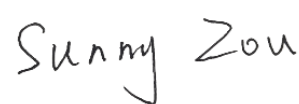


TEST REPORT

Applicant: HANSHOW PTE. LTD.
Address: 138 ROBINSON ROAD, #02-33, OXLEY TOWER,
SINGAPORE(068906)
Equipment Type: Electronic Shelf Label
Model Name: Nebular Plus-420Q-N
Brand Name: Hanshow
FCC ID: 2BPF3-NP-420Q
Test Standard: 47 CFR Part 15 Subpart C
(refer to section 3.1)
Sample Arrival Date: Aug. 01, 2025
Test Date: Aug. 14, 2025 - Aug. 21, 2025
Date of Issue: Aug. 25, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Yang Wenxuan**Checked by:** Ye Hongji**Approved by:** Sunny Zou
(Technical Director)

Revision History

Version	Issue Date	Revisions
<u>Rev. 01</u>	<u>Aug. 25, 2025</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☒ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☐ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	HANSHOW PTE. LTD.
Address	138 ROBINSON ROAD, #02-33, OXLEY TOWER, SINGAPORE(068906)

2.2 Manufacturer Information

Manufacturer	HANSHOW PTE. LTD.
Address	138 ROBINSON ROAD, #02-33, OXLEY TOWER, SINGAPORE(068906)

2.3 General Description for Equipment under Test (EUT)

EUT Name	Electronic Shelf Label
Model Name Under Test	Nebular Plus-420Q-N
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	HSELAQ_04_20MG_31
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	2.4G ISM Band
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The requirement for the following technical information of the EUT was tested in this report:

Modulation Technology	FHSS
Modulation Type	GFSK
Product Type	☐ Mobile ☒ Portable ☐ Fix Location
Transfer Rate	500 kbps
Frequency Range	The frequency range used is 2400 MHz to 2483.5 MHz.
Number of Channel	157
Tested Channel	4(2402 MHz), 82(2441 MHz), 160(2480 MHz)
Antenna Type	PCB Antenna
Antenna Gain	-0.4 dBi

All channel list:

Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)	Channel Number	Freq. (MHz)
4	2402.0	44	2422.0	84	2442.0	124	2462.0
5	2402.5	45	2422.5	85	2442.5	125	2462.5
6	2403.0	46	2423.0	86	2443.0	126	2463.0
7	2403.5	47	2423.5	87	2443.5	127	2463.5
8	2404.0	48	2424.0	88	2444.0	128	2464.0
9	2404.5	49	2424.5	89	2444.5	129	2464.5
10	2405.0	50	2425.0	90	2445.0	130	2465.0
11	2405.5	51	2425.5	91	2445.5	131	2465.5
12	2406.0	52	2426.0	92	2446.0	132	2466.0
13	2406.5	53	2426.5	93	2446.5	133	2466.5
14	2407.0	54	2427.0	94	2447.0	134	2467.0
15	2407.5	55	2427.5	95	2447.5	135	2467.5
16	2408.0	56	2428.0	96	2448.0	136	2468.0
17	2408.5	57	2428.5	97	2448.5	137	2468.5
18	2409.0	58	2429.0	98	2449.0	138	2469.0
19	2409.5	59	2429.5	99	2449.5	139	2469.5
20	2410.0	60	2430.0	100	2450.0	140	2470.0
21	2410.5	61	2430.5	101	2450.5	141	2470.5
22	2411.0	62	2431.0	102	2451.0	142	2471.0
23	2411.5	63	2431.5	103	2451.5	143	2471.5
24	2412.0	64	2432.0	104	2452.0	144	2472.0
25	2412.5	65	2432.5	105	2452.5	145	2472.5
26	2413.0	66	2433.0	106	2453.0	146	2473.0
27	2413.5	67	2433.5	107	2453.5	147	2473.5
28	2414.0	68	2434.0	108	2454.0	148	2474.0
29	2414.5	69	2434.5	109	2454.5	149	2474.5
30	2415.0	70	2435.0	110	2455.0	150	2475.0
31	2415.5	71	2435.5	111	2455.5	151	2475.5
32	2416.0	72	2436.0	112	2456.0	152	2476.0
33	2416.5	73	2436.5	113	2456.5	153	2476.5
34	2417.0	74	2437.0	114	2457.0	154	2477.0
35	2417.5	75	2437.5	115	2457.5	155	2477.5
36	2418.0	76	2438.0	116	2458.0	156	2478.0
37	2418.5	77	2438.5	117	2458.5	157	2478.5
38	2419.0	78	2439.0	118	2459.0	158	2479.0
39	2419.5	79	2439.5	119	2459.5	159	2479.5
40	2420.0	80	2440.0	120	2460.0	160	2480.0
41	2420.5	81	2440.5	121	2460.5	--	--
42	2421.0	82	2441.0	122	2461.0	--	--
43	2421.5	83	2441.5	123	2461.5	--	--

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Miscellaneous Wireless Communications Services
2	ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

3.2 Test Verdict

No.	Description	FCC Part No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	--	Pass	Note 1
2	20 dB and 99% Bandwidth	15.215(c)	ANNEX A.1	Pass	--
3	AC Conducted Emission	15.207	ANNEX A.2	N/A	Note 2
4	Radiated Spurious Emission	15.249(a)	ANNEX A.3	Pass	--
5	Band Edge(Restricted-band band-edge)	15.249(a)	ANNEX A.4	Pass	--

Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.

