



FCC Radio Test Report

FCC ID: RI7ATD551

This report concerns: Original Grant

Project No. : 2404C168
Equipment : LTE Cat-M1 Tracker
Brand Name : 1. Telit Cinterion
2. DeWALT
Test Model : ATD551
Series Model : N/A
Applicant : Telit Communications S.p.A.
Address : Via Stazione di Prosecco 5/b, 34010 Sgonico, Trieste, Italy
Manufacturer : Telit Communications S.p.A.
Address : Via Stazione di Prosecco 5/b, 34010 Sgonico, Trieste, Italy
Factory : Fushan Technology (Vietnam)Limited Liability Company
Address : No. 8, Road 6, VSIP Bac Ninh, Phu Chan, Tu Son, Bac Ninh, Vietnam
Date of Receipt : May 07, 2024
Date of Test : May 08, 2024 ~ Oct. 17, 2024
Issued Date : Oct. 31, 2024
Report Version : R02
Test Sample : Engineering Sample No.: DG20240507140, DG20240507139
Standard(s) : 47 CFR FCC Part 24 Subpart E
47 CFR FCC Part 2

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by **BTL**.

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2404C168	R00	Original Report.	Sep. 26, 2024	Invalid
BTL-FCCP-2-2404C168	R01	1. Added the radiated spurious emissions above 18GHz. 2. Added the RF Module FCC ID in section 2.	Oct. 18, 2024	Invalid
BTL-FCCP-2-2404C168	R02	Updated the Laboratory address.	Oct. 31, 2024	Valid

1. APPLICABLE STANDARDS

The following reference test guidance is not within the scope of accreditation of A2LA:
ANSI C63.26-2015
FCC KDB 971168 D01 Power Meas License Digital Systems v03r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part 24 Subpart E & Part 2			
Standard(s) Section	Test Item	Judgment	Remark
2.1046 24.232(c)	Equivalent Isotropic Radiated Power	PASS	Note(1)
2.1049	Occupied Bandwidth	PASS	Note(1)
2.1051 24.238(a)	Conducted Spurious Emissions	PASS	Note(1)
2.1053 24.238(a)	Radiated Spurious Emissions	PASS	-----
24.238(a)	Band Edge Measurements	PASS	Note(1)
24.232(d)	Peak To Average Ratio	PASS	Note(1)
2.1055 24.235	Frequency Stability	PASS	Note(1)

Note:

- The RF module of this LTE Cat-M1 Tracker has been tested and certified. Please refer to the module report as listed in the below table for the test results of the RF module.

RF Module	Module Function	Report Number	Standard	
Model: ME310G1-WW FCC ID: RI7ME310G1WW	GSM	60356613 003	47 CFR FCC Part 22	RSS-132 Issue 3
			47 CFR FCC Part 24	RSS-133 Issue 6
			47 CFR FCC Part 2	RSS-Gen Issue 5
	LTE	60356613 002	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
		60356613 001	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

- The PCS1900, band 2 and band 25 antenna gain of LTE Cat-M1 Tracker was greater than that of module, so output power, EIRP and radiated spurious emissions were tested and recorded. For the test results of all other test items please refer to above module test report.

2. Based on the RF module the antennas for this LTE Cat-M1 Tracker were updated as below table:

Brand	P/N	Antenna Type	Connector	Gain (dBi)	Note
 ethertronics AN AVIX GROUP COMPANY	1004795/1004796	PCB	N/A	3.1	PCS 1900
				3.1	LTE Band 2
				3.1	LTE Band 25

1) The antenna gain is provided by the manufacturer.

2.1 TEST FACILITY

The test facilities used to collect the test data of output power and EIRP in this report is at the location of Room 108-116, 309-310, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China.

The test facilities used to collect the test data of radiated spurious emissions in this report is at the location of 1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969

BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

The BTL measurement uncertainty as below table:

A. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	U_1 (dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	U_1 (dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.40
		30MHz ~ 200MHz	H	3.62
		200MHz ~ 1,000MHz	V	4.58
		200MHz ~ 1,000MHz	H	3.98

Test Site	Method	Measurement Frequency Range	U_1 (dB)
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	U_1 (dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36

B. Other Measurement:

Parameter	Uncertainty
Maximum Output Power	±0.87 dB
Temperature	±0.48 °C
Humidity	±1.37 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
Output Power & EIRP	24.3°C	45%	DC 3.7V	Mark Wu	May 08, 2024- Jun. 13, 2024
Radiated Spurious Emissions (9 kHz to 30 MHz)	23°C	42%	AC 120V/60Hz	Hayden Chen	Jun. 12, 2024
Radiated Spurious Emissions (30 MHz to 1000 MHz)	24°C	56%	AC 120V/60Hz	Jensen Zhou	Jun. 22, 2024
Radiated Spurious Emissions (Above 1000 MHz)	22-24°C	50-56%	AC 120V/60Hz	Jensen Zhou Allen Tong	Jun. 22, 2024- Oct. 16, 2024

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	LTE Cat-M1 Tracker			
Brand Name	1. Telit Cinterion 2. DeWALT			
Test Model	ATD551			
PMN	LTE Cat-M1 Tracker(C1) will use Brand:DeWALT LTE Cat-M1 Tracker(S0) will use Brand:Telit Cinterion LTE Cat-M1 Tracker(S1) will use Brand:Telit Cinterion LTE Cat-M1 Tracker(C2)			
Model Difference(s)	Logo, some mechanical parts color, label, accesories are different.			
Hardware Version	V0.6			
Software Version	V03.05			
Power Source	1# DC Voltage supplied from AC adapter. Model: ADS-10LA-06 05010EPCU 2# Supplied from battery.			
Power Rating	1# I/P: 100-240V ~ 50/60Hz MAX 0.3A O/P: 5V  2.0A 2# DC 3.7V / 3000mAh			
IMEI No.	350903782706437, 350903782706486			
Modulation Type	GSM/GPRS		GMSK	
	EDGE		GMSK, 8PSK	
	LTE(eMTC)		UL: QPSK,16QAM	
	LTE(NB-IoT)		UL: BPSK, QPSK	
Max. EIRP	GPRS 1900		GMSK	31.41 dBm
	EDGE 1900		8PSK	26.92 dBm
	LTE (eMTC)	Channel Bandwidth (MHz)	QPSK (dBm)	16QAM (dBm)
	Band 2	1.4	23.48	23.58
		3	23.64	23.28
		5	25.08	24.48
		10	24.34	24.33
		15	24.36	24.41
		20	24.35	24.28
	Band 25	1.4	23.70	22.50
		3	23.65	22.75
		5	24.43	24.43
		10	24.41	24.40
		15	24.38	24.40
		20	24.36	24.40
	LTE (NB-IoT)	Sub-carrier Spacing (kHz)	BPSK (dBm)	QPSK (dBm)
	Band 2	3.75	24.84	24.88
		15	25.48	25.68
	Band 25	3.75	24.72	24.81
		15	25.32	25.46

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

PCS 1900				
Test Frequency ID	UARFCN	Frequency of Uplink (MHz)	UARFCN	Frequency of Downlink (MHz)
Low Range	512	1850.2	528	1930.2
Mid Range	661	1880	677	1960
High Range	810	1909.8	826	1989.8

LTE Band 2(eMTC)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	18607	1850.7	607	1930.7
	3	18615	1851.5	615	1931.5
	5	18625	1852.5	625	1932.5
	10	18650	1855	650	1935
	15	18675	1857.5	675	1937.5
	20	18700	1860	700	1940
Mid Range	1.4/3/5/10/15/20	18900	1880	900	1960
High Range	1.4	19193	1909.3	1193	1989.3
	3	19185	1908.5	1185	1988.5
	5	19175	1907.5	1175	1987.5
	10	19150	1905	1150	1985
	15	19125	1902.5	1125	1982.5
	20	19100	1900	1100	1980

LTE Band 2(NB-IoT)					
Test Frequency ID	Bandwidth (kHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	200	18601	1850.1	601	1930.1
Mid Range	200	18900	1880.0	900	1960.0
High Range	200	19199	1909.9	1199	1989.9

LTE Band 25(eMTC)					
Test Frequency ID	Bandwidth (MHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	1.4	26047	1850.7	8047	1930.7
	3	26055	1851.5	8055	1931.5
	5	26065	1852.5	8065	1932.5
	10	26090	1855	8090	1935
	15	26115	1857.5	8115	1937.5
	20	26140	1860	8140	1940
Mid Range	1.4/3/5/10/15/20	26365	1882.5	8365	1962.5
High Range	1.4	26683	1914.3	8683	1994.3
	3	26675	1913.5	8675	1993.5
	5	26665	1912.5	8665	1992.5
	10	26640	1910	8640	1990
	15	26615	1907.5	8615	1987.5
	20	26590	1905	8590	1985

LTE Band 25(NB-IoT)					
Test Frequency ID	Bandwidth (kHz)	N _{UL}	Frequency of Uplink (MHz)	N _{DL}	Frequency of Downlink (MHz)
Low Range	200	26041	1850.1	8041	1930.1
Mid Range	200	26365	1882.5	8365	1962.5
High Range	200	26689	1914.9	8689	1994.9

3.2 DESCRIPTION OF TEST MODES

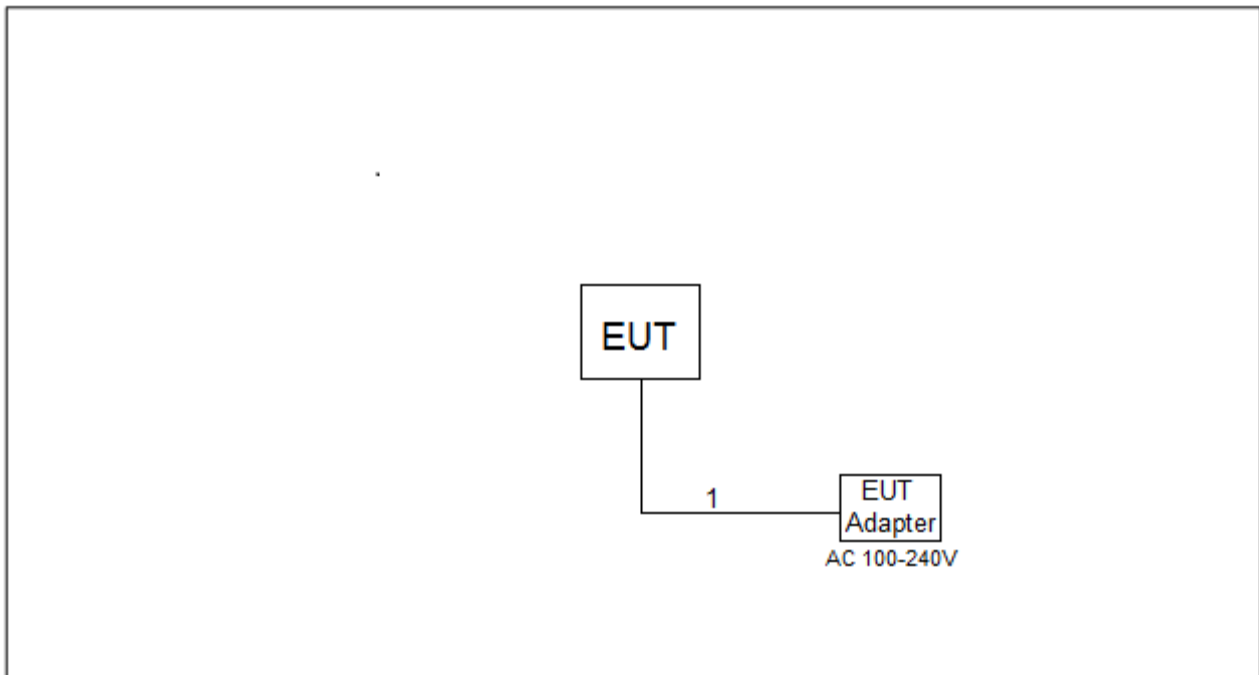
Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

GSM MODE			
Test Item	Available Channel	Tested Channel	Mode
Output Power & EIRP	512 to 810	512, 661, 810	GPRS, EDGE
Radiated Spurious Emissions	512 to 810	661	GPRS

LTE BAND 2 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Radiated Spurious Emissions	18607 to 19193	18900	1.4 MHz	QPSK	1RB
	18625 to 19175	18900	5MHz	QPSK	1RB
	18700 to 19100	18900	20MHz	QPSK	1RB
Output Power & EIRP	18607 to 19193	18607, 18900, 19193	1.4MHz	QPSK, 16QAM	1RB/5RB
	18615 to 19185	18615, 18900, 19185	3MHz	QPSK, 16QAM	1RB/5RB
	18625 to 19175	18625, 18900, 19175	5MHz	QPSK, 16QAM	1RB/6RB
	18650 to 19150	18650, 18900, 19150	10MHz	QPSK, 16QAM	1RB/6RB
	18675 to 19125	18675, 18900, 19125	15MHz	QPSK, 16QAM	1RB/6RB
	18700 to 19100	18700, 18900, 19100	20MHz	QPSK, 16QAM	1RB/6RB
Test Item	Available Channel	Tested Channel	Sub-carrier Spacing(kHz)	Modulation	Mode
Radiated Spurious Emissions	18601 to 19199	18900	3.75	QPSK	1RB
	18601 to 19199	18900	15	QPSK	1RB
Output Power & EIRP	18601 to 19199	18601, 18900, 19199	3.75	BPSK, QPSK	1RB
	18601 to 19199	18601, 18900, 19199	15	BPSK, QPSK	1RB/3RB

LTE BAND 25 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Radiated Spurious Emissions	26047 to 26683	26365	1.4MHz	QPSK	1RB
	26065 to 26665	26365	5MHz	QPSK	1RB
	26140 to 26590	26365	20MHz	QPSK	1RB
Output Power & EIRP	26047 to 26683	26047, 26365, 22683	1.4MHz	QPSK, 16QAM	1RB/5RB
	26055 to 26675	26055, 26365, 26675	3MHz	QPSK, 16QAM	1RB/5RB
	26065 to 26665	26065, 26365, 26665	5MHz	QPSK, 16QAM	1RB/6RB
	26090 to 26640	26090, 26365, 26640	10MHz	QPSK, 16QAM	1RB/6RB
	26115 to 26615	26115, 26365, 26615	15MHz	QPSK, 16QAM	1RB/6RB
	26140 to 26590	26140, 26365, 26590	20MHz	QPSK, 16QAM	1RB/6RB
Test Item	Available Channel	Tested Channel	Sub-carrier Spacing(kHz)	Modulation	Mode
Radiated Spurious Emissions	26041 to 26689	26365	3.75	QPSK	1RB
	26041 to 26689	26365	15	QPSK	1RB
Output Power & EIRP	26041 to 26689	26041, 26365, 26689	3.75	BPSK, QPSK	1RB
	26041 to 26689	26041, 26365, 26689	15	BPSK, QPSK	1RB/3RB

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATIONOFSYSTEMTESTED



3.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	USB Cable	YES	NO	1m

4. TEST RESULT

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMIT

Mobile / Portable stations are limited to 2 watts e.i.r.p.

