

FCC Test Report

(Co-Located)

Report No.: RF181119C14

Test Model: CSG750

Series Model: CSG7xxxxxxxxxx (Where x can be 0-9, A-Z, a-z, any alphanumeric character or blank)

Received Date: Nov. 19, 2018

Test Date: Dec. 05 ~ Dec. 10, 2018

Issued Date: Dec. 12, 2018

Applicant: Sierra Wireless Inc.

Address: 13811 Wireless Way Richmond, BC V6V 3A4 Canada

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

**FCC Registration/
Designation Number:** 788550 / TW0003



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Table of Contents

Release Control Record	3
1 Certificate of Conformity	4
2 Summary of Test Results	5
2.1 Measurement Uncertainty.....	5
2.2 Test Site and Instruments.....	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Configuration of System under Test.....	10
3.2.1 Description of Support Units.....	10
3.2.2 Test Mode Applicability and Tested Channel Detail.....	11
3.3 General Description of Applied Standards	14
4 Test Types and Results	15
4.1 Output Power Measurement	15
4.1.1 Limits of Output Power Measurement.....	15
4.1.2 Test Procedures.....	15
4.1.3 Test Setup.....	16
4.1.4 Test Results	17
4.2 Radiated Emission Measurement	32
4.2.1 Limits of Radiated Emission Measurement.....	32
4.2.2 Test Procedure	32
4.2.3 Deviation from Test Standard	32
4.2.4 Test Setup.....	33
4.2.5 Test Results	34
5 Pictures of Test Arrangements	79
Appendix – Information on the Testing Laboratories	80

Release Control Record

Issue No.	Description	Date Issued
RF181119C14	Original release	Dec. 12, 2018

1 Certificate of Conformity

Product: Cloud Services Gateway

Brand: Versa

Test Model: CSG750

Series Model: CSG7xxxxxxxx (Where x can be 0-9, A-Z, a-z, any alphanumeric character or blank)

Sample Status: Engineering sample

Applicant: Sierra Wireless Inc.

Test Date: Dec. 05 ~ Dec. 10, 2018

Standards: FCC Part 22, Subpart H
FCC Part 24, Subpart E
FCC Part 27, Subpart C, D, F, H, L, M
FCC Part 90, Subpart S
ANSI 63.26-2015

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.

Prepared by : Celine Chou , **Date:** Dec. 12, 2018
Celine Chou / Senior Specialist

Approved by : Bruce Chen , **Date:** Dec. 12, 2018
Bruce Chen / Project Engineer

2 Summary of Test Results

Applied Standard	FCC Part 22, Subpart H FCC Part 24, Subpart E FCC Part 27, Subpart C, D, F, H, L, M FCC Part 90, Subpart S ANSI 63.26-2015		
FCC Clause	Test Item	Result	Remarks
2.1046 22.913 (a)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1046 24.232 (c)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1046 27.50	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1046 90.635 (b)	Effective Radiated Power	Pass	Meet the requirement of limit.
2.1053 22.917	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -15.70dB at 846.60MHz.
2.1053 24.238	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -6.00dB at 1882.50MHz.
2.1053 27.53(a) 27.53(c) 27.53(h) 27.53(m)	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -7.60dB at 1732.50MHz.
2.1053 90.691	Radiated Spurious Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -30.90dB at 821.50MHz.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) ($\pm$)
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Test Site and Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 11, 2018	Apr. 10, 2019
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	May 29, 2018	May 28, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 21, 2018	Nov. 20, 2019
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
Preamplifier EMCI	EMC 184045	980116	Oct. 12, 2018	Oct. 11, 2019
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Aug. 08, 2018	Aug. 07, 2019
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 22, 2018	Feb. 21, 2019
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM80 00	CABLE-CH9-02 (248780+171006)	Jan. 15, 2018	Jan. 14, 2019
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Aug. 08, 2018	Aug. 07, 2019
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 31, 2018	Jul. 30, 2019
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Mini-Circuits Power Splitter	ZN2PD-9G	NA	Jun. 21, 2018	Jun. 20, 2019
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The IC Site Registration No. is 7450F-9.

3 General Information

3.1 General Description of EUT

Product	Cloud Services Gateway				
Brand	Versa				
Test Model	CSG750				
Series Model	CSG7xxxxxxxx (Where x can be 0-9, A-Z, a-z, any alphanumeric character or blank)				
Model Difference	Refer to Note				
Status of EUT	Engineering sample				
Power Supply Rating	12Vdc from adapter				
Modulation Type	WCDMA	BPSK, QPSK			
	LTE	QPSK, 16QAM			
Operating Frequency	WCDMA	WCDMA Band 2	1852.4MHz ~ 1907.6MHz		
		WCDMA Band 4	1712.4MHz ~ 1752.6MHz		
		WCDMA Band 5	826.4MHz ~ 846.6MHz		
	LTE	LTE Band 2	Channel Bandwidth 1.4MHz	1850.7MHz ~ 1909.3MHz	
			Channel Bandwidth 3MHz	1851.5MHz ~ 1908.5MHz	
			Channel Bandwidth 5MHz	1852.5MHz ~ 1907.5MHz	
			Channel Bandwidth 10MHz	1855.0MHz ~ 1905.0MHz	
			Channel Bandwidth 15MHz	1857.5MHz ~ 1902.5MHz	
			Channel Bandwidth 20MHz	1860.0MHz ~ 1900.0MHz	
		LTE Band 4	Channel Bandwidth 1.4MHz	1710.7MHz ~ 1754.3MHz	
			Channel Bandwidth 3MHz	1711.5MHz ~ 1753.5MHz	
			Channel Bandwidth 5MHz	1712.5MHz ~ 1752.5MHz	
			Channel Bandwidth 10MHz	1715.0MHz ~ 1750.0MHz	
			Channel Bandwidth 15MHz	1717.5MHz ~ 1747.5MHz	
			Channel Bandwidth 20MHz	1720.0MHz ~ 1745.0MHz	
		LTE Band 5	Channel Bandwidth 1.4MHz	824.7MHz ~ 848.3MHz	
			Channel Bandwidth 3MHz	825.5MHz ~ 847.5MHz	
			Channel Bandwidth 5MHz	826.5MHz ~ 846.5MHz	
			Channel Bandwidth 10MHz	829.0MHz ~ 844.0MHz	
		LTE Band 7	Channel Bandwidth 5MHz	2502.5MHz ~2567.5MHz	
			Channel Bandwidth 10MHz	2505.0MHz ~ 2565.0MHz	
			Channel Bandwidth 15MHz	2507.5MHz ~ 2562.5MHz	
			Channel Bandwidth 20MHz	2510.0MHz ~ 2560.0MHz	
		LTE Band 12	Channel Bandwidth 1.4MHz	699.7MHz ~ 715.3MHz	
			Channel Bandwidth 3MHz	700.5MHz ~ 714.5MHz	
			Channel Bandwidth 5MHz	701.5MHz ~ 713.5MHz	
			Channel Bandwidth 10MHz	704.0MHz ~ 711.0MHz	
		LTE Band 13	Channel Bandwidth 5MHz	779.5MHz ~ 784.5MHz	
			Channel Bandwidth 10MHz	782.0MHz	

Operating Frequency	LTE	LTE Band 25	Channel Bandwidth 1.4MHz	1850.7MHz ~ 1914.3MHz
			Channel Bandwidth 3MHz	1851.5MHz ~ 1913.5MHz
			Channel Bandwidth 5MHz	1852.5MHz ~ 1912.5MHz
			Channel Bandwidth 10MHz	1855.0MHz ~ 1910.0MHz
			Channel Bandwidth 15MHz	1857.5MHz ~ 1907.5MHz
			Channel Bandwidth 20MHz	1860.0MHz ~ 1905.0MHz
		LTE Band 26	Channel Bandwidth 1.4MHz	814.7MHz ~ 848.3MHz
			Channel Bandwidth 3MHz	815.5MHz ~ 847.5MHz
			Channel Bandwidth 5MHz	816.5MHz ~ 846.5MHz
			Channel Bandwidth 10MHz	819.0MHz ~ 844.0MHz
			Channel Bandwidth 15MHz	821.5MHz ~ 841.5MHz
		LTE Band 30	Channel Bandwidth 5MHz	2307.5MHz ~ 2312.5MHz
			Channel Bandwidth 10MHz	2310.0MHz
		LTE Band 41	Channel Bandwidth 5MHz	2498.5MHz ~ 2687.5MHz
			Channel Bandwidth 10MHz	2501.0MHz ~ 2685.0MHz
			Channel Bandwidth 15MHz	2503.5MHz ~ 2682.5MHz
			Channel Bandwidth 20MHz	2506.0MHz ~ 2680.0MHz
Antenna Type	Refer to note			
Antenna Connector	Refer to note			
Accessory Device	Adapter			
Data Cable Supplied	1.05m shielded RJ45 cable without core 3.05m non-shielded Fiber cable without core			

Note:

1. All models are listed as below.

Brand	Versa	
Model	CSG7xxxxxxxx (Where x can be 0-9, A-Z, a-z, any alphanumeric character or blank)	
Type	Type A (CSG730 series)	Type B (CSG750 series)
CPU	ATOM C3308 2.1GHz/2 cores/FC-BGA 9.5W	ATOM C3558 2.2GHz/4 cores/FC-BGA 16W
LTE Module	Brand: Sierra, Model: MC7455	
NIC Module	NM-VS2511IG401A (4 ports* 1G RJ45) NM-VS2511IG401B (4 ports* 1G RJ45 with POE)	
RAM	SODIM DDR4 ECC 4GB SODIM DDR4 ECC 8GB	

* The model of the CSG750 with SODIM DDR4 ECC 8GB RAM are chosen for final test.

2. There are two WWAN modules (Brand: Sierra, Model: MC7455, FCC ID: N7NMC7455) collocated in the EUT.
3. Those two WWAN modules (Brand: Sierra, Model: MC7455, FCC ID: N7NMC7455) cannot transmit on the same band.
4. Spurious emission of the simultaneous operation (GPS & WWAN) has been evaluated and no non-compliance was found.

5. The EUT uses following adapters.

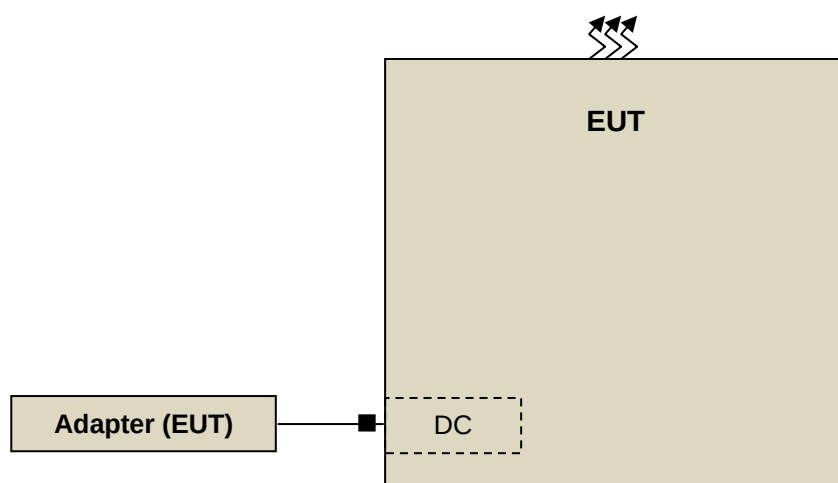
Adapter	
Brand	FSP GROUP INC.
Model	FSP060-DHAN3
Input Power	100-240Vac, 1.8A, 50-60Hz
Output Power	12.0Vdc, 5.0A
Power Line	1.15m DC cable with one core attached on adapter

POE Module Adapter	
Brand	FSP GROUP INC.
Model	FSP065-DWAN3
Input Power	100-240Vac, 1.8A, 50-60Hz
Output Power	54.0Vdc, 1.2A MAX
Power Line	1.15m DC cable with one core attached on adapter

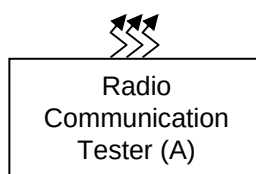
6. The EUT uses following antennas.

