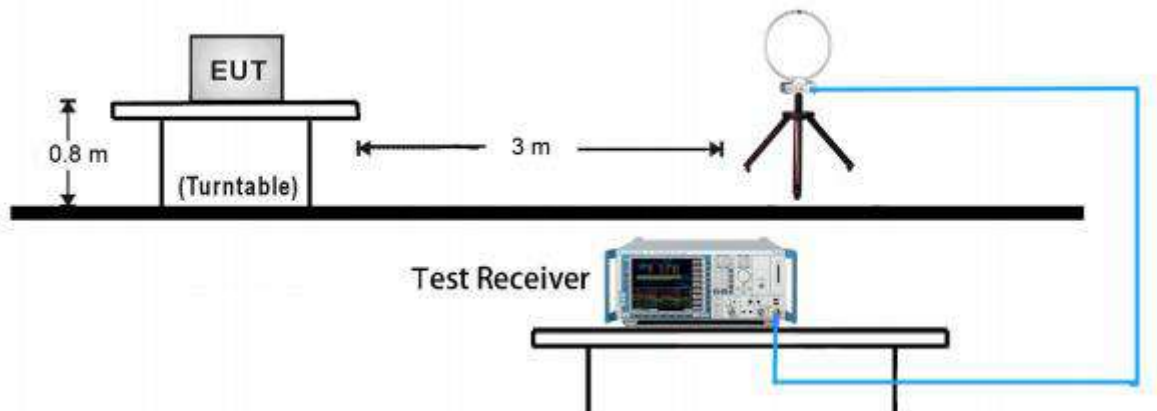
8 Test Setups

7.1 AC Power Line Conducted Emission test setups

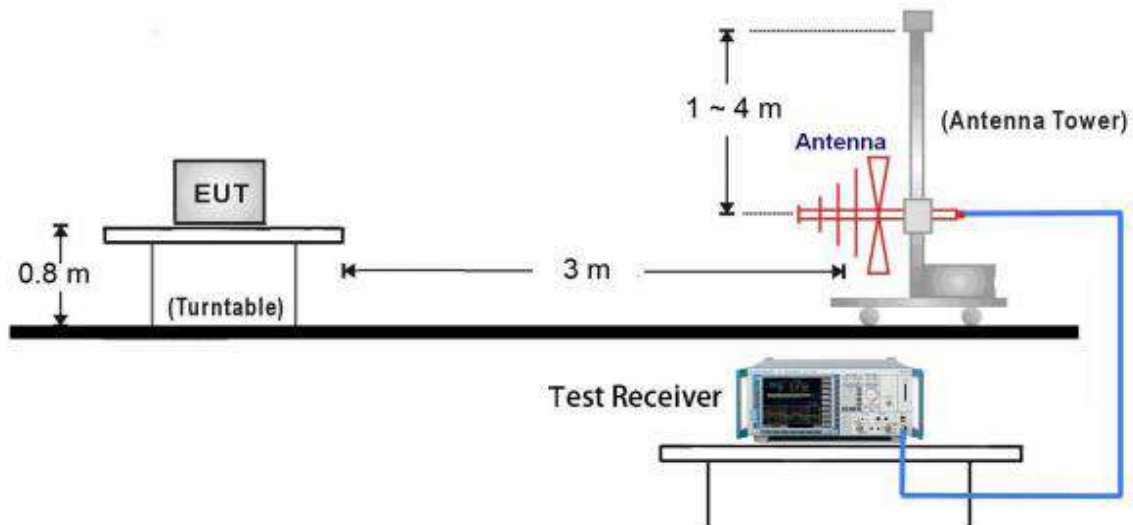


7.2 Radiated test setups

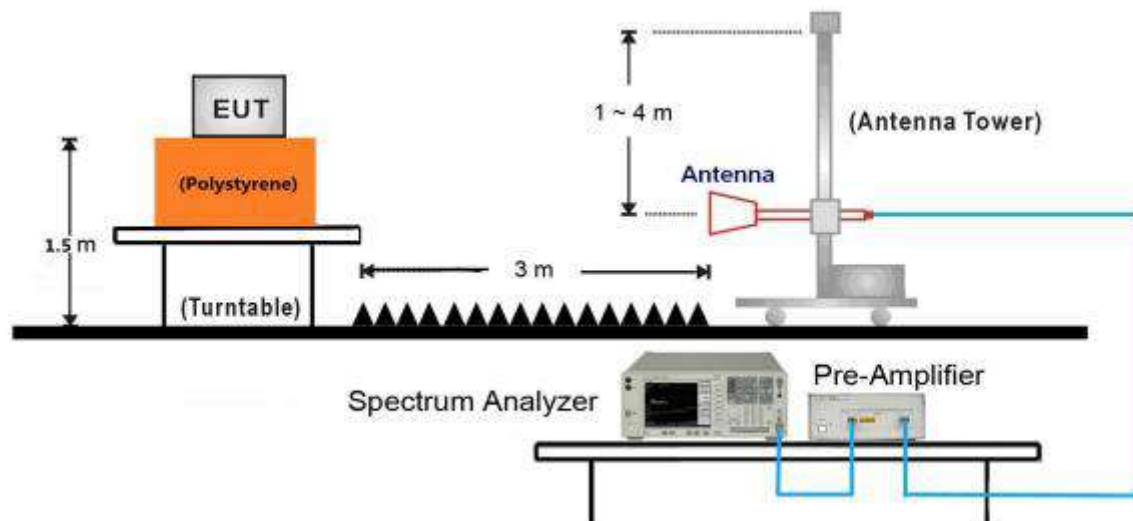
9kHz ~ 30MHz Test Setup:



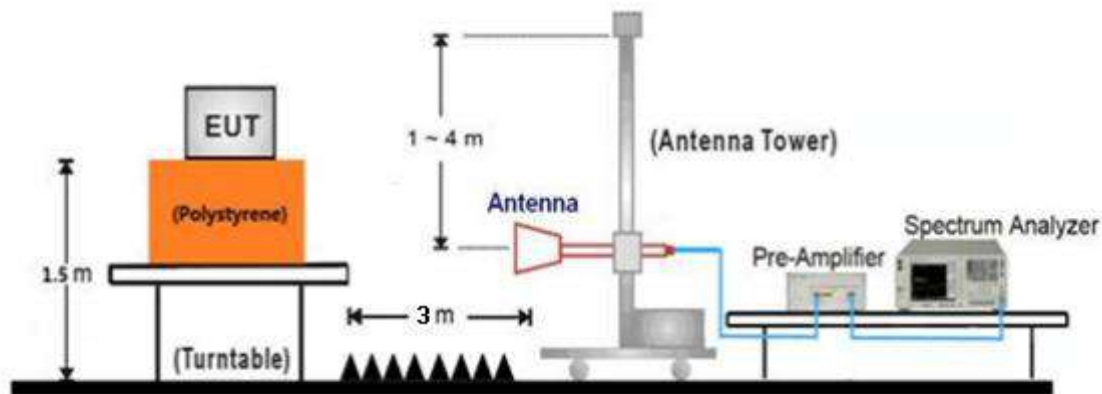
30MHz ~ 1GHz Test Setup:



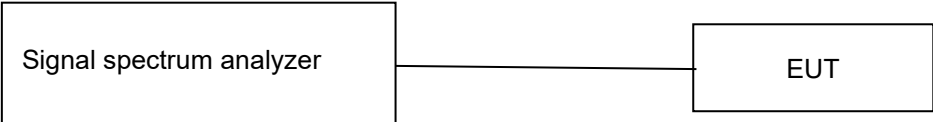
1GHz ~ 18GHz Test Setup:



18GHz ~ 25GHz Test Setup:



7.3 Conducted RF test setups



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenovo	E470	PF-OU5TS7 17/09

Test software: EspRFTTestTool_v5.6

The system was configured to channel 0, 19, and 39 for the test.

Test Mode Applicability and Tested Channel Detail:

Mode	Tested Channel	Data Rate (Mbps)	Modulation	Power level setting
Bluetooth LE	0	1	GFSK	10
	19	1	GFSK	10
	39	1	GFSK	10
Bluetooth LE	0	2	GFSK	10
	19	2	GFSK	10
	39	2	GFSK	10

10 Technical Requirement

10.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

According to §15.207 & RSS-GEN 8.8, 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

Decreasing linearly with logarithm of the frequency

150k-30MHz Conducted Emission Test

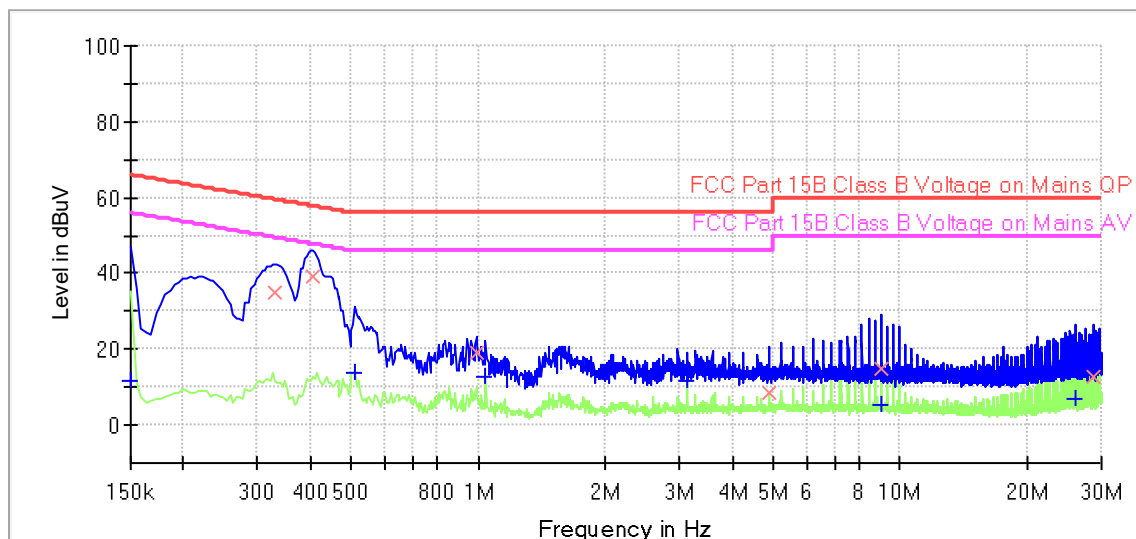
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	11.46	56.00	44.54	1000.0	9.000	L1	19.5
0.330000	35.03	---	59.45	24.42	1000.0	9.000	L1	19.4
0.406500	39.13	---	57.72	18.59	1000.0	9.000	L1	19.4
0.510000	---	13.61	46.00	32.39	1000.0	9.000	L1	19.4
0.991500	19.32	---	56.00	36.68	1000.0	9.000	L1	19.4
1.041000	---	12.84	46.00	33.16	1000.0	9.000	L1	19.4
3.120000	---	11.64	46.00	34.36	1000.0	9.000	L1	19.4
4.902000	8.69	---	56.00	47.31	1000.0	9.000	L1	19.5
9.015000	14.87	---	60.00	45.13	1000.0	9.000	L1	19.6
9.015000	---	5.60	50.00	44.40	1000.0	9.000	L1	19.6
25.989000	---	6.97	50.00	43.03	1000.0	9.000	L1	20.1
28.725000	12.59	---	60.00	47.41	1000.0	9.000	L1	20.1

150k-30MHz Conducted Emission Test

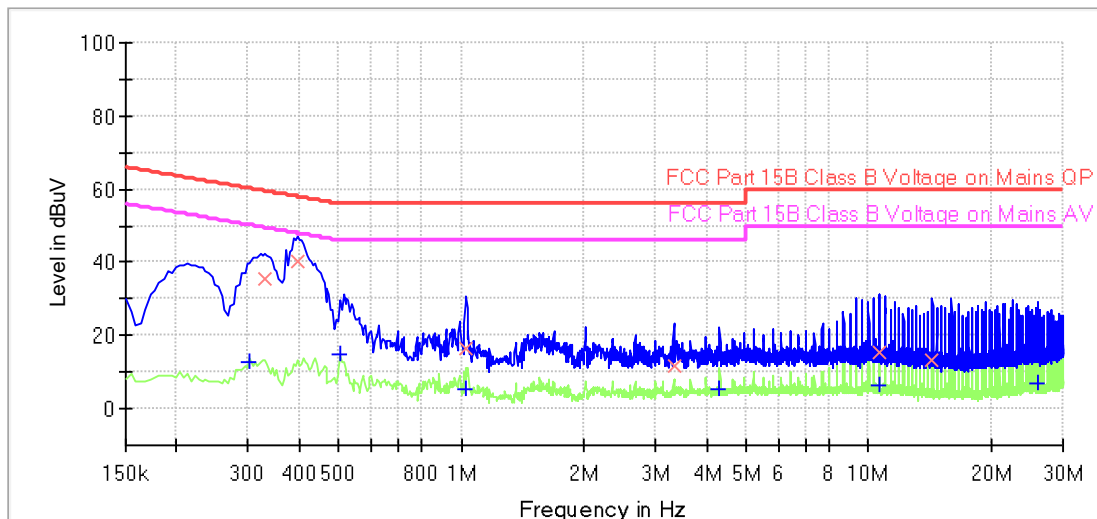
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamplifier
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.303000	---	12.96	50.16	37.20	1000.0	9.000	N	19.4
0.330000	35.62	---	59.45	23.83	1000.0	9.000	N	19.4
0.397500	40.10	---	57.91	17.81	1000.0	9.000	N	19.4
0.505500	---	15.08	46.00	30.92	1000.0	9.000	N	19.5
1.027500	---	5.55	46.00	40.45	1000.0	9.000	N	19.4
1.027500	16.60	---	56.00	39.40	1000.0	9.000	N	19.4
3.322500	11.43	---	56.00	44.57	1000.0	9.000	N	19.5
4.312500	---	5.18	46.00	40.82	1000.0	9.000	N	19.5
10.648500	15.24	---	60.00	44.76	1000.0	9.000	N	19.6
10.648500	---	6.65	50.00	43.35	1000.0	9.000	N	19.6
14.347500	13.35	---	60.00	46.65	1000.0	9.000	N	19.7
26.133000	---	6.83	50.00	43.17	1000.0	9.000	N	20.2

Remark:

*Level=Reading Level + Correction Factor

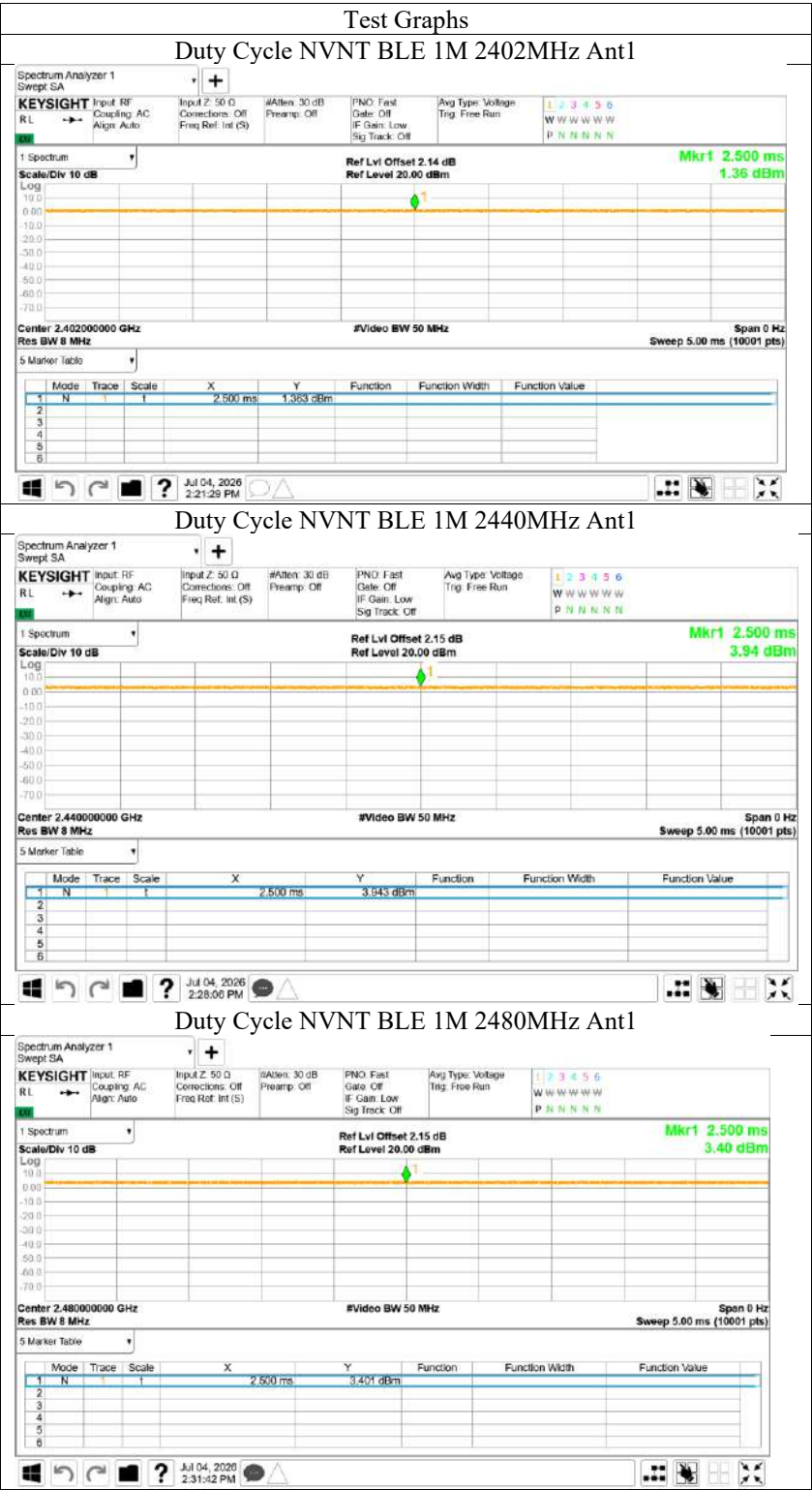
**Correction Factor=Cable Loss + LISN Factor

(The Reading Level is recorded by software which is not shown in the sheet)



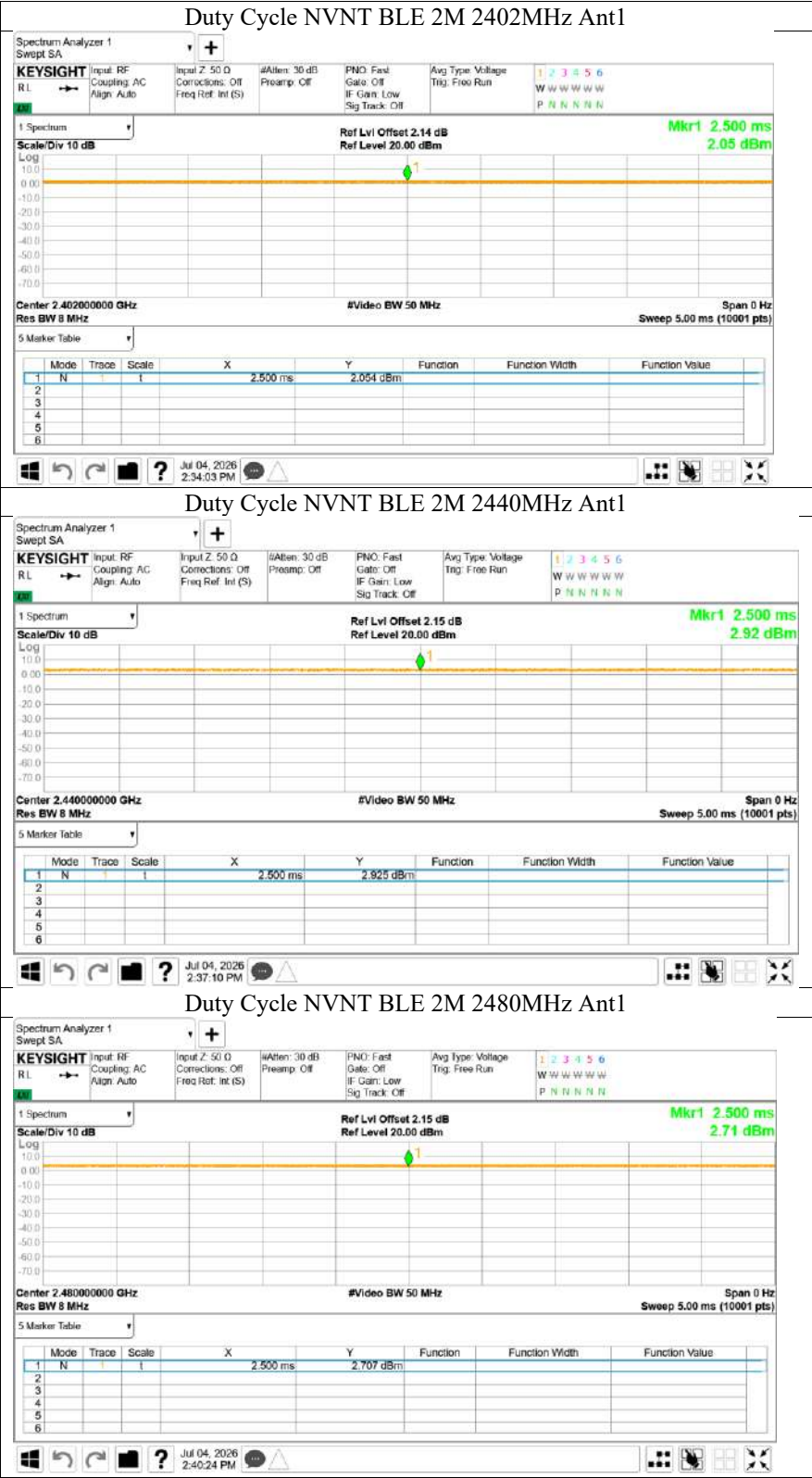
10.2 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	BLE 1M	2402	Ant1	100	0
NVNT	BLE 1M	2440	Ant1	100	0
NVNT	BLE 1M	2480	Ant1	100	0





Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	BLE 2M	2402	Ant1	100	0
NVNT	BLE 2M	2440	Ant1	100	0
NVNT	BLE 2M	2480	Ant1	100	0



10.3 Conducted Peak Output Power & EIRP

Test Method

1. Use the following spectrum analyzer settings:
RBW > the 6 dB bandwidth of the emission being measured, VBW $\geq$ 3RBW, Span $\geq$ 3RBW
Sweep = auto, Detector function = peak, Trace = max hold.
2. Add a correction factor to the display.
3. 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.