Note 2: The EUT only powered by battery, so the AC Conducted Emission test is not applicable.

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% to 67%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+20.1°C to +25.2°C
Working Voltage of the EUT	NV (Normal Voltage)	3 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	KEYSIGHT	N9020A	MY46471071	2025.06.16	2026.06.15
Signaling Unit	ROHDE&SCHWARZ	CMW500	142028	2025.04.28	2026.04.27
Power Sensor	KEYSIGHT	U2063XA	MY58000247	2025.06.16	2026.06.15
Spectrum Analyzer	KEYSIGHT	N9020A	MY50531259	2025.06.16	2026.06.15
Signaling Unit	ROHDE&SCHWARZ	CMW500	171150	2025.04.28	2026.04.27
Test Antenna-Horn	SCHWARZBECK	BBHA 9120D	02460	2024.05.16	2027.05.15
Test Antenna-Horn	A-INFO	LB-180400KF	J211060273	2024.06.15	2027.06.14
Anechoic Chamber	RAINFORD	9m*6m*6m	140	2024.07.28	2027.07.27
Amplifier	COM-MV	LSCX_LNA1-12G-01	7210214	2025.06.17	2026.06.16
Amplifier	COM-MV	XKu_LNA7-18G-01	7210209	2025.06.17	2026.06.16
Amplifier	COM-MV	KA LNA18 40G-01	18050001	2024.12.05	2025.12.04
EMI Receiver	Agilent	N9038A	MY55330120	2025.06.17	2026.06.16
Test Antenna-Bi-Log	SCHWARZBECK	VULB 9168	9168-00867	2025.04.12	2028.04.11
Test Antenna-Loop	SCHWARZBECK	FMZB 1519	1519-037	2024.01.23	2027.01.22
Amplifier	COM-MV	ZT30-1000M	B2017119081	2024.11.28	2025.11.27
Anechoic Chamber	YiHeng	9m*6m*6m	142	2024.07.21	2027.07.20

4.3 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

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

Parameters	Uncertainty
Occupied Channel Bandwidth	2.8%
RF output power, conducted	1.28 dB
Power Spectral Density, conducted	1.30 dB
Unwanted Emissions, conducted	1.84 dB
All emissions, radiated	5.36 dB
Temperature	0.8°C
Humidity	4%