WWAN Antenna							
Ant. Type		PCB					
Connector		SMA (Male)					
Frequency (GHz)	Peak Gain without cable loss (dBi)	Cable loss	Peak Gain with cable loss (dBi)	Frequency (GHz)	Peak Gain without cable loss (dBi)	Cable loss	Peak Gain with cable loss (dBi)
0.698	1.37	-0.6627	0.71	1.850	0.51	-1.0731	-0.56
0.704	1.49	-0.6627	0.83	1.880	0.65	-1.0731	-0.42
0.746	0.93	-0.6627	0.27	1.910	1.56	-1.0731	0.49
0.757	1.61	-0.6627	0.95	1.920	1.92	-1.0731	0.85
0.787	1.66	-0.6627	1.00	1.930	2.53	-1.0731	1.46
0.824	2.98	-0.6627	2.32	1.950	2.96	-1.0731	1.89
0.836	2.46	-0.6627	1.80	1.960	2.69	-1.0731	1.62
0.849	3.2	-0.6627	2.54	1.980	2.75	-1.0731	1.68
0.869	2.11	-0.6627	1.45	1.990	2.5	-1.1708	1.33
0.880	1.22	-0.6627	0.56	2.110	2.48	-1.1318	1.35
0.864	0.53	-0.7413	-0.21	2.132	3.02	-1.1318	1.89
0.900	0.56	-0.7413	-0.18	2.140	2.38	-1.1318	1.25
0.915	0.7	-0.7413	-0.04	2.155	2.59	-1.1318	1.46
0.925	1.25	-0.7413	0.51	2.170	2.3	-1.1318	1.17
0.940	1.13	-0.7413	0.39	2.305	1.75	-1.4754	0.27
0.960	1.4	-0.7413	0.66	2.345	2.27	-1.4793	0.79
1.710	1.04	-1.0731	-0.03	2.390	2.2	-1.5377	0.66
1.732	1.25	-1.0731	0.18	2.500	0.86	-1.5288	-0.67
1.750	1.4	-1.0731	0.33	2.535	0.27	-1.6596	-1.39
1.755	1.62	-1.0731	0.55	2.570	0.23	-1.6192	-1.39
1.785	1.36	-1.0731	0.29	2.620	0.23	-1.8284	-1.60
1.800	1.39	-1.0731	0.32	2.655	0.44	-1.6175	-1.18
1.840	0.55	-1.0731	-0.52	2.690	0.28	-1.7905	-1.51

3.2 Configuration of System under Test



Remote site



3.2.1 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.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Radio Communication Tester	Anritsu	MT8820C	6201010284	NA	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

3.2.2 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Test item	Band	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	ERP / EIRP	LTE Band 26 + WCDMA Band 5	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			4132 to 4233	4233	-	BPSK	-
		LTE Band 26 + LTE Band 25	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 26 + LTE Band 12	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		WCDMA Band 5 + LTE Band 26	26740 to 26990	4233	-	BPSK	-
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 25 + LTE Band 26	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 25 + WCDMA Band 2	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			9262 to 9400	9400	-	BPSK	-
		LTE Band 25 + LTE Band 12	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		LTE Band 25 + LTE Band 26	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 26	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 25	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 12 + LTE Band 4	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			20050 to 20300	20175	20MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 26	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 26 + WCDMA Band 5	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			4132 to 4233	4233	-	BPSK	-
		LTE Band 26 + LTE Band 25	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 26 + LTE Band 12	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset

EUT Configure Mode	Test item	Band	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission Below 1GHz	LTE Band 26 + WCDMA Band 5	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			4132 to 4233	4233	-	BPSK	-
		LTE Band 26 + LTE Band 25	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 26 + LTE Band 12	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		WCDMA Band 5 + LTE Band 26	26740 to 26990	4233	-	BPSK	-
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 25 + WCDMA Band 2	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			9262 to 9400	9400	-	BPSK	-
		LTE Band 25 + LTE Band 12	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		LTE Band 25 + LTE Band 26	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 4	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			20050 to 20300	20175	20MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 26	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset

EUT Configure Mode	Test item	Band	Available channel	Tested channel	Channel Bandwidth	Modulation	Mode
-	Radiated Emission Above 1GHz	LTE Band 26 + WCDMA Band 5	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			4132 to 4233	4233	-	BPSK	-
		LTE Band 26 + LTE Band 25	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 26 + LTE Band 12	26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		WCDMA Band 5 + LTE Band 26	26740 to 26990	4233	-	BPSK	-
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 25 + LTE Band 26	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 25 + WCDMA Band 2	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			9262 to 9400	9400	-	BPSK	-
		LTE Band 25 + LTE Band 12	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
		LTE Band 25 + LTE Band 26	26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 26	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26740 to 26990	26865	15MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 25	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 12 + LTE Band 4	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			20050 to 20300	20175	20MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 12 + LTE Band 26	23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset
			26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
		LTE Band 26 + WCDMA Band 5	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			4132 to 4233	4233	-	BPSK	-
		LTE Band 26 + LTE Band 25	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			26065 to 26665	26365	5MHz	QPSK	1 RB / 14 RB Offset
		LTE Band 26 + LTE Band 12	26765 to 26965	26765	5MHz	QPSK	1 RB / 0 RB Offset
			23017 to 23173	23017	1.4MHz	QPSK	1 RB / 5 RB Offset

Note: Above test condition are select the channel with largest power from module reports for co-located final test.

Test Condition:

Test Item	Environmental Conditions	Input Power (system)	Tested By
ERP / EIRP	22deg. C, 66%RH	120Vac, 60Hz	Han Wu
Radiated Emission	22deg. C, 66%RH	120Vac, 60Hz	Han Wu

3.3 General Description of Applied Standards

The EUT is a RF Product. According to the specification of the EUT declared by the manufacturer, it must comply with the requirements of the following standards:

FCC Part 22, Subpart H

FCC Part 24, Subpart E

FCC Part 27, Subpart C, D, F, H, L, M

ANSI 63.26-2015

All test items have been performed and recorded as per the above standards.

4 Test Types and Results

4.1 Output Power Measurement

4.1.1 Limits of Output Power Measurement

According to Part 24.232(c), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts;

According to Part 22.913(a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts;

According to Part 90.635(b), the maximum output power of the transmitter for mobile stations is 100 watts (20 dBw);

According to Part 27.50(a), for mobile and portable stations transmitting in the 2305-2315 MHz band or the 2350-2360 MHz band, the average EIRP must not exceed 250 milliwatts within any 5 megahertz of authorized bandwidth, except that for mobile and portable stations compliant with 3GPP LTE standards;

According to Part 27.50(b), portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP. According to Part 27.50(c), portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP; According to Part 27.50(h), Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

According to Part 27.50(d), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

4.1.2 Test Procedures

EIRP / ERP Measurement:

- All measurements were done at low, middle and high operational frequency range. RBW and VBW is 1MHz for GSM, 5MHz for WCDMA mode, 10MHz for LTE mode.
- Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated from E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.R.P power - 2.15dBi.

Where:

$$\text{ERP/EIRP} = P_{\text{Meas}} + G_T - L_C$$

P_{Meas} : Measure transmitter output power.

G_T : Gain of the transmitting antenna.

L_C : signal attenuation in the connecting cable between the transmitter and antenna.

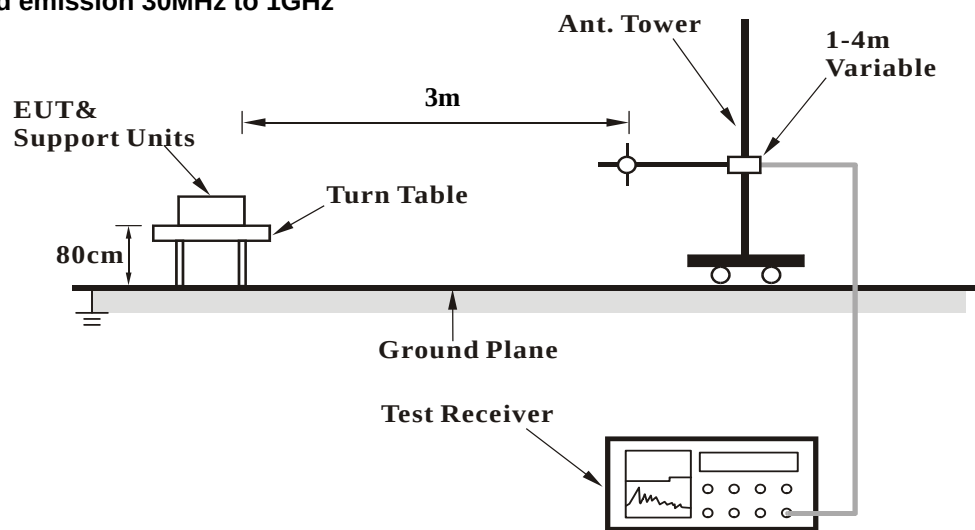
Conducted Power Measurement:

The EUT was set up for the maximum power with GSM, WCDMA, 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.

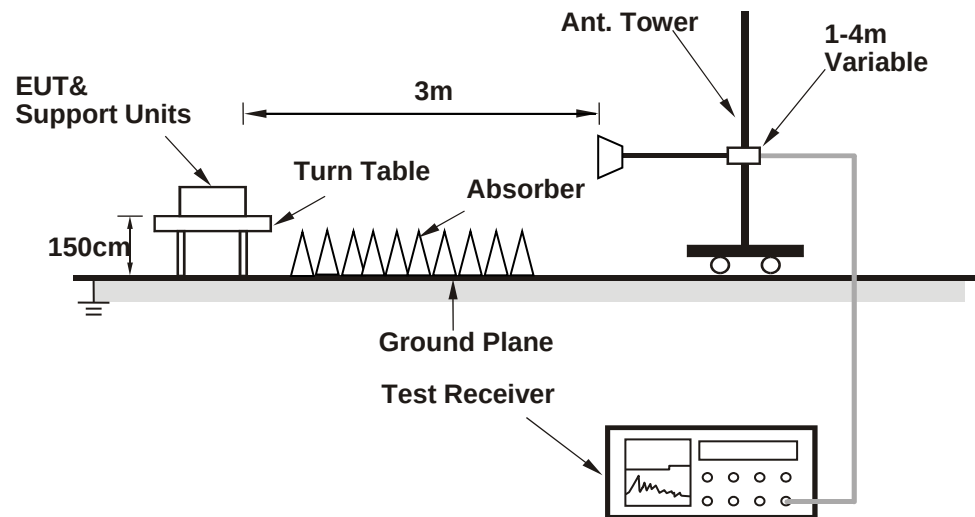
4.1.3 Test Setup

EIRP / ERP Measurement:

For radiated emission 30MHz to 1GHz



For radiated emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Conducted Power Measurement:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 Test Results

LTE Band 26 + WCDMA Band 5

CHANNEL		26865					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-13.00	14.50	3.90	18.40	38.50	-20.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-13.40	14.60	3.90	18.50	38.50	-20.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		4233					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-16.70	10.90	3.40	14.30	38.50	-24.20
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-8.80	19.40	3.40	22.80	38.50	-15.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 25

CHANNEL		26865					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-12.90	14.60	3.90	18.50	38.50	-20.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-13.40	14.60	3.90	18.50	38.50	-20.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-21.60	18.90	0.00	18.90	33.00	-14.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.60	27.00	0.00	27.00	33.00	-6.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 12

CHANNEL		26865					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-13.00	14.50	3.90	18.40	38.50	-20.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-13.50	14.50	3.90	18.40	38.50	-20.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-13.80	10.70	3.50	14.20	34.80	-20.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.60	18.90	3.50	22.40	34.80	-12.40

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

WCDMA Band 5 + LTE Band 26

CHANNEL		4233					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-14.90	12.70	3.40	16.10	38.50	-22.40
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-14.80	13.40	3.40	16.80	38.50	-21.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-17.10	10.20	3.90	14.10	50.00	-35.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-13.00	15.20	3.90	19.10	50.00	-30.90

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 26

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-23.30	17.20	0.00	17.20	33.00	-15.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.90	26.70	0.00	26.70	33.00	-6.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26865					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-16.80	10.70	3.90	14.60	38.50	-23.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-9.20	18.80	3.90	22.70	38.50	-15.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + WCDMA Band 2

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-23.30	17.20	0.00	17.20	33.00	-15.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.80	26.80	0.00	26.80	33.00	-6.20

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		9400					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-23.40	17.10	0.00	17.10	33.00	-15.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-17.90	22.70	0.00	22.70	33.00	-10.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 12

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-23.30	17.20	0.00	17.20	33.00	-15.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.90	26.70	0.00	26.70	33.00	-6.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-13.90	10.60	3.50	14.10	34.80	-20.70
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.70	18.80	3.50	22.30	34.80	-12.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 26

