RF Test Report

Applicant	:	MobileHelp, LLC
Product Type	:	LTE Module
Trade Name	:	Quectel
Model Number	:	SC20-A
Test Specification	:	FCC 47 CFR PART 22H FCC 47 CFR PART 24E FCC 47 CFR PART 27 ANSI C63.26
Receive Date	:	Apr. 09, 2019
Test Period	:	Apr. 25 ~ May 09, 2019
Issue Date	:	Jun. 14, 2019

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade District,
Taoyuan City 33465, Taiwan (R.O.C.)
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Taiwan Accreditation Foundation accreditation number: 1330
Test Firm MRA designation number: TW0010

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jun. 14, 2019	Initial Issue	Nina Lin

Verification of Compliance

Issued Date: Jun. 14, 2019

Applicant	:	MobileHelp, LLC
Product Type	:	LTE Module
Trade Name	:	Quectel
Model Number	:	SC20-A
FCC ID	:	PXT-201706SC20A
EUT Rated Voltage	:	DC 3.5 V ~ DC 4.2 V
Test Voltage	:	120 Vac / 60 Hz
Applicable Standard	:	FCC 47 CFR PART 22H FCC 47 CFR PART 24E FCC 47 CFR PART 27 ANSI C63.26
Test Result	:	Complied
Performing Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade District, Taoyuan City 33465, Taiwan (R.O.C.) Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 http://www.atl-lab.com.tw/e-index.htm

A Test Lab Techno Corp. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by A Test Lab Techno Corp. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Approved By	:	Fly Lu	Reviewed By	: Eric Ou Yang
(Manager)		(Fly Lu)	(Testing Engineer)	(Eric Ou Yang)

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1 General Information

1.1. EUT Description

Applicant	MobileHelp, LLC 5050 Conference Way N, Suite 125, Boca Raton, Florida 33431, United States		
Manufacturer	Quectel Wireless Solutions Co., Ltd. 7th Floor, Hongye Building, No.1801 Hongmei Road, Xuhui District, Shanghai 200233, China		
Product Type	LTE Module		
Trade Name	Quectel		
Model Number	SC20-A		
FCC ID	PXT-201706SC20A		
Class II Permissive Change	This is to request a Class II permissive change for FCC ID: PXT-201706SC20A, originally granted on 6/13/2019. The major change filed under this application is: Change #1: Host added, MobileHelp, model number: DC-TBS2-01 #2: Disable GSM, WCDMA B4 and LTE bands B7,B13,B25,B26 by firmware. #3: Reduce the Output Power through firmware, and SAR measurement were evaluated. (Only reduce WCDMA band2/LTE band2/Wi-Fi 2.4GHz/Bluetooth output Power, other undescribed parts haven't changes). #4: Addition antennas, the WWAN WCDMA/LTE band 2 antenna gain higher then original grant, WLAN/Bluetooth antenna type different from original grant. The radiated emission has verified and compliance with FCC regulations. Other undescribed parts antenna gain lower then original grant.		
Host Information	Product Type: Tablet Base Station Trade Name: MobileHelp Model Name: DC-TBS2-01		
IMEI No.	015559000091890		
Operate Band	Frequency Range (MHz)	Modulation	Channel Bandwidth
LTE Band 2	UL: 1850 ~ 1910	QPSK, 16QAM	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	DL: 1930 ~ 1990	QPSK, 16QAM	
LTE Band 4	UL: 1710 ~ 1755	QPSK, 16QAM	1.4 MHz, 3 MHz, 5 MHz, 10 MHz, 15 MHz, 20 MHz
	DL: 2110 ~ 2155	QPSK, 16QAM	
LTE Band 5	UL: 824 ~ 849	QPSK, 16QAM	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	DL: 869 ~ 894	QPSK, 16QAM	
LTE Band 12	UL: 699 ~ 716	QPSK, 16QAM	1.4 MHz, 3 MHz, 5 MHz, 10 MHz
	DL: 728 ~ 746	QPSK, 16QAM	
Type of Antenna	SMT PCB Antenna		

Antenna Gain	LTE Band 2	2.91 dBi
	LTE Band 4	2.08 dBi
	LTE Band 5	1.48 dBi
	LTE Band 12	1.41 dBi
Operate Temp. Range	-40 ~ 75 ℃	

Band	Channel Bandwidth	Modulation	Max. RF Output Power	E.R.P. /E.I.R.P.
			(W)	(W)
LTE Band2	1.4 MHz	QPSK	0.135	0.114
LTE Band2	1.4 MHz	16QAM	0.114	0.105
LTE Band2	3 MHz	QPSK	0.128	0.118
LTE Band2	3 MHz	16QAM	0.111	0.103
LTE Band2	5 MHz	QPSK	0.126	0.117
LTE Band2	5 MHz	16QAM	0.100	0.100
LTE Band2	10 MHz	QPSK	0.125	0.117
LTE Band2	10 MHz	16QAM	0.103	0.102
LTE Band2	15 MHz	QPSK	0.122	0.113
LTE Band2	15 MHz	16QAM	0.104	0.104
LTE Band2	20 MHz	QPSK	0.122	0.119
LTE Band2	20 MHz	16QAM	0.107	0.100
LTE Band4	1.4 MHz	QPSK	0.209	---
LTE Band4	1.4 MHz	16QAM	0.173	---
LTE Band4	3 MHz	QPSK	0.210	---
LTE Band4	3 MHz	16QAM	0.169	---
LTE Band4	5 MHz	QPSK	0.212	---
LTE Band4	5 MHz	16QAM	0.171	---
LTE Band4	10 MHz	QPSK	0.216	---
LTE Band4	10 MHz	16QAM	0.176	---
LTE Band4	15 MHz	QPSK	0.223	---
LTE Band4	15 MHz	16QAM	0.185	---
LTE Band4	20 MHz	QPSK	0.227	---
LTE Band4	20 MHz	16QAM	0.185	---

Band	Channel Bandwidth	Modulation	Max. RF Output Power	E.R.P. /E.I.R.P.
			(W)	(W)
LTE Band5	1.4 MHz	QPSK	0.207	---
LTE Band5	1.4 MHz	16QAM	0.170	---
LTE Band5	3 MHz	QPSK	0.207	---
LTE Band5	3 MHz	16QAM	0.171	---
LTE Band5	5 MHz	QPSK	0.209	---
LTE Band5	5 MHz	16QAM	0.174	---
LTE Band5	10 MHz	QPSK	0.211	---
LTE Band5	10 MHz	16QAM	0.175	---
LTE Band12	1.4 MHz	QPSK	0.209	---
LTE Band12	1.4 MHz	16QAM	0.173	---
LTE Band12	3 MHz	QPSK	0.211	---
LTE Band12	3 MHz	16QAM	0.172	---
LTE Band12	5 MHz	QPSK	0.210	---
LTE Band12	5 MHz	16QAM	0.171	---
LTE Band12	10 MHz	QPSK	0.211	---
LTE Band12	10 MHz	16QAM	0.169	---

1.2. Mode of Operation

Three channels had been tested for each channel bandwidth.

