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 ~ Sep. 09, 2024
Issued Date	:	Oct. 31, 2024
Report Version	:	R02
Test Sample	:	Engineering Sample No.: DG20240507140, DG20240507139
Standard(s)	:	47 CFR FCC Part 22 Subpart H 47 CFR FCC Part 2

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

Prepared by : Edward Li

Edward Li

Approved by : Treey Chen

Treey Chen

Room 108-116, 309-310, Building 2, No.1, Yile Road, Songshan Lake Zone,
Dongguan City, Guangdong, People's Republic of China.
Tel: +86-769-8318-3000 Web: www.newbtl.com Service mail: btl_qa@newbtl.com

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-1-2404C168	R00	Original Report.	Sep. 26, 2024	Invalid
BTL-FCCP-1-2404C168	R01	Added the RF Module FCC ID in section 2.	Oct. 18, 2024	Invalid
BTL-FCCP-1-2404C168	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 22 Subpart H & Part 2			
Standard(s) Section	**Test Item**	**Judgment**	**Remark**
2.1046	Output Power	PASS	**Note(1)**
22.913(a)(5)	Effective Radiated Power	PASS	**Note(1)**
2.1049	Occupied Bandwidth	PASS	**Note(1)**
2.1051 22.917(a)	Conducted Spurious Emissions	PASS	**Note(1)**
2.1053 22.917(a)	Radiated Spurious Emissions	PASS	------
22.917(a)	Band Edge Measurements	PASS	**Note(1)**
22.913(d)	Peak To Average Ratio	PASS	**Note(1)**
2.1055 22.355	Frequency Stability	PASS	**Note(1)**

Note:
1. 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 47 CFR FCC Part 24 47 CFR FCC Part 2	RSS-132 Issue 3 RSS-133 Issue 6 RSS-Gen Issue 5
	LTE	60356613 002	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
		60356613 001	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

1) The GSM850, band 5 and band 26 antenna gain of LTE Cat-M1 Tracker was smaller than that of module, so ouput power and ERP refer to module test report. Thus, only the radiated spurious emissions was evaluated and recorded in this report. 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 AVX GROUP COMPANY	1004795/1004796	PCB	N/A	1.6	GSM 850
				1.6	LTE Band 5
				1.6	LTE Band 26

1) The antenna gain is provided by the manufacturer.

2.1 TEST FACILITY

The test facilities used to collect the test data 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*,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	*U*,(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*,(dB)
DG-CB03 (3m)	CISPR	1GHz ~ 6GHz	4.08
		6GHz ~ 18GHz	4.62

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
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)	22-24°C	56-58%	AC 120V/60Hz	Jensen Zhou	Jun. 10, 2024-Jun. 22, 2024
Radiated Spurious Emissions (Above 1000 MHz)	22-24°C	56-58%	AC 120V/60Hz	Jensen Zhou	Jun. 10, 2024-Jun. 22, 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, accesorries 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.	Radiated	350903782706437, 350903782706486
Modulation Type	GPRS/EGPRS	GMSK
	EGPRS	8PSK
	LTE(eMTC)	UL: QPSK,16QAM
	LTE(NB-IoT)	UL: BPSK, QPSK

Note:

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

2. Channel List:

GSM 850				
Test Frequency ID	UARFCN	Frequency of Uplink (MHz)	UARFCN	Frequency of Downlink (MHz)
Low Range	128	824.2	137	869.2
Mid Range	190	836.6	199	881.6
High Range	251	848.8	260	893.8

LTE Band 5(eMTC)					
Test Frequency ID	Bandwidth (MHz)	N_{UL}	Frequency of Uplink (MHz)	N_{DL}	Frequency of Downlink (MHz)
Low Range	1.4	20407	824.7	2407	869.7
	3	20415	825.5	2415	870.5
	5	20425	826.5	2425	871.5
	10	20450	829	2450	874
Mid Range	1.4/3/5/10	20525	836.5	2525	881.5
High Range	1.4	20643	848.3	2643	893.3
	3	20635	847.5	2635	892.5
	5	20625	846.5	2625	891.5
	10	20600	844	2600	889

LTE Band 5(NB-IoT)					
Test Frequency ID	Bandwidth (kHz)	N_{UL}	Frequency of Uplink (MHz)	N_{DL}	Frequency of Downlink (MHz)
Low Range	200	20401	824.1	2401	869.1
Mid Range	200	20525	836.5	2525	881.5
High Range	200	20649	848.9	2649	893.9

LTE Band 26(eMTC)					
Test Frequency ID	Bandwidth (MHz)	N_{UL}	Frequency of Uplink (MHz)	N_{DL}	Frequency of Downlink (MHz)
Low Range	1.4	26797	824.7	8797	869.7
	3	26805	825.5	8805	870.5
	5	26815	826.5	8815	871.5
	10	26840	829	8840	874
	15	26865	831.5	8865	876.5
Mid Range	1.4/3/5/10/15	26915	836.5	8915	881.5
High Range	1.4	27033	848.3	9033	893.3
	3	27025	847.5	9025	892.5
	5	27015	846.5	9015	891.5
	10	26990	844	8990	889
	15	26965	841.5	8965	886.5

LTE Band 26(NB-IoT)					
Test Frequency ID	Bandwidth (kHz)	N_{UL}	Frequency of Uplink (MHz)	N_{DL}	Frequency of Downlink (MHz)
Low Range	200	26791	824.1	8791	869.1
Mid Range	200	26915	836.5	8915	881.5
High Range	200	27039	848.9	9039	893.9

3.2 DESCRIPTION OF TEST MODES

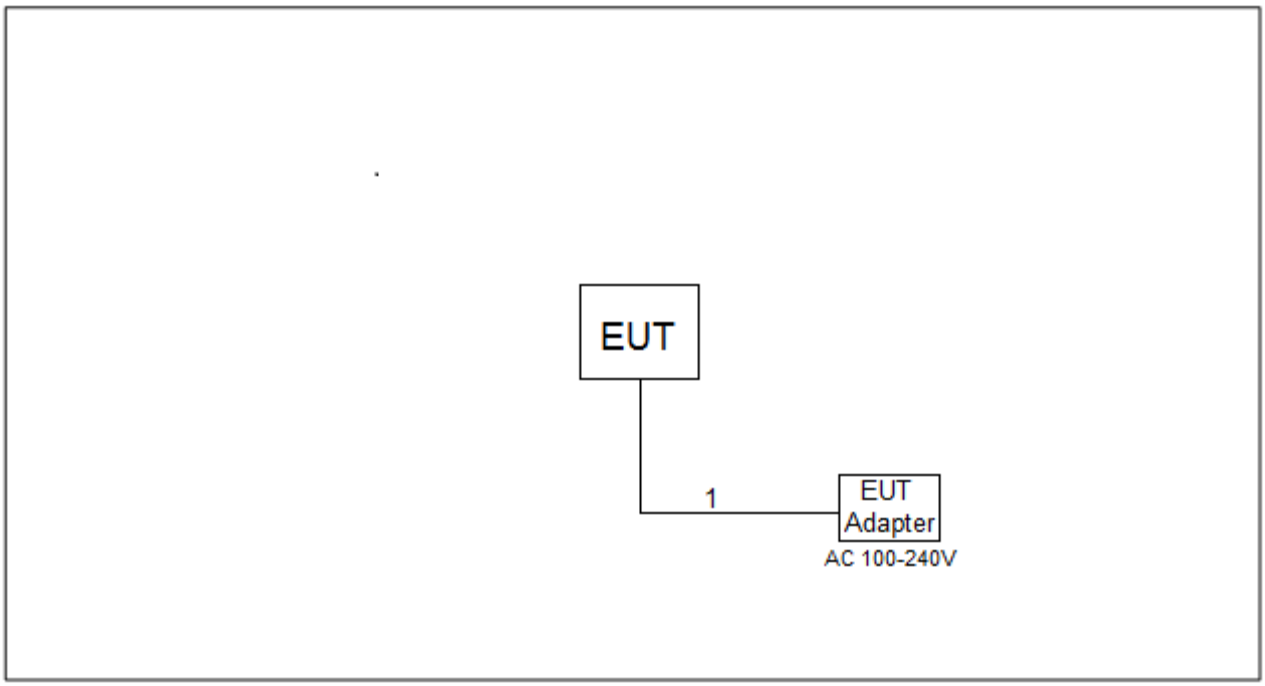
Following mode(s) is (were) found to be the worst case(s) and selected for the final test.

GSM MODE			
Test Item	Available Channel	Tested Channel	Mode
Radiated Spurious Emissions	128 to 251	190	GPRS

LTE BAND 5 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Radiated Spurious Emissions	20407 to 20643	20525	1.4MHz	QPSK	1RB
	20425 to 20625	20525	5MHz	QPSK	1RB
	20450 to 20600	20525	10MHz	QPSK	1RB
Test Item	Available Channel	Tested Channel	Sub-carrier Spacing(kHz)	Modulation	Mode
Radiated Spurious Emissions	20401 to 20649	20525	3.75	QPSK	1RB
	20401 to 20649	20525	15	QPSK	1RB

LTE BAND 26 MODE					
Test Item	Available Channel	Tested Channel	Channel Bandwidth	Modulation	Mode
Radiated Spurious Emissions	26797 to 27033	26915	1.4MHz	QPSK	1RB
	26815 to 27015	26915	5MHz	QPSK	1RB
	26865 to 26965	26915	15MHz	QPSK	1RB
Test Item	Available Channel	Tested Channel	Sub-carrier Spacing(kHz)	Modulation	Mode
Radiated Spurious Emissions	26791 to 27039	26915	3.75	QPSK	1RB
	26791 to 27039	26915	15	QPSK	1RB

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 RADIATED SPURIOUS EMISSIONS MEASUREMENT

4.1.1 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.