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-23.30	17.20	0.00	17.20	33.00	-15.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.80	26.80	0.00	26.80	33.00	-6.20

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-17.10	10.20	3.90	14.10	50.00	-35.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-13.10	15.10	3.90	19.00	50.00	-31.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 26

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.00	16.50	3.50	20.00	34.80	-14.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.30	19.20	3.50	22.70	34.80	-12.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26865					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-16.70	10.80	3.90	14.70	38.50	-23.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	831.50	-9.20	18.80	3.90	22.70	38.50	-15.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 25

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.20	16.30	3.50	19.80	34.80	-15.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.30	19.20	3.50	22.70	34.80	-12.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-21.80	18.70	0.00	18.70	33.00	-14.30
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.70	26.90	0.00	26.90	33.00	-6.10

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 4

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.20	16.30	3.50	19.80	34.80	-15.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.20	19.30	3.50	22.80	34.80	-12.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		20175					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1732.50	-23.00	15.40	0.60	16.00	30.00	-14.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1732.50	-16.50	21.80	0.60	22.40	30.00	-7.60

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 26

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.00	16.50	3.50	20.00	34.80	-14.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.30	19.20	3.50	22.70	34.80	-12.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-17.10	10.20	3.90	14.10	50.00	-35.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-13.00	15.20	3.90	19.10	50.00	-30.90

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + WCDMA Band 5

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-12.40	15.00	3.90	18.90	50.00	-31.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-11.90	16.30	3.90	20.20	50.00	-29.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		4233					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-19.50	8.10	3.40	11.50	38.50	-27.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	846.60	-12.00	16.20	3.40	19.60	38.50	-18.90

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 25

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-12.40	15.00	3.90	18.90	50.00	-31.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-12.00	16.20	3.90	20.10	50.00	-29.90

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		26365					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-22.60	17.90	0.00	17.90	33.00	-15.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-14.40	26.20	0.00	26.20	33.00	-6.80

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 12

CHANNEL		26765					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-12.40	15.00	3.90	18.90	50.00	-31.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	821.50	-11.90	16.30	3.90	20.20	50.00	-29.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

CHANNEL		23017					
Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-14.00	10.50	3.50	14.00	34.80	-20.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	699.70	-8.70	18.80	3.50	22.30	34.80	-12.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

4.2 Radiated Emission Measurement

4.2.1 Limits of Radiated Emission Measurement

LTE Band 2, Band 4, Band 5, Band 12, Band 13, Band 25, Band 26:

Out of band emissions, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power by a factor of at least $43 + 10 \log(P)$ dB, so the limit level is:

$$P(\text{dBm}) - (43 + 10 \log(P)) \text{ dB} = -13\text{dBm}$$

LTE Band 7, Band 41:

Out of band emissions, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power by a factor of at least $55 + 10 \log(P)$ dB, so the limit level is:

$$P(\text{dBm}) - (55 + 10 \log(P)) \text{ dB} = -25\text{dBm}$$

LTE Band 30:

Out of band emissions, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power by a factor of at least $70 + 10 \log(P)$ dB, so the limit level is:

$$P(\text{dBm}) - (70 + 10 \log(P)) \text{ dB} = -40\text{dBm}$$

4.2.2 Test Procedure

- The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high channel of operational frequency range.)
- Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- The substitution antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step b. Record the power level of S.G
- $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution antenna}.$

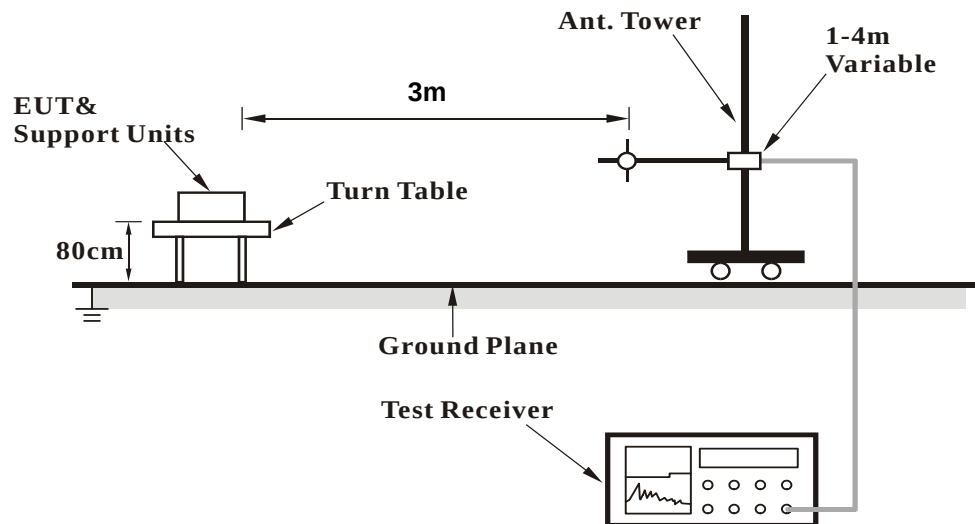
Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.2.3 Deviation from Test Standard

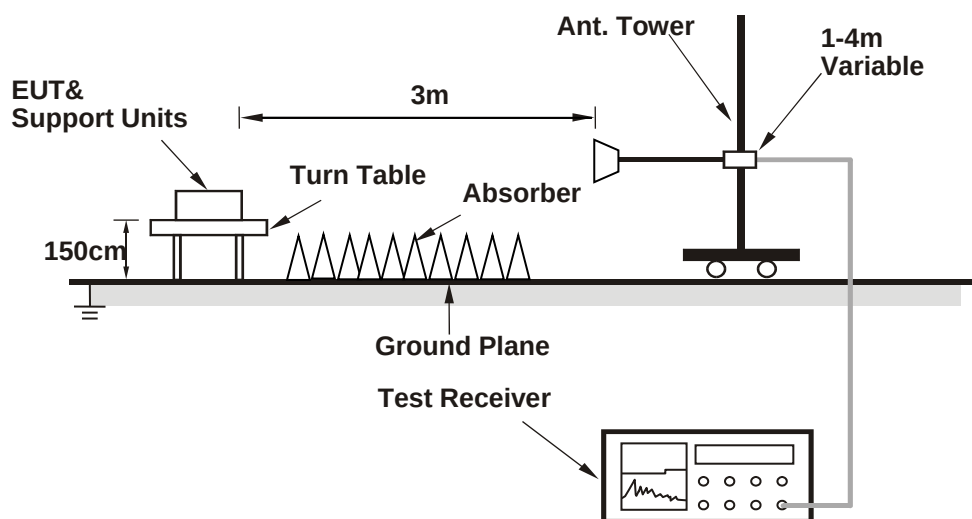
No deviation.

4.2.4 Test Setup

For Radiated Emission below or equal 1GHz



For Radiated Emission above 1GHz



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.2.5 Test Results

Below 1GHz Data:

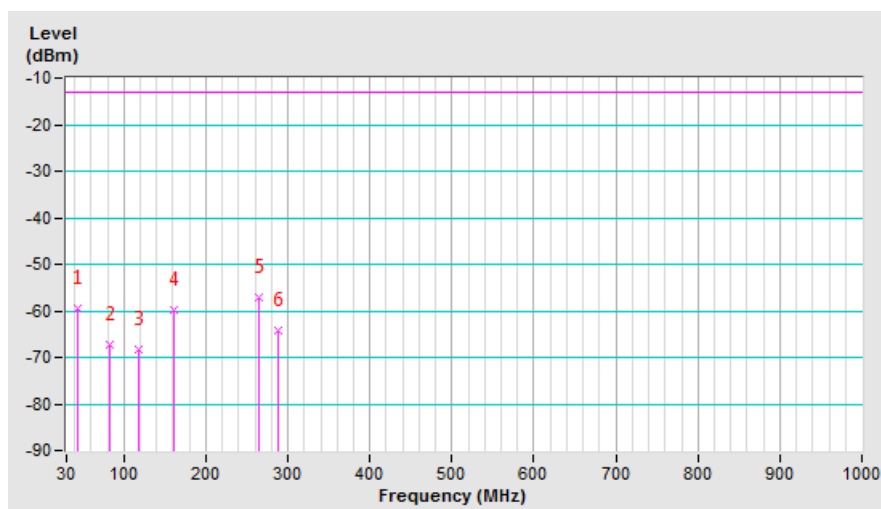
LTE Band 26 + WCDMA Band 5

Mode	TX channel 26865 + 4233	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	43.58	-59.00	-48.20	-11.30	-59.50	-13.00	-46.50
2	82.38	-59.90	-67.80	0.40	-67.40	-13.00	-54.40
3	118.27	-58.40	-65.30	-2.90	-68.20	-13.00	-55.20
4	161.92	-52.20	-57.00	-2.90	-59.90	-13.00	-46.90
5	264.74	-50.60	-55.60	-1.60	-57.20	-13.00	-44.20
6	288.99	-58.40	-62.40	-1.70	-64.10	-13.00	-51.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

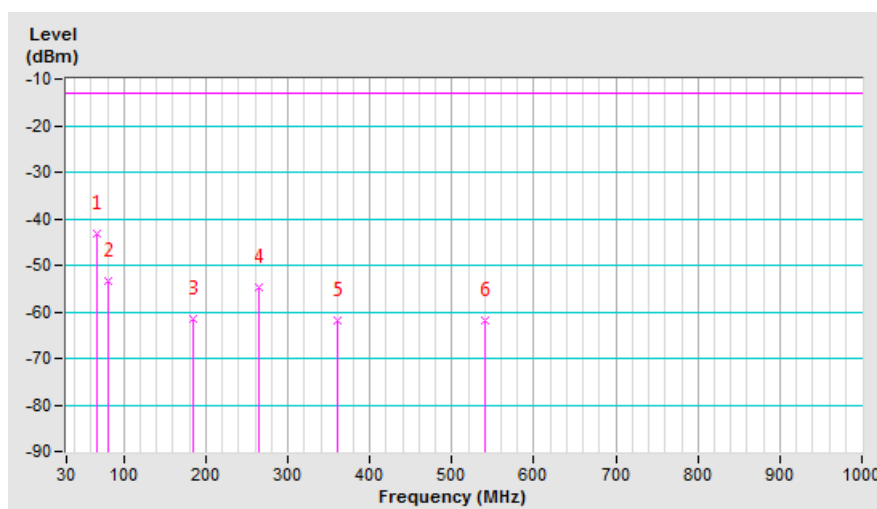


Mode	TX channel 26865 + 4233	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	66.86	-33.90	-41.80	-1.50	-43.30	-13.00	-30.30
2	81.41	-46.50	-53.80	0.50	-53.30	-13.00	-40.30
3	185.20	-56.50	-58.70	-2.80	-61.50	-13.00	-48.50
4	264.74	-53.60	-53.20	-1.60	-54.80	-13.00	-41.80
5	360.77	-59.20	-65.80	4.00	-61.80	-13.00	-48.80
6	541.19	-60.90	-65.60	3.90	-61.70	-13.00	-48.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



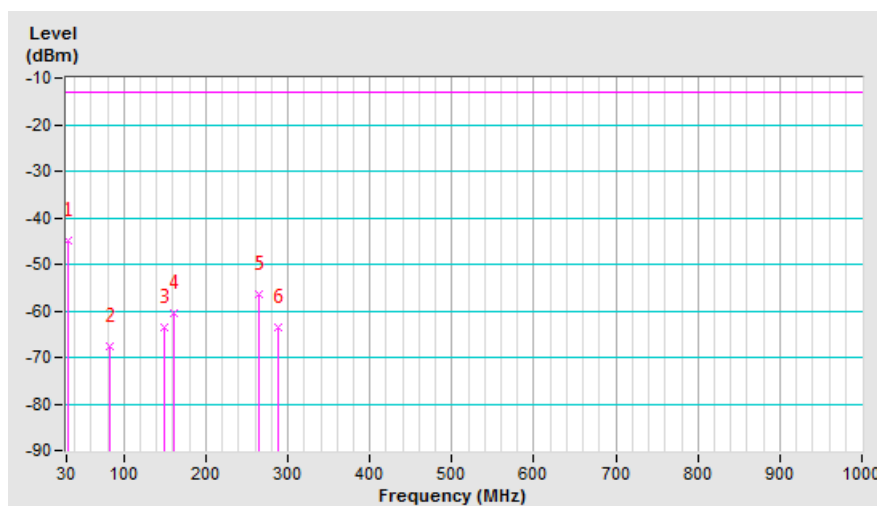
LTE Band 26 + LTE Band 25

Mode	TX channel 26865	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	32.91	-45.90	-27.20	-17.70	-44.90	-13.00	-31.90
2	82.38	-60.00	-67.90	0.40	-67.50	-13.00	-54.50
3	149.31	-56.50	-60.40	-3.00	-63.40	-13.00	-50.40
4	161.92	-53.00	-57.70	-2.90	-60.60	-13.00	-47.60
5	264.74	-49.80	-54.80	-1.60	-56.40	-13.00	-43.40
6	288.99	-57.90	-61.80	-1.70	-63.50	-13.00	-50.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