4.1.2 TEST PROCEDURE

The testing follows FCC KDB 971168 v03r01 Section 5 or ANSI C63.26-2015 Section 5.2.

EIRP:

$EIRP = \text{Output Power} + \text{Antenan gain}$

Output Power:

The EUT was set up for the maximum power with GSM, GPRS, EDGE, WCDMA and LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 TEST SETUP LAYOUT

Output Power Measurement



4.1.4 TEST DEVIATION

No deviation.

4.1.5 TEST RESULTS

Please refer to the APPENDIX A.

4.2 RADIATED SPURIOUS EMISSIONS MEASUREMENT

4.2.1 LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13dBm.

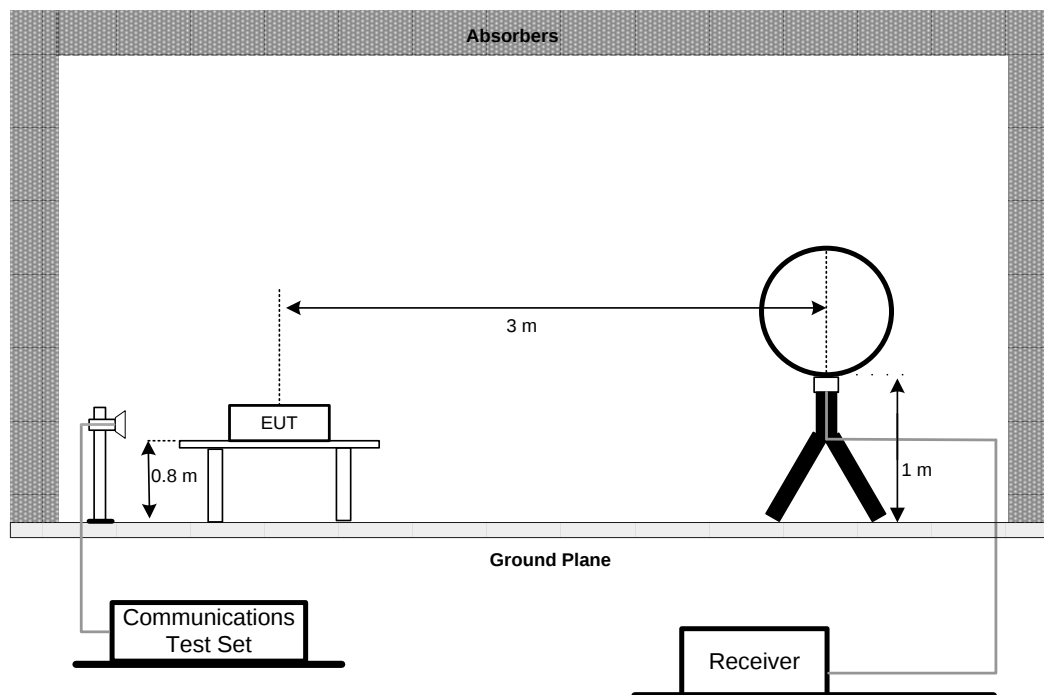
4.2.2 TEST PROCEDURES

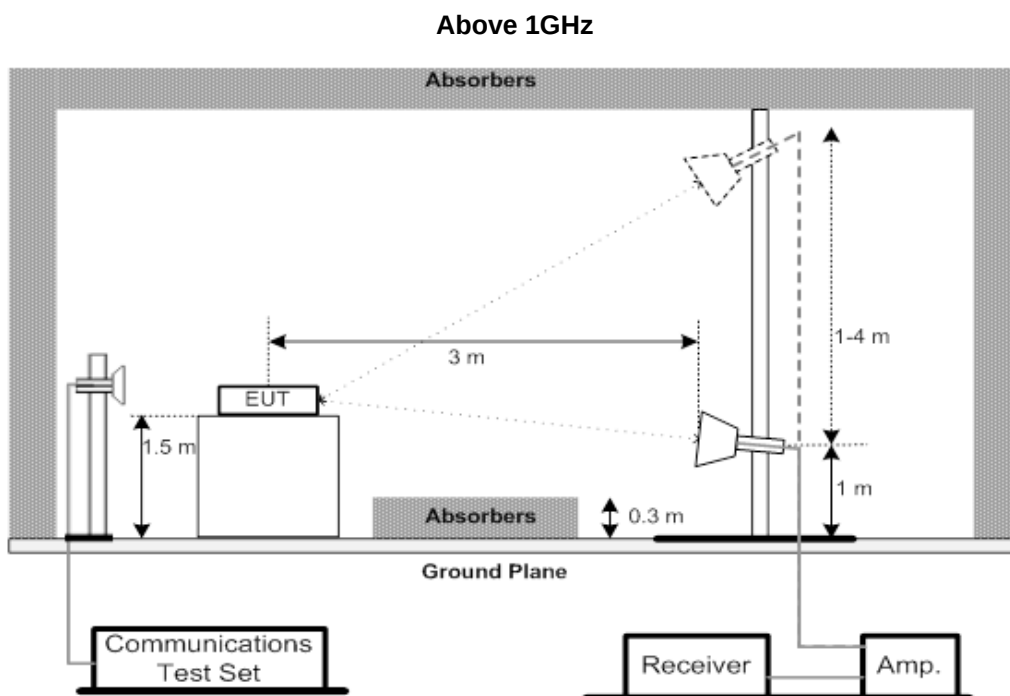
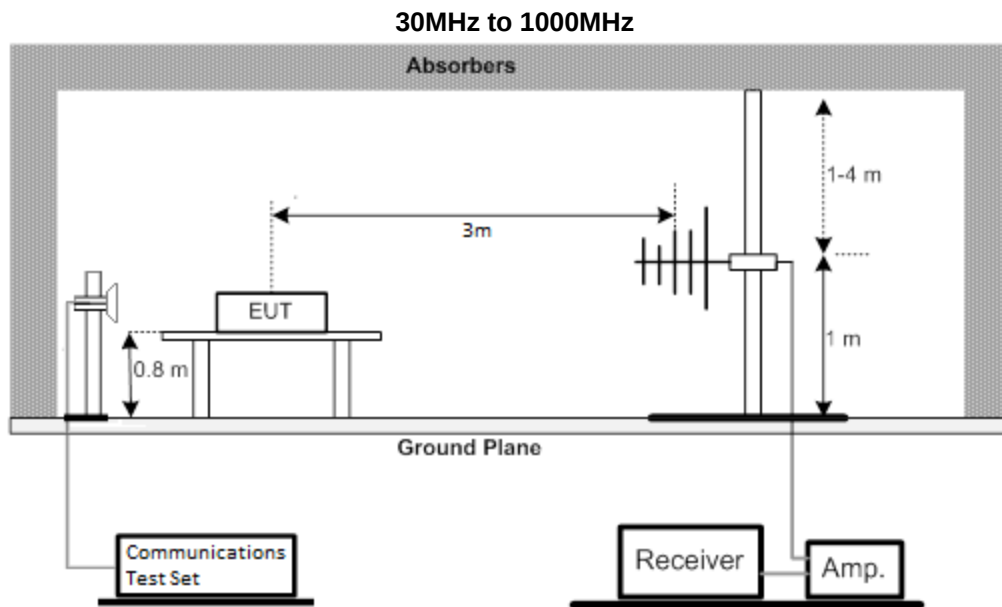
The testing follows FCC KDB 971168 v03r01 Section 6.2 or ANSI C63.26-2015 Section 5.5.

1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power.
4. Start the test, rotate the table 360° to find the worst Angle, maintain the worst Angle, raise the antenna to 1-4m to find the worst height, maintain the worst height, then rotate the table to determine the final worst Angle, grab the spectrum diagram.
5. EUT shall be placed in accordance with X,Y,Z as required by Figure 5 in ANSI C63.26.
Repeat Step 5 above to find the worst placement. Test all bands according to the worst placement.
6. Then EIRP is then converted to field strength as follows in Equation
7. $E \text{ (dBuV/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m. The emission limit equal to 82.26dBuV/m.

4.2.3 TEST SETUP LAYOUT

Below 30MHz





4.2.4 TEST DEVIATION

No deviation.

4.2.5 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX B.

4.2.6 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX C.

4.2.7 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX D.

4. LIST OF MEASUREMENT EQUIPMENTS

(Test Period: May 08, 2024 ~ Sep. 09, 2024)

Conducted Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Wideband Radio Communication Tester	R&S	CWM 500	165578	May 11, 2024 Jan. 19, 2025
2	Radio Communication Analyzer	Anristu	MT8821C	6261915479	Jul. 07, 2024 Jun. 28, 2025
3	8960 SERIES 10 Wireless Communications Test Set	Agilent Technologies	E5515E	MY54491001	Jul. 07, 2024 Jun. 28, 2025

(Test Period: May 08, 2024 ~ Sep. 09, 2024)

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-N MBM-1.5M	N/A	Jun. 09, 2025
4	Cable	N/A	RG 213/U	N/A	Jun. 09, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	Jul. 11, 2024 May 16, 2025
7	WPT coil	N/A	100KHz-300KHz	N/A	N/A

(Test Period: May 08, 2024 ~ Sep. 09, 2024)

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1462	Dec. 13, 2024
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024
3	Preamplifier	EMC INSTRUMENT	EMC001330	980863	Apr. 07, 2025
4	Cable	RegalWay	LMR400-NMNM -12.5m	N/A	Jul. 04, 2024 Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM -3m	N/A	Jul. 04, 2024 Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM -0.5m	N/A	Jul. 04, 2024 Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
8	Positioning Controller	MF	MF-7802	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025
11	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Dec. 22, 2024
12	wideband radio communication tester	R&S	CMW500	152372	Dec. 22, 2024

(Test Period: May 08, 2024 ~ Sep. 09, 2024)

Radiated Emissions - 1 GHz to 18 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63380204	Nov. 17, 2024
2	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
3	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024
4	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	May 31, 2025
5	Double Ridged Guide Antenna	ETS	3115	75846	Mar. 20, 2025
6	Cable	RegalWay	RWLP50-4.0A-SMS M-12.5M	N/A	Feb. 19, 2025
7	Cable	RegalWay	RWLP50-4.0A-NM RASM-2.5M	N/A	Aug. 08, 2024 Jul. 03, 2025
8	Cable	RegalWay	RWLP50-4.0A-NM RASMRA-0.8M	N/A	Aug. 08, 2024 Jul. 03, 2025
9	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
10	Filter	COM-MW	ZHPF-M1-13G-W1 02	N/A	May 31, 2025
11	Positioning Controller	MF	MF-7802	N/A	N/A
12	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
13	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Dec. 22, 2024
14	wideband radio communication tester	R&S	CMW500	152372	Dec. 22, 2024

(Test Period: Oct. 16, 2024)

Radiated Emissions – Above 18 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63380204	Nov. 17, 2024
2	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 17, 2025
3	Cable	RegalWay	RWLP50-2.6A-2.92 M2.92M-1.1M	N/A	Jul. 25, 2025
4	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
5	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 16, 2025
6	966 Chamber room	CM	9*6*6	N/A	May 19, 2025
7	Positioning Controller	MF	MF-7802	N/A	N/A
8	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
9	Wireless Communication Test SET	Agilent	E5515C	MY48364183	Dec. 22, 2024
10	wideband radio communication tester	R&S	CMW500	152372	Dec. 22, 2024

