



REPORT No.: SZ23090086W01

TEST REPORT

APPLICANT : Ubiik Inc.

PRODUCT NAME : goRAN LTE Base Station

MODEL NAME : BS1AN-DA3US

BRAND NAME : UBIK

FCC ID : 2AXTDBS1ANDA3US

STANDARD(S) : 47 CFR Part 2
47 CFR Part 27

RECEIPT DATE : 2023-09-13

TEST DATE : 2023-09-26 to 2023-10-19

ISSUE DATE : 2023-12-19



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Change History		
Version	Date	Reason for change
1.0	2023-12-19	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Ubiik Inc.
Applicant Address:	19F., No. 17, Sec. 1, Chengde Rd., Datong Dist., Taipei City 103, Taiwan (R.O.C.)
Manufacturer:	Ubiik Inc.
Manufacturer Address:	19F., No. 17, Sec. 1, Chengde Rd., Datong Dist., Taipei City 103, Taiwan (R.O.C.)

1.2. Equipment Under Test (EUT) Description

Product Name:	goRAN LTE Base Station	
Sample No.:	1#	
Hardware Version:	N/A	
Software Version:	N/A	
Modulation Type:	QPSK	
Operation Band:	NB-IOT 757MHz–758MHz	
Sub-carrier spacing	3.75KHz, 15KHz	
Frequency Range:	757MHz–758MHz	Tx: 757MHz–758MHz
		Rx: 787MHz–788MHz
Channel Bandwidth:	757MHz–758MHz	200KHz
Antenna Gain:	Panel Antenna	12dBi
		16dBi
	Fixed External Antenna	3.83dBi
		7.80dBi
Accessory Information:	AC Adapter :	
	Brand Name:	PHIHONG
	Model No.:	POE60U-BTA
	Serial No.:	N/A
	Rated Input:	100-240V ~ 1.5A , 50/60Hz
	Rated Output1:	56V $\Rightarrow$ 0.535A, 30W
	Rated Output2:	56V $\Rightarrow$ 0.535A, 30W
	Manufacturer:	Phihong Technology Co., Ltd.



Note1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.3. Maximum E.R.P./E.I.R.P. and Emission Designator

757MHz~758MHz	Maximum E.R.P./E.I.R.P. (W)	Emission Designator (99%OBW)
Sub-carrier spacing (KHz)	QPSK	QPSK
3.75	35.975	182KG7D
15	36.141	185KG7D

1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 27 for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 27	Miscellaneous Wireless Communications Services

NB-IOT 757MHz~758MHz			
Item	FCC Rule No.	Requirements	Result
Effective (Isotropic) Radiated Power Output Data	§2.1046, §27.50(b)(10)	ERP ≤3W	PASS
Peak-Average Ratio	N/A	N/A	N/A
Bandwidth	§2.1049	OBW: No limit EBW: No limit	PASS
Band Edges Compliance	§2.1051, §27.53(c)(1)	Refer to section 2.6	PASS
Spurious Emission at Antenna Terminals	§2.1051, §27.53(c)(1)	≤ -13 dBm/1MHz	PASS
Field Strength of Spurious Radiation	§2.1053, §27.53(c)(1)	≤ -13 dBm/1MHz	PASS
Frequency Stability	§2.1055, §27.54	No limit	N/A



Test detailed items/section required by FCC rules and results are as below:

Test Item	Test Date	Test Engineer	Result	Method Determination /Remark
Transmitter Conducted Output Power and E.R.P./E.I.R.P.	2023/09/26	Li Huaijie	PASS	No deviation
Occupied Bandwidth	2023/09/26	Li Huaijie	PASS	No deviation
Frequency Stability	2023/09/26	Li Huaijie	PASS	No deviation
Conducted Spurious Emissions	2023/09/26	Li Huaijie	PASS	No deviation
Band Edge	2023/10/07	Li Huaijie	PASS	No deviation
Radiated Spurious Emissions	2023/10/19	Su Zhan	PASS	No deviation
Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016. Note 2: Additions to, deviation, or exclusions from the method shall be judged in the "method determination" column of add, deviate or exclude from the specific method shall be explained in the "Remark" of the above table. Note 3: The declared of product specification for EUT presented in the report are provided by manufacturer and the test laboratory is not responsible for the accuracy of the information. Note 4: When the test result is a critical value, we will use the measurement uncertainty give the judgment result based on the 95% confidence intervals.				

1.5. Environmental Conditions

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

Temperature (°C):	15-35
Relative Humidity (%):	30-60
Atmospheric Pressure (kPa):	86-106

2. Summary Test Results And Description

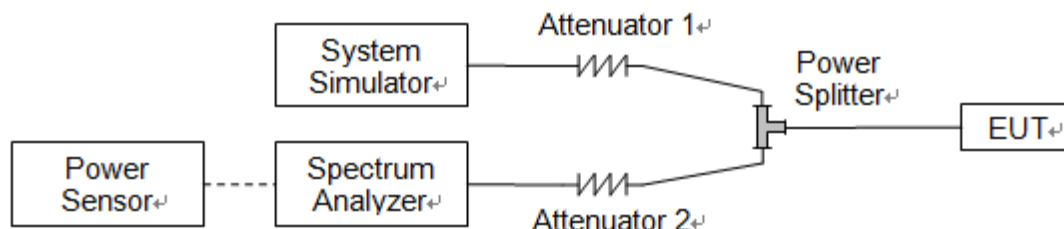
2.1. Transmitter Conducted Output Power and E.R.P./E.I.R.P.

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 27.50 (b)(1) for 757MHz-758MHz, Fixed and base stations transmitting a signal in the 757–758 and 775–776 MHz bands must not exceed an effective radiated power (ERP) of 1000 watts and an antenna height of 305 m height above average terrain (HAAT), except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts ERP in accordance with Table 1 of this section.

2.1.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.1.3. Test Procedure

KDB 971168 D01v03 Section 5.2 and ANSI/TIA-603-E-2016.

$E.I.R.P. (dBm) = \text{Conducted Output Power (dBm)} + \text{Antenna Gain (dBi)}$

$E.R.P. (dBm) = E.I.R.P. (dBm) - 2.15$

**2.1.4. Result****Conducted Output Power**

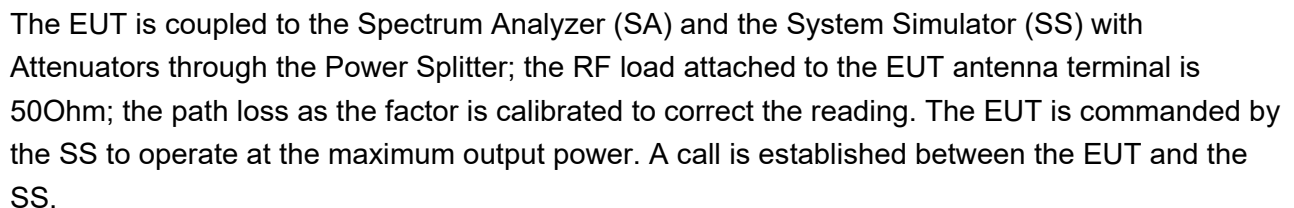
NB-IOT 757MHz-758MHz				
Sub-carrier Spacing (KHz)	Modulation	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel		70647	70651	70655
Frequency (MHz)		757.1	757.5	757.9
15	QPSK	29.54	29.58	29.52
Channel		70647	70651	70655
Frequency (MHz)		757.1	757.5	757.9
3.75	QPSK	29.56	29.53	29.49

Effective Radiated Power and Effective Isotropic Radiated Power

NB-IOT 757MHz-758MHz		Measured E.R.P.					
Sub-carrier Spacing (KHz)	Modulation	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel		70647		70651		70655	
Frequency (MHz)		757.1		757.5		757.9	
Unit		dBm	W	dBm	W	dBm	W
15	QPSK	45.54	35.810	45.58	36.141	45.52	35.645
Channel		70647		70651		70655	
Frequency (MHz)		757.1		757.5		757.9	
Unit		dBm	W	dBm	W	dBm	W
3.75	QPSK	45.56	35.975	45.53	35.727	45.49	35.400

2.2.1. Requirement

2.2.2. Test Description



KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

2.2.4. Test Result

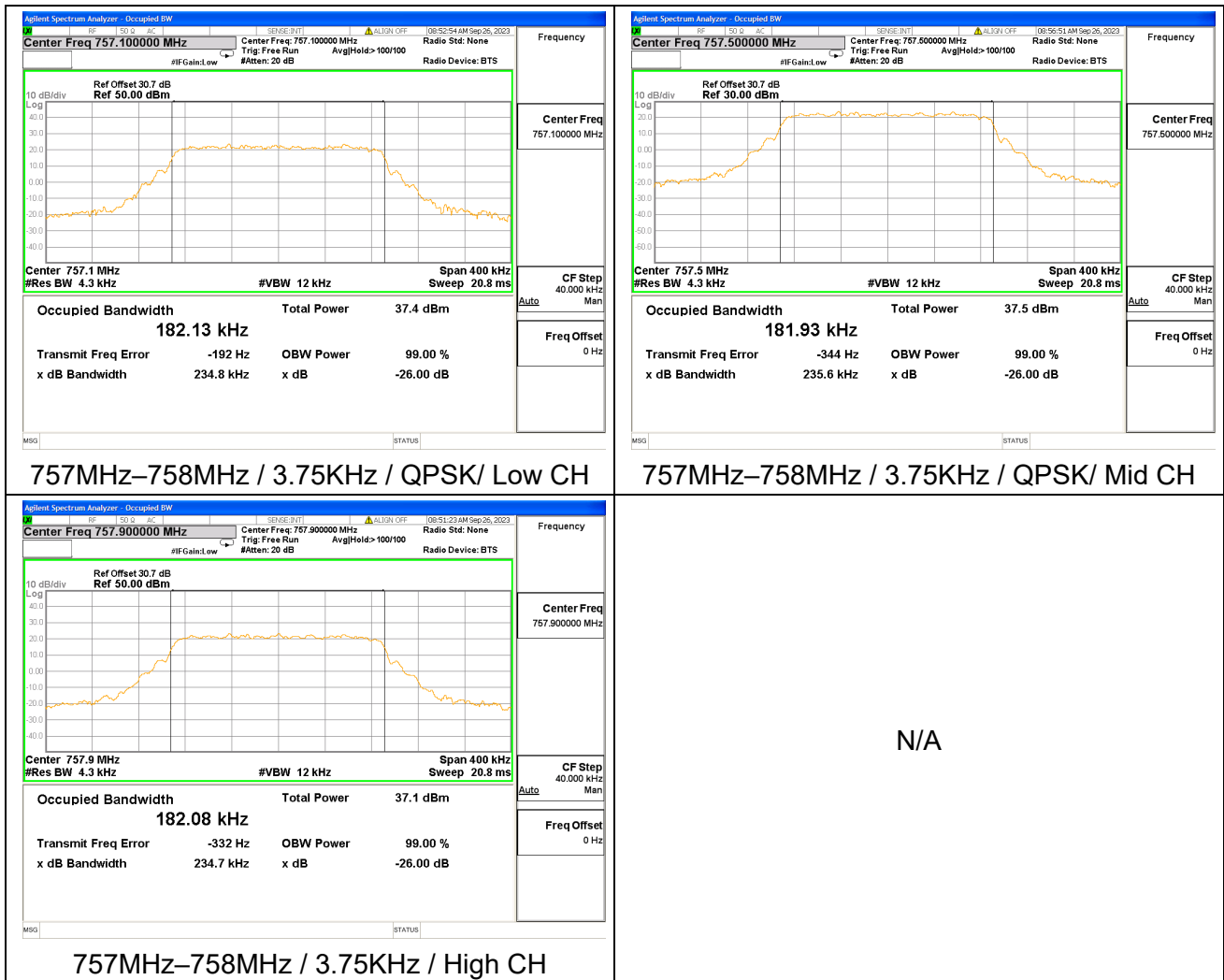


NB-IOT 757MHz-758MHz							
Subcarrier Space (KHz)	Channel Level	Channel	Frequency (MHz)	Modulation	99% BW (KHz)	26dB BW (KHz)	Verdict
15	Low	70647	757.1	QPSK	182.21	234.9	PASS
15	Mid	70651	757.5	QPSK	182.36	235.7	PASS
15	High	70655	757.9	QPSK	184.90	235.4	PASS
3.75	Low	70647	757.1	QPSK	182.13	234.8	PASS
3.75	Mid	70651	757.5	QPSK	181.93	235.6	PASS
3.75	High	70655	757.9	QPSK	182.08	234.7	PASS





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2.3. Frequency Stability

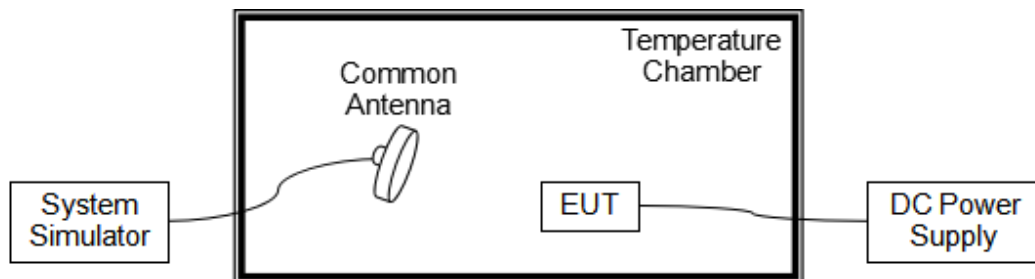
2.3.1. Requirement

According to FCC section 2.1055, 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30°C to $+50^{\circ}\text{C}$ at intervals of not more than 10°C .
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

Note: The operating temperature of EUT is from -20°C to 55°C , which are specified by the applicant.

2.3.2. Test Description



The EUT which is powered by the DC Power Supply directly is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

2.3.3. Test Procedure

KDB 971168 D01v03 Section 9.0 and ANSI/TIA-603-E-2016.



2.3.4. Test Result

The nominal, highest and lowest extreme voltages are separately 56.0V, 64.4V and 47.6V, which are specified by the applicant; the normal temperature here used is 20°C.

NB-IOT 757MHz–758MHz, QPSK, 3.75KHz, Frequency 757.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	56.0	+20(Ref)	-19	-0.025	PASS
100		-20	2	0.003	
100		-10	20	0.026	
100		0	-7	-0.009	
100		+10	14	0.018	
100		+20	19	0.025	
100		+30	14	0.018	
100		+40	16	0.021	
100		+50	-16	-0.021	
100		+55	4	0.005	
115	64.4	+20	18	0.024	PASS
85	47.6	+20	18	0.024	

NB-IOT 757MHz–758MHz, QPSK, 15KHz, Frequency 757.5MHz					
Limit =Within Authorized Band					
Voltage (%)	Power (VDC)	Temp (°C)	Fre. Dev. (Hz)	Deviation (ppm)	Result
100	56.0	+20(Ref)	14	0.018	PASS
100		-20	-16	-0.021	
100		-10	-23	-0.030	
100		0	-5	-0.007	
100		+10	14	0.018	
100		+20	17	0.022	
100		+30	-20	-0.026	
100		+40	23	0.030	
100		+50	-21	-0.028	
100		+55	12	0.016	
115	64.4	+20	15	0.020	PASS
85	47.6	+20	-9	-0.012	

2.4. Conducted Spurious Emissions

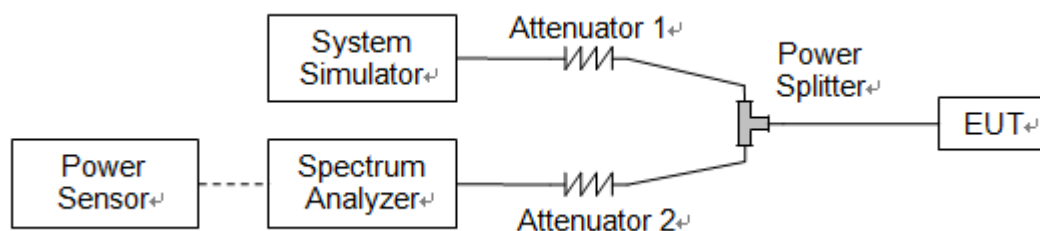
2.4.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This calculated to be -13dBm.

Additional requirement for 757MHz-758MHz:

According to FCC section 27.53(c)(1), any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB in a 100kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. This calculated to be -13dBm.

2.4.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.4.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.4.4. Test Result





2.5. Band Edge

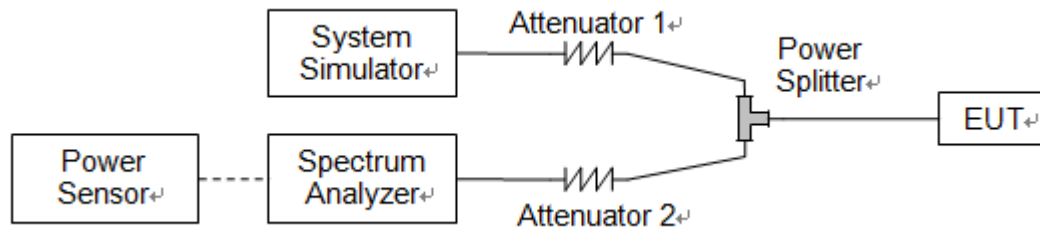
2.5.1. Requirement

757MHz-758MHz:

According to FCC section 27.53(c), for operations in the 746–758 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;
- (3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $76 + 10 \log (P)$ dB in a 6.25 kHz band segment, for base and fixed stations;
- (4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations;
- (5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed;
- (6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

2.5.2. Test Description



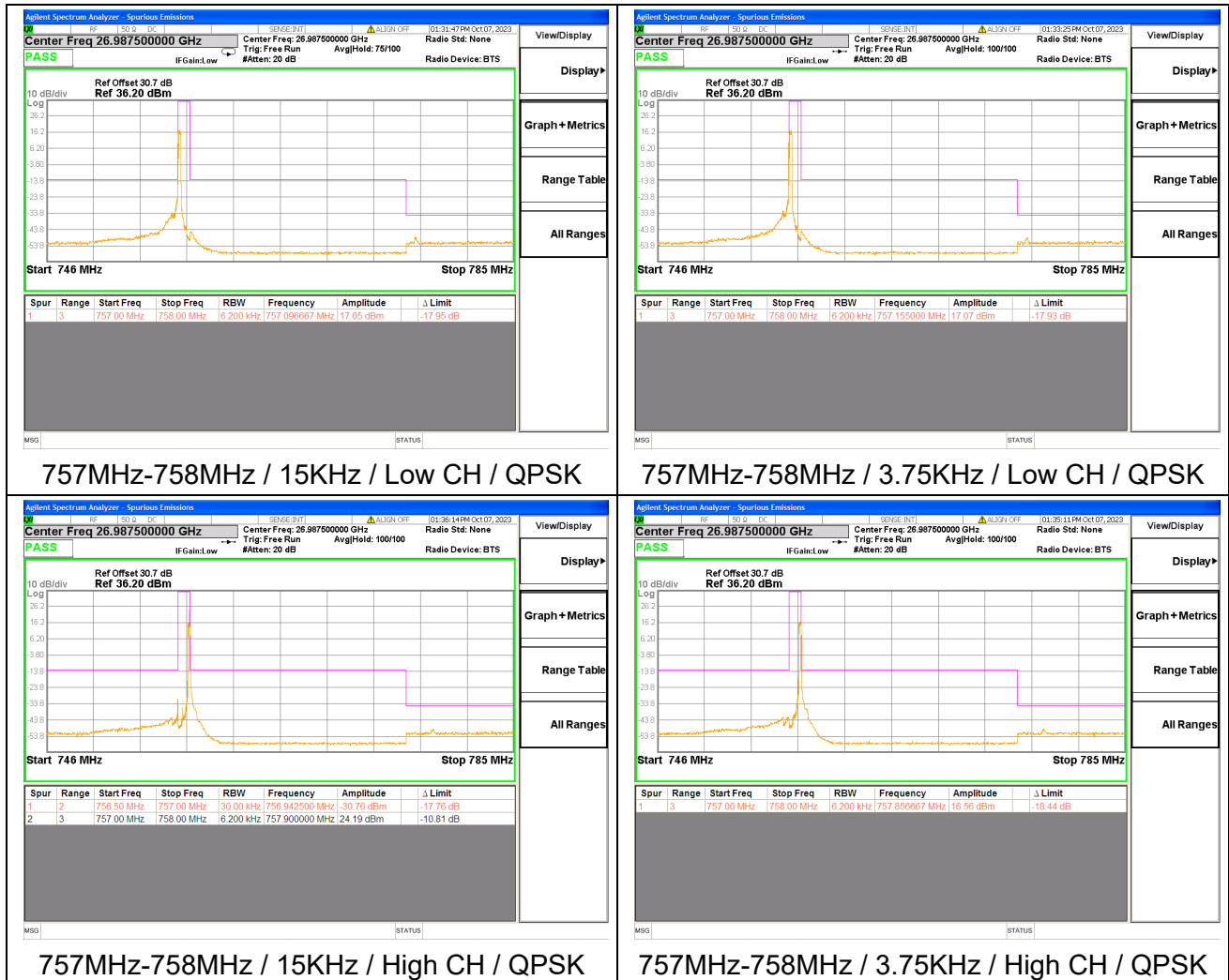
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.5.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.