LTE Band 2						
Channel Bandwidth	1.4 MHz		3 MHz		5 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	18607	1850.7	18615	1851.5	18625	1852.5
Middle CH	18900	1880.0	18900	1880.0	18900	1880.0
High CH	19193	1909.3	19185	1908.5	19175	1907.5
Channel Bandwidth	10 MHz		15 MHz		20 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	18650	1855.0	18675	1857.5	18700	1860.0
Middle CH	18900	1880.0	18900	1880.0	18900	1880.0
High CH	19150	1905.0	19125	1902.5	19100	1900.0

LTE Band 4						
Channel Bandwidth	1.4 MHz		3 MHz		5 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	19957	1710.7	19965	1711.5	19975	1712.5
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20393	1754.3	20385	1753.5	20375	1752.5
Channel Bandwidth	10 MHz		15 MHz		20 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20000	1715.0	20025	1717.5	20050	1720.0
Middle CH	20175	1732.5	20175	1732.5	20175	1732.5
High CH	20350	1750.0	20325	1747.5	20300	1745.0

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

LTE Band 5				
Channel Bandwidth	1.4 MHz		3 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20407	824.7	20415	825.5
Middle CH	20525	836.5	20525	836.5
High CH	20643	848.3	20635	847.5
Channel Bandwidth	5 MHz		10 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	20425	826.5	20450	829.0
Middle CH	20525	836.5	20525	836.5
High CH	20625	846.5	20600	844.0

LTE Band 12				
Channel Bandwidth	1.4 MHz		3 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23017	699.7	23025	700.5
Middle CH	23095	707.5	23095	707.5
High CH	23173	715.3	23165	714.5
Channel Bandwidth	5 MHz		10 MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low CH	23035	701.5	23060	704.0
Middle CH	23095	707.5	23095	707.5
High CH	23155	713.5	23130	711.0

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission: 9 kHz to10th Harmonic

Band	Channel Bandwidth	Test Modes	
LTE Band 2	1.4 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☑ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 7) Link ☑ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 3) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☑ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☑ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
	15 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 37) Link ☑ LTE(RB Size 1, RB Offset 74) Link ☐ LTE(RB Size 36, RB Offset 0) Link ☐ LTE(RB Size 36, RB Offset 19) Link ☐ LTE(RB Size 36, RB Offset 39) Link ☐ LTE(RB Size 75, RB Offset 0) Link	QPSK
	20 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 1, RB Offset 99) Link ☐ LTE(RB Size 50, RB Offset 0) Link ☐ LTE(RB Size 50, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 50) Link ☐ LTE(RB Size 100, RB Offset 0) Link	QPSK

Band	Channel Bandwidth	Test Modes	
LTE Band 4	1.4 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☑ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 7) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 3) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
	15 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 37) Link ☐ LTE(RB Size 1, RB Offset 74) Link ☐ LTE(RB Size 36, RB Offset 0) Link ☐ LTE(RB Size 36, RB Offset 19) Link ☐ LTE(RB Size 36, RB Offset 39) Link ☐ LTE(RB Size 75, RB Offset 0) Link	QPSK
	20 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 1, RB Offset 99) Link ☐ LTE(RB Size 50, RB Offset 0) Link ☐ LTE(RB Size 50, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 50) Link ☐ LTE(RB Size 100, RB Offset 0) Link	QPSK

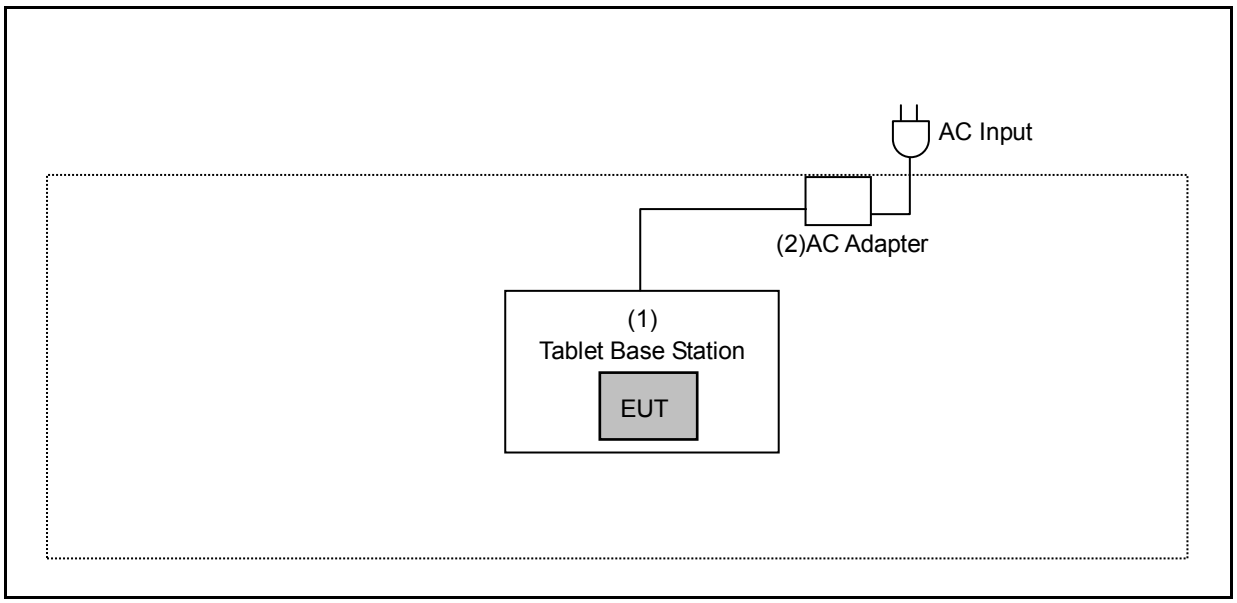
Band	Channel Bandwidth	Test Modes	
LTE Band 5	1.4 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☑ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 7) Link ☐ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 3) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☑ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK
LTE Band 12	1.4 MHz	☑ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 2) Link ☐ LTE(RB Size 1, RB Offset 5) Link ☐ LTE(RB Size 3, RB Offset 0) Link ☐ LTE(RB Size 3, RB Offset 1) Link ☐ LTE(RB Size 3, RB Offset 3) Link ☐ LTE(RB Size 6, RB Offset 0) Link	QPSK
	3 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 7) Link ☑ LTE(RB Size 1, RB Offset 14) Link ☐ LTE(RB Size 8, RB Offset 0) Link ☐ LTE(RB Size 8, RB Offset 3) Link ☐ LTE(RB Size 8, RB Offset 7) Link ☐ LTE(RB Size 15, RB Offset 0) Link	QPSK
	5 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☐ LTE(RB Size 1, RB Offset 12) Link ☑ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 12, RB Offset 0) Link ☐ LTE(RB Size 12, RB Offset 6) Link ☐ LTE(RB Size 12, RB Offset 13) Link ☐ LTE(RB Size 25, RB Offset 0) Link	QPSK
	10 MHz	☐ LTE(RB Size 1, RB Offset 0) Link ☑ LTE(RB Size 1, RB Offset 24) Link ☐ LTE(RB Size 1, RB Offset 49) Link ☐ LTE(RB Size 25, RB Offset 0) Link ☐ LTE(RB Size 25, RB Offset 12) Link ☐ LTE(RB Size 25, RB Offset 25) Link ☐ LTE(RB Size 50, RB Offset 0) Link	QPSK

1.3. EUT Test Step

1	Setup the EUT shown on “Configuration of Test System Details”.
2	Turn on the power of all equipment.
3	EUT run test program test.

