



RADIO TEST REPORT

Report No.:STS2007251W02

Issued for

Spark Technology Labs Inc.

680 Davenport Rd., Unit D, Waterloo, ON, Canada N2V 2C3

Product Name:	CH4G Asset Tracker	
Brand Name:	CloudHawk	
Model Name:	CH4G	
Series Model:	N/A	
FCC ID:	2AA5OCH4G	
IC:	21738-CH4G	
Test Standard:	47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 27 47 CFR FCC Part 90 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-130 Issue 2 RSS-139 Issue 3 RSS-Gen Issue 5

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**TEST RESULT CERTIFICATION**

Applicant's Name Spark Technology Labs Inc.

Address 680 Davenport Rd., Unit D, Waterloo, ON, Canada N2V 2C3

Manufacture's Name Spark Technology Labs Inc.

Address 680 Davenport Rd., Unit D, Waterloo, ON, Canada N2V 2C3

Product description

Product Name CH4G Asset Tracker

Brand Name CloudHawk

Model Name CH4G

Series Model N/A

Test Standards	47 CFR FCC Part 22	RSS-132 Issue 3
	47 CFR FCC Part 24	RSS-133 Issue 6
	47 CFR FCC Part 27	RSS-130 Issue 2
	47 CFR FCC Part 90	RSS-139 Issue 3
	47 CFR FCC Part 2	RSS-Gen Issue 5

Test Procedure KDB 971168 D01 v03r01, ANSI C63.26 2015

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC/IC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test.....

Date of receipt of test item..... 16 July 2020

Date (s) of performance of tests.: 16 July 2020 ~ 30 July 2020

Date of Issue 30 July 2020

Test Result Pass

Testing Engineer :

(Chris Chen)

Technical Manager :

(Sean she)

Authorized Signatory :

(Vita Li)





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**Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	30 July 2020	STS2007251W02	ALL	Initial Issue





1. TEST FACTORY & MEASUREMENT UNCERTAINTY

1.1 TEST RESULTS DESCRIPTION AND LABORATORY INFORMATION

Rule	Description	Limit	Result
§27.50(c)(10)	Effective Radiated Power	ERP < 3 Watt	PASS
§24.232(c) §27.50(h)(2) RSS-133 Issue 6, January 2013 (6.4) RSS-199 Issue 3, December 2016(4.4)	Equivalent Isotropic Radiated Power	EIRP < 2Watt	PASS
§27.50(d)(4) RSS-139 Issue 3, July 2015 (6.4) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power	EIRP < 1Watt	PASS
§22.913	Effective Radiated Power	ERP < 7 Watt	PASS
§90.635(b)	Effective Radiated Power	ERP < 100Watt	PASS
§2.1053 §22.917 §24.238(a) §27.53(g) §27.53(h) RSS-132 Issue 3, January 2013(5.5) RSS-133 Issue 6, January 2013 (6.5.1) RSS-139 Issue 3, July 2015 (6.5)	Radiated Spurious Emission	< 43+10log10(P[Watts])	PASS
§2.1053 §27.53(m)(4)	Radiated Spurious Emission	< 55+10log10(P[Watts])	PASS
RSS-132 Issue 3, January 2013(5.6) RSS-133 Issue 6, January 2013(6.6) RSS-Gen Issue 5, March 2019 (7.3)	Receiver spurious emissions	See report section 5.1.	PASS

The module has been certified by FCC/IC, The original module FCC ID is R17ME910G1WW, IC is 513A-ME910G1WW. The report number of FCC&IC certified is STS1912245W02.

In this report, this certified module is same as the original module. We have tested the new radiated power and radiated emission.



1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.3 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.68\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.988\text{dB}$
3	All emissions, radiated 30-1GHz	$\pm 6.7\text{dB}$
4	All emissions, radiated 1G-6GHz	$\pm 5.5\text{dB}$
5	All emissions, radiated >6G	$\pm 5.8\text{dB}$
6	Conducted Emission (9KHz-150KHz)	$\pm 3.37\text{dB}$
7	Conducted Emission (150KHz-30MHz)	$\pm 3.83\text{dB}$



2. GENERAL INFORMATION

2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Name:	CH4G Asset Tracker
Trade Name	CloudHawk
Model Name	CH4G
Series Model	N/A
Model Difference	N/A
Frequency Bands:	NB-IOT FDD Band 2 NB-IOT FDD Band 4 NB-IOT FDD Band 5 NB-IOT FDD Band 12 NB-IOT FDD Band 13 NB-IOT FDD Band 25 NB-IOT FDD Band 26 NB-IOT FDD Band 66 NB-IOT FDD Band 71 NB-IOT FDD Band 85
Device Category	Category NB1 and NB2
SIM CARD:	Only support single SIM Card.
Antenna:	Internal monopole
Antenna gain:	-2 dBi for NB-IoT Band 2/4/5/12/13/25/26/66/71/85
Battery:	Capacity: 5200 mAh Rated Voltage: 3.7V Charge Limit: 4.2V
Power Rating:	Input:12~24V DC
Extreme Voltage:	3.5V to 4.2V (Normal: 3.7V)
Extreme Temperature:	-20℃ to +45℃
Hardware version number:	Rev. B
Software version number:	M0C.400001



2.1.2 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Product Specification Subjective To This Standard	
Tx Frequency	NB-IOT Band 2:1850~1910MHz NB-IOT Band 4:1710~1755MHz NB-IOT Band 5:824~849MHz NB-IOT Band 12:699~716MHz NB-IOT Band 13:777~787MHz NB-IOT Band 25:1850~1915MHz NB-IOT Band 26:814~849MHz NB-IOT Band 66:1710~1780MHz NB-IOT Band 71:663~698MHz NB-IOT Band 85:698~716MHz
Rx Frequency	NB-IOT Band 2:1930 ~1990MHz NB-IOT Band 4:2110~2155MHz NB-IOT Band 5:869~894MHz NB-IOT Band 12:729~746MHz NB-IOT Band 13:746~756MHz NB-IOT Band 25:1930~1995MHz NB-IOT Band 26:859~894MHz NB-IOT Band 66:2110~2200MHz NB-IOT Band 71:617~652MHz NB-IOT Band 85:728~746MHz
Deployment	Stand-alone
Ntones	Single, multi-tone
Sub-carrier spacing	3.75KHz, 15KHz
Type of Modulation	BPSK /QPSK

List of Frequencies under Test

Operation bands	Mode	Frequencies under Test					
		Uplink			Downlink		
		Range	EARFC N	Frequencies (MHz)	Range	EARFC N	Frequencies (MHz)
2	Standalone	Low	18601	1850.1000	Low	601	1930.1000
		Mid	18900	1880.0000	Mid	900	1960.0000
		High	19199	1909.9000	High	1199	1989.9000
4	Standalone	Low	19951	1710.1000	Low	1951	2110.1000
		Mid	20175	1732.5000	Mid	2175	2132.5000
		High	20399	1754.9000	High	2399	2154.9000
5	Standalone	Low	20401	824.1000	Low	2401	869.1000
		Mid	20525	836.5000	Mid	2525	881.5000
		High	20649	848.9000	High	2649	893.9000
12	Standalone	Low	23011	699.1000	Low	5011	729.1000
		Mid	23095	707.5000	Mid	5095	737.5000
		High	23179	715.9000	High	5179	745.9000
13	Standalone	Low	23181	777.1000	Low	5181	746.1000
		Mid	23230	782.0000	Mid	5230	751.0000
		High	23279	786.9000	High	5279	755.9000



25	Standalone	Low	26041	1850.1000	Low	8041	1930.1000
		Mid	26365	1882.5000	Mid	8365	1962.5000
		High	26689	1914.9000	High	8689	1994.9000
26(L)	Standalone	Low	26691	814.1000	Low	8691	859.1000
		Mid	26740	819.0000	Mid	8740	864.0000
		High	26789	823.9000	High	8789	868.9000
26(U)	Standalone	Low	26791	824.1000	Low	8791	869.1000
		Mid	26915	836.5000	Mid	8915	881.5000
		High	27039	848.9000	High	9039	893.9000
66	Standalone	Low	131973	1710.1000	Low	66437	2110.1000
		Mid	132322	1745.0000	Mid	66786	2145.0000
		High	132671	1779.9000	High	67135	2179.9000
71	Standalone	Low	133123	663.1000	Low	68587	617.1000
		Mid	133297	680.5000	Mid	68761	634.5000
		High	133471	697.9000	High	68935	651.9000
85	Standalone	Low	134003	698.1000	Low	70367	728.1000
		Mid	134092	707.0000	Mid	70456	737.0000
		High	134181	715.9000	High	70545	745.9000





2.1.3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 v03r01 and ANSI C63.26 2015 Power Meas. License Digital Systems with maximum output power. Radiated measurements are performed by rotating the EUT in three different orthogonal test planes to find the maximum emission.

Remark:

1. The mark 'v' means that this configuration is chosen for testing
2. The mark '-' means that this bandwidth is not supported.
3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated

ITEMS	Band	Subcarrier Spacing (KHz)		Modulation		Test Channel		
		3.75	15	BPSK	QPSK	L	M	H
E.R.P.& E.I.R.P.	2	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v
	5	v	v	v	v	v	v	v
	12	v	v	v	v	v	v	v
	13	v	v	v	v	v	v	v
	25	v	v	v	v	v	v	v
	26	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v
	71	v	v	v	v	v	v	v
	85	v	v	v	v	v	v	v
Radiated Spurious Emission	2	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	v
	5	v	v	v	v	v	v	v
	12	v	v	v	v	v	v	v
	13	v	v	v	v	v	v	v
	25	v	v	v	v	v	v	v
	26	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	v
	71	v	v	v	v	v	v	v
	85	v	v	v	v	v	v	v



2.1.4 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for filing to comply with below standards:

47 CFR FCC Part 22	RSS-132 Issue 3
47 CFR FCC Part 24	RSS-133 Issue 6
47 CFR FCC Part 27	RSS-130 Issue 2
47 CFR FCC Part 90	RSS-139 Issue 3
47 CFR FCC Part 2	RSS-Gen Issue 5

2.1.5 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with eut intended for fcc grant together.

2.1.6 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

2.1.7 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

2.1.8 CONFIGURATION OF EUT SYSTEM

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

E-1
EUT

Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	Serial No.	Note
N/A	N/A	N/A	N/A	N/A

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.



2.1.9 MEASUREMENT INSTRUMENTS

The radiated emission testing was performed according to the procedures of ANSI C63.26 2015 and FCC CFR 47 rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2019.10.09	2020.10.08
Signal Analyzer	Agilent	N9020A	MY51110105	2020.03.05	2021.03.04
Wireless Communications Test Set	R&S	CMW 500	133884	2020.03.05	2021.03.04
Bilog Antenna	TESEQ	CBL6111D	34678	2017.11.02	2020.11.01
Horn Antenna	SCHWARZBECK	BBHA 9120D(1201)	9120D-1343	2018.10.19	2021.10.18
SHF-EHF Horn Antenna (18G-40GHz)	A-INFO	LB-180400-KF	J211020657	2018.03.11	2021.03.10
Pre-Amplifier(0.1M-3GHz)	EM	EM330	060665	2019.10.09	2020.10.08
Pre-Amplifier (1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2019.10.12	2020.10.11
Pre-Amplifier (18G-40GHz)	SKET	LNPA-1840-50	SK2018101801	2019.10.12	2020.10.11
turn table	EM	SC100_1	60531	N/A	N/A
Antenna mast	EM	SC100	N/A	N/A	N/A
Temperature & Humidity	HH660	Mieo	N/A	2019.10.17	2020.10.16
Test SW	BULUN	BL410-E/18.905			

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Universal Radio communication tester	R&S	CMU200	119907	2020.10.11	2021.10.10
Wireless Communications Test Set	R&S	CMW 500	133884	2020.03.05	2021.03.04
Signal Analyzer	Agilent	N9020A	MY49100060	2019.10.09	2020.10.08
Temperature & Humidity	HH660	Mieo	N/A	2019.10.17	2020.10.16
Test SW	FARAD	LZ-RF /LzRf-3A3			



2.1.10 MEASUREMENT RESULTS EXPLANATION EXAMPLE

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF Cable Loss + Attenuator Factor.



3. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

3.1 DESCRIPTION OF THE ERP/EIRP MEASUREMENT

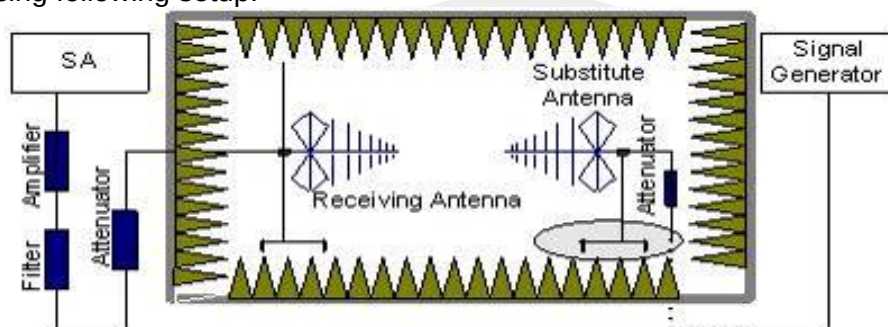
3.1.1 MEASUREMENT METHOD

Effective radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems. Mobile and portable (hand-held) stations operating are limited to average ERP, Equivalent isotropic radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. Mobile and portable (hand-held) stations operating are limited to average EIRP.

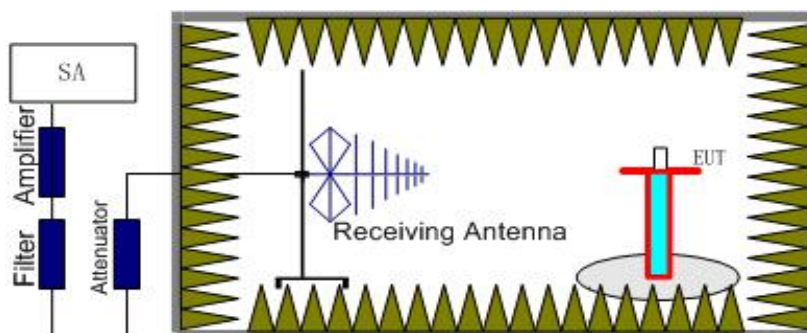
3.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = R_x \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$ The SA is calibrated using following setup.



b) EUT was placed on a 1.5m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies. It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power=PMea+ARpl



3.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.6 and ANSI C63.26 2015 Section 5.2.
2. The EUT was placed on a non-conductive rotating platform 1.5 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with Peak detector.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 m in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.26 2015. The EUT was replaced by dipole antenna (substitution antenna) at same location and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, $EIRP/ERP = LVL + \text{Correction factor}$.
5. RB Set greater than bandwidth, VB Set spectrum analyzer Maximum support.





3.1.4 TEST RESULTS

Note: Test is divided into three directions, X/Y/Z. X pattern for the worst.

Radiated Power (EIRP) for NB-IoT Band 2/Standalone									
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result					Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P(dBm)	Polarization	
								Of Max. EIRP	
BPSK	3.75	1@0	Lowest	9.37	2.37	10.40	17.40	Horizontal	Pass
			Middle	9.12	2.39	10.42	17.15	Horizontal	Pass
			Highest	9.17	2.40	10.44	17.21	Horizontal	Pass
		1@0	Lowest	10.72	2.37	10.40	18.75	Vertical	Pass
			Middle	10.53	2.39	10.42	18.56	Vertical	Pass
			Highest	10.5	2.40	10.44	18.54	Vertical	Pass
	15	1@0	Lowest	8.89	2.37	10.40	16.92	Horizontal	Pass
			Middle	8.79	2.39	10.42	16.82	Horizontal	Pass
			Highest	8.6	2.40	10.44	16.64	Horizontal	Pass
		1@0	Lowest	10.28	2.37	10.40	18.31	Vertical	Pass
			Middle	10.23	2.39	10.42	18.26	Vertical	Pass
			Highest	10.04	2.40	10.44	18.08	Vertical	Pass
QPSK	3.75	1@0	Lowest	8.37	2.37	10.40	16.40	Horizontal	Pass
			Middle	8.1	2.39	10.42	16.13	Horizontal	Pass
			Highest	8.12	2.40	10.44	16.16	Horizontal	Pass
		1@0	Lowest	9.72	2.37	10.40	17.75	Vertical	Pass
			Middle	9.58	2.39	10.42	17.61	Vertical	Pass
			Highest	9.52	2.40	10.44	17.56	Vertical	Pass
	15	1@0	Lowest	7.76	2.37	10.40	15.79	Horizontal	Pass
			Middle	7.61	2.39	10.42	15.64	Horizontal	Pass
			Highest	7.82	2.40	10.44	15.86	Horizontal	Pass
		1@0	Lowest	9.16	2.37	10.40	17.19	Vertical	Pass
			Middle	9.08	2.39	10.42	17.11	Vertical	Pass
			Highest	9.17	2.40	10.44	17.21	Vertical	Pass
Limit	EIRP<2W=33dBm								



Radiated Power (EIRP) for NB-IoT Band 4/Standalone									
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result					Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization	
								Of Max. ERP	
BPSK	3.75	1@0	Lowest	10.02	2.35	10.13	17.80	Horizontal	Pass
			Middle	10.12	2.36	10.16	17.92	Horizontal	Pass
			Highest	10.1	2.37	10.22	17.95	Horizontal	Pass
		1@0	Lowest	11.43	2.35	10.13	19.21	Vertical	Pass
			Middle	11.55	2.36	10.16	19.35	Vertical	Pass
			Highest	11.43	2.37	10.22	19.28	Vertical	Pass
	15	1@0	Lowest	9.46	2.35	10.13	17.24	Horizontal	Pass
			Middle	9.41	2.36	10.16	17.21	Horizontal	Pass
			Highest	9.59	2.37	10.22	17.44	Horizontal	Pass
		1@0	Lowest	10.83	2.35	10.13	18.61	Vertical	Pass
			Middle	10.9	2.36	10.16	18.70	Vertical	Pass
			Highest	10.93	2.37	10.22	18.78	Vertical	Pass
QPSK	3.75	1@0	Lowest	8.86	2.35	10.13	16.64	Horizontal	Pass
			Middle	9.1	2.36	10.16	16.90	Horizontal	Pass
			Highest	9.12	2.37	10.22	16.97	Horizontal	Pass
		1@0	Lowest	10.18	2.35	10.13	17.96	Vertical	Pass
			Middle	10.5	2.36	10.16	18.30	Vertical	Pass
			Highest	10.46	2.37	10.22	18.31	Vertical	Pass
	15	1@0	Lowest	8.17	2.35	10.13	15.95	Horizontal	Pass
			Middle	8.51	2.36	10.16	16.31	Horizontal	Pass
			Highest	8.64	2.37	10.22	16.49	Horizontal	Pass
		1@0	Lowest	9.66	2.35	10.13	17.44	Vertical	Pass
			Middle	9.9	2.36	10.16	17.70	Vertical	Pass
			Highest	10.02	2.37	10.22	17.87	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (ERP) for NB-IoT Band 5/Standalone											
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion	
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization		
									Of Max. ERP		
BPSK	3.75	1@0	Lowest	15.56	1.27	6.70	2.15	18.84	Horizontal	Pass	
			Middle	15.62	1.28	6.70	2.15	18.89	Horizontal	Pass	
			Highest	15.65	1.29	6.70	2.15	18.91	Horizontal	Pass	
		1@0	Lowest	17.01	1.27	6.70	2.15	20.29	Vertical	Pass	
			Middle	17.09	1.28	6.70	2.15	20.36	Vertical	Pass	
			Highest	17.09	1.29	6.70	2.15	20.35	Vertical	Pass	
	15	1@0	Lowest	15.28	1.27	6.70	2.15	18.56	Horizontal	Pass	
			Middle	15.19	1.28	6.70	2.15	18.46	Horizontal	Pass	
			Highest	15.26	1.29	6.70	2.15	18.52	Horizontal	Pass	
		1@0	Lowest	16.68	1.27	6.70	2.15	19.96	Vertical	Pass	
			Middle	16.58	1.28	6.70	2.15	19.85	Vertical	Pass	
			Highest	16.68	1.29	6.70	2.15	19.94	Vertical	Pass	
	QPSK	3.75	1@0	Lowest	14.73	1.27	6.70	2.15	18.01	Horizontal	Pass
				Middle	14.8	1.28	6.70	2.15	18.07	Horizontal	Pass
				Highest	14.7	1.29	6.70	2.15	17.96	Horizontal	Pass
			1@0	Lowest	16.08	1.27	6.70	2.15	19.36	Vertical	Pass
				Middle	16.11	1.28	6.70	2.15	19.38	Vertical	Pass
				Highest	16.11	1.29	6.70	2.15	19.37	Vertical	Pass
15		1@0	Lowest	14.12	1.27	6.70	2.15	17.40	Horizontal	Pass	
			Middle	14.12	1.28	6.70	2.15	17.39	Horizontal	Pass	
			Highest	14.26	1.29	6.70	2.15	17.52	Horizontal	Pass	
		1@0	Lowest	15.55	1.27	6.70	2.15	18.83	Vertical	Pass	
			Middle	15.58	1.28	6.70	2.15	18.85	Vertical	Pass	
			Highest	15.61	1.29	6.70	2.15	18.87	Vertical	Pass	
Limit	ERP<7W=38.45dBm										