2.5.4. Test Result



2.6. Radiated Spurious Emissions

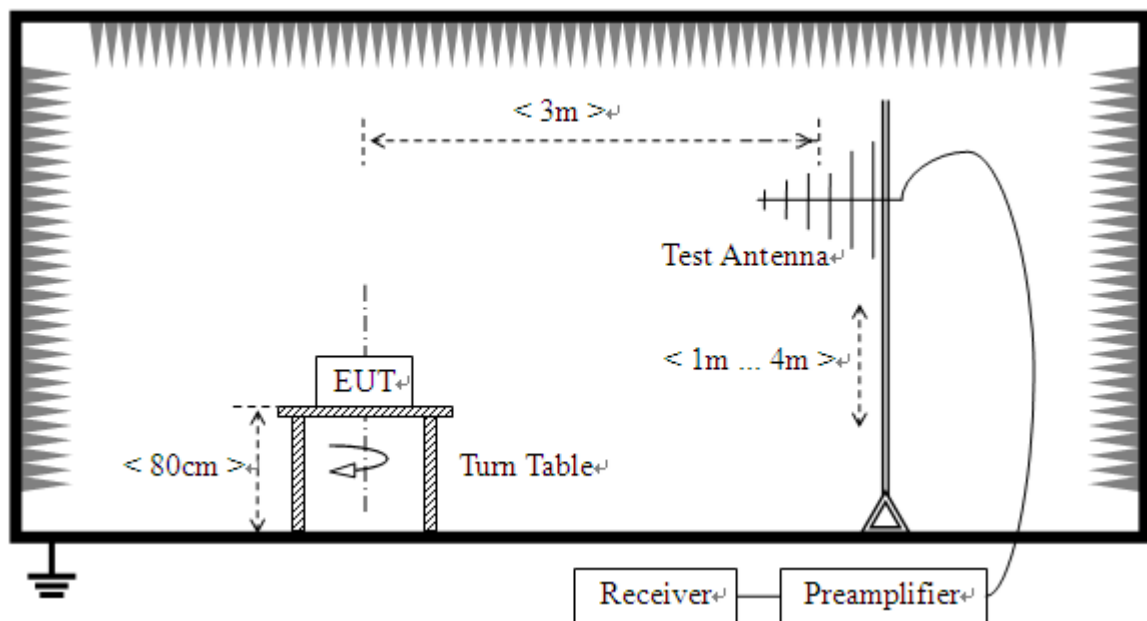
2.6.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. This calculated to be -13dBm.

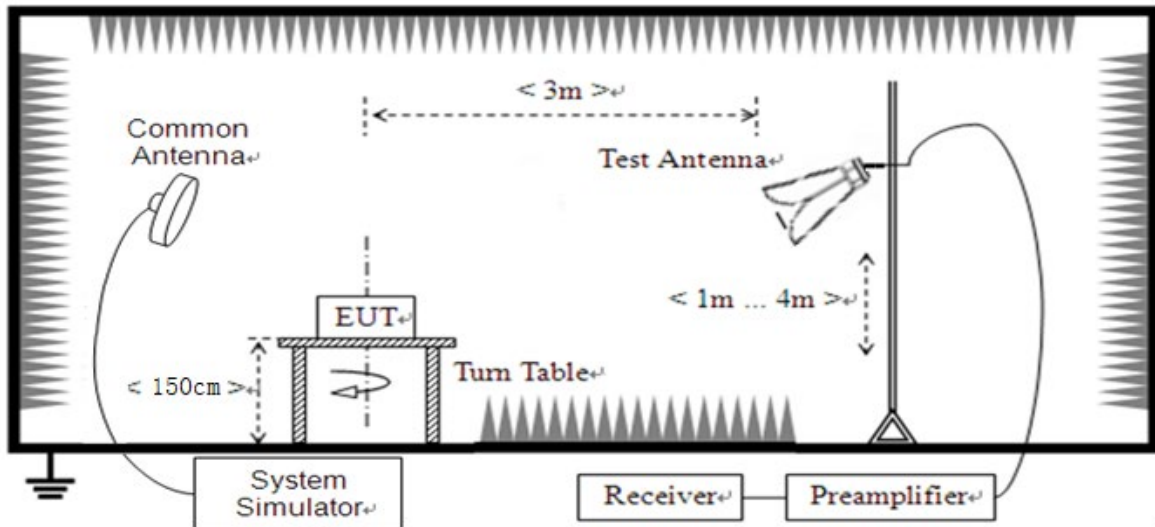
Additional requirement for 757MHz-758MHz:

According to FCC section 27.53(c)(1), any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log(P)$ dB in a 100kHz bandwidth. However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed. This calculated to be -13dBm.

2.6.2. Test Description



(For the test frequency from 30MHz to 1GHz)



(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading. A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360° to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: When doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.6.3. Test Procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

For measurements below 1GHz the resolution bandwidth is set to 100kHz for peak detection measurements.

For measurements above 1GHz (exclude 1559-1610 MHz) the resolution bandwidth is set to 1MHz, the video bandwidths set to 3MHz for peak measurements.

2.6.4. Test Result

The measurement frequency range is from 30MHz 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. The lowest, middle and highest channels are tested to verify the out of band emissions.

The substitution corrections are obtained as described below:

$$A_{\text{SUBST}} = P_{\text{SUBST_TX}} - P_{\text{SUBST_RX}} - L_{\text{SUBST_CABLES}} + G_{\text{SUBST_TX_ANT}}$$

$$A_{\text{TOT}} = L_{\text{CABLES}} + A_{\text{SUBST}}$$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

$P_{\text{SUBST_TX}}$ is signal generator level,

$P_{\text{SUBST_RX}}$ is receiver level,

$L_{\text{SUBST_CABLES}}$ is cable losses including TX cable,

$G_{\text{SUBST_TX_ANT}}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT} .

Note 1: The power of the EUT transmitting frequency should be ignored.

Note 2: 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.

Note 3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band; only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note 4: N/A means the frequency is the basic frequency or the base station frequency; they are no need to verdict.

Note 5: The received power level is the measured power adjusted for measurement antenna gain, connecting cable loss, and any external signal amplification or attenuation used in the test configuration. Mathematically, as in Equation:

$$P_R = P_{\text{meas}} - G_R + L_C - G_{\text{amp}}$$

where

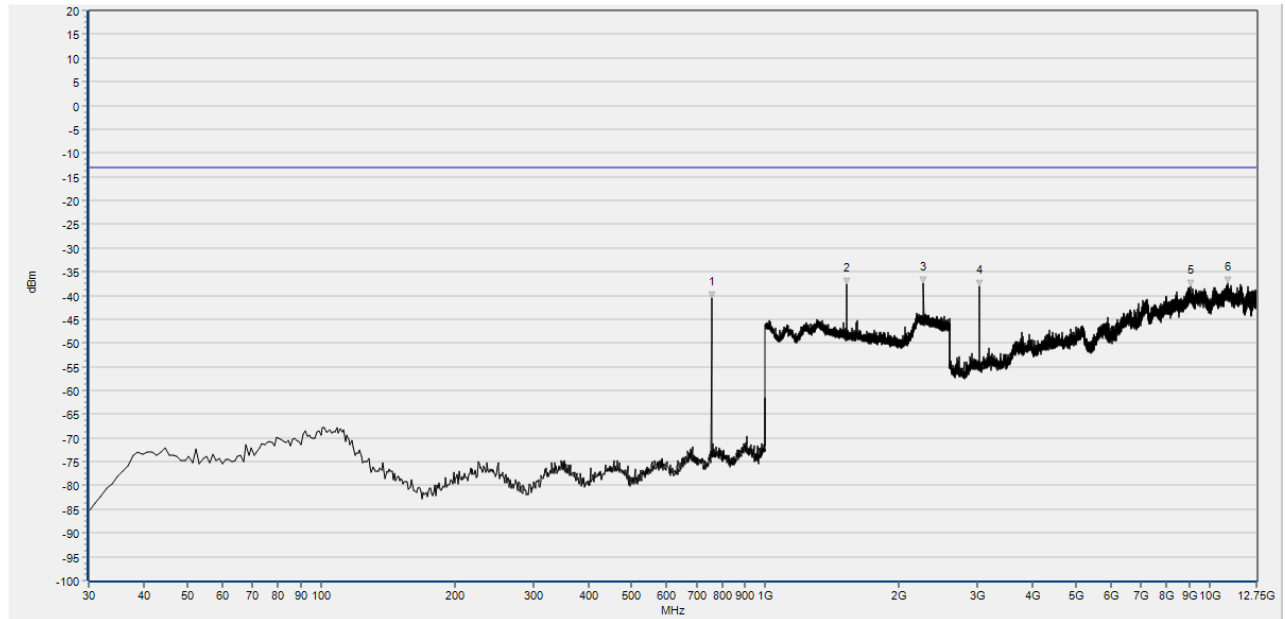
P_{meas} measured power level, in dBm;

G_R gain of the receive (measurement) antenna, in dBi;

L_C signal loss in the measurement cable, in dB;

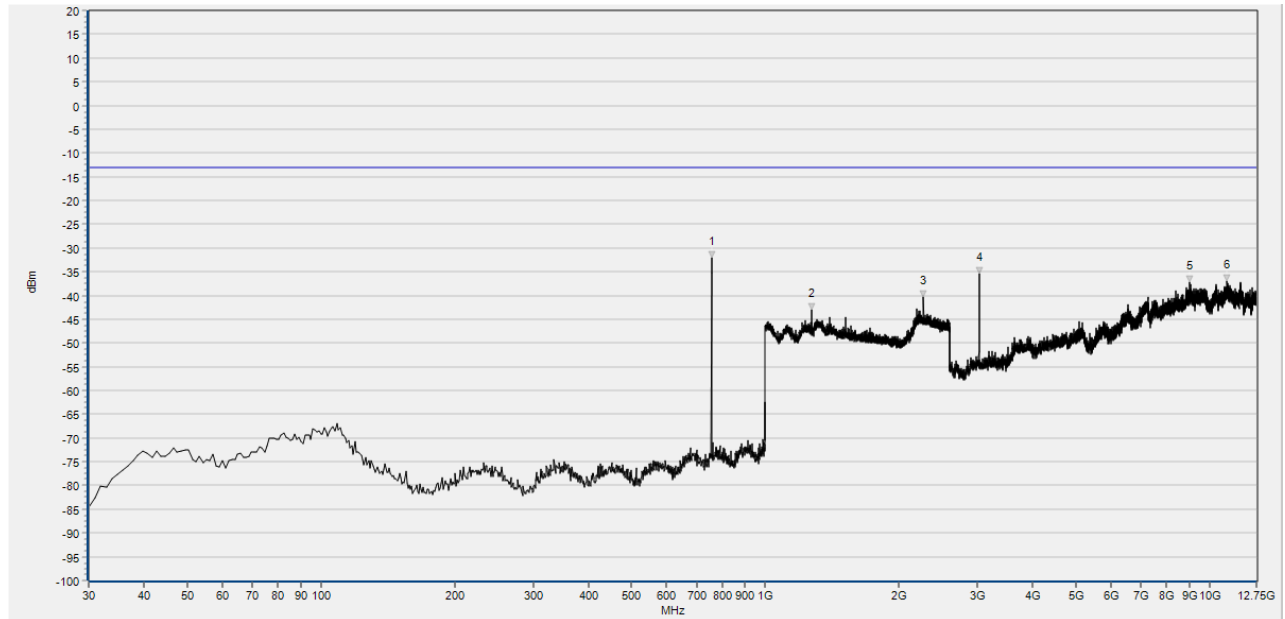
G_{amp} value of external amplification, in dB.

Panel Antenna



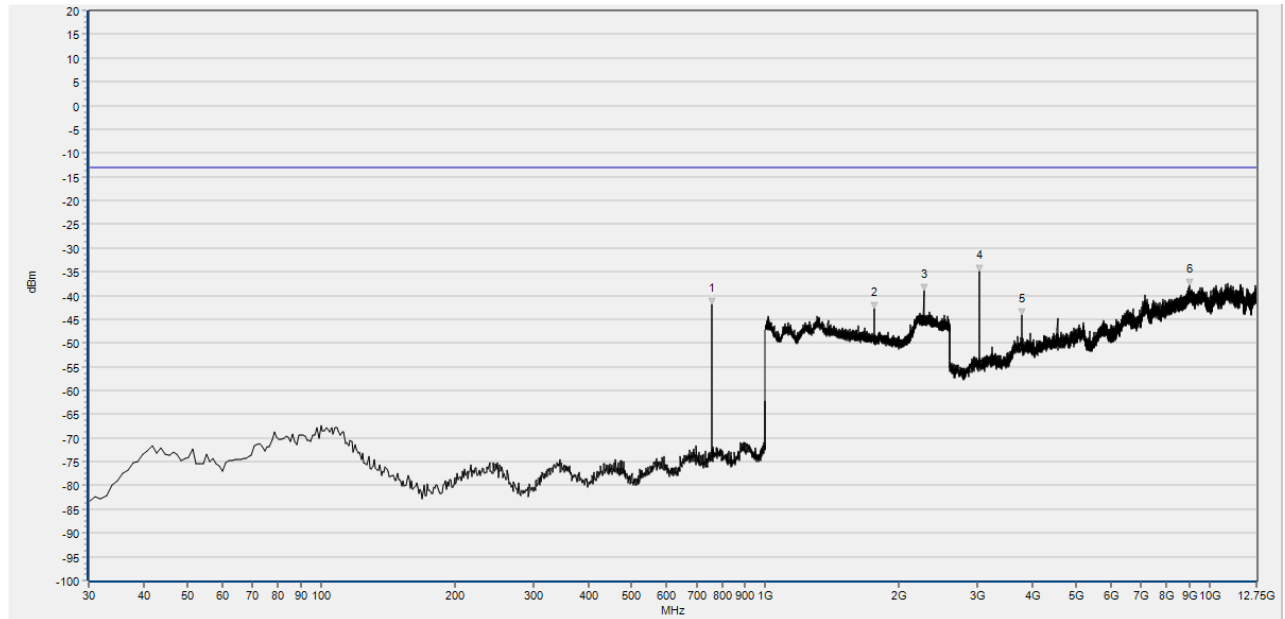
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-40.49	-13.00	341.7	V	N/A
2	1525.650	-37.66	-13.00	284.6	V	PASS
3	2270.908	-37.39	-13.00	44.5	V	PASS
4	3028.223	-38.02	-13.00	85.6	V	PASS
5	9065.803	-38.13	-13.00	137.3	V	PASS
6	10970.658	-37.32	-13.00	8.8	V	PASS

NB-IOT 757MHz-758MHz Low Channel 3.75K V



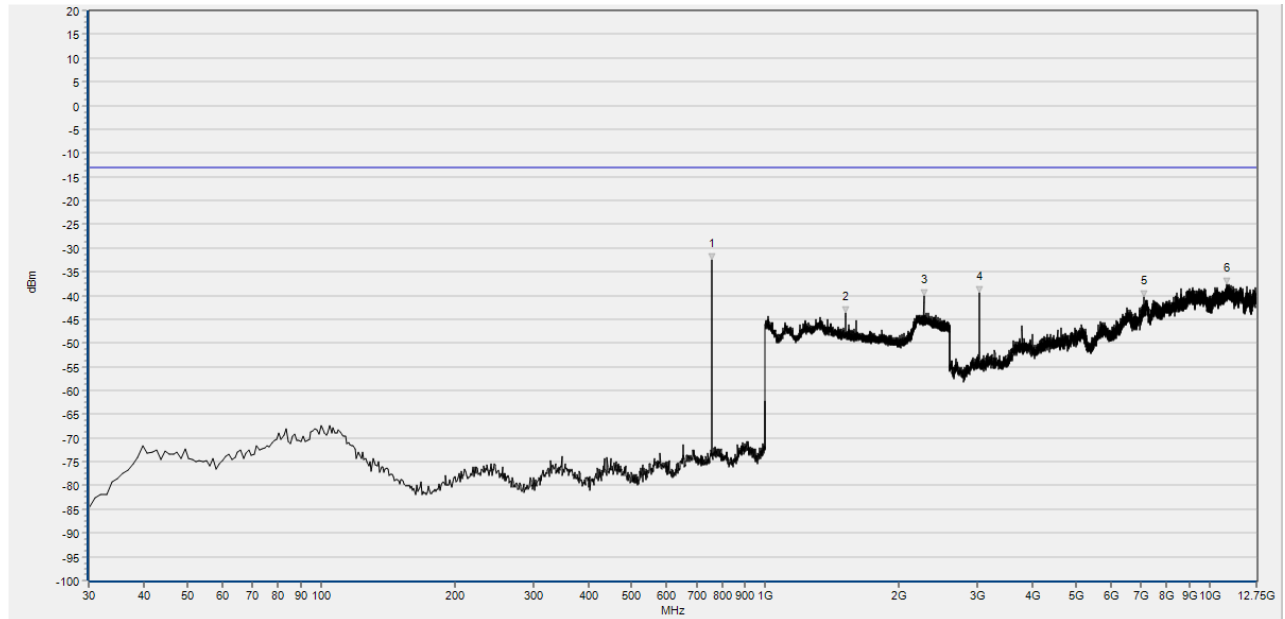
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-32.15	-13.00	309.4	H	N/A
2	1269.548	-43.02	-13.00	112.4	H	PASS
3	2270.908	-40.42	-13.00	216.9	H	PASS
4	3028.223	-35.31	-13.00	296.3	H	PASS
5	9012.275	-37.29	-13.00	87.5	H	PASS
6	10959.584	-37.03	-13.00	165.3	H	PASS

NB-IOT 757MHz-758MHz Low Channel 3.75K H



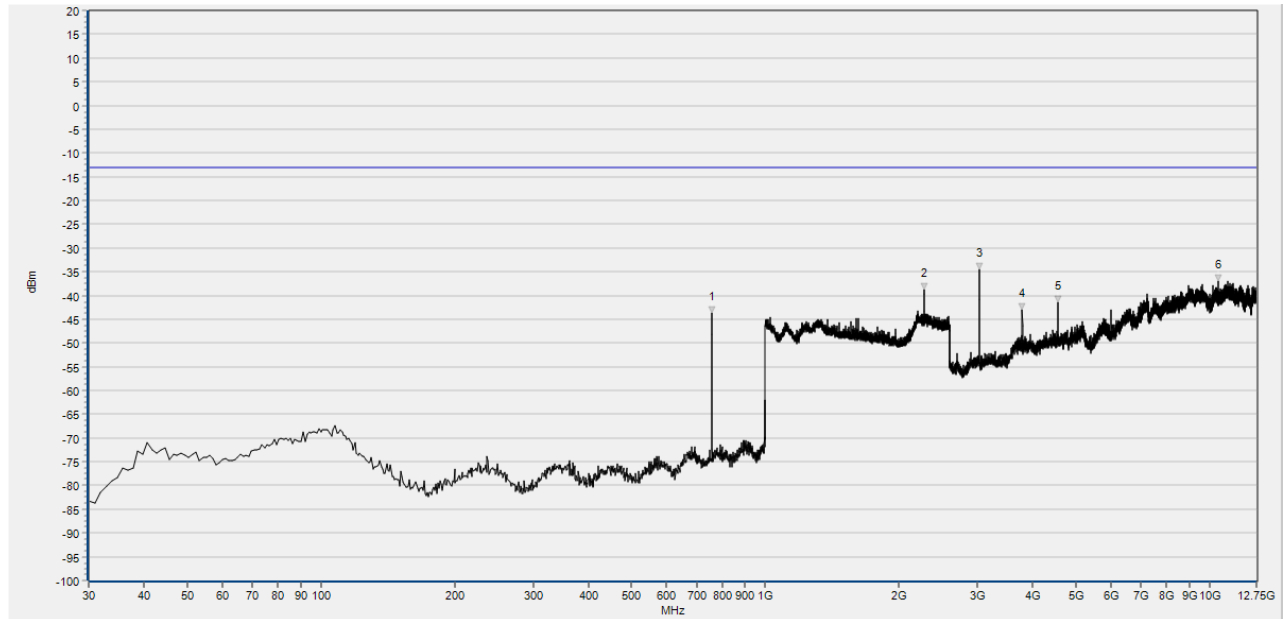
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-41.89	-13.00	357.1	V	N/A
2	1761.265	-42.71	-13.00	274.8	V	PASS
3	2272.189	-38.97	-13.00	99.5	V	PASS
4	3030.069	-35.07	-13.00	74.5	V	PASS
5	3786.843	-44.17	-13.00	87.5	V	PASS
6	8999.354	-37.87	-13.00	152.3	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 3.75K V



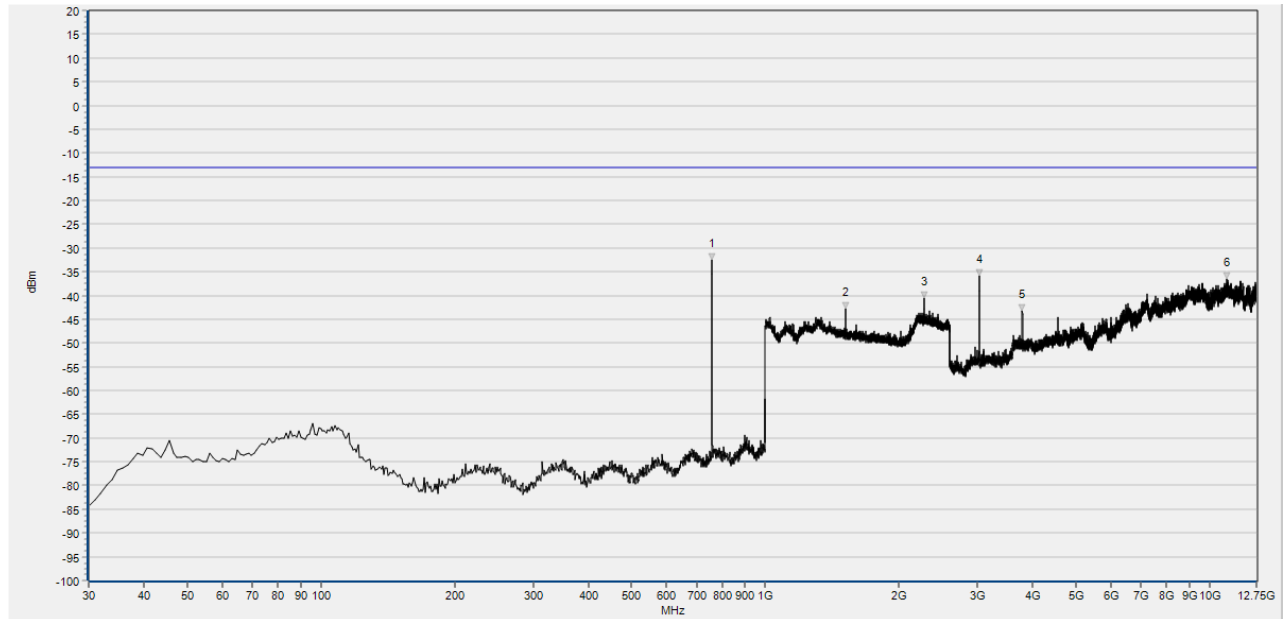
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-32.53	-13.00	348.6	H	N/A
2	1514.766	-43.73	-13.00	72.3	H	PASS
3	2272.189	-40.15	-13.00	232.5	H	PASS
4	3030.069	-39.39	-13.00	164.5	H	PASS
5	7109.265	-40.44	-13.00	295.5	H	PASS
6	10926.359	-37.69	-13.00	321.5	H	PASS