Measurement Software			
No.	Description	Software	Version
1	Radiated Emission	EZ EMC	1.1.4.4

1.4. Configuration of Test System Details



Devices Description					
Product		Manufacturer	Model Number	Serial Number	Power Cord
(1)	Tablet Base Station	MobileHelp	DC-TBS2-01	---	---
(2)	AC Adapter	Keen Ocean Industrial Ltd	S09-012-0050-02000	---	---

1.5. Test Instruments

For Conducted

Test Period: Apr. 25, 2019

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Radio Communication Analyzer	Anritsu	MT8820C	6201342039	12/13/2018	1 year

For Radiated Emissions

Test Period: May 09, 2019

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	01/14/2019	1 year
Pre Amplifier (1~26.5 GHz)	Agilent	8449B	3008A02237	10/16/2018	1 year
Pre Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/14/2019	1 year
Broadband Antenna	Schwarzbeck	VULB9168	416	10/19/2018	1 year
Horn Antenna (1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	08/23/2018	1 year
Horn Antenna (18~40 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	08/07/2018	1 year
Loop Antenna	COM-POWER CORPORATION	AL-130	121014	03/29/2019	1 year
RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/20/2019	1 year
Microwave Cable	EMCI	EMC104-SM-SM-13000	170814	10/30/2018	1 year
Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	02/20/2019	1 year

Note: N.C.R. = No Calibration Request.

1.6. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	990

Test Setting Condition		
N.V.	Normal Voltage	AC 120 V
L.T.	Low Temperature	-40 ℃
N.T.	Normal Temperature	+25 ℃
H.T.	High Temperature	+75 ℃

1.7. Summary of Test Result

FCC Rule	Description	Result
§2.1046	Conducted Output Average Power	PASS
§22.913 §24.232 §27. 50	Equivalent Isotropic Radiated Power / Equivalent Radiated Power	PASS (Note2)
§2.1055 §22.355 §24.235 §27. 54	Frequency Stability	N/A (Note1)
§2.1049	Emission Bandwidth & Occupied Bandwidth	N/A (Note1)
§24.232 §27.50	Peak to average ratio	N/A (Note1)
§2.1051 §22.917 §24.238 §27.53	Band Edge	N/A (Note1)
§2.1051 §22.917 §24.238 §27.53	Conducted Spurious Emissions	N/A (Note1)
§2.1053 §22.917 §24.238 §27.53	Radiated Spurious Emissions	PASS (Note2)

Note1: Class II permissive change. No need for verification.

Note2: LTE band 2 antenna gain higher then original certificate grant, So we verify
Effective Radiated Power / Equivalent Isotropic Radiated Power and Radiated Spurious Emissions.

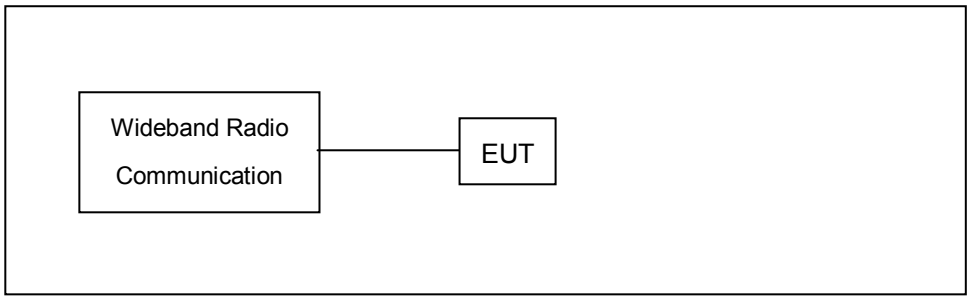
2 Measurement Procedure

2.1. Conducted Output Average Power Test

■ Limit

N/A

■ Test Setup



■ Test Procedure

a. The EUT was set up for the maximum power with simulator.

b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

■ Uncertainty

The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

2.2. Effective Radiated Power / Equivalent Isotropic Radiated Power Test

■ Limit

For FCC Part 27: The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 1 Watts.

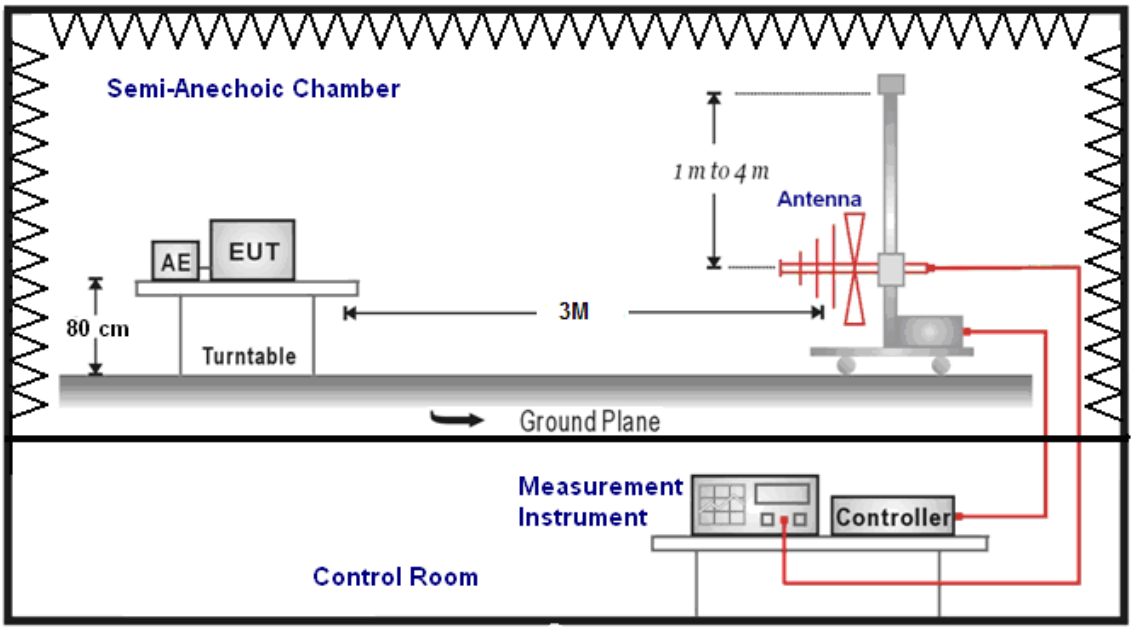
For FCC Part 27.50(c)(9): Control and mobile stations in the 698-746 MHz band are limited to 30 watts ERP.