Limits

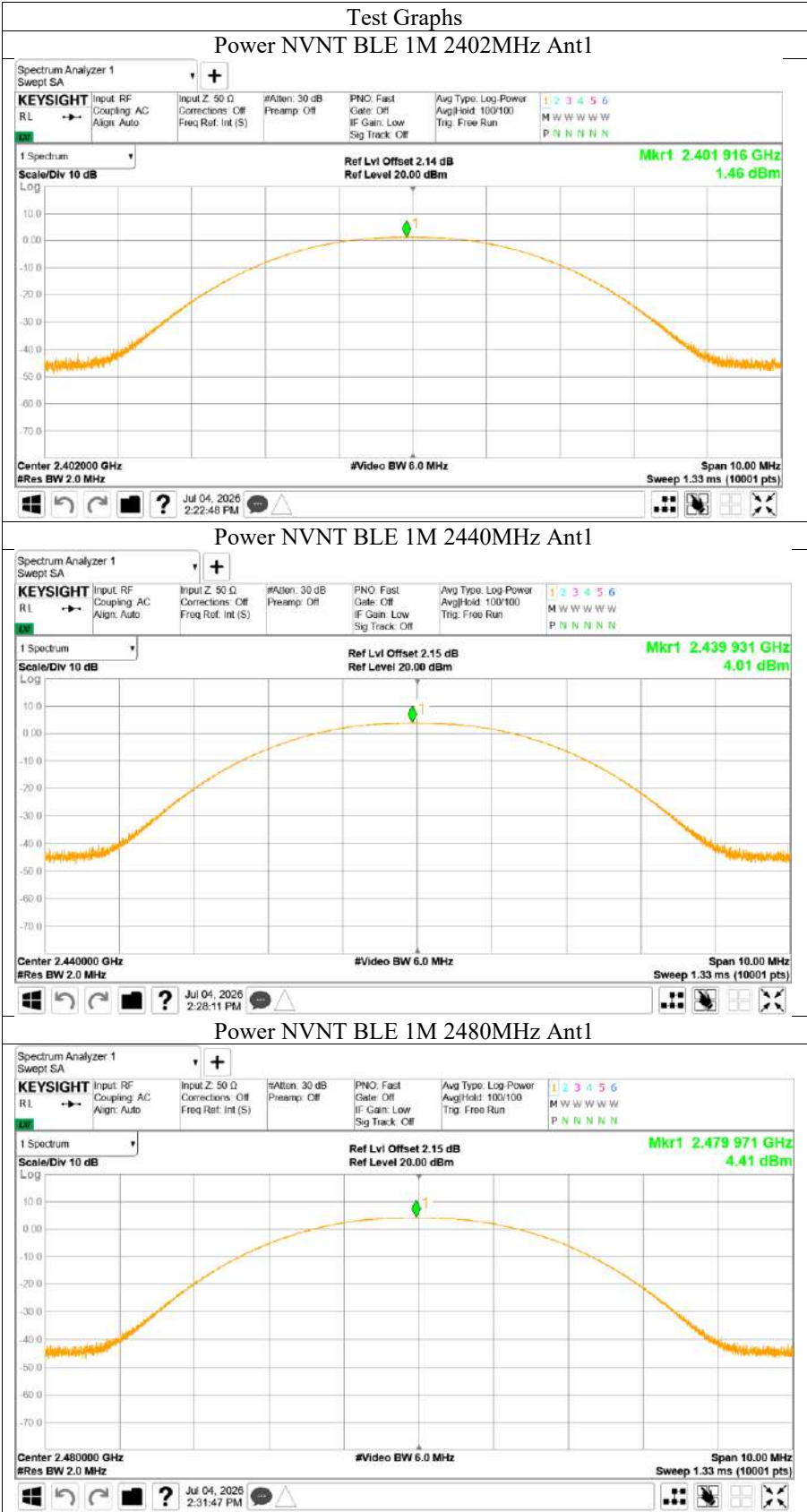
According to §15.247 (b) (3) & RSS-247 6.3.2, conducted peak output power limit as below:

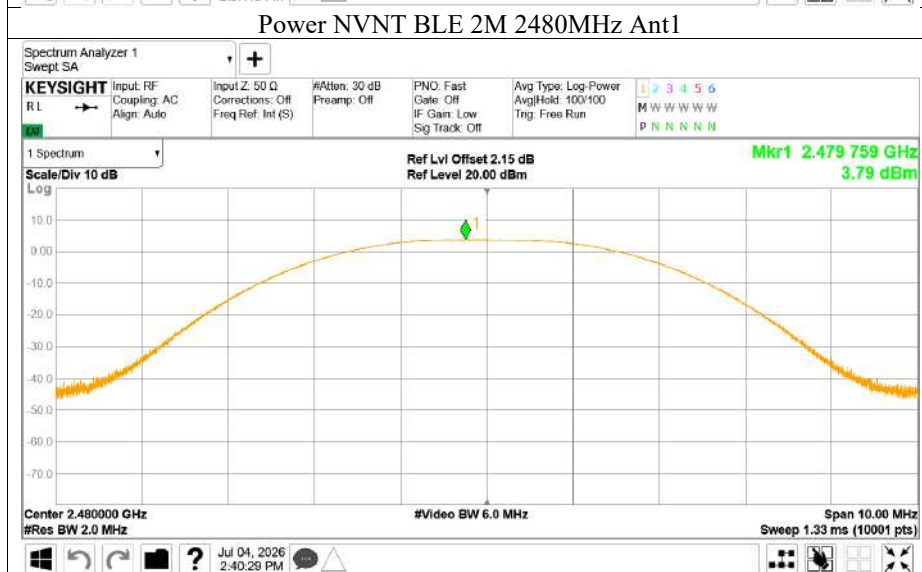
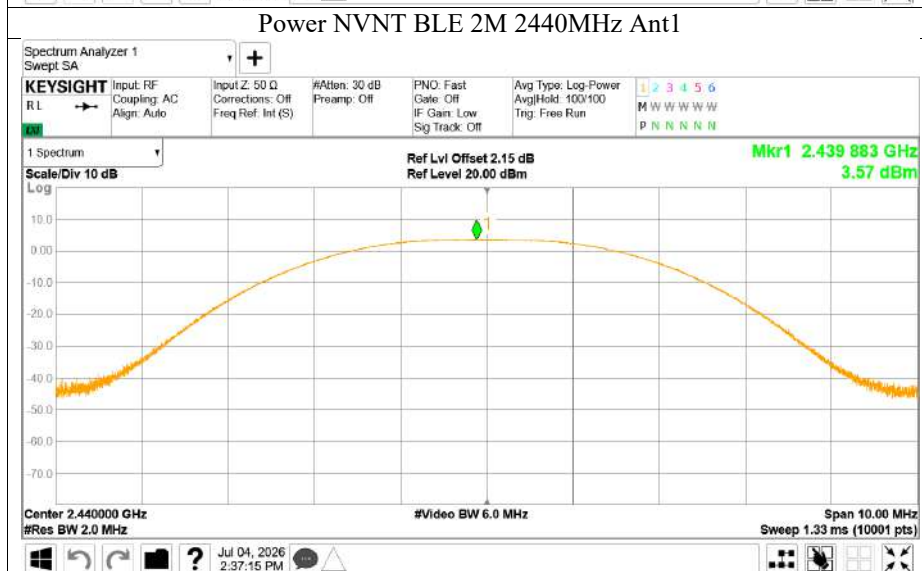
	Frequency Range	Limit	Limit
	MHz	W	dBm
Conducted peak output power	2400-2483.5	≤ 1	≤ 30
e.i.r.p.	2400-2483.5	≤ 4	≤ 36

Test result as below table

Data Rate	Antenna gain=3.75dBi				
	Frequency MHz	Conducted Peak Output Power(dBm) §15.247 (b) (3)	Result	e.i.r.p.(dBm) RSS-247 6.3.2	Result
1Mbps	2402MHz	1.47	Pass	5.22	Pass
	2440MHz	4.01	Pass	7.76	Pass
	2480MHz	4.41	Pass	8.16	Pass
2Mbps	2402MHz	1.73	Pass	5.48	Pass
	2440MHz	3.57	Pass	7.32	Pass
	2480MHz	3.79	Pass	7.54	Pass

Test Graph





10.4 6dB bandwidth and 99% Occupied 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:
4. RBW=1% to 5% of the occupied bandwidth but not less than 100kHz, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
5. Use the automatic bandwidth measurement capability of an instrument, use the X dB bandwidth mode with X set to 6 dB.
6. Allow the trace to stabilize, record the 6 dB Bandwidth value.

Test Method for 99 % Bandwidth

7. Connect EUT test port to spectrum analyzer.
Use the following spectrum analyzer settings:
RBW=1% to 5% of the actual occupied, VBW $\geq$ 3RBW, Sweep = auto, Detector function = peak, Trace = max hold
8. Use the occupied bandwidth measurement capability of test receiver.
9. Allow the trace to stabilize, record the occupied bandwidth value.

Limit

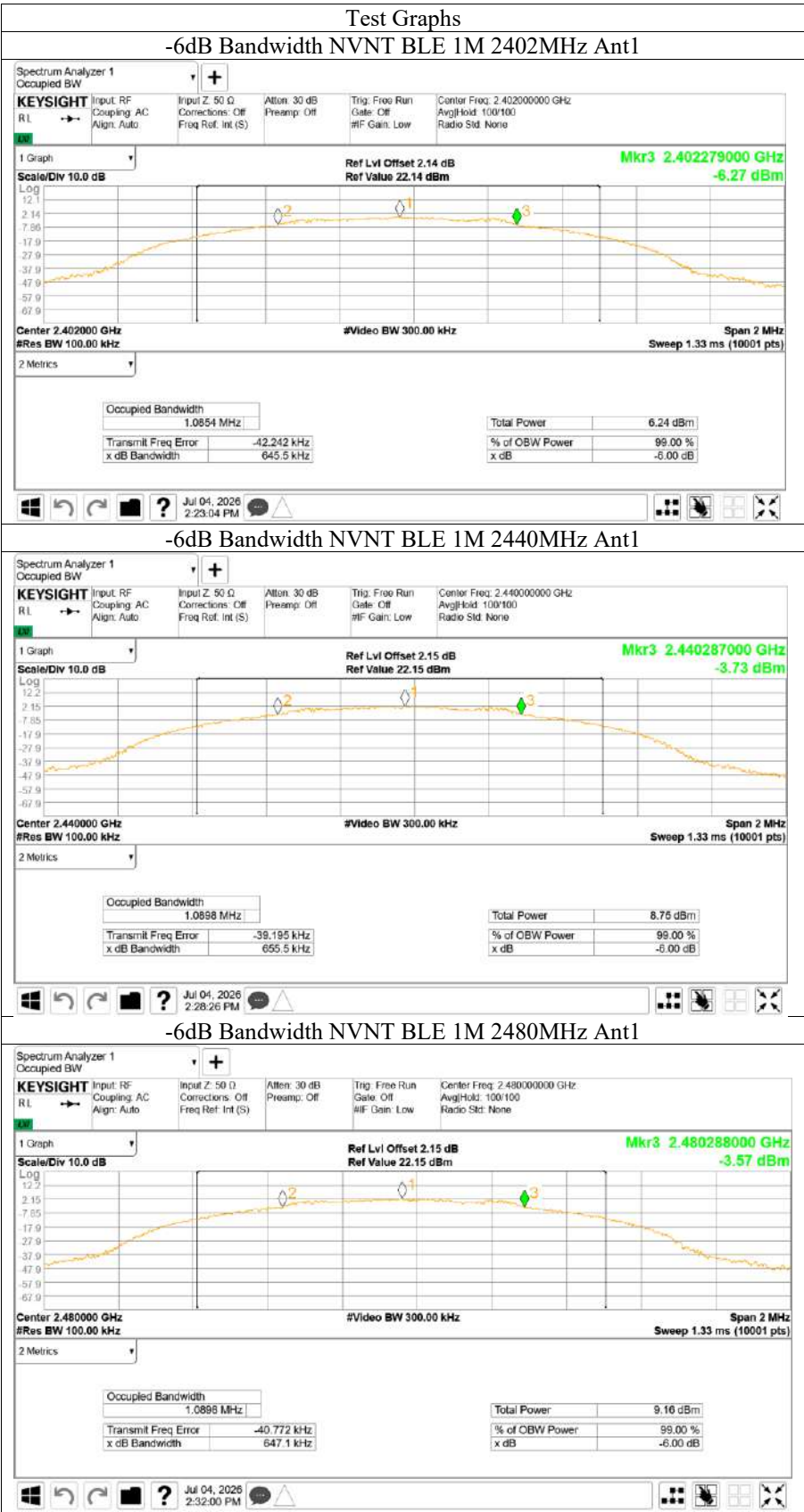
6dB bandwidth Limit [kHz]	99% bandwidth Limit [kHz]
≥ 500	--

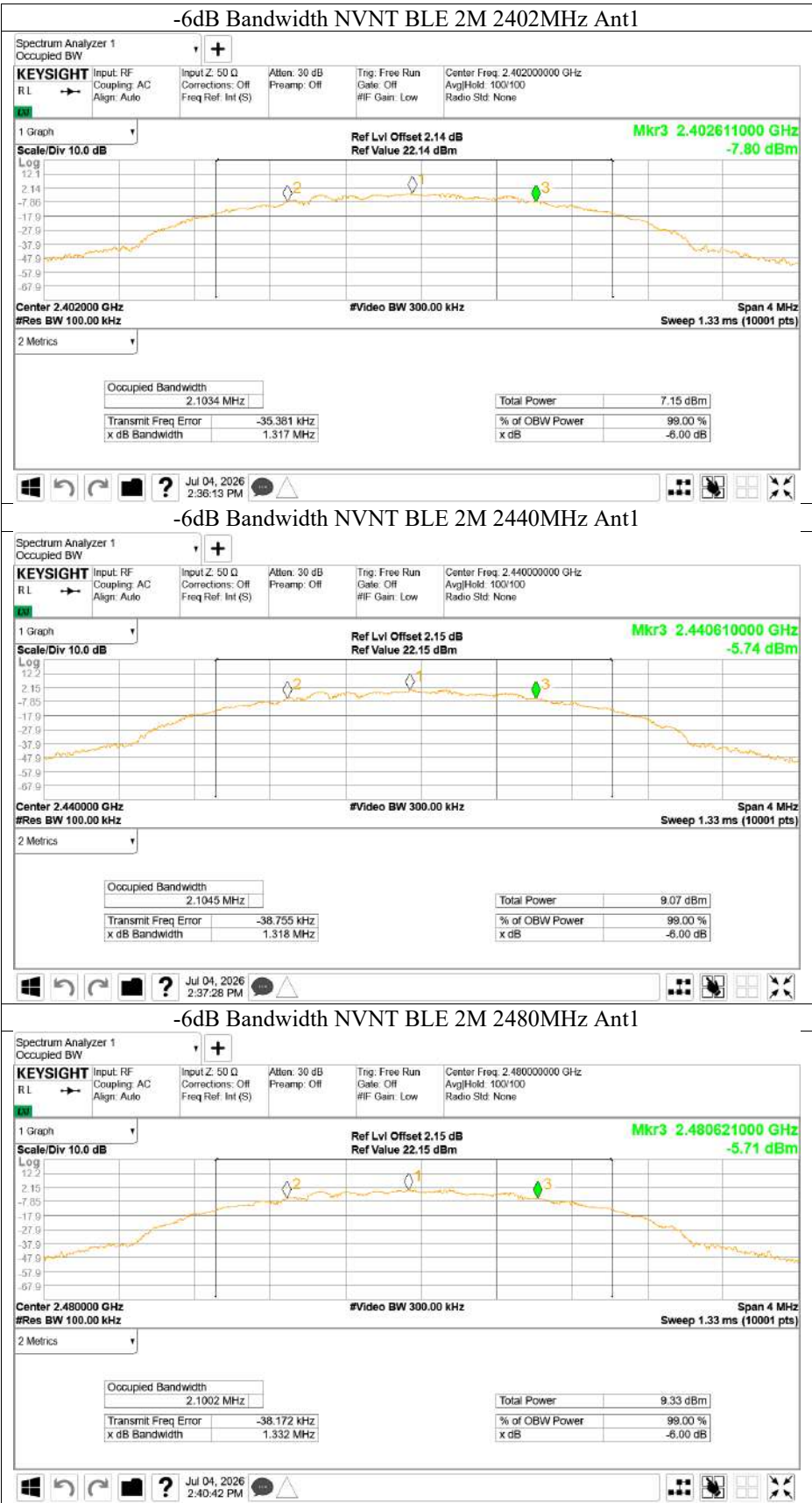
Test result

Data Rate	Frequency MHz	6dB bandwidth (MHz)		Result	99% occupied bandwidth MHz
		result	limit	verdict	
1Mbps	2402	0.645	≥ 0.5	Pass	1.077
	2440	0.656	≥ 0.5	Pass	1.082
	2480	0.647	≥ 0.5	Pass	1.08
2Mbps	2402	1.317	≥ 0.5	Pass	2.119
	2440	1.318	≥ 0.5	Pass	2.121
	2480	1.332	≥ 0.5	Pass	2.121