Radiated Power (ERP) for NB-IoT Band 12/Standalone										
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
									Of Max. ERP	
BPSK	3.75	1@0	Lowest	13.62	1.21	6.40	2.15	16.66	Horizontal	Pass
			Middle	13.63	1.22	6.40	2.15	16.66	Horizontal	Pass
			Highest	13.94	1.23	6.40	2.15	16.96	Horizontal	Pass
		1@0	Lowest	14.98	1.21	6.40	2.15	18.02	Vertical	Pass
			Middle	15.08	1.22	6.40	2.15	18.11	Vertical	Pass
			Highest	15.28	1.23	6.40	2.15	18.30	Vertical	Pass
	15	1@0	Lowest	13.21	1.21	6.40	2.15	16.25	Horizontal	Pass
			Middle	13.04	1.22	6.40	2.15	16.07	Horizontal	Pass
			Highest	13.33	1.23	6.40	2.15	16.35	Horizontal	Pass
		1@0	Lowest	14.64	1.21	6.40	2.15	17.68	Vertical	Pass
			Middle	14.53	1.22	6.40	2.15	17.56	Vertical	Pass
			Highest	14.64	1.23	6.40	2.15	17.66	Vertical	Pass
QPSK	3.75	1@0	Lowest	12.67	1.21	6.40	2.15	15.71	Horizontal	Pass
			Middle	12.7	1.22	6.40	2.15	15.73	Horizontal	Pass
			Highest	12.87	1.23	6.40	2.15	15.89	Horizontal	Pass
		1@0	Lowest	14.16	1.21	6.40	2.15	17.20	Vertical	Pass
			Middle	14.01	1.22	6.40	2.15	17.04	Vertical	Pass
			Highest	14.22	1.23	6.40	2.15	17.24	Vertical	Pass
	15	1@0	Lowest	12.12	1.21	6.40	2.15	15.16	Horizontal	Pass
			Middle	12.03	1.22	6.40	2.15	15.06	Horizontal	Pass
			Highest	12.1	1.23	6.40	2.15	15.12	Horizontal	Pass
		1@0	Lowest	13.62	1.21	6.40	2.15	16.66	Vertical	Pass
			Middle	13.4	1.22	6.40	2.15	16.43	Vertical	Pass
			Highest	13.55	1.23	6.40	2.15	16.57	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for NB-IoT Band 13/Standalone

Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
									Of Max. ERP	
BPSK	3.75	1@0	Lowest	15.68	1.25	6.60	2.15	18.88	Horizontal	Pass
			Middle	15.78	1.25	6.60	2.15	18.98	Horizontal	Pass
			Highest	15.71	1.25	6.60	2.15	18.91	Horizontal	Pass
		1@0	Lowest	17.16	1.25	6.60	2.15	20.36	Vertical	Pass
			Middle	17.17	1.25	6.60	2.15	20.37	Vertical	Pass
			Highest	17.1	1.25	6.60	2.15	20.30	Vertical	Pass
	15	1@0	Lowest	15.29	1.25	6.60	2.15	18.49	Horizontal	Pass
			Middle	15.19	1.25	6.60	2.15	18.39	Horizontal	Pass
			Highest	15.11	1.25	6.60	2.15	18.31	Horizontal	Pass
		1@0	Lowest	16.78	1.25	6.60	2.15	19.98	Vertical	Pass
			Middle	16.65	1.25	6.60	2.15	19.85	Vertical	Pass
			Highest	16.56	1.25	6.60	2.15	19.76	Vertical	Pass
QPSK	3.75	1@0	Lowest	14.91	1.25	6.60	2.15	18.11	Horizontal	Pass
			Middle	14.76	1.25	6.60	2.15	17.96	Horizontal	Pass
			Highest	14.7	1.25	6.60	2.15	17.90	Horizontal	Pass
		1@0	Lowest	16.3	1.25	6.60	2.15	19.50	Vertical	Pass
			Middle	16.09	1.25	6.60	2.15	19.29	Vertical	Pass
			Highest	16.12	1.25	6.60	2.15	19.32	Vertical	Pass
	15	1@0	Lowest	14.27	1.25	6.60	2.15	17.47	Horizontal	Pass
			Middle	14.18	1.25	6.60	2.15	17.38	Horizontal	Pass
			Highest	14.28	1.25	6.60	2.15	17.48	Horizontal	Pass
		1@0	Lowest	15.77	1.25	6.60	2.15	18.97	Vertical	Pass
			Middle	15.63	1.25	6.60	2.15	18.83	Vertical	Pass
			Highest	15.75	1.25	6.60	2.15	18.95	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (EIRP) for NB-IoT Band 25/Standalone										
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result					Conclusion	
				S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.I.R.P(dBm)	Polarization		
								Of Max. EIRP		
BPSK	3.75	1@0	Lowest	9.37	2.37	10.40	17.40	Horizontal	Pass	
			Middle	9.5	2.39	10.42	17.53	Horizontal	Pass	
			Highest	9.42	2.40	10.44	17.46	Horizontal	Pass	
		1@0	Lowest	10.81	2.37	10.40	18.84	Vertical	Pass	
			Middle	10.93	2.39	10.42	18.96	Vertical	Pass	
			Highest	10.81	2.40	10.44	18.85	Vertical	Pass	
	15	1@0	Lowest	8.77	2.37	10.40	16.80	Horizontal	Pass	
			Middle	8.81	2.39	10.42	16.84	Horizontal	Pass	
			Highest	9.01	2.40	10.44	17.05	Horizontal	Pass	
		1@0	Lowest	10.24	2.37	10.40	18.27	Vertical	Pass	
			Middle	10.31	2.39	10.42	18.34	Vertical	Pass	
			Highest	10.36	2.40	10.44	18.40	Vertical	Pass	
	QPSK	3.75	1@0	Lowest	8.34	2.37	10.40	16.37	Horizontal	Pass
				Middle	8.23	2.39	10.42	16.26	Horizontal	Pass
				Highest	8.27	2.40	10.44	16.31	Horizontal	Pass
			1@0	Lowest	9.8	2.37	10.40	17.83	Vertical	Pass
				Middle	9.69	2.39	10.42	17.72	Vertical	Pass
				Highest	9.69	2.40	10.44	17.73	Vertical	Pass
15		1@0	Lowest	7.79	2.37	10.40	15.82	Horizontal	Pass	
			Middle	7.89	2.39	10.42	15.92	Horizontal	Pass	
			Highest	7.75	2.40	10.44	15.79	Horizontal	Pass	
		1@0	Lowest	9.18	2.37	10.40	17.21	Vertical	Pass	
			Middle	9.29	2.39	10.42	17.32	Vertical	Pass	
			Highest	9.15	2.40	10.44	17.19	Vertical	Pass	
Limit	EIRP<2W=33dBm									



Radiated Power (ERP) for NB-IoT Band 26(Part22)/Standalone											
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion	
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization		
									Of Max. ERP		
BPSK	3.75	1@0	Lowest	15.62	1.27	6.70	2.15	18.90	Horizontal	Pass	
			Middle	15.84	1.28	6.70	2.15	19.11	Horizontal	Pass	
			Highest	15.73	1.29	6.70	2.15	18.99	Horizontal	Pass	
		1@0	Lowest	17.06	1.27	6.70	2.15	20.34	Vertical	Pass	
			Middle	17.19	1.28	6.70	2.15	20.46	Vertical	Pass	
			Highest	17.07	1.29	6.70	2.15	20.33	Vertical	Pass	
	15	1@0	Lowest	15.33	1.27	6.70	2.15	18.61	Horizontal	Pass	
			Middle	15.32	1.28	6.70	2.15	18.59	Horizontal	Pass	
			Highest	15.06	1.29	6.70	2.15	18.32	Horizontal	Pass	
		1@0	Lowest	16.71	1.27	6.70	2.15	19.99	Vertical	Pass	
			Middle	16.66	1.28	6.70	2.15	19.93	Vertical	Pass	
			Highest	16.49	1.29	6.70	2.15	19.75	Vertical	Pass	
	QPSK	3.75	1@0	Lowest	14.61	1.27	6.70	2.15	17.89	Horizontal	Pass
				Middle	14.82	1.28	6.70	2.15	18.09	Horizontal	Pass
				Highest	14.77	1.29	6.70	2.15	18.03	Horizontal	Pass
			1@0	Lowest	16.1	1.27	6.70	2.15	19.38	Vertical	Pass
				Middle	16.17	1.28	6.70	2.15	19.44	Vertical	Pass
				Highest	16.1	1.29	6.70	2.15	19.36	Vertical	Pass
15		1@0	Lowest	14.15	1.27	6.70	2.15	17.43	Horizontal	Pass	
			Middle	14.31	1.28	6.70	2.15	17.58	Horizontal	Pass	
			Highest	14.31	1.29	6.70	2.15	17.57	Horizontal	Pass	
		1@0	Lowest	15.56	1.27	6.70	2.15	18.84	Vertical	Pass	
			Middle	15.67	1.28	6.70	2.15	18.94	Vertical	Pass	
			Highest	15.78	1.29	6.70	2.15	19.04	Vertical	Pass	
Limit	ERP<7W=38.45dBm										



Radiated Power (ERP) for NB-IoT Band 26(Part90)/Standalone										
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
									Of Max. ERP	
BPSK	3.75	1@0	Lowest	15.67	1.27	6.70	2.15	18.95	Horizontal	Pass
			Middle	15.81	1.27	6.70	2.15	19.09	Horizontal	Pass
			Highest	15.68	1.27	6.70	2.15	18.96	Horizontal	Pass
		1@0	Lowest	17.1	1.27	6.70	2.15	20.38	Vertical	Pass
			Middle	17.3	1.27	6.70	2.15	20.58	Vertical	Pass
			Highest	17.12	1.27	6.70	2.15	20.40	Vertical	Pass
	15	1@0	Lowest	15.19	1.27	6.70	2.15	18.47	Horizontal	Pass
			Middle	15.4	1.27	6.70	2.15	18.68	Horizontal	Pass
			Highest	15.34	1.27	6.70	2.15	18.62	Horizontal	Pass
		1@0	Lowest	16.63	1.27	6.70	2.15	19.91	Vertical	Pass
			Middle	16.76	1.27	6.70	2.15	20.04	Vertical	Pass
			Highest	16.75	1.27	6.70	2.15	20.03	Vertical	Pass
QPSK	3.75	1@0	Lowest	14.72	1.27	6.70	2.15	18.00	Horizontal	Pass
			Middle	14.85	1.27	6.70	2.15	18.13	Horizontal	Pass
			Highest	14.78	1.27	6.70	2.15	18.06	Horizontal	Pass
		1@0	Lowest	16.2	1.27	6.70	2.15	19.48	Vertical	Pass
			Middle	16.19	1.27	6.70	2.15	19.47	Vertical	Pass
			Highest	16.26	1.27	6.70	2.15	19.54	Vertical	Pass
	15	1@0	Lowest	14.18	1.27	6.70	2.15	17.46	Horizontal	Pass
			Middle	14.18	1.27	6.70	2.15	17.46	Horizontal	Pass
			Highest	14.27	1.27	6.70	2.15	17.55	Horizontal	Pass
		1@0	Lowest	15.65	1.27	6.70	2.15	18.93	Vertical	Pass
			Middle	15.62	1.27	6.70	2.15	18.90	Vertical	Pass
			Highest	15.65	1.27	6.70	2.15	18.93	Vertical	Pass
Limit	ERP<100W=50dBm									



Radiated Power (EIRP) for NB-IoT Band 66/Standalone									
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result					Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	PMeas E.R.P(dBm)	Polarization	
								Of Max. ERP	
BPSK	3.75	1@0	Lowest	10.13	2.35	10.13	17.91	Horizontal	Pass
			Middle	10.07	2.36	10.16	17.87	Horizontal	Pass
			Highest	10.1	2.37	10.22	17.95	Horizontal	Pass
		1@0	Lowest	11.56	2.35	10.13	19.34	Vertical	Pass
			Middle	11.47	2.36	10.16	19.27	Vertical	Pass
			Highest	11.5	2.37	10.22	19.35	Vertical	Pass
	15	1@0	Lowest	9.56	2.35	10.13	17.34	Horizontal	Pass
			Middle	9.45	2.36	10.16	17.25	Horizontal	Pass
			Highest	9.62	2.37	10.22	17.47	Horizontal	Pass
		1@0	Lowest	10.88	2.35	10.13	18.66	Vertical	Pass
			Middle	10.91	2.36	10.16	18.71	Vertical	Pass
			Highest	10.96	2.37	10.22	18.81	Vertical	Pass
QPSK	3.75	1@0	Lowest	8.91	2.35	10.13	16.69	Horizontal	Pass
			Middle	9.22	2.36	10.16	17.02	Horizontal	Pass
			Highest	9.03	2.37	10.22	16.88	Horizontal	Pass
		1@0	Lowest	10.27	2.35	10.13	18.05	Vertical	Pass
			Middle	10.53	2.36	10.16	18.33	Vertical	Pass
			Highest	10.48	2.37	10.22	18.33	Vertical	Pass
	15	1@0	Lowest	8.32	2.35	10.13	16.10	Horizontal	Pass
			Middle	8.51	2.36	10.16	16.31	Horizontal	Pass
			Highest	8.6	2.37	10.22	16.45	Horizontal	Pass
		1@0	Lowest	9.78	2.35	10.13	17.56	Vertical	Pass
			Middle	9.97	2.36	10.16	17.77	Vertical	Pass
			Highest	9.9	2.37	10.22	17.75	Vertical	Pass
Limit	EIRP<1W=30dBm								



Radiated Power (ERP) for NB-IoT Band 71/Standalone										
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
									Of Max. ERP	
BPSK	3.75	1@0	Lowest	13.56	1.21	6.40	2.15	16.60	Horizontal	Pass
			Middle	13.64	1.22	6.40	2.15	16.67	Horizontal	Pass
			Highest	13.69	1.23	6.40	2.15	16.71	Horizontal	Pass
		1@0	Lowest	15	1.21	6.40	2.15	18.04	Vertical	Pass
			Middle	15.03	1.22	6.40	2.15	18.06	Vertical	Pass
			Highest	15.16	1.23	6.40	2.15	18.18	Vertical	Pass
	15	1@0	Lowest	13.18	1.21	6.40	2.15	16.22	Horizontal	Pass
			Middle	13.15	1.22	6.40	2.15	16.18	Horizontal	Pass
			Highest	13.27	1.23	6.40	2.15	16.29	Horizontal	Pass
		1@0	Lowest	14.56	1.21	6.40	2.15	17.60	Vertical	Pass
			Middle	14.52	1.22	6.40	2.15	17.55	Vertical	Pass
			Highest	14.67	1.23	6.40	2.15	17.69	Vertical	Pass
QPSK	3.75	1@0	Lowest	12.71	1.21	6.40	2.15	15.75	Horizontal	Pass
			Middle	12.75	1.22	6.40	2.15	15.78	Horizontal	Pass
			Highest	12.72	1.23	6.40	2.15	15.74	Horizontal	Pass
		1@0	Lowest	14.12	1.21	6.40	2.15	17.16	Vertical	Pass
			Middle	14.07	1.22	6.40	2.15	17.10	Vertical	Pass
			Highest	14.11	1.23	6.40	2.15	17.13	Vertical	Pass
	15	1@0	Lowest	12.17	1.21	6.40	2.15	15.21	Horizontal	Pass
			Middle	12.13	1.22	6.40	2.15	15.16	Horizontal	Pass
			Highest	12.32	1.23	6.40	2.15	15.34	Horizontal	Pass
		1@0	Lowest	13.61	1.21	6.40	2.15	16.65	Vertical	Pass
			Middle	13.48	1.22	6.40	2.15	16.51	Vertical	Pass
			Highest	13.65	1.23	6.40	2.15	16.67	Vertical	Pass
Limit	ERP<3W=34.77dBm									



Radiated Power (ERP) for NB-IoT Band 85/Standalone										
Modulation	Subcarrier Space (KHz)	RB Configure	Channel	Result						Conclusion
				S G.Level (dBm)	Cable loss	Gain (dBi)	correction factor(dB)	PMeas E.R.P(dBm)	Polarization	
									Of Max. ERP	
BPSK	3.75	1@0	Lowest	16.17	1.21	6.40	2.15	19.21	Horizontal	Pass
			Middle	16.14	1.22	6.40	2.15	19.17	Horizontal	Pass
			Highest	16.14	1.23	6.40	2.15	19.16	Horizontal	Pass
		1@0	Lowest	17.54	1.21	6.40	2.15	20.58	Vertical	Pass
			Middle	17.5	1.22	6.40	2.15	20.53	Vertical	Pass
			Highest	17.54	1.23	6.40	2.15	20.56	Vertical	Pass
	15	1@0	Lowest	15.63	1.21	6.40	2.15	18.67	Horizontal	Pass
			Middle	15.4	1.22	6.40	2.15	18.43	Horizontal	Pass
			Highest	15.64	1.23	6.40	2.15	18.66	Horizontal	Pass
		1@0	Lowest	16.97	1.21	6.40	2.15	20.01	Vertical	Pass
			Middle	16.87	1.22	6.40	2.15	19.90	Vertical	Pass
			Highest	16.99	1.23	6.40	2.15	20.01	Vertical	Pass
QPSK	3.75	1@0	Lowest	15	1.21	6.40	2.15	18.04	Horizontal	Pass
			Middle	15.12	1.22	6.40	2.15	18.15	Horizontal	Pass
			Highest	15.1	1.23	6.40	2.15	18.12	Horizontal	Pass
		1@0	Lowest	16.41	1.21	6.40	2.15	19.45	Vertical	Pass
			Middle	16.54	1.22	6.40	2.15	19.57	Vertical	Pass
			Highest	16.57	1.23	6.40	2.15	19.59	Vertical	Pass
	15	1@0	Lowest	14.54	1.21	6.40	2.15	17.58	Horizontal	Pass
			Middle	14.6	1.22	6.40	2.15	17.63	Horizontal	Pass
			Highest	14.68	1.23	6.40	2.15	17.70	Horizontal	Pass
		1@0	Lowest	15.95	1.21	6.40	2.15	18.99	Vertical	Pass
			Middle	16.01	1.22	6.40	2.15	19.04	Vertical	Pass
			Highest	16.09	1.23	6.40	2.15	19.11	Vertical	Pass
Limit	ERP<3W=34.77dBm									

4. RADIATED SPURIOUS EMISSION

4.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

4.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. For Band 7 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $55 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, $RSE = Rx \text{ (dBuV)} + CL \text{ (dB)} + SA \text{ (dB)} + Gain \text{ (dBi)} - 107 \text{ (dBuV to dBm)}$ The SA is calibrated using following setup.