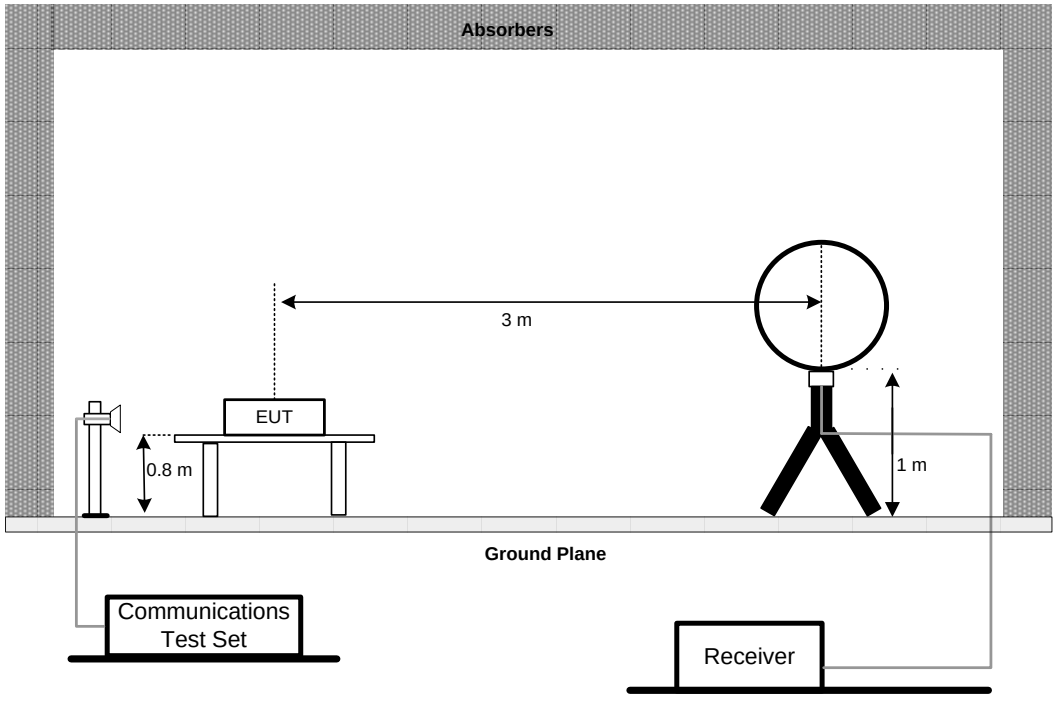
4.1.2 TEST PROCEDURES

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

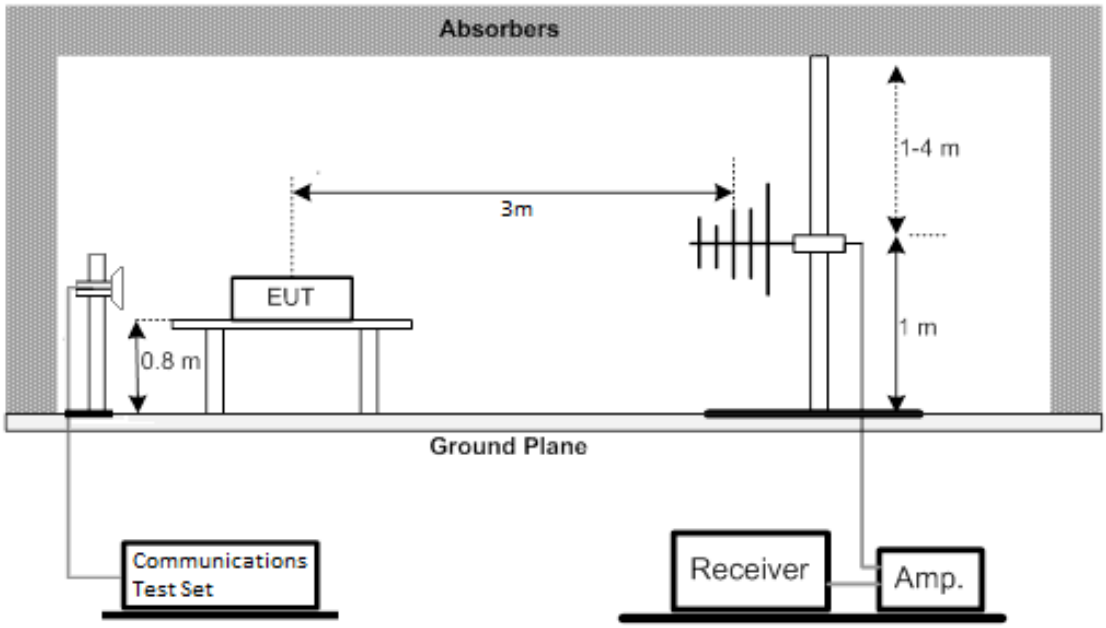
1. The EUT was placed on a turntable with 0.8 meter height for frequency below 1GHz and 1.5 meter height for frequency above 1GHz respectively above ground.
2. The EUT was set 3 meters from the receiving antenna mounted on the antenna tower.
3. During the measurement, the system simulator parameters 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 (dBuV/m) = EIRP (dBm) - 20log(D) + 104.8; where D is the measurement distance (in the far field region) in m.The emission limit equal to 82.26dBuV/m.

4.1.3 TEST SETUP LAYOUT

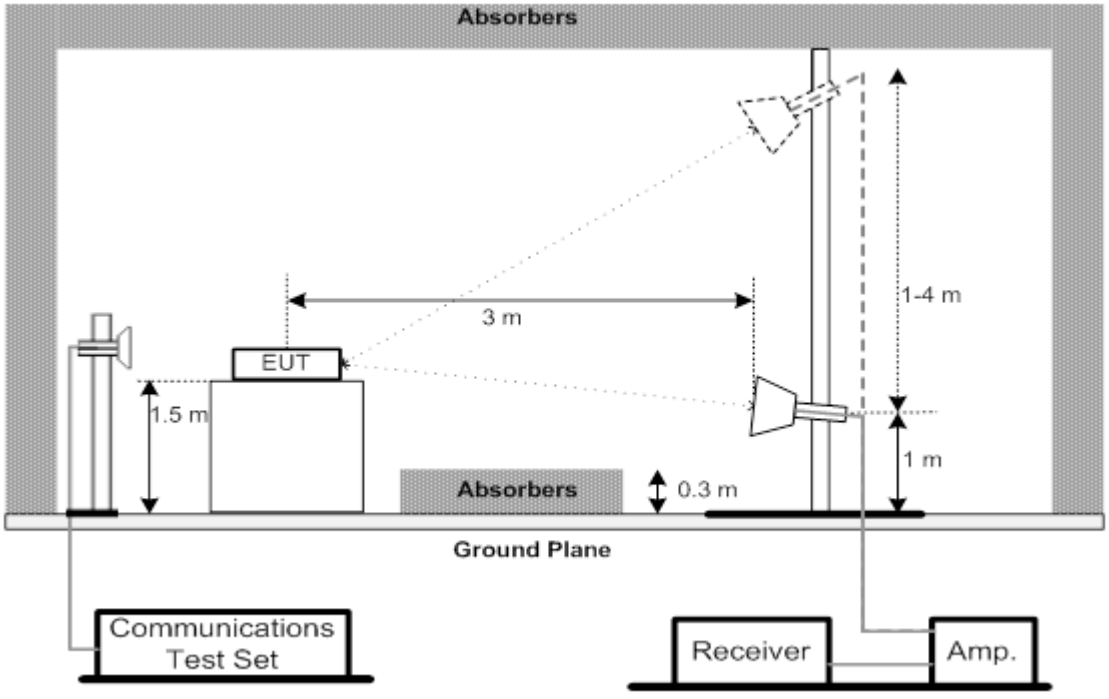
Below 30MHz



30MHz to 1000MHz



Above 1GHz



4.1.4 TEST DEVIATION

No deviation

4.1.5 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the APPENDIX A.

4.1.6 TEST RESULTS (30MHZ TO 1000MHZ)

Please refer to the APPENDIX B.

4.1.7 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the APPENDIX C.