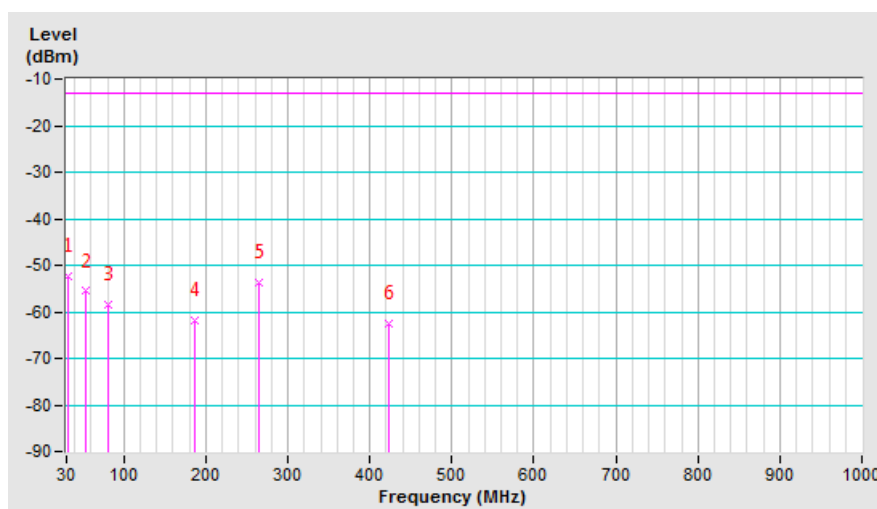


Mode	TX channel 26865	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	31.94	-39.90	-34.20	-18.30	-52.50	-13.00	-39.50
2	53.28	-46.50	-49.40	-6.20	-55.60	-13.00	-42.60
3	80.44	-51.80	-59.10	0.50	-58.60	-13.00	-45.60
4	187.14	-57.20	-59.10	-2.70	-61.80	-13.00	-48.80
5	264.74	-52.50	-52.00	-1.60	-53.60	-13.00	-40.60
6	422.85	-59.90	-65.80	3.40	-62.40	-13.00	-49.40

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

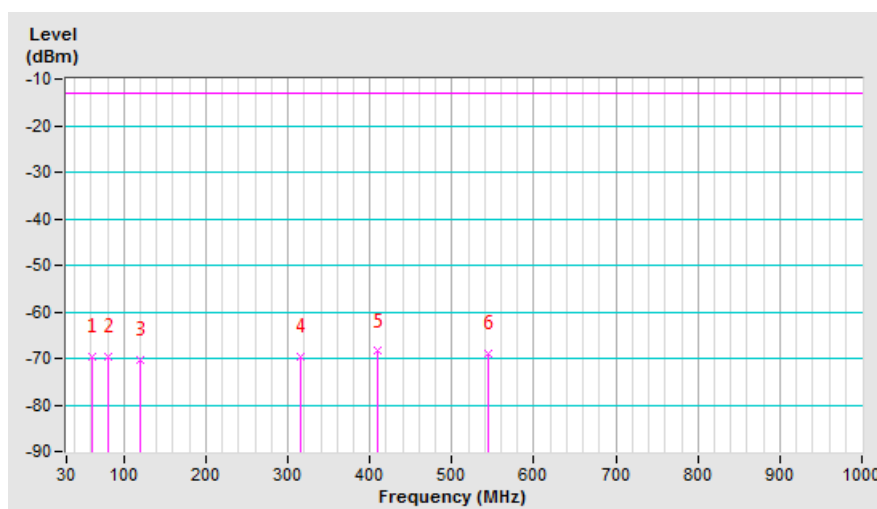


Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	61.04	-64.50	-66.60	-3.20	-69.80	-13.00	-56.80
2	80.44	-64.90	-70.30	0.50	-69.80	-13.00	-56.80
3	120.21	-62.50	-67.10	-3.20	-70.30	-13.00	-57.30
4	316.15	-65.60	-73.60	4.00	-69.60	-13.00	-56.60
5	409.27	-68.20	-71.70	3.20	-68.50	-13.00	-55.50
6	544.10	-69.40	-72.70	3.80	-68.90	-13.00	-55.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

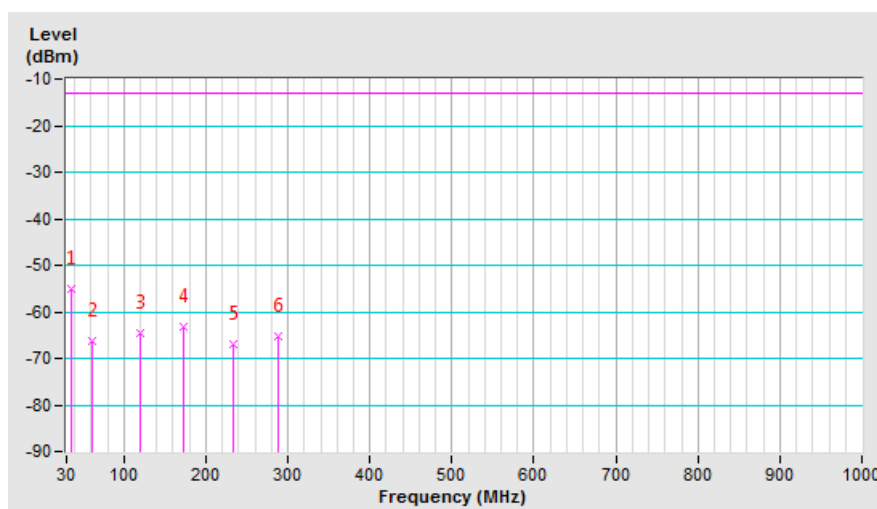


Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	36.79	-45.60	-39.90	-15.20	-55.10	-13.00	-42.10
2	61.04	-59.40	-63.00	-3.20	-66.20	-13.00	-53.20
3	119.24	-57.90	-61.40	-3.10	-64.50	-13.00	-51.50
4	173.56	-59.70	-60.50	-2.80	-63.30	-13.00	-50.30
5	233.70	-64.50	-65.10	-1.70	-66.80	-13.00	-53.80
6	288.02	-66.80	-63.50	-1.80	-65.30	-13.00	-52.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



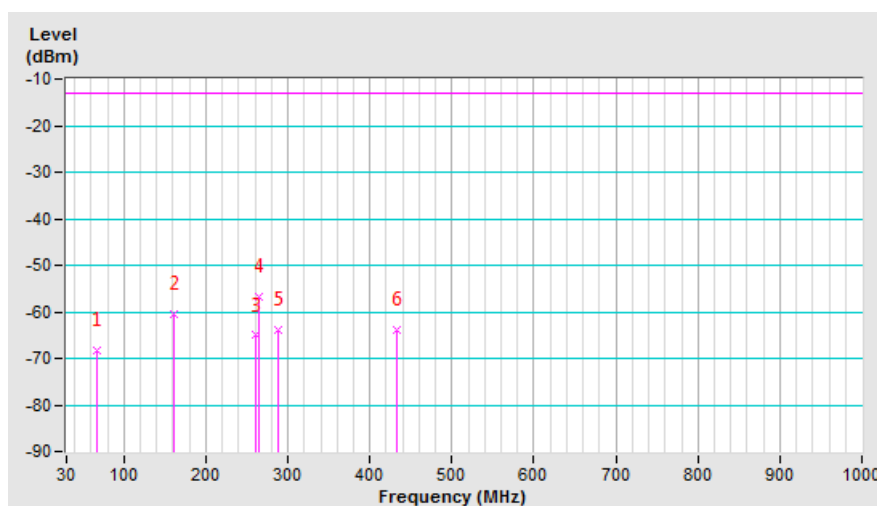
LTE Band 26 + LTE Band 12

Mode	TX channel 26865	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	66.86	-59.20	-66.70	-1.50	-68.20	-13.00	-55.20
2	161.92	-53.00	-57.70	-2.90	-60.60	-13.00	-47.60
3	259.89	-58.10	-63.60	-1.50	-65.10	-13.00	-52.10
4	264.74	-50.10	-55.20	-1.60	-56.80	-13.00	-43.80
5	288.99	-58.20	-62.20	-1.70	-63.90	-13.00	-50.90
6	433.52	-61.50	-67.50	3.50	-64.00	-13.00	-51.00

Remarks:

- ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

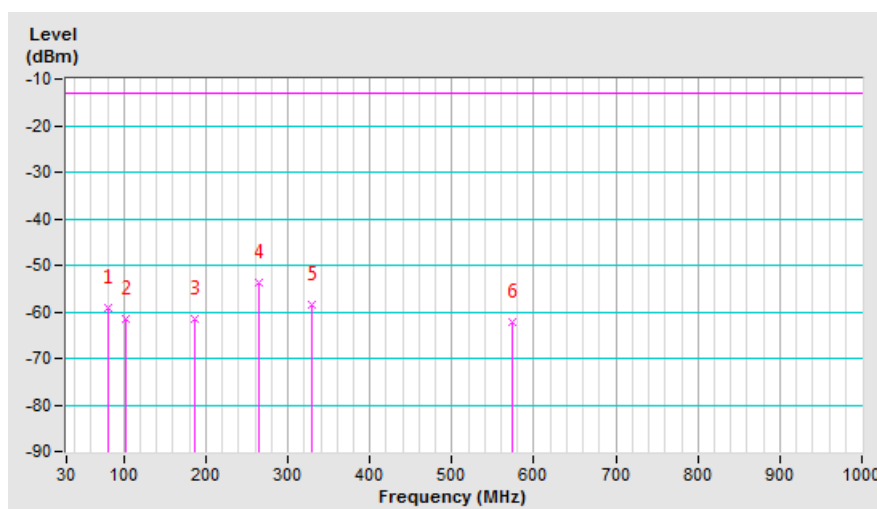


Mode	TX channel 26865	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	80.44	-52.40	-59.80	0.50	-59.30	-13.00	-46.30
2	102.75	-51.00	-59.80	-1.80	-61.60	-13.00	-48.60
3	186.17	-56.80	-58.90	-2.60	-61.50	-13.00	-48.50
4	264.74	-52.60	-52.10	-1.60	-53.70	-13.00	-40.70
5	329.73	-55.90	-62.60	4.10	-58.50	-13.00	-45.50
6	574.17	-61.90	-66.00	3.70	-62.30	-13.00	-49.30

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

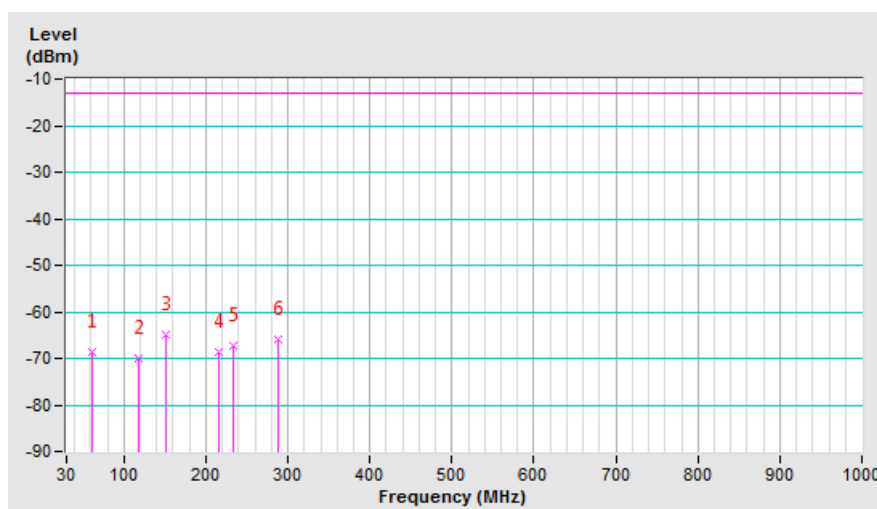


Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	61.04	-61.10	-65.40	-3.20	-68.60	-13.00	-55.60
2	118.27	-60.10	-67.10	-2.90	-70.00	-13.00	-57.00
3	151.25	-58.20	-62.00	-2.80	-64.80	-13.00	-51.80
4	216.24	-58.30	-66.80	-2.00	-68.80	-13.00	-55.80
5	233.70	-57.60	-65.60	-1.70	-67.30	-13.00	-54.30
6	288.02	-60.00	-64.00	-1.80	-65.80	-13.00	-52.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