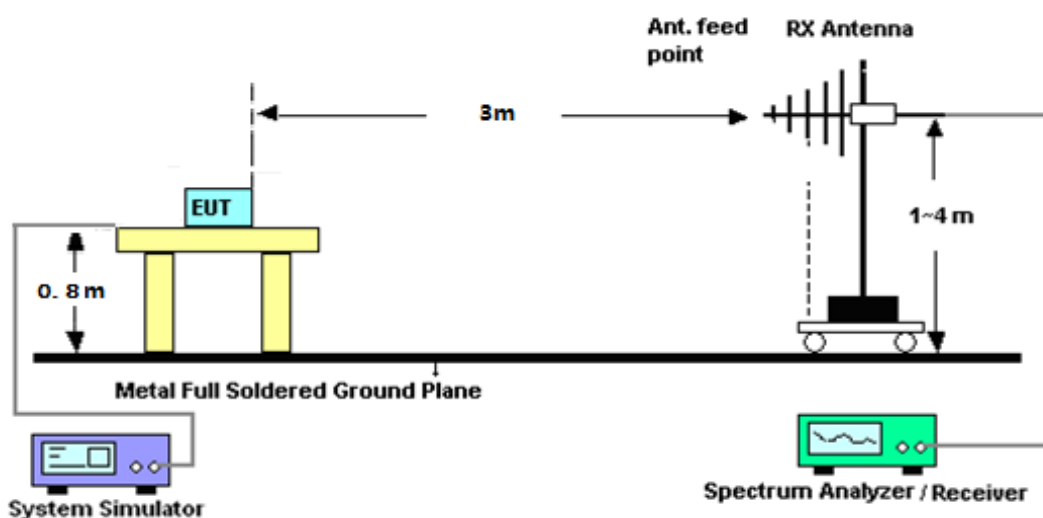
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

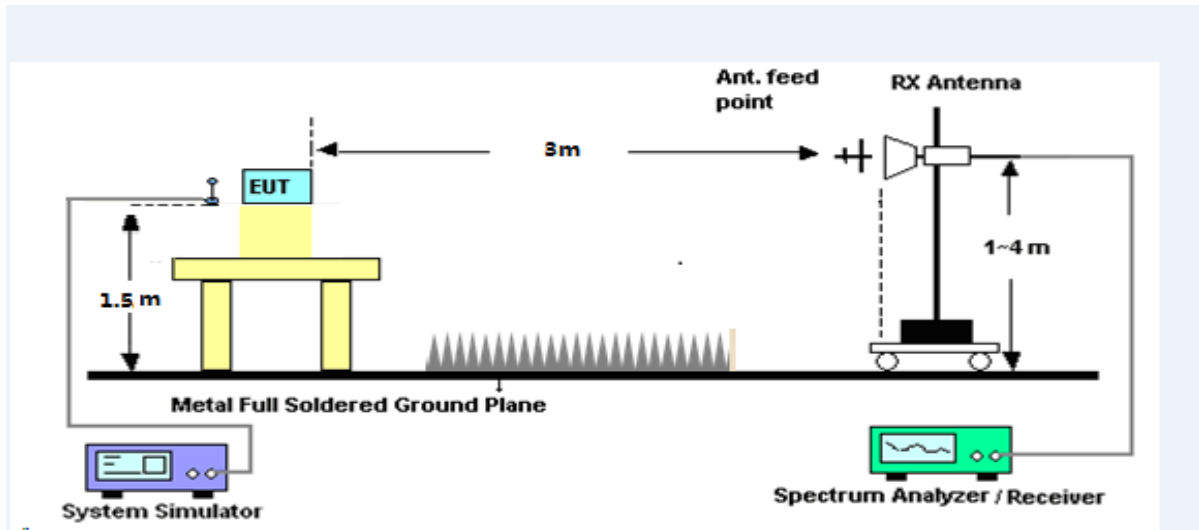
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:

Power = P_{Mea} + AR_{pl}

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



4.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 5.8 and ANSI C63.26 2015 Section 5.5.
2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= P(W) - [43 + 10\log(P)]$ (dB)
 $= [30 + 10\log(P)]$ (dBm) - $[43 + 10\log(P)]$ (dB)
 $= -13$ dBm

For Band 7:

The limit line is derived from $55 + 10\log(P)$ dB below the transmitter power P(Watts)
 $= [30 + 10\log(P)]$ (dBm) - $[55 + 10\log(P)]$ (dB)
 $= -25$ dBm

EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain

ERP (dBm) = EIRP - 2.15



4.1.4 TEST RESULTS

NB-IoT Band 2 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.13	-34.65	12.60	12.93	-34.98	-13.00	-21.98	H
5550.48	-35.09	13.10	17.11	-39.10	-13.00	-26.10	H
7400.43	-33.52	11.50	22.20	-44.22	-13.00	-31.22	H
3700.13	-35.56	12.60	12.93	-35.89	-13.00	-22.89	V
5550.48	-34.25	13.10	17.11	-38.26	-13.00	-25.26	V
7400.43	-32.42	11.50	22.20	-43.12	-13.00	-30.12	V
NB-IoT Band 2 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.15	-34.74	12.60	12.93	-35.07	-13.00	-22.07	H
5639.82	-34.52	13.10	17.11	-38.53	-13.00	-25.53	H
7519.92	-33.60	11.50	22.20	-44.30	-13.00	-31.30	H
3760.15	-34.58	12.60	12.93	-34.91	-13.00	-21.91	V
5639.82	-35.25	13.10	17.11	-39.26	-13.00	-26.26	V
7519.92	-32.46	11.50	22.20	-43.16	-13.00	-30.16	V
NB-IoT Band 2 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3819.33	-34.19	12.60	12.93	-34.52	-13.00	-21.52	H
5729.54	-34.18	13.10	17.11	-38.19	-13.00	-25.19	H
7639.38	-32.84	11.50	22.20	-43.54	-13.00	-30.54	H
3819.33	-35.90	12.60	12.93	-36.23	-13.00	-23.23	V
5729.54	-34.03	13.10	17.11	-38.04	-13.00	-25.04	V
7639.38	-32.92	11.50	22.20	-43.62	-13.00	-30.62	V



NB-IoT Band 2 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3700.30	-34.61	12.60	12.93	-34.94	-13.00	-21.94	H
5550.57	-34.15	13.10	17.11	-38.16	-13.00	-25.16	H
7400.44	-32.65	11.50	22.20	-43.35	-13.00	-30.35	H
3700.30	-34.60	12.60	12.93	-34.93	-13.00	-21.93	V
5550.57	-35.08	13.10	17.11	-39.09	-13.00	-26.09	V
7400.44	-32.13	11.50	22.20	-42.83	-13.00	-29.83	V
NB-IoT Band 2 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3760.16	-34.36	12.60	12.93	-34.69	-13.00	-21.69	H
5640.18	-34.55	13.10	17.11	-38.56	-13.00	-25.56	H
7519.96	-32.59	11.50	22.20	-43.29	-13.00	-30.29	H
3760.16	-35.53	12.60	12.93	-35.86	-13.00	-22.86	V
5640.18	-34.93	13.10	17.11	-38.94	-13.00	-25.94	V
7519.96	-32.78	11.50	22.20	-43.48	-13.00	-30.48	V
NB-IoT Band 2 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
3819.47	-33.52	12.60	12.93	-33.85	-13.00	-20.85	H
5729.69	-34.00	13.10	17.11	-38.01	-13.00	-25.01	H
7639.26	-32.63	11.50	22.20	-43.33	-13.00	-30.33	H
3819.47	-34.82	12.60	12.93	-35.15	-13.00	-22.15	V
5729.69	-34.18	13.10	17.11	-38.19	-13.00	-25.19	V
7639.26	-33.07	11.50	22.20	-43.77	-13.00	-30.77	V



NB-IoT Band 2 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.57	-33.57	12.60	12.93	-33.90	-13.00	-20.90	H
5550.32	-34.21	13.10	17.11	-38.22	-13.00	-25.22	H
7400.67	-32.27	11.50	22.20	-42.97	-13.00	-29.97	H
3700.57	-34.85	12.60	12.93	-35.18	-13.00	-22.18	V
5550.32	-34.01	13.10	17.11	-38.02	-13.00	-25.02	V
7400.67	-32.48	11.50	22.20	-43.18	-13.00	-30.18	V
NB-IoT Band 2 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3759.82	-34.93	12.60	12.93	-35.26	-13.00	-22.26	H
5640.07	-34.63	13.10	17.11	-38.64	-13.00	-25.64	H
7519.92	-32.99	11.50	22.20	-43.69	-13.00	-30.69	H
3759.82	-34.78	12.60	12.93	-35.11	-13.00	-22.11	V
5640.07	-34.02	13.10	17.11	-38.03	-13.00	-25.03	V
7519.92	-32.12	11.50	22.20	-42.82	-13.00	-29.82	V
NB-IoT Band 2 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3819.73	-34.88	12.60	12.93	-35.21	-13.00	-22.21	H
5729.71	-34.72	13.10	17.11	-38.73	-13.00	-25.73	H
7639.33	-32.52	11.50	22.20	-43.22	-13.00	-30.22	H
3819.73	-35.44	12.60	12.93	-35.77	-13.00	-22.77	V
5729.71	-34.31	13.10	17.11	-38.32	-13.00	-25.32	V
7639.33	-31.75	11.50	22.20	-42.45	-13.00	-29.45	V



NB-IoT Band 2 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.48	-34.27	12.60	12.93	-34.60	-13.00	-21.60	H
5550.67	-34.34	13.10	17.11	-38.35	-13.00	-25.35	H
7400.49	-32.71	11.50	22.20	-43.41	-13.00	-30.41	H
3700.48	-34.80	12.60	12.93	-35.13	-13.00	-22.13	V
5550.67	-34.15	13.10	17.11	-38.16	-13.00	-25.16	V
7400.49	-32.95	11.50	22.20	-43.65	-13.00	-30.65	V
NB-IoT Band 2 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3760.09	-34.64	12.60	12.93	-34.97	-13.00	-21.97	H
5640.21	-35.30	13.10	17.11	-39.31	-13.00	-26.31	H
7520.26	-32.74	11.50	22.20	-43.44	-13.00	-30.44	H
3760.09	-35.51	12.60	12.93	-35.84	-13.00	-22.84	V
5640.21	-34.59	13.10	17.11	-38.60	-13.00	-25.60	V
7520.26	-32.59	11.50	22.20	-43.29	-13.00	-30.29	V
NB-IoT Band 2 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3819.80	-34.63	12.60	12.93	-34.96	-13.00	-21.96	H
5729.67	-34.92	13.10	17.11	-38.93	-13.00	-25.93	H
7639.71	-32.51	11.50	22.20	-43.21	-13.00	-30.21	H
3819.80	-35.32	12.60	12.93	-35.65	-13.00	-22.65	V
5729.67	-35.07	13.10	17.11	-39.08	-13.00	-26.08	V
7639.71	-32.18	11.50	22.20	-42.88	-13.00	-29.88	V



NB-IoT Band 4 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.05	-34.41	12.90	12.56	-34.07	-13.00	-21.07	H
5130.10	-34.83	13.10	16.32	-38.05	-13.00	-25.05	H
6840.31	-32.21	12.33	21.13	-41.01	-13.00	-28.01	H
3420.05	-35.96	12.90	12.56	-35.62	-13.00	-22.62	V
5130.10	-34.73	13.10	16.32	-37.95	-13.00	-24.95	V
6840.31	-32.34	12.33	21.13	-41.14	-13.00	-28.14	V
NB-IoT Band 2 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3494.97	-34.37	12.90	12.56	-34.03	-13.00	-21.03	H
5242.81	-35.01	13.10	16.32	-38.23	-13.00	-25.23	H
6989.95	-32.71	12.33	21.13	-41.51	-13.00	-28.51	H
3494.97	-34.73	12.90	12.56	-34.39	-13.00	-21.39	V
5242.81	-34.54	13.10	16.32	-37.76	-13.00	-24.76	V
6989.95	-31.95	12.33	21.13	-40.75	-13.00	-27.75	V
NB-IoT Band 4 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3510.06	-34.21	12.90	12.56	-33.87	-13.00	-20.87	H
5764.90	-34.77	13.10	16.32	-37.99	-13.00	-24.99	H
7020.00	-32.69	12.33	21.13	-41.49	-13.00	-28.49	H
3510.06	-35.68	12.90	12.56	-35.34	-13.00	-22.34	V
5764.90	-33.77	13.10	16.32	-36.99	-13.00	-23.99	V
7020.00	-32.93	12.33	21.13	-41.73	-13.00	-28.73	V



NB-IoT Band 4 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.17	-34.11	12.90	12.56	-33.77	-13.00	-20.77	H
5130.22	-34.52	13.10	16.32	-37.74	-13.00	-24.74	H
6840.17	-33.48	12.33	21.13	-42.28	-13.00	-29.28	H
3420.17	-35.28	12.90	12.56	-34.94	-13.00	-21.94	V
5130.22	-35.19	13.10	16.32	-38.41	-13.00	-25.41	V
6840.17	-32.22	12.33	21.13	-41.02	-13.00	-28.02	V
NB-IoT Band 4 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3495.06	-34.56	12.90	12.56	-34.22	-13.00	-21.22	H
5242.45	-34.86	13.10	16.32	-38.08	-13.00	-25.08	H
6989.94	-32.74	12.33	21.13	-41.54	-13.00	-28.54	H
3495.06	-35.43	12.90	12.56	-35.09	-13.00	-22.09	V
5242.45	-33.97	13.10	16.32	-37.19	-13.00	-24.19	V
6989.94	-32.51	12.33	21.13	-41.31	-13.00	-28.31	V
NB-IoT Band 4 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3509.83	-34.39	12.90	12.56	-34.05	-13.00	-21.05	H
5765.03	-35.42	13.10	16.32	-38.64	-13.00	-25.64	H
7019.93	-33.33	12.33	21.13	-42.13	-13.00	-29.13	H
3509.83	-34.70	12.90	12.56	-34.36	-13.00	-21.36	V
5765.03	-34.74	13.10	16.32	-37.96	-13.00	-24.96	V
7019.93	-32.97	12.33	21.13	-41.77	-13.00	-28.77	V



NB-IoT Band 4 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.40	-34.72	12.90	12.56	-34.38	-13.00	-21.38	H
5130.44	-34.62	13.10	16.32	-37.84	-13.00	-24.84	H
6840.23	-32.53	12.33	21.13	-41.33	-13.00	-28.33	H
3420.40	-34.63	12.90	12.56	-34.29	-13.00	-21.29	V
5130.44	-33.78	13.10	16.32	-37.00	-13.00	-24.00	V
6840.23	-32.12	12.33	21.13	-40.92	-13.00	-27.92	V
NB-IoT Band 4 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3495.06	-34.05	12.90	12.56	-33.71	-13.00	-20.71	H
5242.73	-34.99	13.10	16.32	-38.21	-13.00	-25.21	H
6990.06	-33.17	12.33	21.13	-41.97	-13.00	-28.97	H
3495.06	-34.74	12.90	12.56	-34.40	-13.00	-21.40	V
5242.73	-34.51	13.10	16.32	-37.73	-13.00	-24.73	V
6990.06	-32.28	12.33	21.13	-41.08	-13.00	-28.08	V
NB-IoT Band 4 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3509.85	-33.94	12.90	12.56	-33.60	-13.00	-20.60	H
5764.93	-34.34	13.10	16.32	-37.56	-13.00	-24.56	H
7019.82	-32.28	12.33	21.13	-41.08	-13.00	-28.08	H
3509.85	-35.77	12.90	12.56	-35.43	-13.00	-22.43	V
5764.93	-33.78	13.10	16.32	-37.00	-13.00	-24.00	V
7019.82	-31.99	12.33	21.13	-40.79	-13.00	-27.79	V



NB-IoT Band 4 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.36	-34.27	12.90	12.56	-33.93	-13.00	-20.93	H
5130.08	-34.13	13.10	16.32	-37.35	-13.00	-24.35	H
6840.24	-32.42	12.33	21.13	-41.22	-13.00	-28.22	H
3420.36	-35.74	12.90	12.56	-35.40	-13.00	-22.40	V
5130.08	-35.19	13.10	16.32	-38.41	-13.00	-25.41	V
6840.24	-32.78	12.33	21.13	-41.58	-13.00	-28.58	V
NB-IoT Band 4 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3495.05	-34.78	12.90	12.56	-34.44	-13.00	-21.44	H
5242.35	-35.45	13.10	16.32	-38.67	-13.00	-25.67	H
6990.18	-33.20	12.33	21.13	-42.00	-13.00	-29.00	H
3495.05	-35.72	12.90	12.56	-35.38	-13.00	-22.38	V
5242.35	-34.31	13.10	16.32	-37.53	-13.00	-24.53	V
6990.18	-32.35	12.33	21.13	-41.15	-13.00	-28.15	V
NB-IoT Band 4 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3509.99	-34.05	12.90	12.56	-33.71	-13.00	-20.71	H
5765.07	-34.40	13.10	16.32	-37.62	-13.00	-24.62	H
7019.75	-32.39	12.33	21.13	-41.19	-13.00	-28.19	H
3509.99	-35.57	12.90	12.56	-35.23	-13.00	-22.23	V
5765.07	-35.24	13.10	16.32	-38.46	-13.00	-25.46	V
7019.75	-31.85	12.33	21.13	-40.65	-13.00	-27.65	V



NB-IoT Band 5 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1647.94	-33.85	9.56	9.72	-34.01	-13.00	-21.01	H
2471.87	-35.31	10.50	10.86	-35.67	-13.00	-22.67	H
3296.41	-32.91	12.78	11.57	-31.70	-13.00	-18.70	H
1647.94	-35.15	9.56	9.72	-35.31	-13.00	-22.31	V
2471.87	-34.90	10.50	10.86	-35.26	-13.00	-22.26	V
3296.41	-32.74	12.78	11.57	-31.53	-13.00	-18.53	V
NB-IoT Band 5 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1672.79	-34.41	9.56	9.72	-34.57	-13.00	-21.57	H
2509.30	-34.17	10.50	10.86	-34.53	-13.00	-21.53	H
3346.19	-32.33	12.78	11.57	-31.12	-13.00	-18.12	H
1672.79	-35.57	9.56	9.72	-35.73	-13.00	-22.73	V
2509.30	-33.84	10.50	10.86	-34.20	-13.00	-21.20	V
3346.19	-31.73	12.78	11.57	-30.52	-13.00	-17.52	V
NB-IoT Band 5 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1697.48	-34.86	9.56	9.72	-35.02	-13.00	-22.02	H
2546.48	-34.60	10.50	10.86	-34.96	-13.00	-21.96	H
3395.48	-33.09	12.78	11.57	-31.88	-13.00	-18.88	H
1697.48	-36.01	9.56	9.72	-36.17	-13.00	-23.17	V
2546.48	-35.10	10.50	10.86	-35.46	-13.00	-22.46	V
3395.48	-32.96	12.78	11.57	-31.75	-13.00	-18.75	V



NB-IoT Band 5 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1648.09	-33.94	9.56	9.72	-34.10	-13.00	-21.10	H
2472.06	-34.81	10.50	10.86	-35.17	-13.00	-22.17	H
3296.22	-32.66	12.78	11.57	-31.45	-13.00	-18.45	H
1648.09	-35.02	9.56	9.72	-35.18	-13.00	-22.18	V
2472.06	-34.41	10.50	10.86	-34.77	-13.00	-21.77	V
3296.22	-32.35	12.78	11.57	-31.14	-13.00	-18.14	V
NB-IoT Band 5 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1672.84	-34.44	12.90	12.56	-34.10	-13.00	-21.10	H
2509.54	-35.10	13.10	16.32	-38.32	-13.00	-25.32	H
3346.03	-33.64	12.33	21.13	-42.44	-13.00	-29.44	H
1672.84	-35.92	12.90	12.56	-35.58	-13.00	-22.58	V
2509.54	-34.10	13.10	16.32	-37.32	-13.00	-24.32	V
3346.03	-32.25	12.33	21.13	-41.05	-13.00	-28.05	V
NB-IoT Band 5 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1697.58	-34.07	9.56	9.72	-34.23	-13.00	-21.23	H
2546.69	-34.57	10.50	10.86	-34.93	-13.00	-21.93	H
3395.44	-33.33	12.78	11.57	-32.12	-13.00	-19.12	H
1697.58	-34.93	9.56	9.72	-35.09	-13.00	-22.09	V
2546.69	-34.65	10.50	10.86	-35.01	-13.00	-22.01	V
3395.44	-32.40	12.78	11.57	-31.19	-13.00	-18.19	V



NB-IoT Band 5 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1648.27	-34.58	9.56	9.72	-34.74	-13.00	-21.74	H
2471.86	-34.49	10.50	10.86	-34.85	-13.00	-21.85	H
3296.46	-33.34	12.78	11.57	-32.13	-13.00	-19.13	H
1648.27	-34.69	9.56	9.72	-34.85	-13.00	-21.85	V
2471.86	-33.87	10.50	10.86	-34.23	-13.00	-21.23	V
3296.46	-32.92	12.78	11.57	-31.71	-13.00	-18.71	V
NB-IoT Band 5 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1672.72	-34.34	9.56	9.72	-34.50	-13.00	-21.50	H
2509.50	-34.41	10.50	10.86	-34.77	-13.00	-21.77	H
3345.99	-33.01	12.78	11.57	-31.80	-13.00	-18.80	H
1672.72	-34.94	9.56	9.72	-35.10	-13.00	-22.10	V
2509.50	-33.99	10.50	10.86	-34.35	-13.00	-21.35	V
3345.99	-31.89	12.78	11.57	-30.68	-13.00	-17.68	V
NB-IoT Band 5 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1697.97	-33.66	9.56	9.72	-33.82	-13.00	-20.82	H
2546.73	-34.27	10.50	10.86	-34.63	-13.00	-21.63	H
3395.69	-33.58	12.78	11.57	-32.37	-13.00	-19.37	H
1697.97	-35.52	9.56	9.72	-35.68	-13.00	-22.68	V
2546.73	-33.79	10.50	10.86	-34.15	-13.00	-21.15	V
3395.69	-31.78	12.78	11.57	-30.57	-13.00	-17.57	V