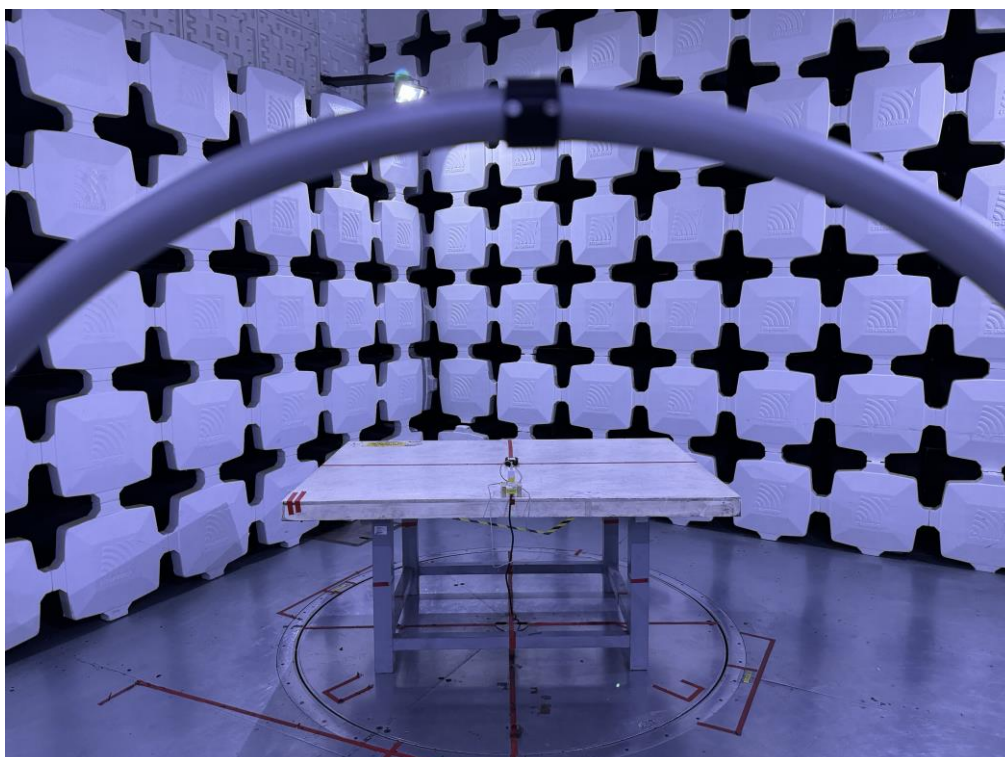
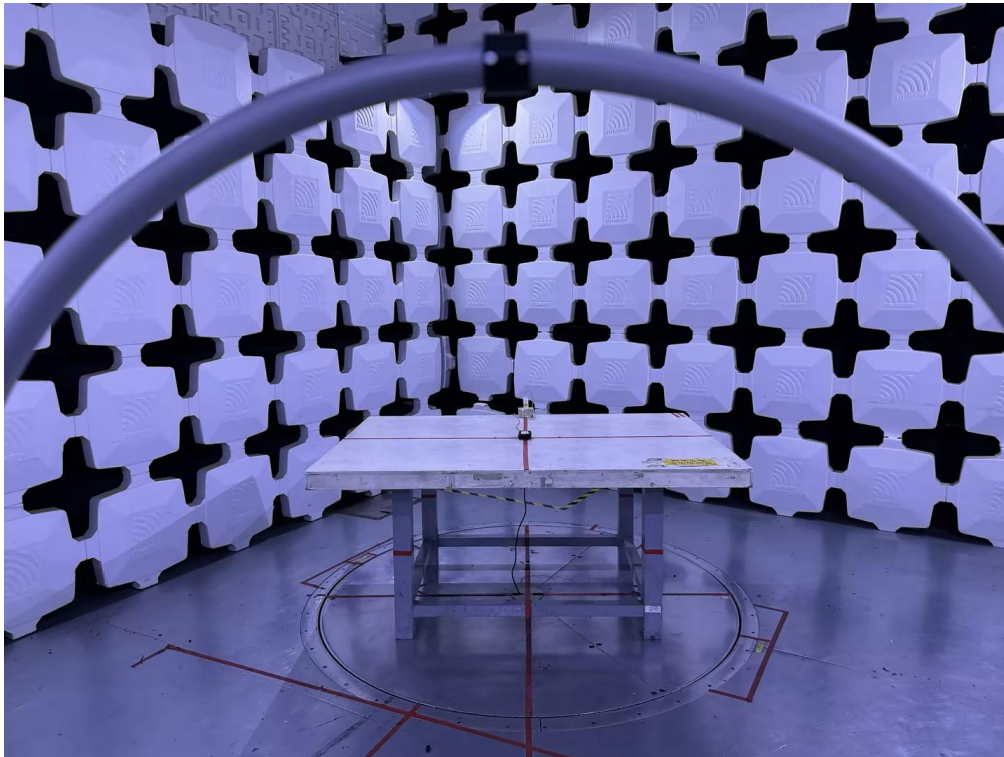
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.

5. EUT TEST PHOTO

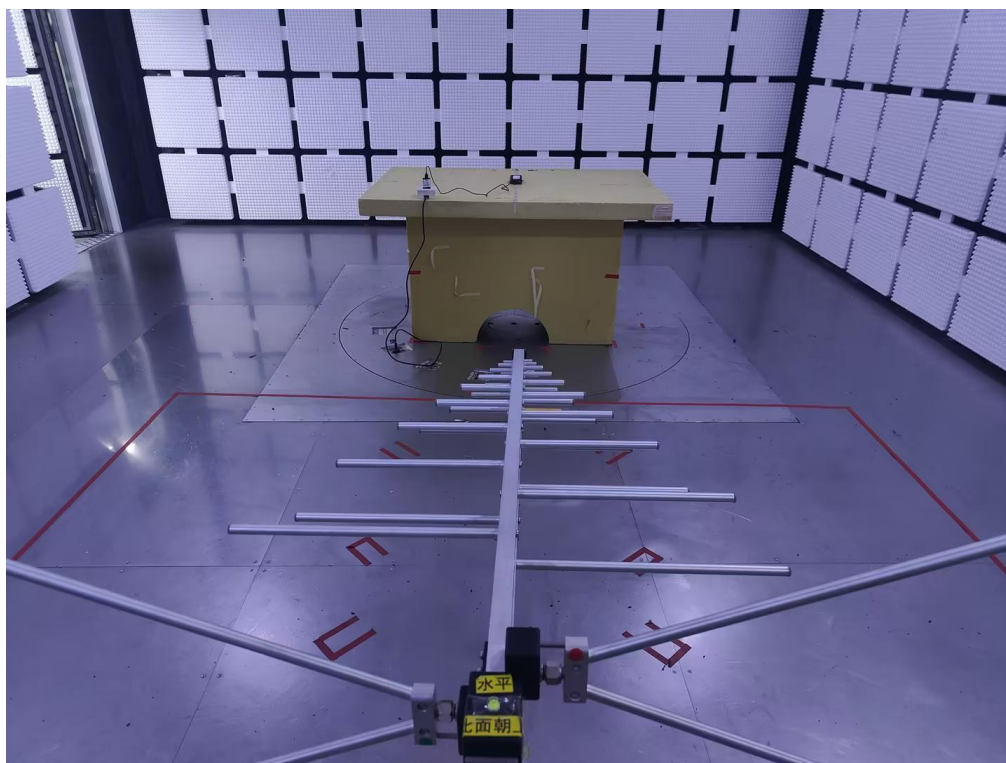
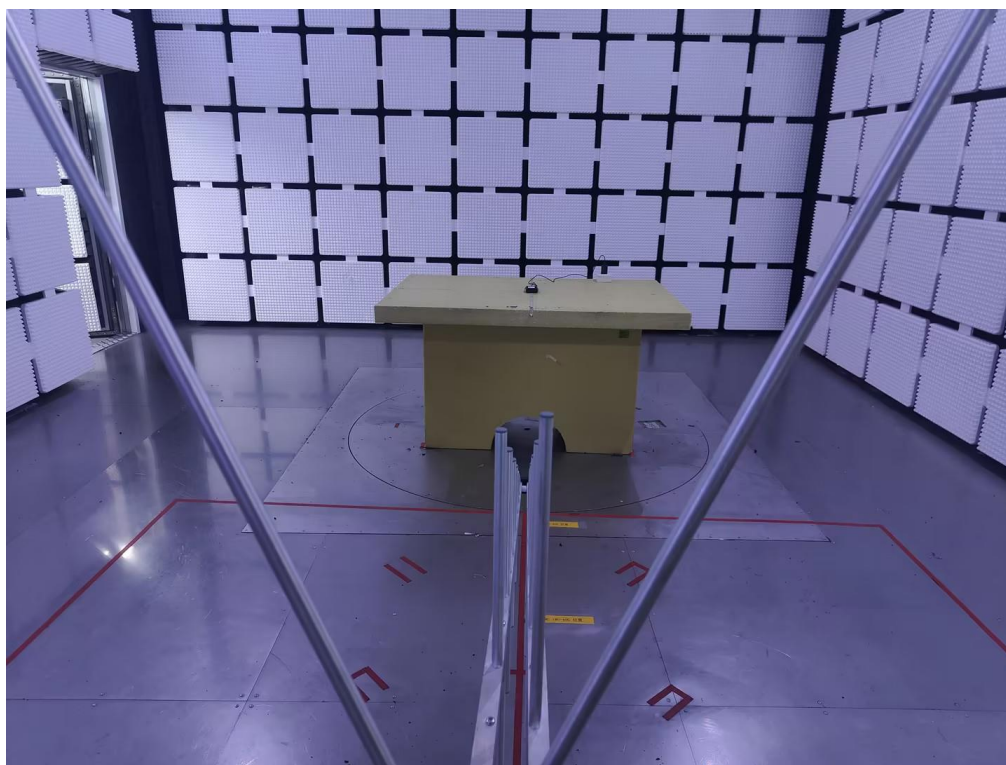
Radiated Emissions Test Photos

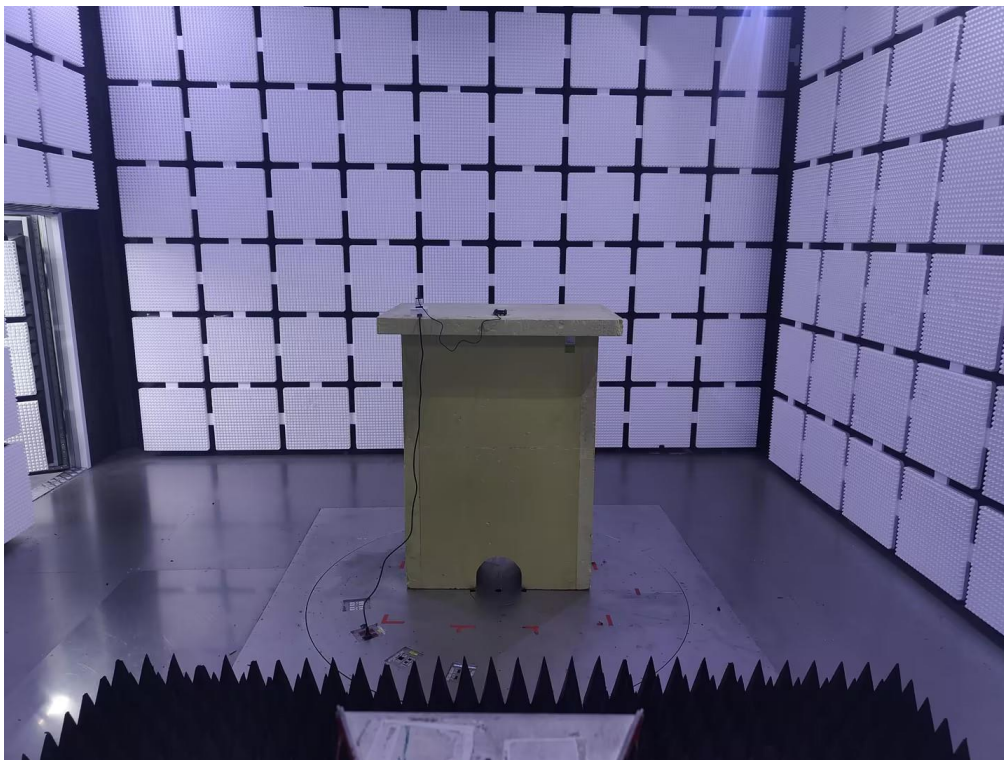
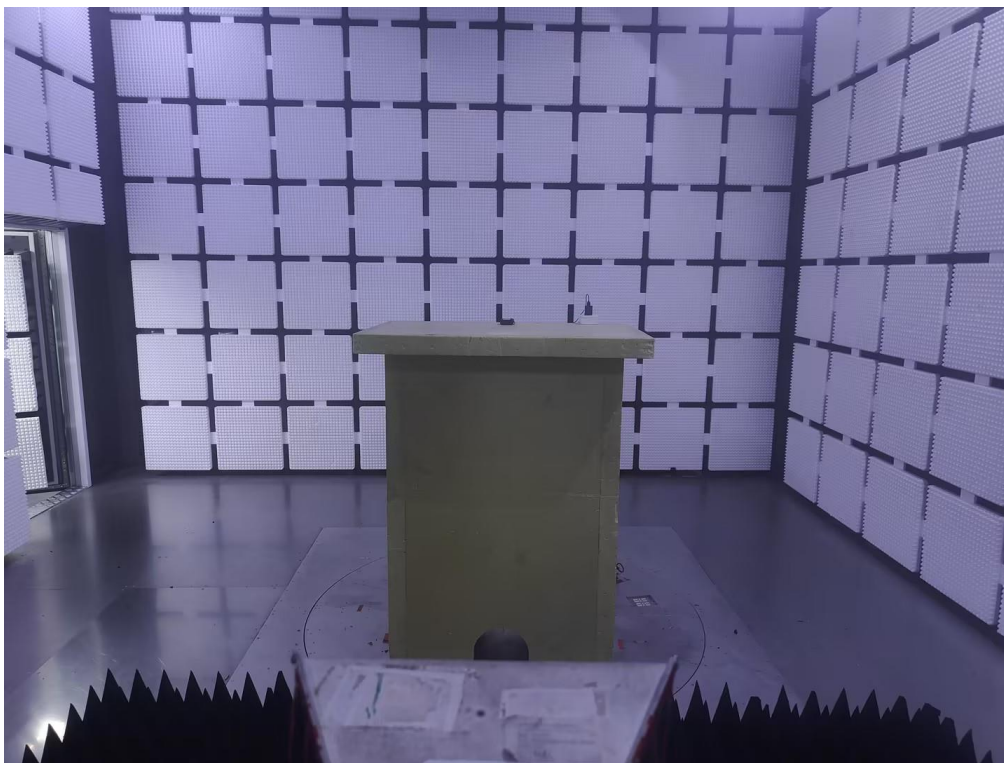
9 kHz to 30 MHz