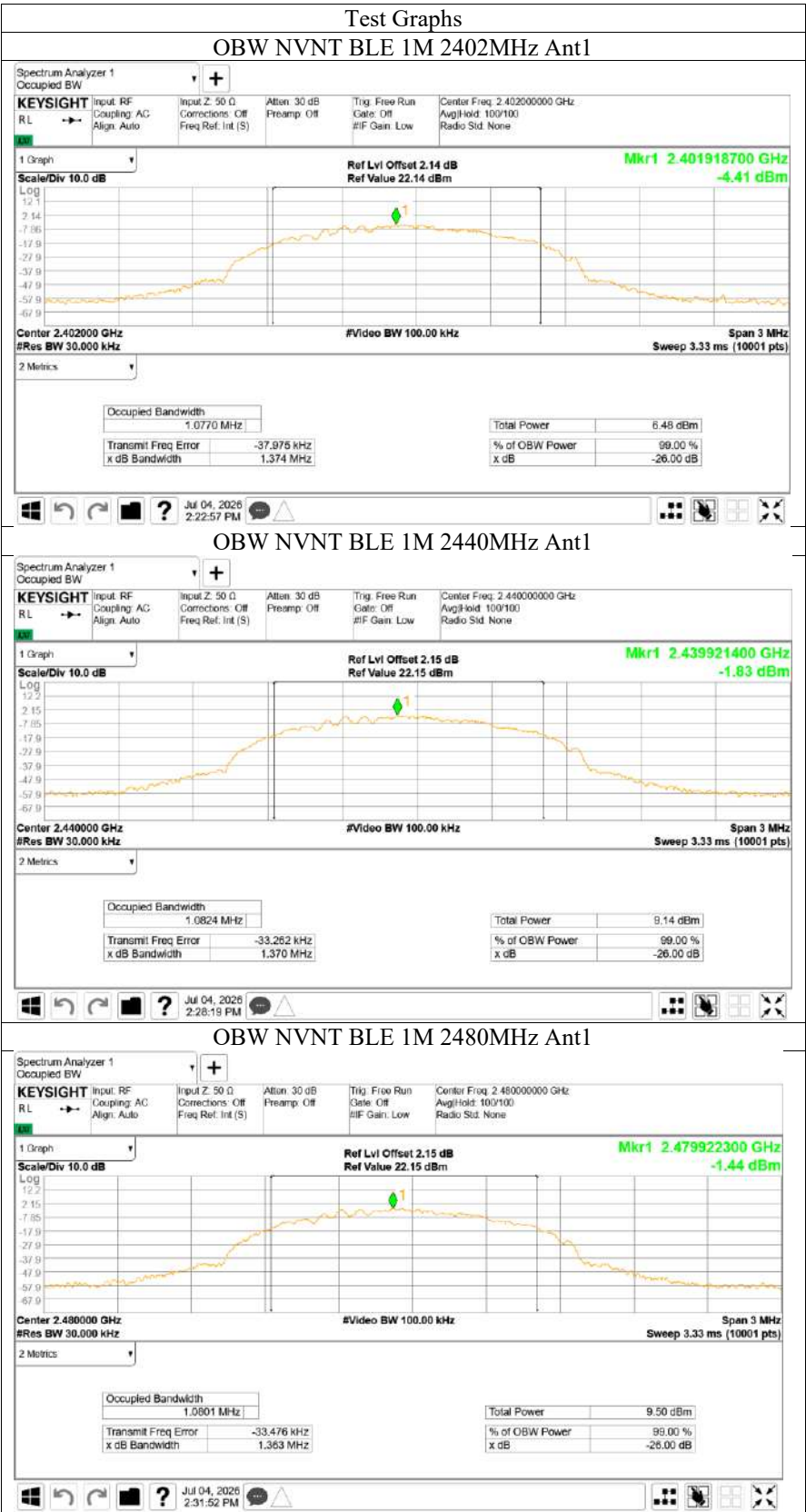
6dB Bandwidth



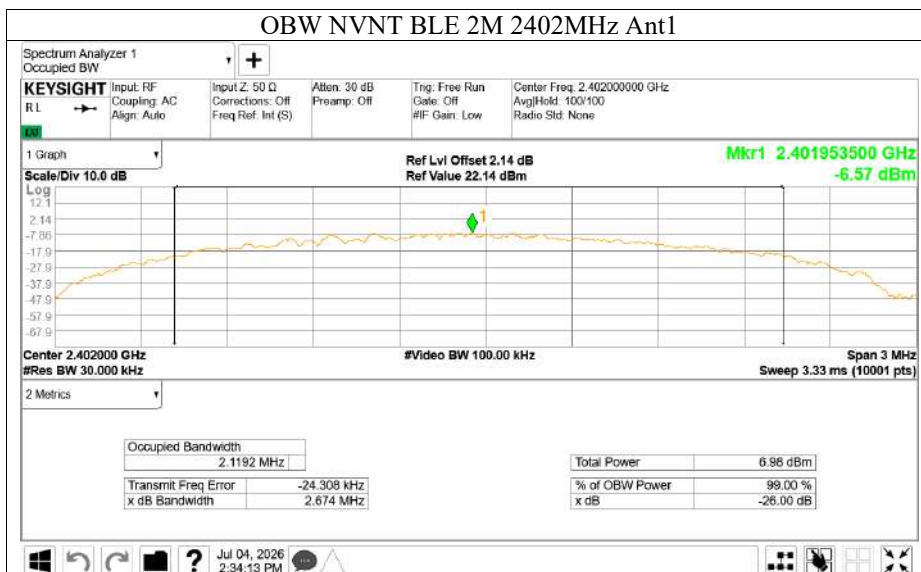




99% Occupied Bandwidth



OBW NVNT BLE 2M 2402MHz Ant1



OBW NVNT BLE 2M 2440MHz Ant1



OBW NVNT BLE 2M 2480MHz Ant1



10.5 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

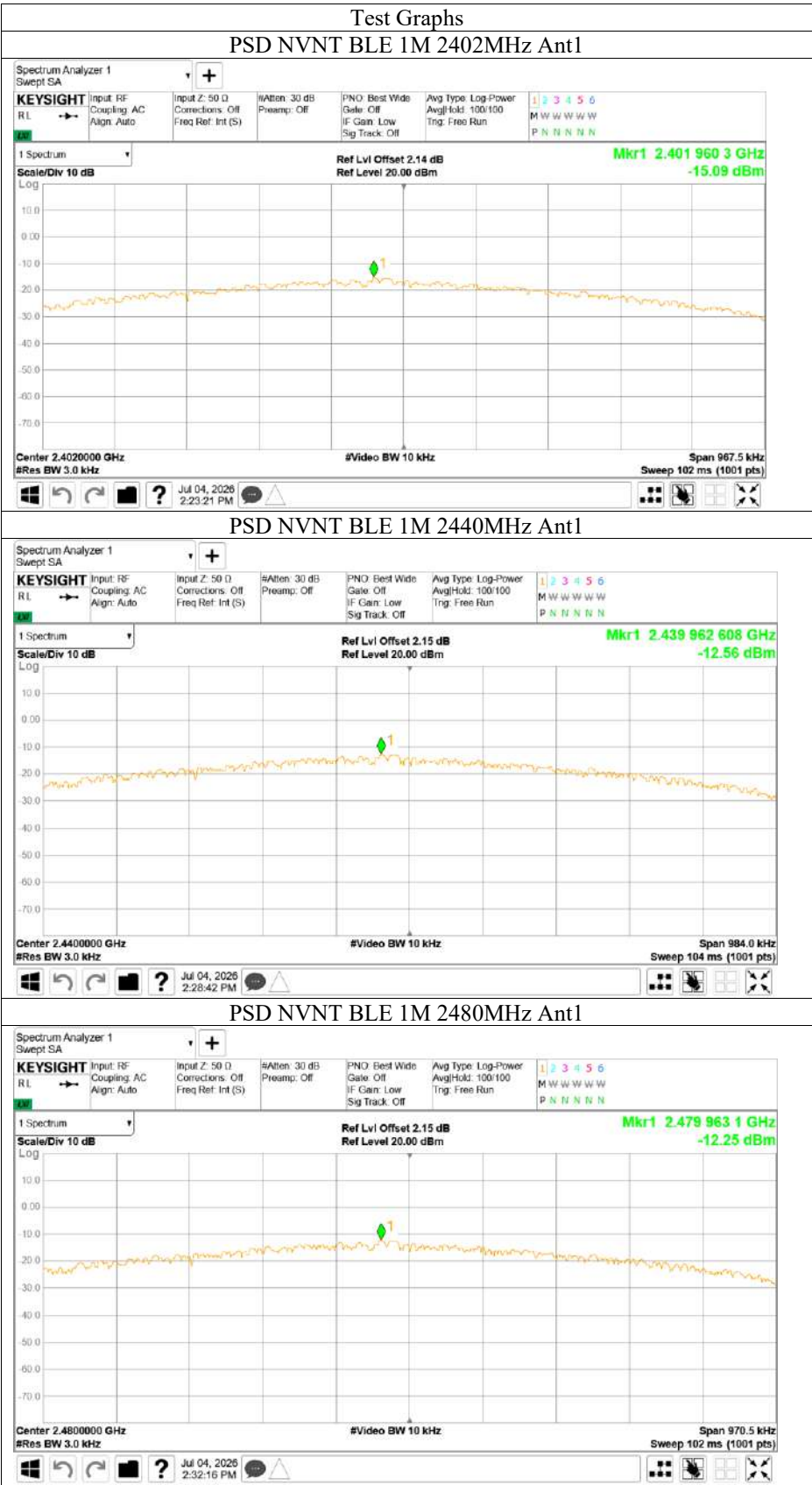
Limit [dBm/3KHz]
 ≤ 8

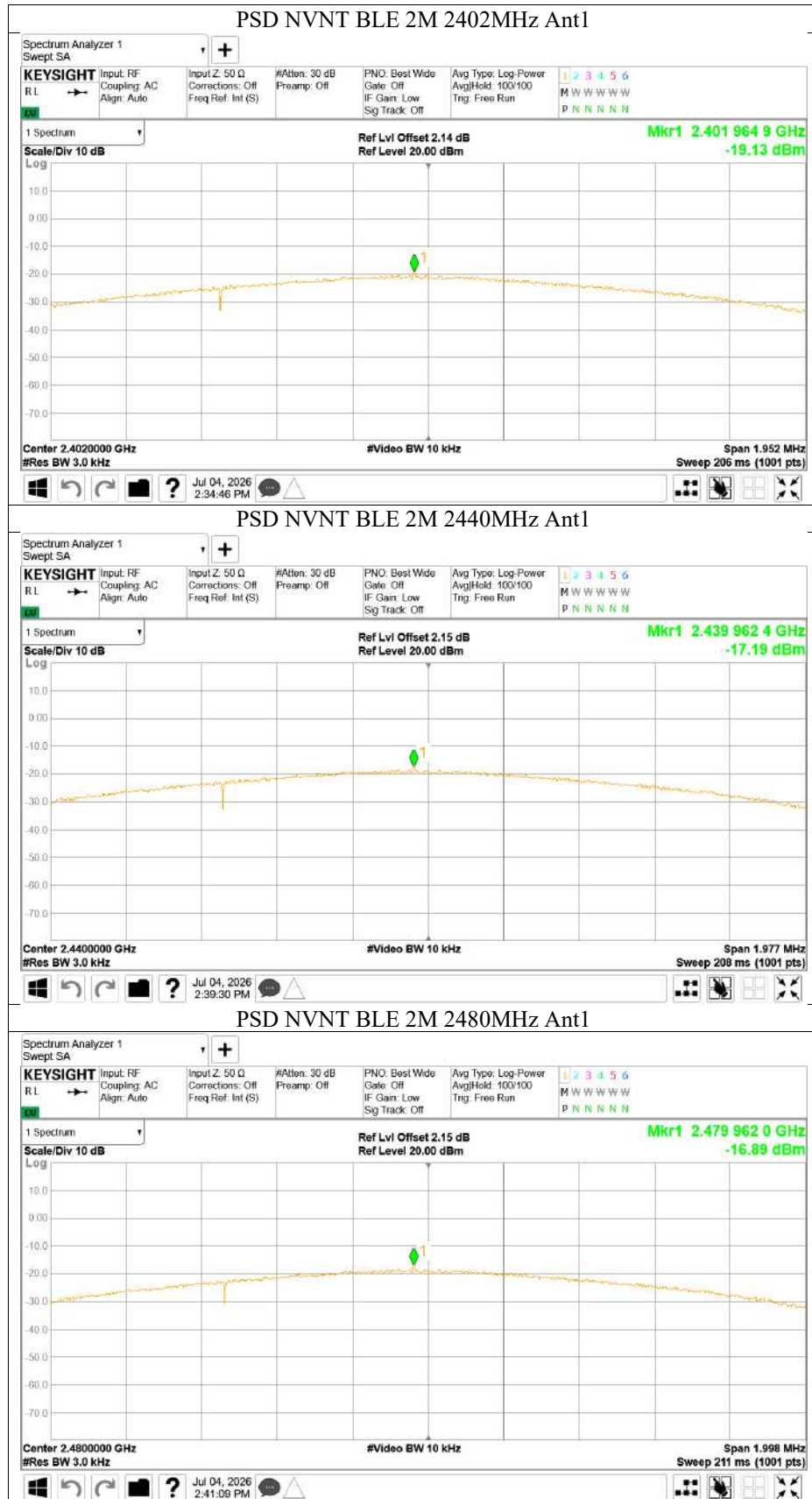
Test result

Data transmission rate	Frequency	Power spectral density	Result
1Mbps	MHz	dBm/3kHz	
	Top channel 2402MHz	-15.09	Pass
	Middle channel 2440MHz	-12.56	Pass
	Bottom channel 2480MHz	-12.25	Pass
2Mbps	Top channel 2402MHz	-19.13	Pass
	Middle channel 2440MHz	-17.19	Pass
	Bottom channel 2480MHz	-16.89	Pass



Test Graph





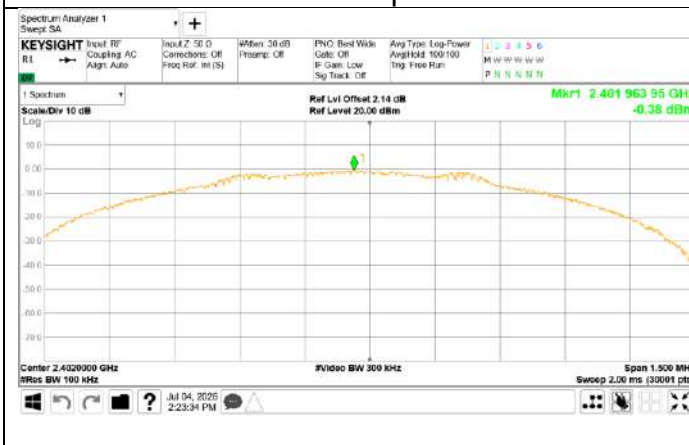
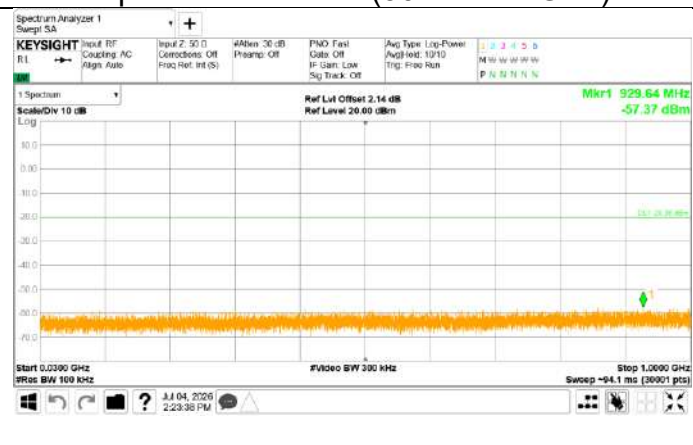
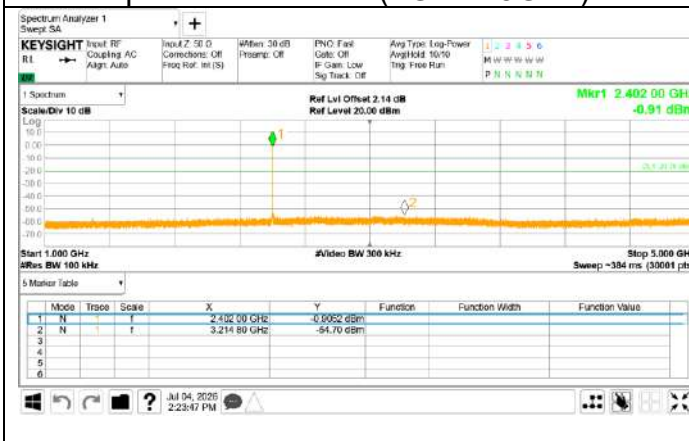
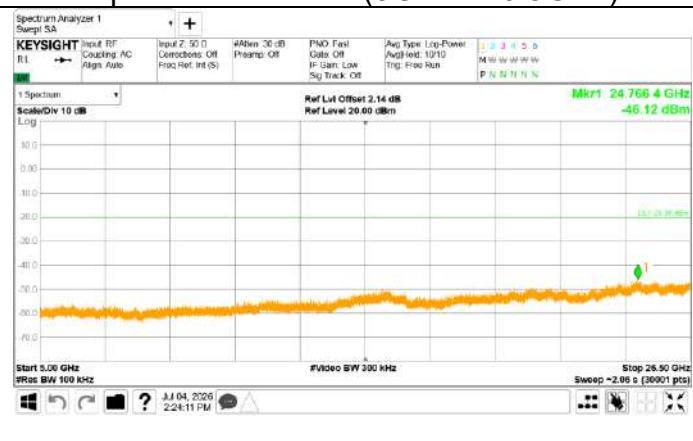
10.6 Spurious RF conducted emissions

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

Spurious RF conducted emissions**Out-of-Band Emissions (1Mbps)
Channel 0 (2402MHz)****Reference point****Spurious Emission (30MHz – 1GHz)****Spurious Emission (1GHz – 5GHz)****Spurious Emission (5GHz – 26.5GHz)**

Out-of-Band Emissions (1Mbps)

Channel 19 (2440MHz)

Reference point



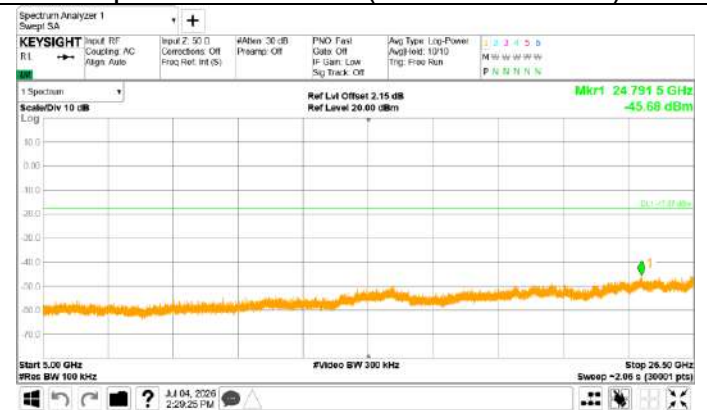
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



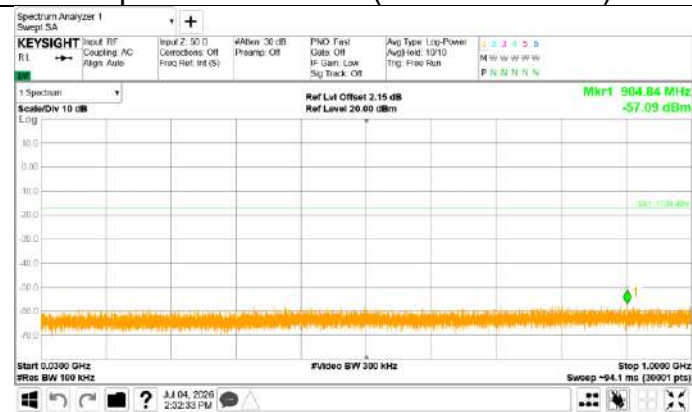
Out-of-Band Emissions (1Mbps)