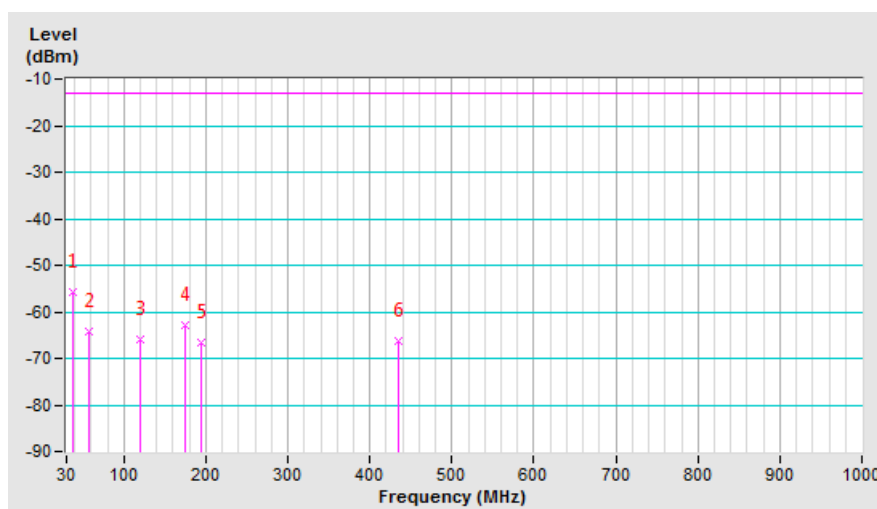


Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	38.73	-44.10	-41.60	-14.20	-55.80	-13.00	-42.80
2	58.13	-55.00	-59.90	-4.20	-64.10	-13.00	-51.10
3	119.24	-57.20	-62.90	-3.10	-66.00	-13.00	-53.00
4	174.53	-57.20	-60.20	-2.80	-63.00	-13.00	-50.00
5	194.90	-63.30	-64.00	-2.60	-66.60	-13.00	-53.60
6	434.49	-64.00	-69.80	3.60	-66.20	-13.00	-53.20

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



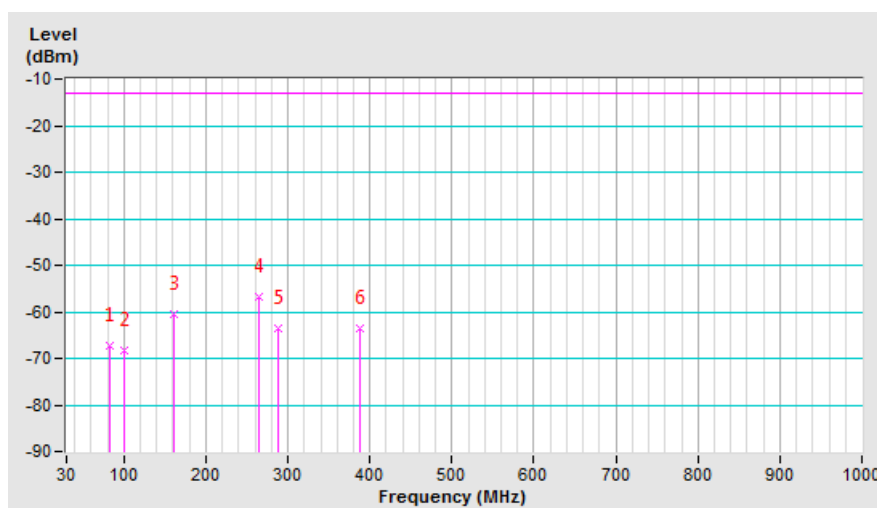
WCDMA Band 5 + LTE Band 26

Mode	TX channel 4233	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	83.35	-59.40	-67.70	0.50	-67.20	-13.00	-54.20
2	100.81	-57.90	-66.80	-1.60	-68.40	-13.00	-55.40
3	161.92	-52.80	-57.50	-2.90	-60.40	-13.00	-47.40
4	264.74	-50.10	-55.10	-1.60	-56.70	-13.00	-43.70
5	288.99	-58.10	-62.00	-1.70	-63.70	-13.00	-50.70
6	386.96	-60.80	-67.20	3.50	-63.70	-13.00	-50.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

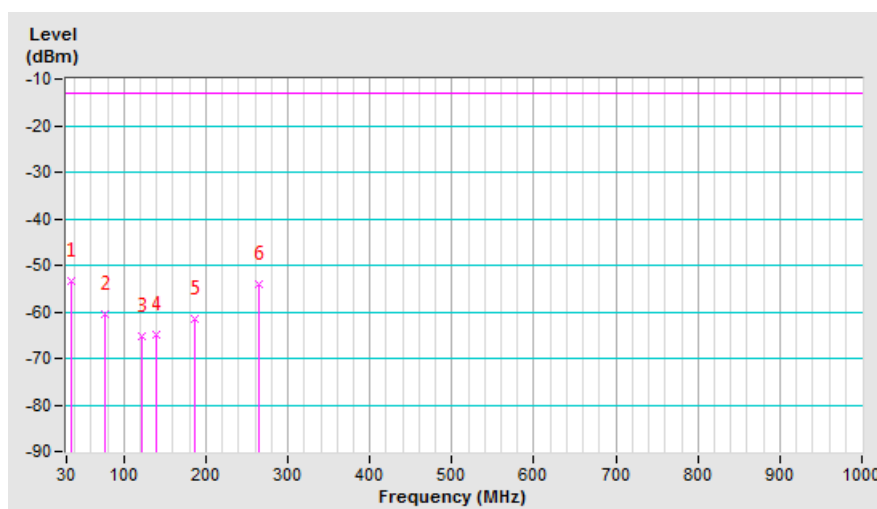


Mode	TX channel 4233	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	36.79	-41.80	-38.20	-15.20	-53.40	-13.00	-40.40
2	76.56	-52.50	-60.70	0.30	-60.40	-13.00	-47.40
3	121.18	-56.70	-62.20	-3.20	-65.40	-13.00	-52.40
4	138.64	-59.90	-61.80	-3.20	-65.00	-13.00	-52.00
5	187.14	-57.00	-58.80	-2.70	-61.50	-13.00	-48.50
6	264.74	-53.00	-52.50	-1.60	-54.10	-13.00	-41.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

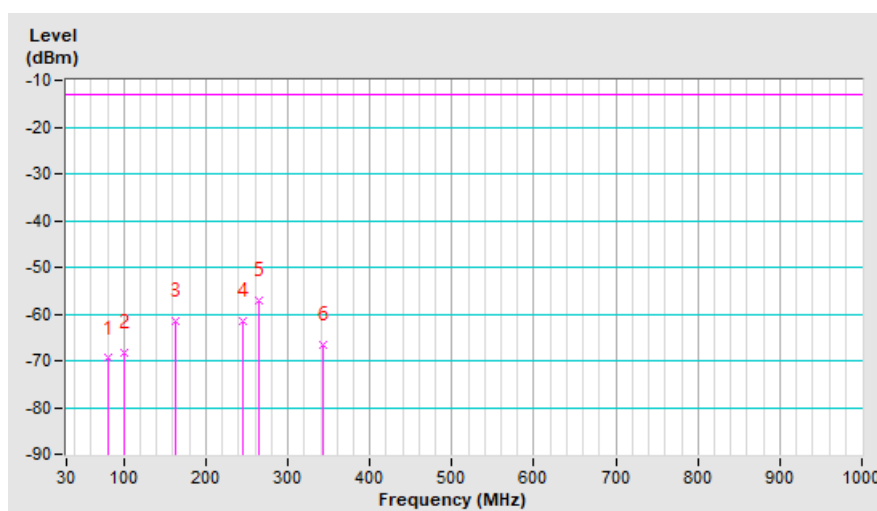


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	80.44	-62.50	-70.00	0.50	-69.50	-13.00	-56.50
2	99.84	-57.70	-66.70	-1.50	-68.20	-13.00	-55.20
3	163.86	-53.10	-58.50	-2.90	-61.40	-13.00	-48.40
4	244.37	-52.50	-60.20	-1.40	-61.60	-13.00	-48.60
5	264.74	-50.40	-55.40	-1.60	-57.00	-13.00	-44.00
6	342.34	-61.10	-70.60	3.90	-66.70	-13.00	-53.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

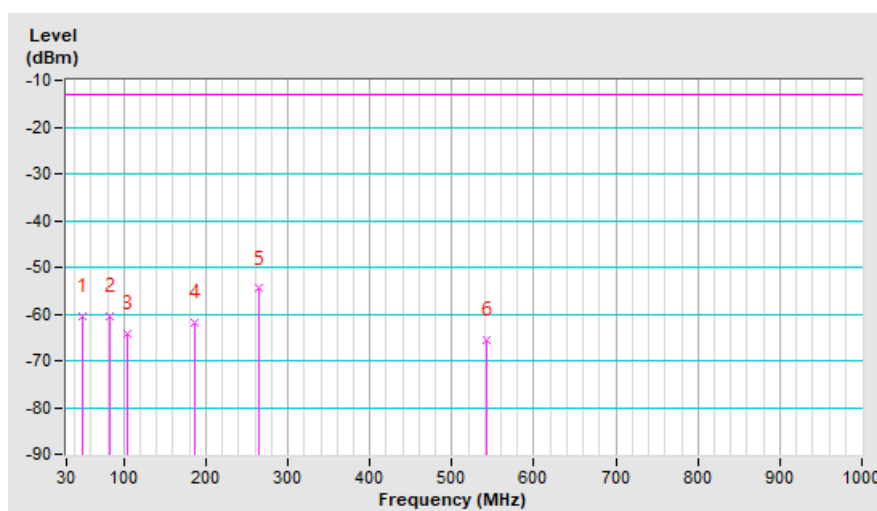


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	50.37	-51.00	-52.60	-7.90	-60.50	-13.00	-47.50
2	83.35	-53.50	-61.00	0.50	-60.50	-13.00	-47.50
3	103.72	-53.20	-62.10	-2.00	-64.10	-13.00	-51.10
4	186.17	-57.00	-59.10	-2.60	-61.70	-13.00	-48.70
5	264.74	-53.50	-53.00	-1.60	-54.60	-13.00	-41.60
6	542.16	-64.80	-69.40	3.90	-65.50	-13.00	-52.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



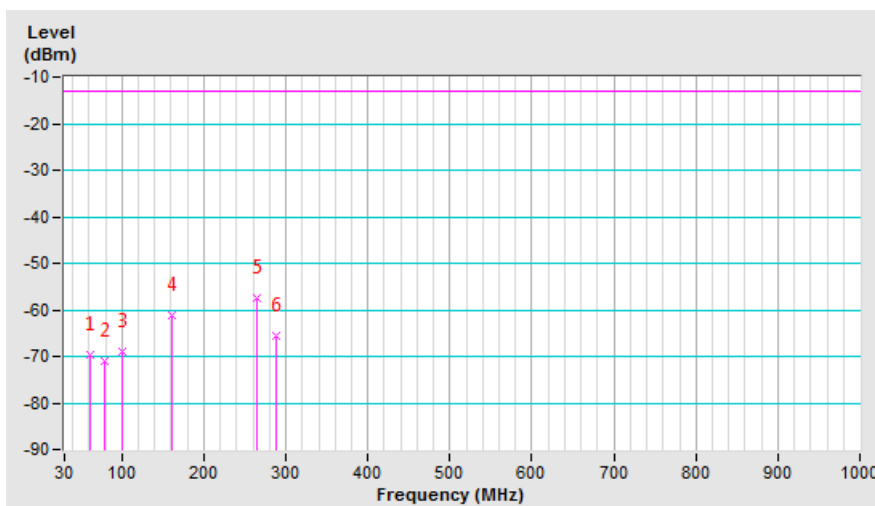
LTE Band 25 + WCDMA Band 2

Mode	TX channel 26365 + 9400	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	62.01	-64.00	-66.70	-3.00	-69.70	-13.00	-56.70
2	78.50	-65.80	-71.50	0.60	-70.90	-13.00	-57.90
3	100.81	-60.50	-67.30	-1.60	-68.90	-13.00	-55.90
4	161.92	-55.80	-58.40	-2.90	-61.30	-13.00	-48.30
5	264.74	-53.00	-55.90	-1.60	-57.50	-13.00	-44.50
6	288.99	-62.20	-64.00	-1.70	-65.70	-13.00	-52.70