4. LIST OF MEASUREMENT EQUIPMENTS

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-NMBM-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

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

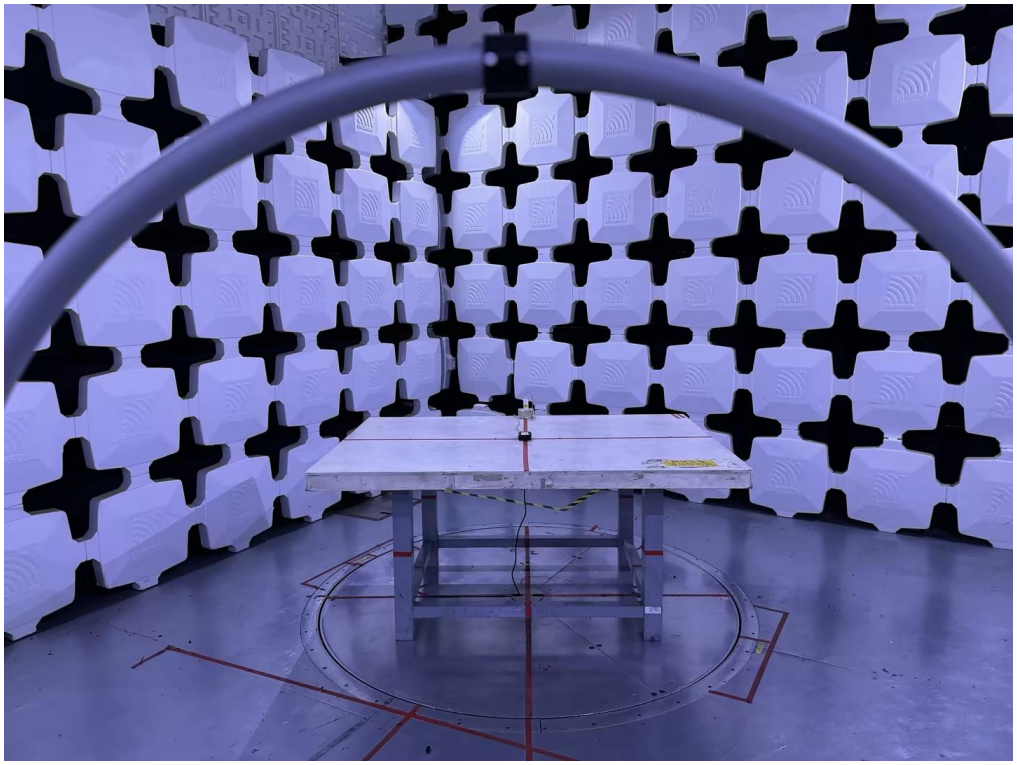
Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXA Signal Analyzer	KEYSIGHT	N9020B	MY63380204	Nov. 17, 2024
2	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
3	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024
4	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	May 31, 2025
5	Double Ridged Guide Antenna	ETS	3115	75846	Mar. 20, 2025
6	Cable	RegalWay	RWLP50-4.0A-SMSM-12.5M	N/A	Feb. 19, 2025
7	Cable	RegalWay	RWLP50-4.0A-NMRASM-2.5M	N/A	Aug. 08, 2024 Jul. 03, 2025
8	Cable	RegalWay	RWLP50-4.0A-NMRASMRA-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-W102	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

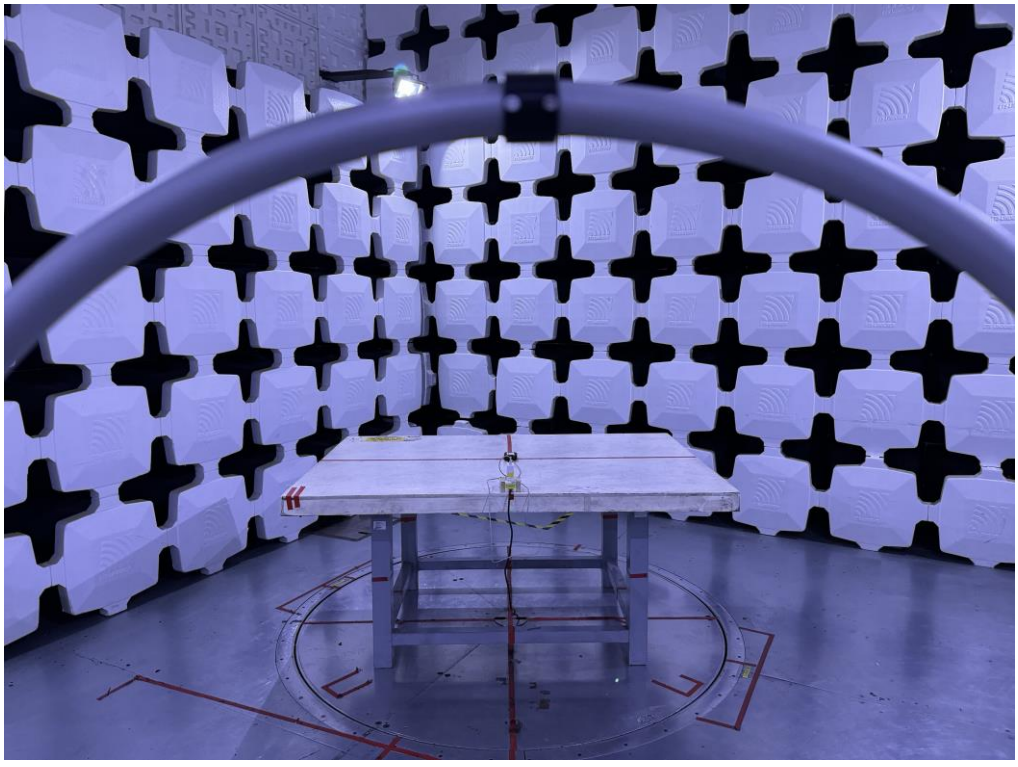
Remark: ”N/A” denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