NB-IoT Band 5 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1648.02	-34.52	9.56	9.72	-34.68	-13.00	-21.68	H
2472.03	-34.80	10.50	10.86	-35.16	-13.00	-22.16	H
3296.26	-32.55	12.78	11.57	-31.34	-13.00	-18.34	H
1648.02	-35.04	9.56	9.72	-35.20	-13.00	-22.20	V
2472.03	-33.82	10.50	10.86	-34.18	-13.00	-21.18	V
3296.26	-32.02	12.78	11.57	-30.81	-13.00	-17.81	V
NB-IoT Band 5 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1673.04	-34.56	9.56	9.72	-34.72	-13.00	-21.72	H
2509.33	-34.05	10.50	10.86	-34.41	-13.00	-21.41	H
3346.14	-32.21	12.78	11.57	-31.00	-13.00	-18.00	H
1673.04	-35.13	9.56	9.72	-35.29	-13.00	-22.29	V
2509.33	-33.76	10.50	10.86	-34.12	-13.00	-21.12	V
3346.14	-32.05	12.78	11.57	-30.84	-13.00	-17.84	V
NB-IoT Band 5 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1697.59	-33.76	9.56	9.72	-33.92	-13.00	-20.92	H
2546.43	-34.57	10.50	10.86	-34.93	-13.00	-21.93	H
3395.37	-32.33	12.78	11.57	-31.12	-13.00	-18.12	H
1697.59	-35.58	9.56	9.72	-35.74	-13.00	-22.74	V
2546.43	-34.69	10.50	10.86	-35.05	-13.00	-22.05	V
3395.37	-32.85	12.78	11.57	-31.64	-13.00	-18.64	V



NB-IoT Band 12 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1398.31	-33.94	8.17	9.34	-35.11	-13.00	-22.11	H
2097.31	-35.19	9.53	10.42	-36.08	-13.00	-23.08	H
2796.46	-32.42	11.27	11.12	-32.27	-13.00	-19.27	H
1398.31	-35.56	8.17	9.34	-36.73	-13.00	-23.73	V
2097.31	-33.92	9.53	10.42	-34.81	-13.00	-21.81	V
2796.46	-32.65	11.27	11.12	-32.50	-13.00	-19.50	V
NB-IoT Band 12 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1415.06	-33.52	8.17	9.34	-34.69	-13.00	-21.69	H
2122.56	-35.40	9.53	10.42	-36.29	-13.00	-23.29	H
2829.87	-33.36	11.27	11.12	-33.21	-13.00	-20.21	H
1415.06	-35.24	8.17	9.34	-36.41	-13.00	-23.41	V
2122.56	-35.18	9.53	10.42	-36.07	-13.00	-23.07	V
2829.87	-32.49	11.27	11.12	-32.34	-13.00	-19.34	V
NB-IoT Band 12 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1431.54	-34.45	8.17	9.34	-35.62	-13.00	-22.62	H
2147.72	-35.19	9.53	10.42	-36.08	-13.00	-23.08	H
2863.63	-32.91	11.27	11.12	-32.76	-13.00	-19.76	H
1431.54	-35.44	8.17	9.34	-36.61	-13.00	-23.61	V
2147.72	-34.93	9.53	10.42	-35.82	-13.00	-22.82	V
2863.63	-32.97	11.27	11.12	-32.82	-13.00	-19.82	V



NB-IoT Band 12 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1398.18	-34.14	8.17	9.34	-35.31	-13.00	-22.31	H
2097.10	-34.99	9.53	10.42	-35.88	-13.00	-22.88	H
2796.54	-32.66	11.27	11.12	-32.51	-13.00	-19.51	H
1398.18	-35.95	8.17	9.34	-37.12	-13.00	-24.12	V
2097.10	-34.96	9.53	10.42	-35.85	-13.00	-22.85	V
2796.54	-32.53	11.27	11.12	-32.38	-13.00	-19.38	V
NB-IoT Band 12 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1414.86	-34.62	8.17	9.34	-35.79	-13.00	-22.79	H
2122.25	-34.18	9.53	10.42	-35.07	-13.00	-22.07	H
2830.02	-32.36	11.27	11.12	-32.21	-13.00	-19.21	H
1414.86	-35.06	8.17	9.34	-36.23	-13.00	-23.23	V
2122.25	-34.46	9.53	10.42	-35.35	-13.00	-22.35	V
2830.02	-32.02	11.27	11.12	-31.87	-13.00	-18.87	V
NB-IoT Band 12 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1431.91	-34.72	8.17	9.34	-35.89	-13.00	-22.89	H
2147.49	-34.70	9.53	10.42	-35.59	-13.00	-22.59	H
2863.61	-33.53	11.27	11.12	-33.38	-13.00	-20.38	H
1431.91	-35.04	8.17	9.34	-36.21	-13.00	-23.21	V
2147.49	-34.64	9.53	10.42	-35.53	-13.00	-22.53	V
2863.61	-32.20	11.27	11.12	-32.05	-13.00	-19.05	V



NB-IoT Band 12 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1398.42	-34.86	8.17	9.34	-36.03	-13.00	-23.03	H
2097.37	-34.52	9.53	10.42	-35.41	-13.00	-22.41	H
2796.49	-33.54	11.27	11.12	-33.39	-13.00	-20.39	H
1398.42	-35.72	8.17	9.34	-36.89	-13.00	-23.89	V
2097.37	-33.97	9.53	10.42	-34.86	-13.00	-21.86	V
2796.49	-32.01	11.27	11.12	-31.86	-13.00	-18.86	V
NB-IoT Band 12 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1414.98	-33.67	8.17	9.34	-34.84	-13.00	-21.84	H
2122.25	-34.74	9.53	10.42	-35.63	-13.00	-22.63	H
2829.87	-32.70	11.27	11.12	-32.55	-13.00	-19.55	H
1414.98	-35.23	8.17	9.34	-36.40	-13.00	-23.40	V
2122.25	-34.36	9.53	10.42	-35.25	-13.00	-22.25	V
2829.87	-32.14	11.27	11.12	-31.99	-13.00	-18.99	V
NB-IoT Band 12 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1431.76	-34.24	8.17	9.34	-35.41	-13.00	-22.41	H
2147.52	-34.75	9.53	10.42	-35.64	-13.00	-22.64	H
2863.62	-33.07	11.27	11.12	-32.92	-13.00	-19.92	H
1431.76	-34.57	8.17	9.34	-35.74	-13.00	-22.74	V
2147.52	-34.72	9.53	10.42	-35.61	-13.00	-22.61	V
2863.62	-32.74	11.27	11.12	-32.59	-13.00	-19.59	V



NB-IoT Band 12 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1398.06	-33.99	8.17	9.34	-35.16	-13.00	-22.16	H
2097.46	-35.18	9.53	10.42	-36.07	-13.00	-23.07	H
2796.18	-32.64	11.27	11.12	-32.49	-13.00	-19.49	H
1398.06	-35.49	8.17	9.34	-36.66	-13.00	-23.66	V
2097.46	-33.76	9.53	10.42	-34.65	-13.00	-21.65	V
2796.18	-32.80	11.27	11.12	-32.65	-13.00	-19.65	V
NB-IoT Band 12 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1414.91	-34.32	8.17	9.34	-35.49	-13.00	-22.49	H
2122.29	-34.20	9.53	10.42	-35.09	-13.00	-22.09	H
2829.93	-33.53	11.27	11.12	-33.38	-13.00	-20.38	H
1414.91	-35.52	8.17	9.34	-36.69	-13.00	-23.69	V
2122.29	-34.73	9.53	10.42	-35.62	-13.00	-22.62	V
2829.93	-32.58	11.27	11.12	-32.43	-13.00	-19.43	V
NB-IoT Band 12 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1431.78	-33.79	8.17	9.34	-34.96	-13.00	-21.96	H
2147.49	-35.17	9.53	10.42	-36.06	-13.00	-23.06	H
2863.51	-32.74	11.27	11.12	-32.59	-13.00	-19.59	H
1431.78	-35.05	8.17	9.34	-36.22	-13.00	-23.22	V
2147.49	-35.00	9.53	10.42	-35.89	-13.00	-22.89	V
2863.51	-31.89	11.27	11.12	-31.74	-13.00	-18.74	V



NB-IoT Band 13 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1554.05	-34.31	9.56	9.72	-34.47	-13.00	-21.47	H
2331.52	-34.80	10.50	10.86	-35.16	-13.00	-22.16	H
3018.48	-32.50	12.78	11.57	-31.29	-13.00	-18.29	H
1554.05	-35.55	9.56	9.72	-35.71	-13.00	-22.71	V
2331.52	-34.78	10.50	10.86	-35.14	-13.00	-22.14	V
3018.48	-33.11	12.78	11.57	-31.90	-13.00	-18.90	V
NB-IoT Band 13 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1564.28	-34.34	9.56	9.72	-34.50	-13.00	-21.50	H
2346.03	-34.15	10.50	10.86	-34.51	-13.00	-21.51	H
3127.87	-33.37	12.78	11.57	-32.16	-13.00	-19.16	H
1564.28	-35.33	9.56	9.72	-35.49	-13.00	-22.49	V
2346.03	-34.58	10.50	10.86	-34.94	-13.00	-21.94	V
3127.87	-32.39	12.78	11.57	-31.18	-13.00	-18.18	V
NB-IoT Band 13 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1573.92	-34.88	9.56	9.72	-35.04	-13.00	-22.04	H
2360.50	-34.92	10.50	10.86	-35.28	-13.00	-22.28	H
3147.40	-32.65	12.78	11.57	-31.44	-13.00	-18.44	H
1573.92	-35.38	9.56	9.72	-35.54	-13.00	-22.54	V
2360.50	-34.37	10.50	10.86	-34.73	-13.00	-21.73	V
3147.40	-32.63	12.78	11.57	-31.42	-13.00	-18.42	V



NB-IoT Band 13 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1554.29	-34.30	9.56	9.72	-34.46	-13.00	-21.46	H
2331.50	-34.78	10.50	10.86	-35.14	-13.00	-22.14	H
3018.21	-33.51	12.78	11.57	-32.30	-13.00	-19.30	H
1554.29	-34.53	9.56	9.72	-34.69	-13.00	-21.69	V
2331.50	-35.00	10.50	10.86	-35.36	-13.00	-22.36	V
3018.21	-32.41	12.78	11.57	-31.20	-13.00	-18.20	V
NB-IoT Band 13 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1563.93	-34.65	9.56	9.72	-34.81	-13.00	-21.81	H
2345.63	-34.48	10.50	10.86	-34.84	-13.00	-21.84	H
3128.12	-33.57	12.78	11.57	-32.36	-13.00	-19.36	H
1563.93	-35.87	9.56	9.72	-36.03	-13.00	-23.03	V
2345.63	-33.86	10.50	10.86	-34.22	-13.00	-21.22	V
3128.12	-32.40	12.78	11.57	-31.19	-13.00	-18.19	V
NB-IoT Band 13 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1573.63	-33.97	9.56	9.72	-34.13	-13.00	-21.13	H
2360.80	-34.49	10.50	10.86	-34.85	-13.00	-21.85	H
3147.60	-32.43	12.78	11.57	-31.22	-13.00	-18.22	H
1573.63	-35.23	9.56	9.72	-35.39	-13.00	-22.39	V
2360.80	-34.33	10.50	10.86	-34.69	-13.00	-21.69	V
3147.60	-32.63	12.78	11.57	-31.42	-13.00	-18.42	V



NB-IoT Band 13 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1554.48	-34.18	9.56	9.72	-34.34	-13.00	-21.34	H
2331.25	-35.46	10.50	10.86	-35.82	-13.00	-22.82	H
3018.59	-33.41	12.78	11.57	-32.20	-13.00	-19.20	H
1554.48	-35.77	9.56	9.72	-35.93	-13.00	-22.93	V
2331.25	-34.03	10.50	10.86	-34.39	-13.00	-21.39	V
3018.59	-32.52	12.78	11.57	-31.31	-13.00	-18.31	V
NB-IoT Band 13 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1564.17	-34.94	9.56	9.72	-35.10	-13.00	-22.10	H
2345.71	-34.45	10.50	10.86	-34.81	-13.00	-21.81	H
3127.87	-33.30	12.78	11.57	-32.09	-13.00	-19.09	H
1564.17	-35.92	9.56	9.72	-36.08	-13.00	-23.08	V
2345.71	-34.32	10.50	10.86	-34.68	-13.00	-21.68	V
3127.87	-32.27	12.78	11.57	-31.06	-13.00	-18.06	V
NB-IoT Band 13 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1574.00	-33.62	9.56	9.72	-33.78	-13.00	-20.78	H
2360.92	-35.33	10.50	10.86	-35.69	-13.00	-22.69	H
3147.66	-32.77	12.78	11.57	-31.56	-13.00	-18.56	H
1574.00	-35.67	9.56	9.72	-35.83	-13.00	-22.83	V
2360.92	-34.06	10.50	10.86	-34.42	-13.00	-21.42	V
3147.66	-31.77	12.78	11.57	-30.56	-13.00	-17.56	V



NB-IoT Band 13 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1554.13	-34.66	9.56	9.72	-34.82	-13.00	-21.82	H
2331.34	-34.04	10.50	10.86	-34.40	-13.00	-21.40	H
3018.59	-32.58	12.78	11.57	-31.37	-13.00	-18.37	H
1554.13	-34.83	9.56	9.72	-34.99	-13.00	-21.99	V
2331.34	-34.43	10.50	10.86	-34.79	-13.00	-21.79	V
3018.59	-33.12	12.78	11.57	-31.91	-13.00	-18.91	V
NB-IoT Band 13 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1564.14	-33.88	9.56	9.72	-34.04	-13.00	-21.04	H
2346.09	-35.16	10.50	10.86	-35.52	-13.00	-22.52	H
3127.91	-32.74	12.78	11.57	-31.53	-13.00	-18.53	H
1564.14	-34.61	9.56	9.72	-34.77	-13.00	-21.77	V
2346.09	-34.92	10.50	10.86	-35.28	-13.00	-22.28	V
3127.91	-33.08	12.78	11.57	-31.87	-13.00	-18.87	V
NB-IoT Band 13 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1573.98	-33.75	9.56	9.72	-33.91	-13.00	-20.91	H
2360.63	-34.86	10.50	10.86	-35.22	-13.00	-22.22	H
3147.78	-32.62	12.78	11.57	-31.41	-13.00	-18.41	H
1573.98	-34.98	9.56	9.72	-35.14	-13.00	-22.14	V
2360.63	-33.76	10.50	10.86	-34.12	-13.00	-21.12	V
3147.78	-31.75	12.78	11.57	-30.54	-13.00	-17.54	V



NB-IoT Band 25 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.15	-34.91	12.60	12.93	-35.24	-13.00	-22.24	H
5550.36	-34.55	13.10	17.11	-38.56	-13.00	-25.56	H
7400.14	-33.58	11.50	22.20	-44.28	-13.00	-31.28	H
3700.15	-35.15	12.60	12.93	-35.48	-13.00	-22.48	V
5550.36	-34.52	13.10	17.11	-38.53	-13.00	-25.53	V
7400.14	-32.38	11.50	22.20	-43.08	-13.00	-30.08	V
NB-IoT Band 25 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3764.87	-34.91	12.60	12.93	-35.24	-13.00	-22.24	H
5647.47	-35.35	13.10	17.11	-39.36	-13.00	-26.36	H
7530.24	-32.86	11.50	22.20	-43.56	-13.00	-30.56	H
3764.87	-35.96	12.60	12.93	-36.29	-13.00	-23.29	V
5647.47	-34.03	13.10	17.11	-38.04	-13.00	-25.04	V
7530.24	-32.54	11.50	22.20	-43.24	-13.00	-30.24	V
NB-IoT Band 25 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3829.90	-34.50	12.60	12.93	-34.83	-13.00	-21.83	H
5744.68	-35.08	13.10	17.11	-39.09	-13.00	-26.09	H
7659.63	-33.25	11.50	22.20	-43.95	-13.00	-30.95	H
3829.90	-35.11	12.60	12.93	-35.44	-13.00	-22.44	V
5744.68	-34.13	13.10	17.11	-38.14	-13.00	-25.14	V
7659.63	-31.99	11.50	22.20	-42.69	-13.00	-29.69	V



NB-IoT Band 25 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.11	-33.65	12.60	12.93	-33.98	-13.00	-20.98	H
5550.29	-35.23	13.10	17.11	-39.24	-13.00	-26.24	H
7400.30	-33.44	11.50	22.20	-44.14	-13.00	-31.14	H
3700.11	-35.56	12.60	12.93	-35.89	-13.00	-22.89	V
5550.29	-35.08	13.10	17.11	-39.09	-13.00	-26.09	V
7400.30	-32.60	11.50	22.20	-43.30	-13.00	-30.30	V
NB-IoT Band 25 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3764.95	-33.97	12.60	12.93	-34.30	-13.00	-21.30	H
5647.30	-35.09	13.10	17.11	-39.10	-13.00	-26.10	H
7530.03	-32.72	11.50	22.20	-43.42	-13.00	-30.42	H
3764.95	-35.79	12.60	12.93	-36.12	-13.00	-23.12	V
5647.30	-34.32	13.10	17.11	-38.33	-13.00	-25.33	V
7530.03	-33.18	11.50	22.20	-43.88	-13.00	-30.88	V
NB-IoT Band 25 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3829.94	-33.51	12.60	12.93	-33.84	-13.00	-20.84	H
5744.78	-34.73	13.10	17.11	-38.74	-13.00	-25.74	H
7659.36	-33.47	11.50	22.20	-44.17	-13.00	-31.17	H
3829.94	-35.93	12.60	12.93	-36.26	-13.00	-23.26	V
5744.78	-33.76	13.10	17.11	-37.77	-13.00	-24.77	V
7659.36	-32.72	11.50	22.20	-43.42	-13.00	-30.42	V



NB-IoT Band 25 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.34	-34.85	12.60	12.93	-35.18	-13.00	-22.18	H
5550.28	-34.45	13.10	17.11	-38.46	-13.00	-25.46	H
7400.23	-32.59	11.50	22.20	-43.29	-13.00	-30.29	H
3700.34	-35.13	12.60	12.93	-35.46	-13.00	-22.46	V
5550.28	-34.80	13.10	17.11	-38.81	-13.00	-25.81	V
7400.23	-31.74	11.50	22.20	-42.44	-13.00	-29.44	V
NB-IoT Band 25 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3765.09	-34.12	12.60	12.93	-34.45	-13.00	-21.45	H
5647.62	-35.10	13.10	17.11	-39.11	-13.00	-26.11	H
7530.01	-32.38	11.50	22.20	-43.08	-13.00	-30.08	H
3765.09	-35.35	12.60	12.93	-35.68	-13.00	-22.68	V
5647.62	-34.98	13.10	17.11	-38.99	-13.00	-25.99	V
7530.01	-32.12	11.50	22.20	-42.82	-13.00	-29.82	V
NB-IoT Band 25 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3829.77	-33.96	12.60	12.93	-34.29	-13.00	-21.29	H
5744.83	-34.07	13.10	17.11	-38.08	-13.00	-25.08	H
7659.50	-33.22	11.50	22.20	-43.92	-13.00	-30.92	H
3829.77	-35.44	12.60	12.93	-35.77	-13.00	-22.77	V
5744.83	-35.05	13.10	17.11	-39.06	-13.00	-26.06	V
7659.50	-33.00	11.50	22.20	-43.70	-13.00	-30.70	V



NB-IoT Band 25 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3700.06	-34.49	12.60	12.93	-34.82	-13.00	-21.82	H
5550.51	-35.23	13.10	17.11	-39.24	-13.00	-26.24	H
7400.38	-32.53	11.50	22.20	-43.23	-13.00	-30.23	H
3700.06	-34.86	12.60	12.93	-35.19	-13.00	-22.19	V
5550.51	-34.13	13.10	17.11	-38.14	-13.00	-25.14	V
7400.38	-31.86	11.50	22.20	-42.56	-13.00	-29.56	V
NB-IoT Band 25 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3764.81	-34.72	12.60	12.93	-35.05	-13.00	-22.05	H
5647.74	-34.36	13.10	17.11	-38.37	-13.00	-25.37	H
7530.10	-33.07	11.50	22.20	-43.77	-13.00	-30.77	H
3764.81	-35.03	12.60	12.93	-35.36	-13.00	-22.36	V
5647.74	-35.08	13.10	17.11	-39.09	-13.00	-26.09	V
7530.10	-32.65	11.50	22.20	-43.35	-13.00	-30.35	V
NB-IoT Band 25 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3830.04	-34.76	12.60	12.93	-35.09	-13.00	-22.09	H
5744.75	-35.07	13.10	17.11	-39.08	-13.00	-26.08	H
7659.43	-33.42	11.50	22.20	-44.12	-13.00	-31.12	H
3830.04	-34.58	12.60	12.93	-34.91	-13.00	-21.91	V
5744.75	-34.40	13.10	17.11	-38.41	-13.00	-25.41	V
7659.43	-32.29	11.50	22.20	-42.99	-13.00	-29.99	V