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

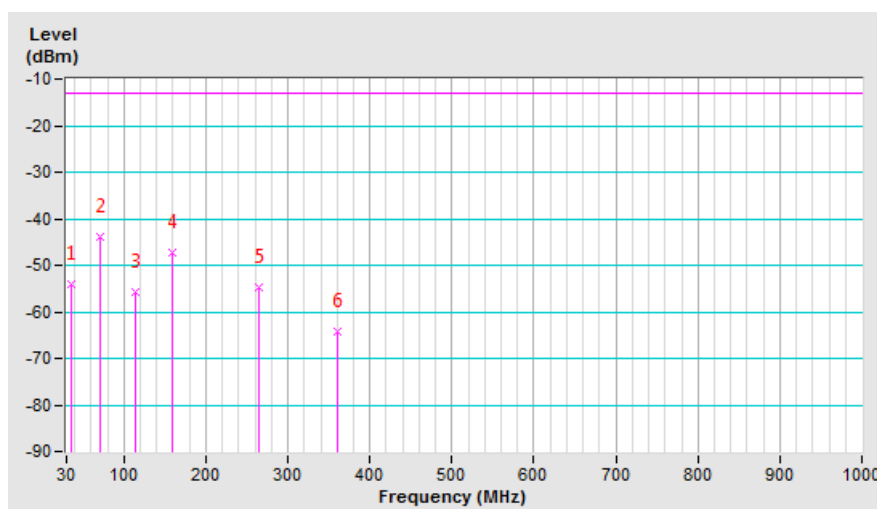


Mode	TX channel 26365 + 9400	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	35.82	-44.40	-38.20	-15.90	-54.10	-13.00	-41.10
2	71.71	-37.90	-43.60	-0.30	-43.90	-13.00	-30.90
3	114.39	-48.50	-53.00	-2.80	-55.80	-13.00	-42.80
4	159.01	-44.40	-44.60	-2.80	-47.40	-13.00	-34.40
5	264.74	-55.60	-53.00	-1.60	-54.60	-13.00	-41.60
6	360.77	-63.70	-68.10	4.00	-64.10	-13.00	-51.10

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



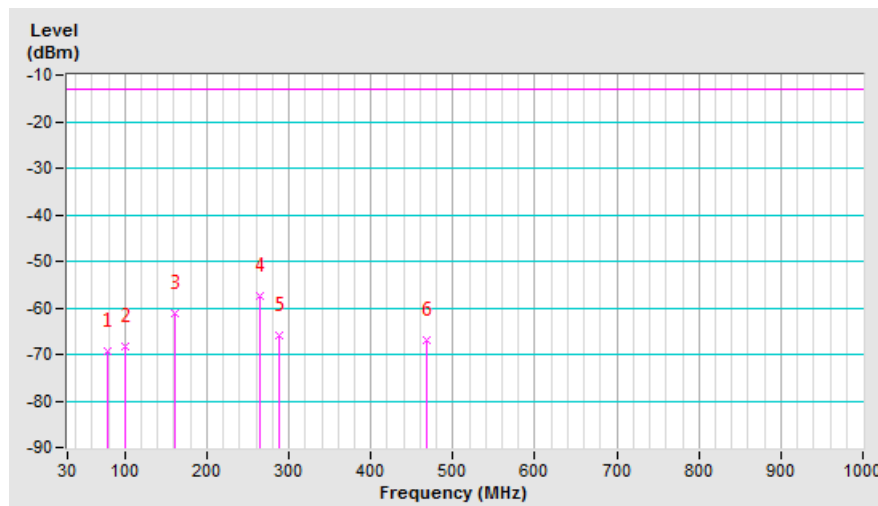
LTE Band 25 + LTE Band 12

Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	79.47	-64.50	-70.00	0.60	-69.40	-13.00	-56.40
2	100.81	-59.90	-66.70	-1.60	-68.30	-13.00	-55.30
3	161.92	-55.80	-58.40	-2.90	-61.30	-13.00	-48.30
4	264.74	-52.90	-55.80	-1.60	-57.40	-13.00	-44.40
5	288.02	-62.20	-64.00	-1.80	-65.80	-13.00	-52.80
6	468.44	-66.60	-70.30	3.50	-66.80	-13.00	-53.80

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

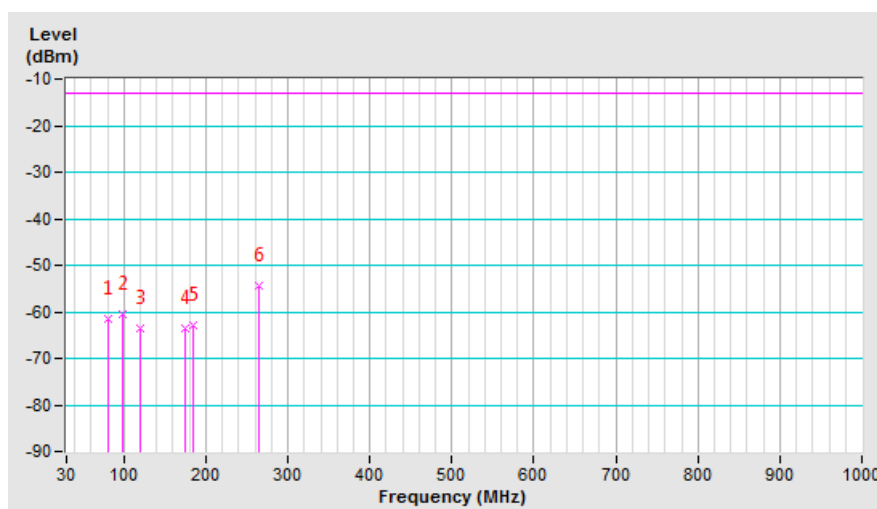


Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	80.44	-56.80	-62.00	0.50	-61.50	-13.00	-48.50
2	97.90	-52.50	-59.20	-1.40	-60.60	-13.00	-47.60
3	119.24	-56.80	-60.30	-3.10	-63.40	-13.00	-50.40
4	174.53	-60.10	-60.90	-2.80	-63.70	-13.00	-50.70
5	185.20	-59.90	-60.00	-2.80	-62.80	-13.00	-49.80
6	264.74	-55.40	-52.80	-1.60	-54.40	-13.00	-41.40

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

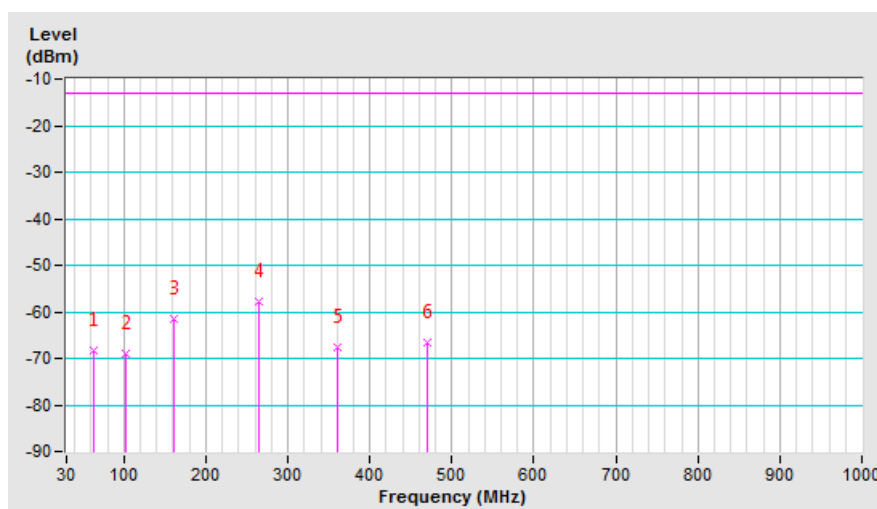


Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	63.95	-60.00	-66.20	-2.00	-68.20	-13.00	-55.20
2	102.75	-58.50	-67.10	-1.80	-68.90	-13.00	-55.90
3	160.95	-54.00	-58.60	-3.00	-61.60	-13.00	-48.60
4	264.74	-51.10	-56.10	-1.60	-57.70	-13.00	-44.70
5	360.77	-62.60	-71.50	4.00	-67.50	-13.00	-54.50
6	469.41	-64.20	-70.00	3.50	-66.50	-13.00	-53.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

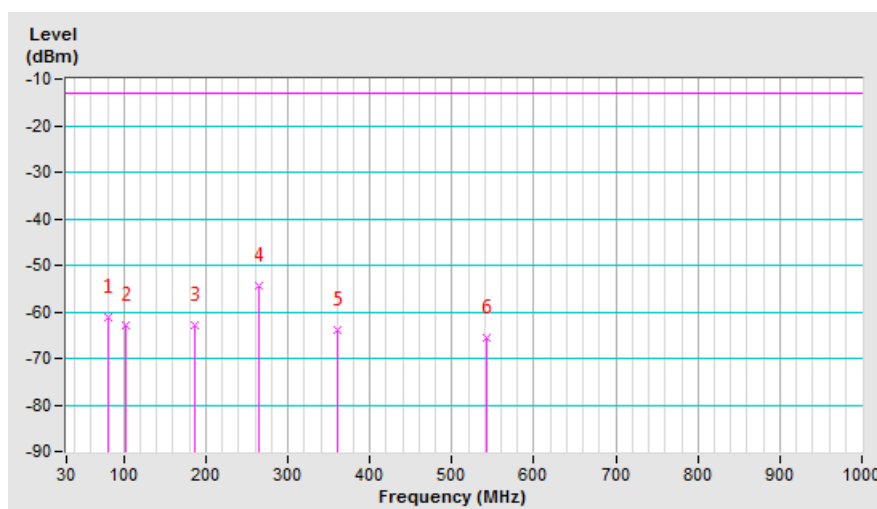


Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	81.41	-54.40	-61.60	0.50	-61.10	-13.00	-48.10
2	102.75	-52.40	-61.20	-1.80	-63.00	-13.00	-50.00
3	186.17	-58.20	-60.40	-2.60	-63.00	-13.00	-50.00
4	264.74	-53.20	-52.80	-1.60	-54.40	-13.00	-41.40
5	360.77	-61.50	-68.00	4.00	-64.00	-13.00	-51.00
6	543.13	-64.80	-69.40	3.90	-65.50	-13.00	-52.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



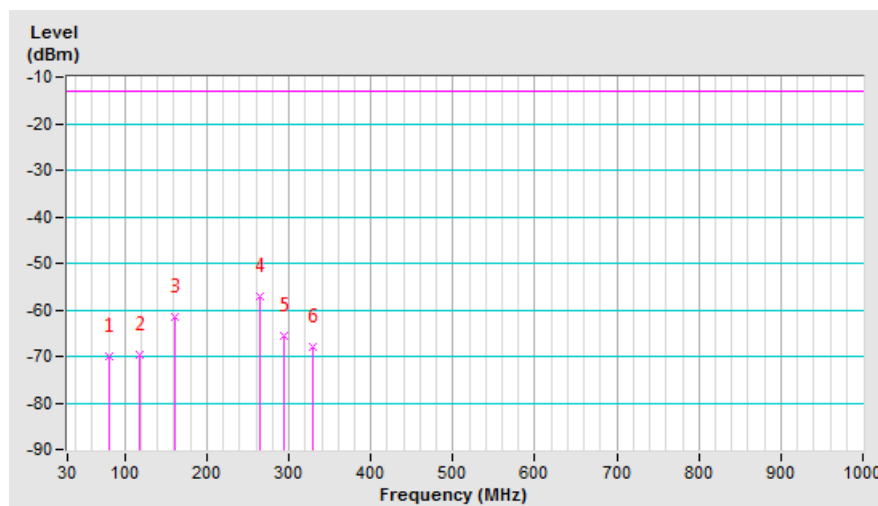
LTE Band 25 + LTE Band 26

Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	81.41	-65.00	-70.60	0.50	-70.10	-13.00	-57.10
2	118.27	-61.80	-66.60	-2.90	-69.50	-13.00	-56.50
3	161.92	-56.00	-58.60	-2.90	-61.50	-13.00	-48.50
4	264.74	-52.70	-55.60	-1.60	-57.20	-13.00	-44.20
5	293.84	-62.50	-63.90	-1.80	-65.70	-13.00	-52.70
6	328.76	-64.20	-72.10	4.10	-68.00	-13.00	-55.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