5. EUT TEST PHOTO

Radiated Emissions Test Photos

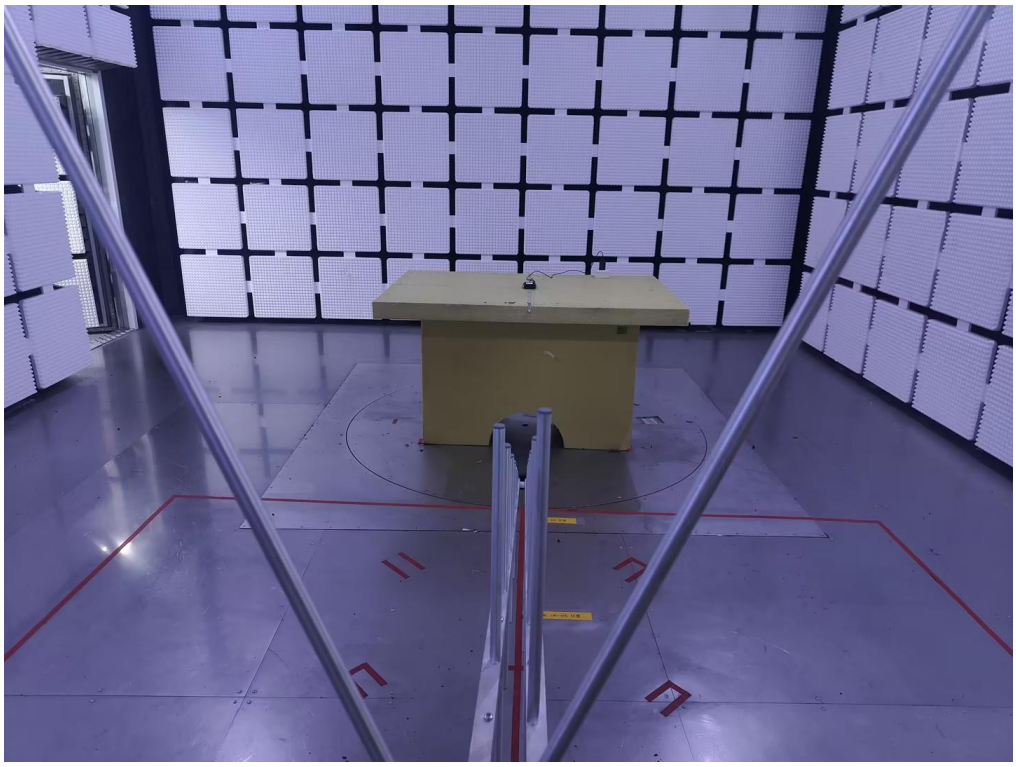
9 kHz to 30 MHz

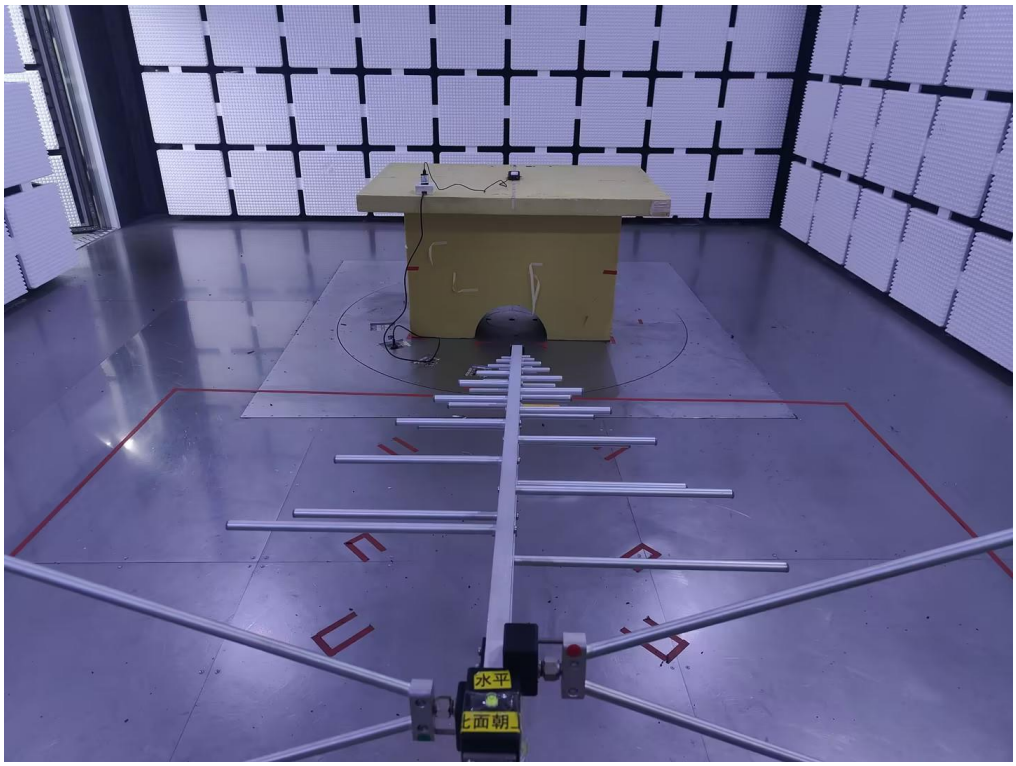




Radiated Emissions Test Photos

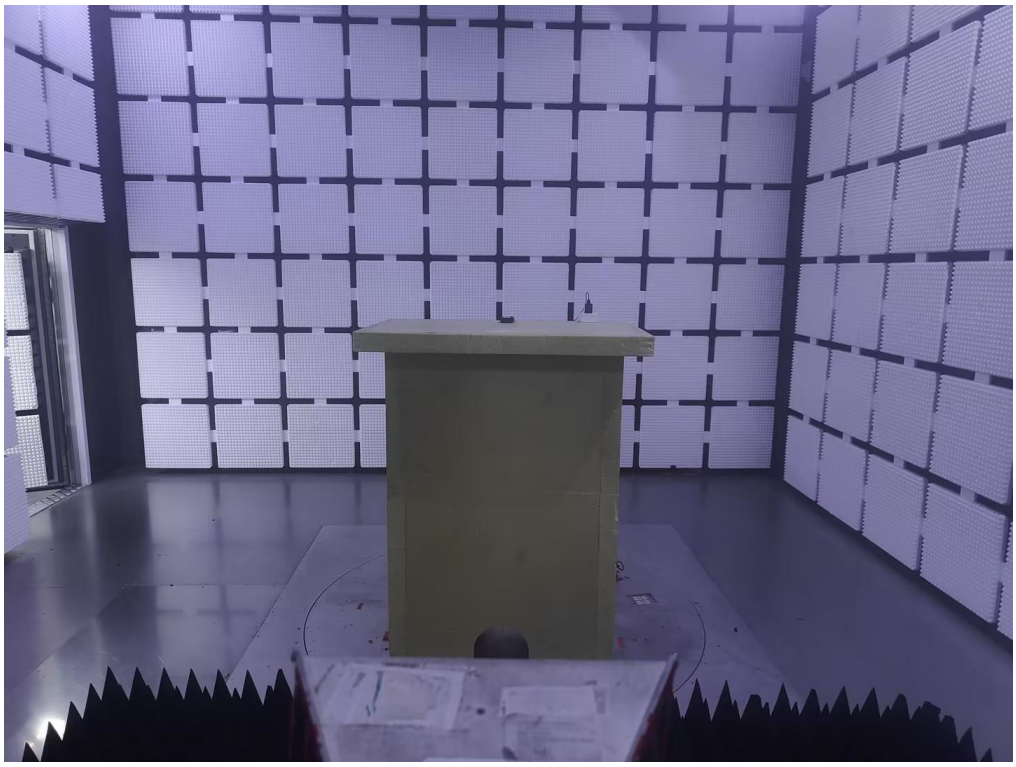
30 MHz to 1 GHz

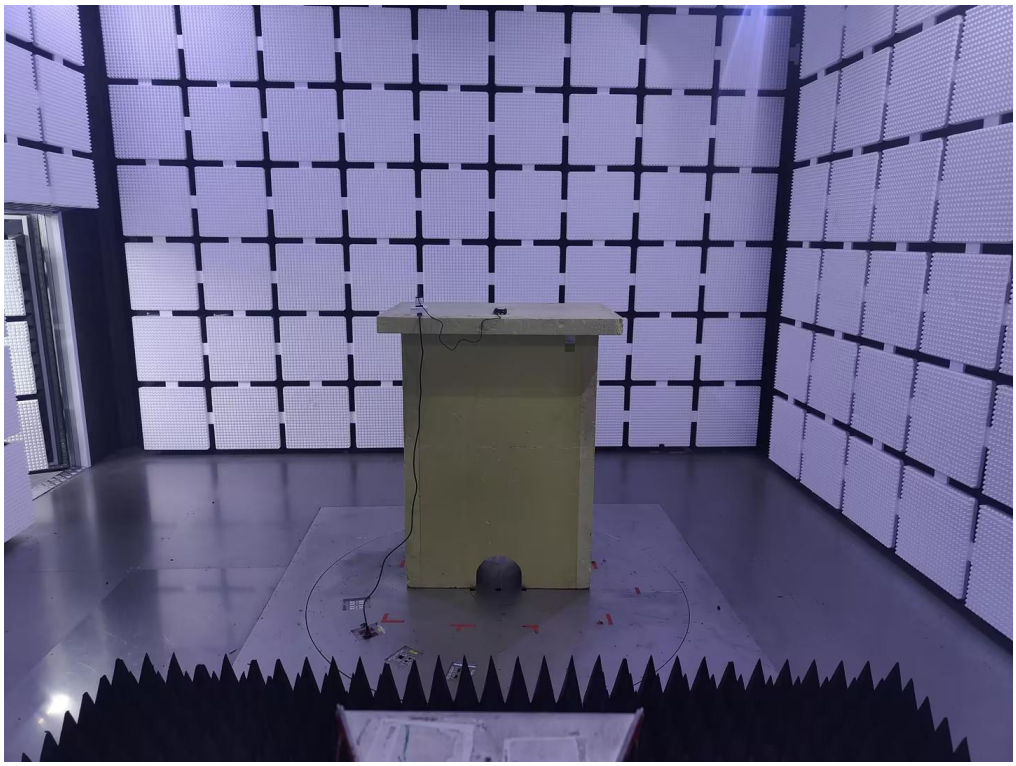




Radiated Emissions Test Photos

Above 1 GHz

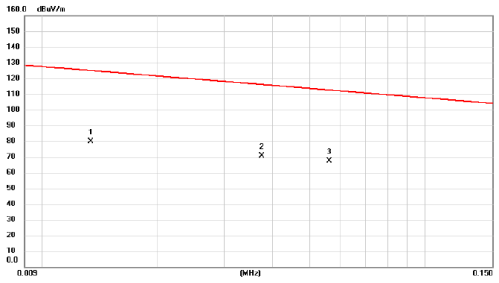




APPENDIX A - RADIATED SPURIOUS EMISSIONS (9KHZ TO 30MHZ)

Test Mode :	TX Mode

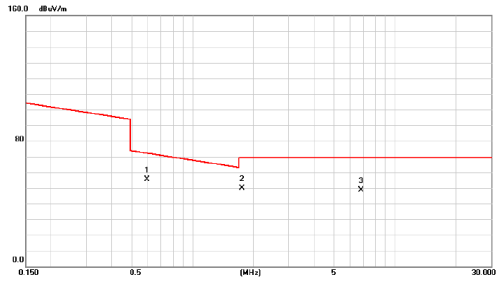
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.013	59.03	20.60	79.63	125.06	-45.43	AVG	
2		0.037	49.44	21.14	70.58	116.12	-45.54	AVG	
3	*	0.056	46.19	21.22	67.41	112.61	-45.20	AVG	

Test Mode :	TX Mode

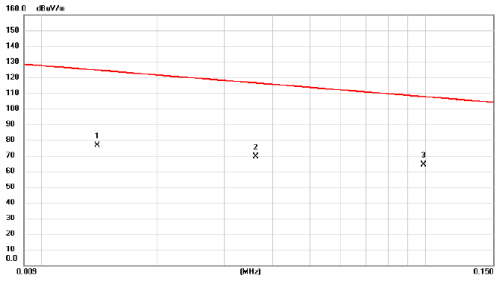
Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.598	34.44	21.03	55.47	72.07	-16.60	QP	
2		1.762	28.64	21.02	49.66	69.54	-19.88	QP	
3		6.806	27.61	21.00	48.61	69.54	-20.93	QP	

Test Mode :	TX Mode

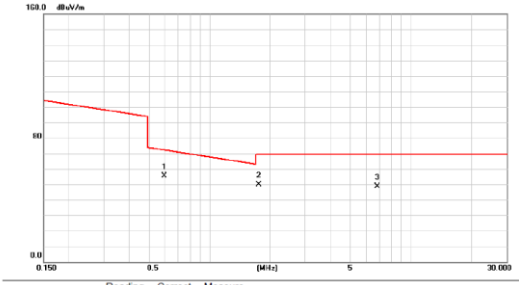
Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.014	56.01	20.62	76.63	124.68	-48.05	AVG	
2		0.036	48.41	21.13	69.54	116.45	-46.91	AVG	
3	*	0.099	42.82	21.30	64.12	107.71	-43.59	QP	