NB-IoT Band 26(Part22) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1648.09	-34.11	9.56	9.72	-34.27	-13.00	-21.27	H
2472.14	-35.21	10.50	10.86	-35.57	-13.00	-22.57	H
3296.31	-32.73	12.78	11.57	-31.52	-13.00	-18.52	H
1648.09	-34.59	9.56	9.72	-34.75	-13.00	-21.75	V
2472.14	-34.14	10.50	10.86	-34.50	-13.00	-21.50	V
3296.31	-32.89	12.78	11.57	-31.68	-13.00	-18.68	V
NB-IoT Band 26(Part22) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1673.15	-33.56	9.56	9.72	-33.72	-13.00	-20.72	H
2509.28	-34.35	10.50	10.86	-34.71	-13.00	-21.71	H
3346.04	-32.61	12.78	11.57	-31.40	-13.00	-18.40	H
1673.15	-35.38	9.56	9.72	-35.54	-13.00	-22.54	V
2509.28	-33.91	10.50	10.86	-34.27	-13.00	-21.27	V
3346.04	-33.01	12.78	11.57	-31.80	-13.00	-18.80	V
NB-IoT Band 26(Part22) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1697.50	-33.88	9.56	9.72	-34.04	-13.00	-21.04	H
2546.56	-34.68	10.50	10.86	-35.04	-13.00	-22.04	H
3395.68	-33.58	12.78	11.57	-32.37	-13.00	-19.37	H
1697.50	-35.84	9.56	9.72	-36.00	-13.00	-23.00	V
2546.56	-35.25	10.50	10.86	-35.61	-13.00	-22.61	V
3395.68	-32.73	12.78	11.57	-31.52	-13.00	-18.52	V



NB-IoT Band 26(Part22) / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1648.42	-34.22	9.56	9.72	-34.38	-13.00	-21.38	H
2472.22	-35.45	10.50	10.86	-35.81	-13.00	-22.81	H
3296.30	-32.71	12.78	11.57	-31.50	-13.00	-18.50	H
1648.42	-35.02	9.56	9.72	-35.18	-13.00	-22.18	V
2472.22	-35.08	10.50	10.86	-35.44	-13.00	-22.44	V
3296.30	-32.71	12.78	11.57	-31.50	-13.00	-18.50	V
NB-IoT Band 26(Part22) / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1672.89	-33.64	12.90	12.56	-33.30	-13.00	-20.30	H
2509.44	-34.47	13.10	16.32	-37.69	-13.00	-24.69	H
3346.11	-32.55	12.33	21.13	-41.35	-13.00	-28.35	H
1672.89	-34.97	12.90	12.56	-34.63	-13.00	-21.63	V
2509.44	-34.26	13.10	16.32	-37.48	-13.00	-24.48	V
3346.11	-33.03	12.33	21.13	-41.83	-13.00	-28.83	V
NB-IoT Band 26(Part22) / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1697.56	-34.15	9.56	9.72	-34.31	-13.00	-21.31	H
2546.51	-34.88	10.50	10.86	-35.24	-13.00	-22.24	H
3395.44	-33.43	12.78	11.57	-32.22	-13.00	-19.22	H
1697.56	-35.02	9.56	9.72	-35.18	-13.00	-22.18	V
2546.51	-34.26	10.50	10.86	-34.62	-13.00	-21.62	V
3395.44	-33.04	12.78	11.57	-31.83	-13.00	-18.83	V



NB-IoT Band 26(Part22) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1648.09	-33.60	9.56	9.72	-33.76	-13.00	-20.76	H
2472.07	-35.44	10.50	10.86	-35.80	-13.00	-22.80	H
3296.44	-32.26	12.78	11.57	-31.05	-13.00	-18.05	H
1648.09	-35.28	9.56	9.72	-35.44	-13.00	-22.44	V
2472.07	-34.31	10.50	10.86	-34.67	-13.00	-21.67	V
3296.44	-32.64	12.78	11.57	-31.43	-13.00	-18.43	V
NB-IoT Band 26(Part22) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1673.11	-34.08	9.56	9.72	-34.24	-13.00	-21.24	H
2509.41	-34.20	10.50	10.86	-34.56	-13.00	-21.56	H
3346.20	-32.42	12.78	11.57	-31.21	-13.00	-18.21	H
1673.11	-35.78	9.56	9.72	-35.94	-13.00	-22.94	V
2509.41	-34.88	10.50	10.86	-35.24	-13.00	-22.24	V
3346.20	-33.15	12.78	11.57	-31.94	-13.00	-18.94	V
NB-IoT Band 26(Part22) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1697.56	-34.88	9.56	9.72	-35.04	-13.00	-22.04	H
2546.83	-35.36	10.50	10.86	-35.72	-13.00	-22.72	H
3395.81	-32.82	12.78	11.57	-31.61	-13.00	-18.61	H
1697.56	-35.11	9.56	9.72	-35.27	-13.00	-22.27	V
2546.83	-33.82	10.50	10.86	-34.18	-13.00	-21.18	V
3395.81	-32.05	12.78	11.57	-30.84	-13.00	-17.84	V



NB-IoT Band 26(Part22) / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1648.32	-33.52	9.56	9.72	-33.68	-13.00	-20.68	H
2472.08	-34.21	10.50	10.86	-34.57	-13.00	-21.57	H
3296.50	-32.67	12.78	11.57	-31.46	-13.00	-18.46	H
1648.32	-34.74	9.56	9.72	-34.90	-13.00	-21.90	V
2472.08	-34.68	10.50	10.86	-35.04	-13.00	-22.04	V
3296.50	-33.01	12.78	11.57	-31.80	-13.00	-18.80	V
NB-IoT Band 26(Part22) / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1673.08	-34.48	9.56	9.72	-34.64	-13.00	-21.64	H
2509.63	-34.46	10.50	10.86	-34.82	-13.00	-21.82	H
3345.98	-33.44	12.78	11.57	-32.23	-13.00	-19.23	H
1673.08	-35.04	9.56	9.72	-35.20	-13.00	-22.20	V
2509.63	-34.84	10.50	10.86	-35.20	-13.00	-22.20	V
3345.98	-32.98	12.78	11.57	-31.77	-13.00	-18.77	V
NB-IoT Band 26(Part22) / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1697.49	-33.45	9.56	9.72	-33.61	-13.00	-20.61	H
2546.77	-35.04	10.50	10.86	-35.40	-13.00	-22.40	H
3395.78	-32.33	12.78	11.57	-31.12	-13.00	-18.12	H
1697.49	-34.81	9.56	9.72	-34.97	-13.00	-21.97	V
2546.77	-34.90	10.50	10.86	-35.26	-13.00	-22.26	V
3395.78	-32.15	12.78	11.57	-30.94	-13.00	-17.94	V



NB-IoT Band 26(Part90) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1627.99	-33.56	9.56	9.72	-33.72	-13.00	-20.72	H
2442.51	-34.32	10.50	10.86	-34.68	-13.00	-21.68	H
3256.63	-33.28	12.78	11.57	-32.07	-13.00	-19.07	H
1627.99	-35.80	9.56	9.72	-35.96	-13.00	-22.96	V
2442.51	-34.50	10.50	10.86	-34.86	-13.00	-21.86	V
3256.63	-32.97	12.78	11.57	-31.76	-13.00	-18.76	V
NB-IoT Band 26(Part90) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1638.17	-34.76	9.56	9.72	-34.92	-13.00	-21.92	H
2457.26	-35.07	10.50	10.86	-35.43	-13.00	-22.43	H
3275.80	-32.64	12.78	11.57	-31.43	-13.00	-18.43	H
1638.17	-35.69	9.56	9.72	-35.85	-13.00	-22.85	V
2457.26	-34.19	10.50	10.86	-34.55	-13.00	-21.55	V
3275.80	-31.81	12.78	11.57	-30.60	-13.00	-17.60	V
NB-IoT Band 26(Part90) / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1647.60	-34.17	9.56	9.72	-34.33	-13.00	-21.33	H
2471.86	-34.87	10.50	10.86	-35.23	-13.00	-22.23	H
3295.38	-33.23	12.78	11.57	-32.02	-13.00	-19.02	H
1647.60	-35.95	9.56	9.72	-36.11	-13.00	-23.11	V
2471.86	-33.99	10.50	10.86	-34.35	-13.00	-21.35	V
3295.38	-32.66	12.78	11.57	-31.45	-13.00	-18.45	V



NB-IoT Band 26(Part90) / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1627.99	-33.78	9.56	9.72	-33.94	-13.00	-20.94	H
2442.27	-34.90	10.50	10.86	-35.26	-13.00	-22.26	H
3256.48	-33.35	12.78	11.57	-32.14	-13.00	-19.14	H
1627.99	-35.23	9.56	9.72	-35.39	-13.00	-22.39	V
2442.27	-34.49	10.50	10.86	-34.85	-13.00	-21.85	V
3256.48	-33.17	12.78	11.57	-31.96	-13.00	-18.96	V
NB-IoT Band 26(Part90) / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1638.02	-34.85	12.90	12.56	-34.51	-13.00	-21.51	H
2457.20	-34.12	13.10	16.32	-37.34	-13.00	-24.34	H
3276.03	-33.36	12.33	21.13	-42.16	-13.00	-29.16	H
1638.02	-35.74	12.90	12.56	-35.40	-13.00	-22.40	V
2457.20	-34.26	13.10	16.32	-37.48	-13.00	-24.48	V
3276.03	-32.13	12.33	21.13	-40.93	-13.00	-27.93	V
NB-IoT Band 26(Part90) / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1647.63	-33.90	9.56	9.72	-34.06	-13.00	-21.06	H
2471.48	-34.96	10.50	10.86	-35.32	-13.00	-22.32	H
3295.45	-32.48	12.78	11.57	-31.27	-13.00	-18.27	H
1647.63	-35.34	9.56	9.72	-35.50	-13.00	-22.50	V
2471.48	-34.00	10.50	10.86	-34.36	-13.00	-21.36	V
3295.45	-32.77	12.78	11.57	-31.56	-13.00	-18.56	V



NB-IoT Band 26(Part90) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1628.01	-33.85	9.56	9.72	-34.01	-13.00	-21.01	H
2442.22	-35.27	10.50	10.86	-35.63	-13.00	-22.63	H
3256.68	-32.28	12.78	11.57	-31.07	-13.00	-18.07	H
1628.01	-35.50	9.56	9.72	-35.66	-13.00	-22.66	V
2442.22	-34.58	10.50	10.86	-34.94	-13.00	-21.94	V
3256.68	-31.79	12.78	11.57	-30.58	-13.00	-17.58	V
NB-IoT Band 26(Part90) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1638.16	-34.50	9.56	9.72	-34.66	-13.00	-21.66	H
2456.84	-34.25	10.50	10.86	-34.61	-13.00	-21.61	H
3275.95	-32.42	12.78	11.57	-31.21	-13.00	-18.21	H
1638.16	-35.26	9.56	9.72	-35.42	-13.00	-22.42	V
2456.84	-33.83	10.50	10.86	-34.19	-13.00	-21.19	V
3275.95	-32.65	12.78	11.57	-31.44	-13.00	-18.44	V
NB-IoT Band 26(Part90) / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1647.66	-34.01	9.56	9.72	-34.17	-13.00	-21.17	H
2471.54	-34.81	10.50	10.86	-35.17	-13.00	-22.17	H
3295.81	-32.66	12.78	11.57	-31.45	-13.00	-18.45	H
1647.66	-36.00	9.56	9.72	-36.16	-13.00	-23.16	V
2471.54	-35.18	10.50	10.86	-35.54	-13.00	-22.54	V
3295.81	-32.60	12.78	11.57	-31.39	-13.00	-18.39	V



NB-IoT Band 26(Part90) / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1628.29	-34.43	9.56	9.72	-34.59	-13.00	-21.59	H
2442.42	-35.08	10.50	10.86	-35.44	-13.00	-22.44	H
3256.51	-33.50	12.78	11.57	-32.29	-13.00	-19.29	H
1628.29	-34.60	9.56	9.72	-34.76	-13.00	-21.76	V
2442.42	-34.19	10.50	10.86	-34.55	-13.00	-21.55	V
3256.51	-31.75	12.78	11.57	-30.54	-13.00	-17.54	V
NB-IoT Band 26(Part90) / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1637.84	-34.42	9.56	9.72	-34.58	-13.00	-21.58	H
2456.96	-35.48	10.50	10.86	-35.84	-13.00	-22.84	H
3276.00	-33.37	12.78	11.57	-32.16	-13.00	-19.16	H
1637.84	-35.46	9.56	9.72	-35.62	-13.00	-22.62	V
2456.96	-35.07	10.50	10.86	-35.43	-13.00	-22.43	V
3276.00	-31.95	12.78	11.57	-30.74	-13.00	-17.74	V
NB-IoT Band 26(Part90) / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1647.95	-33.56	9.56	9.72	-33.72	-13.00	-20.72	H
2471.72	-35.03	10.50	10.86	-35.39	-13.00	-22.39	H
3295.38	-32.92	12.78	11.57	-31.71	-13.00	-18.71	H
1647.95	-35.60	9.56	9.72	-35.76	-13.00	-22.76	V
2471.72	-34.20	10.50	10.86	-34.56	-13.00	-21.56	V
3295.38	-32.47	12.78	11.57	-31.26	-13.00	-18.26	V



NB-IoT Band 66 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3419.93	-34.13	12.90	12.56	-33.79	-13.00	-20.79	H
5130.00	-34.33	13.10	16.32	-37.55	-13.00	-24.55	H
6840.45	-32.80	12.33	21.13	-41.60	-13.00	-28.60	H
3419.93	-35.62	12.90	12.56	-35.28	-13.00	-22.28	V
5130.00	-34.81	13.10	16.32	-38.03	-13.00	-25.03	V
6840.45	-32.90	12.33	21.13	-41.70	-13.00	-28.70	V
NB-IoT Band 2 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3490.04	-34.25	12.90	12.56	-33.91	-13.00	-20.91	H
5234.73	-34.33	13.10	16.32	-37.55	-13.00	-24.55	H
6980.14	-33.53	12.33	21.13	-42.33	-13.00	-29.33	H
3490.04	-36.00	12.90	12.56	-35.66	-13.00	-22.66	V
5234.73	-34.60	13.10	16.32	-37.82	-13.00	-24.82	V
6980.14	-32.57	12.33	21.13	-41.37	-13.00	-28.37	V
NB-IoT Band 66 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3559.97	-33.76	12.90	12.56	-33.42	-13.00	-20.42	H
5339.65	-34.13	13.10	16.32	-37.35	-13.00	-24.35	H
7119.76	-32.85	12.33	21.13	-41.65	-13.00	-28.65	H
3559.97	-35.34	12.90	12.56	-35.00	-13.00	-22.00	V
5339.65	-34.19	13.10	16.32	-37.41	-13.00	-24.41	V
7119.76	-32.34	12.33	21.13	-41.14	-13.00	-28.14	V



NB-IoT Band 66 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3419.96	-34.73	12.90	12.56	-34.39	-13.00	-21.39	H
5130.24	-34.55	13.10	16.32	-37.77	-13.00	-24.77	H
6840.24	-33.47	12.33	21.13	-42.27	-13.00	-29.27	H
3419.96	-35.16	12.90	12.56	-34.82	-13.00	-21.82	V
5130.24	-34.52	13.10	16.32	-37.74	-13.00	-24.74	V
6840.24	-32.50	12.33	21.13	-41.30	-13.00	-28.30	V
NB-IoT Band 66 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3490.08	-33.53	12.90	12.56	-33.19	-13.00	-20.19	H
5235.18	-35.13	13.10	16.32	-38.35	-13.00	-25.35	H
6980.17	-32.32	12.33	21.13	-41.12	-13.00	-28.12	H
3490.08	-34.77	12.90	12.56	-34.43	-13.00	-21.43	V
5235.18	-33.87	13.10	16.32	-37.09	-13.00	-24.09	V
6980.17	-33.15	12.33	21.13	-41.95	-13.00	-28.95	V
NB-IoT Band 66 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3559.76	-33.97	12.90	12.56	-33.63	-13.00	-20.63	H
5339.47	-34.69	13.10	16.32	-37.91	-13.00	-24.91	H
7119.37	-33.36	12.33	21.13	-42.16	-13.00	-29.16	H
3559.76	-35.08	12.90	12.56	-34.74	-13.00	-21.74	V
5339.47	-34.45	13.10	16.32	-37.67	-13.00	-24.67	V
7119.37	-31.80	12.33	21.13	-40.60	-13.00	-27.60	V



NB-IoT Band 66 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.28	-33.52	12.90	12.56	-33.18	-13.00	-20.18	H
5130.49	-34.22	13.10	16.32	-37.44	-13.00	-24.44	H
6840.59	-32.78	12.33	21.13	-41.58	-13.00	-28.58	H
3420.28	-34.53	12.90	12.56	-34.19	-13.00	-21.19	V
5130.49	-34.51	13.10	16.32	-37.73	-13.00	-24.73	V
6840.59	-32.25	12.33	21.13	-41.05	-13.00	-28.05	V
NB-IoT Band 66 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3490.05	-34.25	12.90	12.56	-33.91	-13.00	-20.91	H
5235.08	-35.31	13.10	16.32	-38.53	-13.00	-25.53	H
6980.05	-33.40	12.33	21.13	-42.20	-13.00	-29.20	H
3490.05	-35.12	12.90	12.56	-34.78	-13.00	-21.78	V
5235.08	-34.80	13.10	16.32	-38.02	-13.00	-25.02	V
6980.05	-32.11	12.33	21.13	-40.91	-13.00	-27.91	V
NB-IoT Band 66 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3559.93	-33.73	12.90	12.56	-33.39	-13.00	-20.39	H
5339.85	-35.23	13.10	16.32	-38.45	-13.00	-25.45	H
7119.69	-32.18	12.33	21.13	-40.98	-13.00	-27.98	H
3559.93	-35.90	12.90	12.56	-35.56	-13.00	-22.56	V
5339.85	-34.56	13.10	16.32	-37.78	-13.00	-24.78	V
7119.69	-32.24	12.33	21.13	-41.04	-13.00	-28.04	V



NB-IoT Band 66 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3420.03	-33.74	12.90	12.56	-33.40	-13.00	-20.40	H
5130.15	-34.30	13.10	16.32	-37.52	-13.00	-24.52	H
6840.53	-33.59	12.33	21.13	-42.39	-13.00	-29.39	H
3420.03	-36.01	12.90	12.56	-35.67	-13.00	-22.67	V
5130.15	-34.79	13.10	16.32	-38.01	-13.00	-25.01	V
6840.53	-32.68	12.33	21.13	-41.48	-13.00	-28.48	V
NB-IoT Band 66 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3490.00	-34.55	12.90	12.56	-34.21	-13.00	-21.21	H
5234.93	-34.80	13.10	16.32	-38.02	-13.00	-25.02	H
6979.94	-32.79	12.33	21.13	-41.59	-13.00	-28.59	H
3490.00	-35.54	12.90	12.56	-35.20	-13.00	-22.20	V
5234.93	-34.04	13.10	16.32	-37.26	-13.00	-24.26	V
6979.94	-32.80	12.33	21.13	-41.60	-13.00	-28.60	V
NB-IoT Band 66 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
3559.96	-34.56	12.90	12.56	-34.22	-13.00	-21.22	H
5339.57	-34.90	13.10	16.32	-38.12	-13.00	-25.12	H
7119.49	-32.17	12.33	21.13	-40.97	-13.00	-27.97	H
3559.96	-35.58	12.90	12.56	-35.24	-13.00	-22.24	V
5339.57	-34.01	13.10	16.32	-37.23	-13.00	-24.23	V
7119.49	-33.05	12.33	21.13	-41.85	-13.00	-28.85	V



NB-IoT Band 71 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1326.41	-33.47	8.17	9.34	-34.64	-13.00	-21.64	H
1989.17	-34.97	9.53	10.42	-35.86	-13.00	-22.86	H
2652.60	-32.86	11.27	11.12	-32.71	-13.00	-19.71	H
1326.41	-35.80	8.17	9.34	-36.97	-13.00	-23.97	V
1989.17	-35.13	9.53	10.42	-36.02	-13.00	-23.02	V
2652.60	-32.54	11.27	11.12	-32.39	-13.00	-19.39	V
NB-IoT Band 71 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1361.10	-34.23	8.17	9.34	-35.40	-13.00	-22.40	H
2041.60	-34.23	9.53	10.42	-35.12	-13.00	-22.12	H
2722.00	-32.90	11.27	11.12	-32.75	-13.00	-19.75	H
1361.10	-34.91	8.17	9.34	-36.08	-13.00	-23.08	V
2041.60	-33.96	9.53	10.42	-34.85	-13.00	-21.85	V
2722.00	-32.48	11.27	11.12	-32.33	-13.00	-19.33	V
NB-IoT Band 71 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea	Limit	Margin	Polarity
				(dBm)	(dBm)	(dBm)	
1395.53	-34.81	8.17	9.34	-35.98	-13.00	-22.98	H
2093.51	-34.80	9.53	10.42	-35.69	-13.00	-22.69	H
2791.76	-33.10	11.27	11.12	-32.95	-13.00	-19.95	H
1395.53	-35.53	8.17	9.34	-36.70	-13.00	-23.70	V
2093.51	-34.49	9.53	10.42	-35.38	-13.00	-22.38	V
2791.76	-32.55	11.27	11.12	-32.40	-13.00	-19.40	V