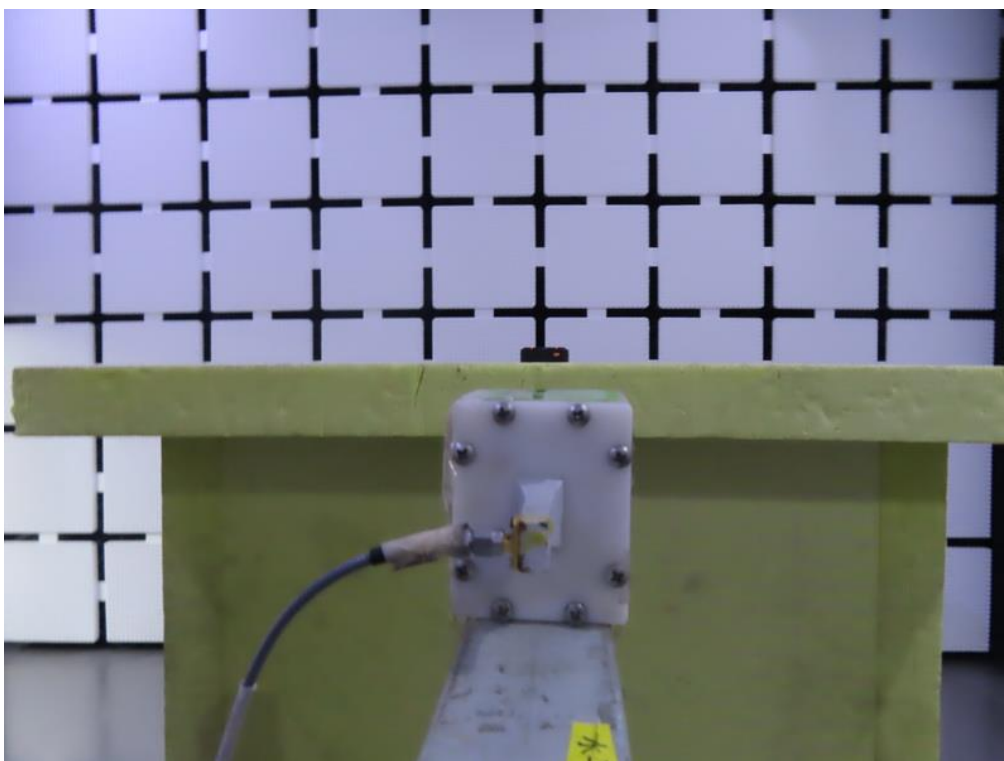
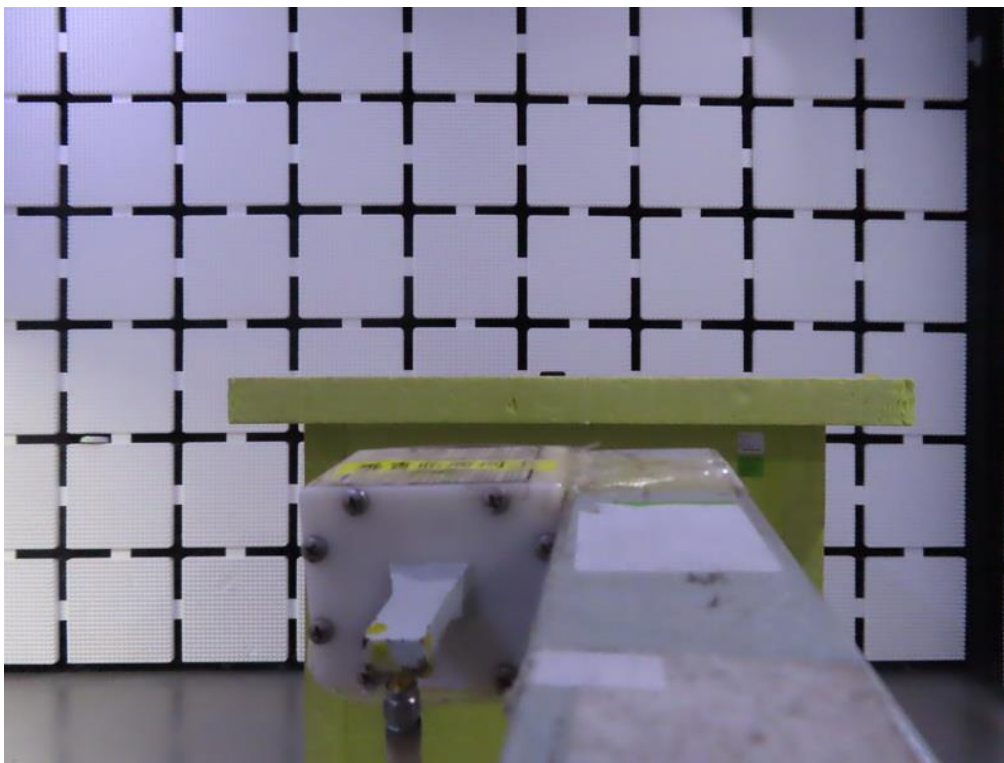


Radiated Emissions Test Photos

30 MHz to 1 GHz



Radiated Emissions Test Photos**1 GHz – 18 GHz**

Radiated Emissions Test Photos**Above 18 GHz**

APPENDIX A - OUTPUT POWER

Output Power (dBm)

PCS1900		512CH	661CH	810CH
		1850.2MHz	1880MHz	1909.8MHz
GPRS/EDGE (GMSK)	1 Tx Slot	28.32	29.01	28.97
	2 Tx Slot	28.03	28.71	28.71
	3 Tx Slot	27.65	28.25	28.37
	4 Tx Slot	27.14	27.07	26.91
EDGE (8PSK)	1 Tx Slot	24.29	24.52	24.27
	2 Tx Slot	24.11	24.14	24.16
	3 Tx Slot	23.61	23.72	23.83
	4 Tx Slot	21.29	21.58	22.15

For eMTC:

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18607CH	18900CH	19193CH
				1850.7MHz	1880MHz	1909.3MHz
2 / 1.4MHz	QPSK	1	0	19.95	20.38	19.76
		1	5	19.71	20.15	19.90
		5	1	17.55	17.91	18.33
	16QAM	1	0	19.91	20.48	19.94
		1	5	19.75	20.13	19.82
		5	1	17.68	17.92	18.13

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18615CH	18900CH	19185CH
				1851.5MHz	1880MHz	1908.5MHz
2 / 3MHz	QPSK	1	0	19.72	20.54	20.47
		1	5	19.37	20.32	20.37
		5	1	17.59	18.09	18.11
	16QAM	1	0	18.98	20.18	20.10
		1	5	18.77	19.92	19.77
		5	1	17.62	18.09	18.18

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18625CH	18900CH	19175CH
				1852.5MHz	1880MHz	1907.5MHz
2 / 5MHz	QPSK	1	0	21.04	21.33	21.09
		1	5	21.15	21.34	21.98
		6	0	21.16	21.35	20.99
	16QAM	1	0	21.12	21.05	21.09
		1	5	21.10	21.10	20.99
		6	0	21.24	21.38	20.98

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18650CH	18900CH	19150CH
				1855MHz	1880MHz	1905MHz
2 / 10MHz	QPSK	1	0	21.13	21.16	21.01
		1	5	21.24	21.24	21.02
		6	0	21.15	21.21	20.96
	16QAM	1	0	21.23	21.17	21.07
		1	5	21.18	21.19	21.07
		6	0	21.22	21.14	21.10

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18675CH	18900CH	19125CH
				1857.5MHz	1880MHz	1902.5MHz
2 / 15MHz	QPSK	1	0	21.26	21.15	21.01
		1	5	21.20	21.13	21.09
		6	0	21.19	21.10	21.08
	16QAM	1	0	21.31	21.16	21.14
		1	5	21.17	21.22	20.93
		6	0	21.24	21.20	20.97

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18700CH	18900CH	19100CH
				1860MHz	1880MHz	1900MHz
2 / 20MHz	QPSK	1	0	21.22	21.09	20.99
		1	5	21.14	21.14	21.00
		6	0	21.25	21.10	20.97
	16QAM	1	0	21.11	21.18	21.08
		1	5	21.13	21.01	21.09
		6	0	21.15	21.16	20.96

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26047CH	18900CH	26683CH
				1850.7MHz	1882.5MHz	1914.3MHz
25 / 1.4MHz	QPSK	1	0	20.02	20.60	20.27
		1	5	19.77	20.44	20.02
		5	1	17.50	18.06	18.24
	16QAM	1	0	19.04	19.22	19.40
		1	5	18.89	18.99	19.16
		5	1	17.27	18.01	18.21

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26055CH	18900CH	26675CH
				1851.5MHz	1882.5MHz	1913.5MHz
25 / 3MHz	QPSK	1	0	20.03	20.55	20.20
		1	5	19.75	20.32	19.99
		5	1	17.48	18.03	18.25
	16QAM	1	0	18.79	19.51	19.65
		1	5	18.45	19.41	19.50
		5	1	17.41	17.95	18.03

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	18900CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 5MHz	QPSK	1	0	21.27	21.27	21.10
		1	5	21.26	21.33	21.23
		6	0	21.05	21.31	21.26
	16QAM	1	0	21.23	21.33	21.20
		1	5	21.24	21.21	21.08
		6	0	21.25	21.27	21.19

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	18900CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 10MHz	QPSK	1	0	21.22	21.20	21.23
		1	5	21.31	21.22	21.28
		6	0	21.14	21.24	21.29
	16QAM	1	0	21.23	21.18	21.23
		1	5	21.07	21.16	21.21
		6	0	21.30	21.25	21.27

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26115CH	18900CH	26615CH
				1857.5MHz	1882.5MHz	1907.5MHz
25 / 15MHz	QPSK	1	0	21.21	21.28	21.13
		1	5	21.16	21.27	21.15
		6	0	21.08	21.26	21.18
	16QAM	1	0	21.25	21.30	21.07
		1	5	21.20	21.23	21.14
		6	0	21.18	21.29	21.26

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26140CH	18900CH	26590CH
				1860MHz	1882.5MHz	1905MHz
25 / 20MHz	QPSK	1	0	21.18	21.20	21.16
		1	5	21.19	21.26	21.16
		6	0	21.14	21.24	21.18
	16QAM	1	0	21.21	21.29	21.25
		1	5	21.30	21.28	21.22
		6	0	21.28	21.29	21.25

For NB-IoT:

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18601CH	18900CH	19199CH
				1850.1MHz	1880MHz	1909.9MHz
2 / 3.75kHz	BPSK	1	0	4.67	21.74	4.62
		1	47	4.55	21.55	4.55
	QPSK	1	0	4.63	21.78	4.66
		1	47	4.59	21.58	4.54

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18601CH	18900CH	19199CH
				1850.1MHz	1880MHz	1909.9MHz
2 / 15kHz	BPSK	1	0	4.58	22.36	4.52
		1	11	4.60	22.38	4.45
	QPSK	1	0	4.51	22.32	4.42
		1	11	4.54	22.37	4.46
		3	3	4.77	22.58	4.66

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26041CH	26365CH	26689CH
				1850.1MHz	1882.5MHz	1914.9MHz
25 / 3.75kHz	BPSK	1	0	4.62	21.62	4.82
		1	47	4.47	21.46	4.73
	QPSK	1	0	4.59	21.71	4.83
		1	47	4.48	21.59	4.71

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26041CH	26365CH	26689CH
				1850.1MHz	1882.5MHz	1914.9MHz
25 / 15kHz	BPSK	1	0	4.59	22.22	4.78
		1	11	4.60	22.14	4.74
	QPSK	1	0	4.49	22.20	4.81
		1	11	4.55	22.11	4.67
		3	3	4.69	22.36	4.79

EIRP (dBm)

PCS1900		512CH	661CH	810CH
		1850.2MHz	1880MHz	1909.8MHz
GPRS/EDGE (GMSK)	1 Tx Slot	30.72	31.41	31.37
	2 Tx Slot	30.43	31.11	31.11
	3 Tx Slot	30.05	30.65	30.77
	4 Tx Slot	29.54	29.47	29.31
EDGE (8PSK)	1 Tx Slot	26.69	26.92	26.67
	2 Tx Slot	26.51	26.54	26.56
	3 Tx Slot	26.01	26.12	26.23
	4 Tx Slot	23.69	23.98	24.55

For eMTC:

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18607CH	18900CH	19193CH
				1850.7MHz	1880MHz	1909.3MHz
2 / 1.4MHz	QPSK	1	0	23.05	23.48	22.86
		1	5	22.81	23.25	23.00
		5	1	20.65	21.01	21.43
	16QAM	1	0	23.01	23.58	23.04
		1	5	22.85	23.23	22.92
		5	1	20.78	21.02	21.23

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18615CH	18900CH	19185CH
				1851.5MHz	1880MHz	1908.5MHz
2 / 3MHz	QPSK	1	0	22.82	23.64	23.57
		1	5	22.47	23.42	23.47
		5	1	20.69	21.19	21.21
	16QAM	1	0	22.08	23.28	23.20
		1	5	21.87	23.02	22.87
		5	1	20.72	21.19	21.28

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18625CH	18900CH	19175CH
				1852.5MHz	1880MHz	1907.5MHz
2 / 5MHz	QPSK	1	0	24.14	24.43	24.19
		1	5	24.25	24.44	25.08
		6	0	24.26	24.45	24.09
	16QAM	1	0	24.22	24.15	24.19
		1	5	24.20	24.20	24.09
		6	0	24.34	24.48	24.08

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18650CH	18900CH	19150CH
				1855MHz	1880MHz	1905MHz
2 / 10MHz	QPSK	1	0	24.23	24.26	24.11
		1	5	24.34	24.34	24.12
		6	0	24.25	24.31	24.06
	16QAM	1	0	24.33	24.27	24.17
		1	5	24.28	24.29	24.17
		6	0	24.32	24.24	24.20

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18675CH	18900CH	19125CH
				1857.5MHz	1880MHz	1902.5MHz
2 / 15MHz	QPSK	1	0	24.36	24.25	24.11
		1	5	24.30	24.23	24.19
		6	0	24.29	24.20	24.18
	16QAM	1	0	24.41	24.26	24.24
		1	5	24.27	24.32	24.03
		6	0	24.34	24.30	24.07

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18700CH	18900CH	19100CH
				1860MHz	1880MHz	1900MHz
2 / 20MHz	QPSK	1	0	24.32	24.19	24.09
		1	5	24.24	24.24	24.10
		6	0	24.35	24.20	24.07
	16QAM	1	0	24.21	24.28	24.18
		1	5	24.23	24.11	24.19
		6	0	24.25	24.26	24.06