Test Mode :	TX Mode

Ant 90°

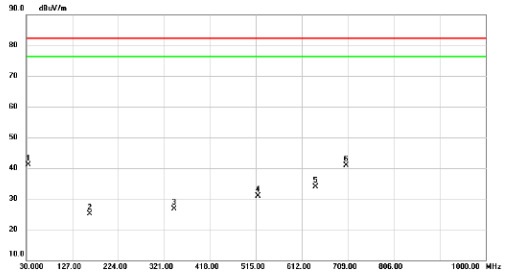


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.598	34.44	21.03	55.47	72.07	-16.60	QP	
2		1.762	28.64	21.02	49.66	69.54	-19.88	QP	
3		6.806	27.61	21.00	48.61	69.54	-20.93	QP	

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

Test Mode :	GPRS850_TX CH190_GSM

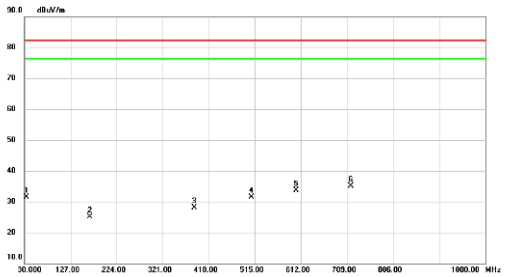
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	34.365	53.50	-12.33	41.17	82.30	-41.13	peak	
2		164.345	35.97	-10.94	25.03	82.30	-57.27	peak	
3		342.825	36.07	-9.37	26.70	82.30	-55.60	peak	
4		519.365	36.43	-5.43	31.00	82.30	-51.30	peak	
5		641.100	36.74	-2.81	33.93	82.30	-48.37	peak	
6		705.605	43.00	-2.02	40.98	82.30	-41.32	peak	

Test Mode :	GPRS850_TX CH190_GSM

Horizontal

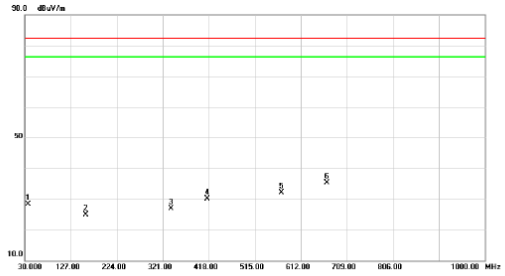


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		34.365	43.75	-12.33	31.42	82.30	-50.88	peak	
2		167.740	36.11	-11.08	25.03	82.30	-57.27	peak	
3		386.960	36.28	-8.20	28.08	82.30	-54.22	peak	
4		508.210	37.16	-5.67	31.49	82.30	-50.81	peak	
5		602.300	37.11	-3.41	33.70	82.30	-48.60	peak	
6	*	716.760	36.86	-1.75	35.11	82.30	-47.19	peak	

For eMTC:

Test Mode :	LTE Band 5_TX CH20525_1.4MHz

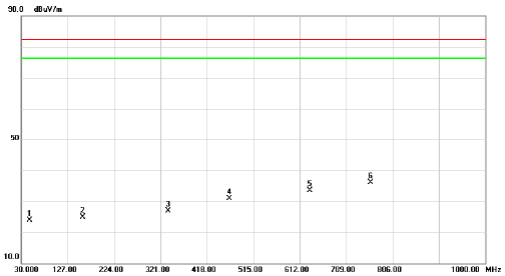
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		36.790	40.44	-12.13	28.31	82.30	-53.99	peak	
2		158.040	35.69	-10.84	24.85	82.30	-57.45	peak	
3		337.975	36.36	-9.42	26.94	82.30	-55.36	peak	
4		414.120	37.56	-7.52	30.04	82.30	-52.26	peak	
5		571.260	36.28	-4.23	32.05	82.30	-50.25	peak	
6	*	667.290	37.81	-2.50	35.31	82.30	-46.99	peak	

Test Mode :	LTE Band 5_TX CH20525_1.4MHz

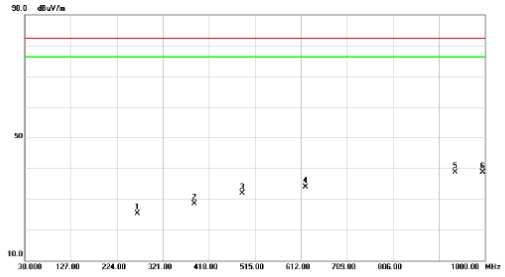
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		47.460	35.31	-11.31	24.00	82.30	-58.30	peak	
2		159.010	35.80	-10.80	25.00	82.30	-57.30	peak	
3		337.005	36.26	-9.43	26.83	82.30	-55.47	peak	
4		465.045	37.21	-6.37	30.84	82.30	-51.46	peak	
5		632.855	36.53	-2.94	33.59	82.30	-48.71	peak	
6	*	759.440	37.08	-0.97	36.11	82.30	-46.19	peak	

Test Mode :	LTE Band 5_TX CH20525_5MHz

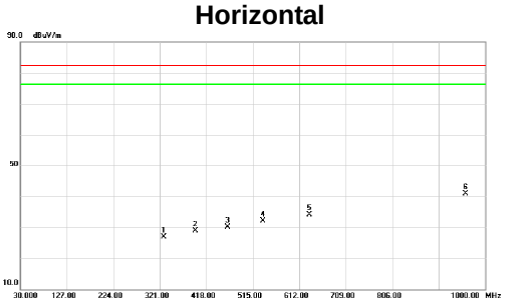
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		267.165	36.88	-11.56	25.32	82.30	-56.98	peak	
2		386.960	36.64	-8.20	28.44	82.30	-53.86	peak	
3		487.840	37.94	-6.02	31.92	82.30	-50.38	peak	
4		621.700	37.04	-3.11	33.93	82.30	-48.37	peak	
5		937.435	38.09	0.55	38.64	82.30	-43.66	peak	
6	*	995.150	37.78	0.99	38.77	82.30	-43.53	peak	

Test Mode :	LTE Band 5_TX CH20525_5MHz

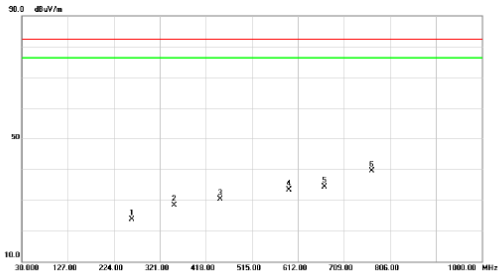
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		328.760	36.38	-9.57	26.81	82.30	-55.49	peak	
2		395.690	36.79	-7.96	28.83	82.30	-53.47	peak	
3		462.135	36.57	-6.41	30.16	82.30	-52.14	peak	
4		535.855	37.29	-5.11	32.18	82.30	-50.12	peak	
5		633.825	36.99	-2.93	34.06	82.30	-48.24	peak	
6	*	959.745	40.29	0.69	40.98	82.30	-41.32	peak	

Test Mode :	LTE Band 5_TX CH20525_10MHz

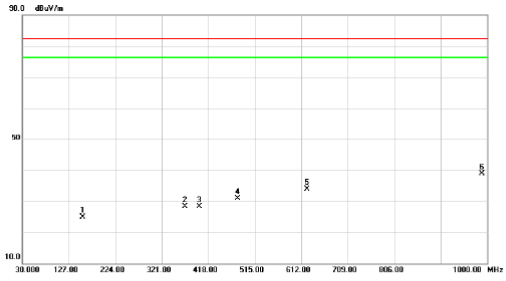
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		261.830	35.63	-11.85	23.78	82.30	-58.52	peak	
2		351.555	37.54	-9.30	28.24	82.30	-54.06	peak	
3		448.555	36.87	-6.63	30.24	82.30	-52.06	peak	
4		593.085	37.02	-3.63	33.39	82.30	-48.91	peak	
5		668.260	36.84	-2.49	34.35	82.30	-47.95	peak	
6	*	768.170	40.47	-1.01	39.46	82.30	-42.84	peak	

Test Mode :	LTE Band 5_TX CH20525_10MHz

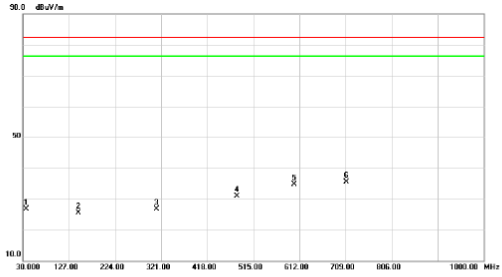
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		155.615	35.82	-10.91	24.91	82.30	-57.39	peak	
2		369.015	37.08	-8.87	28.21	82.30	-54.09	peak	
3		398.600	36.16	-7.90	28.26	82.30	-54.04	peak	
4		479.110	36.98	-6.15	30.83	82.30	-51.47	peak	
5		624.610	36.98	-3.07	33.91	82.30	-48.39	peak	
6	*	989.330	37.86	0.95	38.81	82.30	-43.49	peak	