For FCC Part 22.913(a)(5): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

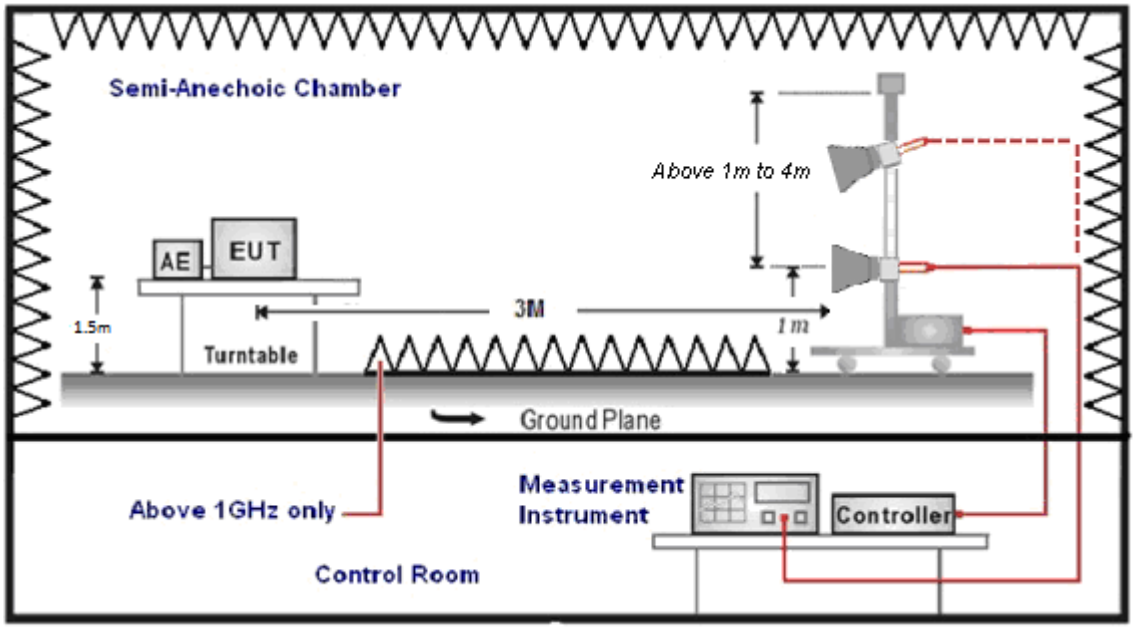
For FCC Part 24.232(c): The E.I.R.P. of Mobile and portable stations test transmitters must not exceed 2 Watts.

■ Test Setup

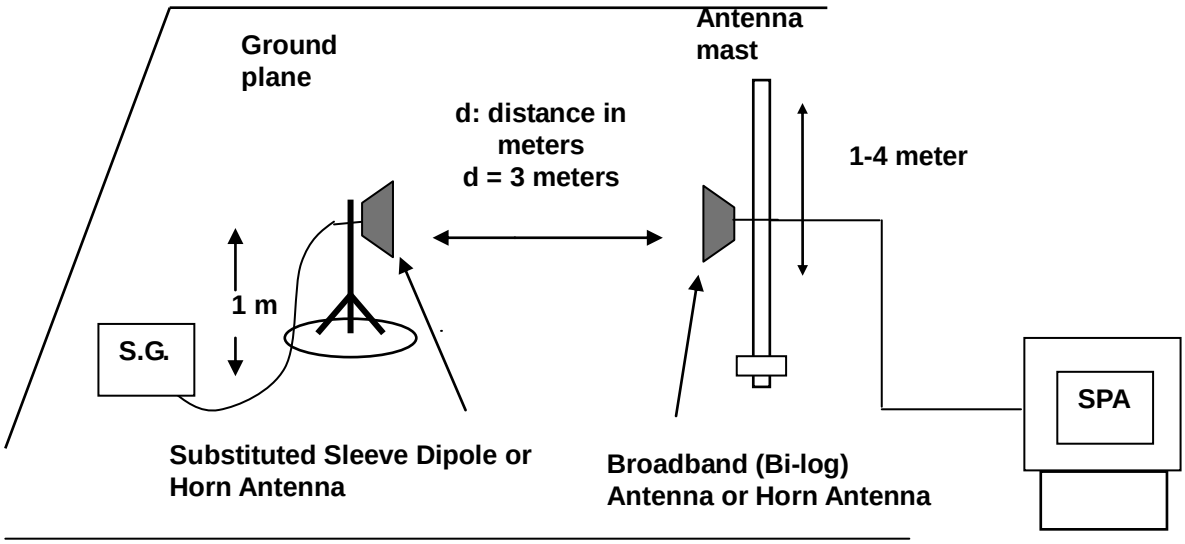
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



■ Test Procedure

a. The EUT was set up for the maximum power with wwan link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range).

b. E.I.R.P power measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (1.5 m for above 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution antenna (Note:1 & 2) 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 a. Record the power level of S.G.

d. E.I.R.P. = Output power level of S.G - TX cable loss + Antenna gain of substitution horn

e. E.R.P. = E.I.R.P- 2.15 dB

Note: 1. Below 1 GHz Substituted Method Test：Sleeve dipole antenna to Bi-Log Antenna

2. Above 1 GHz Substituted Method Test：Horn antenna to Horn Antenna

a. LC: signal loss in the measurement cable, in dB;

b. The free space propagation path loss LP is determined from the Equation:

c. LP = 20 logF + 20 logd － 27.5 ,where:

d. LP basic free space propagation path loss, in dB;

e. F center frequency of radiated EUT signal, in MHz;

f. d measurement distance, in m.