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26047CH	18900CH	26683CH
				1850.7MHz	1882.5MHz	1914.3MHz
25 / 1.4MHz	QPSK	1	0	23.12	23.70	23.37
		1	5	22.87	23.54	23.12
		5	1	20.60	21.16	21.34
	16QAM	1	0	22.14	22.32	22.50
		1	5	21.99	22.09	22.26
		5	1	20.37	21.11	21.31

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26055CH	18900CH	26675CH
				1851.5MHz	1882.5MHz	1913.5MHz
25 / 3MHz	QPSK	1	0	23.13	23.65	23.30
		1	5	22.85	23.42	23.09
		5	1	20.58	21.13	21.35
	16QAM	1	0	21.89	22.61	22.75
		1	5	21.55	22.51	22.60
		5	1	20.51	21.05	21.13

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	18900CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 5MHz	QPSK	1	0	24.37	24.37	24.20
		1	5	24.36	24.43	24.33
		6	0	24.15	24.41	24.36
	16QAM	1	0	24.33	24.43	24.30
		1	5	24.34	24.31	24.18
		6	0	24.35	24.37	24.29

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26065CH	18900CH	26665CH
				1852.5MHz	1882.5MHz	1912.5MHz
25 / 10MHz	QPSK	1	0	24.32	24.30	24.33
		1	5	24.41	24.32	24.38
		6	0	24.24	24.34	24.39
	16QAM	1	0	24.33	24.28	24.33
		1	5	24.17	24.26	24.31
		6	0	24.40	24.35	24.37

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26115CH	18900CH	26615CH
				1857.5MHz	1882.5MHz	1907.5MHz
25 / 15MHz	QPSK	1	0	24.31	24.38	24.23
		1	5	24.26	24.37	24.25
		6	0	24.18	24.36	24.28
	16QAM	1	0	24.35	24.40	24.17
		1	5	24.30	24.33	24.24
		6	0	24.28	24.39	24.36

LTE Band / BW	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26140CH	18900CH	26590CH
				1860MHz	1882.5MHz	1905MHz
25 / 20MHz	QPSK	1	0	24.28	24.30	24.26
		1	5	24.29	24.36	24.26
		6	0	24.24	24.34	24.28
	16QAM	1	0	24.31	24.39	24.35
		1	5	24.40	24.38	24.32
		6	0	24.38	24.39	24.35

For NB-IoT:

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18601CH	18900CH	19199CH
				1850.1MHz	1880MHz	1909.9MHz
2 / 3.75kHz	BPSK	1	0	7.77	24.84	7.72
		1	47	7.65	24.65	7.65
	QPSK	1	0	7.73	24.88	7.76
		1	47	7.69	24.68	7.64

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				18601CH	18900CH	19199CH
				1850.1MHz	1880MHz	1909.9MHz
2 / 15kHz	BPSK	1	0	7.68	25.46	7.62
		1	11	7.70	25.48	7.55
	QPSK	1	0	7.61	25.42	7.52
		1	11	7.64	25.47	7.56
		3	3	7.87	25.68	7.76

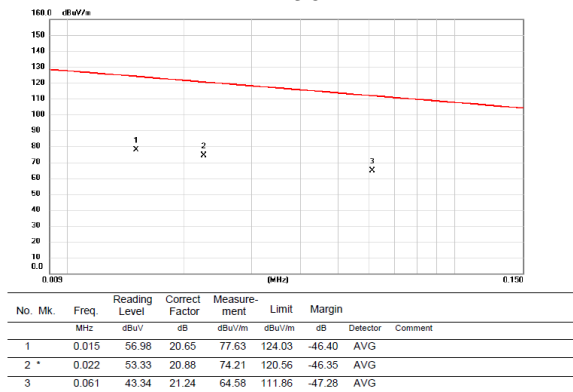
LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26041CH	26365CH	26689CH
				1850.1MHz	1882.5MHz	1914.9MHz
25 / 3.75kHz	BPSK	1	0	7.72	24.72	7.92
		1	47	7.57	24.56	7.83
	QPSK	1	0	7.69	24.81	7.93
		1	47	7.58	24.69	7.81

LTE Band / Sub-carrier Spacing(kHz)	Modulation	RB Size	RB Offset	Low CH	Mid CH	High CH
				26041CH	26365CH	26689CH
				1850.1MHz	1882.5MHz	1914.9MHz
25 / 15kHz	BPSK	1	0	7.69	25.32	7.88
		1	11	7.70	25.24	7.84
	QPSK	1	0	7.59	25.30	7.91
		1	11	7.65	25.21	7.77
		3	3	7.79	25.46	7.89

APPENDIX B - RADIATED SPURIOUS EMISSIONS (9KHZ TO 30MHZ)

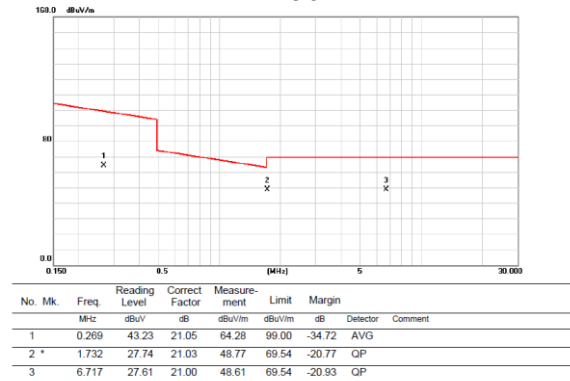
Test Mode : TX Mode

Ant 0°



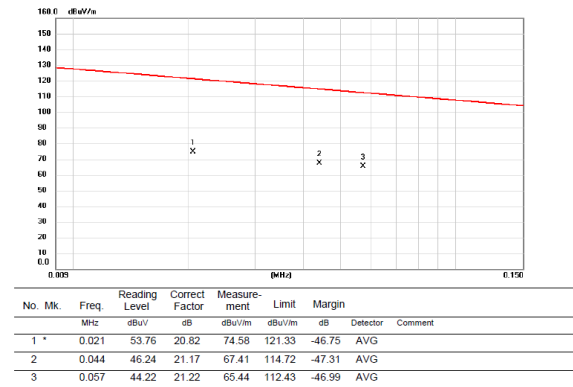
Test Mode : TX Mode

Ant 0°



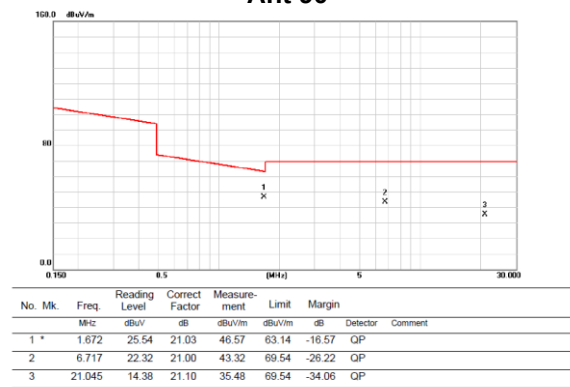
Test Mode : TX Mode

Ant 90°



Test Mode : TX Mode

Ant 90°

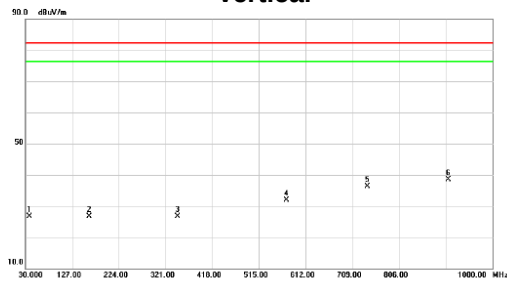


APPENDIX C - RADIATED SPURIOUS EMISSIONS (30MHZ TO 1000MHZ)

Test Mode : PCS1900_TX CH661_GPRS

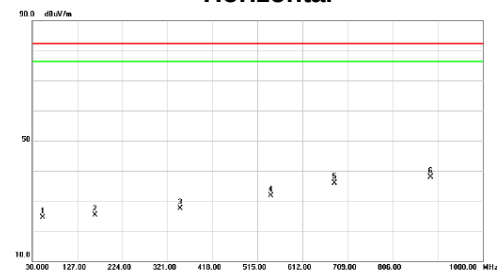
Test Mode : PCS1900_TX CH661_GPRS

Vertical



No. Mhz	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBμV	dB	dBμV/m	dBμV/m	dB		
1	37.760	38.76	-12.02	26.74	82.30	-55.56	peak	
2	161.920	37.50	-10.85	26.65	82.30	-55.65	peak	
3	345.735	36.01	-9.34	26.67	82.30	-55.63	peak	
4	572.230	36.12	-4.19	31.93	82.30	-50.37	peak	
5	740.525	37.38	-1.17	36.21	82.30	-46.09	peak	
6 *	908.820	38.06	0.42	38.48	82.30	-43.82	peak	

Horizontal

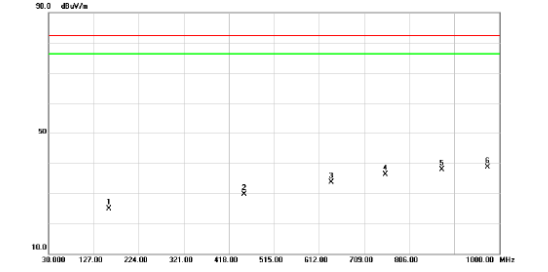


No. Mhz	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
	MHz	dBμV	dB	dBμV/m	dBμV/m	dB		
1	52.795	35.79	-11.37	24.42	82.30	-57.88	peak	
2	165.315	36.25	-10.99	25.26	82.30	-57.04	peak	
3	349.130	36.88	-9.31	27.57	82.30	-54.73	peak	
4	544.100	36.61	-4.94	31.67	82.30	-50.63	peak	
5	681.355	38.20	-2.36	35.84	82.30	-46.46	peak	
6 *	887.480	37.63	0.21	37.84	82.30	-44.46	peak	

For eMTC:

Test Mode : LTE Band 2_TX CH18900_1.4MHz

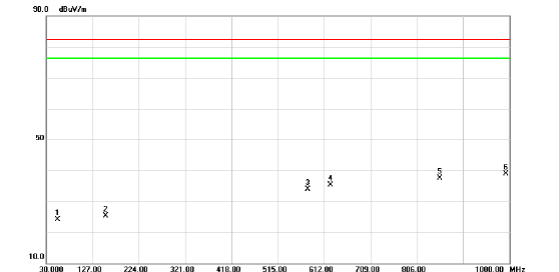
Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	159.495	35.76	-10.78	24.98	82.30	-57.32	peak	
2	450.980	36.34	-8.59	26.75	82.30	-52.55	peak	
3	638.190	36.56	-2.86	33.70	82.30	-48.60	peak	
4	754.590	37.32	-0.95	36.37	82.30	-45.93	peak	
5	875.940	37.75	0.08	37.81	82.30	-44.49	peak	
6 *	974.780	37.96	0.82	38.78	82.30	-43.52	peak	

Test Mode : LTE Band 2_TX CH18900_1.4MHz

Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	53.785	35.54	-11.41	24.13	82.30	-58.17	peak	
2	154.845	36.29	-10.95	25.34	82.30	-56.96	peak	
3	577.080	37.97	-4.07	33.90	82.30	-48.40	peak	
4	628.085	38.35	-3.04	35.31	82.30	-46.99	peak	
5	854.015	37.82	-0.23	37.59	82.30	-44.71	peak	
6 *	992.725	37.92	0.98	38.90	82.30	-43.40	peak	

Test Mode : LTE Band 2_TX CH18900_5MHz

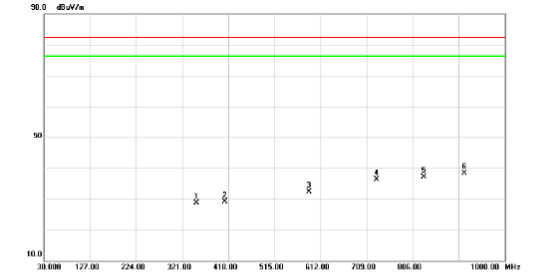
Vertical



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	752.105	37.98	-0.95	37.01	82.30	-45.29	peak	
2 *	983.510	38.16	0.89	39.05	82.30	-43.25	peak	
3	847.225	38.73	-0.34	38.39	82.30	-43.91	peak	
4	631.885	38.91	-2.95	35.96	82.30	-46.34	peak	
5	485.530	37.66	-6.36	31.30	82.30	-51.00	peak	
6	346.220	37.11	-9.34	27.77	82.30	-54.53	peak	

Test Mode : LTE Band 2_TX CH18900_5MHz

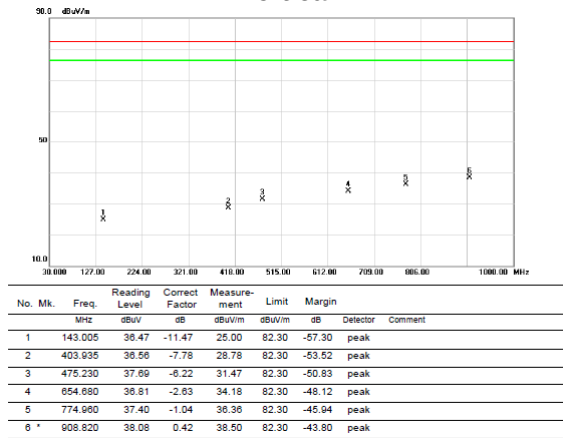
Horizontal



No. Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measurement dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	351.555	37.93	-9.30	28.63	82.30	-53.67	peak	
2	411.210	38.79	-7.60	29.19	82.30	-53.11	peak	
3	588.235	38.09	-3.77	32.32	82.30	-49.98	peak	
4	729.855	37.68	-1.43	36.25	82.30	-46.05	peak	
5	829.785	37.67	-0.64	37.03	82.30	-45.27	peak	
6 *	915.610	37.98	0.44	38.40	82.30	-43.90	peak	