Test Mode :	LTE Band 26_TX CH26915_1.4MHz

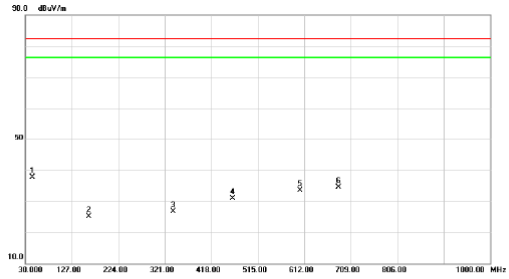
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		36.790	38.87	-12.13	26.74	82.30	-55.56	peak	
2		146.885	36.77	-11.27	25.50	82.30	-56.80	peak	
3		311.300	36.91	-10.16	26.75	82.30	-55.55	peak	
4		481.050	37.08	-6.13	30.95	82.30	-51.35	peak	
5		600.360	38.12	-3.42	34.70	82.30	-47.60	peak	
6	*	710.455	37.45	-1.92	35.53	82.30	-46.77	peak	

Test Mode :	LTE Band 26_TX CH26915_1.4MHz

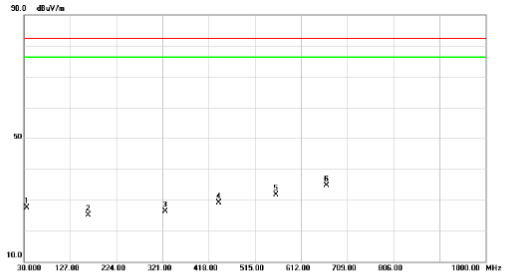
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	44.550	49.03	-11.39	37.64	82.30	-44.66	peak	
2		162.890	36.05	-10.89	25.16	82.30	-57.14	peak	
3		338.460	36.16	-9.42	26.74	82.30	-55.56	peak	
4		462.620	37.40	-6.40	31.00	82.30	-51.30	peak	
5		603.755	36.84	-3.38	33.46	82.30	-48.84	peak	
6		683.295	36.89	-2.34	34.55	82.30	-47.75	peak	

Test Mode :	LTE Band 26_TX CH26915_5MHz

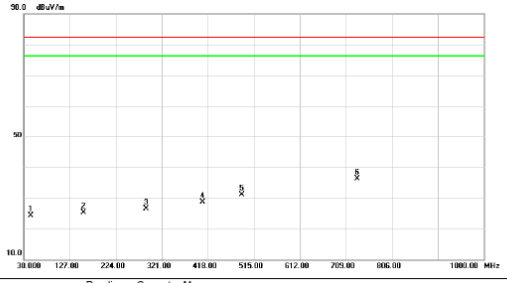
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		35.820	39.67	-12.22	27.45	82.30	-54.85	peak	
2		165.315	36.09	-10.99	25.10	82.30	-57.20	peak	
3		326.335	35.90	-9.65	26.25	82.30	-56.05	peak	
4		439.825	36.02	-6.86	29.16	82.30	-53.14	peak	
5		559.620	36.27	-4.54	31.73	82.30	-50.57	peak	
6	*	665.350	37.25	-2.52	34.73	82.30	-47.57	peak	

Test Mode :	LTE Band 26_TX CH26915_5MHz

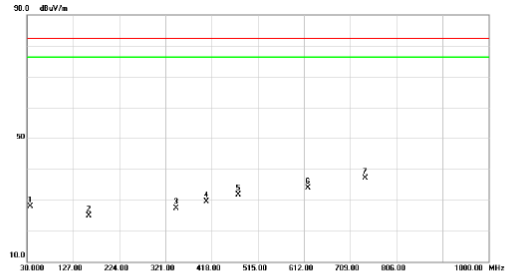
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		45.035	35.66	-11.38	24.28	82.30	-58.02	peak	
2		156.585	36.24	-10.88	25.36	82.30	-56.94	peak	
3		287.535	37.16	-10.68	26.48	82.30	-55.82	peak	
4		406.360	36.38	-7.72	28.66	82.30	-53.64	peak	
5		489.780	37.18	-5.99	31.19	82.30	-51.11	peak	
6	*	732.280	37.65	-1.37	36.28	82.30	-46.02	peak	

Test Mode :	LTE Band 26_TX CH26915_15MHz

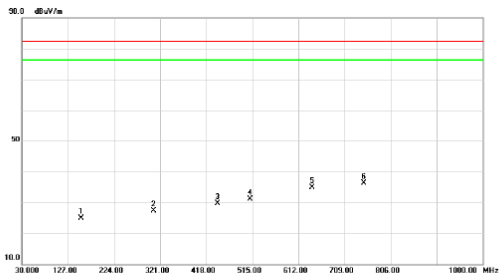
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		36.790	40.02	-12.13	27.89	82.30	-54.41	peak	
2		159.495	35.68	-10.78	24.90	82.30	-57.40	peak	
3		343.310	36.58	-9.37	27.21	82.30	-55.09	peak	
4		407.330	37.12	-7.69	29.43	82.30	-52.87	peak	
5		474.260	37.96	-6.23	31.73	82.30	-50.57	peak	
6		620.245	37.02	-3.13	33.89	82.30	-48.41	peak	
7	*	741.010	38.25	-1.16	37.09	82.30	-45.21	peak	

Test Mode :	LTE Band 26_TX CH26915_15MHz

Horizontal

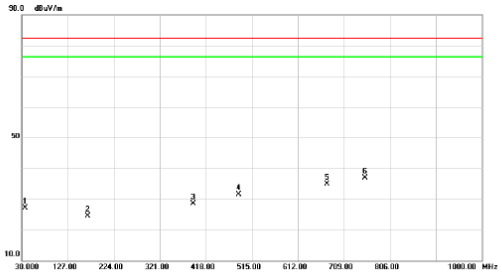


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		155.130	35.91	-10.93	24.98	82.30	-57.32	peak	
2		306.935	37.59	-10.28	27.31	82.30	-54.99	peak	
3		442.250	36.53	-6.80	29.73	82.30	-52.57	peak	
4		510.150	36.75	-5.62	31.13	82.30	-51.17	peak	
5		641.585	37.78	-2.81	34.97	82.30	-47.33	peak	
6	*	749.255	37.34	-0.95	36.39	82.30	-45.91	peak	

For NB-IoT:

Test Mode :	LTE Band 5_TX CH20525_ 3.75kHz

Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		36.790	39.30	-12.13	27.17	82.30	-55.13	peak	
2		169.195	35.58	-11.14	24.44	82.30	-57.86	peak	
3		391.810	36.45	-8.04	28.41	82.30	-53.89	peak	
4		487.355	37.63	-6.03	31.60	82.30	-50.70	peak	
5		673.595	37.41	-2.44	34.97	82.30	-47.33	peak	
6	*	754.105	37.79	-0.95	36.84	82.30	-45.46	peak	

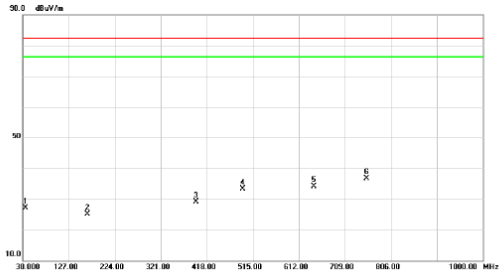
Test Mode :	LTE Band 5_TX CH20525_ 3.75kHz

Horizontal

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		59.585	36.24	-11.90	24.34	82.30	-57.96	peak	
2		163.375	36.01	-10.91	25.10	82.30	-57.20	peak	
3		299.660	36.58	-10.47	26.11	82.30	-56.19	peak	
4		523.730	37.06	-5.35	31.71	82.30	-50.59	peak	
5		653.225	38.06	-2.64	35.42	82.30	-46.88	peak	
6	*	753.620	37.67	-0.95	36.72	82.30	-45.58	peak	

Test Mode :	LTE Band 5_TX CH20525_ 15kHz

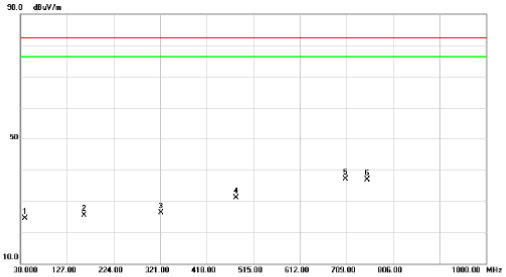
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		35.335	39.37	-12.27	27.10	82.30	-55.20	peak	
2		166.770	36.09	-11.04	25.05	82.30	-57.25	peak	
3		395.690	36.98	-7.96	29.02	82.30	-53.28	peak	
4		494.145	39.15	-5.92	33.23	82.30	-49.07	peak	
5		643.525	36.80	-2.78	34.02	82.30	-48.28	peak	
6	*	754.590	37.69	-0.95	36.74	82.30	-45.56	peak	

Test Mode :	LTE Band 5_TX CH20525_ 15kHz

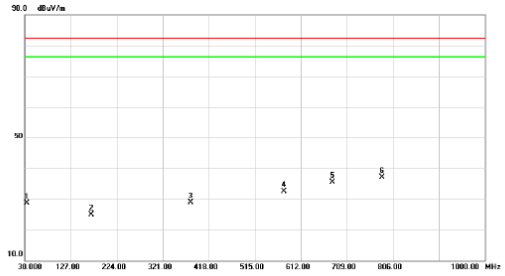
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		40.185	36.24	-11.74	24.50	82.30	-57.80	peak	
2		162.405	36.41	-10.87	25.54	82.30	-56.76	peak	
3		322.940	36.05	-9.75	26.30	82.30	-56.00	peak	
4		479.110	37.16	-6.15	31.01	82.30	-51.29	peak	
5	*	707.060	39.11	-1.99	37.12	82.30	-45.18	peak	
6		752.165	37.82	-0.95	36.87	82.30	-45.43	peak	