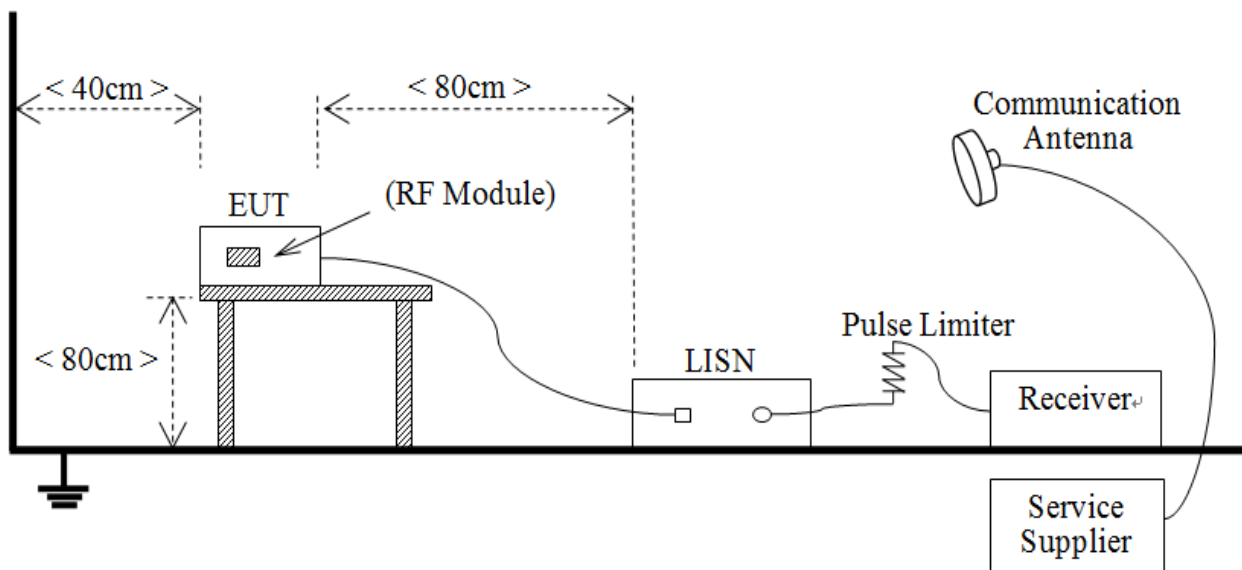
4.4 Description of Test Setup

4.4.1 For Antenna Port Test



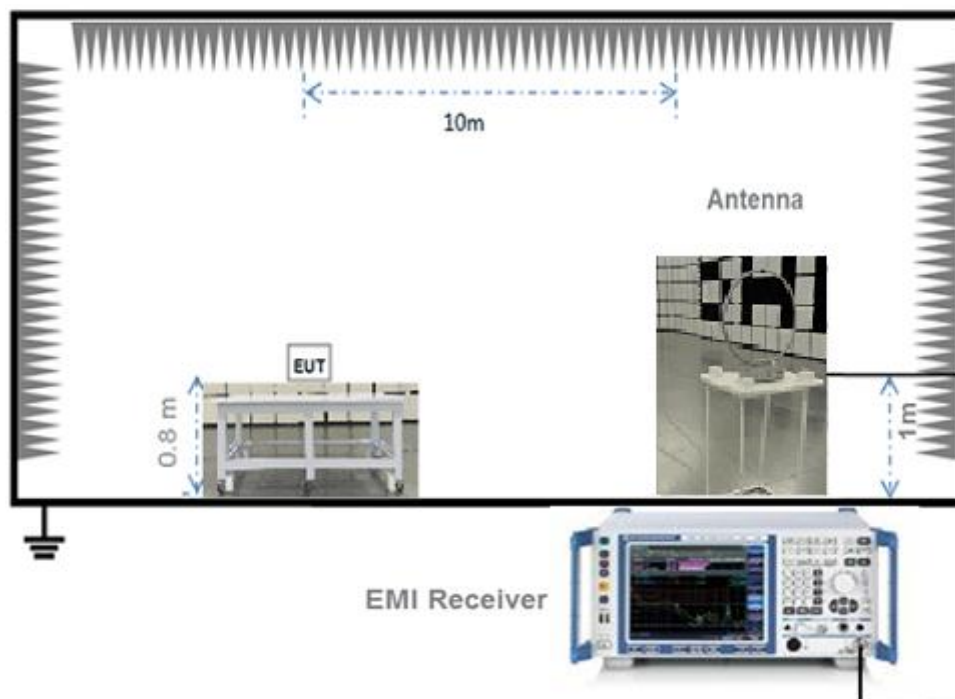
(Diagram 1)

4.4.2 For AC Power Supply Port Test



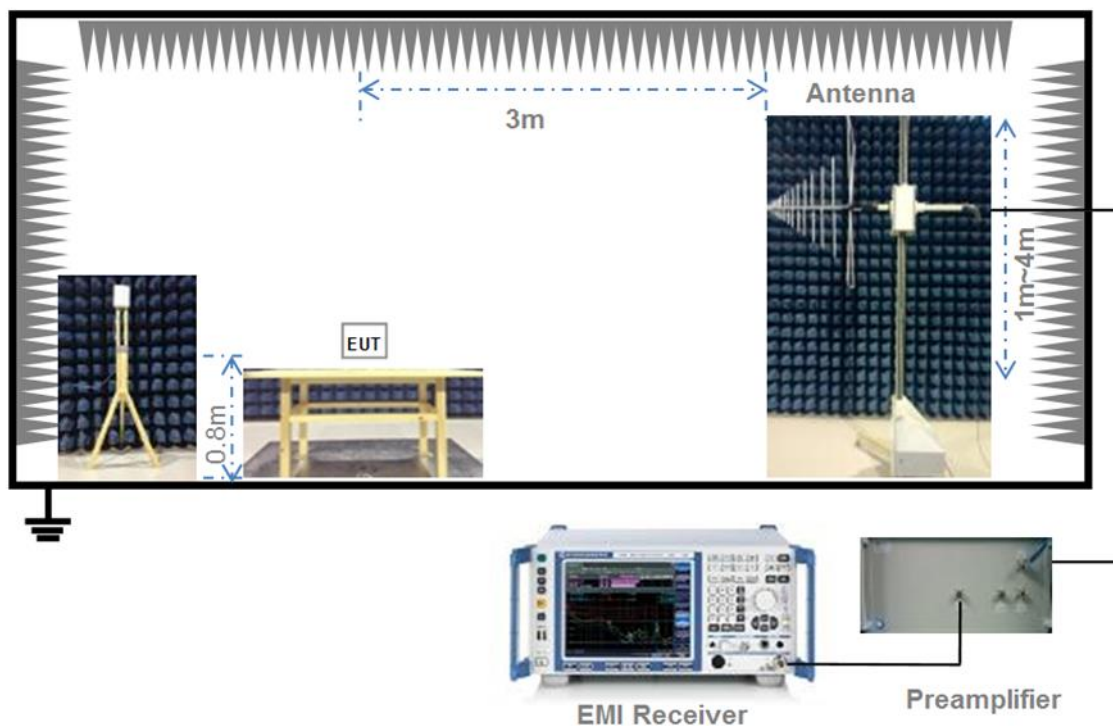
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