Channel 39 (2480MHz)

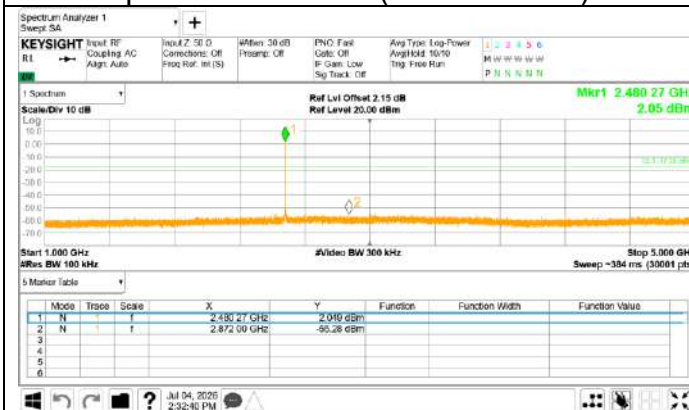
Reference point



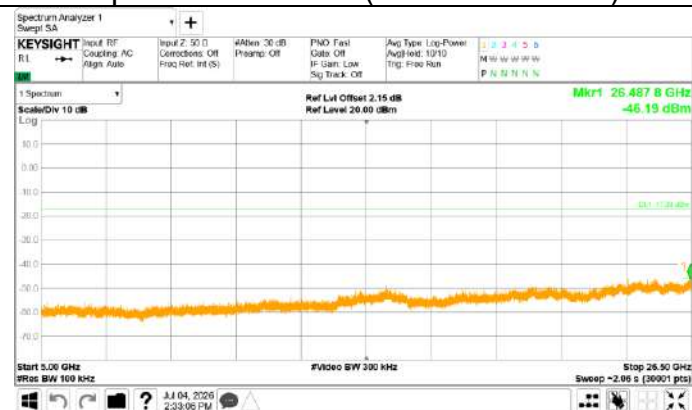
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



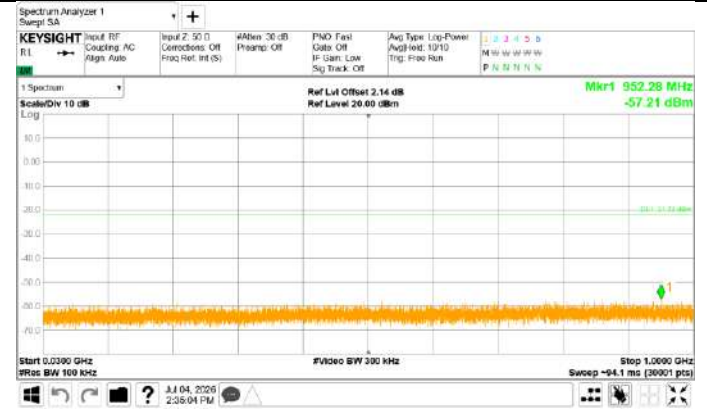
Out-of-Band Emissions (2 Mbps)

Channel 0 (2402MHz)

Reference point



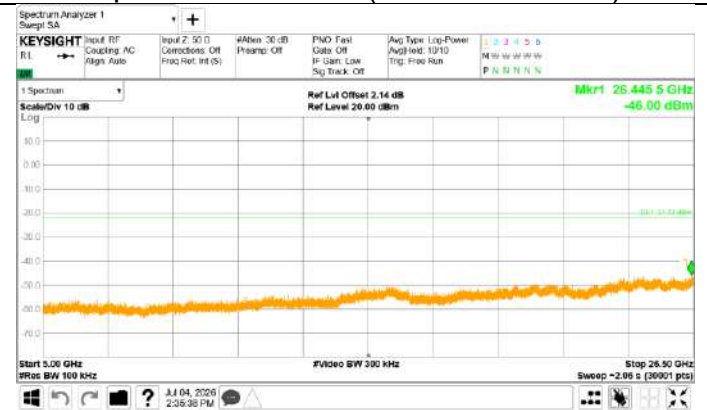
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



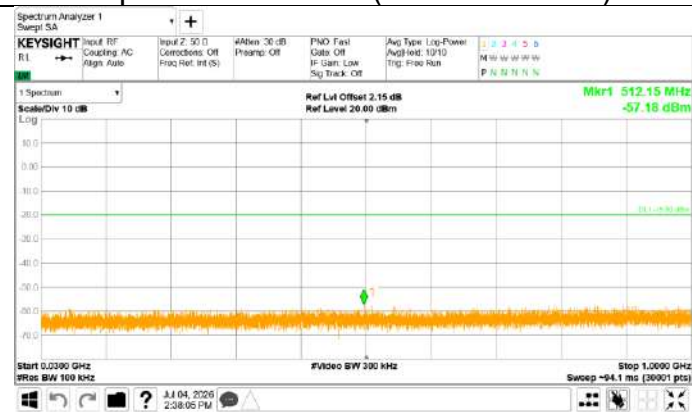
Out-of-Band Emissions (2 Mbps)

Channel 19 (2440MHz)

Reference point



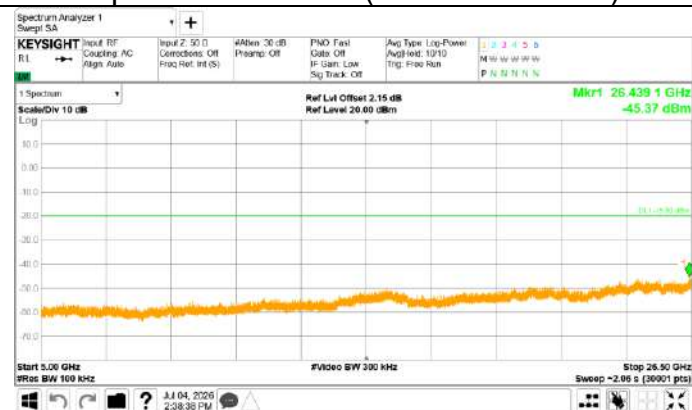
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



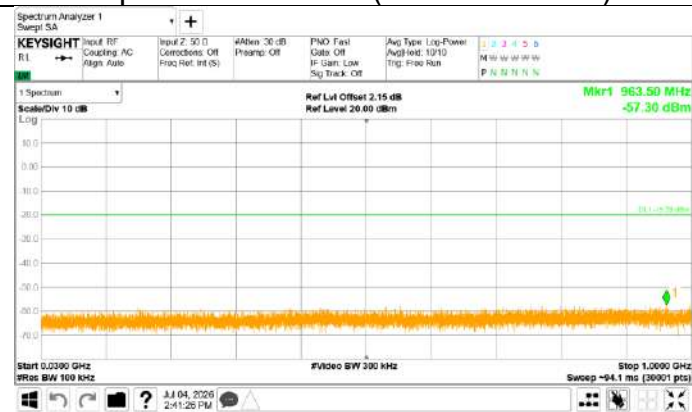
Out-of-Band Emissions (2 Mbps)

Channel 39 (2480MHz)

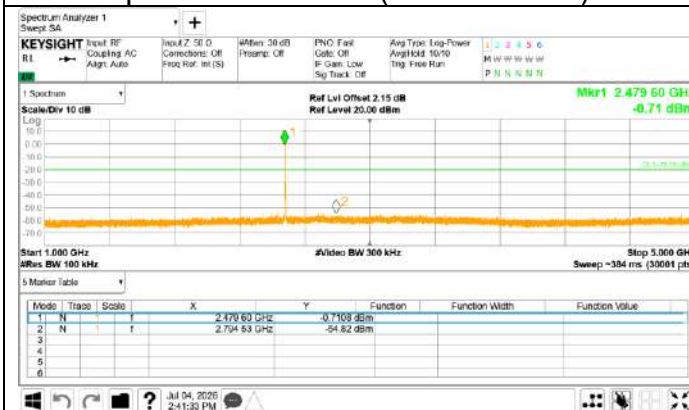
Reference point



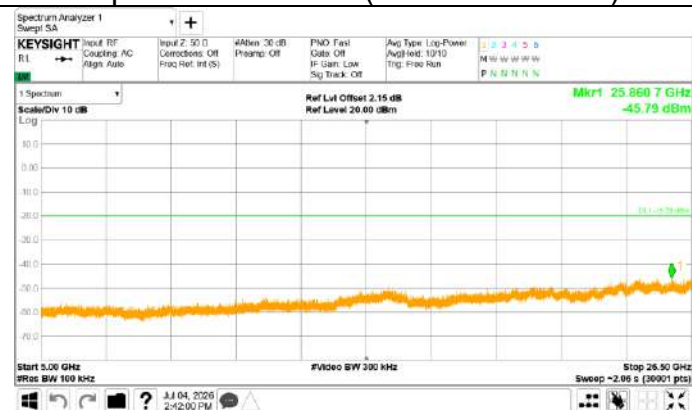
Spurious Emission (30MHz – 1GHz)



Spurious Emission (1GHz –5GHz)



Spurious Emission (5GHz –26.5GHz)



10.7 Band edge

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.

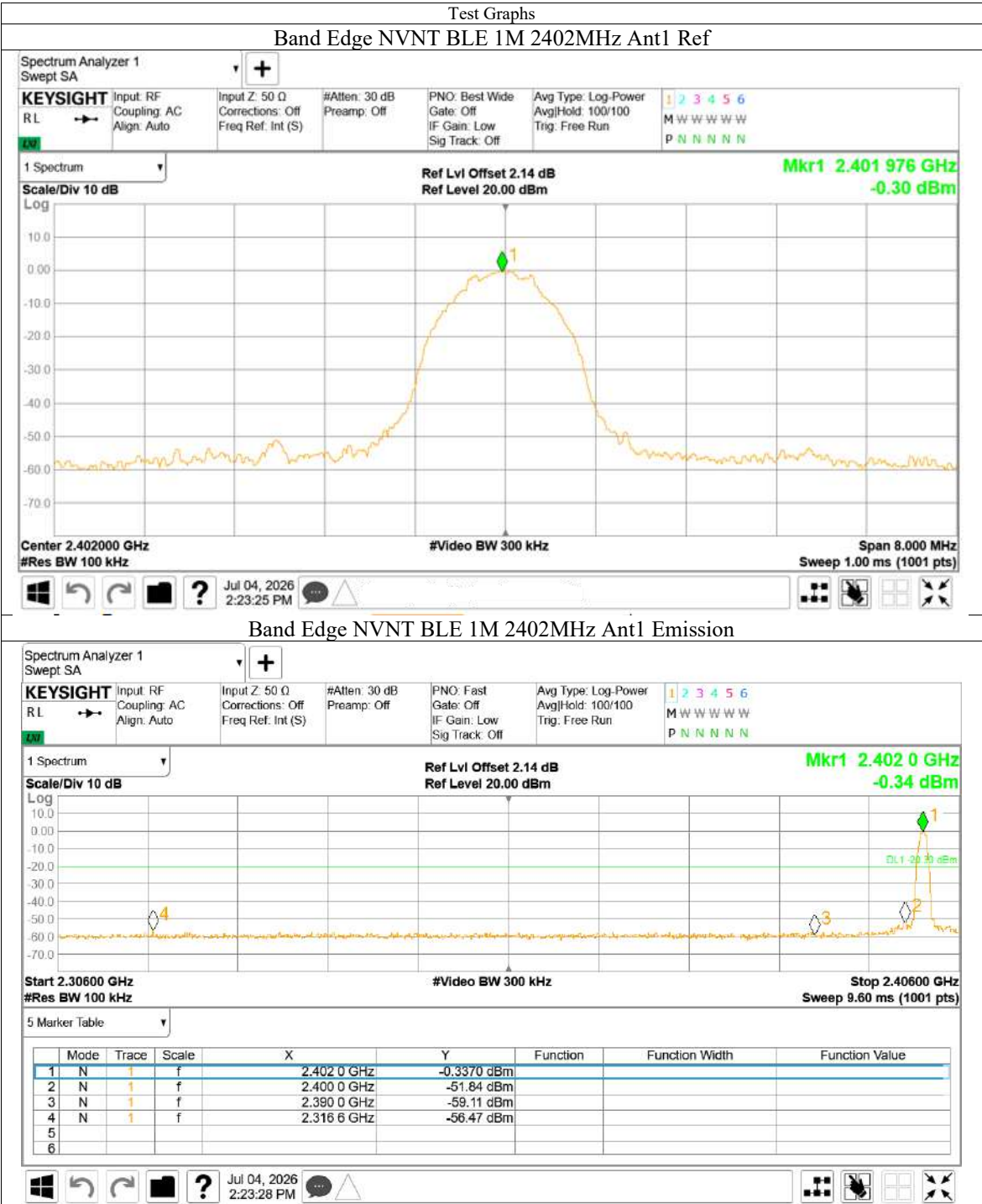
Limit:

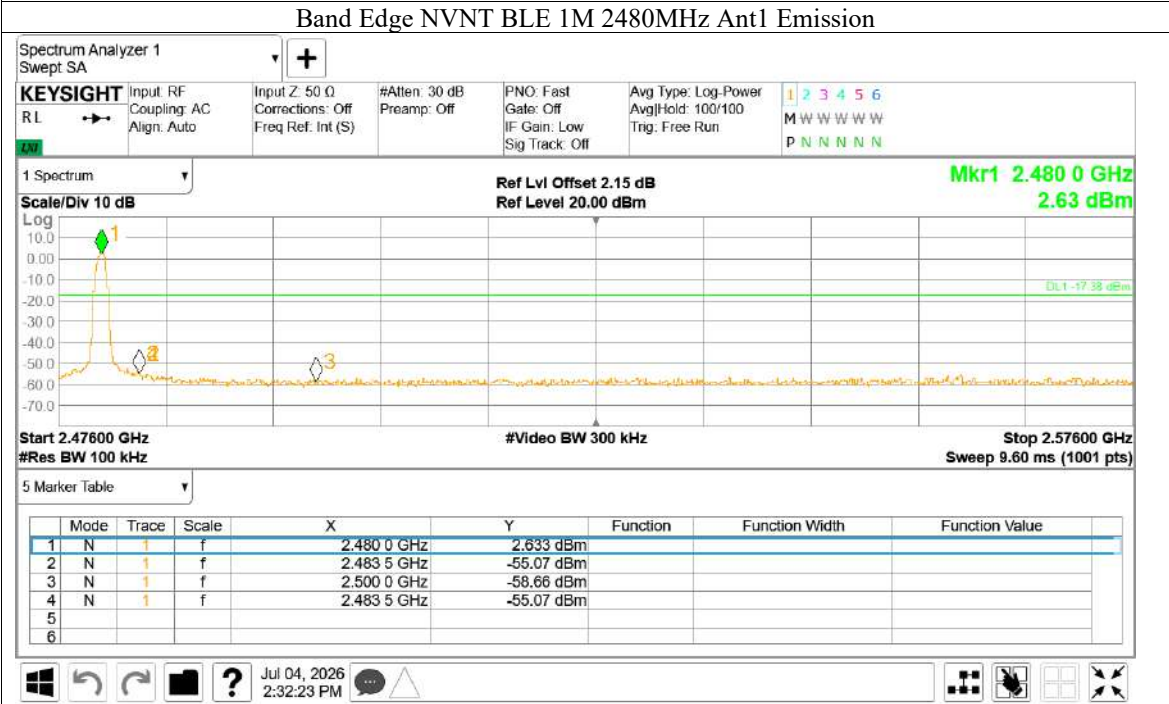
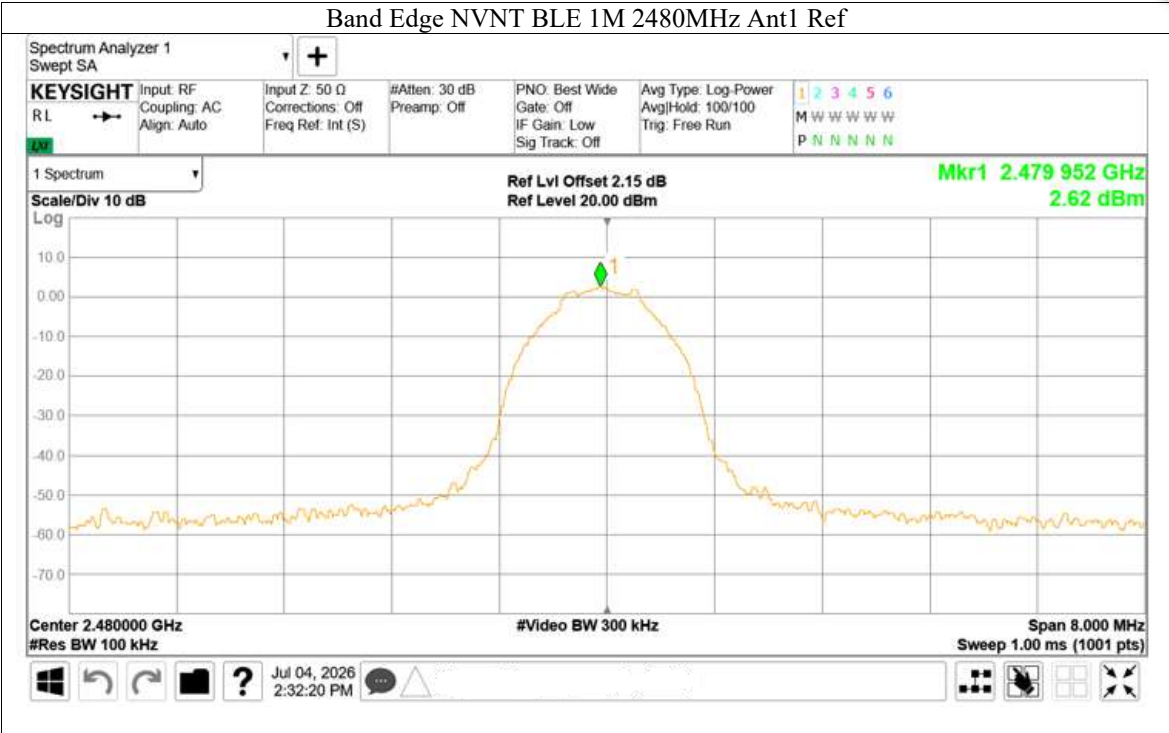
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either 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) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB.