Test Mode :	LTE Band 26_TX CH26915_ 3.75kHz

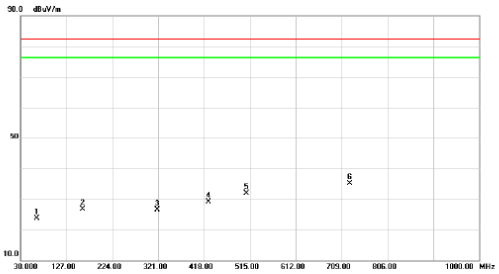
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		34.850	41.02	-12.30	28.72	82.30	-53.58	peak	
2		170.165	36.12	-11.19	24.93	82.30	-57.37	peak	
3		379.200	37.52	-8.52	29.00	82.30	-53.30	peak	
4		576.595	36.57	-4.09	32.48	82.30	-49.82	peak	
5		678.445	37.80	-2.38	35.42	82.30	-46.88	peak	
6	*	783.205	38.16	-1.08	37.08	82.30	-45.22	peak	

Test Mode :	LTE Band 26_TX CH26915_ 3.75kHz

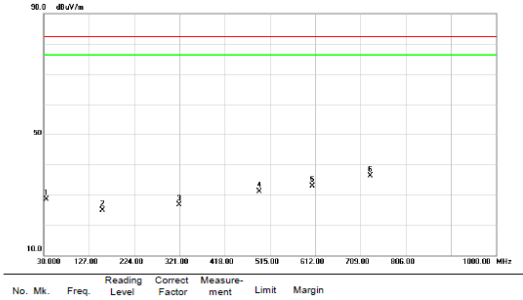
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		64.435	36.34	-12.59	23.75	82.30	-58.55	peak	
2		160.950	37.43	-10.81	26.62	82.30	-55.68	peak	
3		319.060	36.42	-9.88	26.54	82.30	-55.76	peak	
4		427.700	36.26	-7.18	29.08	82.30	-53.22	peak	
5		508.210	37.65	-5.67	31.98	82.30	-50.32	peak	
6	*	725.975	36.61	-1.53	35.08	82.30	-47.22	peak	

Test Mode :	LTE Band 26_TX CH26915_ 15kHz

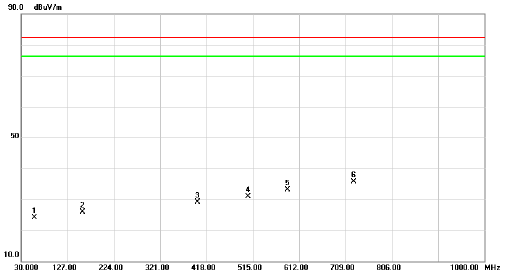
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		35.335	40.81	-12.27	28.54	82.30	-53.76	peak	
2		155.615	35.91	-10.91	25.00	82.30	-57.30	peak	
3		320.515	36.44	-9.83	26.61	82.30	-55.69	peak	
4		492.205	37.03	-5.96	31.07	82.30	-51.23	peak	
5		605.695	36.30	-3.35	32.95	82.30	-49.35	peak	
6	*	729.855	37.74	-1.43	36.31	82.30	-45.99	peak	

Test Mode :	LTE Band 26_TX CH26915_ 15kHz

Horizontal

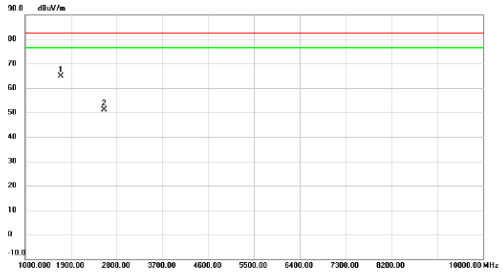


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		57.160	35.70	-11.86	24.04	82.30	-58.26	peak	
2		159.010	36.65	-10.80	25.85	82.30	-56.45	peak	
3		399.085	37.09	-7.90	29.19	82.30	-53.11	peak	
4		504.815	36.71	-5.73	30.98	82.30	-51.32	peak	
5		587.750	36.86	-3.77	33.09	82.30	-49.21	peak	
6	*	726.945	37.25	-1.51	35.74	82.30	-46.56	peak	

APPENDIX C - RADIATED SPURIOUS EMISSIONS (ABOVE 1000MHZ)

Test Mode :	GPRS850_TX CH190_GSM

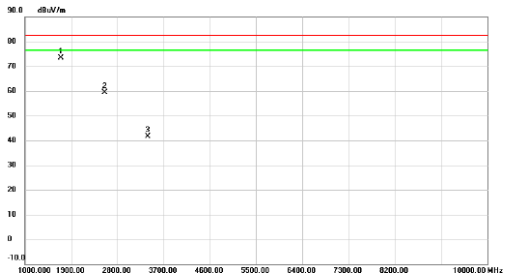
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1697.500	69.64	-4.87	64.77	82.30	-17.53	peak	
2		2548.000	55.39	-4.28	51.11	82.30	-31.19	peak	

Test Mode :	GPRS850_TX CH190_GSM

Horizontal

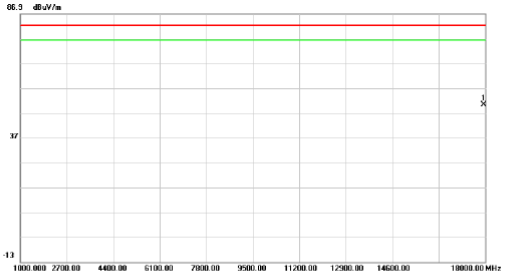


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1697.500	78.13	-4.87	73.26	82.30	-9.04	peak	
2		2548.000	63.71	-4.28	59.43	82.30	-22.87	peak	
3		3394.000	43.16	-1.46	41.70	82.30	-40.60	peak	

For eMTC:

Test Mode :	LTE Band 5_TX CH20525_1.4MHz

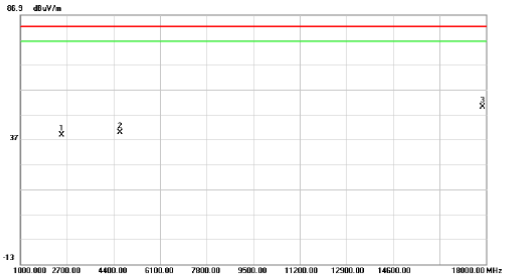
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	17940.500	41.41	8.98	50.39	82.30	-31.91	peak	

Test Mode :	LTE Band 5_TX CH20525_1.4MHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2513.000	43.12	-4.45	38.67	82.30	-43.63	peak	
2		4646.500	39.72	-0.03	39.69	82.30	-42.61	peak	
3	*	17864.000	41.11	9.02	50.13	82.30	-32.17	peak	

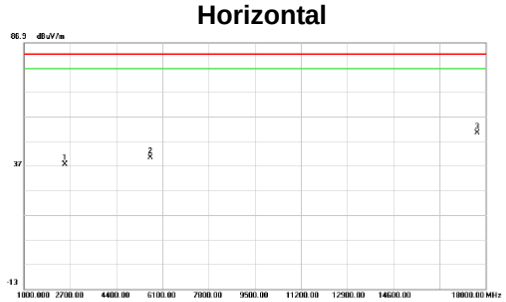
Test Mode :	LTE Band 5_TX CH20525_5MHz

Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	12730.000	38.20	8.60	46.80	82.30	-35.50	peak	

Test Mode :	LTE Band 5_TX CH20525_5MHz

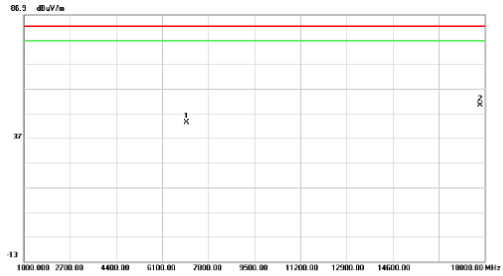
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2513.000	41.88	-4.45	37.43	82.30	-44.87	peak	
2		5666.500	37.42	2.93	40.35	82.30	-41.95	peak	
3	*	17694.000	41.30	9.10	50.40	82.30	-31.90	peak	

Test Mode :	LTE Band 5_TX CH20525_10MHz

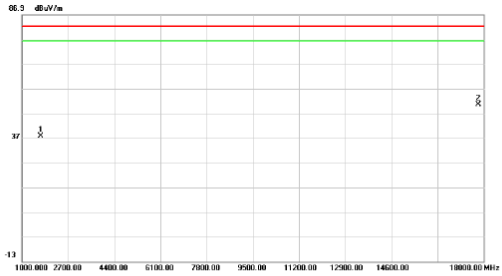
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		6984.000	37.92	5.44	43.36	82.30	-38.94	peak	
2	*	17821.500	41.28	9.05	50.33	82.30	-31.97	peak	

Test Mode :	LTE Band 5_TX CH20525_10MHz

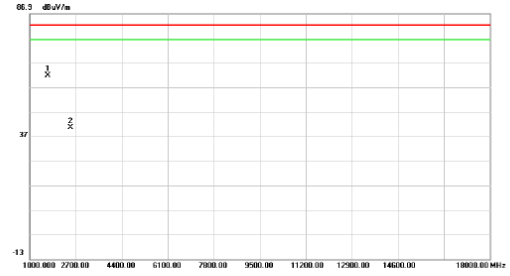
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		1680.000	42.64	-4.89	37.75	82.30	-44.55	peak	
2	*	17804.500	41.56	9.05	50.61	82.30	-31.69	peak	