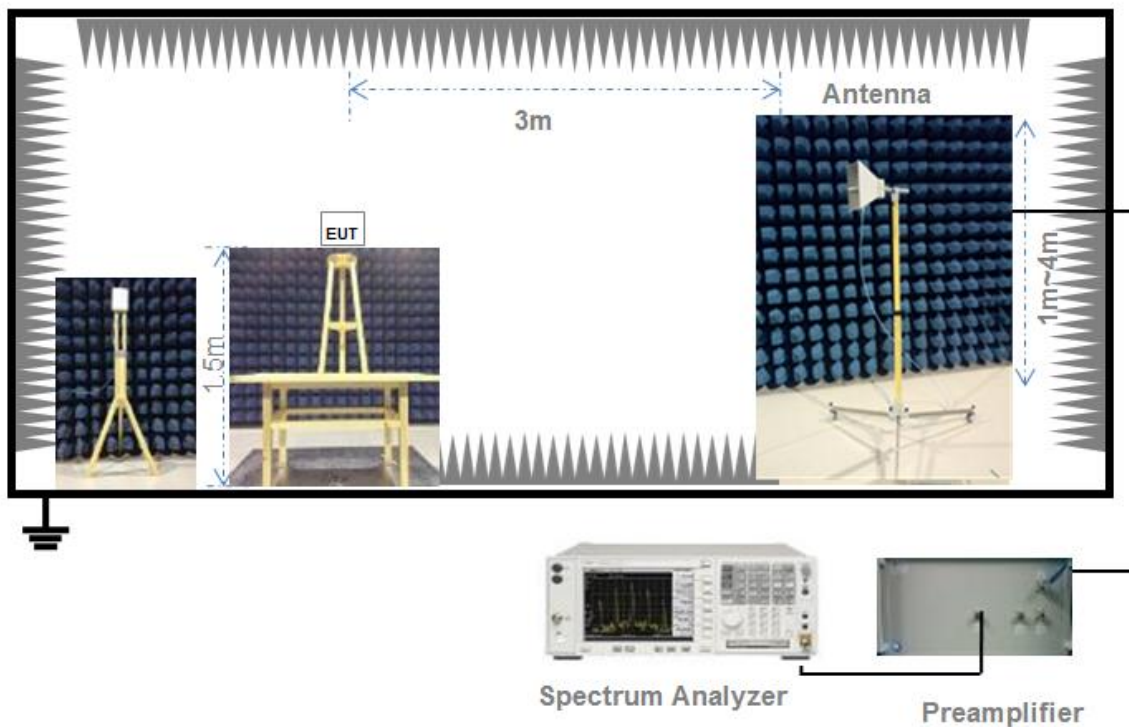
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203 & 15.247(b)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product.	An embedded-in antenna design is used.

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 20 dB and 99% Bandwidth

5.2.1 Limit

FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

RSS-Gen 6.6

The emission bandwidth (×dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated × dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3× the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured

5.2.2 Test Setups

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW ≥ 1% of the 20 dB bandwidth

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 AC Conducted Emission

5.3.1 Limit

FCC §15.207

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.3.2 Test Setups

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Radiated Spurious Emission

5.4.1 Limit

FCC §15.249(a)

Except as provided in paragraph (a) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
Above 960	500	3

Note:

1. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.4.2 Test Setups

See section 4.4.2-4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented. The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge (Restricted-band band-edge)

5.5.1 Limit

FCC §15.249(a)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.5.2 Test Setups

See section 4.4.3 to 4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.5.4 Test Result

Please refer to ANNEX A.4.