NB-IOT 757MHz–758MHz Mid Channel 3.75K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-43.68	-13.00	0.0	V	N/A
2	2273.469	-38.72	-13.00	192.4	V	PASS
3	3031.915	-34.42	-13.00	35.0	V	PASS
4	3788.689	-43.06	-13.00	310.8	V	PASS
5	4547.309	-41.40	-13.00	21.3	V	PASS
6	10455.683	-36.97	-13.00	357.9	V	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K V

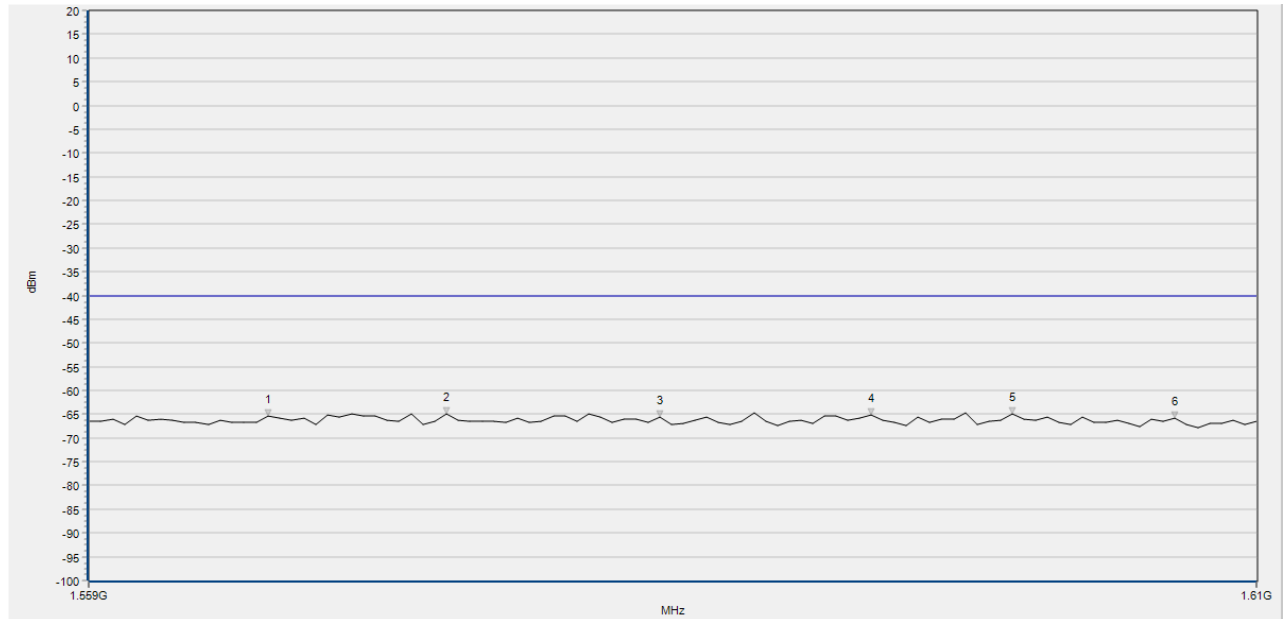


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-32.50	-13.00	100.4	H	N/A
2	1515.406	-42.86	-13.00	84.0	H	PASS
3	2273.469	-40.51	-13.00	115.8	H	PASS
4	3031.915	-35.86	-13.00	243.1	H	PASS
5	3788.689	-43.22	-13.00	349.9	H	PASS
6	10933.742	-36.45	-13.00	322.7	H	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K H



REPORT No.: SZ23090086W01

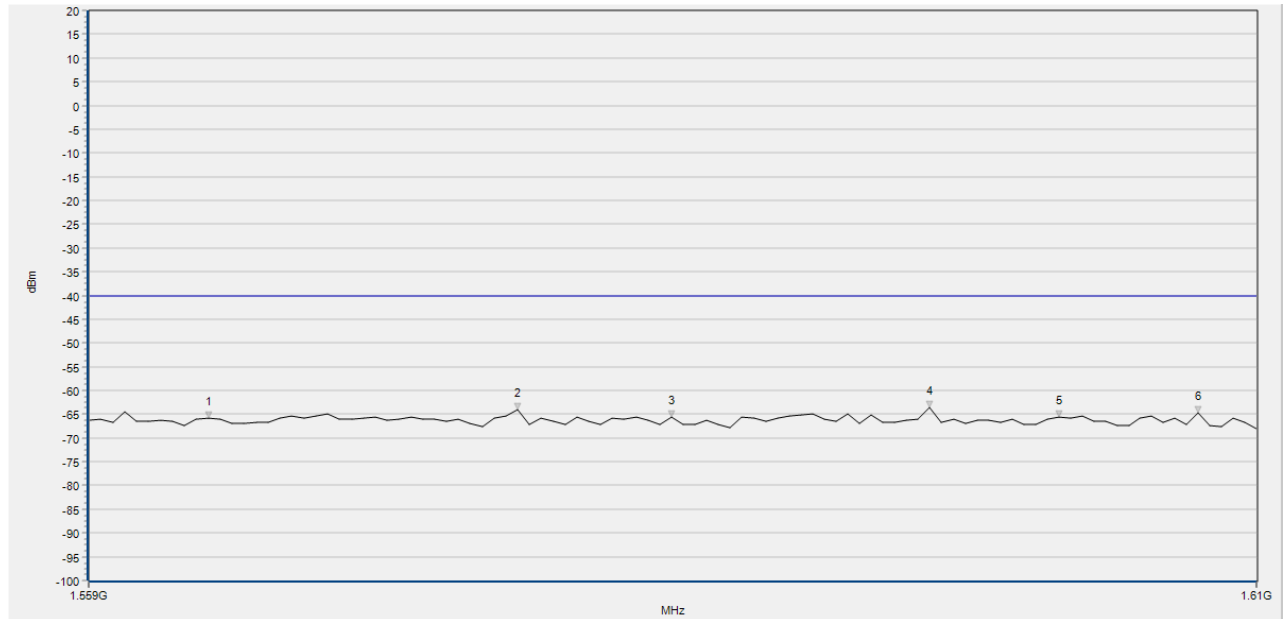


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1566.727	-65.42	-40.00	31.9	V	PASS
2	1574.455	-64.88	-40.00	24.8	V	PASS
3	1583.727	-65.63	-40.00	53.2	V	PASS
4	1593.000	-65.17	-40.00	28.2	V	PASS
5	1599.182	-64.90	-40.00	53.2	V	PASS
6	1606.394	-65.87	-40.00	38.9	V	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz V

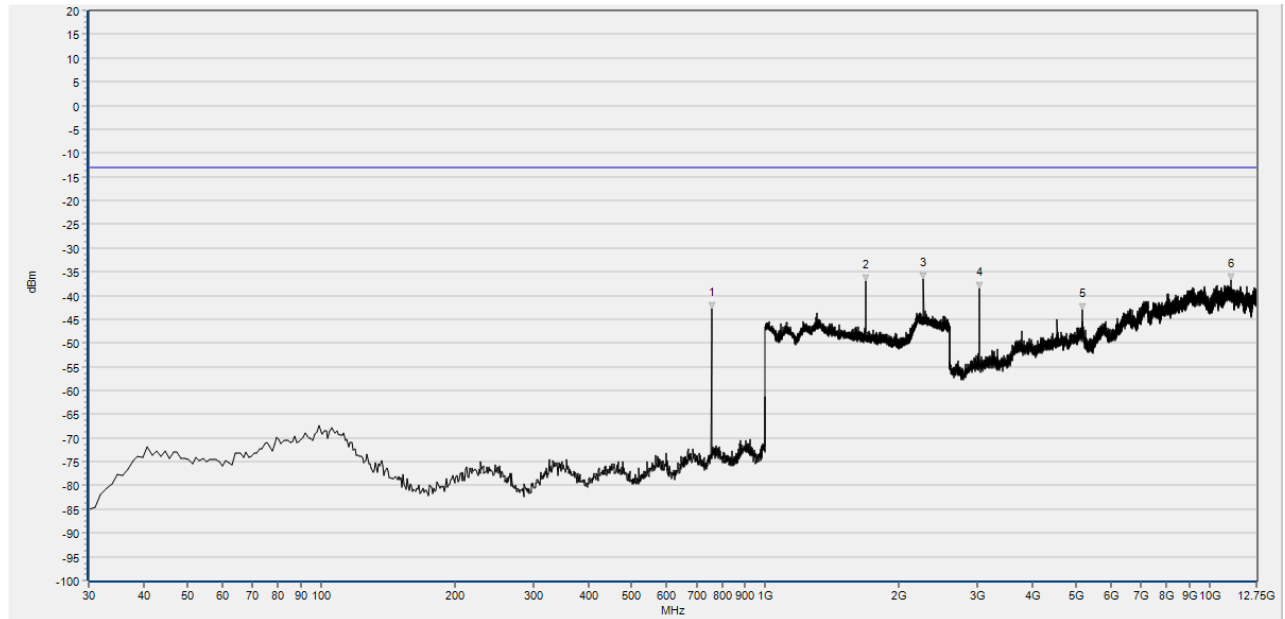


REPORT No.: SZ23090086W01



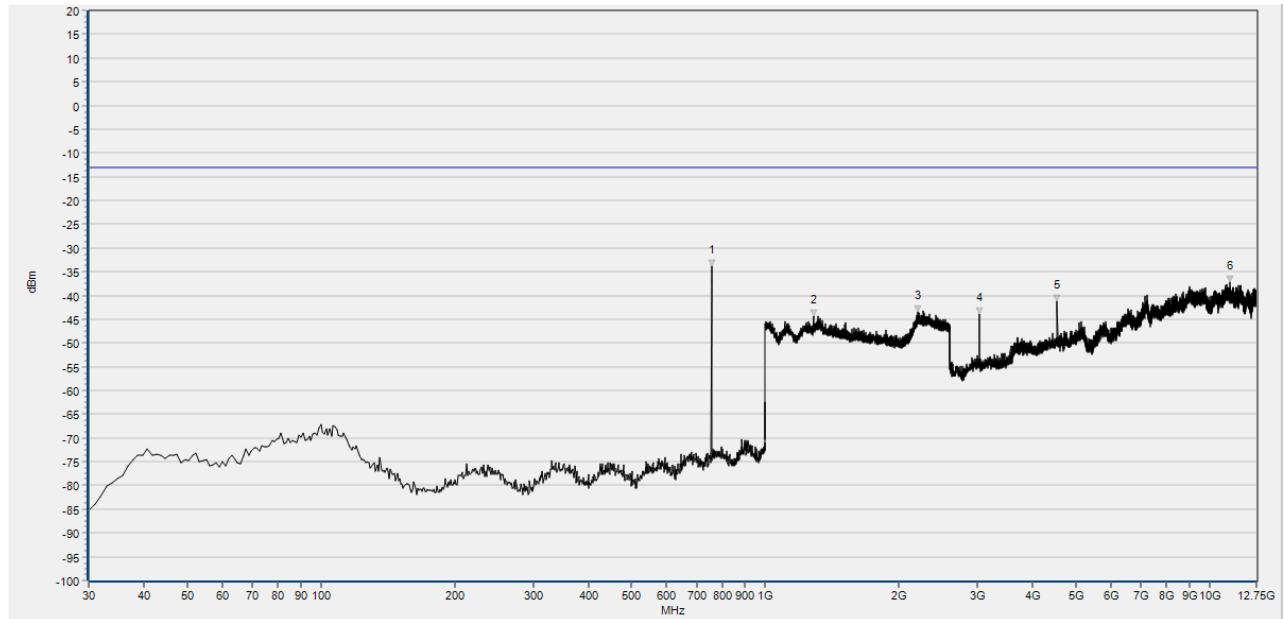
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1564.152	-65.70	-40.00	308.0	H	PASS
2	1577.545	-64.10	-40.00	318.9	H	PASS
3	1584.242	-65.68	-40.00	294.0	H	PASS
4	1595.576	-63.61	-40.00	297.6	H	PASS
5	1601.242	-65.65	-40.00	297.6	H	PASS
6	1607.424	-64.68	-40.00	315.2	H	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz H



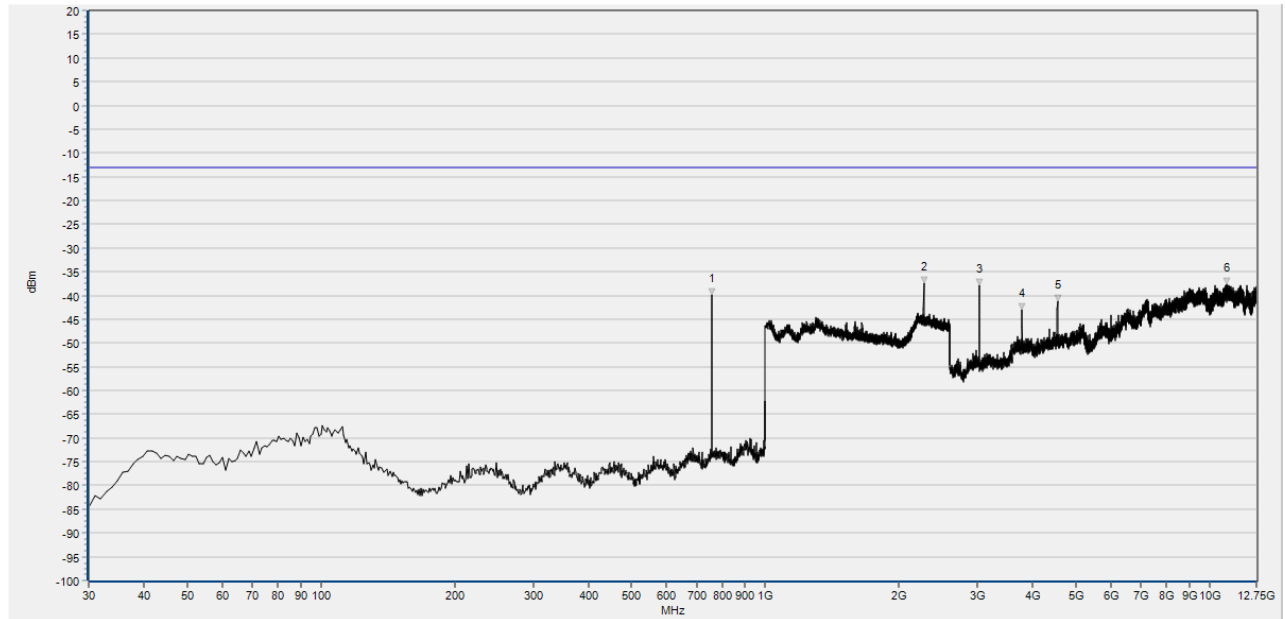
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-42.70	-13.00	357.1	V	N/A
2	1685.074	-36.91	-13.00	205.8	V	PASS
3	2270.908	-36.58	-13.00	43.0	V	PASS
4	3028.223	-38.58	-13.00	241.5	V	PASS
5	5180.415	-42.98	-13.00	8.5	V	PASS
6	11166.312	-36.85	-13.00	112.4	V	PASS

NB-IOT 757MHz-758MHz Low Channel 15K V



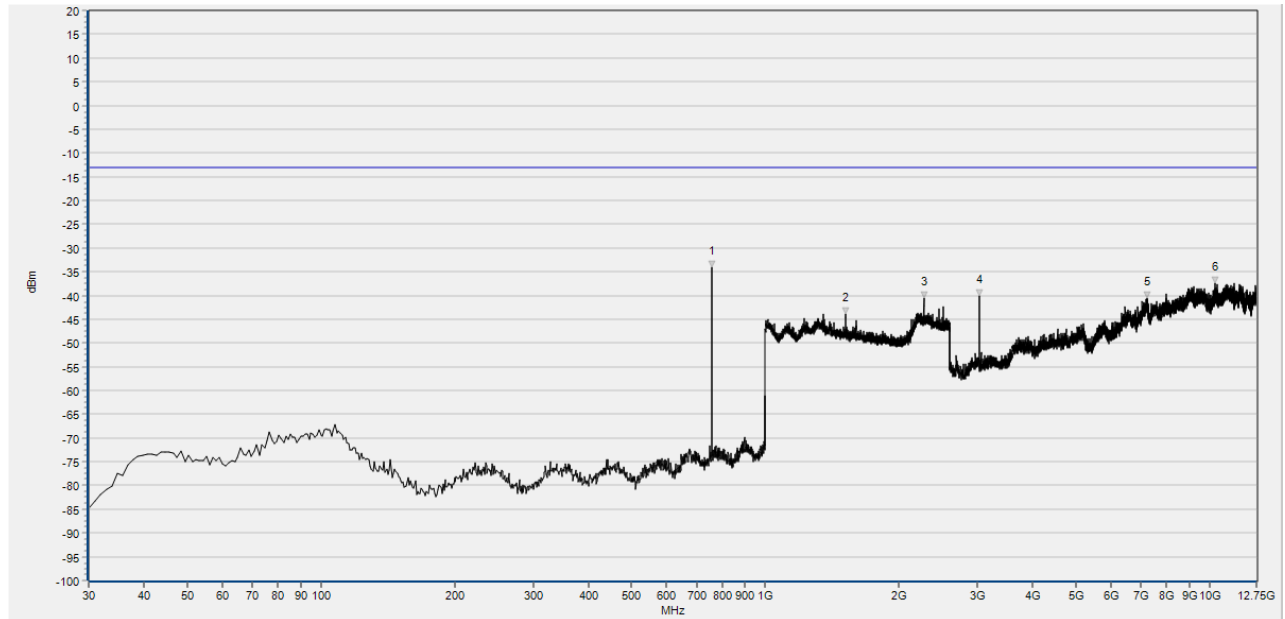
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-33.88	-13.00	327.1	H	N/A
2	1282.353	-44.27	-13.00	224.1	H	PASS
3	2203.041	-43.49	-13.00	17.2	H	PASS
4	3028.223	-43.94	-13.00	2.0	H	PASS
5	4541.771	-41.28	-13.00	86.8	H	PASS
6	11120.167	-37.31	-13.00	217.8	H	PASS

NB-IOT 757MHz-758MHz Low Channel 15K H



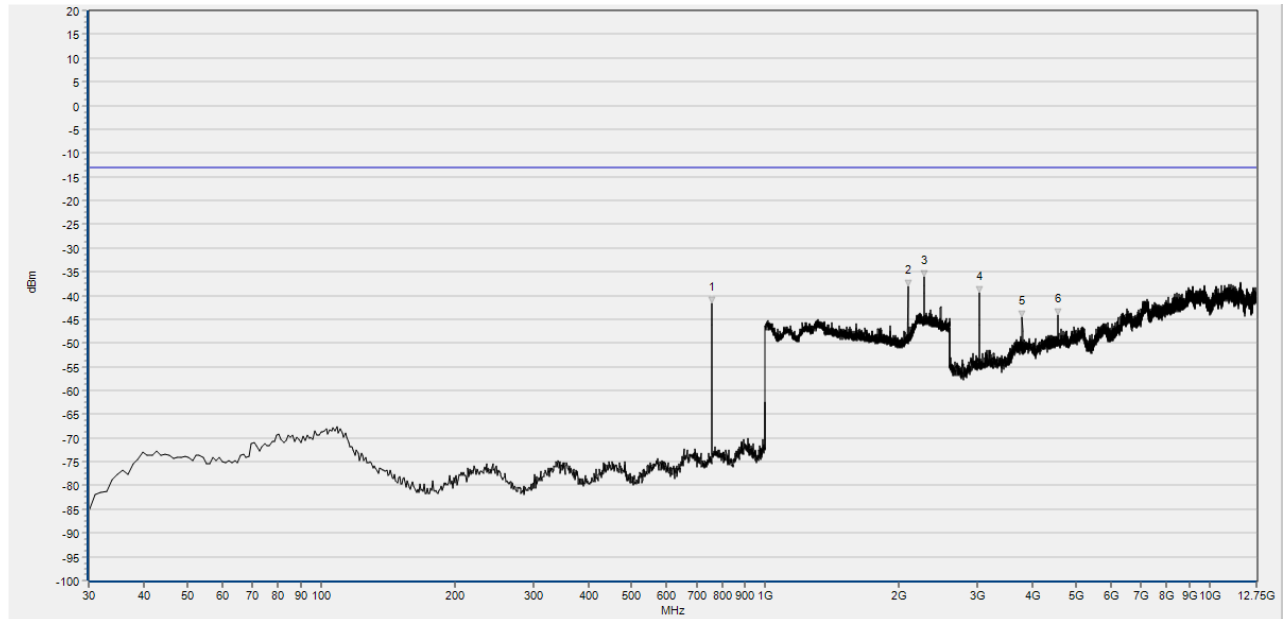
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-39.93	-13.00	319.7	V	N/A
2	2272.189	-37.36	-13.00	101.7	V	PASS
3	3030.069	-37.84	-13.00	63.3	V	PASS
4	3786.843	-43.07	-13.00	336.9	V	PASS
5	4545.463	-41.19	-13.00	50.3	V	PASS
6	10950.355	-37.75	-13.00	76.3	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 15K V