g. ERP (dBm) = EIRP - 2.15

■ Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

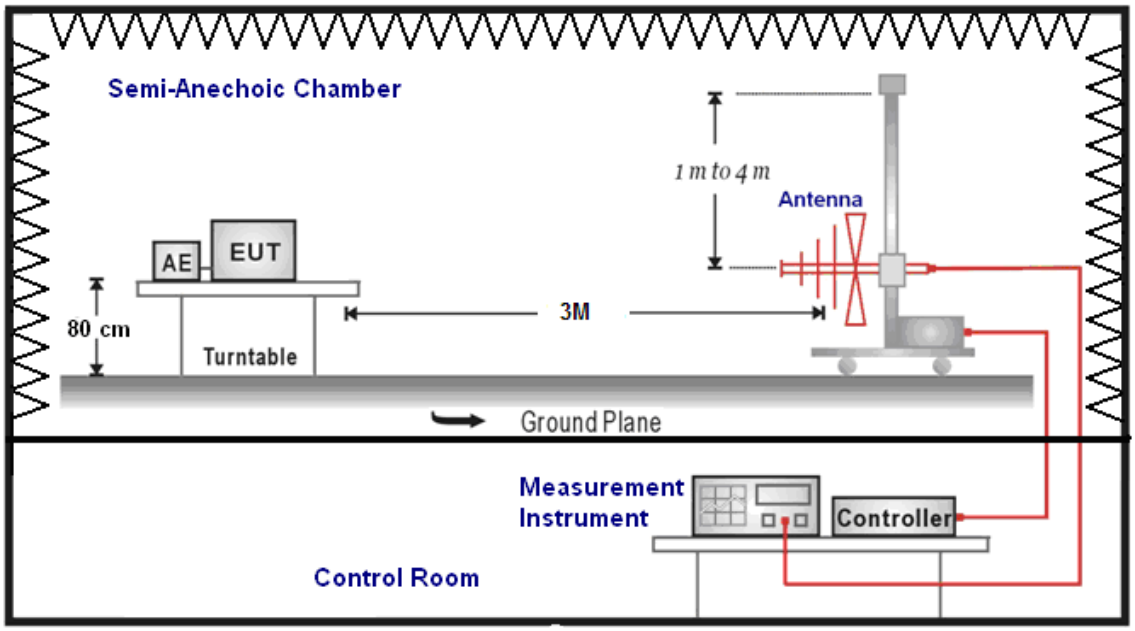
2.3. Radiated Emission Test

■ Limit

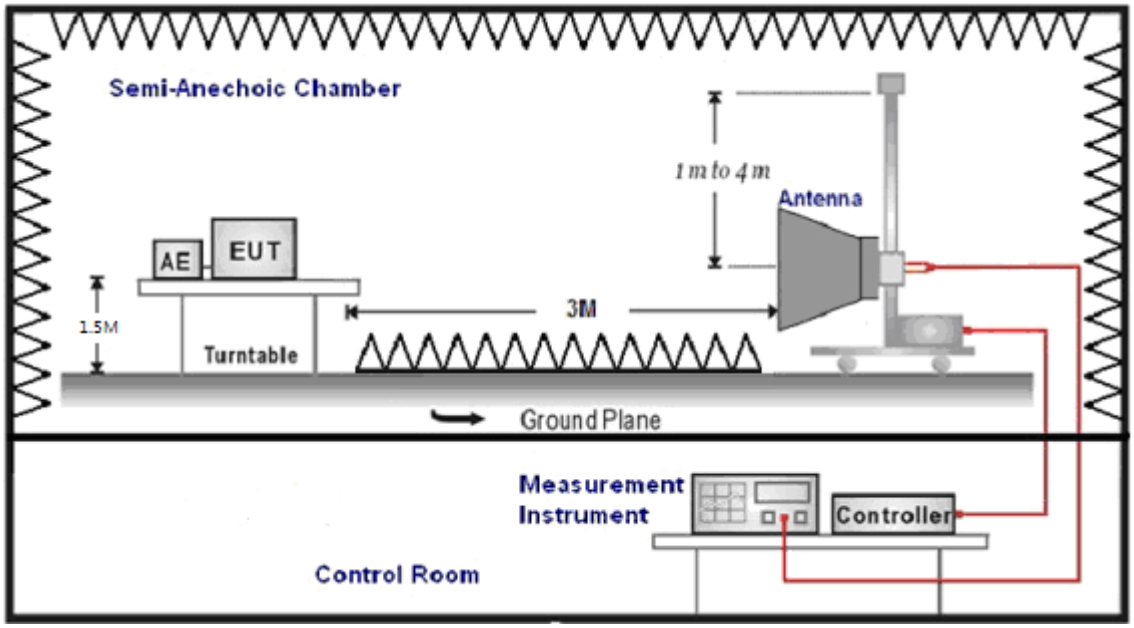
The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 $\log_{10}$(P) dB. The limit of emission equal to -13 dBm

■ Setup

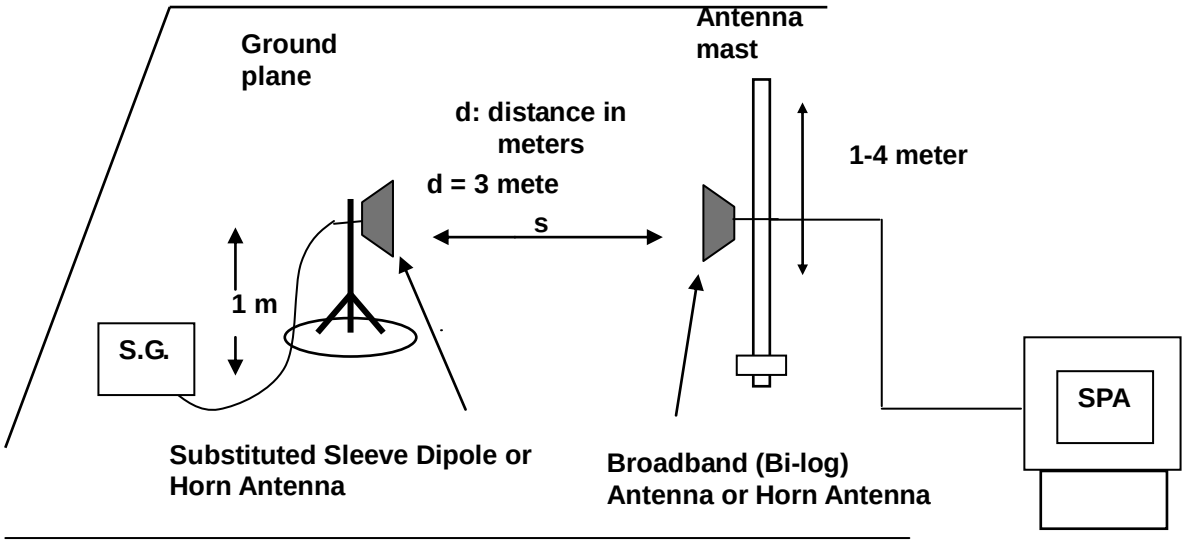
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



■ Test Procedure

a. The EUT was set up for the maximum power with wwan link data modulation. The power was measured with Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range).

b. Radiation Emission measurement. In the semi-anechoic chamber, EUT placed on the 0.8 m (1.5 m for above 1 GHz) 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 1 m to 4 m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution antenna (Note:1 & 2) 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 a. Record the power level of S.G.

d. E.I.R.P. = Output power level of S.G - TX cable loss + Antenna gain of substitution horn

e. E.R.P. = E.I.R.P- 2.15 dB

f. Measurement range 9 kHz - 10 th Harmonic

Note: 1. Below 1 GHz Substituted Method Test：Sleeve dipole antenna to Bi-Log Antenna