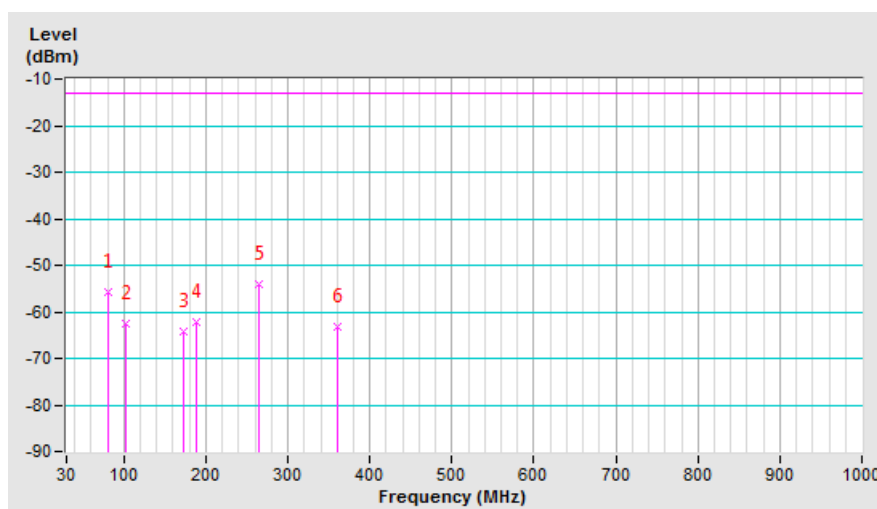


Mode	TX channel 26365	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	81.41	-51.30	-56.40	0.50	-55.90	-13.00	-42.90
2	101.78	-54.10	-60.90	-1.60	-62.50	-13.00	-49.50
3	172.59	-60.60	-61.20	-2.90	-64.10	-13.00	-51.10
4	188.11	-60.10	-59.60	-2.70	-62.30	-13.00	-49.30
5	264.74	-55.20	-52.60	-1.60	-54.20	-13.00	-41.20
6	360.77	-62.90	-67.30	4.00	-63.30	-13.00	-50.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

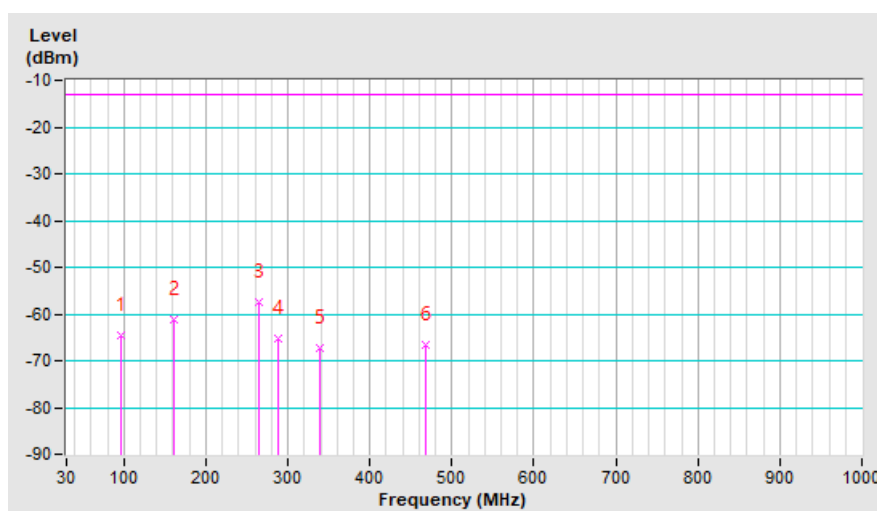


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	96.93	-53.70	-63.50	-1.20	-64.70	-13.00	-51.70
2	161.92	-53.60	-58.30	-2.90	-61.20	-13.00	-48.20
3	264.74	-50.80	-55.80	-1.60	-57.40	-13.00	-44.40
4	288.99	-59.60	-63.60	-1.70	-65.30	-13.00	-52.30
5	339.43	-61.60	-71.30	4.00	-67.30	-13.00	-54.30
6	467.47	-64.30	-70.10	3.50	-66.60	-13.00	-53.60

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

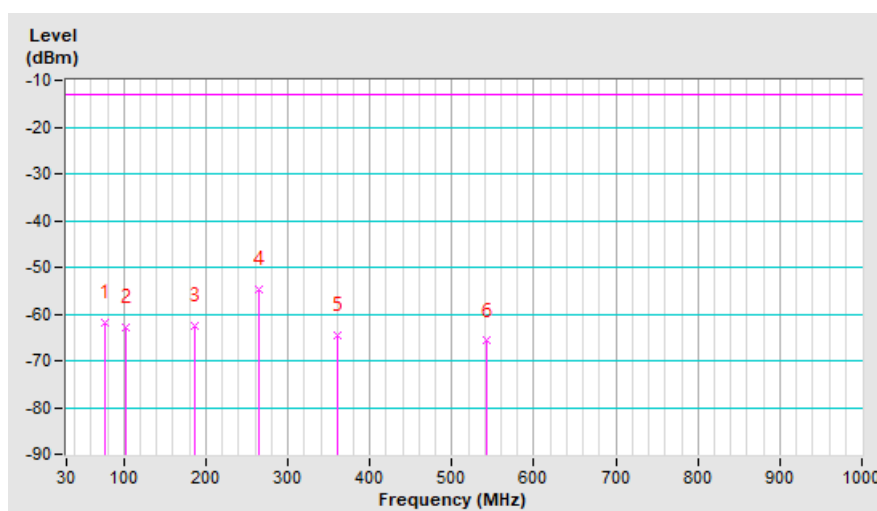


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	77.53	-54.40	-62.50	0.50	-62.00	-13.00	-49.00
2	101.78	-52.30	-61.30	-1.60	-62.90	-13.00	-49.90
3	186.17	-57.80	-59.90	-2.60	-62.50	-13.00	-49.50
4	264.74	-53.60	-53.20	-1.60	-54.80	-13.00	-41.80
5	360.77	-62.00	-68.60	4.00	-64.60	-13.00	-51.60
6	542.16	-65.00	-69.70	3.90	-65.80	-13.00	-52.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



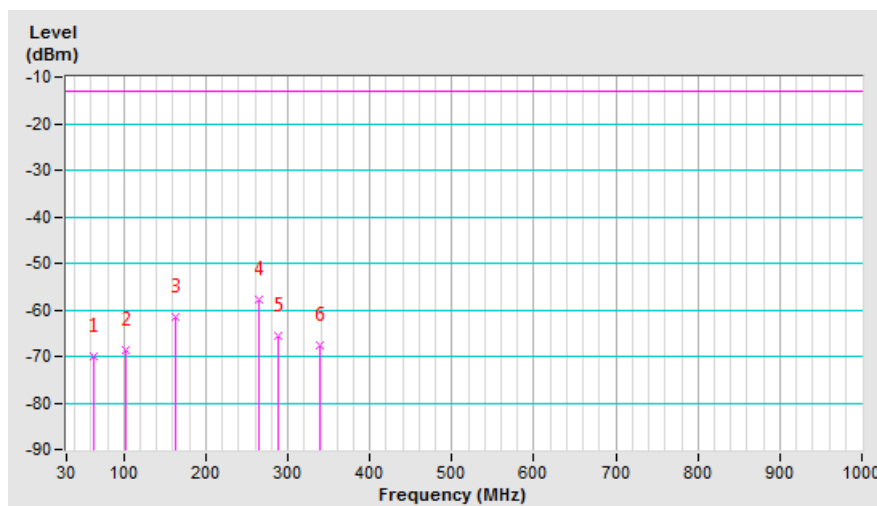
LTE Band 12 + LTE Band 4

Mode	TX channel 23017 + 20175	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	62.98	-62.00	-67.70	-2.40	-70.10	-13.00	-57.10
2	102.75	-58.20	-66.90	-1.80	-68.70	-13.00	-55.70
3	162.89	-53.50	-58.50	-2.90	-61.40	-13.00	-48.40
4	264.74	-51.10	-56.10	-1.60	-57.70	-13.00	-44.70
5	288.99	-59.90	-63.90	-1.70	-65.60	-13.00	-52.60
6	338.46	-61.90	-71.70	4.10	-67.60	-13.00	-54.60

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

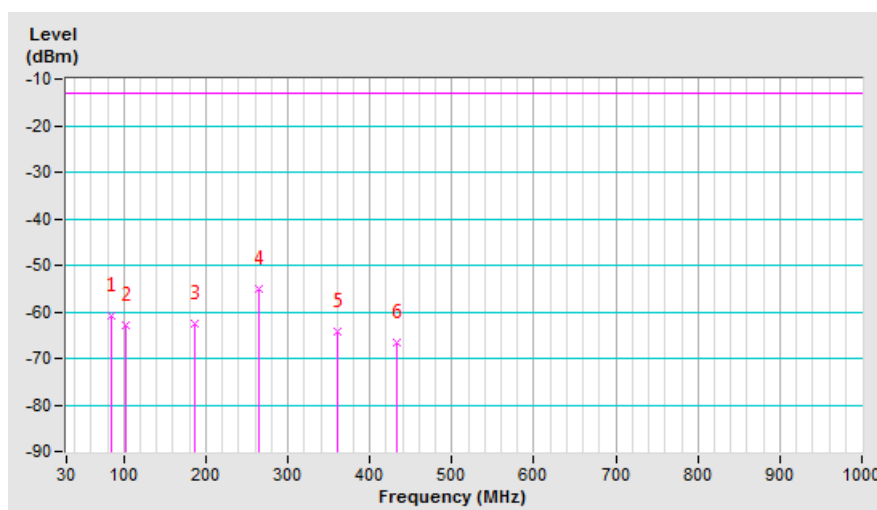


Mode	TX channel 23017 + 20175	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	85.29	-53.20	-61.20	0.30	-60.90	-13.00	-47.90
2	102.75	-52.20	-61.10	-1.80	-62.90	-13.00	-49.90
3	186.17	-57.80	-59.90	-2.60	-62.50	-13.00	-49.50
4	264.74	-54.00	-53.50	-1.60	-55.10	-13.00	-42.10
5	360.77	-61.50	-68.10	4.00	-64.10	-13.00	-51.10
6	432.55	-64.20	-70.00	3.50	-66.50	-13.00	-53.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



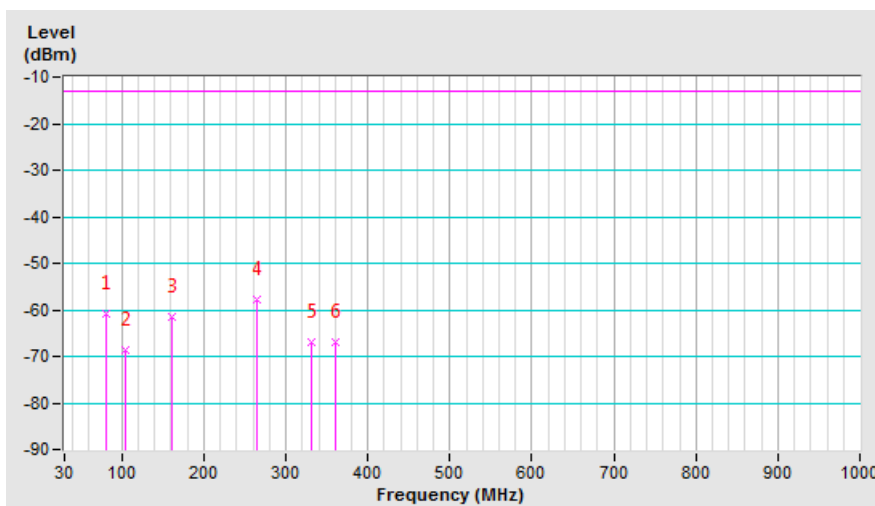
LTE Band 12 + LTE Band 26

Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	81.41	-53.60	-61.40	0.50	-60.90	-13.00	-47.90
2	103.72	-58.00	-66.60	-2.00	-68.60	-13.00	-55.60
3	161.92	-53.80	-58.50	-2.90	-61.40	-13.00	-48.40
4	264.74	-51.10	-56.20	-1.60	-57.80	-13.00	-44.80
5	331.67	-60.80	-70.80	4.00	-66.80	-13.00	-53.80
6	360.77	-61.90	-70.80	4.00	-66.80	-13.00	-53.80