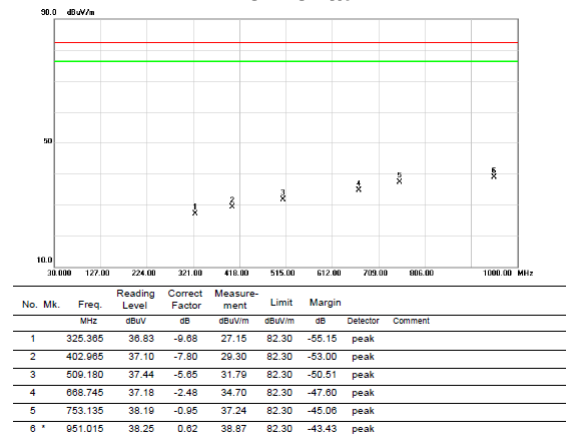
Test Mode : LTE Band 2_TX CH18900_20MHz

Vertical



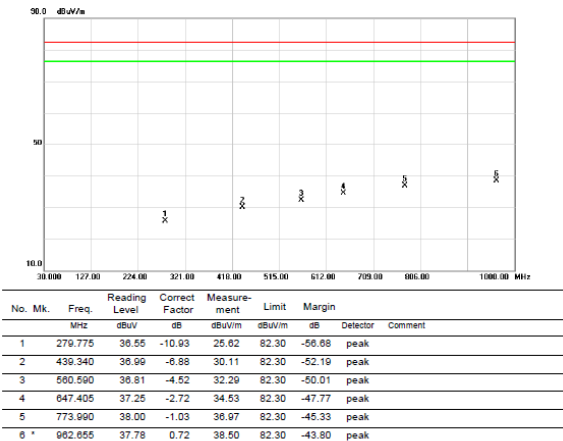
Test Mode : LTE Band 2_TX CH18900_20MHz

Horizontal



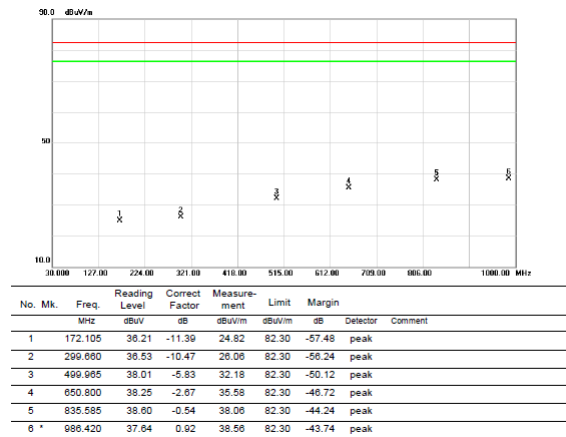
Test Mode : LTE Band 25_TX CH26365_1.4MHz

Vertical



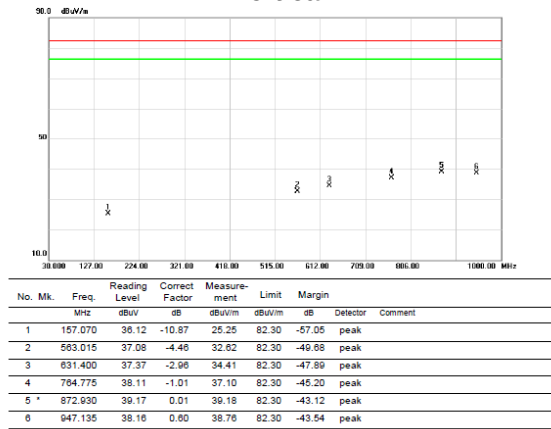
Test Mode : LTE Band 25_TX CH26365_1.4MHz

Horizontal



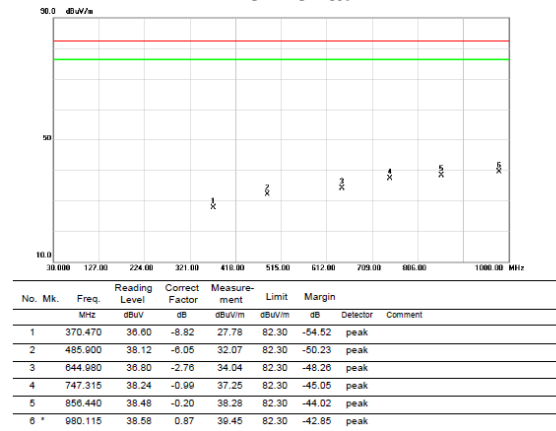
Test Mode : LTE Band 25_TX CH26365_5MHz

Vertical



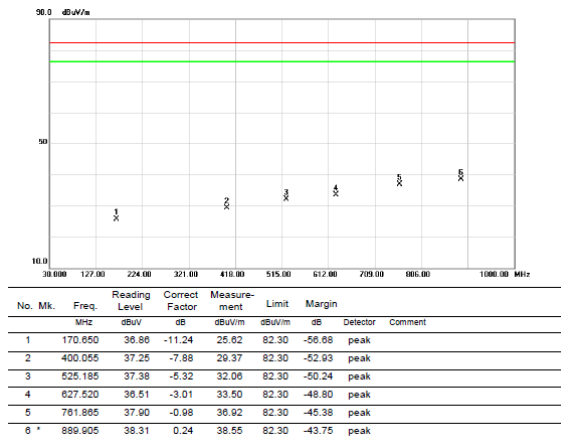
Test Mode : LTE Band 25_TX CH26365_5MHz

Horizontal



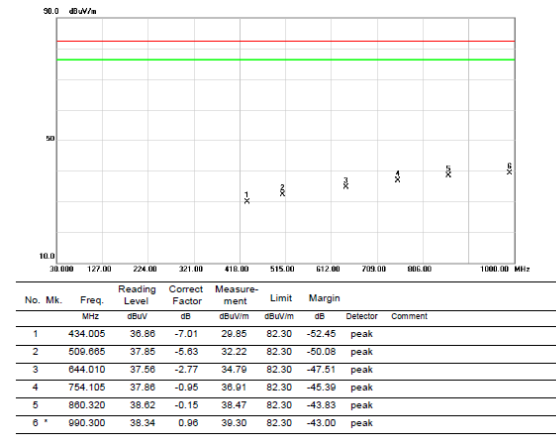
Test Mode : LTE Band 25_TX CH26365_20MHz

Vertical



Test Mode : LTE Band 25_TX CH26365_20MHz

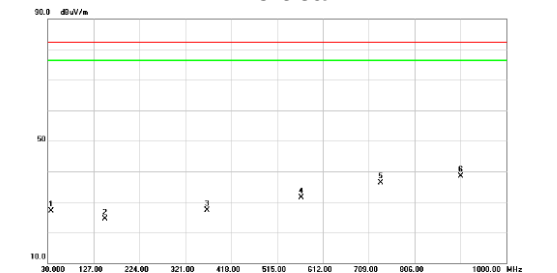
Horizontal



For NB-IoT:

Test Mode : LTE Band 2_TX CH18900_3.75kHz

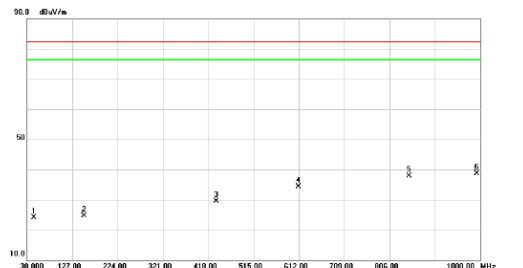
Vertical



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	36.790	39.27	-12.13	27.14	82.30	-55.16	peak	
2	150.280	35.63	-11.09	24.54	82.30	-57.76	peak	
3	367.075	36.31	-8.95	27.36	82.30	-54.94	peak	
4	565.440	36.00	-4.40	31.60	82.30	-50.70	peak	
5	734.220	37.53	-1.32	36.21	82.30	-46.09	peak	
6 *	903.000	38.09	0.38	38.47	82.30	-43.83	peak	

Test Mode : LTE Band 2_TX CH18900_3.75kHz

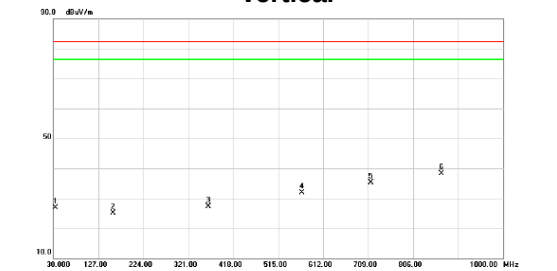
Horizontal



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	44.550	35.49	-11.39	24.10	82.30	-58.20	peak	
2	152.705	35.78	-11.01	24.77	82.30	-57.53	peak	
3	434.975	36.50	-6.99	29.51	82.30	-52.79	peak	
4	611.515	37.66	-3.26	34.40	82.30	-47.90	peak	
5	847.710	36.19	-0.33	37.86	82.30	-44.44	peak	
6 *	992.240	37.72	0.98	38.70	82.30	-43.60	peak	

Test Mode : LTE Band 2_TX CH18900_15kHz

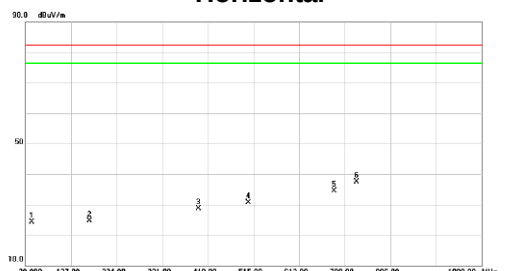
Vertical



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	33.680	39.35	-12.99	26.36	82.30	-55.94	peak	
2	159.010	35.62	-10.80	25.02	82.30	-57.28	peak	
3	364.650	36.31	-9.04	27.27	82.30	-55.03	peak	
4	565.925	36.25	-4.37	31.88	82.30	-50.42	peak	
5	715.305	37.16	-1.79	35.37	82.30	-46.93	peak	
6 *	867.595	38.35	-0.06	38.29	82.30	-44.01	peak	

Test Mode : LTE Band 2_TX CH18900_15kHz

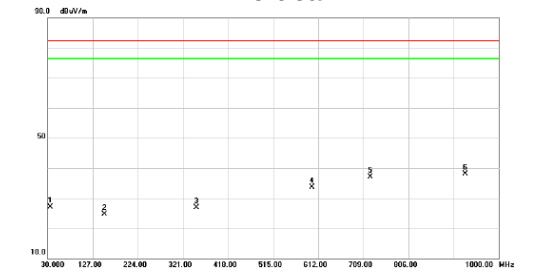
Horizontal



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	43.095	35.81	-11.49	24.32	82.30	-57.98	peak	
2	166.770	35.81	-11.04	24.77	82.30	-57.53	peak	
3	397.630	36.72	-7.93	28.79	82.30	-53.51	peak	
4	504.330	36.46	-5.74	30.72	82.30	-51.58	peak	
5	686.690	36.83	-2.31	34.52	82.30	-47.78	peak	
6 *	734.705	38.86	-1.31	37.55	82.30	-44.75	peak	

Test Mode : LTE Band 25_TX CH26365_3.75kHz

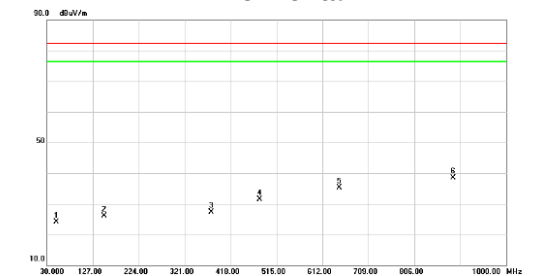
Vertical



No. Mk.	Freq. MHz	Reading Level dBV	Correct Factor dB	Measurement dBV/m	Limit dBV/m	Margin dB	Detector	Comment
1	35.335	39.34	-12.27	27.07	82.30	-55.23	peak	
2	152.705	35.62	-11.01	24.61	82.30	-57.69	peak	
3	350.100	36.27	-9.31	26.96	82.30	-55.34	peak	
4	598.420	37.12	-3.47	33.65	82.30	-48.65	peak	
5	724.035	38.69	-1.58	37.11	82.30	-45.19	peak	
6 *	928.220	37.64	0.50	38.14	82.30	-44.16	peak	

Test Mode : LTE Band 25_TX CH26365_3.75kHz

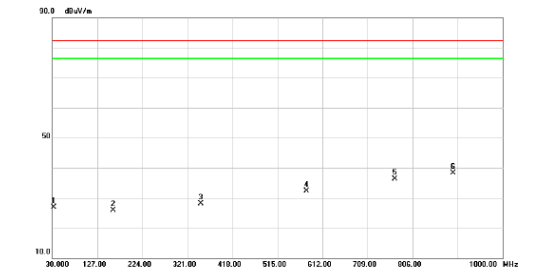
Horizontal



No. Mk.	Freq. MHz	Reading Level dBV	Correct Factor dB	Measurement dBV/m	Limit dBV/m	Margin dB	Detector	Comment
1	49.885	35.34	-11.29	24.05	82.30	-58.25	peak	
2	151.250	37.18	-11.07	26.11	82.30	-56.19	peak	
3	376.775	35.89	-8.61	27.28	82.30	-55.02	peak	
4	479.595	37.60	-6.15	31.45	82.30	-50.85	peak	
5	647.890	37.95	-2.71	35.24	82.30	-47.06	peak	
6 *	887.490	38.39	0.21	38.60	82.30	-43.70	peak	