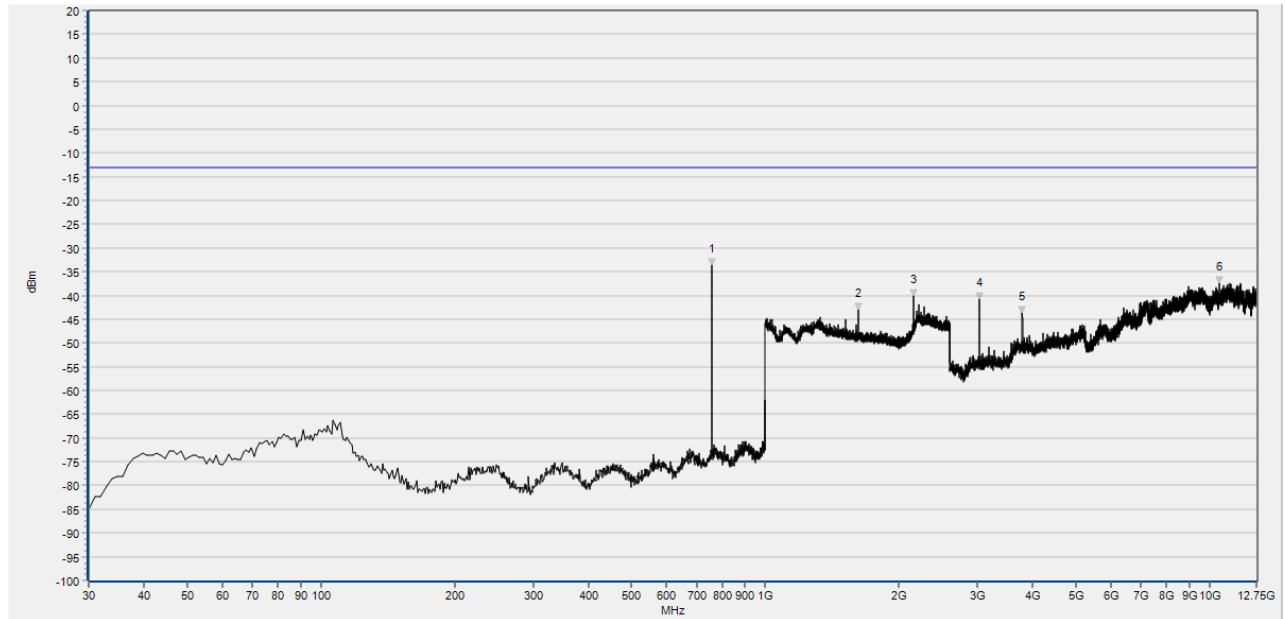
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-34.08	-13.00	107.3	H	N/A
2	1514.766	-43.99	-13.00	3.1	H	PASS
3	2272.189	-40.59	-13.00	329.1	H	PASS
4	3030.069	-40.09	-13.00	339.8	H	PASS
5	7244.008	-40.52	-13.00	167.9	H	PASS
6	10300.636	-37.41	-13.00	84.2	H	PASS

NB-IOT 757MHz~758MHz Mid Channel 15K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-41.75	-13.00	360.0	V	N/A
2	2092.277	-38.20	-13.00	348.4	V	PASS
3	2273.469	-36.15	-13.00	96.1	V	PASS
4	3031.915	-39.41	-13.00	273.5	V	PASS
5	3788.689	-44.53	-13.00	21.6	V	PASS
6	4547.309	-44.18	-13.00	61.1	V	PASS

NB-IOT 757MHz-758MHz High Channel 15K V

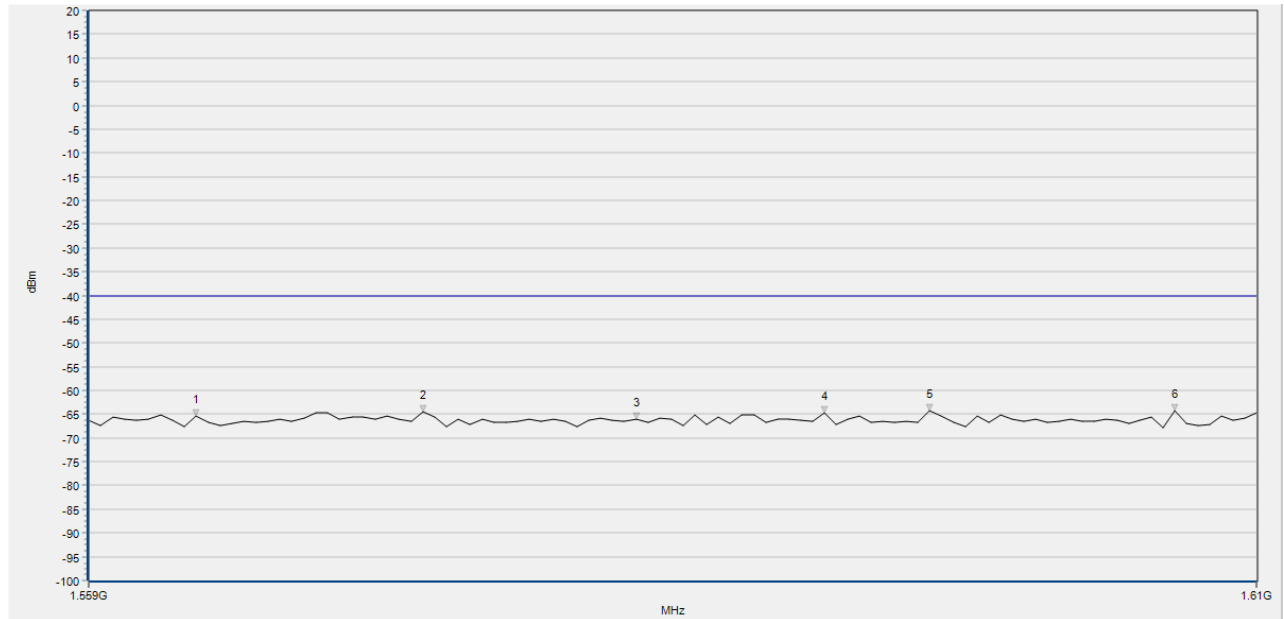


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-33.72	-13.00	106.4	H	N/A
2	1622.969	-43.00	-13.00	244.4	H	PASS
3	2154.382	-40.13	-13.00	244.4	H	PASS
4	3031.915	-40.89	-13.00	325.3	H	PASS
5	3788.689	-43.71	-13.00	360.0	H	PASS
6	10533.206	-37.47	-13.00	308.1	H	PASS

NB-IOT 757MHz–758MHz High Channel 15K H



REPORT No.: SZ23090086W01

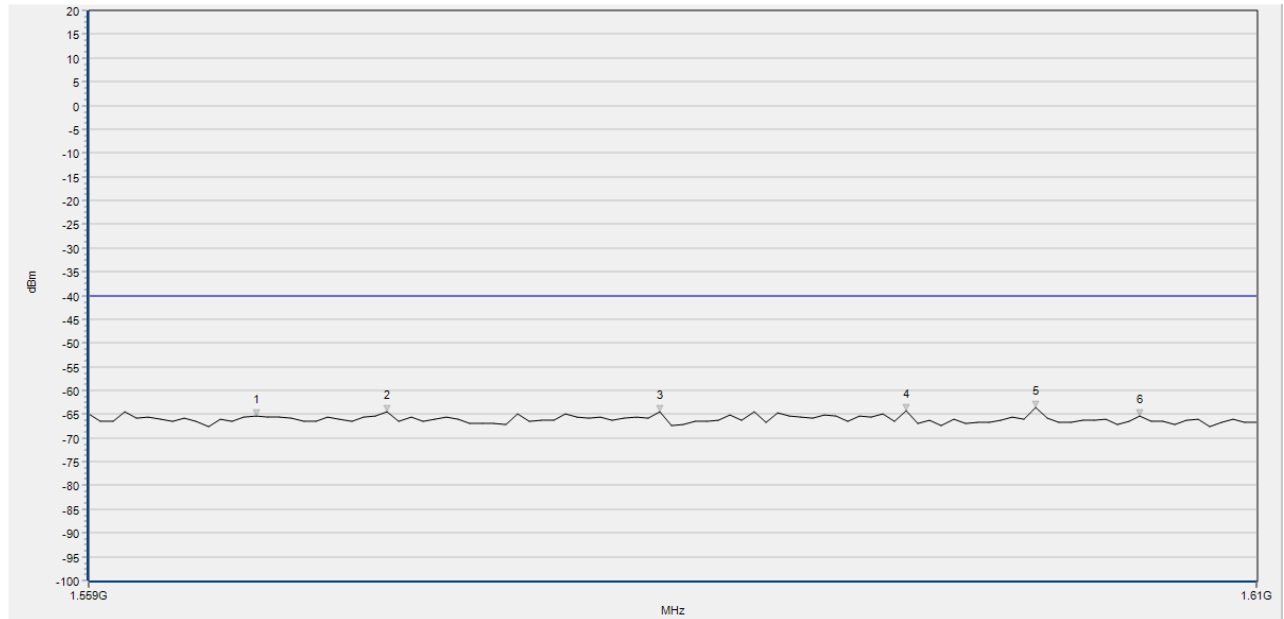


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1563.636	-65.37	-40.00	309.6	V	PASS
2	1573.424	-64.58	-40.00	334.5	V	PASS
3	1582.697	-66.12	-40.00	306.1	V	PASS
4	1590.939	-64.59	-40.00	323.9	V	PASS
5	1595.576	-64.35	-40.00	313.0	V	PASS
6	1606.394	-64.29	-40.00	331.0	V	PASS

NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz V



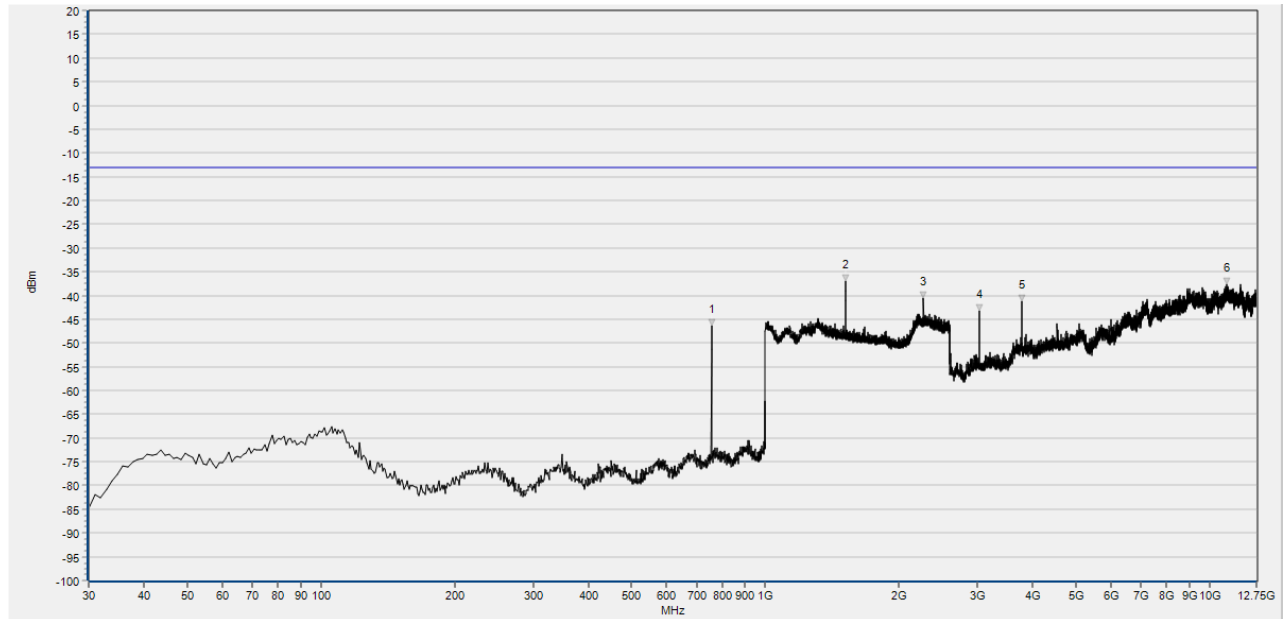
REPORT No.: SZ23090086W01



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1566.212	-65.47	-40.00	124.7	H	PASS
2	1571.879	-64.58	-40.00	117.6	H	PASS
3	1583.727	-64.51	-40.00	110.4	H	PASS
4	1594.545	-64.29	-40.00	114.1	H	PASS
5	1600.212	-63.67	-40.00	139.0	H	PASS
6	1604.848	-65.47	-40.00	124.7	H	PASS

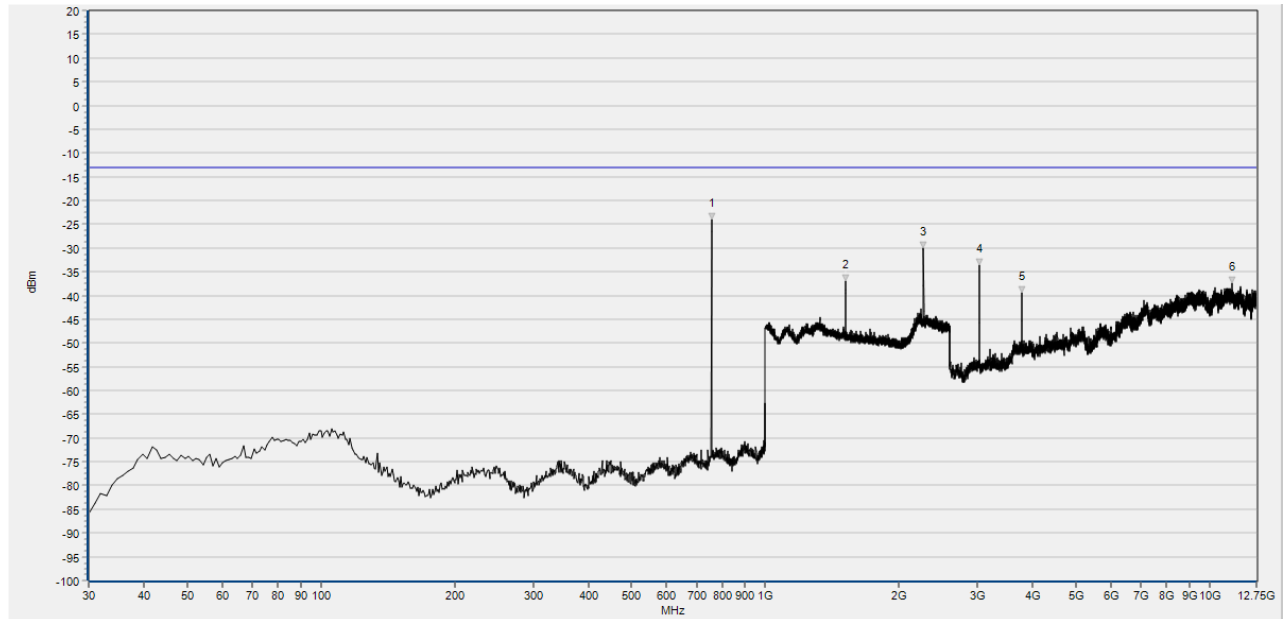
NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz H

Fixed External Antenna 1:



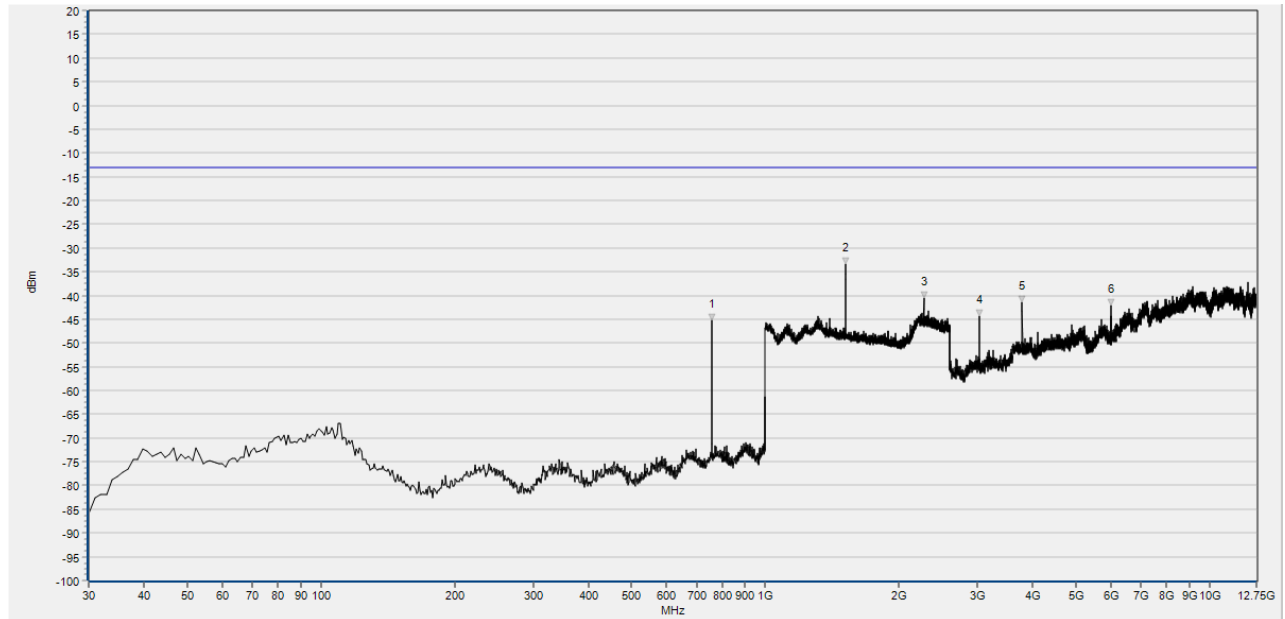
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-46.31	-13.00	355.7	V	N/A
2	1514.126	-37.07	-13.00	236.7	V	PASS
3	2270.908	-40.63	-13.00	181.6	V	PASS
4	3028.223	-43.28	-13.00	33.9	V	PASS
5	3784.997	-41.28	-13.00	231.9	V	PASS
6	10957.738	-37.66	-13.00	297.3	V	PASS

NB-IOT 757MHz–758MHz Low Channel 3.75K V



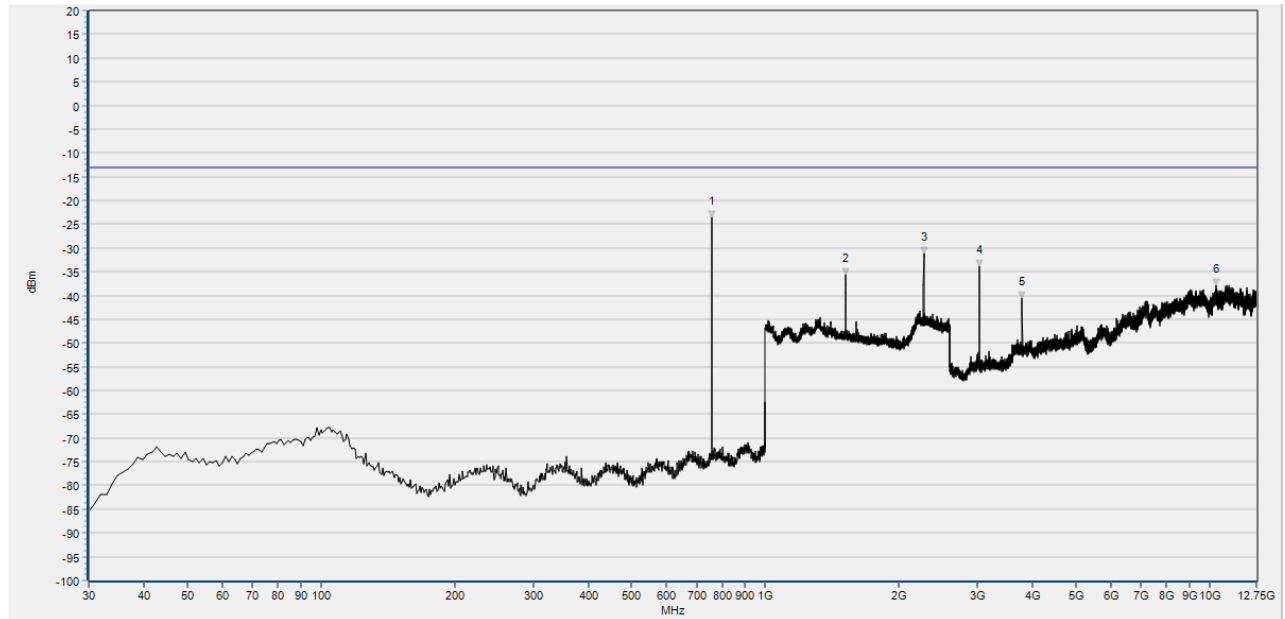
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-24.06	-13.00	348.2	H	N/A
2	1514.126	-37.00	-13.00	108.2	H	PASS
3	2270.908	-30.12	-13.00	6.4	H	PASS
4	3028.223	-33.74	-13.00	334.9	H	PASS
5	3784.997	-39.47	-13.00	307.4	H	PASS
6	11217.994	-37.51	-13.00	137.8	H	PASS