2. Above 1 GHz Substituted Method Test：Horn antenna to Horn Antenn

■ Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

3 Test Results

Conducted Output Average Power

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	1.4 MHz	QPSK	18607	1850.7	1	0	20.63	0.116
					1	2	20.79	0.120
					1	5	20.65	0.116
					3	0	20.58	0.114
					3	1	20.52	0.113
					3	3	20.61	0.115
					6	0	20.00	0.100
			18900	1880.0	1	0	20.78	0.120
					1	2	21.09	0.129
					1	5	20.86	0.122
					3	0	21.01	0.126
					3	1	21.05	0.127
					3	3	21.14	0.130
					6	0	20.01	0.100
			19193	1909.3	1	0	20.88	0.122
					1	2	**21.29**	**0.135**
					1	5	21.23	0.133
					3	0	21.11	0.129
					3	1	21.11	0.129
					3	3	21.18	0.131
					6	0	20.13	0.103
		16QAM	18607	1850.7	1	0	19.97	0.099
					1	2	20.08	0.102
					1	5	19.87	0.097
					3	0	20.23	0.105
					3	1	20.17	0.104
					3	3	20.16	0.104
					6	0	18.93	0.078
			18900	1880.0	1	0	20.35	0.108
					1	2	**20.56**	**0.114**
					1	5	20.07	0.102
					3	0	20.42	0.110
					3	1	20.46	0.111
					3	3	20.52	0.113
					6	0	19.08	0.081
			19193	1909.3	1	0	20.29	0.107
					1	2	20.42	0.110
					1	5	20.08	0.102
					3	0	20.31	0.107
					3	1	20.40	0.110
					3	3	20.39	0.109
					6	0	19.14	0.082

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	3 MHz	QPSK	18615	1851.5	1	0	20.75	0.119
					1	7	20.87	0.122
					1	14	20.94	0.124
					8	0	19.90	0.098
					8	3	19.95	0.099
					8	7	19.91	0.098
					15	0	19.86	0.097
			18900	1880.0	1	0	20.87	0.122
					1	7	21.01	0.126
					1	14	21.03	0.127
					8	0	19.98	0.100
					8	3	19.88	0.097
					8	7	19.96	0.099
					15	0	19.88	0.097
			19185	1908.5	1	0	20.89	0.123
					1	7	21.06	0.128
					1	14	**21.08**	**0.128**
					8	0	20.00	0.100
					8	3	20.05	0.101
					8	7	20.03	0.101
					15	0	20.02	0.100
		16QAM	18615	1851.5	1	0	19.95	0.099
					1	7	19.77	0.095
					1	14	19.92	0.098
					8	0	18.82	0.076
					8	3	18.86	0.077
					8	7	18.81	0.076
					15	0	18.88	0.077
			18900	1880.0	1	0	20.13	0.103
					1	7	20.31	0.107
					1	14	20.19	0.104
					8	0	18.87	0.077
					8	3	18.81	0.076
					8	7	18.86	0.077
					15	0	18.89	0.077
			19185	1908.5	1	0	**20.46**	**0.111**
					1	7	19.99	0.100
					1	14	20.06	0.101
					8	0	18.99	0.079
					8	3	19.02	0.080
					8	7	19.03	0.080
					15	0	18.95	0.079

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	5 MHz	QPSK	18625	1852.5	1	0	20.46	0.111
					1	12	20.57	0.114
					1	24	20.75	0.119
					12	0	19.76	0.095
					12	6	19.73	0.094
					12	13	19.76	0.095
					25	0	19.76	0.095
			18900	1880.0	1	0	20.83	0.121
					1	12	20.82	0.121
					1	24	20.89	0.123
					12	0	19.85	0.097
					12	6	19.86	0.097
					12	13	19.83	0.096
					25	0	19.77	0.095
			19175	1907.5	1	0	20.83	0.121
					1	12	20.96	0.125
					1	24	**21.01**	**0.126**
					12	0	19.98	0.100
					12	6	19.89	0.097
					12	13	19.95	0.099
					25	0	19.99	0.100
		16QAM	18625	1852.5	1	0	19.91	0.098
					1	12	19.69	0.093
					1	24	19.88	0.097
					12	0	18.83	0.076
					12	6	18.81	0.076
					12	13	18.87	0.077
					25	0	18.89	0.077
			18900	1880.0	1	0	20.02	0.100
					1	12	19.72	0.094
					1	24	19.89	0.097
					12	0	18.84	0.077
					12	6	18.86	0.077
					12	13	18.83	0.076
					25	0	18.82	0.076
			19175	1907.5	1	0	**20.02**	**0.100**
					1	12	19.81	0.096
					1	24	20.01	0.100
					12	0	18.86	0.077
					12	6	18.95	0.079
					12	11	18.89	0.077
					25	0	19.04	0.080

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	10 MHz	QPSK	18650	1855.0	1	0	20.78	0.120
					1	24	20.79	0.120
					1	49	20.64	0.116
					25	0	19.74	0.094
					25	12	19.64	0.092
					25	25	19.71	0.094
					50	0	19.66	0.092
			18900	1880.0	1	0	20.88	0.122
					1	24	20.86	0.122
					1	49	20.84	0.121
					25	0	19.84	0.096
					25	12	19.75	0.094
					25	25	19.77	0.095
					50	0	19.81	0.096
			19150	1905.0	1	0	20.81	0.121
					1	24	**20.97**	**0.125**
					1	49	20.89	0.123
					25	0	19.87	0.097
					25	12	19.84	0.096
					25	25	19.94	0.099
					50	0	19.83	0.096
		16QAM	18650	1855.0	1	0	19.94	0.099
					1	24	19.93	0.098
					1	49	19.73	0.094
					25	0	18.88	0.077
					25	12	18.88	0.077
					25	25	18.85	0.077
					50	0	18.89	0.077
			18900	1880.0	1	0	20.10	0.102
					1	24	19.93	0.098
					1	49	20.09	0.102
					25	0	18.86	0.077
					25	12	18.83	0.076
					25	25	18.88	0.077
					50	0	18.81	0.076
			19150	1905.0	1	0	20.09	0.102
					1	24	**20.12**	**0.103**
					1	49	20.06	0.101
					25	0	18.82	0.076
					25	12	18.88	0.077
					25	25	18.99	0.079
					50	0	18.83	0.076

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	15 MHz	QPSK	18675	1857.5	1	0	20.49	0.112
					1	37	20.50	0.112
					1	74	20.70	0.117
					36	0	19.65	0.092
					36	19	19.53	0.090
					36	39	19.64	0.092
					75	0	19.61	0.091
			18900	1880.0	1	0	20.69	0.117
					1	37	20.65	0.116
					1	74	**20.88**	**0.122**
					36	0	19.76	0.095
					36	19	19.70	0.093
					36	39	19.66	0.092
					75	0	19.67	0.093
			19125	1902.5	1	0	20.80	0.120
					1	37	20.65	0.116
					1	74	20.83	0.121
					36	0	19.75	0.094
					36	19	19.71	0.094
					36	39	19.89	0.097
					75	0	19.75	0.094
		16QAM	18675	1857.5	1	0	19.94	0.099
					1	37	19.83	0.096
					1	74	19.83	0.096
					36	0	18.86	0.077
					36	19	18.83	0.076
					36	39	18.85	0.077
					75	0	18.82	0.076
			18900	1880.0	1	0	**20.15**	**0.104**
					1	37	19.59	0.091
					1	74	19.94	0.099
					36	0	18.82	0.076
					36	19	18.83	0.076
					36	39	18.89	0.077
					75	0	18.81	0.076
			19125	1902.5	1	0	19.98	0.100
					1	37	19.75	0.094
					1	74	20.12	0.103
					36	0	18.83	0.076
					36	19	18.85	0.077
					36	39	18.94	0.078
					75	0	18.82	0.076