NB-IoT Band 71 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1326.29	-33.85	8.17	9.34	-35.02	-13.00	-22.02	H
1989.54	-35.45	9.53	10.42	-36.34	-13.00	-23.34	H
2652.52	-33.26	11.27	11.12	-33.11	-13.00	-20.11	H
1326.29	-35.33	8.17	9.34	-36.50	-13.00	-23.50	V
1989.54	-34.87	9.53	10.42	-35.76	-13.00	-22.76	V
2652.52	-32.78	11.27	11.12	-32.63	-13.00	-19.63	V
NB-IoT Band 71 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1361.17	-34.09	8.17	9.34	-35.26	-13.00	-22.26	H
2041.24	-34.26	9.53	10.42	-35.15	-13.00	-22.15	H
2722.10	-32.25	11.27	11.12	-32.10	-13.00	-19.10	H
1361.17	-35.22	8.17	9.34	-36.39	-13.00	-23.39	V
2041.24	-34.97	9.53	10.42	-35.86	-13.00	-22.86	V
2722.10	-32.64	11.27	11.12	-32.49	-13.00	-19.49	V
NB-IoT Band 71 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1395.62	-33.51	8.17	9.34	-34.68	-13.00	-21.68	H
2093.90	-34.20	9.53	10.42	-35.09	-13.00	-22.09	H
2791.41	-33.08	11.27	11.12	-32.93	-13.00	-19.93	H
1395.62	-35.79	8.17	9.34	-36.96	-13.00	-23.96	V
2093.90	-35.05	9.53	10.42	-35.94	-13.00	-22.94	V
2791.41	-31.99	11.27	11.12	-31.84	-13.00	-18.84	V



NB-IoT Band 71 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1326.14	-34.51	8.17	9.34	-35.68	-13.00	-22.68	H
1989.46	-34.80	9.53	10.42	-35.69	-13.00	-22.69	H
2652.49	-32.72	11.27	11.12	-32.57	-13.00	-19.57	H
1326.14	-34.73	8.17	9.34	-35.90	-13.00	-22.90	V
1989.46	-34.64	9.53	10.42	-35.53	-13.00	-22.53	V
2652.49	-31.91	11.27	11.12	-31.76	-13.00	-18.76	V
NB-IoT Band 71 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1360.97	-34.17	8.17	9.34	-35.34	-13.00	-22.34	H
2041.63	-34.79	9.53	10.42	-35.68	-13.00	-22.68	H
2722.09	-32.51	11.27	11.12	-32.36	-13.00	-19.36	H
1360.97	-35.73	8.17	9.34	-36.90	-13.00	-23.90	V
2041.63	-34.63	9.53	10.42	-35.52	-13.00	-22.52	V
2722.09	-32.73	11.27	11.12	-32.58	-13.00	-19.58	V
NB-IoT Band 71 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1395.55	-34.46	8.17	9.34	-35.63	-13.00	-22.63	H
2093.71	-35.32	9.53	10.42	-36.21	-13.00	-23.21	H
2791.75	-33.00	11.27	11.12	-32.85	-13.00	-19.85	H
1395.55	-35.40	8.17	9.34	-36.57	-13.00	-23.57	V
2093.71	-34.84	9.53	10.42	-35.73	-13.00	-22.73	V
2791.75	-33.01	11.27	11.12	-32.86	-13.00	-19.86	V



NB-IoT Band 71 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1326.41	-34.03	8.17	9.34	-35.20	-13.00	-22.20	H
1989.14	-34.71	9.53	10.42	-35.60	-13.00	-22.60	H
2652.64	-33.11	11.27	11.12	-32.96	-13.00	-19.96	H
1326.41	-35.30	8.17	9.34	-36.47	-13.00	-23.47	V
1989.14	-33.94	9.53	10.42	-34.83	-13.00	-21.83	V
2652.64	-32.69	11.27	11.12	-32.54	-13.00	-19.54	V
NB-IoT Band 71 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1361.06	-34.80	8.17	9.34	-35.97	-13.00	-22.97	H
2041.34	-33.99	9.53	10.42	-34.88	-13.00	-21.88	H
2721.80	-32.47	11.27	11.12	-32.32	-13.00	-19.32	H
1361.06	-34.75	8.17	9.34	-35.92	-13.00	-22.92	V
2041.34	-34.89	9.53	10.42	-35.78	-13.00	-22.78	V
2721.80	-32.37	11.27	11.12	-32.22	-13.00	-19.22	V
NB-IoT Band 71 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1395.76	-33.69	8.17	9.34	-34.86	-13.00	-21.86	H
2093.84	-34.09	9.53	10.42	-34.98	-13.00	-21.98	H
2791.69	-33.46	11.27	11.12	-33.31	-13.00	-20.31	H
1395.76	-35.31	8.17	9.34	-36.48	-13.00	-23.48	V
2093.84	-34.39	9.53	10.42	-35.28	-13.00	-22.28	V
2791.69	-32.28	11.27	11.12	-32.13	-13.00	-19.13	V



NB-IoT Band 85 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1396.17	-33.96	8.17	9.34	-35.13	-13.00	-22.13	H
2094.11	-34.82	9.53	10.42	-35.71	-13.00	-22.71	H
2792.57	-33.05	11.27	11.12	-32.90	-13.00	-19.90	H
1396.17	-34.95	8.17	9.34	-36.12	-13.00	-23.12	V
2094.11	-33.76	9.53	10.42	-34.65	-13.00	-21.65	V
2792.57	-31.81	11.27	11.12	-31.66	-13.00	-18.66	V
NB-IoT Band 85 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1413.87	-34.52	8.17	9.34	-35.69	-13.00	-22.69	H
2121.12	-35.08	9.53	10.42	-35.97	-13.00	-22.97	H
2828.05	-32.64	11.27	11.12	-32.49	-13.00	-19.49	H
1413.87	-35.52	8.17	9.34	-36.69	-13.00	-23.69	V
2121.12	-34.00	9.53	10.42	-34.89	-13.00	-21.89	V
2828.05	-33.09	11.27	11.12	-32.94	-13.00	-19.94	V
NB-IoT Band 85 / QPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1431.54	-33.93	8.17	9.34	-35.10	-13.00	-22.10	H
2147.59	-34.45	9.53	10.42	-35.34	-13.00	-22.34	H
2863.38	-33.12	11.27	11.12	-32.97	-13.00	-19.97	H
1431.54	-35.24	8.17	9.34	-36.41	-13.00	-23.41	V
2147.59	-34.91	9.53	10.42	-35.80	-13.00	-22.80	V
2863.38	-31.96	11.27	11.12	-31.81	-13.00	-18.81	V



NB-IoT Band 85 / QPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1396.20	-34.61	8.17	9.34	-35.78	-13.00	-22.78	H
2094.28	-34.99	9.53	10.42	-35.88	-13.00	-22.88	H
2792.30	-33.00	11.27	11.12	-32.85	-13.00	-19.85	H
1396.20	-35.19	8.17	9.34	-36.36	-13.00	-23.36	V
2094.28	-34.20	9.53	10.42	-35.09	-13.00	-22.09	V
2792.30	-32.18	11.27	11.12	-32.03	-13.00	-19.03	V
NB-IoT Band 85 / QPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.20	-33.65	8.17	9.34	-34.82	-13.00	-21.82	H
2121.08	-34.06	9.53	10.42	-34.95	-13.00	-21.95	H
2828.06	-33.04	11.27	11.12	-32.89	-13.00	-19.89	H
1414.20	-35.59	8.17	9.34	-36.76	-13.00	-23.76	V
2121.08	-35.09	9.53	10.42	-35.98	-13.00	-22.98	V
2828.06	-32.36	11.27	11.12	-32.21	-13.00	-19.21	V
NB-IoT Band 85 / QPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1431.83	-34.24	8.17	9.34	-35.41	-13.00	-22.41	H
2147.81	-34.66	9.53	10.42	-35.55	-13.00	-22.55	H
2863.43	-32.96	11.27	11.12	-32.81	-13.00	-19.81	H
1431.83	-35.04	8.17	9.34	-36.21	-13.00	-23.21	V
2147.81	-34.83	9.53	10.42	-35.72	-13.00	-22.72	V
2863.43	-32.40	11.27	11.12	-32.25	-13.00	-19.25	V



NB-IoT Band 85 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1396.03	-34.70	8.17	9.34	-35.87	-13.00	-22.87	H
2094.39	-34.17	9.53	10.42	-35.06	-13.00	-22.06	H
2792.46	-33.56	11.27	11.12	-33.41	-13.00	-20.41	H
1396.03	-34.72	8.17	9.34	-35.89	-13.00	-22.89	V
2094.39	-33.91	9.53	10.42	-34.80	-13.00	-21.80	V
2792.46	-32.69	11.27	11.12	-32.54	-13.00	-19.54	V
NB-IoT Band 85 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1413.88	-34.04	8.17	9.34	-35.21	-13.00	-22.21	H
2120.76	-34.48	9.53	10.42	-35.37	-13.00	-22.37	H
2827.97	-32.19	11.27	11.12	-32.04	-13.00	-19.04	H
1413.88	-34.93	8.17	9.34	-36.10	-13.00	-23.10	V
2120.76	-34.87	9.53	10.42	-35.76	-13.00	-22.76	V
2827.97	-32.73	11.27	11.12	-32.58	-13.00	-19.58	V
NB-IoT Band 85 / BPSK / 3.75KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1431.70	-34.40	8.17	9.34	-35.57	-13.00	-22.57	H
2147.81	-35.16	9.53	10.42	-36.05	-13.00	-23.05	H
2863.43	-33.05	11.27	11.12	-32.90	-13.00	-19.90	H
1431.70	-35.68	8.17	9.34	-36.85	-13.00	-23.85	V
2147.81	-34.22	9.53	10.42	-35.11	-13.00	-22.11	V
2863.43	-33.03	11.27	11.12	-32.88	-13.00	-19.88	V



NB-IoT Band 85 / BPSK / 15KHz /1@0/ The Worst Test Results for Lowest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1396.17	-34.43	8.17	9.34	-35.60	-13.00	-22.60	H
2094.46	-34.57	9.53	10.42	-35.46	-13.00	-22.46	H
2792.15	-32.49	11.27	11.12	-32.34	-13.00	-19.34	H
1396.17	-34.83	8.17	9.34	-36.00	-13.00	-23.00	V
2094.46	-34.63	9.53	10.42	-35.52	-13.00	-22.52	V
2792.15	-32.96	11.27	11.12	-32.81	-13.00	-19.81	V
NB-IoT Band 85 / BPSK / 15KHz /1@0/ The Worst Test Results for Middle							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1414.16	-33.44	8.17	9.34	-34.61	-13.00	-21.61	H
2121.06	-34.21	9.53	10.42	-35.10	-13.00	-22.10	H
2827.93	-33.47	11.27	11.12	-33.32	-13.00	-20.32	H
1414.16	-34.87	8.17	9.34	-36.04	-13.00	-23.04	V
2121.06	-34.12	9.53	10.42	-35.01	-13.00	-22.01	V
2827.93	-32.12	11.27	11.12	-31.97	-13.00	-18.97	V
NB-IoT Band 85 / BPSK / 15KHz /1@0/ The Worst Test Results for Highest							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit (dBm)	Margin (dBm)	Polarity
1431.64	-34.50	8.17	9.34	-35.67	-13.00	-22.67	H
2147.63	-34.11	9.53	10.42	-35.00	-13.00	-22.00	H
2863.68	-32.64	11.27	11.12	-32.49	-13.00	-19.49	H
1431.64	-35.35	8.17	9.34	-36.52	-13.00	-23.52	V
2147.63	-34.63	9.53	10.42	-35.52	-13.00	-22.52	V
2863.68	-32.32	11.27	11.12	-32.17	-13.00	-19.17	V



5. RECEIVER SPURIOUS EMISSIONS

5.1 TEST LIMIT

Radiated emission measurements shall be performed with the receiver antenna connected to the receiver antenna ports. The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is higher, to at least five times the highest tunable or local oscillator frequency, whichever is higher, without exceeding 40 GHz.

Spurious emissions from receivers shall not exceed the radiated emissions limits shown in table 3.

Table 3 – Receiver radiated emissions limits

Frequency (MHz)	Field strength ($\mu\text{V/m}$ at 3 metres)Note 1
30-88	100
88-216	150
216-960	200
Above 960	500

Note 1: Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with section 6.6.

5.2 TEST PROCEDURE

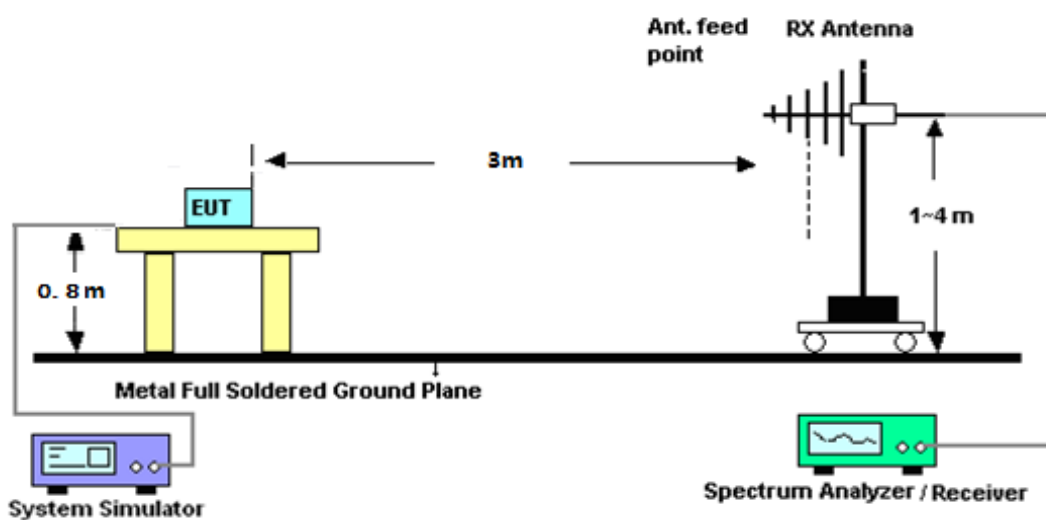
- The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 meters (above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. horizontal and vertical polarizations of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then QuasiPeak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

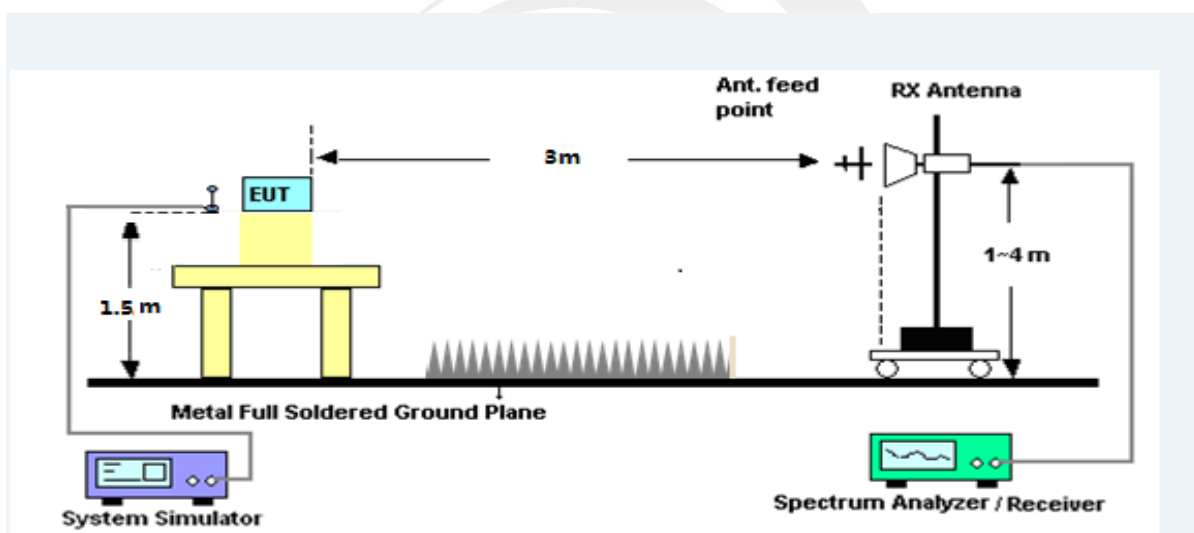
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.3 TEST SETUP

For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz





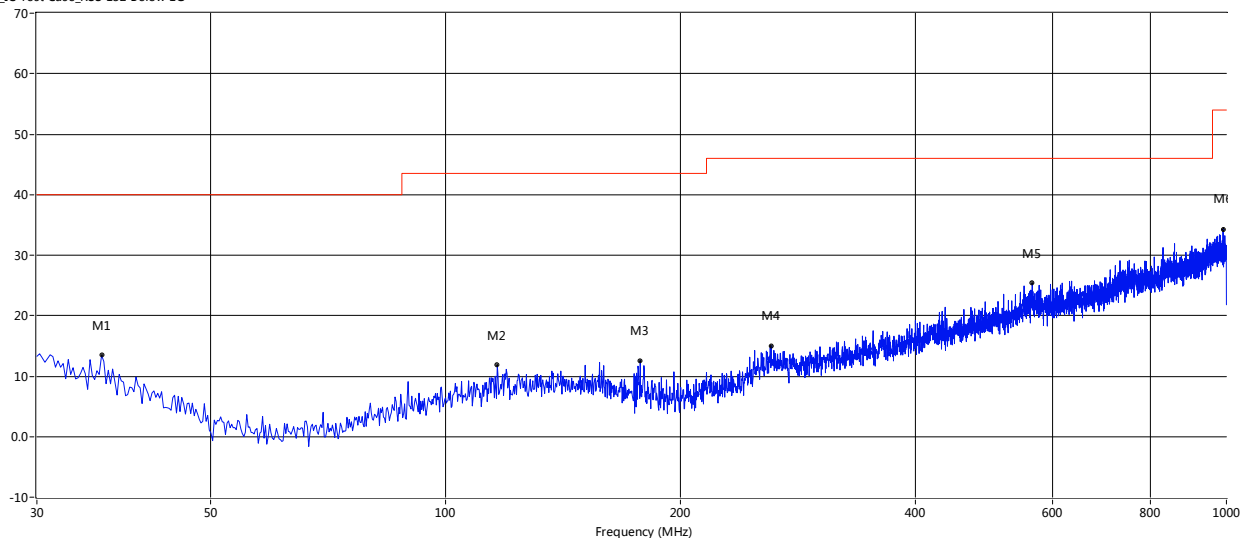
5.4 TEST RESULT

Note: All mode has been tested, only show the worst case in this report.