ANNEX A TEST RESULT

A.1 20 dB and 99% Bandwidth

Test Data

Frequency (MHz)	20 dB Bandwidth (kHz)	99% Bandwidth (kHz)
2402	637.451	579.974
2441	630.127	575.245
2480	630.127	572.191

Test Plots

20 dB Bandwidth

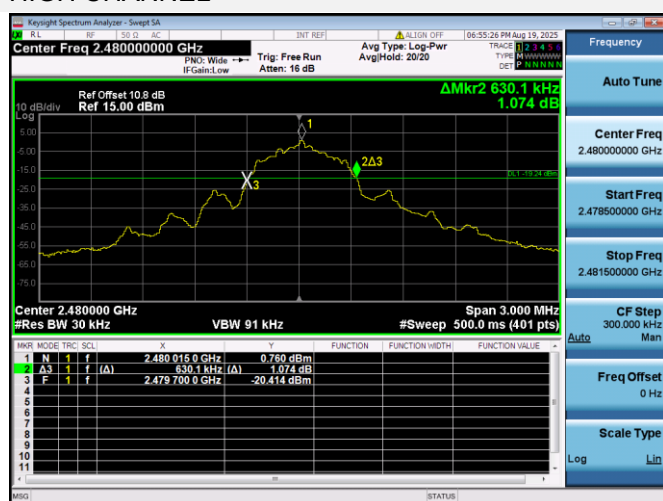
LOW CHANNEL



MIDDLE CHANNEL

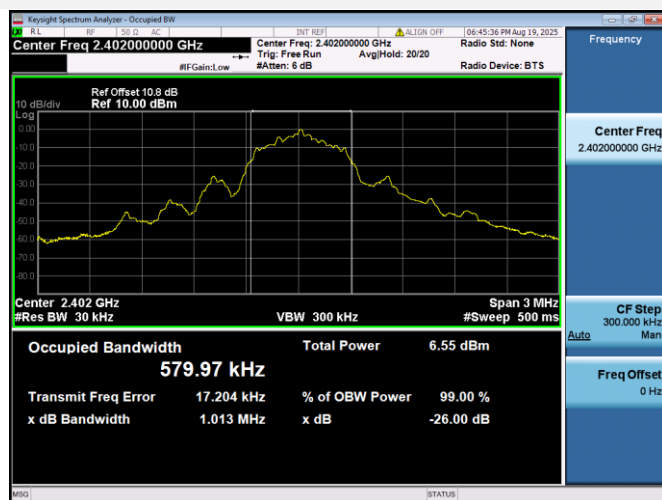


HIGH CHANNEL

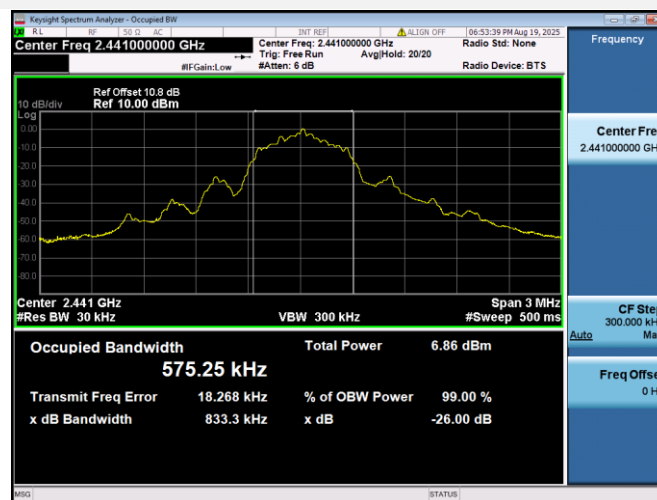


99% Bandwidth

LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



A.2 AC Conducted Emissions

Note: Not applicable.

A.3 Radiated Emission

Note ¹: The symbol of “--” in the table which means not application.

Note ²: For the test data above 1 GHz, according the ANSI C63.4-2014, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ³: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