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band2	20 MHz	QPSK	18700	1860.0	1	0	20.83	0.121
					1	49	20.65	0.116
					1	99	20.82	0.121
					50	0	19.71	0.094
					50	25	19.65	0.092
					50	50	19.66	0.092
					100	0	19.70	0.093
			18900	1880.0	1	0	20.81	0.121
					1	49	20.69	0.117
					1	99	20.63	0.116
					50	0	19.75	0.094
					50	25	19.75	0.094
					50	50	19.76	0.095
					100	0	19.80	0.095
			19100	1900.0	1	0	**20.85**	**0.122**
					1	49	20.79	0.120
					1	99	20.71	0.118
					50	0	19.83	0.096
					50	25	19.62	0.092
					50	50	19.75	0.094
					100	0	19.78	0.095
		16QAM	18700	1860.0	1	0	20.10	0.102
					1	49	19.88	0.097
					1	99	19.83	0.096
					50	0	19.86	0.097
					50	25	19.66	0.092
					50	50	19.69	0.093
					100	0	19.58	0.091
			18900	1880.0	1	0	20.11	0.103
					1	49	20.02	0.100
					1	99	19.93	0.098
					50	0	19.47	0.089
					50	25	19.53	0.090
					50	50	19.59	0.091
					100	0	19.29	0.085
			19100	1900.0	1	0	20.14	0.103
					1	49	20.11	0.103
					1	99	**20.29**	**0.107**
					50	0	19.88	0.097
					50	25	19.85	0.097
					50	50	19.86	0.097
					100	0	19.83	0.096

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	1.4 MHz	QPSK	19957	1710.7	1	0	23.20	0.209
					1	2	23.18	0.208
					1	5	23.13	0.206
					3	0	22.99	0.199
					3	1	23.02	0.200
					3	3	23.19	0.208
					6	0	22.11	0.163
			20175	1732.5	1	0	23.05	0.202
					1	2	**23.21**	**0.209**
					1	5	23.08	0.203
					3	0	23.13	0.206
					3	1	23.16	0.207
					3	3	23.10	0.204
					6	0	22.12	0.163
			20393	1754.3	1	0	22.85	0.193
					1	2	22.96	0.198
					1	5	22.82	0.191
					3	0	22.84	0.192
					3	1	22.87	0.194
					3	3	22.80	0.191
					6	0	21.93	0.156
		16QAM	19957	1710.7	1	0	22.08	0.161
					1	2	22.04	0.160
					1	5	22.34	0.171
					3	0	21.56	0.143
					3	1	21.38	0.137
					3	3	21.30	0.135
					6	0	20.57	0.114
			20175	1732.5	1	0	22.12	0.163
					1	2	22.25	0.168
					1	5	**22.37**	**0.173**
					3	0	21.73	0.149
					3	1	21.70	0.148
					3	3	21.60	0.145
					6	0	20.58	0.114
			20393	1754.3	1	0	22.07	0.161
					1	2	22.32	0.171
					1	5	22.18	0.165
					3	0	22.04	0.160
					3	1	22.19	0.166
					3	3	22.16	0.164
					6	0	21.24	0.133

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	3 MHz	QPSK	19965	1711.5	1	0	**23.22**	**0.210**
					1	7	23.07	0.203
					1	14	23.09	0.204
					8	0	22.13	0.163
					8	3	22.12	0.163
					8	7	21.99	0.158
					15	0	22.13	0.163
			20175	1732.5	1	0	23.13	0.206
					1	7	23.00	0.200
					1	14	23.03	0.201
					8	0	22.18	0.165
					8	3	22.18	0.165
					8	7	22.04	0.160
					15	0	22.12	0.163
			20385	1753.5	1	0	22.95	0.197
					1	7	22.79	0.190
					1	14	22.90	0.195
					8	0	21.97	0.157
					8	3	21.99	0.158
					8	7	21.89	0.155
					15	0	21.88	0.154
		16QAM	19965	1711.5	1	0	**22.27**	**0.169**
					1	7	22.15	0.164
					1	14	22.22	0.167
					8	0	21.24	0.133
					8	3	21.20	0.132
					8	7	21.10	0.129
					15	0	21.07	0.128
			20175	1732.5	1	0	22.17	0.165
					1	7	22.19	0.166
					1	14	22.22	0.167
					8	0	20.98	0.125
					8	3	20.89	0.123
					8	7	20.70	0.117
					15	0	21.14	0.130
			20385	1753.5	1	0	22.21	0.166
					1	7	22.17	0.165
					1	14	22.14	0.164
					8	0	20.90	0.123
					8	3	20.83	0.121
					8	7	20.84	0.121
					15	0	20.84	0.121

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	5 MHz	QPSK	19975	1712.5	1	0	23.06	0.202
					1	12	22.80	0.191
					1	24	22.99	0.199
					12	0	22.12	0.163
					12	6	21.98	0.158
					12	13	22.07	0.161
					25	0	22.07	0.161
			20175	1732.5	1	0	**23.26**	**0.212**
					1	12	22.87	0.194
					1	24	23.00	0.200
					12	0	22.05	0.160
					12	6	22.03	0.160
					12	13	22.09	0.162
					25	0	22.11	0.163
			20375	1752.5	1	0	22.85	0.193
					1	12	22.72	0.187
					1	24	22.87	0.194
					12	0	21.81	0.152
					12	6	21.85	0.153
					12	13	21.98	0.158
					25	0	21.84	0.153
		16QAM	19975	1712.5	1	0	22.00	0.158
					1	12	21.74	0.149
					1	24	22.10	0.162
					12	0	20.93	0.124
					12	6	20.81	0.121
					12	13	21.03	0.127
					25	0	21.12	0.129
			20175	1732.5	1	0	**22.32**	**0.171**
					1	12	21.89	0.155
					1	24	22.18	0.165
					12	0	21.24	0.133
					12	6	21.15	0.130
					12	13	21.20	0.132
					25	0	21.24	0.133
			20375	1752.5	1	0	22.08	0.161
					1	12	21.86	0.153
					1	24	22.13	0.163
					12	0	20.86	0.122
					12	6	20.80	0.120
					12	11	20.82	0.121
					25	0	20.89	0.123