Test Mode :	LTE Band 26_TX CH26915_1.4MHz

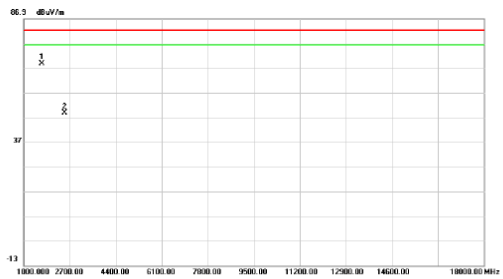
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1671.500	66.60	-4.90	61.70	82.30	-20.60	peak	
2		2513.000	44.98	-4.45	40.53	82.30	-41.77	peak	

Test Mode :	LTE Band 26_TX CH26915_1.4MHz

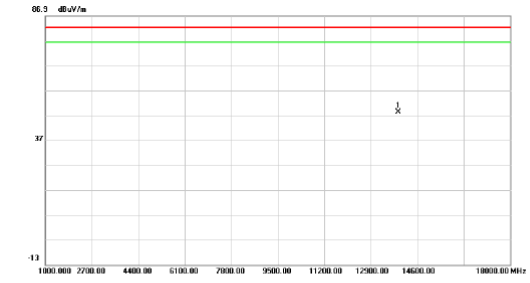
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1671.500	73.72	-4.90	68.82	82.30	-13.48	peak	
2		2513.000	53.29	-4.45	48.84	82.30	-33.46	peak	

Test Mode :	LTE Band 26_TX CH26915_5MHz

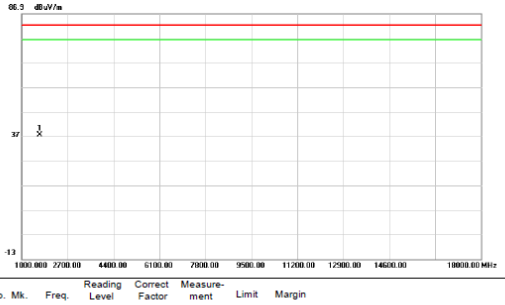
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	13911.500	38.71	9.57	48.28	82.30	-34.02	peak	

Test Mode :	LTE Band 26_TX CH26915_5MHz

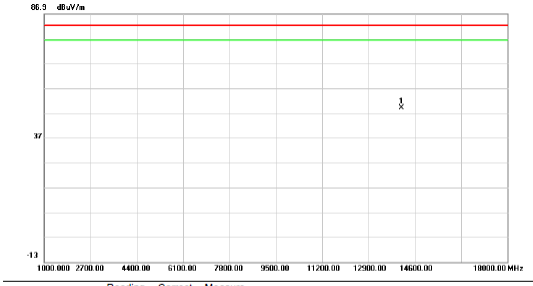
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1671.500	42.53	-4.90	37.63	82.30	-44.67	peak	

Test Mode :	LTE Band 26_TX CH26915_15MHz

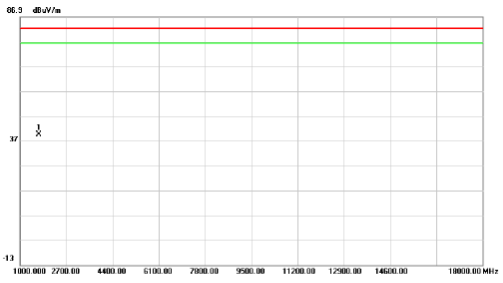
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	14115.500	39.58	9.52	49.10	82.30	-33.20	peak	

Test Mode :	LTE Band 26_TX CH26915_15MHz

Horizontal

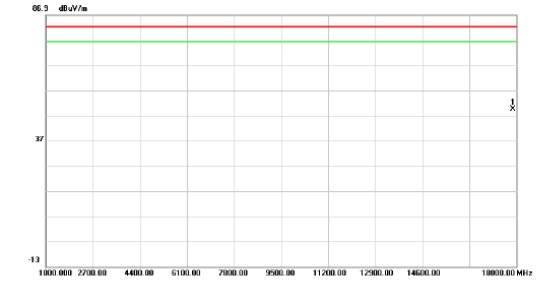


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	1680.000	44.30	-4.89	39.41	82.30	-42.89	peak	

For NB-IoT:

Test Mode :	LTE Band 5_TX CH20525_ 3.75kHz

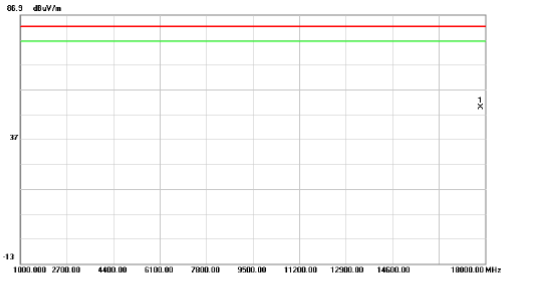
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	17872.500	40.58	9.02	49.60	82.30	-32.70	peak	

Test Mode :	LTE Band 5_TX CH20525_ 3.75kHz

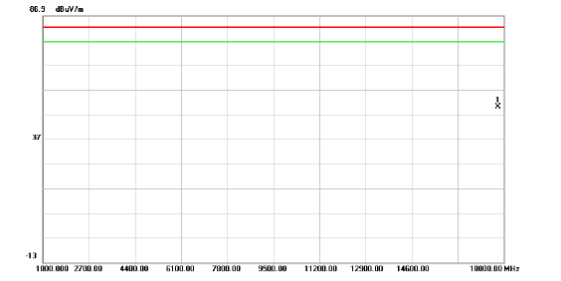
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	17821.500	40.79	9.05	49.84	82.30	-32.46	peak	

Test Mode :	LTE Band 5_TX CH20525_ 15kHz

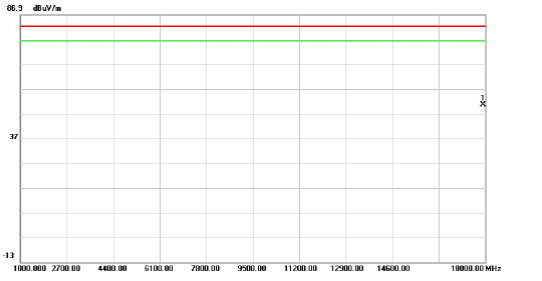
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	17779.000	40.91	9.06	49.97	82.30	-32.33	peak	

Test Mode :	LTE Band 5_TX CH20525_ 15kHz

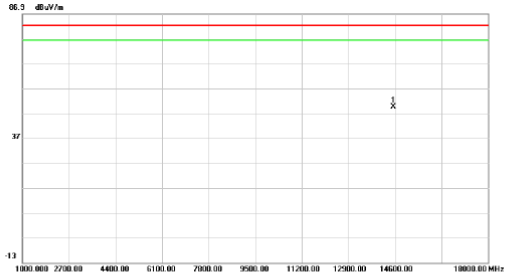
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	17915.000	41.48	9.00	50.48	82.30	-31.82	peak	

Test Mode :	LTE Band 26_TX CH26915_ 3.75kHz

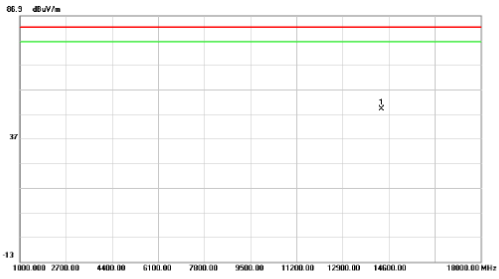
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	14532.000	40.40	9.08	49.48	82.30	-32.82	peak	

Test Mode :	LTE Band 26_TX CH26915_ 3.75kHz

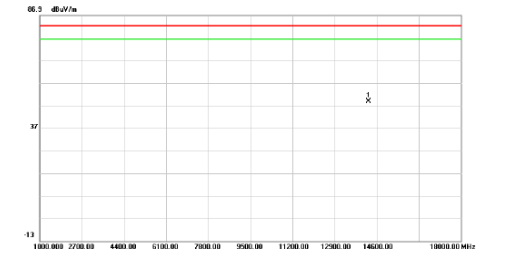
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	14328.000	39.81	9.31	49.12	82.30	-33.18	peak	

Test Mode :	LTE Band 26_TX CH26915_ 15kHz

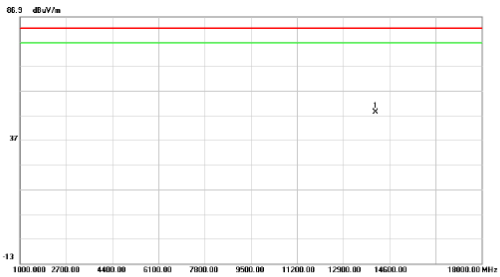
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	14260.000	39.51	9.38	48.89	82.30	-33.41	peak	

Test Mode :	LTE Band 26_TX CH26915_ 15kHz

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	14098.500	38.68	9.54	48.22	82.30	-34.08	peak	

End of Test Report