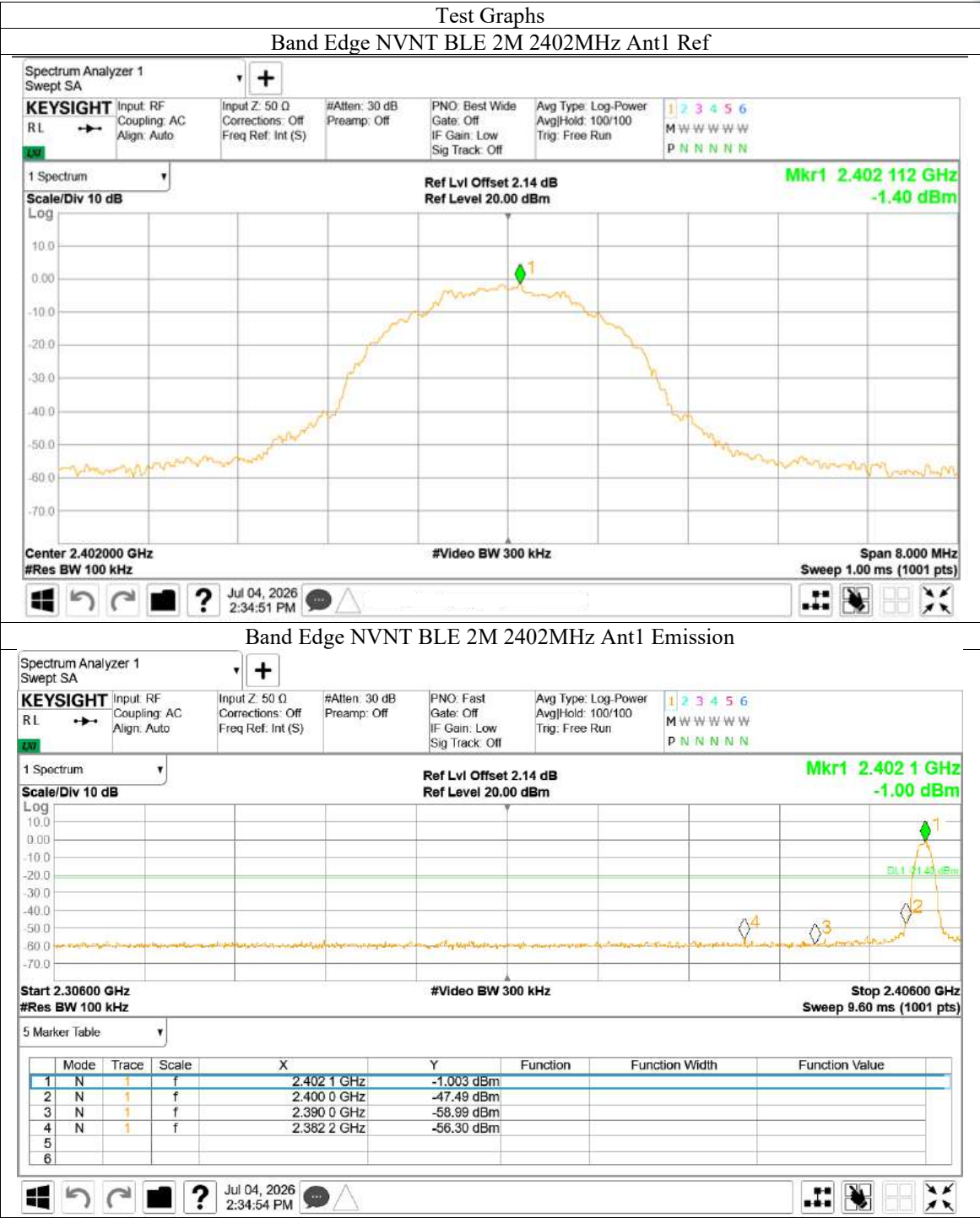
Frequency Range MHz	Limit (dBc)
30-25000	-20

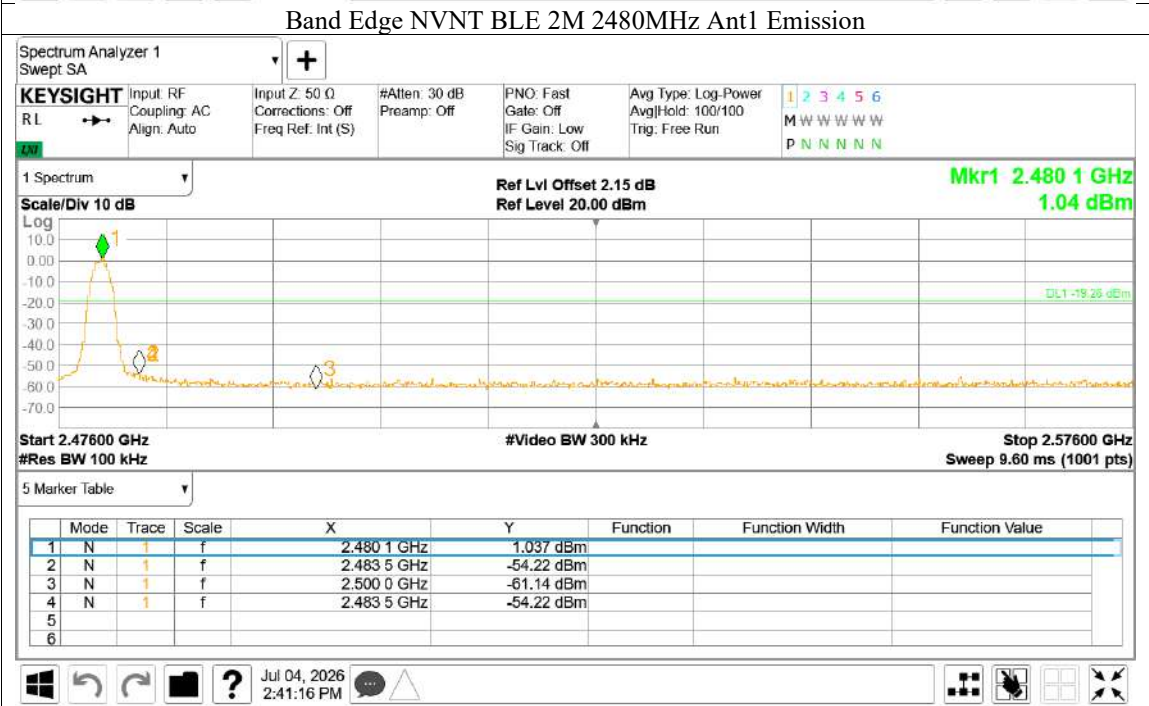
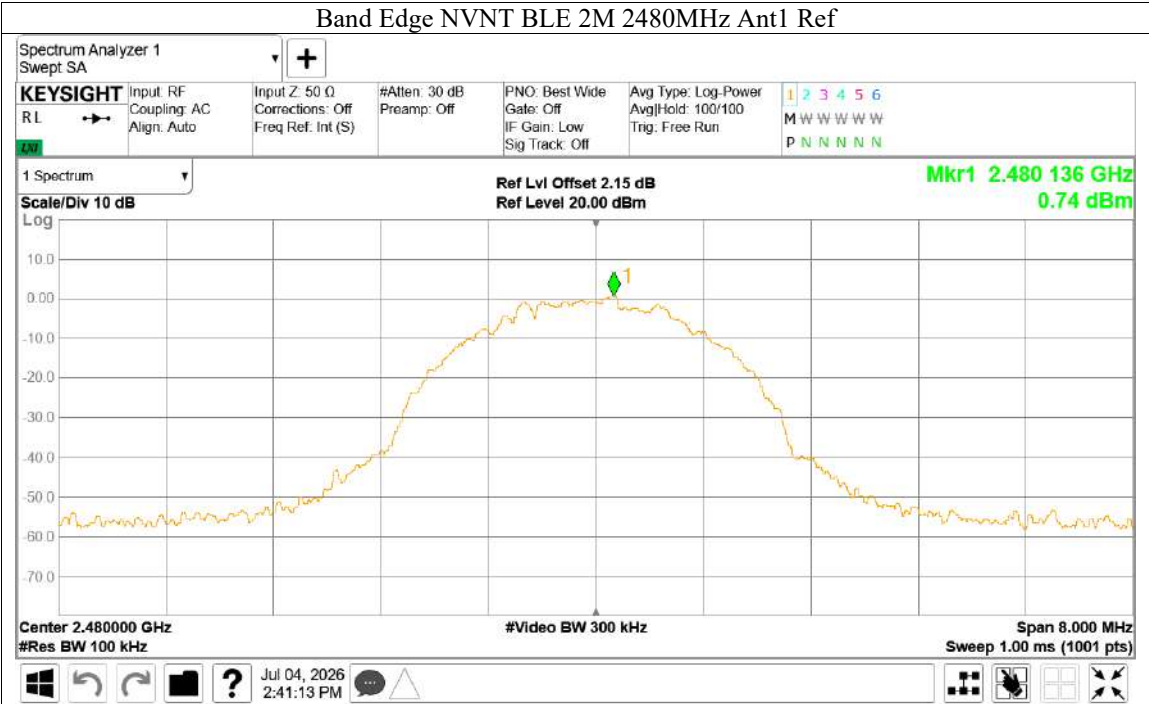


Test result









10.8 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.
Procedures for average unwanted emissions measurements above 1GHz
 - a) RBW = 1MHz.
 - b) $VBW \setminus [3 \times RBW]$.
 - c) Detector = RMS (power averaging), if $[\text{span} / (\# \text{ of points in sweep})] \setminus RBW / 2$.
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) and RSS-247 section 6.3.2, the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in § 15.209(a) and RSS-Gen is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a) and RSS-Gen section 8.9, must also comply with the radiated emission limits specified in § 15.209(a) and RSS-Gen section 8.10.

Below 30MHz

§15.247(d) & §15.209 & §15.205

Frequency MHz	Field Strength uV/m	Detector	Measured Distance Meters
0.009~0.090	2400/F (kHz)	AV	300
0.090~0.110	2400/F (kHz)	QP	300
0.110~0.490	2400/F (kHz)	AV	300
0.490~1.705	24000/F (kHz)	QP	30
1.705~30	30	QP	30

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

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

Note 3: $\text{dB}\mu\text{V/m} = 20\text{log}(\mu\text{V/m})$

RSS-247 & RSS-Gen 8.9

Frequency MHz	Field Strength uA/m	Detector	Measured Distance Meters
0.009~0.090	6.37/F (kHz)	AV	300
0.090~0.110	6.37/F (kHz)	QP	300
0.110~0.490	6.37/F (kHz)	AV	300
0.490~1.705	63.7/F (kHz)	QP	30
1.705~30	0.08	QP	30

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

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

Note 3: $\text{dB}\mu\text{V/m} = 20\text{log}(\mu\text{V/m})$, $\text{dB}\mu\text{A/m} = 20\text{log}(\mu\text{A/m})$

When the limit is in terms of magnetic field, the following equation applies:

$$H[\text{dB}(\mu\text{A/m})] = V[\text{dB}(\mu\text{V})] + L_c [\text{dB}] - G_{PA} [\text{dB}] + A F^E [\text{dB}(\text{m}^{-1})] - 51.5 [\text{dB}\Omega]$$

When the limit is in terms of electric field, the following equation applies:

$$E[\text{dB}(\mu\text{V}/\text{m})] = V[\text{dB}(\mu\text{V})] + L_c[\text{dB}] - G_{PA}[\text{dB}] + A_{FE}[\text{dB}(\text{m}^{-1})]$$

The magnetic field limit is converted to the electric field limit by the equation:

$$E_{\text{limit}}[\text{dB}(\mu\text{V}/\text{m})] = H_{\text{limit}}[\text{dB}(\mu\text{A}/\text{m})] + 51.5[\text{dB}\Omega]$$

where

H is the magnetic field strength (to be compared with the limit),

V is the voltage level measured by the receiver or spectrum analyzer.

L_c is the cable loss.

G_{PA} is the gain of the preamplifier (if used), and A_{FE} is the magnetic antenna factor.

Above 30MHz

§15.247(d) & §15.209 & §15.205

RSS-247 & RSS-Gen 8.9 & 8.10

Frequency MHz	Field Strength uV/m	Field Strength dBμV/m	Detector	Measured Distance Meters
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

Test result

Worst case Radiated Emission 9KHz-30MHz

0.009-30MHz Radiated Emission

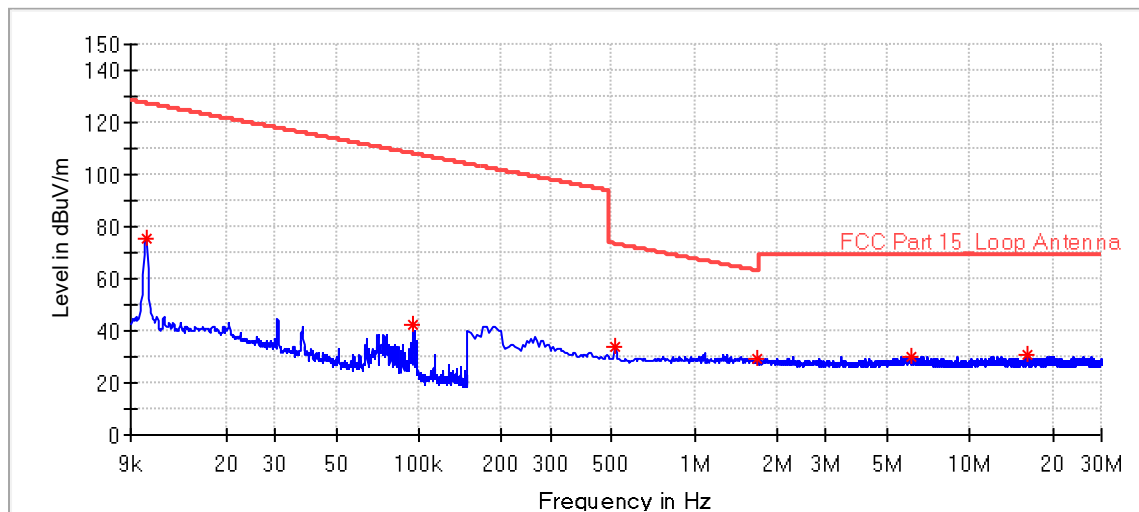
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB

**Critical Freqs**

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010234	75.04	127.40	52.36	X	281.0	19.6
0.095098	42.08	108.04	65.96	X	263.0	18.8
0.518735	33.93	73.31	39.37	X	6.0	18.8
1.682007	28.92	63.09	34.16	X	74.0	19.0
6.084882	30.17	69.54	39.37	X	90.0	18.8
16.040735	30.57	69.54	38.98	X	9.0	18.9

0.009-30MHz Radiated Emission

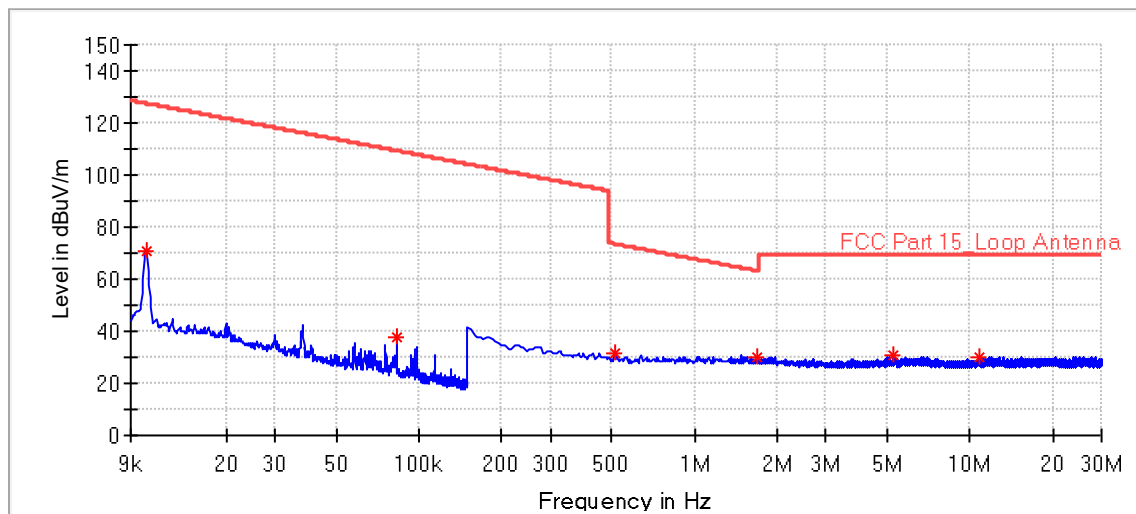
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010234	71.00	127.40	56.40	Y	175.0	19.6
0.083113	37.32	109.21	71.89	Y	175.0	18.8
0.518735	31.27	73.31	42.04	Y	300.0	18.8
1.682007	30.02	63.09	33.07	Y	137.0	19.0
5.272787	30.51	69.54	39.03	Y	359.0	18.9
10.790647	30.24	69.54	39.30	Y	157.0	18.8

0.009-30MHz Radiated Emission

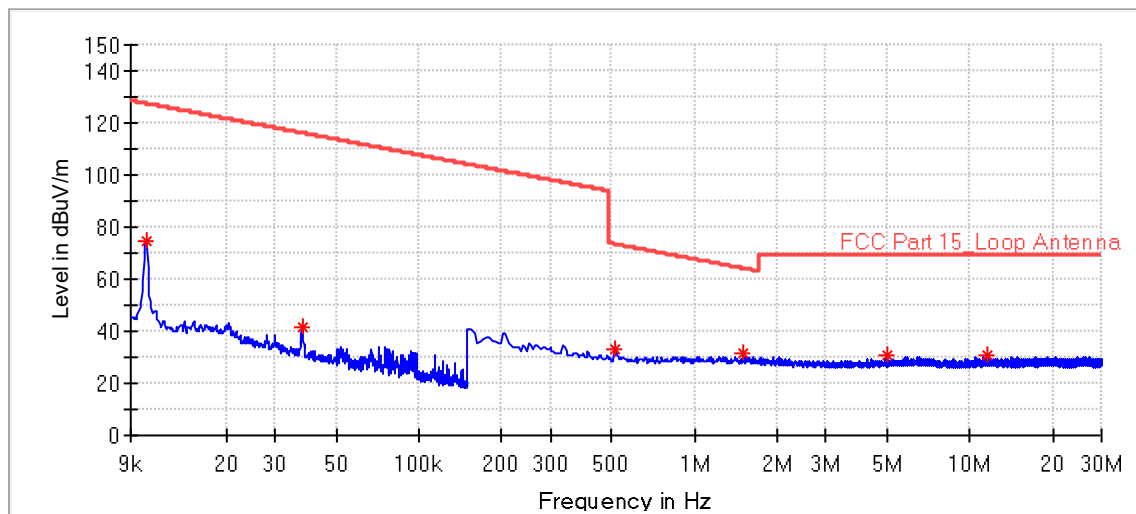
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_Loop E_pre [EMI radiated]

Hardware Setup: RE_Loop Antenna V
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
9 kHz - 150 kHz	88.125 Hz	PK+	200 Hz	0.01 s	0 dB
150 kHz - 30 MHz	4.39 kHz	PK+	9 kHz	0.01 s	0 dB



Critical Freqs

Frequency (MHz)	MaxPeak (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol	Azimuth (deg)	Corr. (dB/m)
0.010234	74.34	127.40	53.07	Z	259.0	19.6
0.037905	41.31	116.03	74.72	Z	87.0	18.9
0.518735	32.91	73.31	40.39	Z	0.0	18.8
1.506419	31.62	64.05	32.42	Z	165.0	18.9
5.022574	30.83	69.54	38.71	Z	63.0	18.9
11.642250	30.64	69.54	38.90	Z	260.0	18.7

Worst case Radiated Emission 30MHz-1GHz

30-1000MHz Radiated Emission

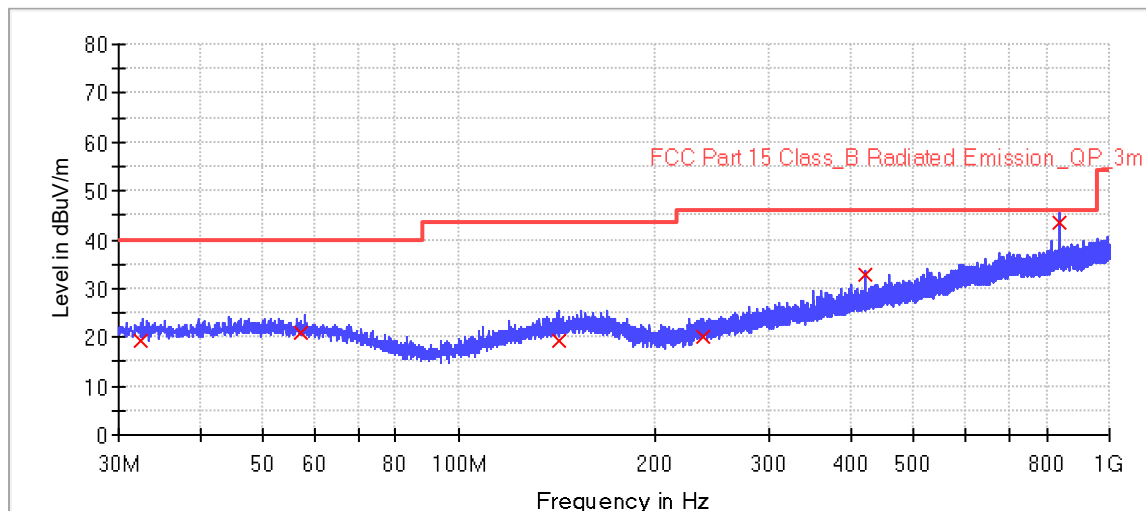
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
32.520000	19.4	1000.0	120.000	158.0	H	0.0	19.2	20.6	40.0
57.360000	20.7	1000.0	120.000	198.0	H	2.0	20.2	19.3	40.0
142.480000	19.3	1000.0	120.000	146.0	H	165.0	20.2	24.2	43.5
237.720000	20.1	1000.0	120.000	215.0	H	18.0	19.4	25.9	46.0
420.000000	33.0	1000.0	120.000	174.0	H	359.0	24.7	13.0	46.0
840.040000	43.7	1000.0	120.000	135.0	H	359.0	33.3	2.3	46.0