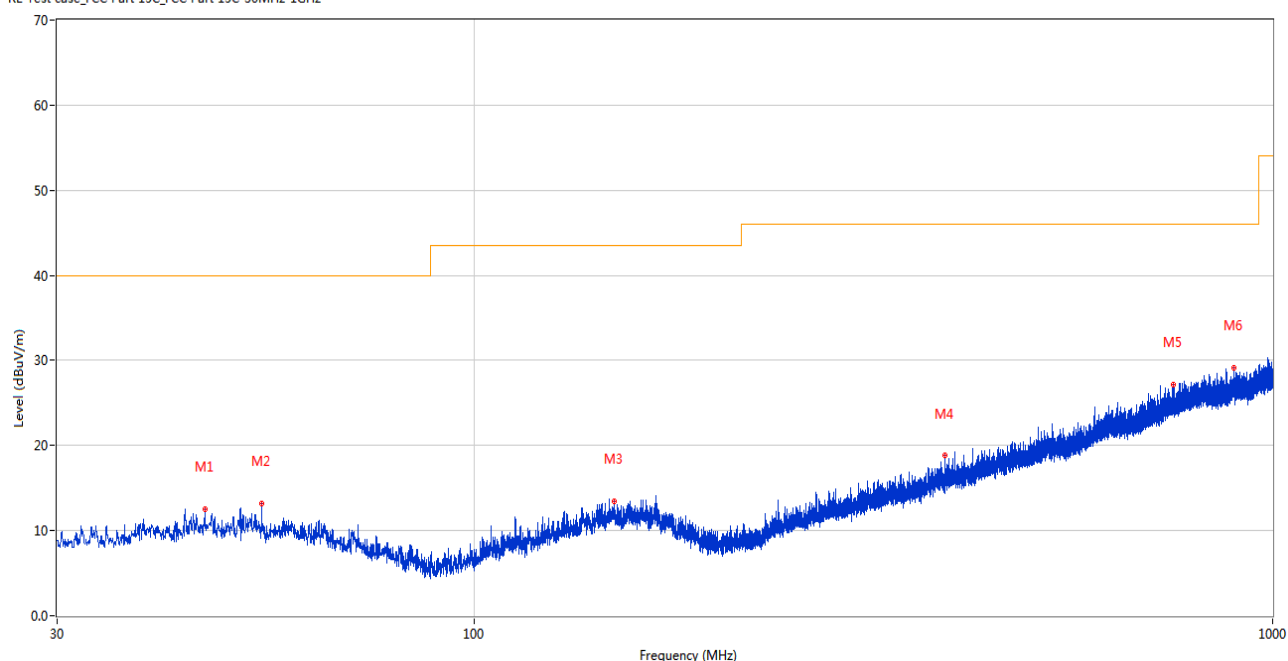
Note ⁴: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

Note ⁵: The center channel Average Results (dBuV/m) = Peak Results(dBuV/m) + Factor (dB); Duty cycle correction factor=20*log(Duty Cycle) (dB)

Test Data and Plots

30 MHz to 1 GHz, ANT H

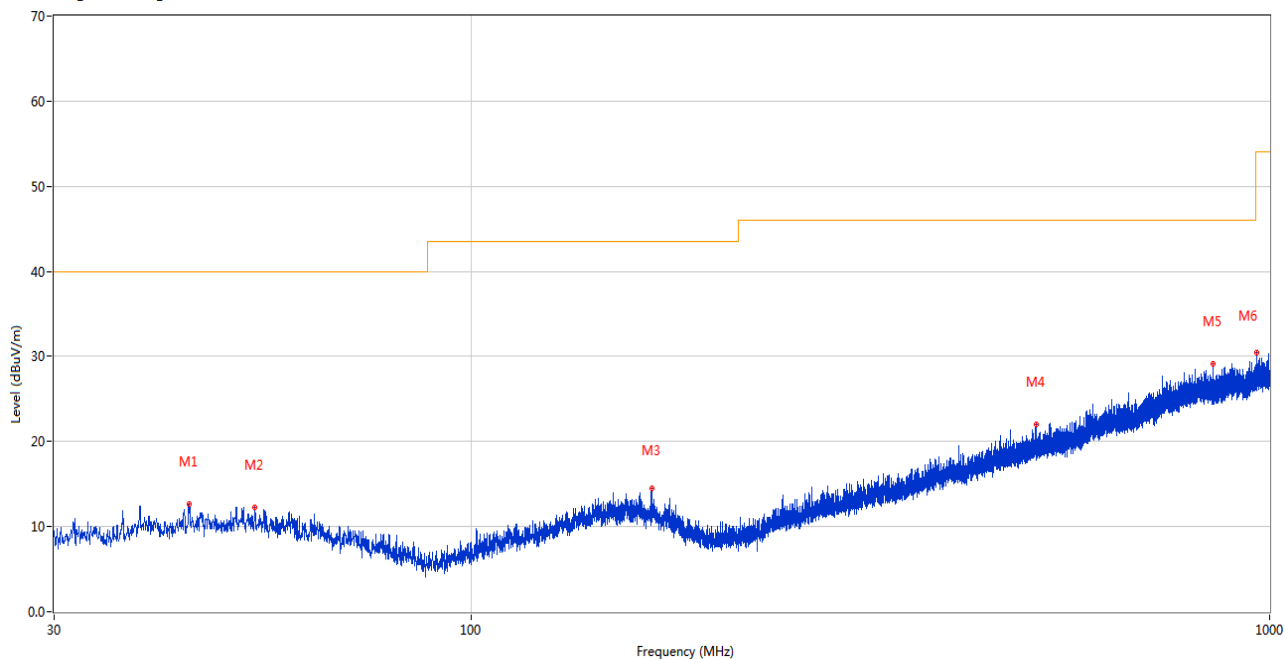
RE Test case_FCC Part 15C_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	45.956	12.53	-25.74	40.0	27.47	Peak	360.00	200	Horizontal	Pass
2	54.153	13.24	-25.91	40.0	26.76	Peak	47.00	200	Horizontal	Pass
3	149.456	13.46	-24.98	43.5	30.04	Peak	257.00	100	Horizontal	Pass
4	388.463	18.79	-21.06	46.0	27.21	Peak	190.00	200	Horizontal	Pass
5	751.680	27.21	-12.76	46.0	18.79	Peak	19.00	200	Horizontal	Pass
6	894.124	29.16	-10.85	46.0	16.84	Peak	170.00	100	Horizontal	Pass