NB-IOT 757MHz-758MHz Low Channel 3.75K H



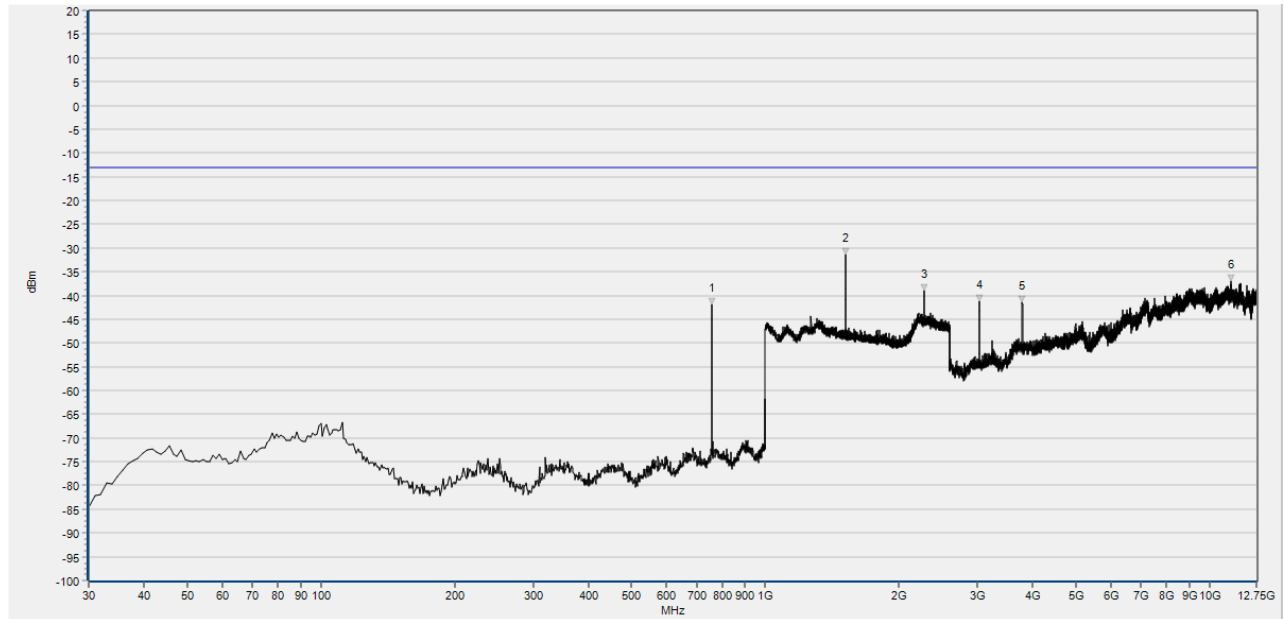
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-45.31	-13.00	341.6	V	N/A
2	1514.766	-33.51	-13.00	243.1	V	PASS
3	2272.189	-40.63	-13.00	347.2	V	PASS
4	3030.069	-44.40	-13.00	229.3	V	PASS
5	3786.843	-41.41	-13.00	359.1	V	PASS
6	5998.100	-42.12	-13.00	134.9	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 3.75K V



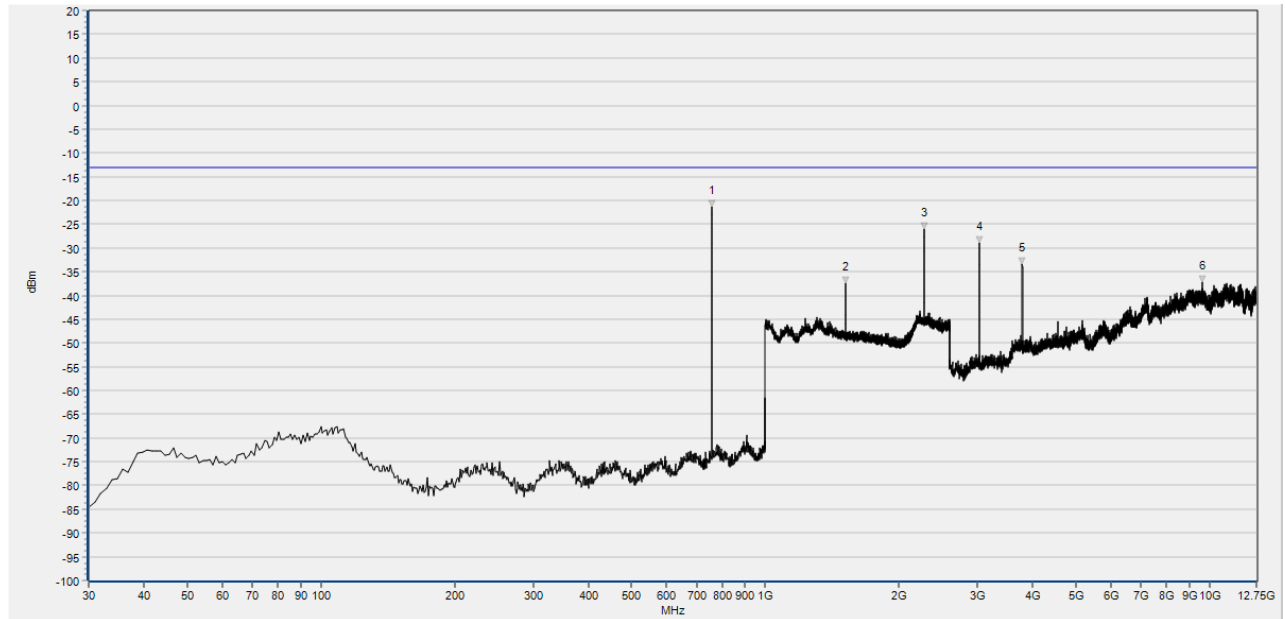
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-23.50	-13.00	354.1	H	N/A
2	1514.766	-35.75	-13.00	326.4	H	PASS
3	2272.189	-31.27	-13.00	0.0	H	PASS
4	3030.069	-33.88	-13.00	265.0	H	PASS
5	3786.843	-40.58	-13.00	314.8	H	PASS
6	10356.010	-37.92	-13.00	341.3	H	PASS

NB-IOT 757MHz-758MHz Mid Channel 3.75K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-41.96	-13.00	301.8	V	N/A
2	1515.406	-31.36	-13.00	238.7	V	PASS
3	2273.469	-38.97	-13.00	348.2	V	PASS
4	3031.915	-41.21	-13.00	47.0	V	PASS
5	3788.689	-41.40	-13.00	179.0	V	PASS
6	11179.233	-36.90	-13.00	256.8	V	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K V

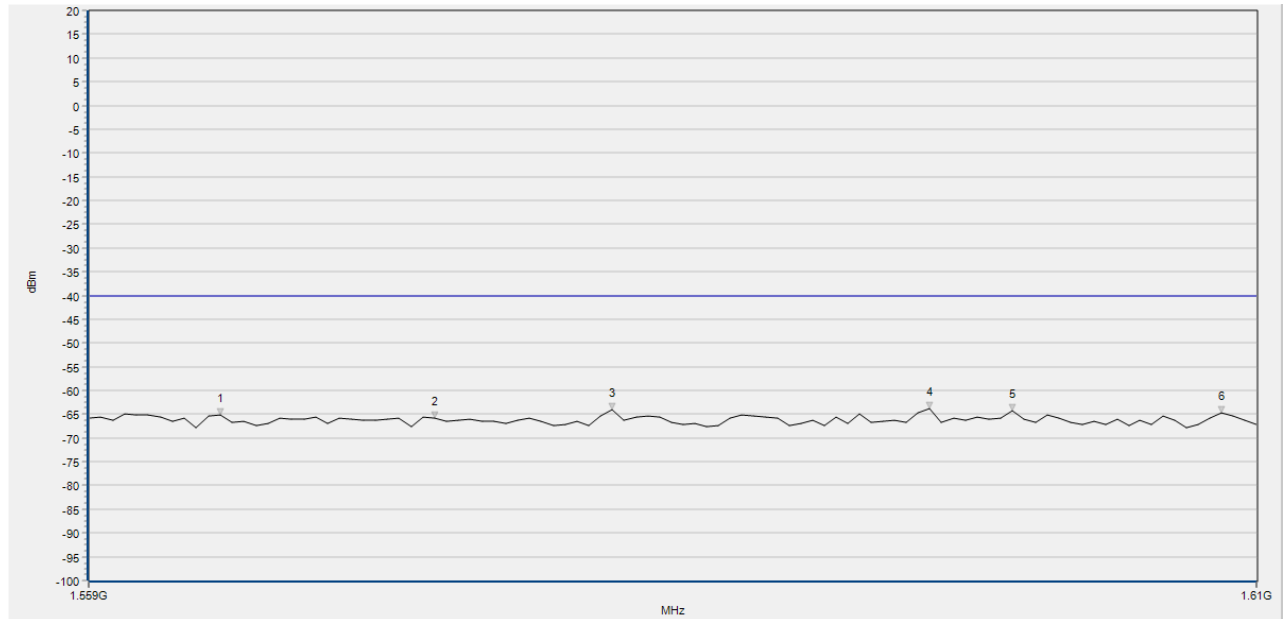


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-21.28	-13.00	360.0	H	N/A
2	1515.406	-37.51	-13.00	155.4	H	PASS
3	2273.469	-26.11	-13.00	334.6	H	PASS
4	3031.915	-28.99	-13.00	338.3	H	PASS
5	3788.689	-33.32	-13.00	9.1	H	PASS
6	9637.998	-37.14	-13.00	180.1	H	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K H



REPORT No.: SZ23090086W01

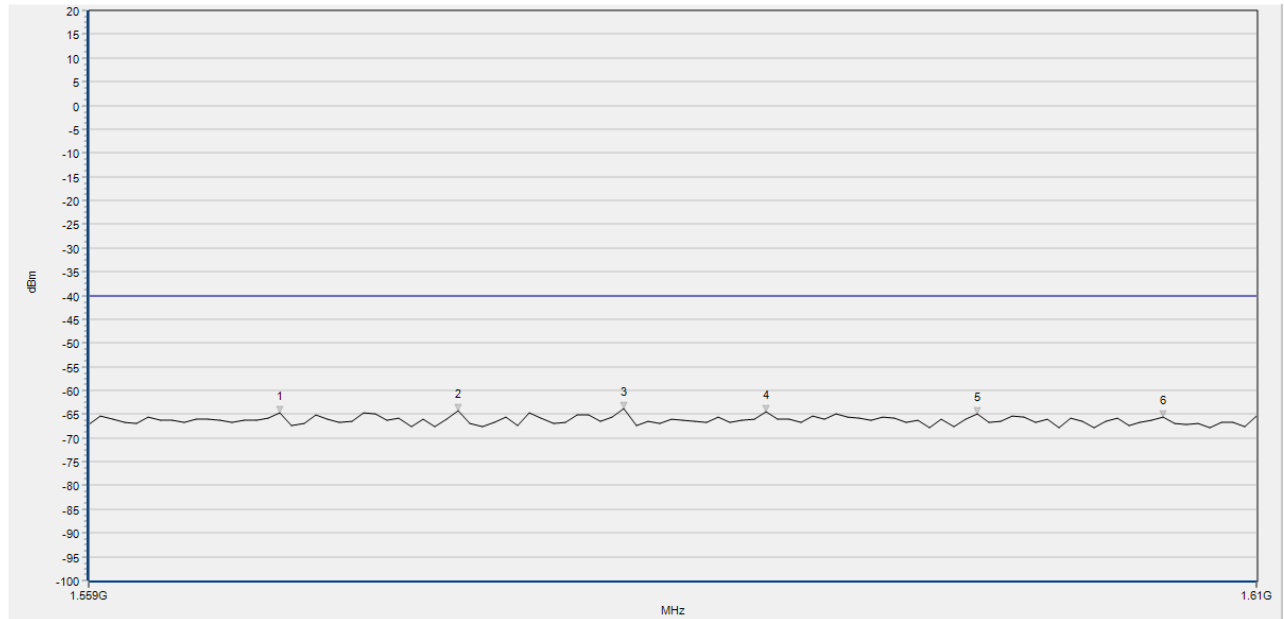


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1564.667	-65.12	-40.00	167.8	V	PASS
2	1573.939	-65.71	-40.00	175.0	V	PASS
3	1581.667	-64.07	-40.00	171.5	V	PASS
4	1595.576	-63.76	-40.00	160.7	V	PASS
5	1599.182	-64.22	-40.00	178.7	V	PASS
6	1608.455	-64.76	-40.00	160.7	V	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz V

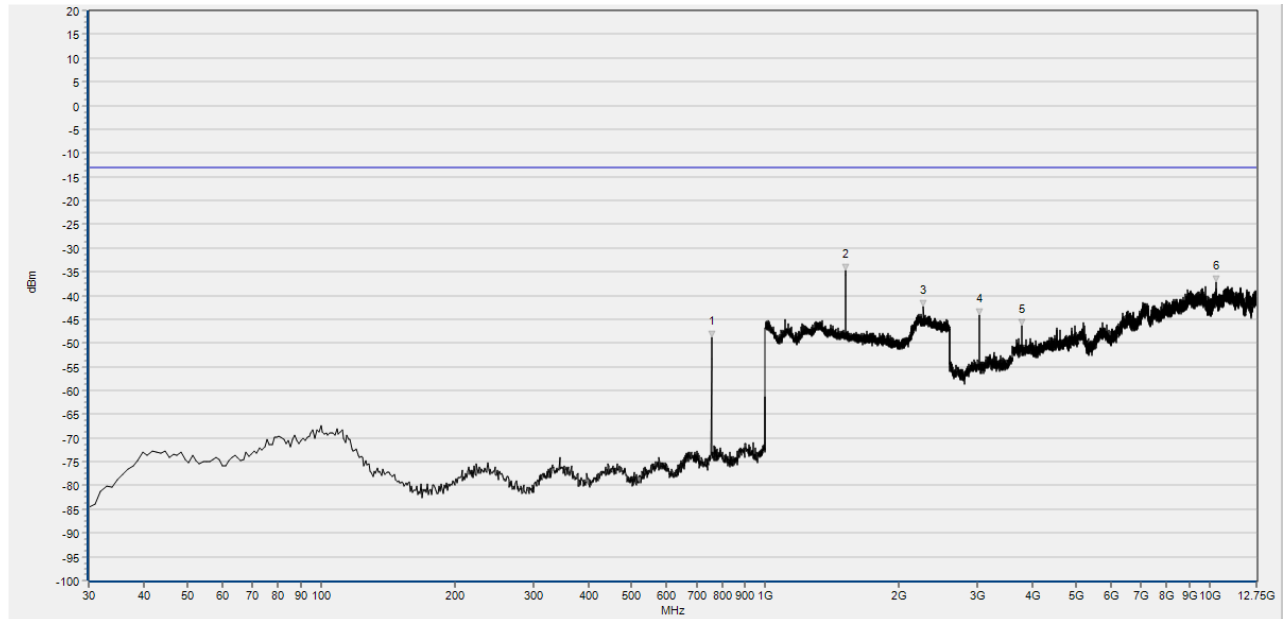


REPORT No.: SZ23090086W01



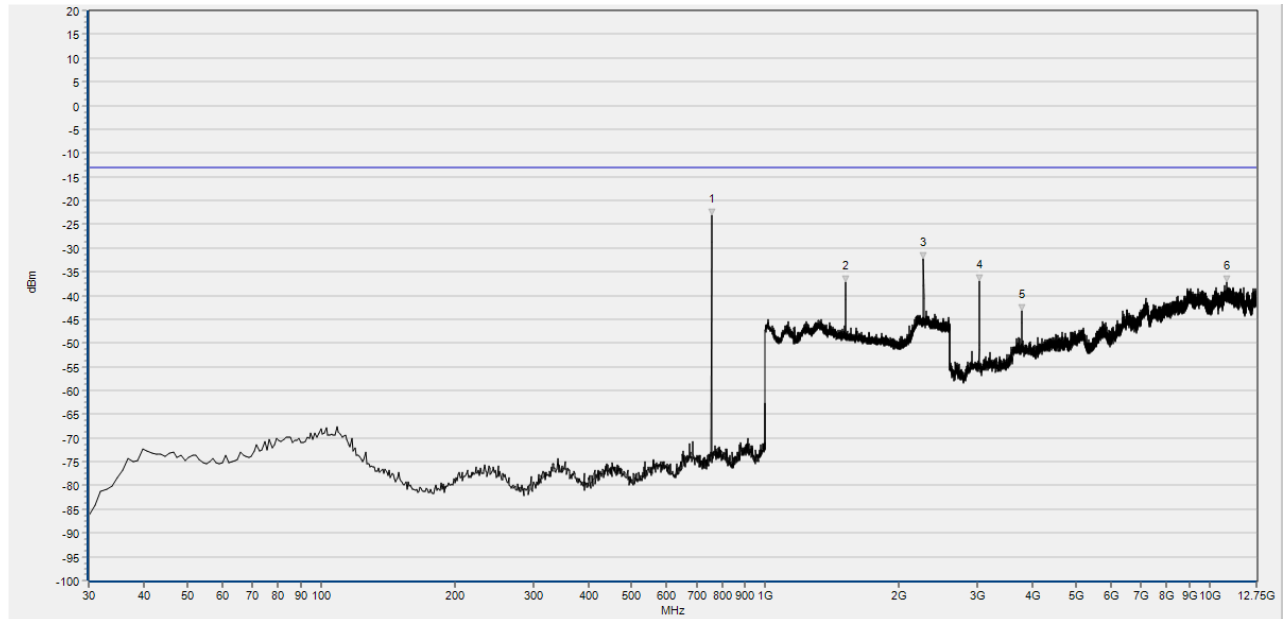
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1567.242	-64.62	-40.00	37.1	H	PASS
2	1574.970	-64.27	-40.00	47.9	H	PASS
3	1582.182	-63.74	-40.00	30.1	H	PASS
4	1588.364	-64.42	-40.00	30.1	H	PASS
5	1597.636	-65.02	-40.00	51.4	H	PASS
6	1605.879	-65.64	-40.00	33.6	H	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz H



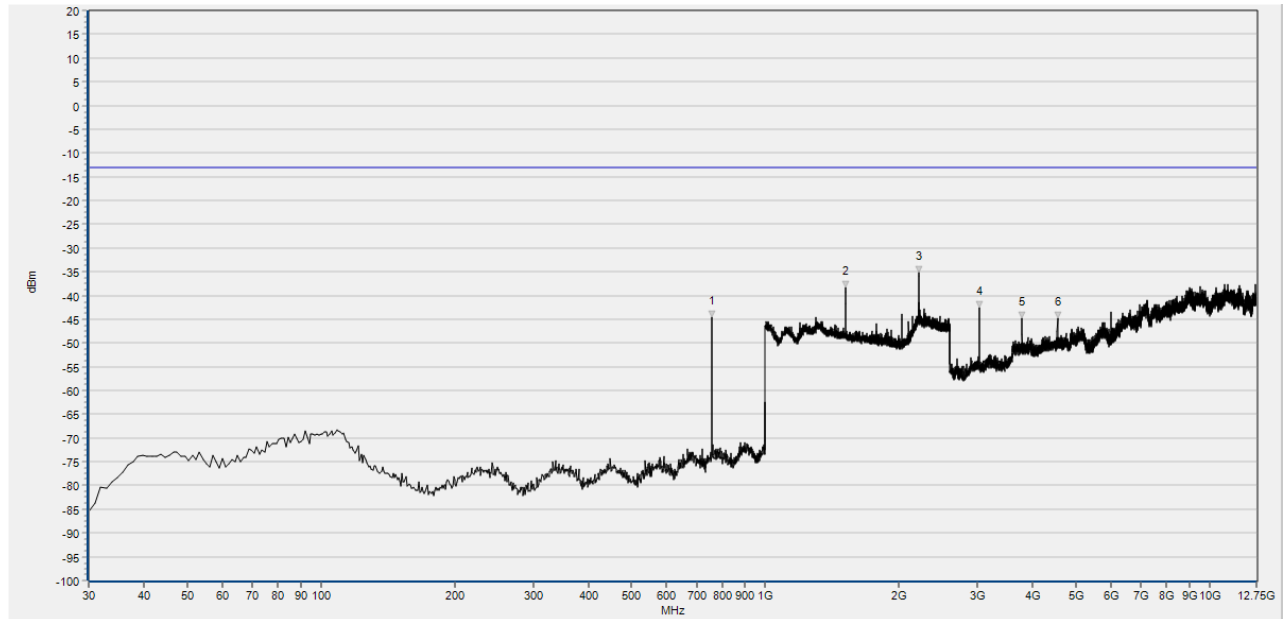
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-48.74	-13.00	308.4	V	N/A
2	1514.126	-34.66	-13.00	242.6	V	PASS
3	2270.908	-42.44	-13.00	319.8	V	PASS
4	3028.223	-44.08	-13.00	178.2	V	PASS
5	3784.997	-46.26	-13.00	73.8	V	PASS
6	10365.239	-37.24	-13.00	165.2	V	PASS

NB-IOT 757MHz-758MHz Low Channel 15K V



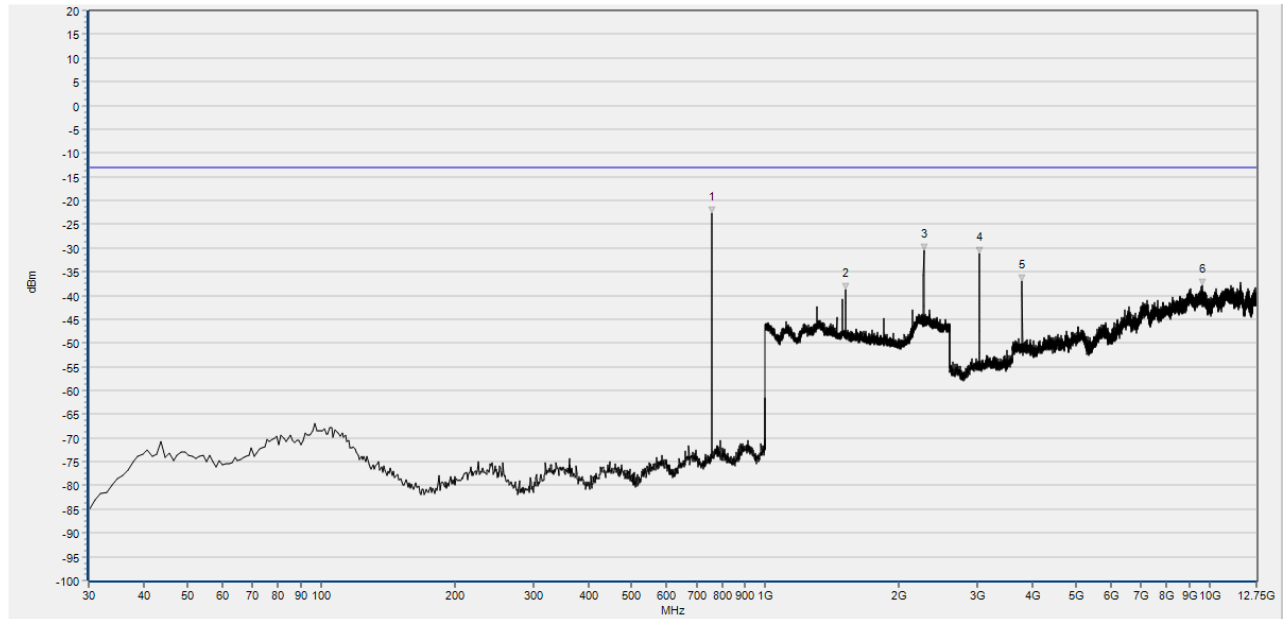
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-23.09	-13.00	318.4	H	N/A
2	1514.126	-37.14	-13.00	235.5	H	PASS
3	2270.908	-32.21	-13.00	333.8	H	PASS
4	3028.223	-37.05	-13.00	269.8	H	PASS
5	3784.997	-43.18	-13.00	2.1	H	PASS
6	10954.046	-37.32	-13.00	190.9	H	PASS