30-1000MHz Radiated Emission

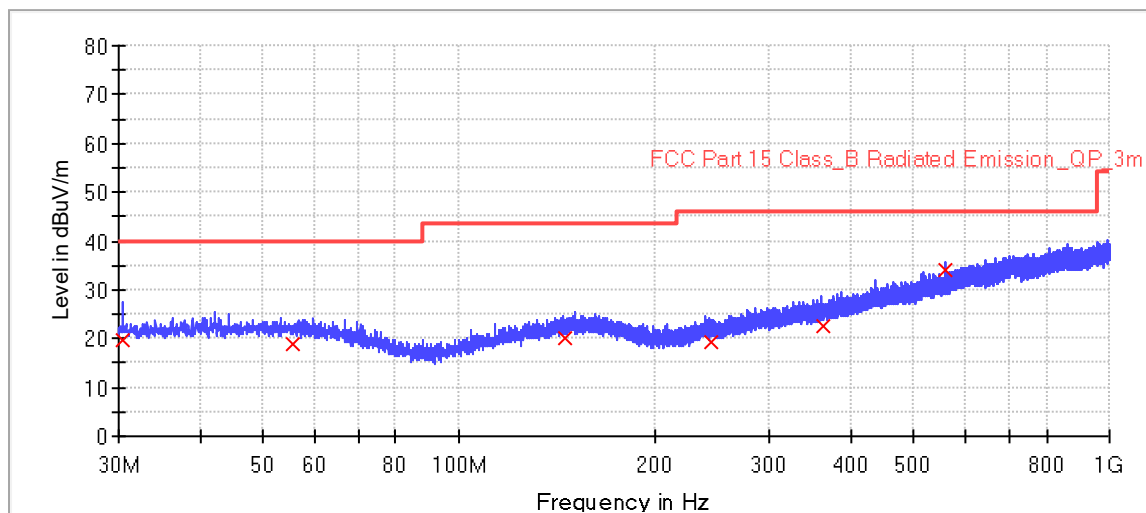
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
 Receiver: [ESR 3]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamp
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

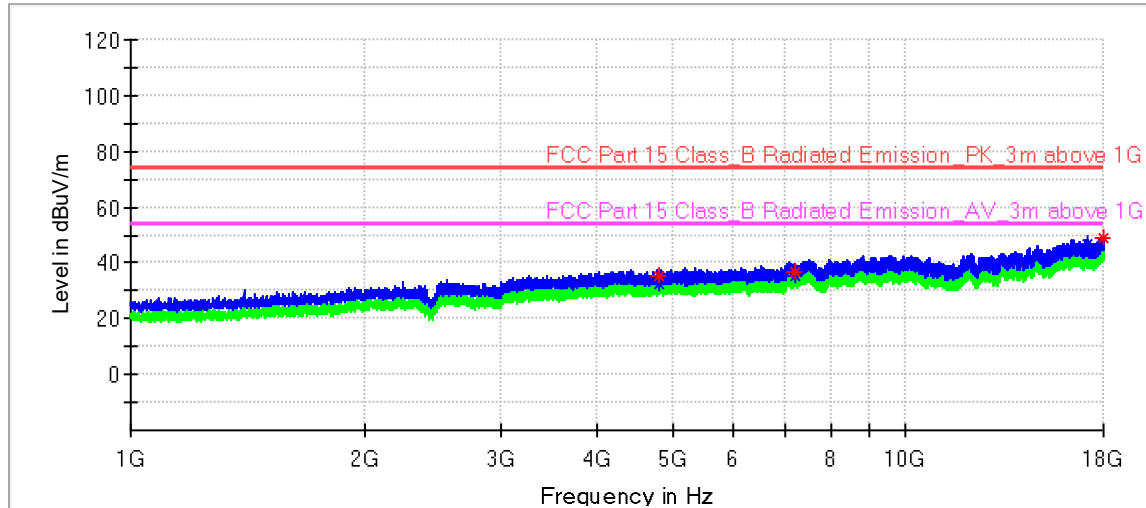


Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBuV/m)
30.440000	19.5	1000.0	120.000	185.0	V	15.0	19.2	20.5	40.0
55.720000	19.0	1000.0	120.000	177.0	V	145.0	20.3	21.1	40.0
145.880000	20.0	1000.0	120.000	196.0	V	2.0	20.4	23.5	43.5
244.240000	19.4	1000.0	120.000	217.0	V	18.0	19.6	26.6	46.0
362.960000	22.5	1000.0	120.000	153.0	V	162.0	23.2	23.5	46.0
560.000000	34.0	1000.0	120.000	175.0	V	359.0	27.7	12.0	46.0

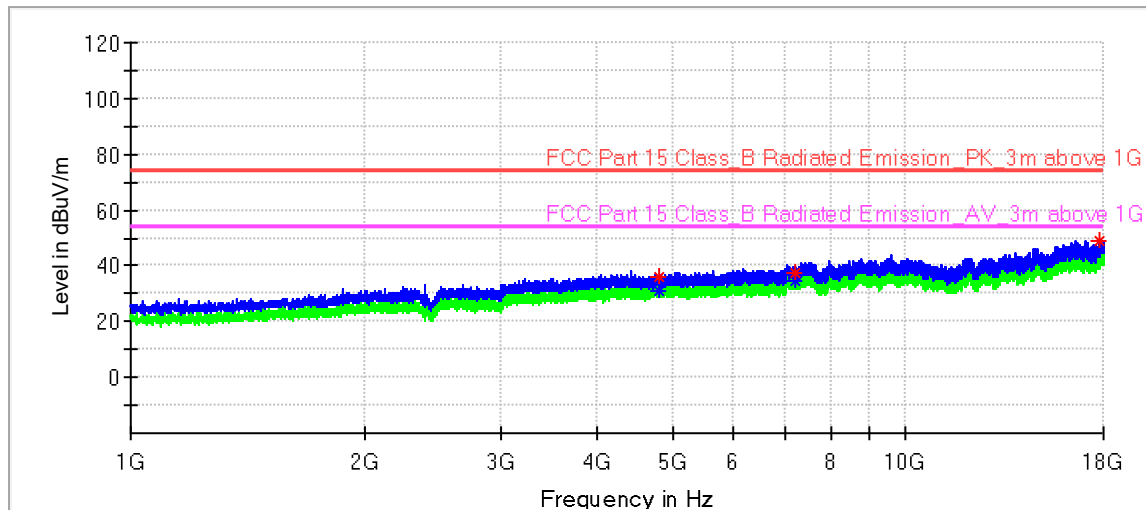
Radiated Emission 1-18 GHz at 1Mbps

Frequency: 2402MHz at 1Mbps



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4802.687500	35.44	---	74.00	38.56	200.0	H	59.0	-4.0
4805.875000	---	32.70	54.00	21.30	200.0	H	4.0	-4.0
7206.593750	---	35.39	54.00	18.61	150.0	H	347.0	-0.6
7207.656250	36.89	---	74.00	37.11	250.0	H	31.0	-0.6
17136.718750	---	46.90	54.00	7.10	150.0	H	254.0	10.6
17952.187500	49.10	---	74.00	24.90	150.0	H	333.0	11.9

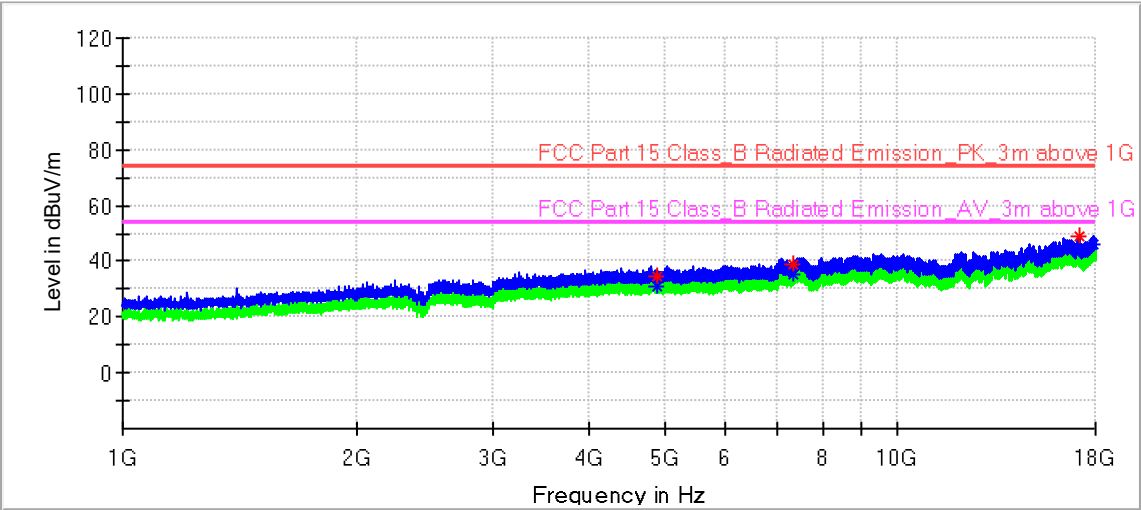


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4804.812500	36.01	---	74.00	37.99	150.0	V	196.0	-4.0
4805.343750	---	30.68	54.00	23.32	150.0	V	248.0	-4.0
7206.062500	37.64	---	74.00	36.36	200.0	V	94.0	-0.6
7206.593750	---	34.55	54.00	19.45	200.0	V	225.0	-0.6
17136.187500	---	45.47	54.00	8.53	250.0	V	78.0	10.6
17774.750000	49.04	---	74.00	24.96	150.0	V	10.0	11.5

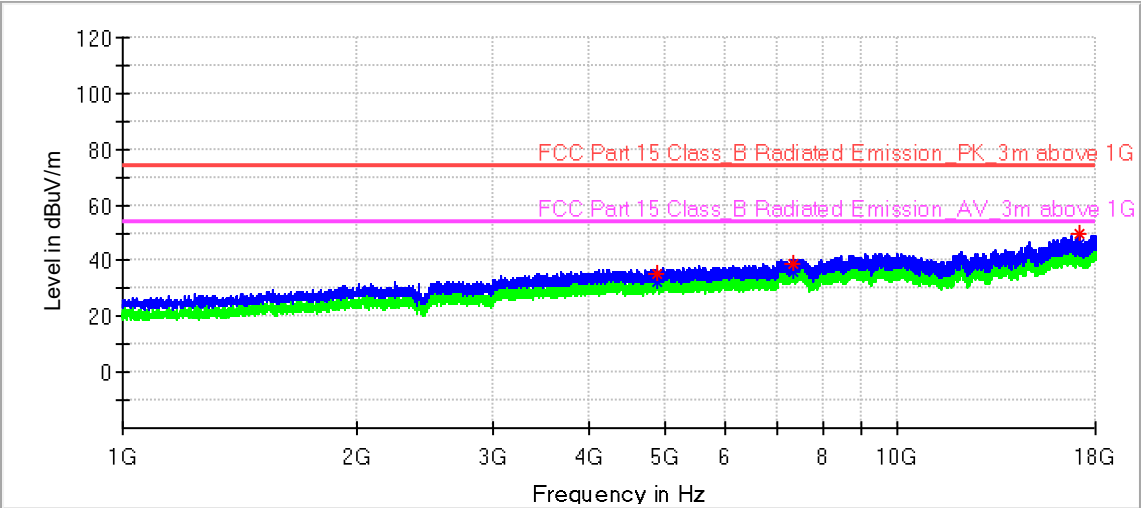


Frequency:2440MHz at 1Mbps



Limit and Margin

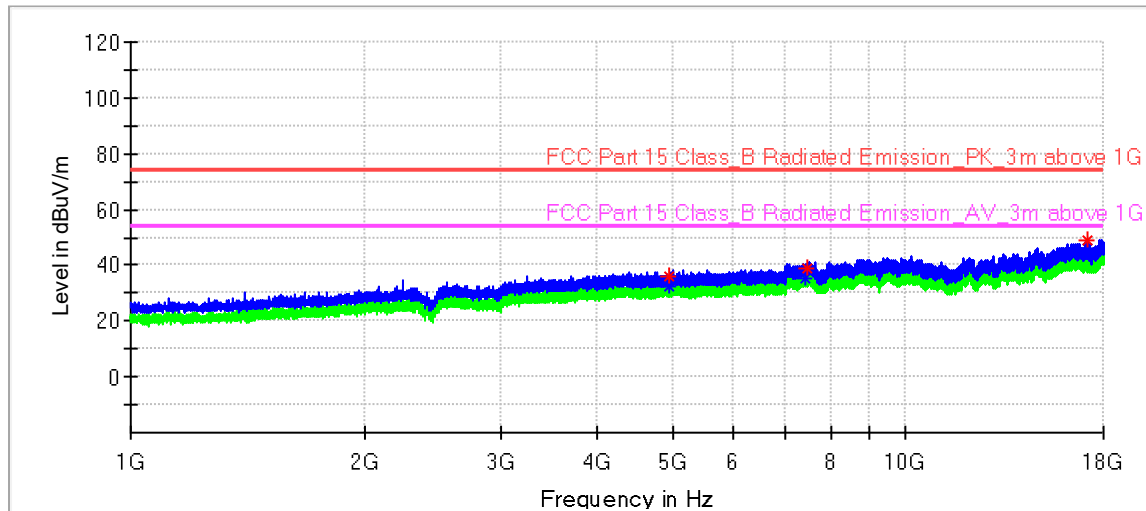
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4880.781250	---	31.29	54.00	22.71	200.0	H	90.0	-3.7
4881.843750	34.64	---	74.00	39.36	150.0	H	274.0	-3.7
7319.750000	39.19	---	74.00	34.81	150.0	H	293.0	-0.7
7321.343750	---	35.29	54.00	18.71	200.0	H	183.0	-0.7
17122.375000	48.89	---	74.00	25.11	200.0	H	148.0	10.6
17921.375000	---	45.86	54.00	8.14	200.0	H	257.0	11.8



Limit and Margin

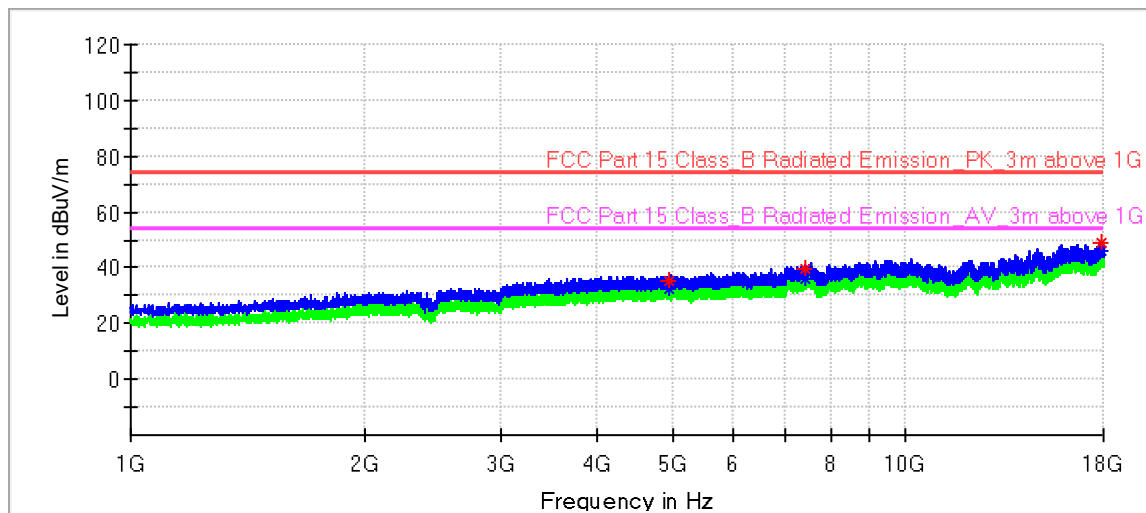
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4882.375000	35.47	---	74.00	38.53	200.0	V	81.0	-3.7
4883.968750	---	32.37	54.00	21.63	250.0	V	0.0	-3.7
7320.812500	38.65	---	74.00	35.35	150.0	V	92.0	-0.7
7322.406250	---	36.31	54.00	17.69	200.0	V	279.0	-0.7
17122.375000	49.49	---	74.00	24.51	150.0	V	335.0	10.6
17122.375000	---	46.02	54.00	7.98	150.0	V	335.0	10.6

Frequency: 2480MHz at 1Mbps



Limit and Margin

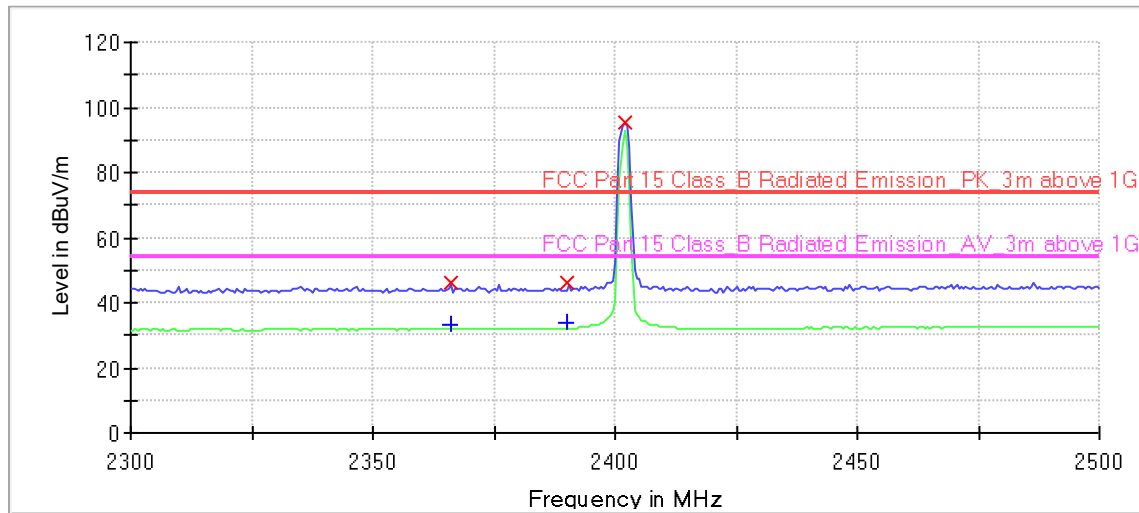
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4958.875000	---	32.50	54.00	21.50	200.0	H	11.0	-3.6
4959.406250	36.01	---	74.00	37.99	150.0	H	266.0	-3.6
7441.406250	---	35.20	54.00	18.80	250.0	H	68.0	-0.6
7442.468750	38.87	---	74.00	35.13	150.0	H	294.0	-0.6
17148.937500	---	45.75	54.00	8.25	250.0	H	0.0	10.6
17148.937500	49.19	---	74.00	24.81	150.0	H	0.0	10.6