30 MHz to 1 GHz, ANT V

RE Test case_FCC Part 15C_FCC Part 15C-30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	44.259	12.71	-25.99	40.0	27.29	Peak	360.00	100	Vertical	Pass
2	53.571	12.29	-25.92	40.0	27.71	Peak	358.00	100	Vertical	Pass
3	168.080	14.48	-25.09	43.5	29.02	Peak	11.00	100	Vertical	Pass
4	510.053	22.04	-17.73	46.0	23.96	Peak	25.00	100	Vertical	Pass
5	849.505	29.11	-11.72	46.0	16.89	Peak	360.00	100	Vertical	Pass
6	964.692	30.44	-9.57	54.0	23.56	Peak	1.00	200	Vertical	Pass

Note: The spurious above 18G is noise only, do not show on the report.

LOW CHANNEL 1 GHz to 18 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1333.992	44.48	74.0	29.52	Peak	13.00	300	Horizontal	Pass
1**	1333.992	31.36	54.0	22.64	AV	13.00	300	Horizontal	Pass
2	2972.019	51.37	74.0	22.63	Peak	225.00	400	Horizontal	Pass
2**	2972.019	41.41	54.0	12.59	AV	225.00	400	Horizontal	Pass
3	4911.415	50.50	74.0	23.50	Peak	239.00	200	Horizontal	Pass
3**	4911.415	44.36	54.0	9.64	AV	239.00	200	Horizontal	Pass
4	7626.071	54.50	74.0	19.50	Peak	163.00	100	Horizontal	Pass
4**	7626.071	38.84	54.0	15.16	AV	163.00	100	Horizontal	Pass
5	12473.454	50.05	74.0	23.95	Peak	211.00	200	Horizontal	Pass
5**	12473.454	43.15	54.0	10.85	AV	211.00	200	Horizontal	Pass
6	16856.434	56.40	74.0	17.60	Peak	88.00	400	Horizontal	Pass
6**	16856.434	41.07	54.0	12.93	AV	88.00	400	Horizontal	Pass

LOW CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1463.875	40.67	74.0	33.33	Peak	2.00	100	Vertical	Pass
1**	1463.875	29.74	54.0	24.26	AV	2.00	100	Vertical	Pass
2	2987.791	50.35	74.0	23.65	Peak	210.00	300	Vertical	Pass
2**	2987.791	37.35	54.0	16.65	AV	210.00	300	Vertical	Pass
3	4823.495	52.22	74.0	21.78	Peak	146.00	200	Vertical	Pass
3**	4823.495	40.08	54.0	13.92	AV	146.00	200	Vertical	Pass
4	7967.088	53.55	74.0	20.45	Peak	254.00	400	Vertical	Pass
4**	7967.088	40.82	54.0	13.18	AV	254.00	400	Vertical	Pass
5	12440.456	51.07	74.0	22.93	Peak	281.00	300	Vertical	Pass
5**	12440.456	46.12	54.0	7.88	AV	281.00	300	Vertical	Pass
6	17456.527	57.39	74.0	16.61	Peak	167.00	100	Vertical	Pass
6**	17456.527	48.44	54.0	5.56	AV	167.00	100	Vertical	Pass

MIDDLE CHANNEL 1 GHz to 18 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1338.571	44.07	74.0	29.93	Peak	342.00	300	Horizontal	Pass
1**	1338.571	27.24	54.0	26.76	AV	342.00	300	Horizontal	Pass
2	2971.782	48.58	74.0	25.42	Peak	72.00	400	Horizontal	Pass
2**	2971.782	43.26	54.0	10.74	AV	72.00	400	Horizontal	Pass
3	4915.821	53.92	74.0	20.08	Peak	40.00	200	Horizontal	Pass
3**	4915.821	45.05	54.0	8.95	AV	40.00	200	Horizontal	Pass
4	7626.180	51.62	74.0	22.38	Peak	137.00	400	Horizontal	Pass
4**	7626.180	38.25	54.0	15.75	AV	137.00	400	Horizontal	Pass
5	12470.811	50.52	74.0	23.48	Peak	242.00	300	Horizontal	Pass
5**	12470.811	44.87	54.0	9.13	AV	242.00	300	Horizontal	Pass
6	16860.368	52.41	74.0	21.59	Peak	32.00	200	Horizontal	Pass
6**	16860.368	42.89	54.0	11.11	AV	32.00	200	Horizontal	Pass