Remarks:

- ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

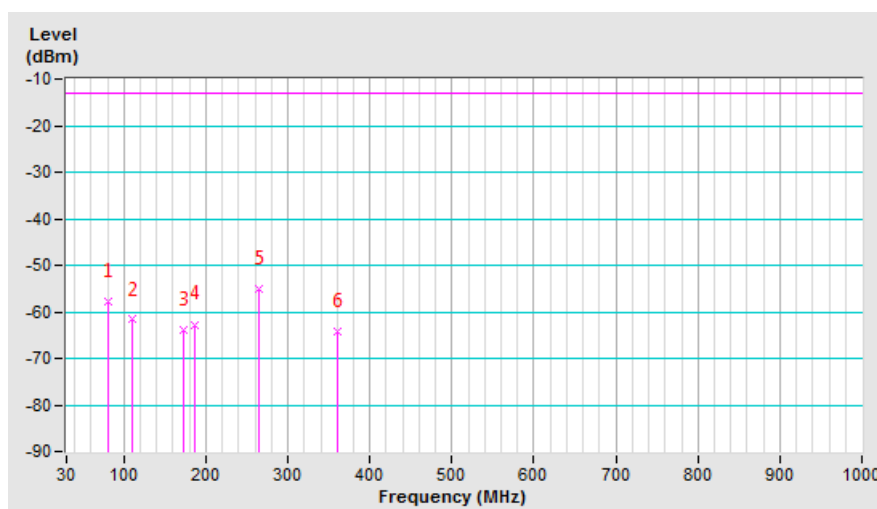


Mode	TX channel 23017	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	80.44	-50.90	-58.20	0.50	-57.70	-13.00	-44.70
2	110.51	-51.60	-59.10	-2.60	-61.70	-13.00	-48.70
3	173.56	-58.00	-61.00	-2.80	-63.80	-13.00	-50.80
4	186.17	-58.00	-60.10	-2.60	-62.70	-13.00	-49.70
5	264.74	-53.90	-53.40	-1.60	-55.00	-13.00	-42.00
6	360.77	-61.90	-68.40	4.00	-64.40	-13.00	-51.40

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

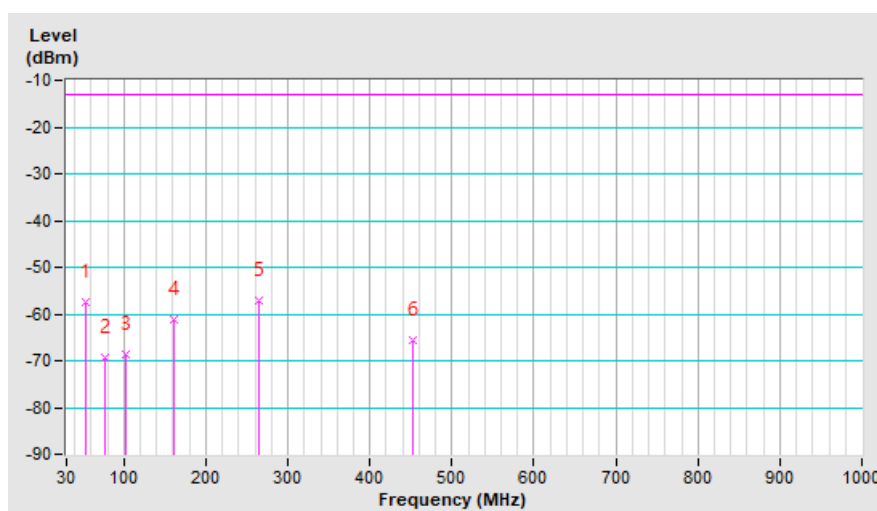


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	53.28	-53.80	-51.40	-6.20	-57.60	-13.00	-44.60
2	76.56	-61.70	-69.70	0.30	-69.40	-13.00	-56.40
3	102.75	-58.10	-66.80	-1.80	-68.60	-13.00	-55.60
4	161.92	-53.60	-58.40	-2.90	-61.30	-13.00	-48.30
5	264.74	-50.40	-55.40	-1.60	-57.00	-13.00	-44.00
6	451.95	-63.60	-69.20	3.50	-65.70	-13.00	-52.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

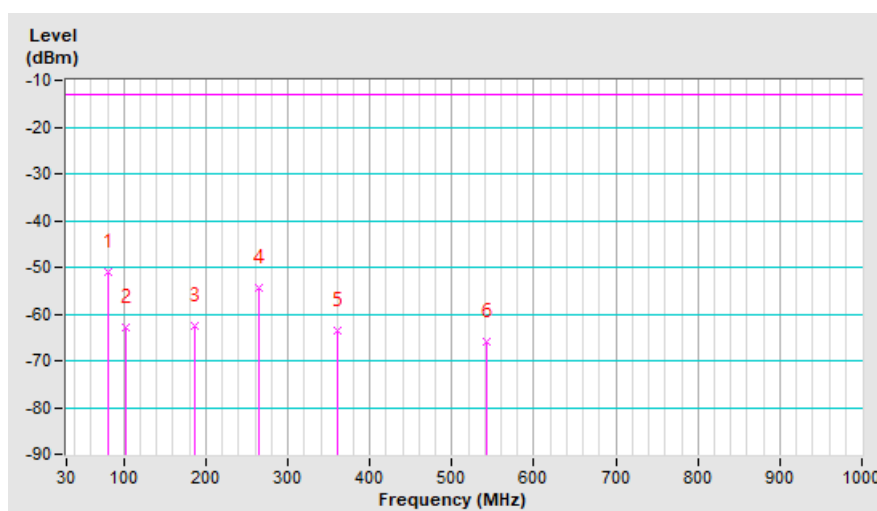


Mode	TX channel 26765	Frequency Range	Below 1000 MHz
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Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	80.44	-44.00	-51.40	0.50	-50.90	-13.00	-37.90
2	101.78	-52.20	-61.20	-1.60	-62.80	-13.00	-49.80
3	186.17	-57.80	-59.90	-2.60	-62.50	-13.00	-49.50
4	264.74	-53.40	-52.90	-1.60	-54.50	-13.00	-41.50
5	360.77	-61.20	-67.70	4.00	-63.70	-13.00	-50.70
6	542.16	-65.20	-69.80	3.90	-65.90	-13.00	-52.90

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).



Above 1GHz Data:

LTE Band 26 + WCDMA Band 5

Mode	TX channel 26865	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-63.80	-56.20	0.90	-55.30	-13.00	-42.30
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-61.90	-54.70	0.90	-53.80	-13.00	-40.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 4233	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-62.50	-54.90	0.70	-54.20	-13.00	-41.20
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-63.80	-56.50	0.70	-55.80	-13.00	-42.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 25

Mode	TX channel 26865	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-63.50	-55.90	0.90	-55.00	-13.00	-42.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-62.90	-55.70	0.90	-54.80	-13.00	-41.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-59.70	-51.20	1.30	-49.90	-13.00	-36.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-65.60	-57.30	1.30	-56.00	-13.00	-43.00

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 12

Mode	TX channel 26865	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-63.80	-56.10	0.90	-55.20	-13.00	-42.20
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-63.10	-55.90	0.90	-55.00	-13.00	-42.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 23017	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.40	-56.20	0.90	-55.30	-13.00	-42.30
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-60.80	-55.70	0.90	-54.80	-13.00	-41.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

WCDMA Band 5 + LTE Band 26

Mode	TX channel 4233	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-62.20	-54.70	0.70	-54.00	-13.00	-41.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-62.80	-55.50	0.70	-54.80	-13.00	-41.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26765	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-52.00	-44.30	1.00	-43.30	-13.00	-30.30
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.00	-54.70	1.00	-53.70	-13.00	-40.70

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 26

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.20	-54.70	1.30	-53.40	-13.00	-40.40
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.70	-55.40	1.30	-54.10	-13.00	-41.10

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26865	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-61.30	-53.70	0.90	-52.80	-13.00	-39.80
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-61.80	-54.50	0.90	-53.60	-13.00	-40.60

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + WCDMA Band 2

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.80	-55.30	1.30	-54.00	-13.00	-41.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-64.10	-55.80	1.30	-54.50	-13.00	-41.50

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 9400	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-64.80	-56.30	1.30	-55.00	-13.00	-42.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3760.00	-63.90	-55.60	1.30	-54.30	-13.00	-41.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 12

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.90	-55.40	1.30	-54.10	-13.00	-41.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.50	-55.20	1.30	-53.90	-13.00	-40.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 23017	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.50	-56.30	0.90	-55.40	-13.00	-42.40
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-61.00	-55.90	0.90	-55.00	-13.00	-42.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 25 + LTE Band 26

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-64.30	-55.80	1.30	-54.50	-13.00	-41.50
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-64.50	-56.20	1.30	-54.90	-13.00	-41.90

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26765	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.40	-54.60	1.00	-53.60	-13.00	-40.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-61.90	-54.60	1.00	-53.60	-13.00	-40.60

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 26

Mode	TX channel 23017	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.00	-55.80	0.90	-54.90	-13.00	-41.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-59.60	-54.50	0.90	-53.60	-13.00	-40.60

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26865	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-63.10	-55.40	1.00	-54.40	-13.00	-41.40
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.40	-55.10	1.00	-54.10	-13.00	-41.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 25

Mode	TX channel 23017	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-63.20	-57.00	0.90	-56.10	-13.00	-43.10
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-58.80	-53.70	0.90	-52.80	-13.00	-39.80

Remarks:

- ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3465.00	-63.40	-55.00	1.40	-53.60	-13.00	-40.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3465.00	-61.20	-53.40	1.40	-52.00	-13.00	-39.00

Remarks:

- EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
- Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 4

Mode	TX channel 23017	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.00	-55.80	0.90	-54.90	-13.00	-41.90
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-58.50	-53.40	0.90	-52.50	-13.00	-39.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 20175	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-59.30	-50.80	1.30	-49.50	-13.00	-36.50
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-65.00	-56.70	1.30	-55.40	-13.00	-42.40

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 12 + LTE Band 26

Mode	TX channel 23017	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.80	-56.50	0.90	-55.60	-13.00	-42.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-59.80	-54.70	0.90	-53.80	-13.00	-40.80

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26765	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-61.50	-53.90	0.90	-53.00	-13.00	-40.00
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1663.00	-61.10	-53.90	0.90	-53.00	-13.00	-40.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + WCDMA Band 5

Mode	TX channel 26765	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.40	-54.60	1.00	-53.60	-13.00	-40.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.20	-55.00	1.00	-54.00	-13.00	-41.00

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 4233	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-63.50	-56.00	0.70	-55.30	-13.00	-42.30
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1693.20	-62.10	-54.80	0.70	-54.10	-13.00	-41.10

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 25

Mode	TX channel 26765	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.00	-54.20	1.00	-53.20	-13.00	-40.20
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.60	-55.40	1.00	-54.40	-13.00	-41.40

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 26365	Frequency Range	1GHz~20GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-63.40	-54.90	1.30	-53.60	-13.00	-40.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3765.00	-64.90	-56.60	1.30	-55.30	-13.00	-42.30

Remarks:

1. EIRP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE Band 26 + LTE Band 12

Mode	TX channel 26765	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-63.40	-55.60	1.00	-54.60	-13.00	-41.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1643.00	-62.80	-55.50	1.00	-54.50	-13.00	-41.50

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Mode	TX channel 23017	Frequency Range	1GHz~10GHz
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Antenna Polarity & Test Distance: Horizontal at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-62.80	-56.50	0.90	-55.60	-13.00	-42.60
Antenna Polarity & Test Distance: Vertical at 3 m							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	ERP (dBm)	Limit (dBm)	Margin (dB)
1	1399.40	-61.40	-56.30	0.90	-55.40	-13.00	-42.40

Remarks:

1. ERP (dBm) = S.G Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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The address and road map of all our labs can be found in our web site also.

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