Limit and Margin

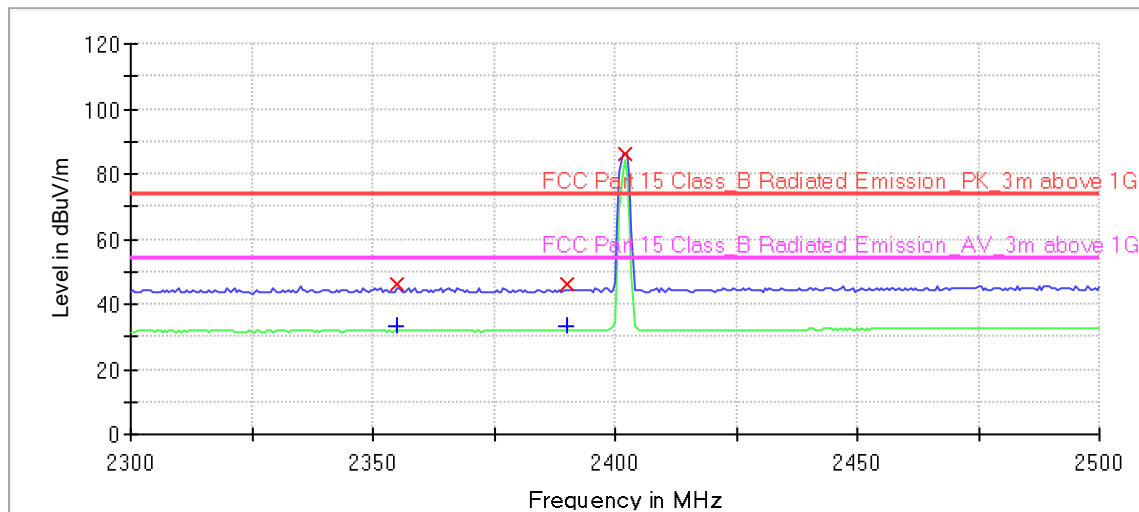
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4959.937500	35.40	---	74.00	38.60	200.0	V	336.0	-3.6
4961.531250	---	32.33	54.00	21.67	150.0	V	325.0	-3.6
7440.343750	39.53	---	74.00	34.47	250.0	V	51.0	-0.6
7440.875000	---	35.65	54.00	18.35	150.0	V	0.0	-0.6
17858.687500	---	45.84	54.00	8.16	200.0	V	245.0	11.7
17903.312500	49.14	---	74.00	24.86	150.0	V	228.0	11.8

Band Edge at 1Mbps



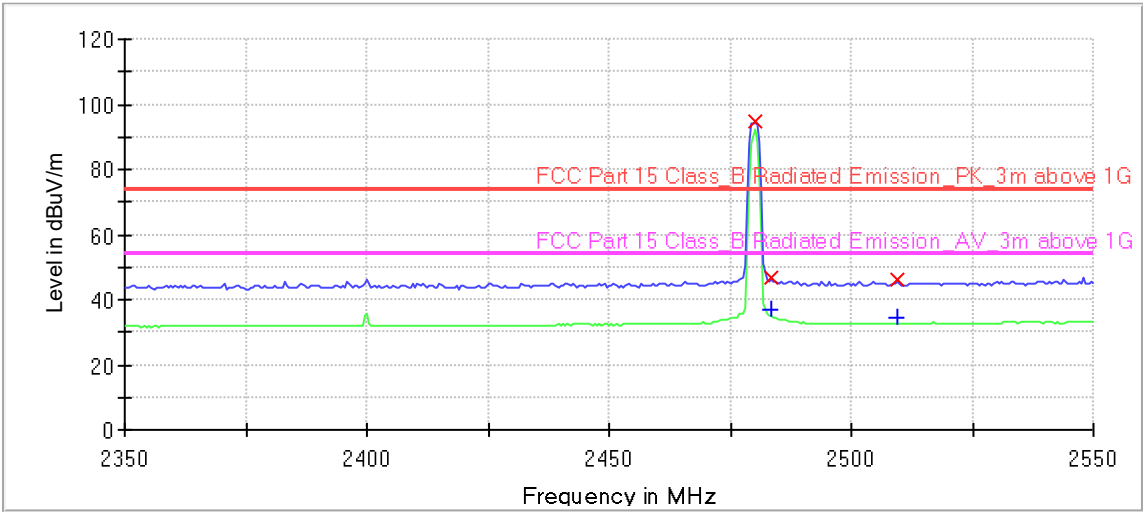
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2366.000000	46.0	33.1	199.0	H	12.0	-2.1	28.0	74.0	20.9	54.0
2390.000000	46.1	34.1	187.0	H	185.0	-2.0	27.9	74.0	20.0	54.0
2402.000000	95.4	---	166.0	H	1.0	-1.9	-21.4	74.0	---	---



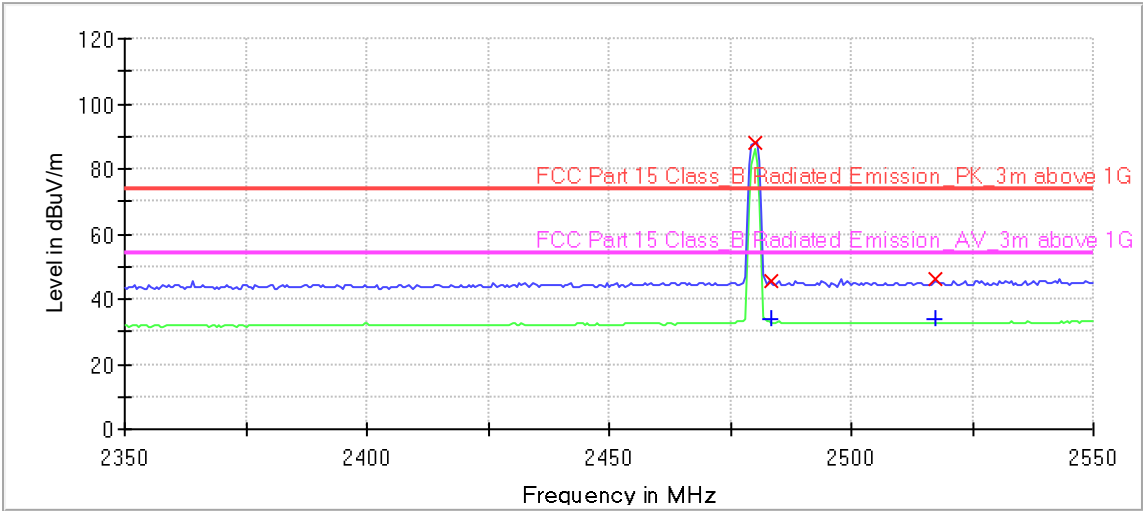
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2355.000000	46.1	33.2	178.0	V	15.0	-2.2	27.9	74.0	20.9	54.0
2390.000000	46.0	33.2	166.0	V	11.0	-2.0	28.0	74.0	20.9	54.0
2402.000000	86.2	---	187.0	V	144.0	-1.9	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2480.000000	94.7	---	189.0	H	12.0	-1.5	---	---	---	---
2483.500000	47.1	36.7	175.0	H	352.0	-1.4	27.0	74.0	17.3	54.0
2509.500000	46.3	34.2	168.0	H	136.0	-1.3	27.7	74.0	19.8	54.0



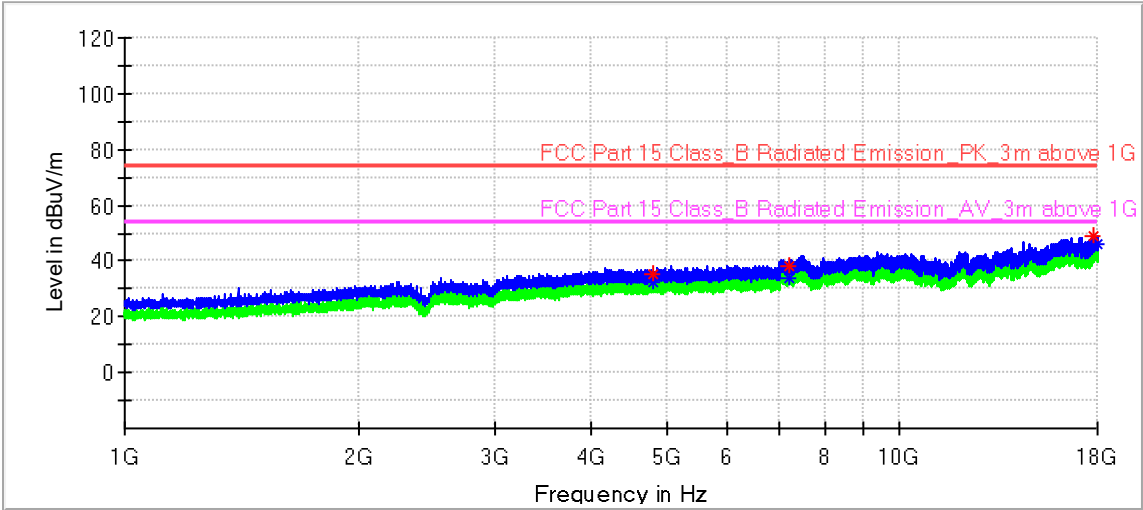
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2480.000000	88.0	---	198.0	V	12.0	-1.5	-14.0	74.0	---	---
2483.500000	45.5	34.0	175.0	V	36.0	-1.4	28.5	74.0	20.0	54.0
2517.500000	46.1	34.1	167.0	V	149.0	-1.3	27.9	74.0	19.9	54.0



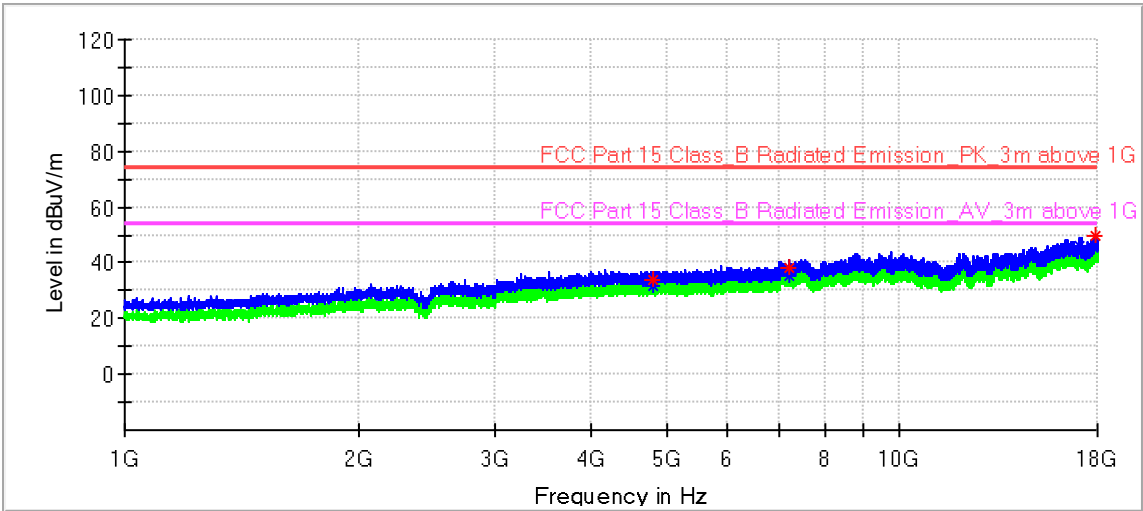
Radiated Emission 1-18 GHz at 2Mbps

Frequency:2402MHz at 2Mbps



Limit and Margin

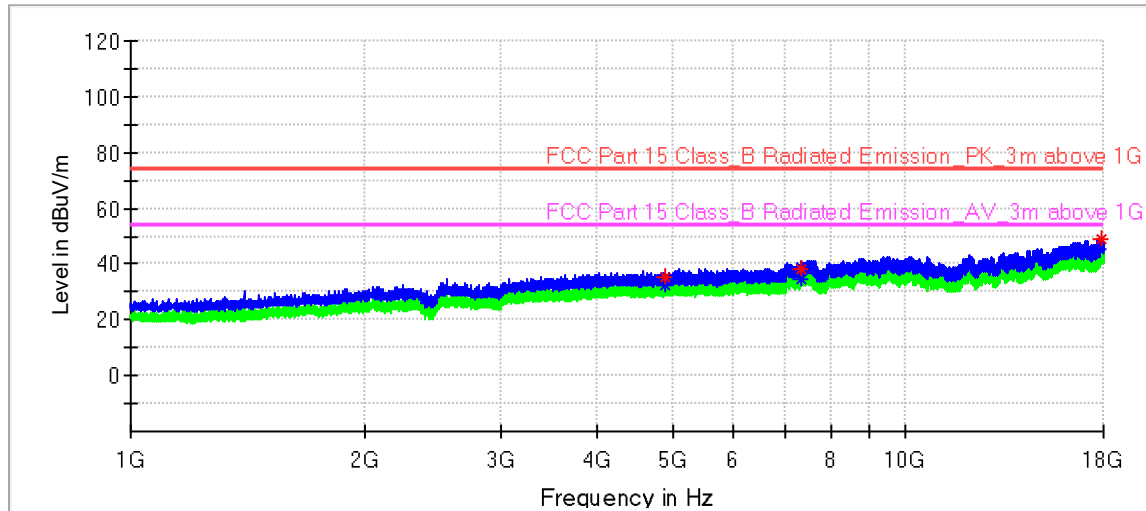
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.750000	---	32.76	54.00	21.24	200.0	H	196.0	-4.0
4805.343750	35.57	---	74.00	38.43	150.0	H	98.0	-4.0
7205.000000	38.50	---	74.00	35.50	200.0	H	356.0	-0.6
7206.593750	---	33.64	54.00	20.36	150.0	H	256.0	-0.6
17837.437500	48.76	---	74.00	25.24	250.0	H	4.0	11.6
17951.656250	---	46.15	54.00	7.85	150.0	H	115.0	11.9



Limit and Margin

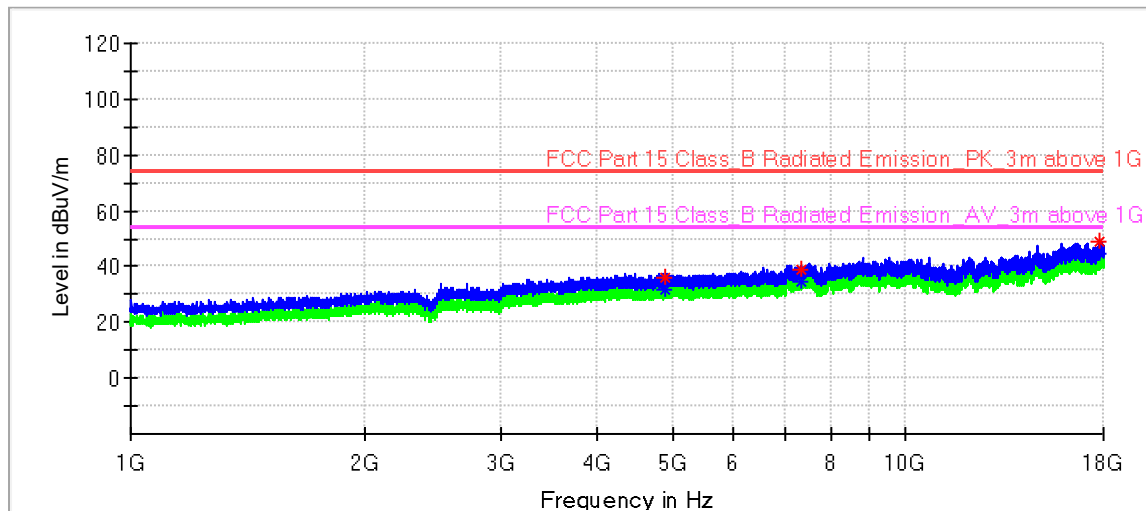
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4803.218750	---	31.76	54.00	22.24	150.0	V	272.0	-4.0
4803.750000	33.85	---	74.00	40.15	200.0	V	300.0	-4.0
7205.000000	---	35.48	54.00	18.52	150.0	V	204.0	-0.6
7205.000000	38.06	---	74.00	35.94	250.0	V	204.0	-0.6
17047.468750	---	46.15	54.00	7.85	150.0	V	323.0	10.4
17934.656250	49.85	---	74.00	24.15	150.0	V	79.0	11.9

Frequency: 2440MHz at 2Mbps



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4880.250000	---	32.06	54.00	21.94	200.0	H	158.0	-3.7
4881.312500	35.52	---	74.00	38.48	150.0	H	0.0	-3.7
7321.343750	---	34.54	54.00	19.46	150.0	H	135.0	-0.7
7322.406250	38.25	---	74.00	35.75	250.0	H	359.0	-0.7
17816.718750	---	45.30	54.00	8.70	150.0	H	306.0	11.6
17912.343750	48.80	---	74.00	25.20	150.0	H	193.0	11.8

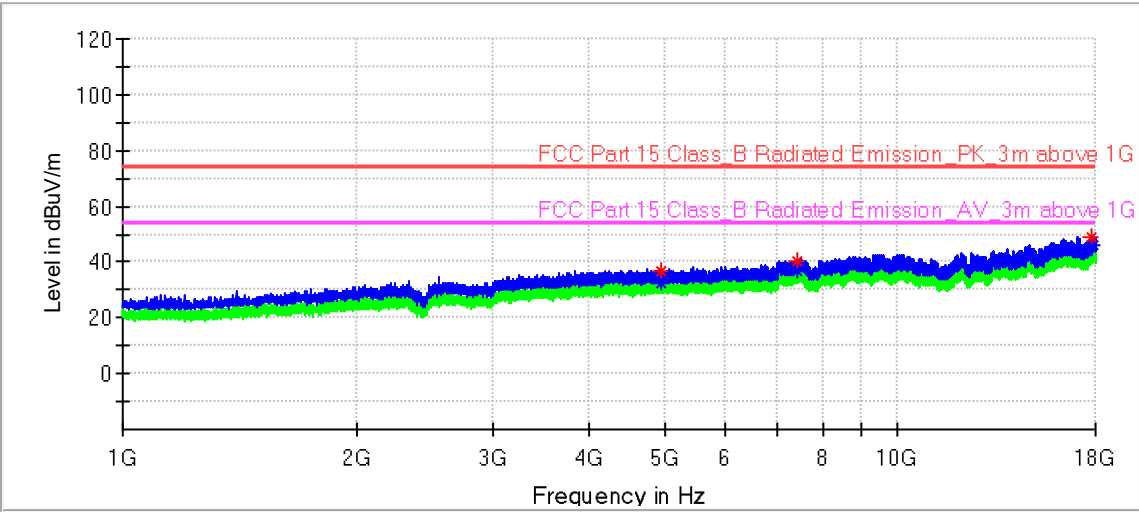


Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4881.312500	---	31.83	54.00	22.17	250.0	V	93.0	-3.7
4881.312500	35.75	---	74.00	38.25	150.0	V	93.0	-3.7
7321.875000	---	34.39	54.00	19.61	200.0	V	303.0	-0.7
7321.875000	39.20	---	74.00	34.80	150.0	V	303.0	-0.7
17742.343750	48.88	---	74.00	25.12	250.0	V	173.0	11.4
17758.812500	---	44.89	54.00	9.11	150.0	V	326.0	11.5