Test Mode : LTE Band 25_TX CH26365_15kHz

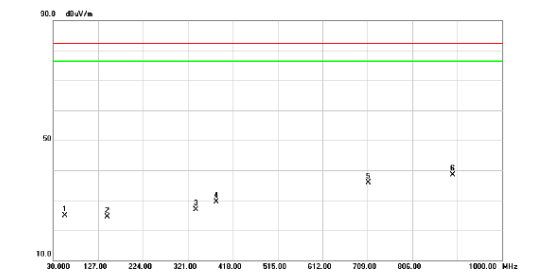
Vertical



No. Mk.	Freq. MHz	Reading Level dBV	Correct Factor dB	Measurement dBV/m	Limit dBV/m	Margin dB	Detector	Comment
1	33.395	39.39	-12.48	26.91	82.30	-55.39	peak	
2	161.435	36.66	-10.83	25.83	82.30	-56.47	peak	
3	350.100	37.46	-9.31	28.15	82.30	-54.15	peak	
4	577.565	36.46	-4.06	32.40	82.30	-49.90	peak	
5	768.170	37.32	-1.01	36.31	82.30	-45.99	peak	
6 *	892.815	37.97	0.28	38.25	82.30	-44.05	peak	

Test Mode : LTE Band 25_TX CH26365_15kHz

Horizontal

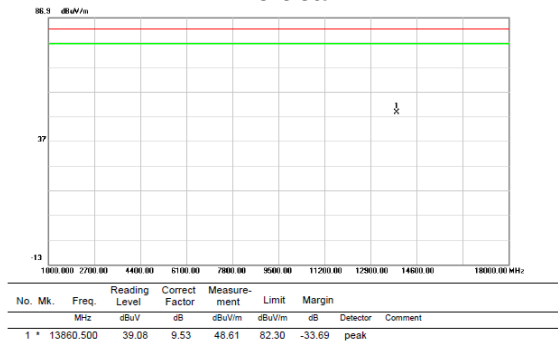


No. Mk.	Freq. MHz	Reading Level dBV	Correct Factor dB	Measurement dBV/m	Limit dBV/m	Margin dB	Detector	Comment
1	55.705	36.49	-11.53	24.96	82.30	-57.34	peak	
2	146.885	35.78	-11.27	24.51	82.30	-57.79	peak	
3	337.975	36.42	-9.42	27.00	82.30	-55.30	peak	
4	382.110	37.84	-8.41	29.43	82.30	-52.87	peak	
5	710.455	37.87	-1.92	35.95	82.30	-46.35	peak	
6 *	893.300	38.12	0.29	38.41	82.30	-43.89	peak	

APPENDIX D - RADIATED SPURIOUS EMISSIONS (ABOVE 1000MHZ)

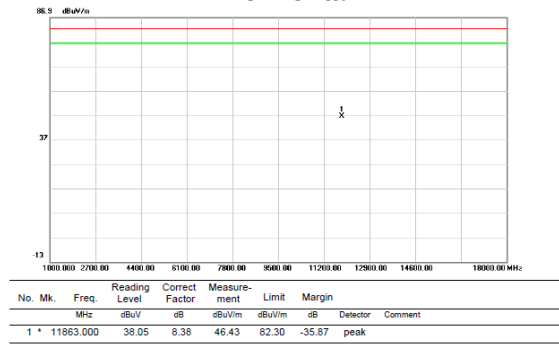
Test Mode : PCS1900_TX CH661_GPRS

Vertical



Test Mode : PCS1900_TX CH661_GPRS

Horizontal



Test Mode : PCS1900_TX CH661_GPRS

Vertical



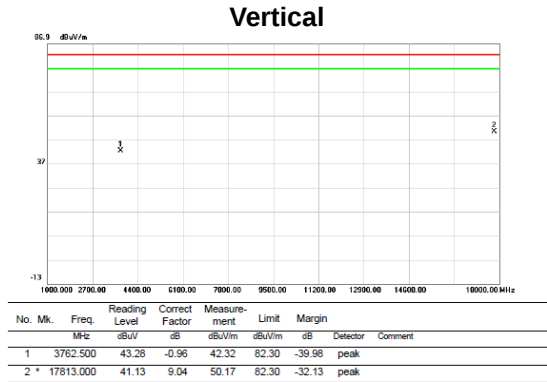
Test Mode : PCS1900_TX CH661_GPRS

Horizontal

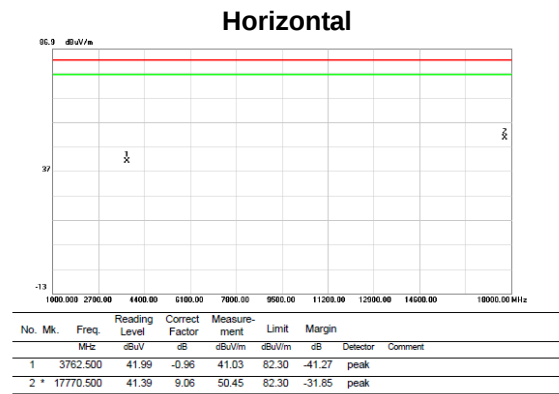


For eMTC:

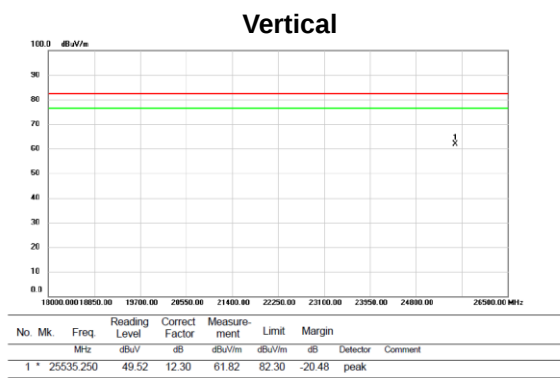
Test Mode : LTE Band 2_TX CH18900_1.4MHz



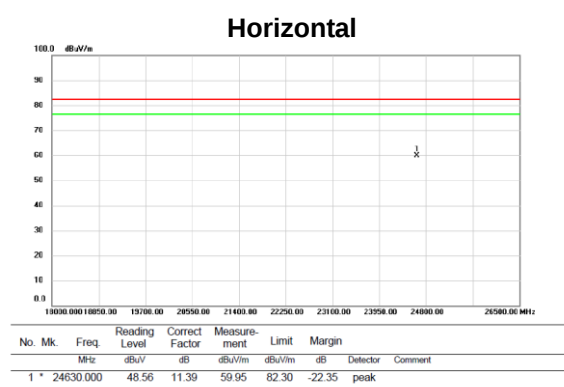
Test Mode : LTE Band 2_TX CH18900_1.4MHz



Test Mode : LTE Band 2_TX CH18900_1.4MHz

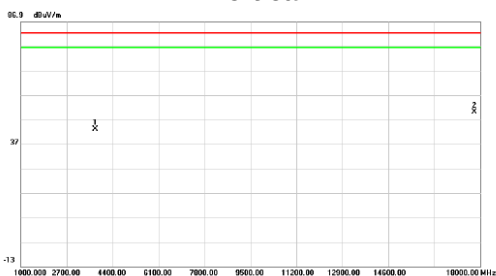


Test Mode : LTE Band 2_TX CH18900_1.4MHz



Test Mode : LTE Band 2_TX CH18900_5MHz

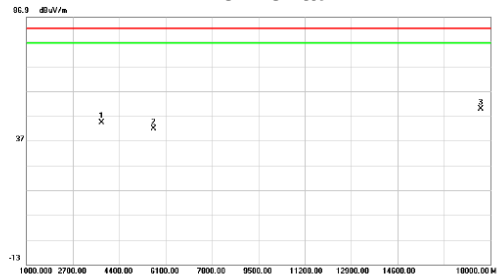
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm		dBm/Hz	dBm/Hz	dB		
1		3762.500	44.07	-0.96	43.11	82.30	-39.19	peak	
2 *		17787.500	40.85	9.06	49.91	82.30	-32.39	peak	

Test Mode : LTE Band 2_TX CH18900_5MHz

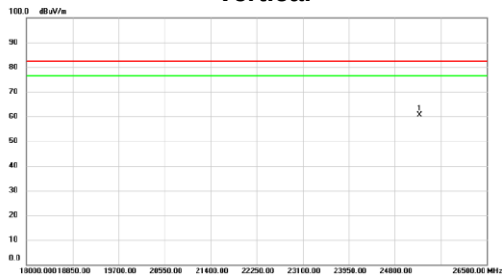
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm		dBm/Hz	dBm/Hz	dB		
1		3754.000	45.17	-0.97	44.20	82.30	-38.10	peak	
2		5649.500	38.93	2.90	41.83	82.30	-40.47	peak	
3 *		17651.500	40.64	9.13	49.77	82.30	-32.53	peak	

Test Mode : LTE Band 2_TX CH18900_5MHz

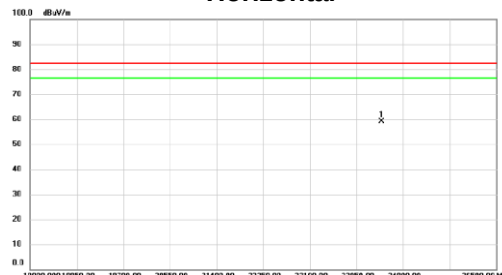
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm		dBm/Hz	dBm/Hz	dB		
1 *		25263.250	48.46	12.09	60.55	82.30	-21.75	peak	

Test Mode : LTE Band 2_TX CH18900_5MHz

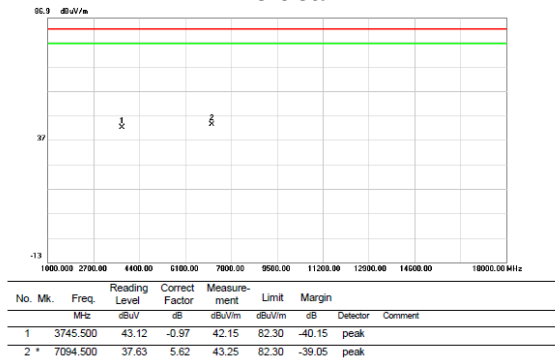
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin	Detector	Comment
		MHz	dBm		dBm/Hz	dBm/Hz	dB		
1 *		24409.000	47.98	11.15	59.13	82.30	-23.17	peak	

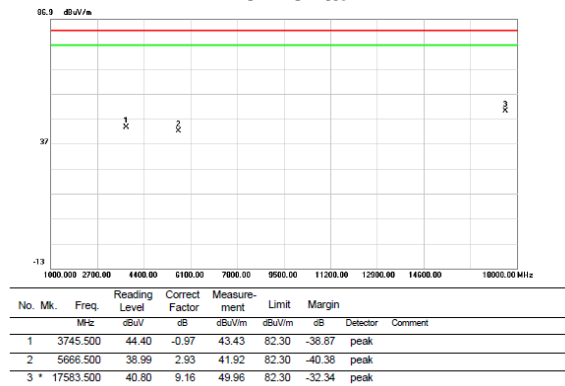
Test Mode : LTE Band 2_TX CH18900_20MHz

Vertical



Test Mode : LTE Band 2_TX CH18900_20MHz

Horizontal



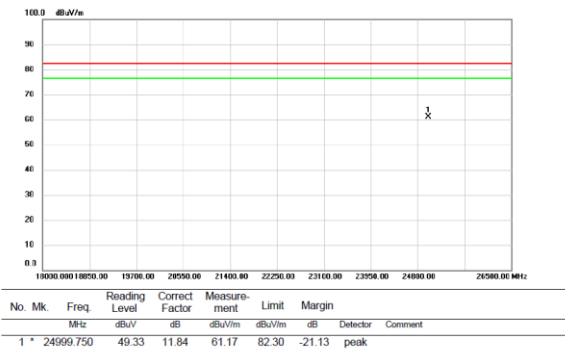
Test Mode : LTE Band 2_TX CH18900_20MHz

Vertical



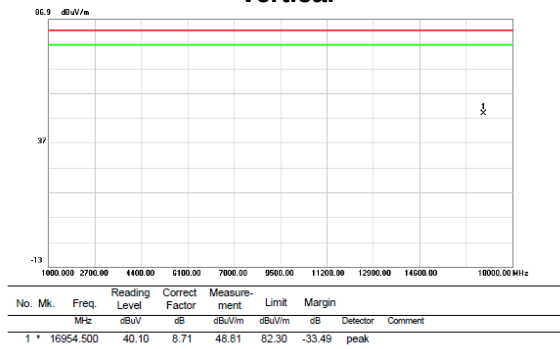
Test Mode : LTE Band 2_TX CH18900_20MHz

Horizontal



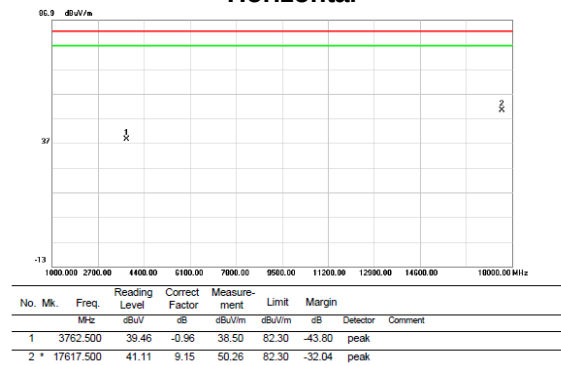
Test Mode : LTE Band 25_TX CH26365_1.4MHz

Vertical



Test Mode : LTE Band 25_TX CH26365_1.4MHz

Horizontal



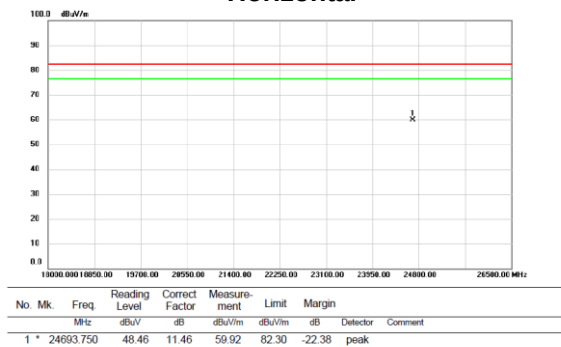
Test Mode : LTE Band 25_TX CH26365_1.4MHz