NB-IOT 757MHz-758MHz Low Channel 15K H



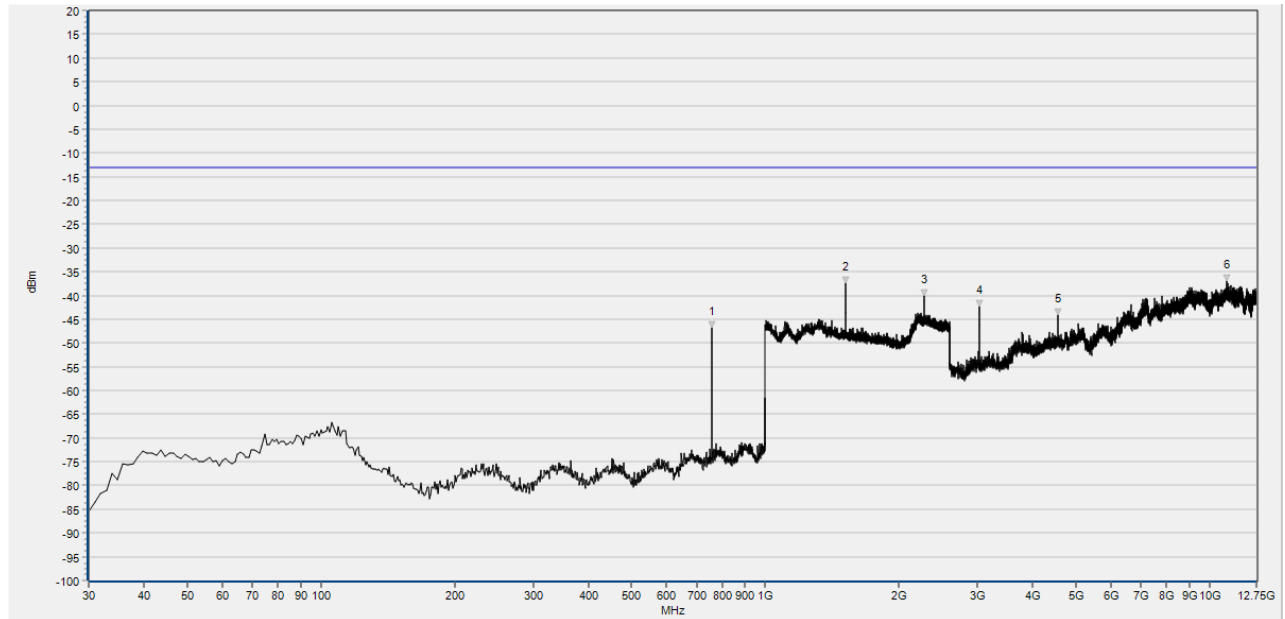
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-44.61	-13.00	300.4	V	N/A
2	1514.766	-38.26	-13.00	247.6	V	PASS
3	2220.328	-35.22	-13.00	330.9	V	PASS
4	3030.069	-42.63	-13.00	230.4	V	PASS
5	3786.843	-44.91	-13.00	68.9	V	PASS
6	4545.463	-44.80	-13.00	68.9	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 15K V



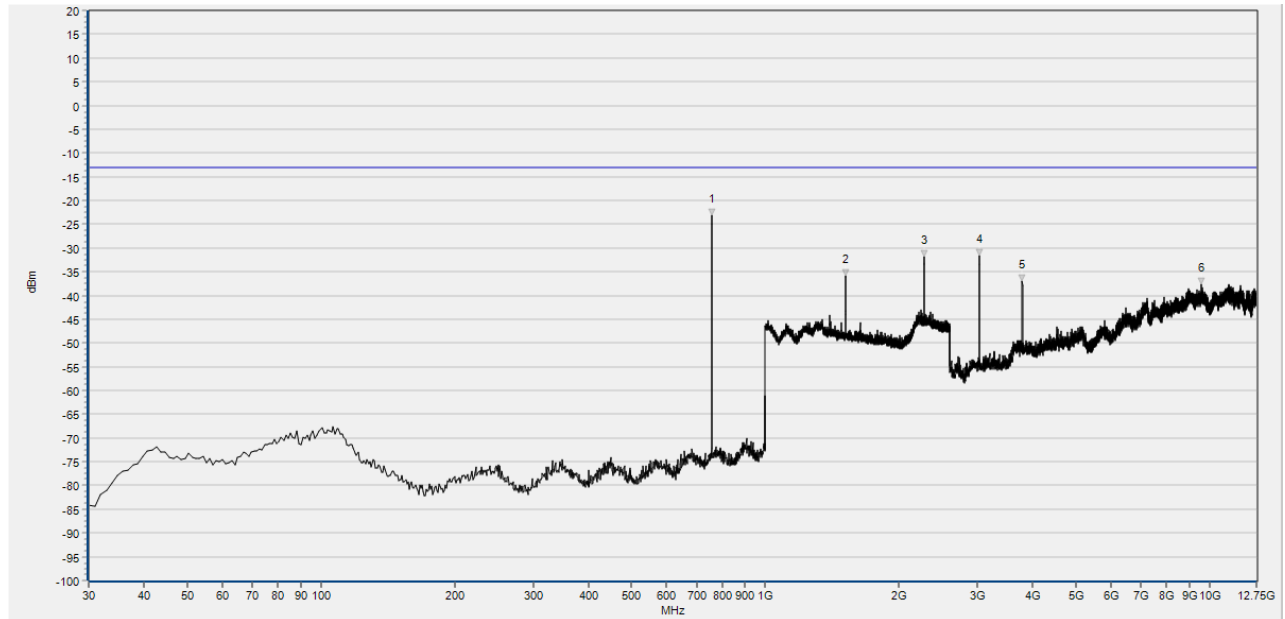
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-22.75	-13.00	14.2	H	N/A
2	1514.766	-38.78	-13.00	48.4	H	PASS
3	2272.189	-30.58	-13.00	354.2	H	PASS
4	3030.069	-31.06	-13.00	247.5	H	PASS
5	3786.843	-36.94	-13.00	357.9	H	PASS
6	9626.923	-37.98	-13.00	76.7	H	PASS

NB-IOT 757MHz-758MHz Mid Channel 15K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-46.83	-13.00	107.6	V	N/A
2	1515.406	-37.45	-13.00	32.6	V	PASS
3	2273.469	-40.02	-13.00	64.0	V	PASS
4	3031.915	-42.30	-13.00	181.3	V	PASS
5	4547.309	-44.15	-13.00	49.9	V	PASS
6	10955.892	-36.97	-13.00	233.4	V	PASS

NB-IOT 757MHz-758MHz High Channel 15K V

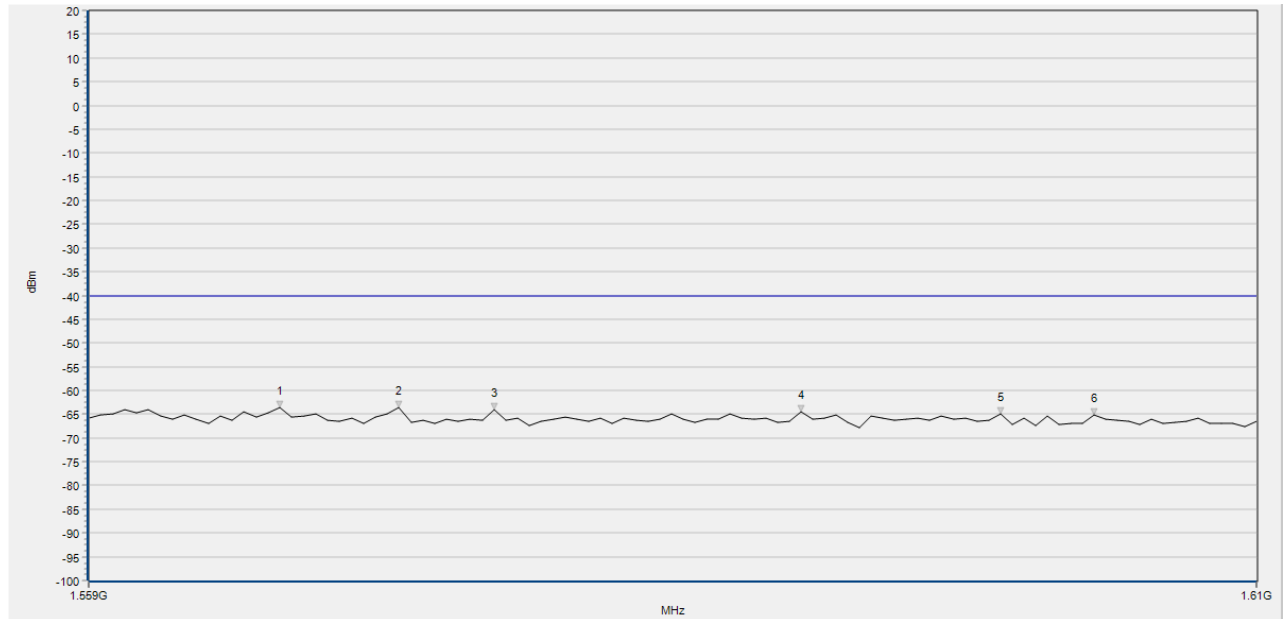


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-23.12	-13.00	87.1	H	N/A
2	1515.406	-35.92	-13.00	161.0	H	PASS
3	2273.469	-31.95	-13.00	339.4	H	PASS
4	3031.915	-31.64	-13.00	220.0	H	PASS
5	3788.689	-37.08	-13.00	312.7	H	PASS
6	9577.087	-37.58	-13.00	64.4	H	PASS

NB-IOT 757MHz-758MHz High Channel 15K H



REPORT No.: SZ23090086W01

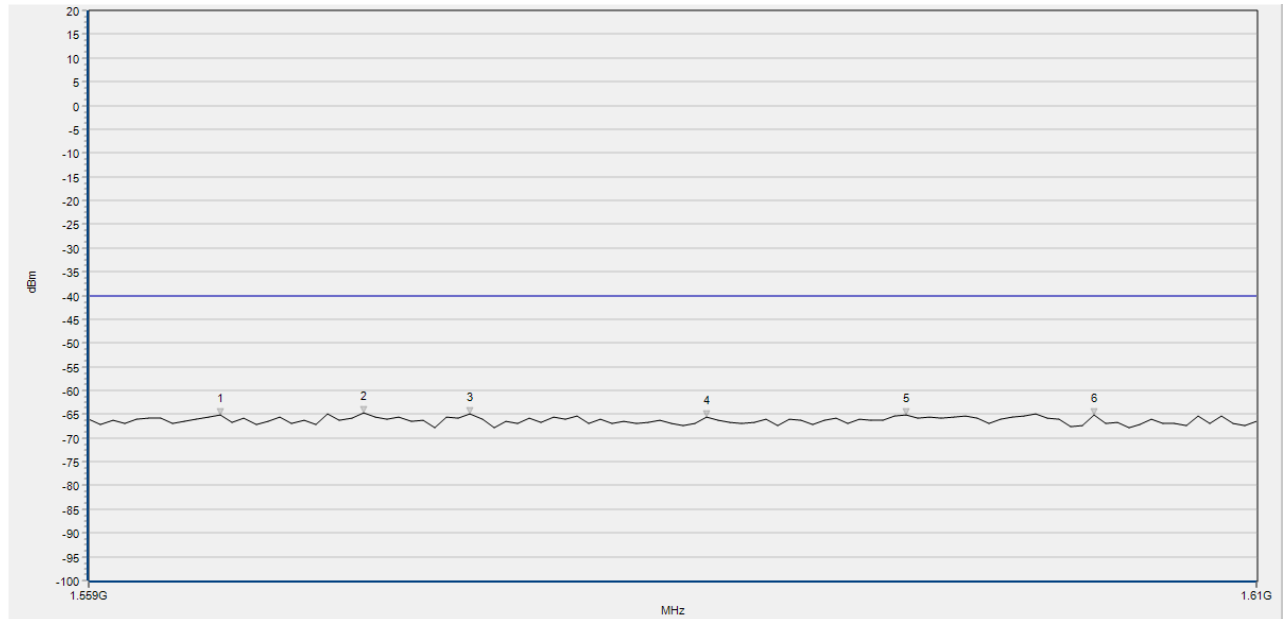


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1567.242	-63.58	-40.00	307.0	V	PASS
2	1572.394	-63.48	-40.00	324.8	V	PASS
3	1576.515	-64.04	-40.00	307.0	V	PASS
4	1589.909	-64.54	-40.00	321.1	V	PASS
5	1598.667	-64.94	-40.00	303.3	V	PASS
6	1602.788	-65.09	-40.00	317.6	V	PASS

NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz V



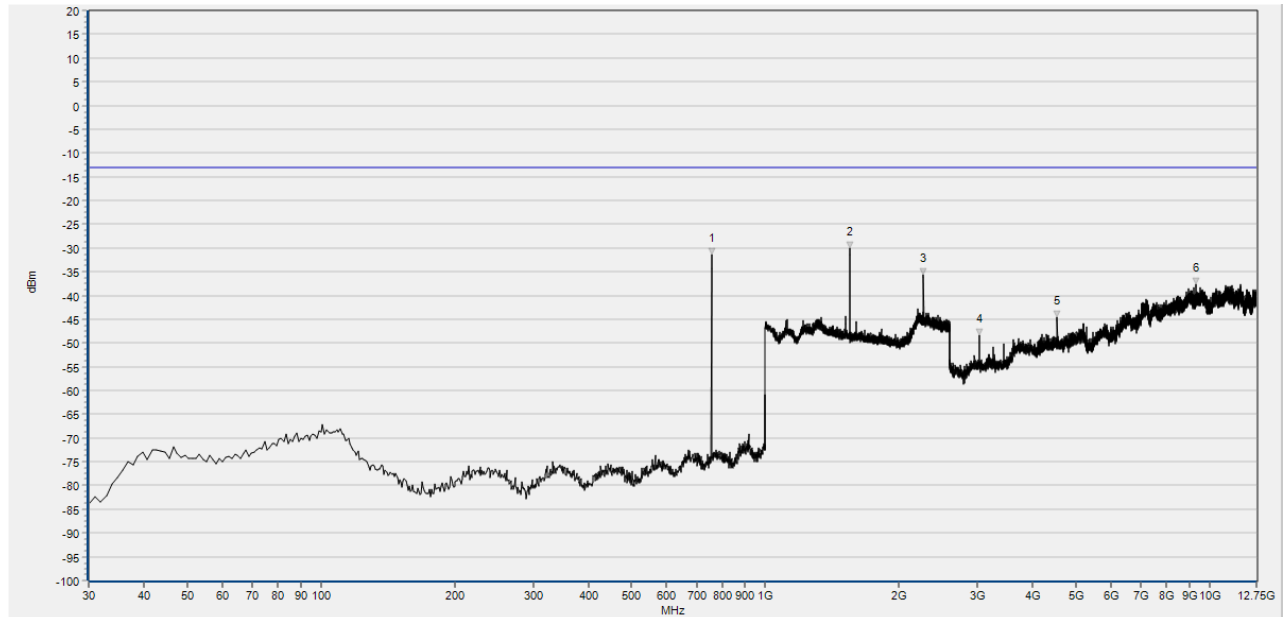
REPORT No.: SZ23090086W01



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1564.667	-65.21	-40.00	25.3	H	PASS
2	1570.848	-64.70	-40.00	13.0	H	PASS
3	1575.485	-65.01	-40.00	0.0	H	PASS
4	1585.788	-65.55	-40.00	7.3	H	PASS
5	1594.545	-65.16	-40.00	0.3	H	PASS
6	1602.788	-65.08	-40.00	0.3	H	PASS

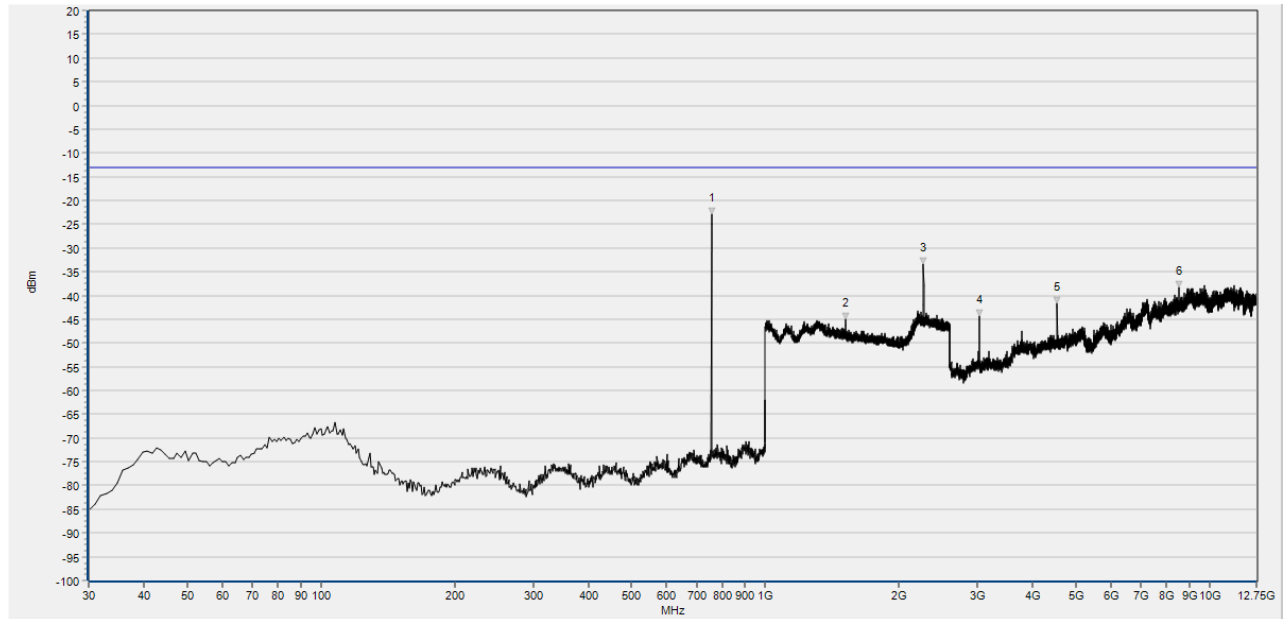
NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz H

Fixed External Antenna 2:



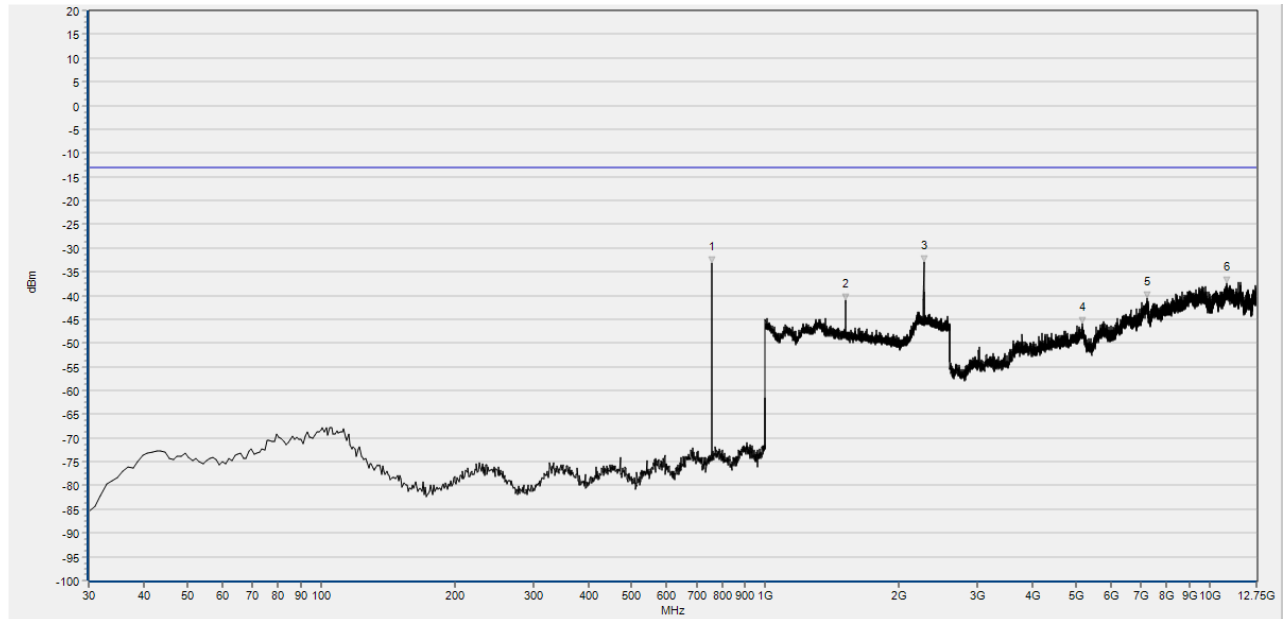
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-31.35	-13.00	266.7	V	N/A
2	1549.980	-30.02	-13.00	321.5	V	PASS
3	2270.908	-35.68	-13.00	291.1	V	PASS
4	3028.223	-48.38	-13.00	22.4	V	PASS
5	4541.771	-44.60	-13.00	47.7	V	PASS
6	9338.980	-37.67	-13.00	112.8	V	PASS