Band 5 (30MHz -1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 132 Below 1G

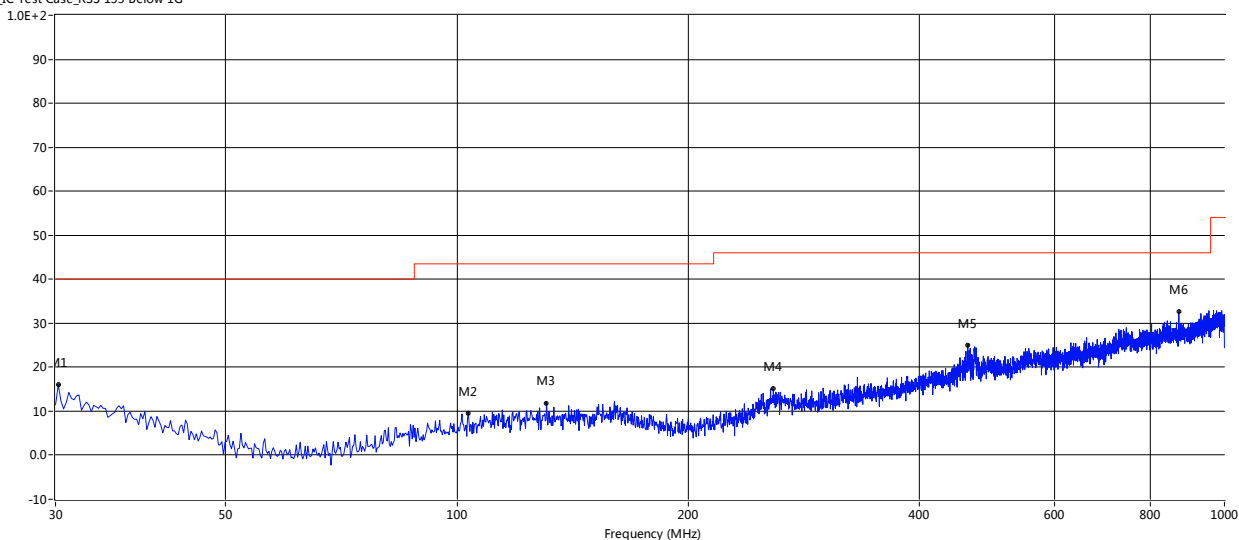


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
36.305	13.43	--	--	-15.19	--	40.0	--	-26.57	Horizontal	Pass
116.573	11.82	--	--	-17.15	--	43.5	--	-31.68	Horizontal	Pass
177.682	12.59	--	--	-18.41	--	43.5	--	-30.91	Horizontal	Pass
261.345	15.05	--	--	-12.79	--	46.0	--	-30.95	Horizontal	Pass
564.227	25.36	--	--	-3.00	--	46.0	--	-20.64	Horizontal	Pass
990.300	34.32	--	--	5.43	--	54.0	--	-19.68	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 133 Below 1G

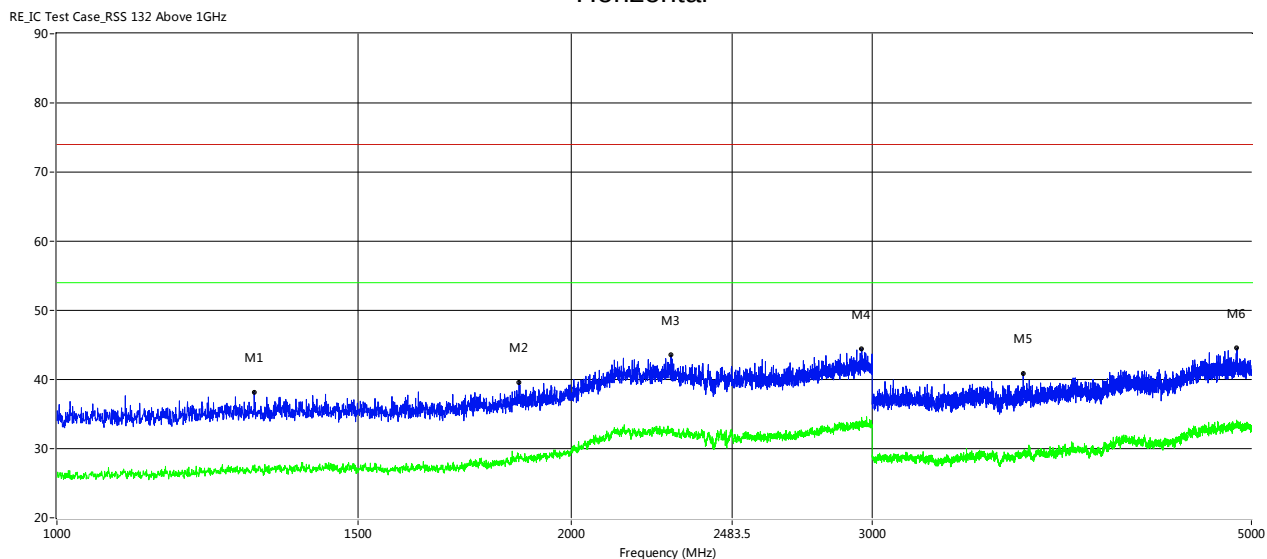


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
30.970	12.20	--	--	-12.50	--	40.0	--	-27.80	Vertical	Pass
113.177	11.79	--	--	-17.43	--	43.5	--	-31.71	Vertical	Pass
161.435	11.98	--	--	-17.48	--	43.5	--	-31.52	Vertical	Pass
473.290	22.55	--	--	-6.54	--	46.0	--	-23.45	Vertical	Pass
803.575	29.99	--	--	1.01	--	46.0	--	-16.01	Vertical	Pass
992.240	34.24	--	--	5.43	--	54.0	--	-19.76	Vertical	Pass



Band 5 (Above 1GHz):

Mid channel
Horizontal

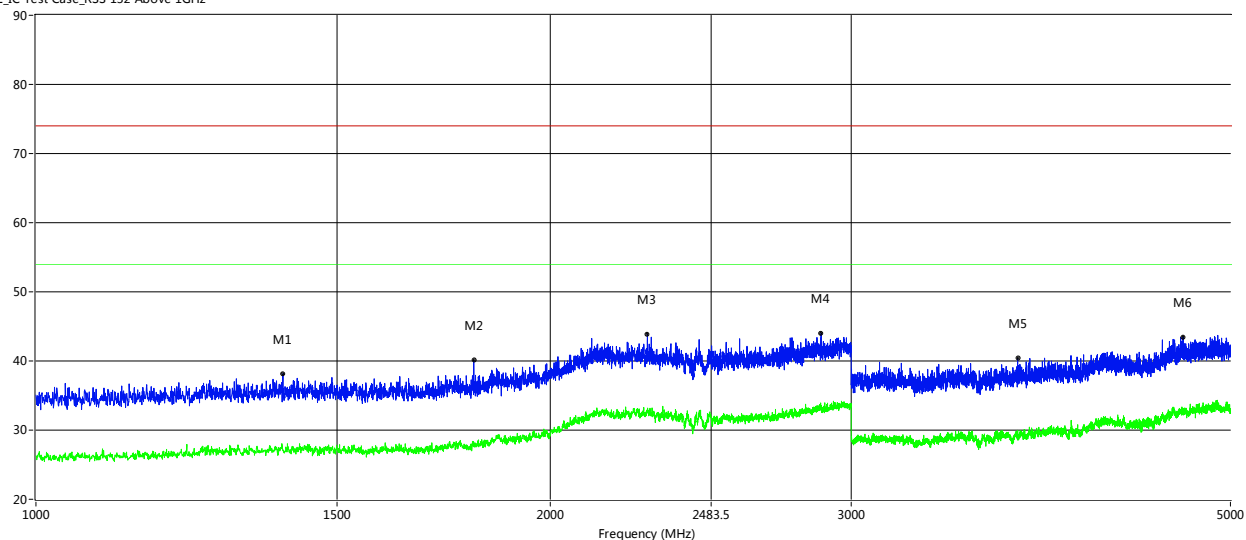


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1304.500	38.13	--	26.88	-0.92	74.0	--	54.0	-27.12	Horizontal	Pass
1864.000	39.61	--	28.83	0.80	74.0	--	54.0	-25.17	Horizontal	Pass
2287.500	43.58	--	32.38	4.59	74.0	--	54.0	-21.62	Horizontal	Pass
2958.000	44.47	--	33.72	5.93	74.0	--	54.0	-20.28	Horizontal	Pass
3677.000	40.89	--	29.47	-11.45	74.0	--	54.0	-24.53	Horizontal	Pass
4904.000	44.55	--	33.88	-6.39	74.0	--	54.0	-20.12	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 132 Above 1GHz



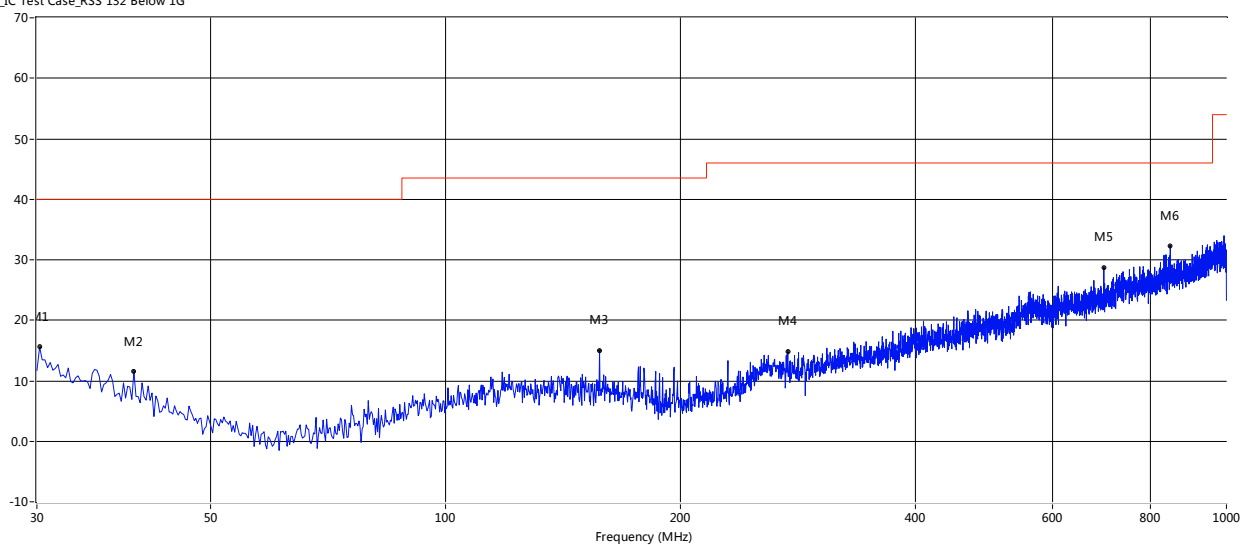
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1395.000	38.15	--	27.06	-0.67	74.0	--	54.0	-26.94	Vertical	Pass
1804.000	40.10	--	28.27	-0.02	74.0	--	54.0	-25.73	Vertical	Pass
2279.500	43.84	--	32.61	4.60	74.0	--	54.0	-21.39	Vertical	Pass
2880.500	44.02	--	33.44	5.61	74.0	--	54.0	-20.56	Vertical	Pass
3754.000	40.37	--	29.37	-11.19	74.0	--	54.0	-24.63	Vertical	Pass
4691.000	43.48	--	32.72	-7.44	74.0	--	54.0	-21.28	Vertical	Pass



Band 26 (30MHz -1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 132 Below 1G

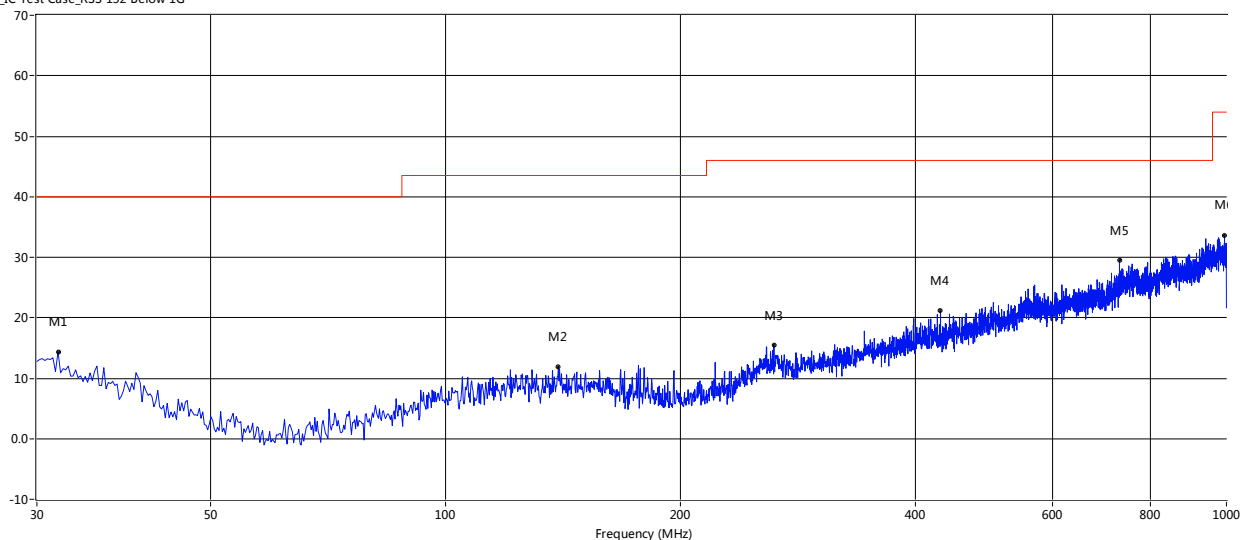


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
30.000	11.64	--	--	-12.01	--	40.0	--	-28.36	Horizontal	Pass
39.943	11.51	--	--	-16.97	--	40.0	--	-28.49	Horizontal	Pass
157.555	15.00	--	--	-17.25	--	43.5	--	-28.50	Horizontal	Pass
274.440	14.86	--	--	-13.46	--	46.0	--	-31.14	Horizontal	Pass
696.875	28.76	--	--	-1.42	--	46.0	--	-17.24	Horizontal	Pass
847.710	32.34	--	--	2.56	--	46.0	--	-13.66	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 132 Below 1G



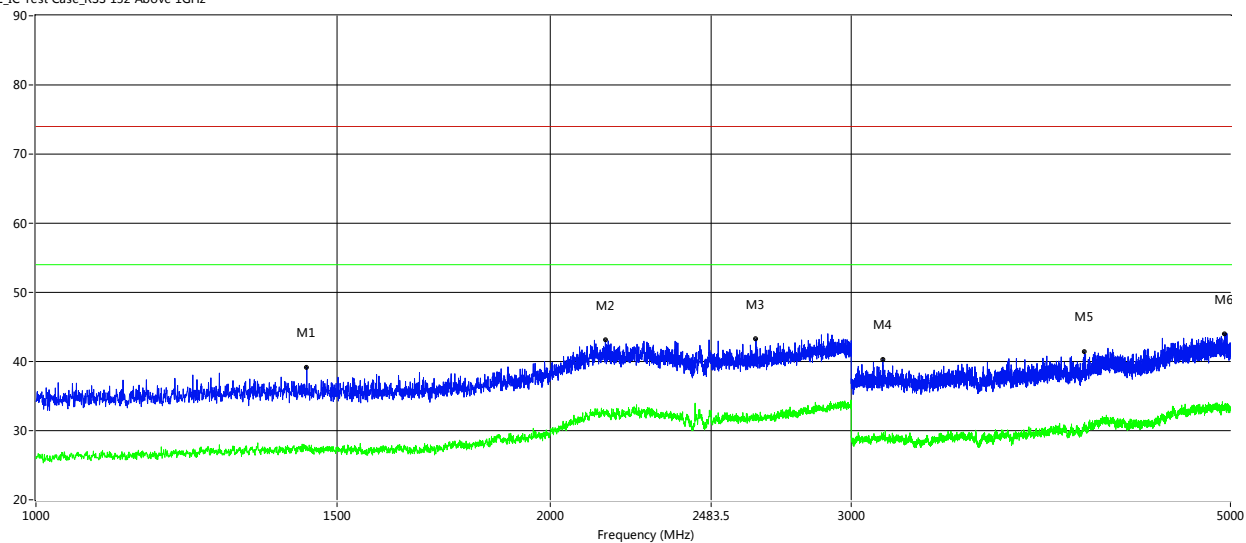
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
31.940	14.36	--	--	-12.98	--	40.0	--	-25.64	Vertical	Pass
139.610	11.92	--	--	-16.59	--	43.5	--	-31.58	Vertical	Pass
263.528	15.39	--	--	-12.78	--	46.0	--	-30.61	Vertical	Pass
430.610	21.13	--	--	-7.78	--	46.0	--	-24.87	Vertical	Pass
729.612	29.43	--	--	0.39	--	46.0	--	-16.57	Vertical	Pass
994.907	33.57	--	--	5.43	--	54.0	--	-20.43	Vertical	Pass



Band 26 (Above 1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 132 Above 1GHz

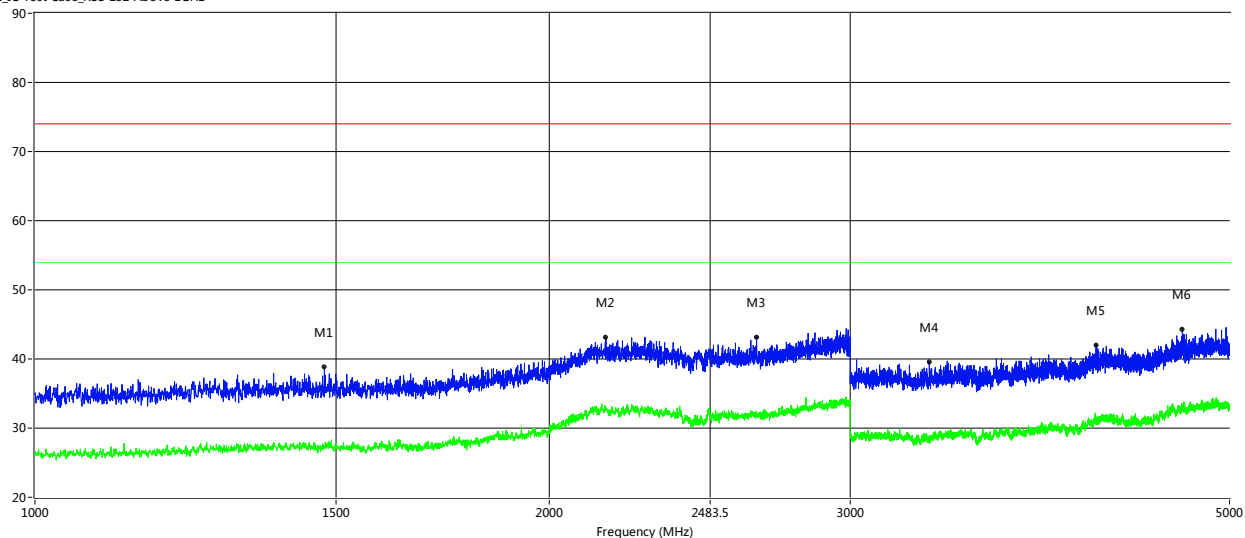


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1440.500	39.15	--	27.24	-0.60	74.0	--	54.0	-26.76	Horizontal	Pass
2154.000	43.13	--	32.62	4.59	74.0	--	54.0	-21.38	Horizontal	Pass
2638.500	43.26	--	32.09	4.40	74.0	--	54.0	-21.91	Horizontal	Pass
3130.500	40.31	--	29.31	-12.38	74.0	--	54.0	-24.69	Horizontal	Pass
4107.500	41.40	--	31.07	-9.83	74.0	--	54.0	-22.93	Horizontal	Pass
4962.500	44.06	--	32.92	-6.38	74.0	--	54.0	-21.08	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 132 Above 1GHz



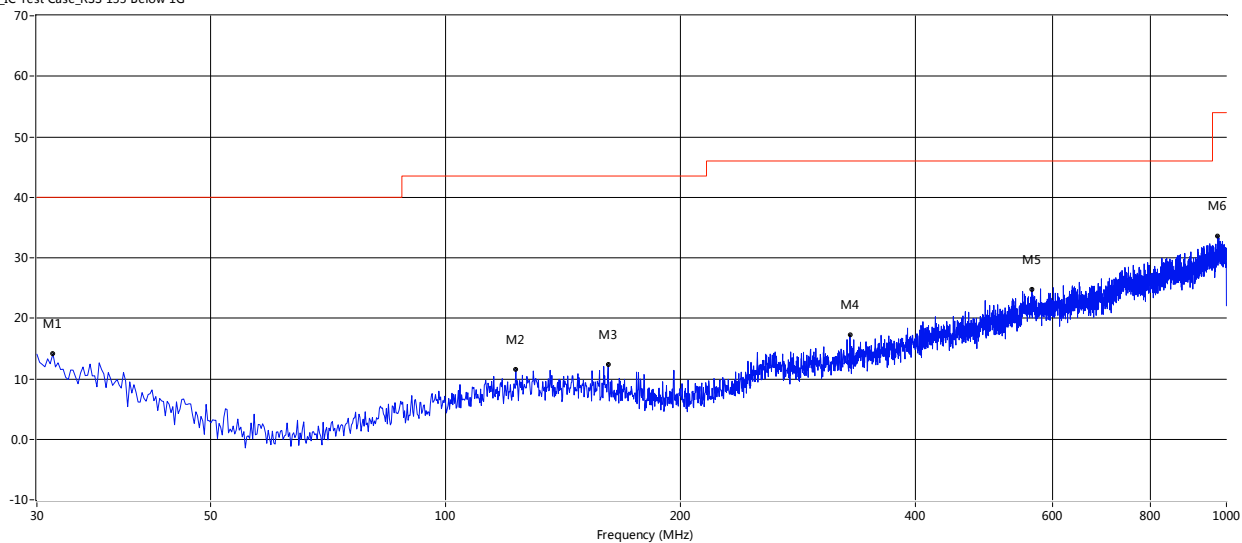
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1477.000	38.83	--	27.03	-0.57	74.0	--	54.0	-26.97	Vertical	Pass
2158.500	43.08	--	33.01	4.54	74.0	--	54.0	-20.99	Vertical	Pass
2644.500	43.16	--	32.42	4.45	74.0	--	54.0	-21.58	Vertical	Pass
3337.500	39.59	--	27.81	-12.04	74.0	--	54.0	-26.19	Vertical	Pass
4178.500	42.05	--	31.40	-9.25	74.0	--	54.0	-22.60	Vertical	Pass
4693.500	44.27	--	32.71	-7.43	74.0	--	54.0	-21.29	Vertical	Pass



Band 2 (30MHz -1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 133 Below 1G