Vertical



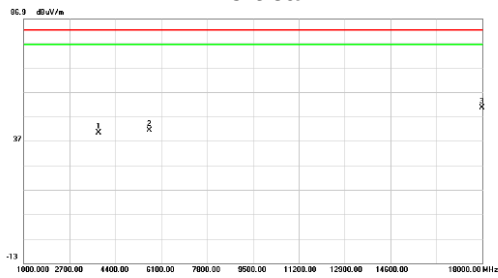
Test Mode : LTE Band 25_TX CH26365_1.4MHz

Horizontal



Test Mode : LTE Band 25_TX CH26365_5MHz

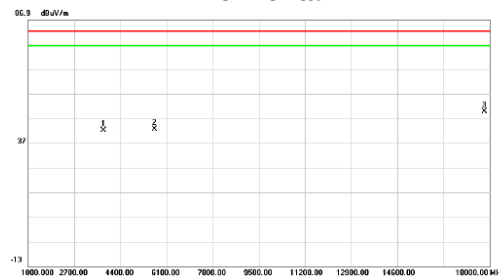
Vertical



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	3771.000	41.31	-0.95	40.36	82.30	-41.94	peak	
2	5658.000	38.35	2.92	41.27	82.30	-41.03	peak	
3 *	17963.000	41.46	8.96	50.42	82.30	-31.88	peak	

Test Mode : LTE Band 25_TX CH26365_5MHz

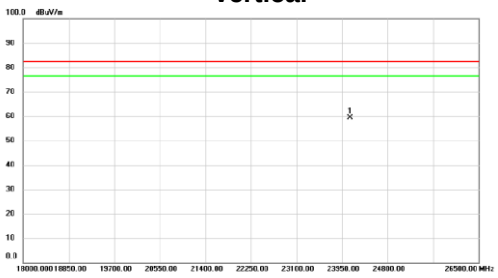
Horizontal



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	3771.000	42.90	-0.95	41.95	82.30	-40.35	peak	
2	5658.000	39.54	2.92	42.46	82.30	-39.84	peak	
3 *	17796.000	40.73	9.06	49.79	82.30	-32.51	peak	

Test Mode : LTE Band 25_TX CH26365_5MHz

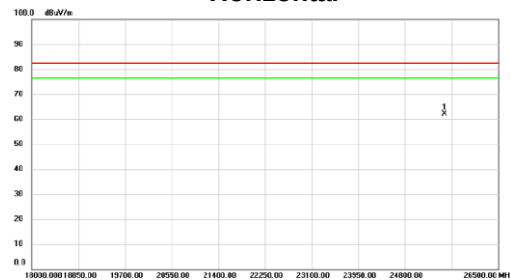
Vertical



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1 *	24103.000	48.43	10.90	59.33	82.30	-22.97	peak	

Test Mode : LTE Band 25_TX CH26365_5MHz

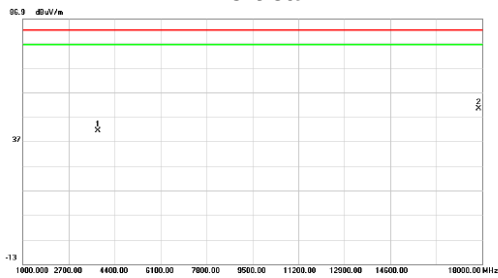
Horizontal



No. Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measurement dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1 *	25514.000	49.72	12.30	62.02	82.30	-20.28	peak	

Test Mode : LTE Band 25_TX CH26365_20MHz

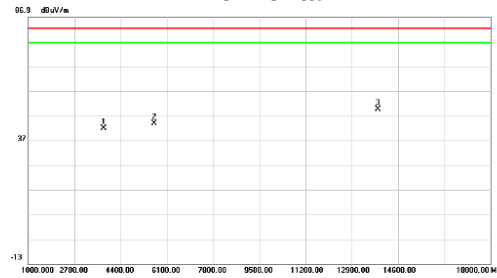
Vertical



No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1		3779.500	42.27	-0.93	41.34	82.30	-40.96	peak	
2	*	17881.000	41.26	9.01	50.27	82.30	-32.03	peak	

Test Mode : LTE Band 25_TX CH26365_20MHz

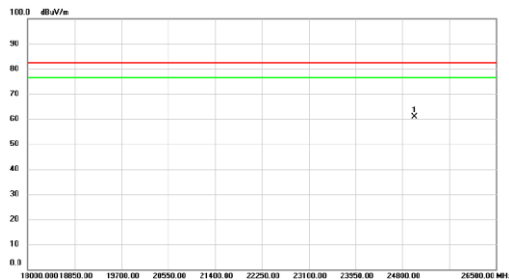
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1		3779.500	42.70	-0.93	41.77	82.30	-40.53	peak	
2		5624.000	40.94	2.86	43.80	82.30	-38.50	peak	
3	*	13860.500	39.91	9.53	49.44	82.30	-32.86	peak	

Test Mode : LTE Band 25_TX CH26365_20MHz

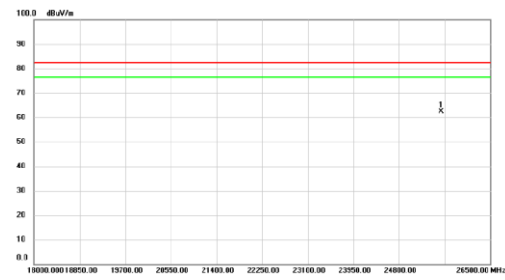
Vertical



No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	*	25016.750	48.94	11.86	60.80	82.30	-21.50	peak	

Test Mode : LTE Band 25_TX CH26365_20MHz

Horizontal

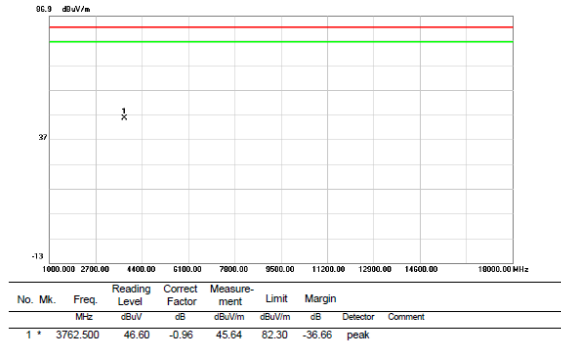


No.	Mk.	Freq. MHz	Reading Level dBμV	Correct Factor dB	Measure- ment dBμV/m	Limit dBμV/m	Margin dB	Detector	Comment
1	*	25500.500	50.17	12.29	62.46	82.30	-19.84	peak	

For NB-IoT:

Test Mode : LTE Band 2_TX CH18900_3.75kHz

Vertical



Test Mode : LTE Band 2_TX CH18900_3.75kHz

Horizontal



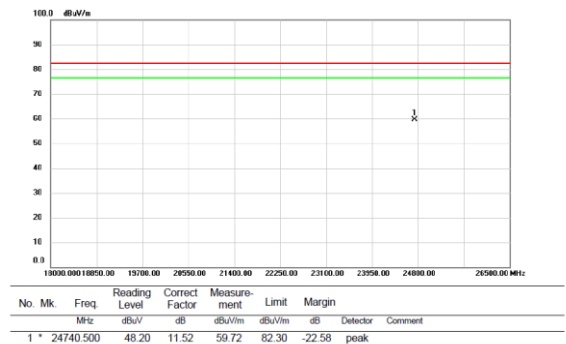
Test Mode : LTE Band 2_TX CH18900_3.75kHz

Vertical



Test Mode : LTE Band 2_TX CH18900_3.75kHz

Horizontal



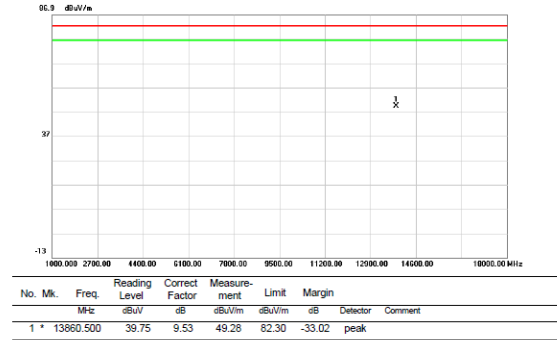
Test Mode : LTE Band 2_TX CH18900_15kHz

Vertical



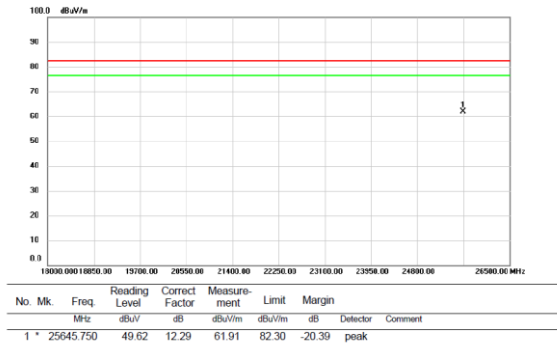
Test Mode : LTE Band 2_TX CH18900_15kHz

Horizontal



Test Mode : LTE Band 2_TX CH18900_15kHz

Vertical



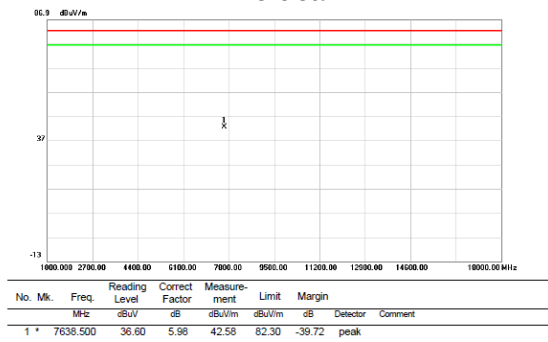
Test Mode : LTE Band 2_TX CH18900_15kHz

Horizontal



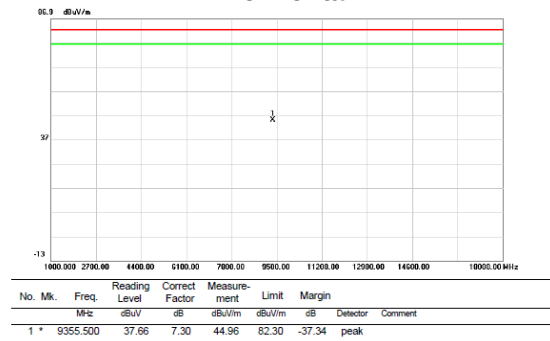
Test Mode : LTE Band 25_TX CH26365_3.75kHz

Vertical



Test Mode : LTE Band 25_TX CH26365_3.75kHz

Horizontal



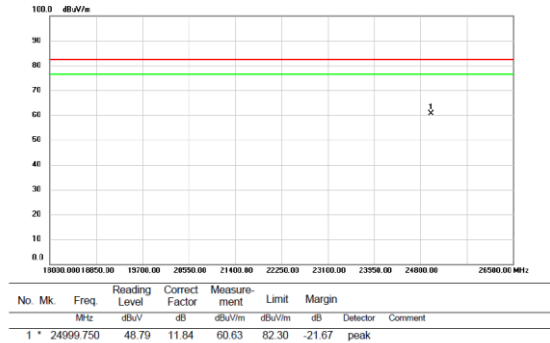
Test Mode : LTE Band 25_TX CH26365_3.75kHz

Vertical



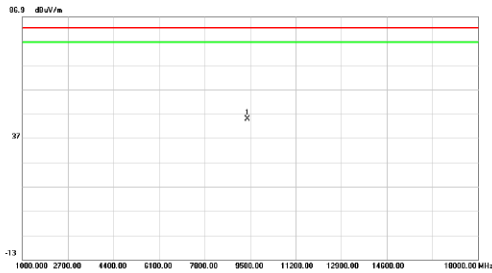
Test Mode : LTE Band 25_TX CH26365_3.75kHz

Horizontal



Test Mode : LTE Band 25_TX CH26365_15kHz

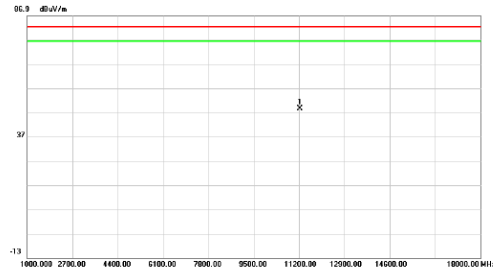
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm/Hz	Correct Factor dB	Measure- ment dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	*	9406.500	37.36	7.33	44.69	82.30	-37.61	peak	

Test Mode : LTE Band 25_TX CH26365_15kHz

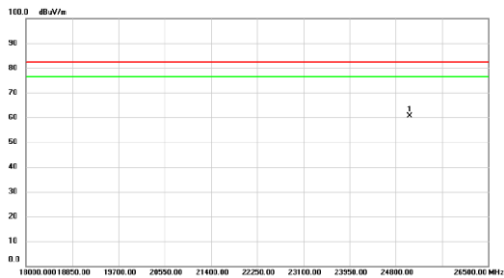
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm/Hz	Correct Factor dB	Measure- ment dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	*	11234.000	39.91	8.53	48.44	82.30	-33.86	peak	

Test Mode : LTE Band 25_TX CH26365_15kHz

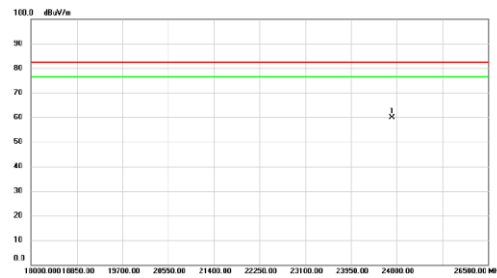
Vertical



No.	Mk.	Freq. MHz	Reading Level dBm/Hz	Correct Factor dB	Measure- ment dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	*	25050.750	48.75	11.89	60.64	82.30	-21.66	peak	

Test Mode : LTE Band 25_TX CH26365_15kHz

Horizontal



No.	Mk.	Freq. MHz	Reading Level dBm/Hz	Correct Factor dB	Measure- ment dBm/Hz	Limit dBm/Hz	Margin dB	Detector	Comment
1	*	24715.000	48.30	11.49	59.79	82.30	-22.51	peak	

End of Test Report