NB-IOT 757MHz–758MHz Low Channel 3.75K V



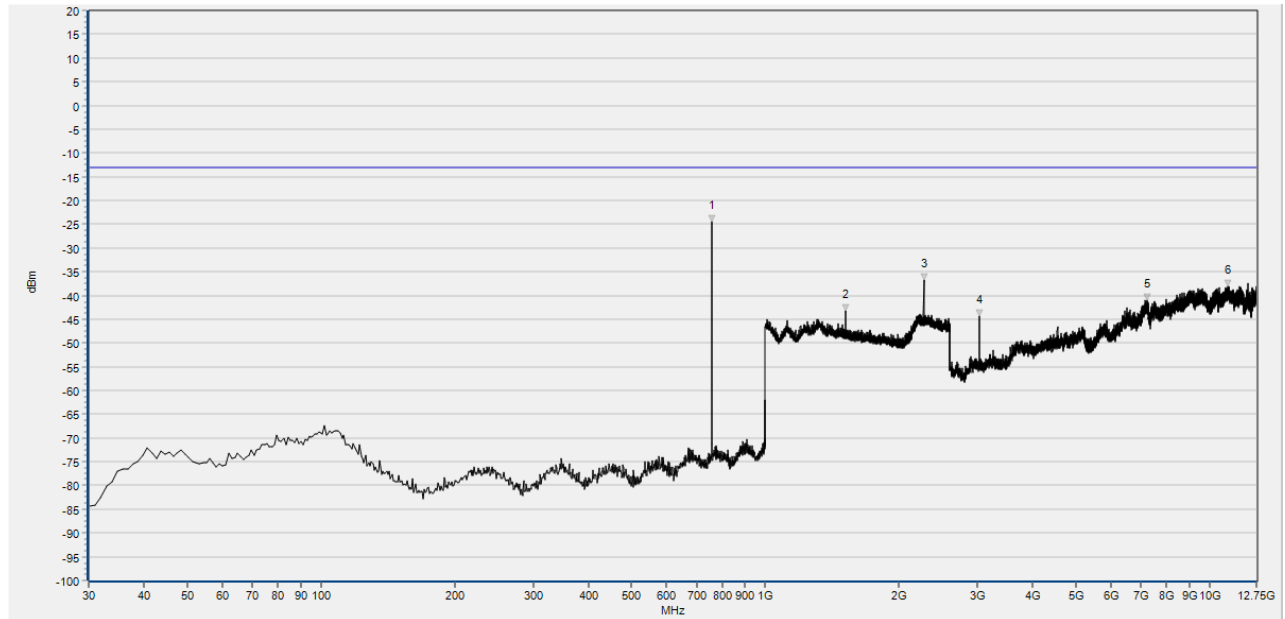
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-22.85	-13.00	360.0	H	N/A
2	1514.126	-45.08	-13.00	65.4	H	PASS
3	2270.908	-33.51	-13.00	252.8	H	PASS
4	3028.223	-44.46	-13.00	23.2	H	PASS
5	4541.771	-41.69	-13.00	88.3	H	PASS
6	8517.603	-38.30	-13.00	88.3	H	PASS

NB-IOT 757MHz-758MHz Low Channel 3.75K H



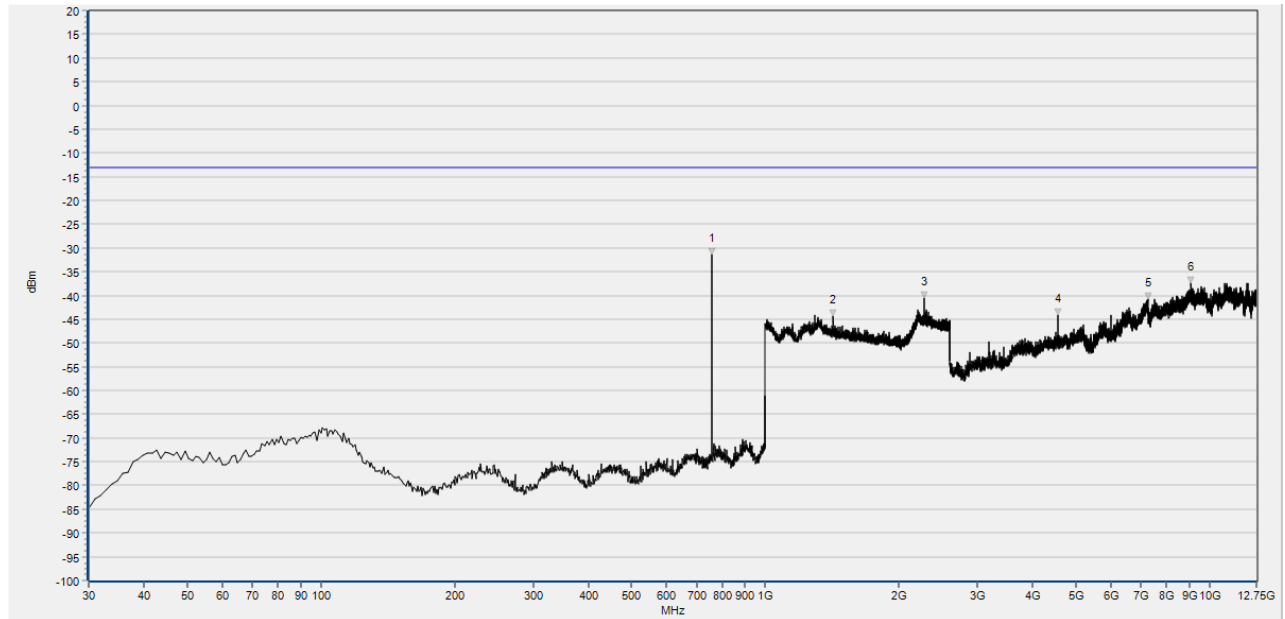
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-33.11	-13.00	349.2	V	N/A
2	1514.766	-40.97	-13.00	86.4	V	PASS
3	2272.829	-33.05	-13.00	311.8	V	PASS
4	5163.803	-45.91	-13.00	192.5	V	PASS
5	7238.471	-40.65	-13.00	140.4	V	PASS
6	10935.588	-37.47	-13.00	140.4	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 3.75K V



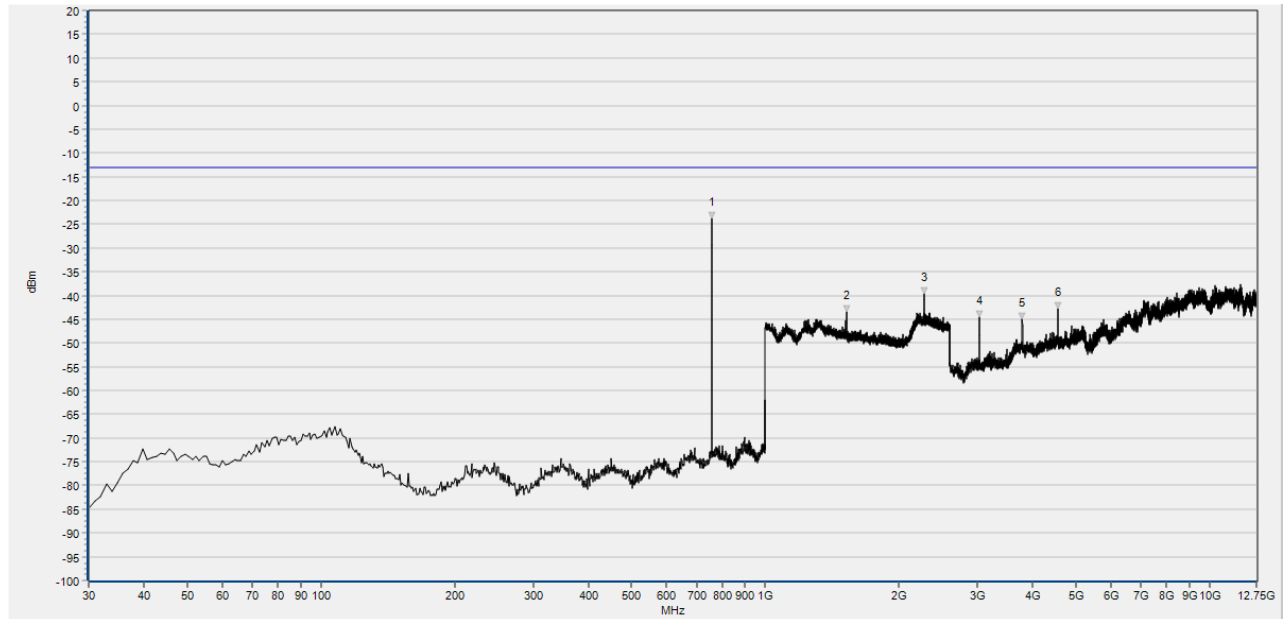
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-24.57	-13.00	351.7	H	N/A
2	1514.766	-43.25	-13.00	120.3	H	PASS
3	2272.189	-36.78	-13.00	358.6	H	PASS
4	3030.069	-44.37	-13.00	179.8	H	PASS
5	7236.625	-40.94	-13.00	296.5	H	PASS
6	11014.957	-38.21	-13.00	154.1	H	PASS

NB-IOT 757MHz–758MHz Mid Channel 3.75K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-31.34	-13.00	11.8	V	N/A
2	1423.209	-44.37	-13.00	126.5	V	PASS
3	2273.469	-40.48	-13.00	274.0	V	PASS
4	4547.309	-44.13	-13.00	0.3	V	PASS
5	7255.083	-40.73	-13.00	237.1	V	PASS
6	9087.952	-37.43	-13.00	114.6	V	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K V

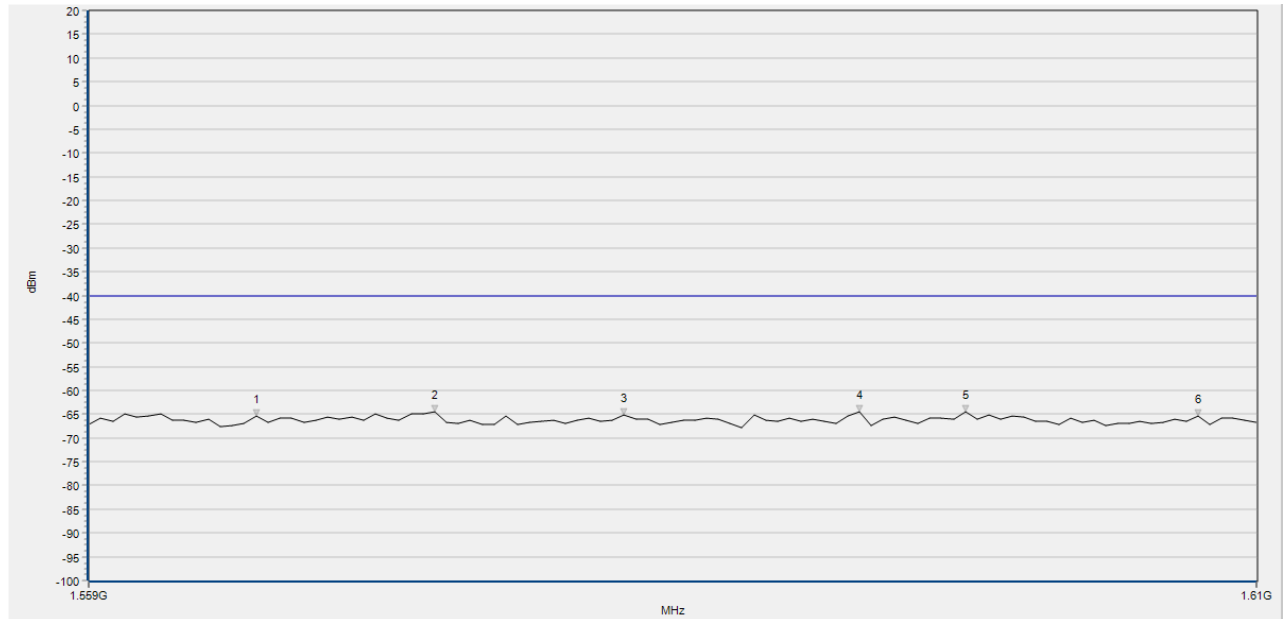


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-23.84	-13.00	0.0	H	N/A
2	1521.809	-43.51	-13.00	16.5	H	PASS
3	2273.469	-39.64	-13.00	351.5	H	PASS
4	3031.915	-44.52	-13.00	19.0	H	PASS
5	3788.689	-45.09	-13.00	336.9	H	PASS
6	4547.309	-42.75	-13.00	45.8	H	PASS

NB-IOT 757MHz-758MHz High Channel 3.75K H



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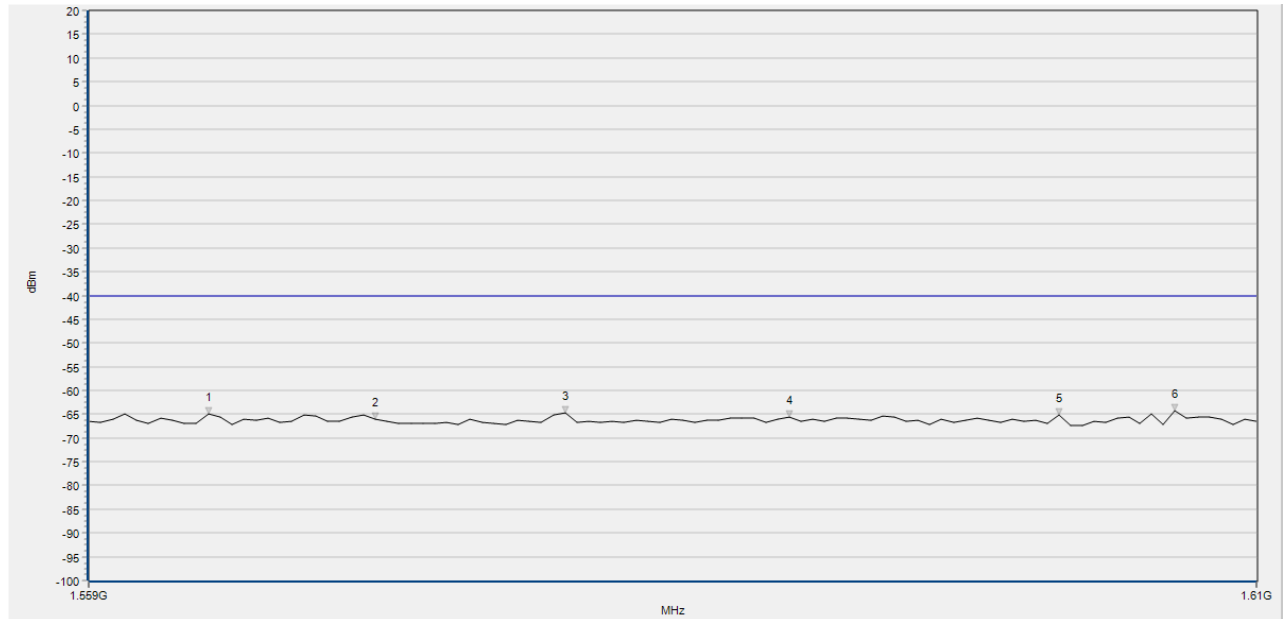


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1566.212	-65.35	-40.00	239.5	V	PASS
2	1573.939	-64.50	-40.00	232.5	V	PASS
3	1582.182	-65.16	-40.00	236.0	V	PASS
4	1592.485	-64.40	-40.00	236.0	V	PASS
5	1597.121	-64.50	-40.00	253.8	V	PASS
6	1607.424	-65.45	-40.00	228.9	V	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz V

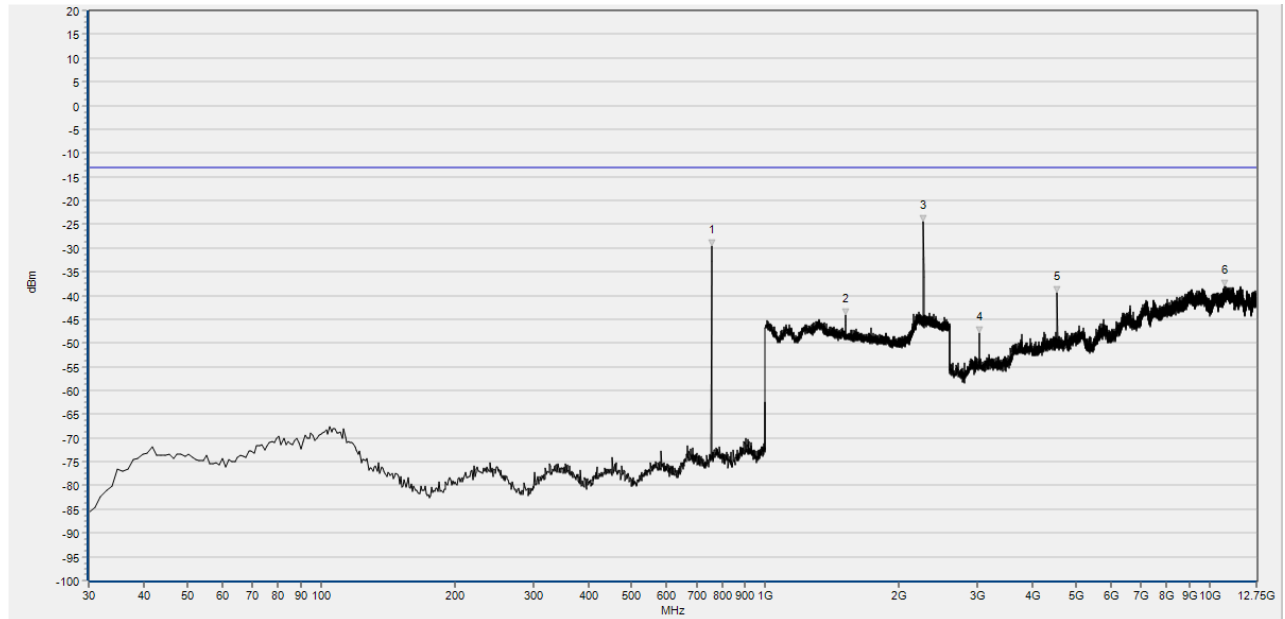


REPORT No.: SZ23090086W01



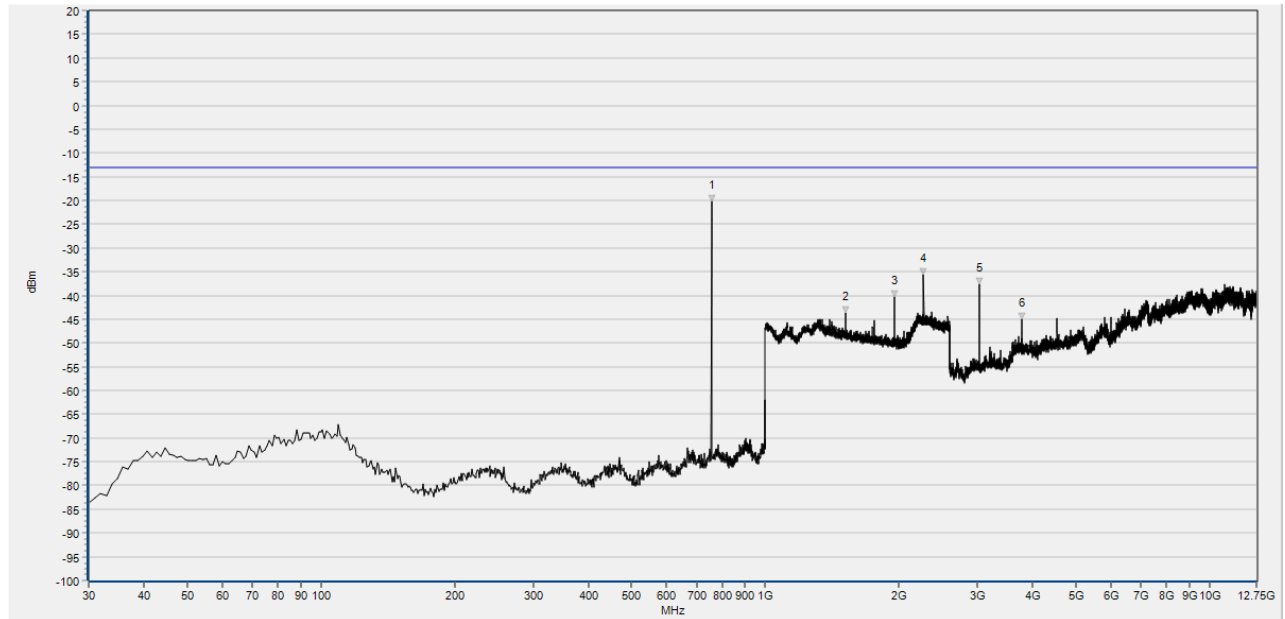
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1564.152	-64.96	-40.00	246.0	H	PASS
2	1571.364	-65.98	-40.00	246.0	H	PASS
3	1579.606	-64.58	-40.00	242.6	H	PASS
4	1589.394	-65.69	-40.00	235.4	H	PASS
5	1601.242	-65.05	-40.00	231.7	H	PASS
6	1606.394	-64.19	-40.00	231.7	H	PASS