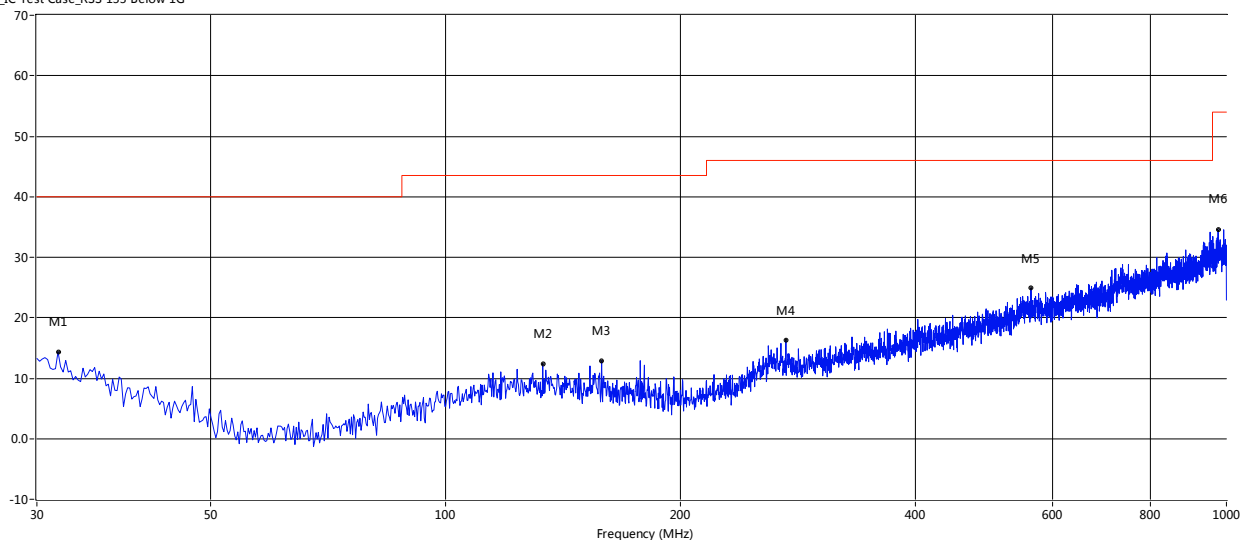


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
31.455	14.11	--	--	-12.74	--	40.0	--	-25.89	Horizontal	Pass
123.120	11.51	--	--	-16.88	--	43.5	--	-31.99	Horizontal	Pass
161.678	12.31	--	--	-17.50	--	43.5	--	-31.19	Horizontal	Pass
329.730	17.29	--	--	-11.58	--	46.0	--	-28.71	Horizontal	Pass
563.742	24.74	--	--	-2.99	--	46.0	--	-21.26	Horizontal	Pass
974.295	33.60	--	--	5.64	--	54.0	--	-20.40	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 133 Below 1G



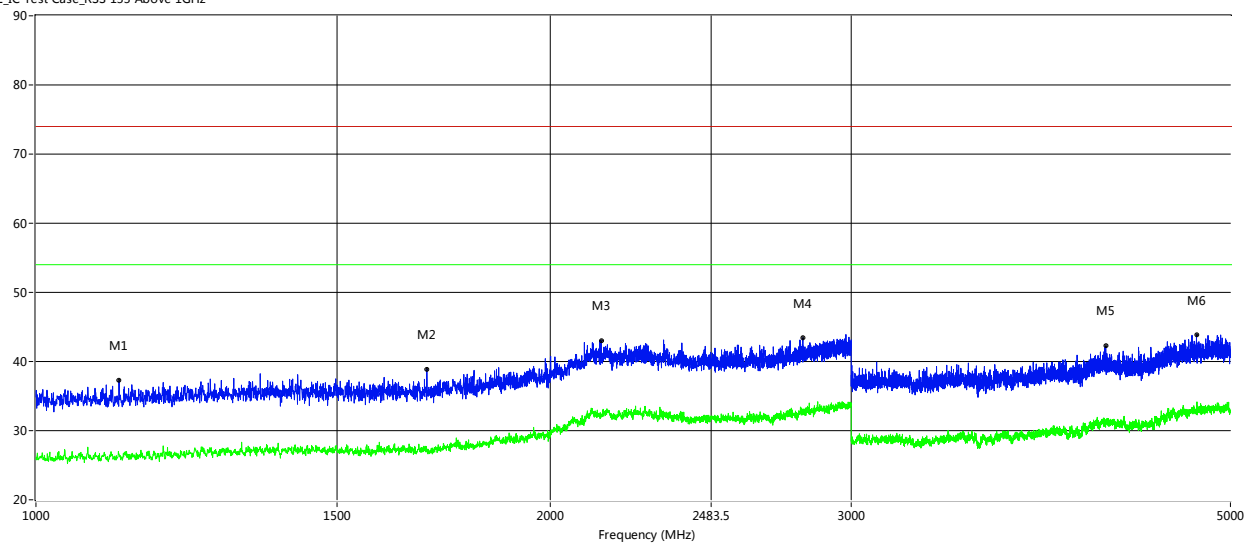
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
31.940	14.36	--	--	-12.98	--	40.0	--	-25.64	Vertical	Pass
133.305	12.44	--	--	-16.74	--	43.5	--	-31.06	Vertical	Pass
158.525	12.89	--	--	-17.29	--	43.5	--	-30.61	Vertical	Pass
272.985	16.26	--	--	-13.43	--	46.0	--	-29.74	Vertical	Pass
562.045	24.88	--	--	-2.97	--	46.0	--	-21.12	Vertical	Pass
975.750	34.55	--	--	5.74	--	54.0	--	-19.45	Vertical	Pass



Band 2 (Above 1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 133 Above 1GHz

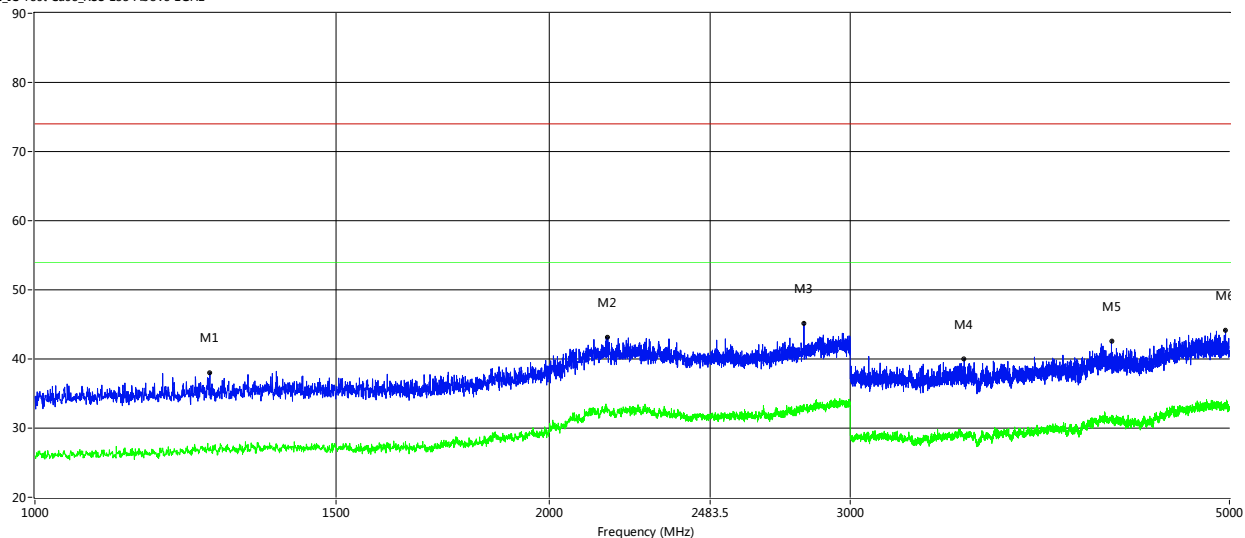


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1118.500	37.25	--	26.64	-1.45	74.0	--	54.0	-27.36	Horizontal	Pass
1693.500	38.89	--	27.38	-0.50	74.0	--	54.0	-26.62	Horizontal	Pass
2142.000	43.06	--	32.17	4.50	74.0	--	54.0	-21.83	Horizontal	Pass
2810.500	43.44	--	32.68	5.34	74.0	--	54.0	-21.32	Horizontal	Pass
4227.500	42.25	--	31.58	-9.03	74.0	--	54.0	-22.42	Horizontal	Pass
4777.000	43.93	--	32.71	-7.08	74.0	--	54.0	-21.29	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 133 Above 1GHz



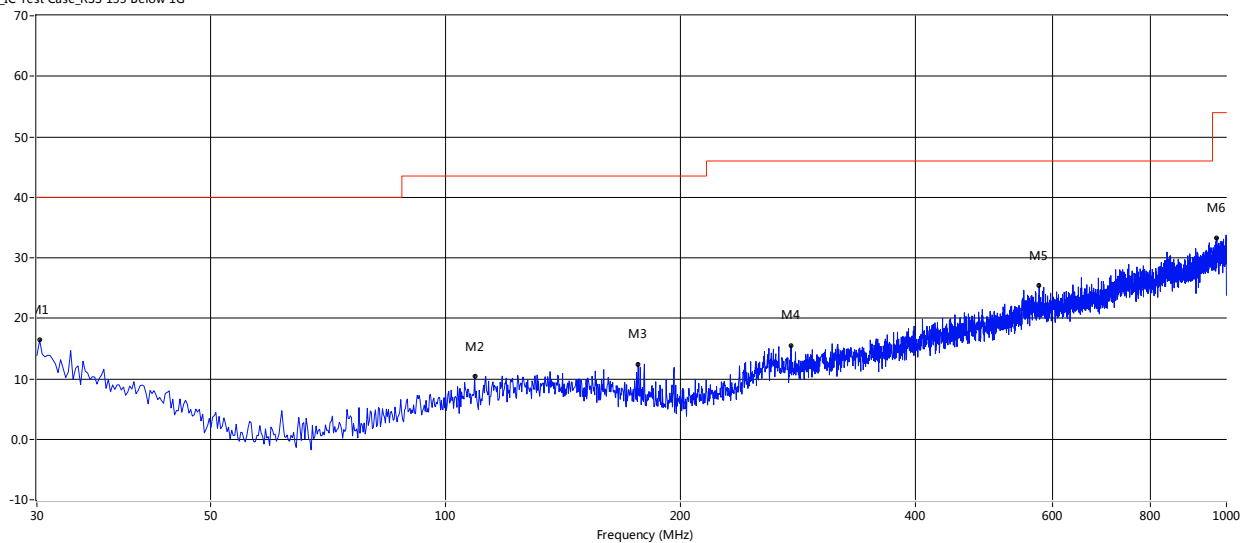
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1266.000	38.04	--	27.16	-0.92	74.0	--	54.0	-26.84	Vertical	Pass
2164.000	43.15	--	32.76	4.49	74.0	--	54.0	-21.24	Vertical	Pass
2818.500	45.15	--	33.44	5.40	74.0	--	54.0	-20.56	Vertical	Pass
3498.000	40.02	--	28.71	-11.42	74.0	--	54.0	-25.29	Vertical	Pass
4266.000	42.57	--	31.31	-8.98	74.0	--	54.0	-22.69	Vertical	Pass
4974.500	44.08	--	33.72	-6.38	74.0	--	54.0	-20.28	Vertical	Pass



Band 25 (30MHz -1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 133 Below 1G

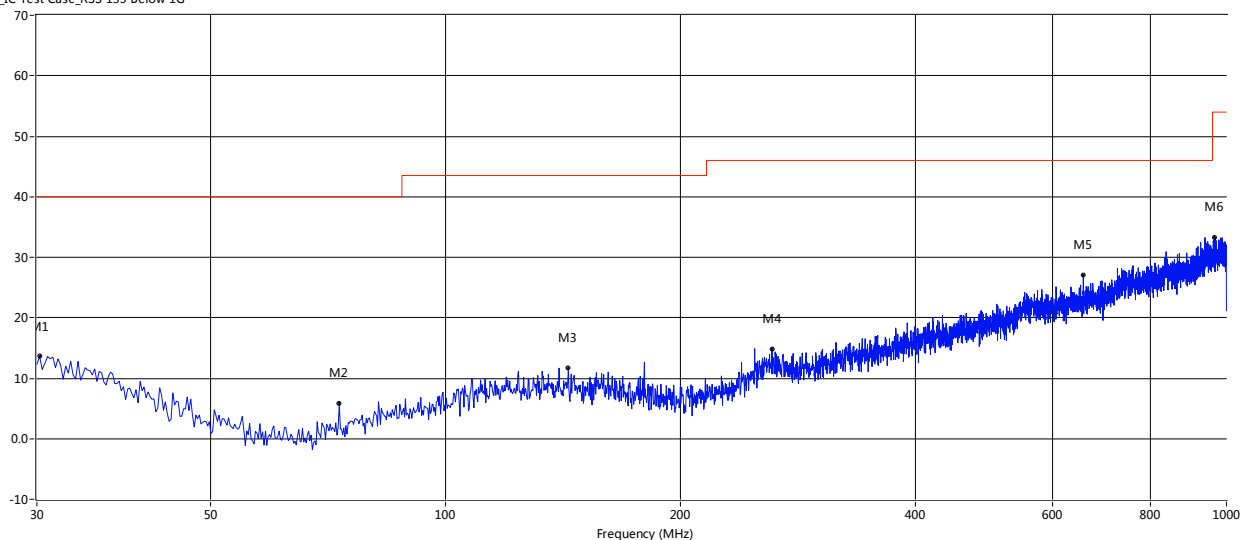


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
30.242	16.37	--	--	-12.13	--	40.0	--	-23.63	Horizontal	Pass
109.055	10.35	--	--	-17.89	--	43.5	--	-33.15	Horizontal	Pass
176.470	12.30	--	--	-18.43	--	43.5	--	-31.20	Horizontal	Pass
277.108	15.49	--	--	-13.55	--	46.0	--	-30.51	Horizontal	Pass
575.868	25.37	--	--	-3.17	--	46.0	--	-20.63	Horizontal	Pass
972.355	33.29	--	--	5.51	--	54.0	--	-20.71	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 133 Below 1G



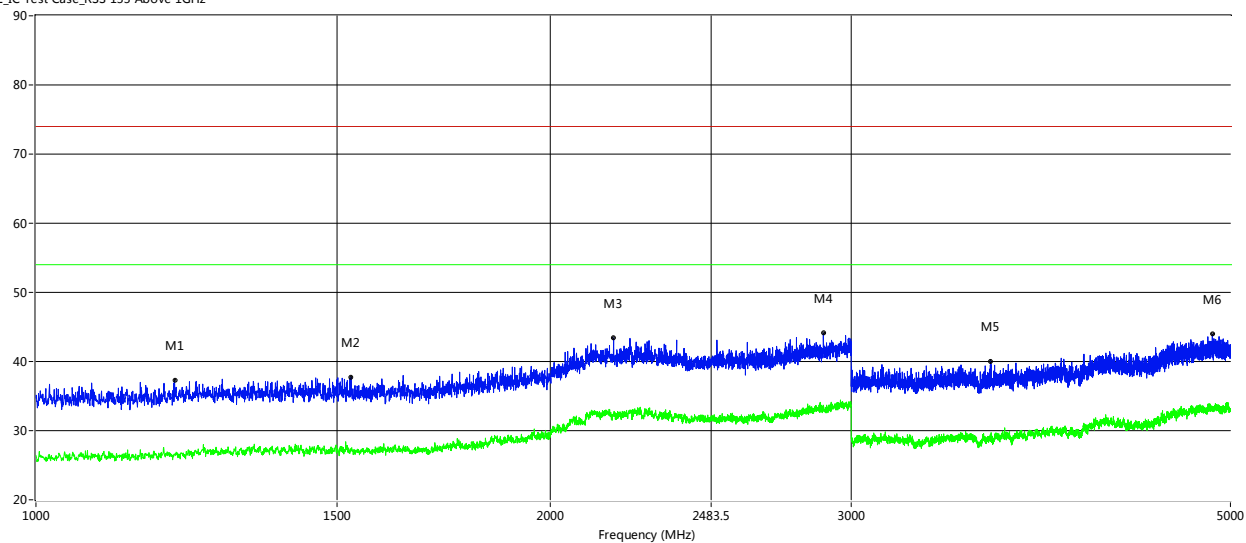
Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
30.000	12.32	--	--	-12.01	--	40.0	--	-27.68	Vertical	Pass
73.165	5.86	--	--	-23.21	--	40.0	--	-34.14	Vertical	Pass
143.732	11.77	--	--	-16.80	--	43.5	--	-31.73	Vertical	Pass
262.073	14.89	--	--	-12.79	--	46.0	--	-31.11	Vertical	Pass
655.893	27.05	--	--	-2.12	--	46.0	--	-18.95	Vertical	Pass
967.020	33.31	--	--	5.28	--	54.0	--	-20.69	Vertical	Pass



Band 25 (Above 1GHz):

Mid channel
Horizontal

RE_IC Test Case_RSS 133 Above 1GHz

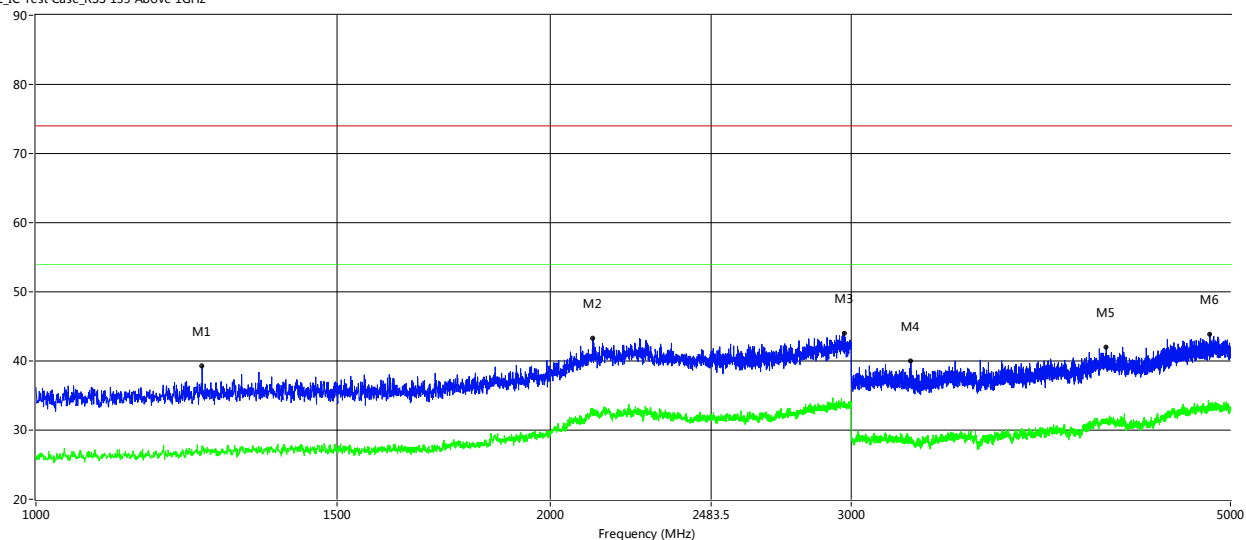


Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1205.500	37.27	--	26.47	-1.18	74.0	--	54.0	-27.53	Horizontal	Pass
1529.000	37.73	--	27.25	-0.59	74.0	--	54.0	-26.75	Horizontal	Pass
2178.000	43.43	--	32.35	4.34	74.0	--	54.0	-21.65	Horizontal	Pass
2889.500	44.11	--	33.31	5.61	74.0	--	54.0	-20.69	Horizontal	Pass
3620.500	40.02	--	28.73	-11.86	74.0	--	54.0	-25.27	Horizontal	Pass
4879.500	43.93	--	33.29	-6.51	74.0	--	54.0	-20.71	Horizontal	Pass



Vertical

RE_IC Test Case_RSS 133 Above 1GHz



Frequency (MHz)	Peak Level (dBuV/m)	Q-peak Level (dBuV/m)	Average Level (dBuV/m)	Factor (dB)	PK Limit (dBuV/m)	QP Limit (dBuV/m)	AV Limit (dBuV/m)	Over Limit (dB)	ANT	Verdict
1251.000	39.24	--	27.77	-0.91	74.0	--	54.0	-26.23	Vertical	Pass
2118.500	43.29	--	33.08	4.10	74.0	--	54.0	-20.92	Vertical	Pass
2972.500	43.95	--	33.37	5.99	74.0	--	54.0	-20.63	Vertical	Pass
3251.000	39.96	--	28.67	-12.18	74.0	--	54.0	-25.33	Vertical	Pass
4229.500	42.00	--	31.65	-9.03	74.0	--	54.0	-22.35	Vertical	Pass
4864.000	43.85	--	33.60	-6.60	74.0	--	54.0	-20.40	Vertical	Pass



APPENDIX-PHOTOS OF TEST SETUP

Note: See test photos in setup photo document for the actual connections between Product and support equipment.

※※※※※END OF THE REPORT※※※※※