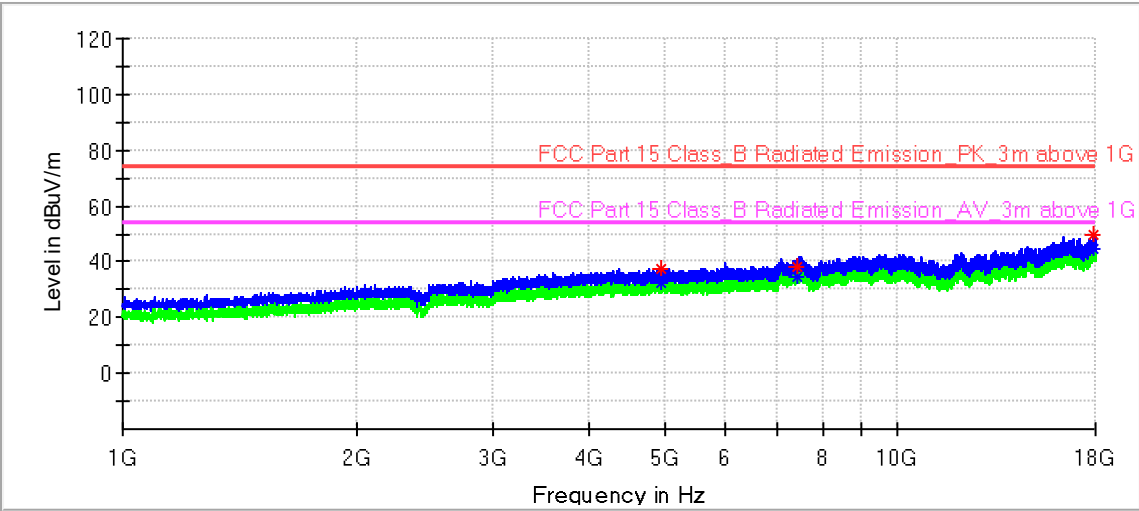


Frequency:2480MHz at 2Mbps



Limit and Margin

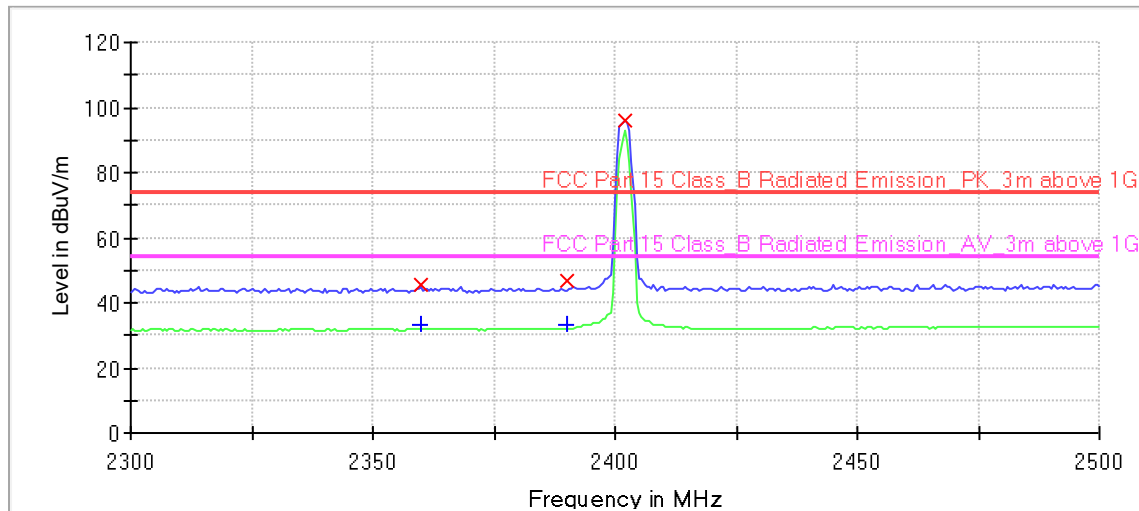
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4958.343750	36.41	---	74.00	37.59	250.0	H	102.0	-3.6
4963.656250	---	32.57	54.00	21.43	150.0	H	73.0	-3.6
7441.406250	---	36.91	54.00	17.09	150.0	H	143.0	-0.6
7441.937500	40.04	---	74.00	33.96	200.0	H	282.0	-0.6
17773.687500	49.05	---	74.00	24.95	150.0	H	126.0	11.5
17903.843750	---	45.81	54.00	8.19	200.0	H	43.0	11.8



Limit and Margin

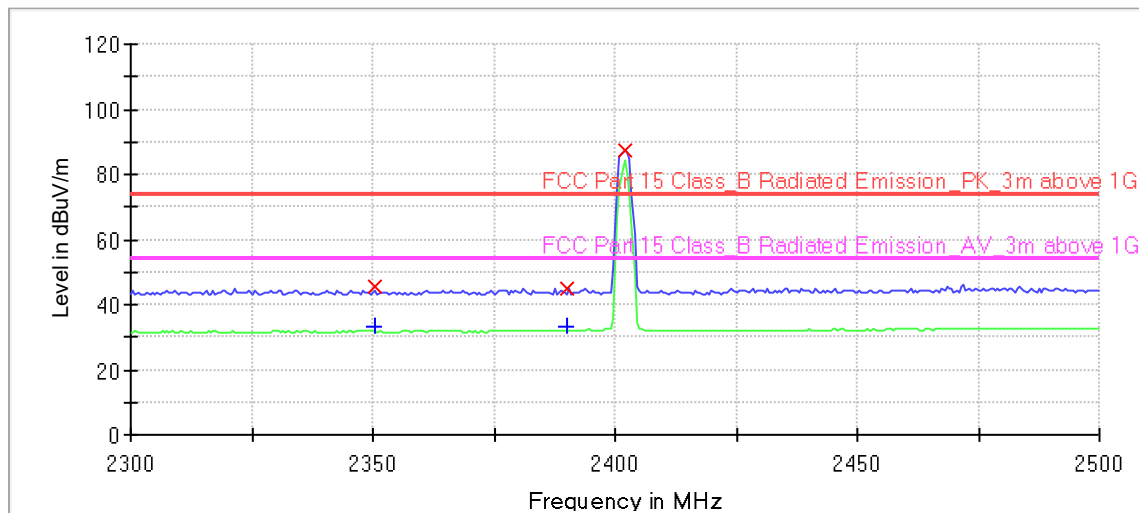
Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
4958.875000	---	32.57	54.00	21.43	250.0	V	1.0	-3.6
4958.875000	37.46	---	74.00	36.54	150.0	V	1.0	-3.6
7441.406250	---	34.38	54.00	19.62	150.0	V	226.0	-0.6
7441.406250	37.86	---	74.00	36.14	250.0	V	226.0	-0.6
17916.062500	---	44.91	54.00	9.09	200.0	V	354.0	11.8
17917.656250	49.38	---	74.00	24.62	150.0	V	220.0	11.8

Band Edge at 2Mbps



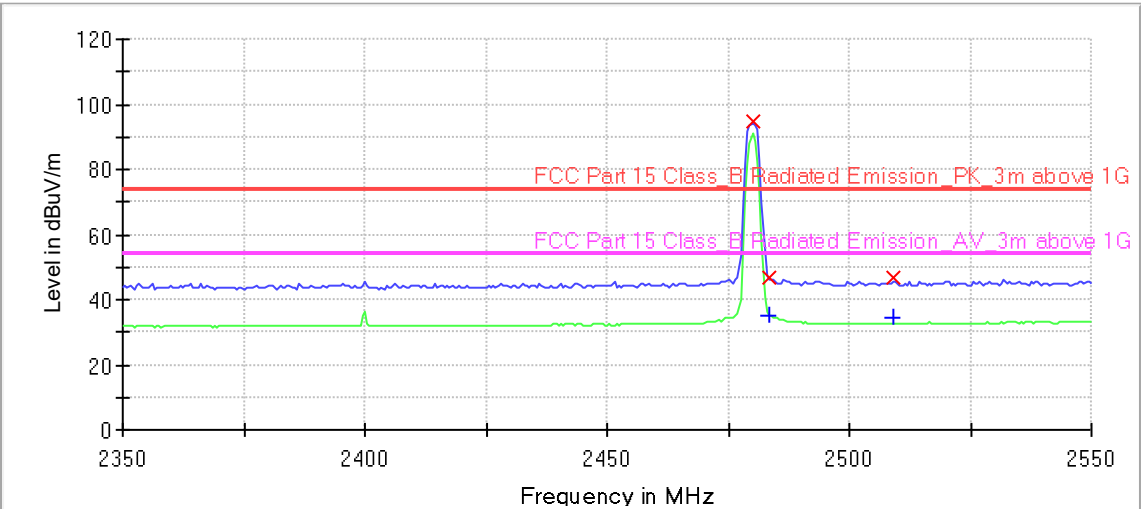
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2360.000000	45.6	33.2	188.0	H	1.0	-2.1	28.4	74.0	20.8	54.0
2390.000000	46.5	33.5	169.0	H	165.0	-2.0	27.5	74.0	20.5	54.0
2402.000000	95.9	---	173.0	H	14.0	-1.9	---	---	---	---



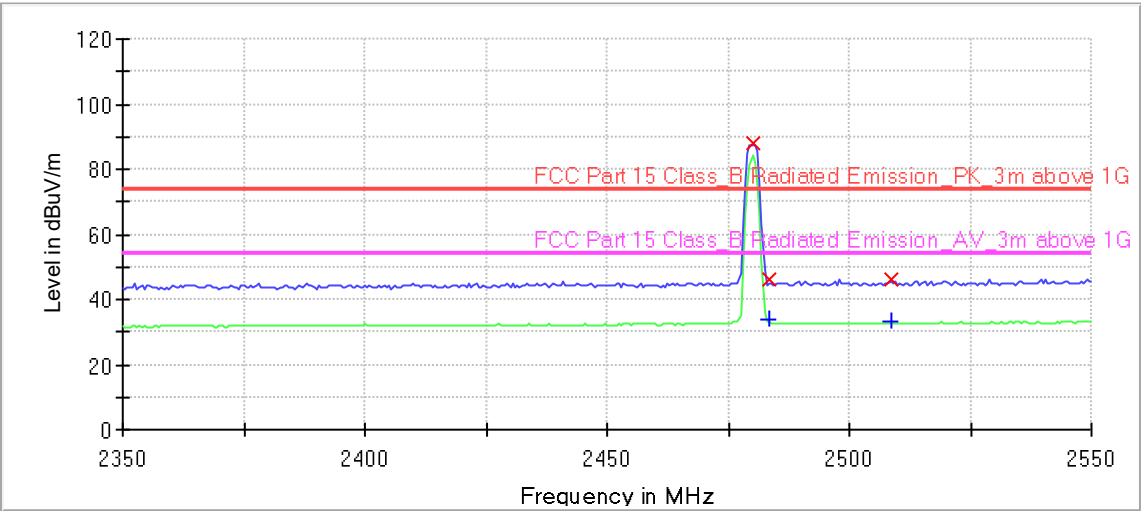
Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2350.500000	45.3	33.1	211.0	V	1.0	-2.2	28.7	74.0	20.9	54.0
2390.000000	45.1	33.2	197.0	V	33.0	-2.0	28.9	74.0	20.8	54.0
2402.000000	87.1	---	186.0	V	141.0	-1.9	---	---	---	---



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2480.000000	95.0	---	187.0	H	11.0	-1.5	---	---	---	---
2483.500000	46.9	35.2	198.0	H	17.0	-1.4	27.1	74.0	18.8	54.0
2509.000000	46.6	34.6	166.0	H	135.0	-1.3	27.5	74.0	19.4	54.0



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	RMS (dBuV/m)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBuV/m)	Margin - RMS (dB)	Limit - RMS (dBuV/m)
2480.000000	87.8	---	178.0	V	4.0	-1.5	---	---	---	---
2483.500000	46.0	33.7	169.0	V	18.0	-1.4	28.0	74.0	20.4	54.0
2508.500000	46.4	33.5	188.0	V	359.0	-1.3	27.6	74.0	20.5	54.0

The worst case of Radiated Emission Above 18GHz

18-25GHz Radiated Emission

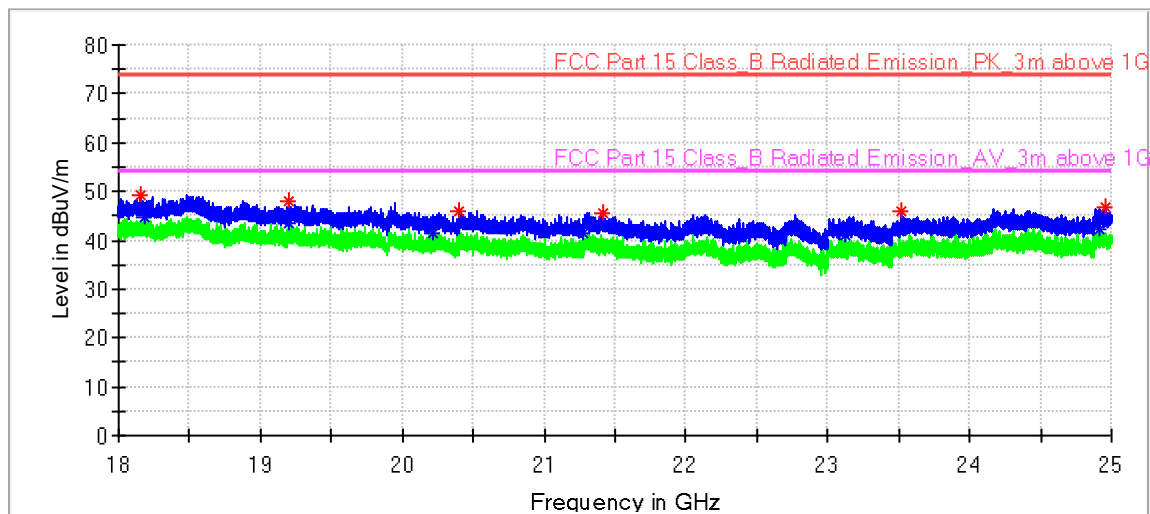
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_3116C_pre [EMI radiated]

Hardware Setup: RE_3116C
 Receiver: [FSV 40]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
18 GHz - 25 GHz	500 kHz	PK+ ; AVG	1 MHz	0.05 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18153.500000	49.37	---	74.00	24.63	100.0	H	77.0	8.4
18188.500000	---	44.70	54.00	9.30	100.0	H	131.0	8.5
19198.000000	---	43.52	54.00	10.48	100.0	H	172.0	8.2
19200.000000	47.86	---	74.00	26.14	100.0	H	193.0	8.2
20217.000000	---	41.63	54.00	12.37	100.0	H	27.0	8.7
20402.500000	45.95	---	74.00	28.05	100.0	H	158.0	8.7
21280.500000	---	41.26	54.00	12.74	100.0	H	169.0	9.2
21415.500000	45.66	---	74.00	28.34	100.0	H	20.0	9.2
23116.500000	---	40.92	54.00	13.08	100.0	H	283.0	9.4
23522.500000	45.78	---	74.00	28.22	100.0	H	87.0	9.4
24913.500000	---	42.33	54.00	11.67	100.0	H	63.0	9.4
24952.500000	46.71	---	74.00	27.29	100.0	H	0.0	9.4

18-25GHz Radiated Emission

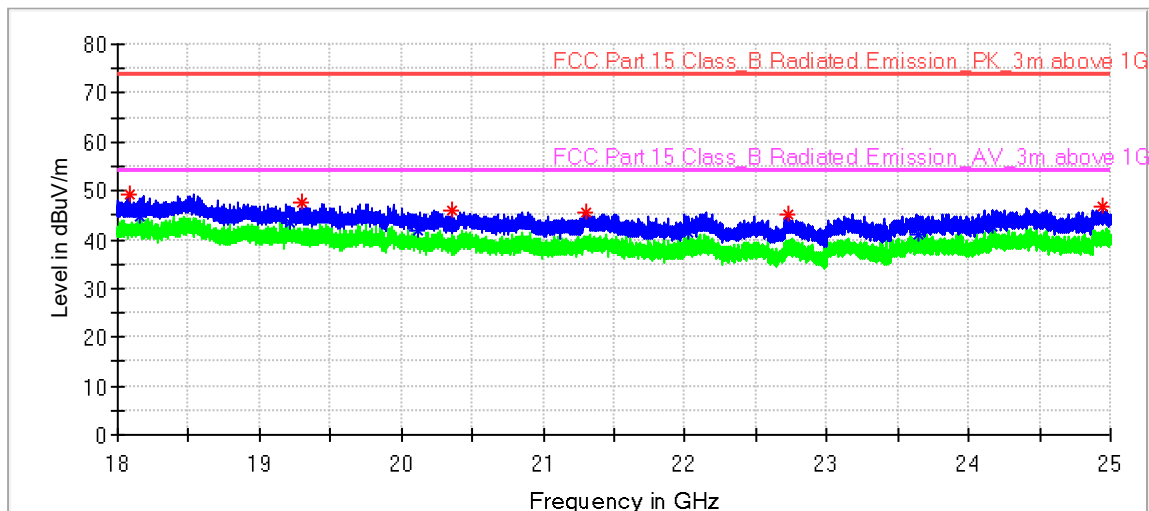
EUT Information

EUT Name: 300W 8-Port GaN Desktop Fast Charger
 Model: X783
 Client: Ugreen Group Limited
 Op Cond: Power on, TX_2480MHz
 Operator: Chengjie GUO
 Standard: FCC Part 15.207
 Sample No.: SHA-1050604-1

Sweep Setup: RE_3116C_pre [EMI radiated]

Hardware Setup: RE_3116C
 Receiver: [FSV 40]
 Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
18 GHz - 25 GHz	500 kHz	PK+ ; AVG	1 MHz	0.05 s	0 dB



Limit and Margin

Frequency (MHz)	MaxPeak (dBuV/m)	Average (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
18083.500000	49.20	---	74.00	24.80	100.0	V	120.0	8.4
18153.500000	---	44.76	54.00	9.24	100.0	V	291.0	8.4
19215.000000	---	43.49	54.00	10.51	100.0	V	291.0	8.2
19295.000000	47.49	---	74.00	26.51	100.0	V	136.0	8.2
20114.000000	---	41.86	54.00	12.14	100.0	V	341.0	8.7
20354.000000	46.12	---	74.00	27.88	100.0	V	133.0	8.7
21303.000000	45.69	---	74.00	28.31	100.0	V	248.0	9.2
22025.000000	---	41.32	54.00	12.68	100.0	V	187.0	8.9
22723.500000	45.26	---	74.00	28.74	100.0	V	65.0	9.3
23640.000000	---	40.88	54.00	13.12	100.0	V	251.0	9.5
24170.500000	---	42.47	54.00	11.53	100.0	V	315.0	9.9
24940.000000	46.60	---	74.00	27.40	100.0	V	210.0	9.4

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

11 Test Equipment List

List of Test Instruments
Test Site1

	Description	Manufacturer	Model no.	Serial no.	CAL. DATE	CAL. DUE DATE
C	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2026-2-24	2027-2-23
	RF automatic control unit	MWRFTest	MW100-RFCB	MW211122-28	2025-10-9	2026-10-8
	RF_Cable	UCWAVE ELECTRONIC	UCA500-NJWSM-1.5M	---	2025-8-1	2026-7-31
RE	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2025-8-1	2026-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2025-8-1	2026-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2026-6-25	2027-6-24
	Double-ridged waveguide horn antenna	Rohde & Schwarz	HF907	102393	2026-4-14	2027-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2026-4-14	2027-4-13
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2026-6-25	2027-6-24
	Double Ridged Horn Antenna	ETS-Lindgren	3116C	000222727	2026-6-25	2027-6-24
	RE_Cable_01 Coaxial Cable	JUNFLON	MWX221	1906S057	2025-8-1	2026-7-31
	RE_Cable_02 Coaxial Cable	HUBER+SUHNER	RG214	1358176	2025-8-1	2026-7-31
	RE_Cable_03 Coaxial Cable	JUNFLON	MWX221	J12J102482	2025-8-1	2026-7-31
	RE_Cable_04 Coaxial Cable	PASTERNAK	PE360	2233	2025-8-1	2026-7-31
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
	Band reject filter	Wainwright	WRCGV10-2382-2402-2480-2500-52SS	38	2025-8-1	2026-7-31
	10dB Attenuator	Aeroflex Weinschel	CG-4689	93459	2026-2-24	2027-2-23
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2025-8-1	2026-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2025-8-1	2026-7-31
	CE_Cable_01 Coaxial Cable	HUBER+SUHNER	RG400	1002115055	2025-8-1	2026-7-31

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTest	3.0.0.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03



C - Conducted RF tests

- Conducted peak output power
- 6dB bandwidth and 99% Occupied Bandwidth
- Power spectral density
- Spurious RF conducted emissions
- Band edge



12 System Measurement Uncertainty

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

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related: 1.16dB Frequency related: 6.00×10^{-8}

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.



13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.



14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

-----End of Test Report-----