NB-IOT 757MHz-758MHz 3.75K 1559MHz-1610MHz H



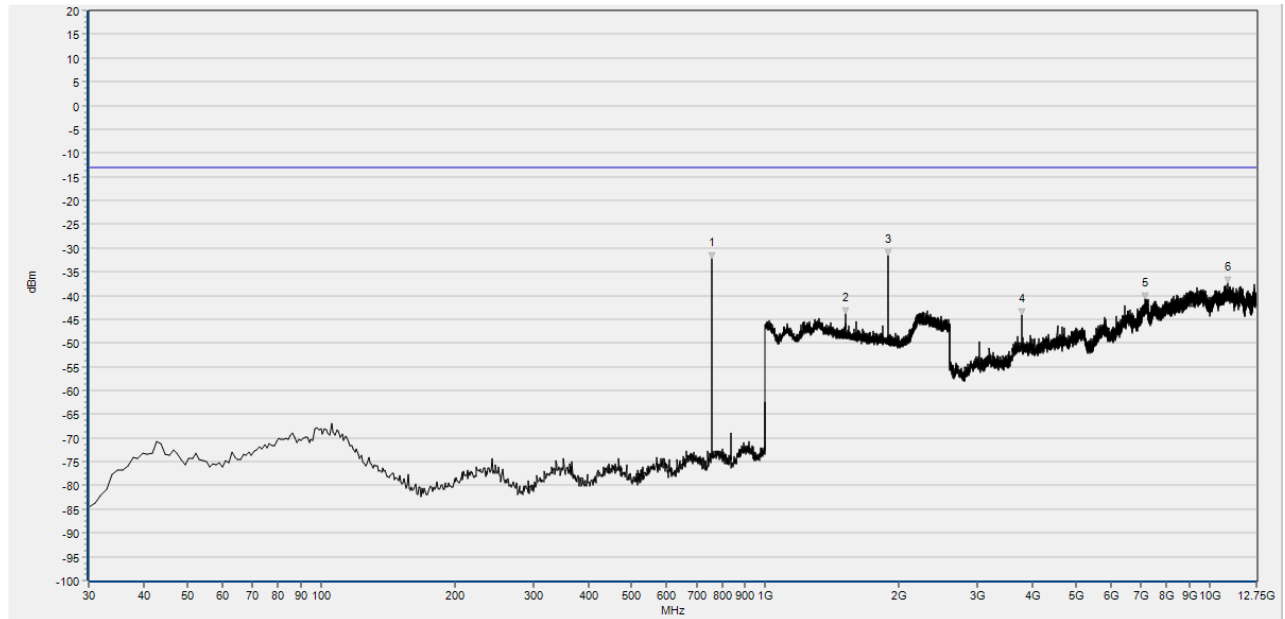
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-29.61	-13.00	313.3	V	N/A
2	1514.126	-44.13	-13.00	92.9	V	PASS
3	2270.908	-24.49	-13.00	228.3	V	PASS
4	3028.223	-47.95	-13.00	22.0	V	PASS
5	4541.771	-39.33	-13.00	49.2	V	PASS
6	10795.308	-38.09	-13.00	357.9	V	PASS

NB-IOT 757MHz-758MHz Low Channel 15K V



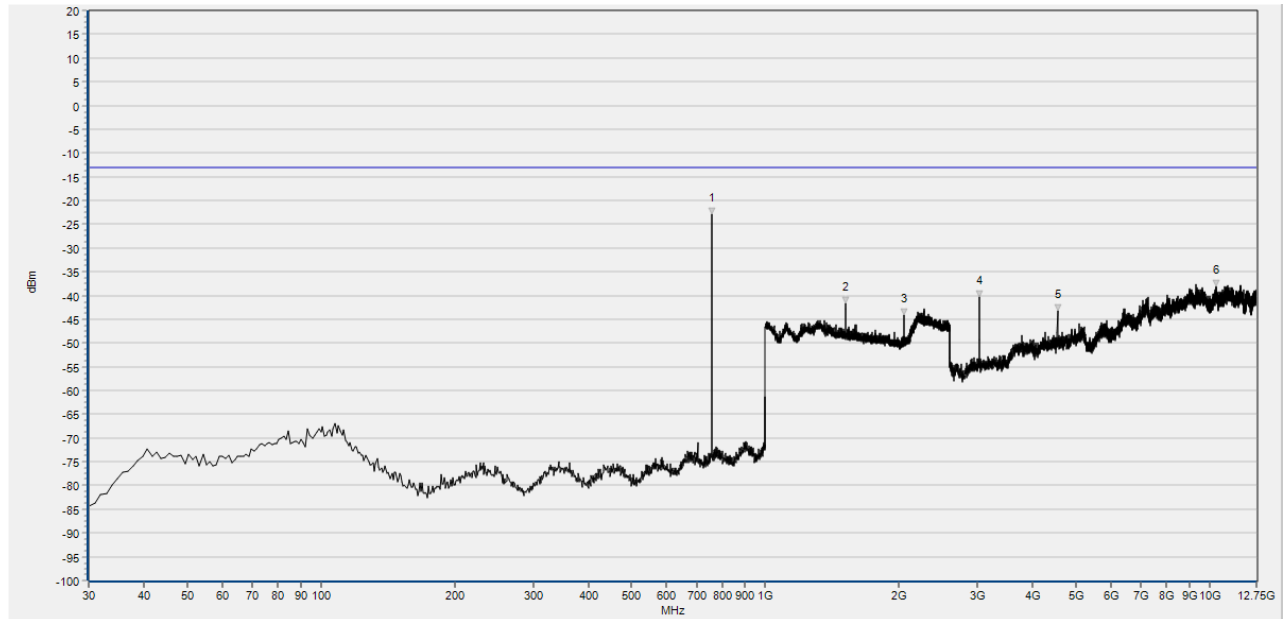
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-20.18	-13.00	12.4	H	N/A
2	1514.126	-43.62	-13.00	66.7	H	PASS
3	1949.500	-40.44	-13.00	224.3	H	PASS
4	2270.908	-35.62	-13.00	170.7	H	PASS
5	3028.223	-37.64	-13.00	24.5	H	PASS
6	3784.997	-45.02	-13.00	343.5	H	PASS

NB-IOT 757MHz-758MHz Low Channel 15K H



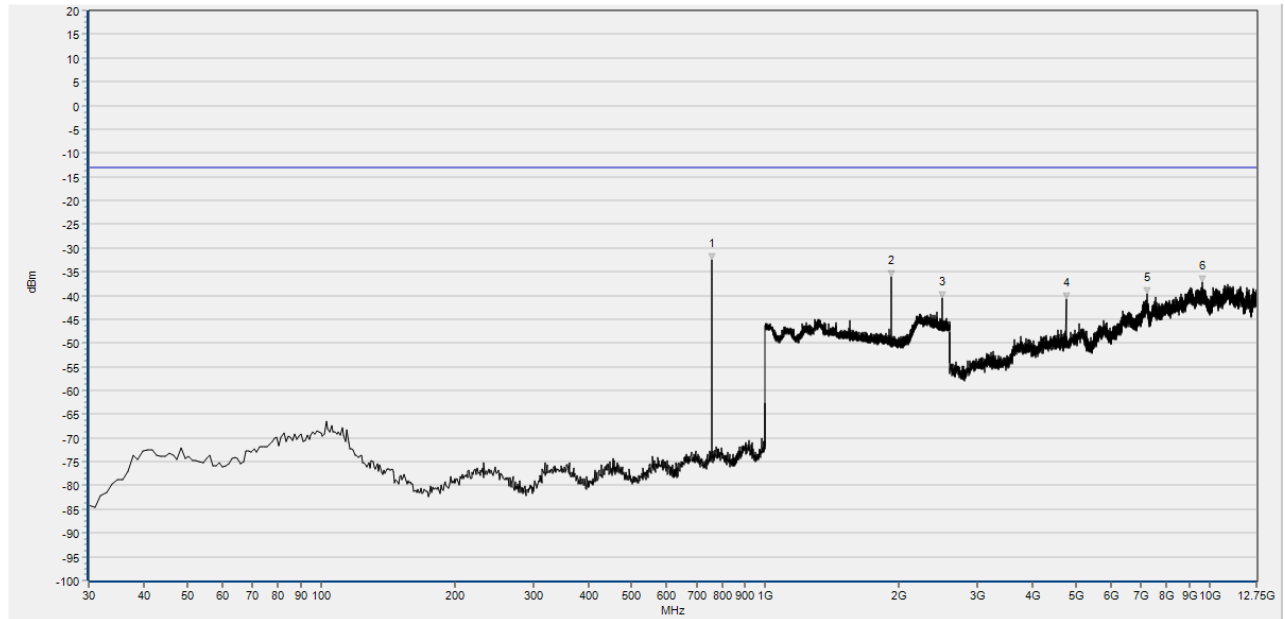
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-32.40	-13.00	97.2	V	N/A
2	1514.766	-43.89	-13.00	163.0	V	PASS
3	1888.675	-31.55	-13.00	6.9	V	PASS
4	3786.843	-44.06	-13.00	358.0	V	PASS
5	7173.868	-40.79	-13.00	311.9	V	PASS
6	10978.041	-37.44	-13.00	114.2	V	PASS

NB-IOT 757MHz-758MHz Mid Channel 15K V



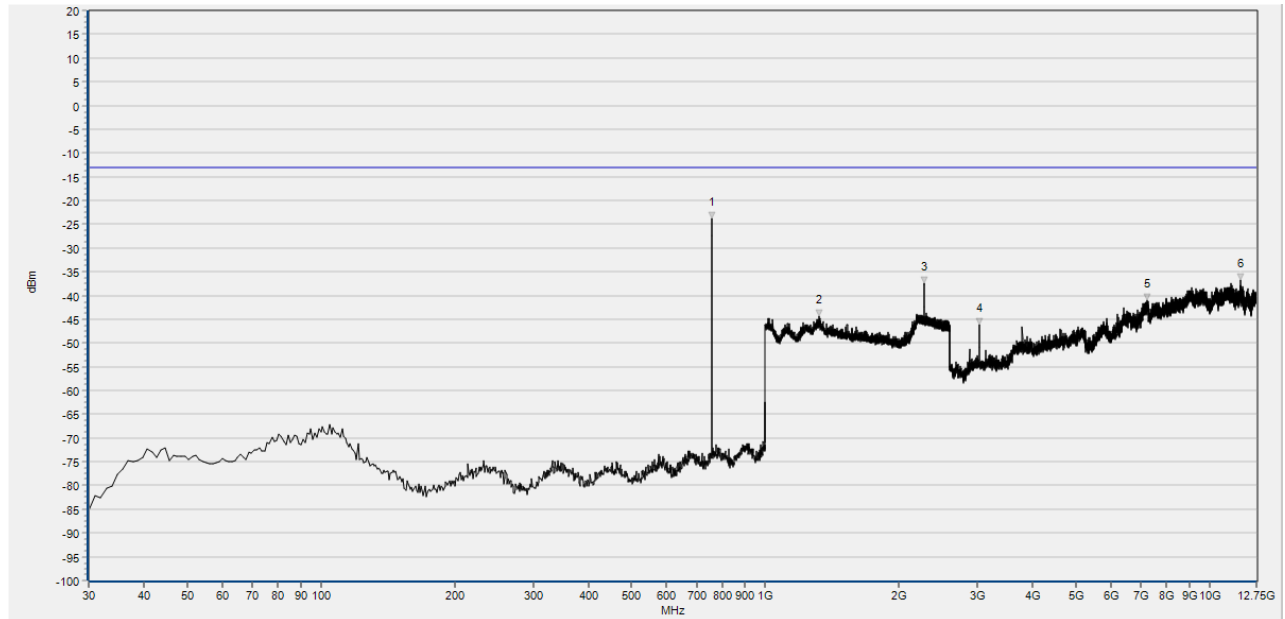
Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-22.92	-13.00	108.1	H	N/A
2	1514.766	-41.74	-13.00	75.3	H	PASS
3	2053.221	-44.20	-13.00	21.7	H	PASS
4	3030.069	-40.43	-13.00	39.1	H	PASS
5	4545.463	-43.24	-13.00	25.7	H	PASS
6	10341.244	-38.12	-13.00	131.4	H	PASS

NB-IOT 757MHz-758MHz Mid Channel 15K H



Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-32.41	-13.00	240.6	V	N/A
2	1917.487	-36.14	-13.00	79.3	V	PASS
3	2496.279	-40.65	-13.00	79.3	V	PASS
4	4750.346	-40.77	-13.00	196.1	V	PASS
5	7238.471	-39.73	-13.00	344.3	V	PASS
6	9630.615	-37.15	-13.00	263.5	V	PASS

NB-IOT 757MHz-758MHz High Channel 15K V

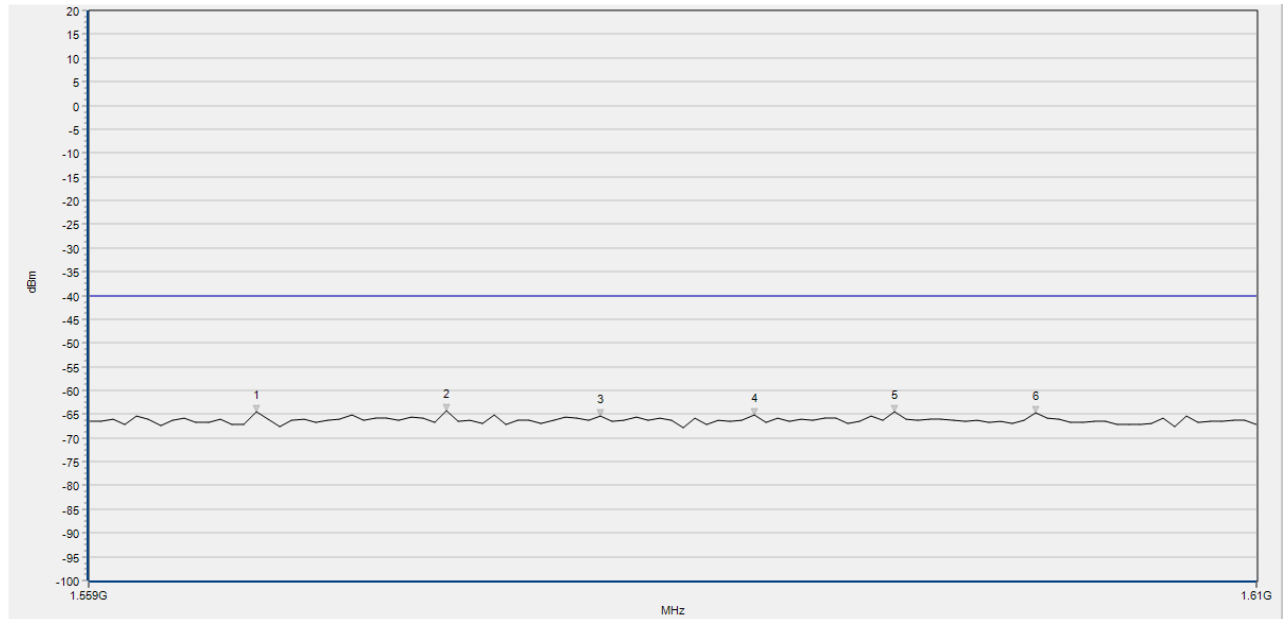


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	757.500	-23.79	-13.00	12.4	H	N/A
2	1318.848	-44.34	-13.00	291.7	H	PASS
3	2273.469	-37.50	-13.00	76.8	H	PASS
4	3031.915	-46.07	-13.00	183.1	H	PASS
5	7234.779	-40.94	-13.00	351.2	H	PASS
6	11758.811	-36.86	-13.00	118.3	H	PASS

NB-IOT 757MHz–758MHz High Channel 15K H



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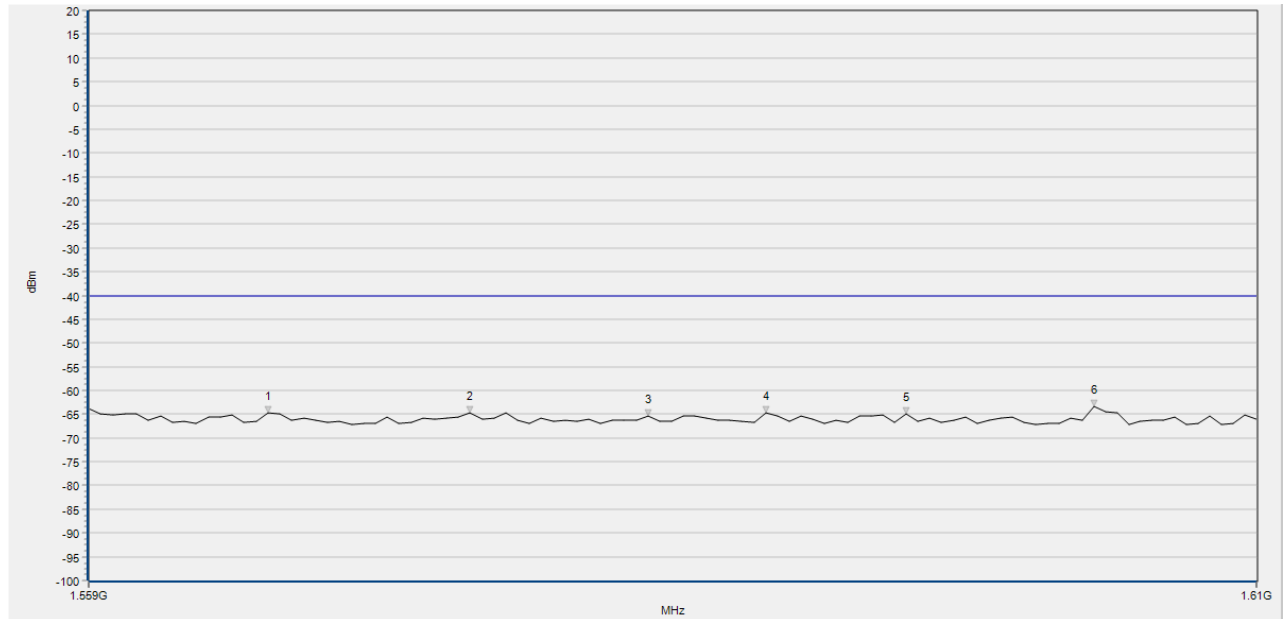


Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1566.212	-64.55	-40.00	57.0	V	PASS
2	1574.455	-64.25	-40.00	57.0	V	PASS
3	1581.152	-65.26	-40.00	85.6	V	PASS
4	1587.848	-65.09	-40.00	67.6	V	PASS
5	1594.030	-64.56	-40.00	60.7	V	PASS
6	1600.212	-64.60	-40.00	85.6	V	PASS

NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz V



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Num	Freq(MHz)	PK	limit PK	Degree	Antenna	Verdict
1	1566.727	-64.75	-40.00	289.1	H	PASS
2	1575.485	-64.76	-40.00	313.6	H	PASS
3	1583.212	-65.36	-40.00	264.5	H	PASS
4	1588.364	-64.71	-40.00	282.7	H	PASS
5	1594.545	-64.84	-40.00	264.5	H	PASS
6	1602.788	-63.25	-40.00	276.8	H	PASS

NB-IOT 757MHz-758MHz 15K 1559MHz-1610MHz H



Annex A Test Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for test performed on the EUT as specified in CISPR 16-1-2:

Test Items	Uncertainty
Output Power	± 2.22 dB
Bandwidth	$\pm 5\%$
Conducted Spurious Emission	± 2.77 dB
Band Edge	± 2.77 dB
Equivalent Isotropic Radiated Power	± 2.22 dB
Radiated Spurious Emissions	± 6 dB

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



Annex B Testing Laboratory Information

1. Identification of the Responsible Testing Laboratory

Laboratory Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone:	+86 755 36698555
Facsimile:	+86 755 36698525

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

3. Facilities and Accreditations

All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10-2013 and CISPR Publication 22; the FCC designation number is CN1192, the test firm registration number is 226174.



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4. Test Equipments Utilized

4.1 Conducted Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
EXA Signal Analyzer	MY51511149	N9020A	Agilent	2023.06.21	2024.06.20
Temperature Chamber	S022177101 00089002	KMT-36LF1A0	KOMEG	2023.09.19	2024.09.18

4.2 List of Software Used

Description	Manufacturer	Software Version
TS+ -[JS36-RSE]	DongSheng	2.0.1.3



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4.3 Radiated Test Equipments

Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
Loop Antenna	1519-022	FMZB 1519	SCHWARZ BECK	2023.06.26	2024.06.25
Bi-Log Antenna	9163-274	VULB 9163	SCHWARZ BECK	2023.06.27	2024.06.26
Bi-Log Antenna	9163-519	VULB 9163	SCHWARZ BECK	2023.07.01	2024.06.30
Horn Antenna	9120D-963	BBHA 9120D	SCHWARZ BECK	2023.06.27	2024.06.26
Horn Antenna	01774	BBHA 9120D	SCHWARZ BECK	2023.07.01	2024.06.30
Horn Antenna	BBHA9170#773	BBHA9170	SCHWARZ BECK	2023.07.01	2024.06.30
Receiver	MY54130016	N9038A	Agilent	2023.06.21	2024.06.20
Receiver	MY56400093	N9038A	KEYSIGHT	2023.02.09	2024.02.08
Receiver	595WX11007	PMM 9010	PMM	2023.02.09	2024.02.08
Receiver	001WX1100	PMM 9060	PMM	2023.02.09	2024.02.08
Signal Analyzer	MY56060145	N9020A	Agilent	2023.06.21	2024.06.20
6db Attenuator	E191001	BW-N6W5+	Mini-circuits	2023.09.19	2024.09.18
Preamplifier (2GHz-18GHz)	61171/61172	S020180L3203	LUCIX CORP.	2023.06.27	2024.06.26
Preamplifier (10MHz-6GHz)	46732	S10M100L3802	LUCIX CORP.	2023.06.27	2024.06.26
Preamplifier (18GHz-40GHz)	DS77209	DCLNA0118-40C-S	Decentest	2023.07.04	2024.07.03
RF Coaxial Cable (DC-18GHz)	MRE001	PE330	Pasternack	2023.06.27	2024.06.26
RF Coaxial Cable (DC-18GHz)	MRE002	CLU18	Pasternack	2023.06.27	2024.06.26
RF Coaxial Cable (DC-18GHz)	MRE003	CLU18	Pasternack	2023.06.27	2024.06.26
RF Coaxial Cable (DC-40GHz)	22290045	QA360-40-KK-0.5	Qualwave	2023.07.04	2024.07.03
RF Coaxial Cable (DC-40GHz)	22290046	QA360-40-KKF-2	Qualwave	2023.07.04	2024.07.03



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Equipment Name	Serial No.	Type	Manufacturer	Cal. Date	Due Date
RF Coaxial Cable (DC-18GHz)	22120181	QA500-18-NN-5	Qualwave	2023.07.04	2024.07.03

_____ END OF REPORT _____