MIDDLE CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1462.862	44.99	74.0	29.01	Peak	82.00	400	Vertical	Pass
1**	1462.862	30.26	54.0	23.74	AV	82.00	400	Vertical	Pass
2	2993.858	52.25	74.0	21.75	Peak	349.00	200	Vertical	Pass
2**	2993.858	38.87	54.0	15.13	AV	349.00	200	Vertical	Pass
3	4825.910	49.21	74.0	24.79	Peak	324.00	200	Vertical	Pass
3**	4825.910	39.70	54.0	14.30	AV	324.00	200	Vertical	Pass
4	7971.015	57.65	74.0	16.35	Peak	284.00	400	Vertical	Pass
4**	7971.015	45.23	54.0	8.77	AV	284.00	400	Vertical	Pass
5	12439.793	52.87	74.0	21.13	Peak	284.00	300	Vertical	Pass
5**	12439.793	41.13	54.0	12.87	AV	284.00	300	Vertical	Pass
6	17453.104	55.56	74.0	18.44	Peak	128.00	400	Vertical	Pass
6**	17453.104	46.12	54.0	7.88	AV	128.00	400	Vertical	Pass

HIGH CHANNEL 1 GHz to 18 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1331.647	41.57	74.0	32.43	Peak	31.00	200	Horizontal	Pass
1**	1331.647	32.40	54.0	21.60	AV	31.00	200	Horizontal	Pass
2	2973.933	48.02	74.0	25.98	Peak	77.00	100	Horizontal	Pass
2**	2973.933	38.62	54.0	15.38	AV	77.00	100	Horizontal	Pass
3	4912.308	49.84	74.0	24.16	Peak	32.00	200	Horizontal	Pass
3**	4912.308	41.50	54.0	12.50	AV	32.00	200	Horizontal	Pass
4	7625.627	55.51	74.0	18.49	Peak	229.00	400	Horizontal	Pass
4**	7625.627	37.59	54.0	16.41	AV	229.00	400	Horizontal	Pass
5	12470.525	51.85	74.0	22.15	Peak	143.00	300	Horizontal	Pass
5**	12470.525	45.14	54.0	8.86	AV	143.00	300	Horizontal	Pass
6	16856.563	55.96	74.0	18.04	Peak	132.00	100	Horizontal	Pass
6**	16856.563	46.01	54.0	7.99	AV	132.00	100	Horizontal	Pass

HIGH CHANNEL 1 GHz to 18 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	1462.962	42.03	74.0	31.97	Peak	227.00	400	Vertical	Pass
1**	1462.962	32.94	54.0	21.06	AV	227.00	400	Vertical	Pass
2	2988.372	53.65	74.0	20.35	Peak	164.00	200	Vertical	Pass
2**	2988.372	41.08	54.0	12.92	AV	164.00	200	Vertical	Pass
3	4825.470	51.97	74.0	22.03	Peak	55.00	200	Vertical	Pass
3**	4825.470	42.91	54.0	11.09	AV	55.00	200	Vertical	Pass
4	7965.975	58.18	74.0	15.82	Peak	142.00	100	Vertical	Pass
4**	7965.975	41.49	54.0	12.51	AV	142.00	100	Vertical	Pass
5	12443.147	53.60	74.0	20.40	Peak	28.00	400	Vertical	Pass
5**	12443.147	44.85	54.0	9.15	AV	28.00	400	Vertical	Pass
6	17460.238	54.50	74.0	19.50	Peak	258.00	400	Vertical	Pass
6**	17460.238	44.86	54.0	9.14	AV	258.00	400	Vertical	Pass

A.4 Band Edge (Restricted-band band-edge)

Note ¹: The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.

Note ²: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Note ³: According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note ⁴: The Level (dBuV/m) has been corrected by factor.

Test Data

LOW CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2320.053	55.74	74.0	18.26	Peak	103.00	100	Horizontal	Pass
1**	2320.053	42.83	54.0	11.17	AV	103.00	100	Horizontal	Pass
2	2390.000	54.26	74.0	19.74	Peak	5.00	200	Horizontal	Pass
2**	2390.000	44.83	54.0	9.17	AV	5.00	200	Horizontal	Pass

HIGH CHANNEL

No.	Frequency (MHz)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	2483.500	56.04	74.0	17.96	Peak	45.00	300	Horizontal	Pass
1**	2483.500	43.19	54.0	10.81	AV	45.00	300	Horizontal	Pass
2	2493.250	57.76	74.0	16.24	Peak	286.00	300	Horizontal	Pass
2**	2493.250	43.79	54.0	10.21	AV	286.00	300	Horizontal	Pass

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ2580410-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2580410-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ2580410-AI.PDF”.

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--END OF REPORT--