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	10 MHz	QPSK	20000	1715.0	1	0	**23.34**	**0.216**
					1	24	23.29	0.213
					1	49	23.20	0.209
					25	0	22.18	0.165
					25	12	22.09	0.162
					25	25	22.13	0.163
					50	0	22.15	0.164
			20175	1732.5	1	0	23.31	0.214
					1	24	23.26	0.212
					1	49	23.09	0.204
					25	0	22.26	0.168
					25	12	22.07	0.161
					25	25	22.05	0.160
					50	0	22.11	0.163
			20350	1750.0	1	0	23.00	0.200
					1	24	22.93	0.196
					1	49	22.82	0.191
					25	0	22.02	0.159
					25	12	21.89	0.155
					25	25	21.95	0.157
					50	0	21.84	0.153
		16QAM	20000	1715.0	1	0	22.13	0.163
					1	24	22.39	0.173
					1	49	**22.45**	**0.176**
					25	0	20.67	0.117
					25	12	20.55	0.114
					25	25	20.56	0.114
					50	0	20.66	0.116
			20175	1732.5	1	0	22.27	0.169
					1	24	22.39	0.173
					1	49	22.17	0.165
					25	0	20.74	0.119
					25	12	20.56	0.114
					25	25	20.54	0.113
					50	0	20.65	0.116
			20350	1750.0	1	0	21.79	0.151
					1	24	22.16	0.164
					1	49	22.05	0.160
					25	0	20.61	0.115
					25	12	20.50	0.112
					25	25	20.55	0.114
					50	0	20.45	0.111

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	15 MHz	QPSK	20025	1717.5	1	0	23.44	0.221
					1	37	23.00	0.200
					1	74	23.33	0.215
					36	0	22.18	0.165
					36	19	22.09	0.162
					36	39	22.16	0.164
					75	0	22.08	0.161
			20175	1732.5	1	0	**23.48**	**0.223**
					1	37	23.00	0.200
					1	74	23.03	0.201
					36	0	22.25	0.168
					36	19	22.07	0.161
					36	39	22.09	0.162
					75	0	22.13	0.163
			20325	1747.5	1	0	23.14	0.206
					1	37	22.73	0.187
					1	74	23.05	0.202
					36	0	22.08	0.161
					36	19	21.96	0.157
					36	39	21.93	0.156
					75	0	21.98	0.158
		16QAM	20025	1717.5	1	0	22.61	0.182
					1	37	22.46	0.176
					1	74	22.35	0.172
					36	0	20.98	0.125
					36	19	20.86	0.122
					36	39	20.91	0.123
					75	0	21.14	0.130
			20175	1732.5	1	0	22.47	0.177
					1	37	22.50	0.178
					1	74	22.45	0.176
					36	0	21.29	0.135
					36	19	20.96	0.125
					36	39	21.01	0.126
					75	0	21.11	0.129
			20325	1747.5	1	0	22.46	0.176
					1	37	22.51	0.178
					1	74	**22.68**	**0.185**
					36	0	20.96	0.125
					36	19	20.84	0.121
					36	39	21.07	0.128
					75	0	21.04	0.127

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band4	20 MHz	QPSK	20050	1720.0	1	0	23.47	0.222
					1	49	23.55	0.226
					1	99	23.33	0.215
					50	0	22.28	0.169
					50	25	22.15	0.164
					50	50	22.14	0.164
					100	0	22.19	0.166
			20175	1732.5	1	0	**23.56**	**0.227**
					1	49	23.20	0.209
					1	99	22.99	0.199
					50	0	22.37	0.173
					50	25	22.16	0.164
					50	50	22.00	0.158
					100	0	22.16	0.164
			20300	1745.0	1	0	23.18	0.208
					1	49	22.81	0.191
					1	99	23.02	0.200
					50	0	22.10	0.162
					50	25	22.01	0.159
					50	50	22.05	0.160
					100	0	22.06	0.161
		16QAM	20050	1720.0	1	0	22.40	0.174
					1	49	22.26	0.168
					1	99	22.49	0.177
					50	0	21.43	0.139
					50	25	21.31	0.135
					50	50	21.33	0.136
					100	0	21.47	0.140
			20175	1732.5	1	0	22.54	0.179
					1	49	22.32	0.171
					1	99	21.91	0.155
					50	0	21.61	0.145
					50	25	21.38	0.137
					50	50	21.34	0.136
					100	0	21.37	0.137
			20300	1745.0	1	0	**22.67**	**0.185**
					1	49	22.44	0.175
					1	99	22.61	0.182
					50	0	21.41	0.138
					50	25	21.22	0.132
					50	50	21.24	0.133
					100	0	21.28	0.134

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band5	1.4 MHz	QPSK	20407	824.7	1	0	22.97	0.198
					1	2	23.11	0.205
					1	5	22.89	0.195
					3	0	23.08	0.203
					3	1	23.09	0.204
					3	3	22.96	0.198
					6	0	22.11	0.163
			20525	836.5	1	0	23.10	0.204
					1	2	**23.15**	**0.207**
					1	5	23.04	0.201
					3	0	23.02	0.200
					3	1	22.93	0.196
					3	3	22.87	0.194
					6	0	22.13	0.163
			20643	848.3	1	0	23.00	0.200
					1	2	22.99	0.199
					1	5	22.84	0.192
					3	0	23.10	0.204
					3	1	22.98	0.199
					3	3	22.90	0.195
					6	0	22.16	0.164
		16QAM	20407	824.7	1	0	22.17	0.165
					1	2	22.14	0.164
					1	5	22.28	0.169
					3	0	21.97	0.157
					3	1	21.98	0.158
					3	3	21.95	0.157
					6	0	20.61	0.115
			20525	836.5	1	0	22.20	0.166
					1	2	**22.31**	**0.170**
					1	5	22.20	0.166
					3	0	21.55	0.143
					3	1	21.63	0.146
					3	3	21.52	0.142
					6	0	20.52	0.113
			20643	848.3	1	0	22.05	0.160
					1	2	22.10	0.162
					1	5	21.85	0.153
					3	0	22.05	0.160
					3	1	22.05	0.160
					3	3	21.92	0.156
					6	0	21.18	0.131

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band5	3 MHz	QPSK	20415	825.5	1	0	23.08	0.203
					1	7	22.96	0.198
					1	14	23.09	0.204
					8	0	22.06	0.161
					8	3	22.07	0.161
					8	7	22.15	0.164
					15	0	21.99	0.158
			20525	836.5	1	0	23.10	0.204
					1	7	22.71	0.187
					1	14	22.97	0.198
					8	0	22.04	0.160
					8	3	22.02	0.159
					8	7	22.01	0.159
					15	0	21.93	0.156
			20635	847.5	1	0	**23.17**	**0.207**
					1	7	22.88	0.194
					1	14	22.94	0.197
					8	0	21.92	0.156
					8	3	21.95	0.157
					8	7	21.98	0.158
					15	0	22.03	0.160
		16QAM	20415	825.5	1	0	22.09	0.162
					1	7	22.16	0.164
					1	14	22.29	0.169
					8	0	20.64	0.116
					8	3	20.47	0.111
					8	7	20.43	0.110
					15	0	20.56	0.114
			20525	836.5	1	0	22.27	0.169
					1	7	22.13	0.163
					1	14	**22.34**	**0.171**
					8	0	20.73	0.118
					8	3	20.69	0.117
					8	7	20.80	0.120
					15	0	20.62	0.115
			20635	847.5	1	0	22.03	0.160
					1	7	21.66	0.147
					1	14	21.81	0.152
					8	0	20.76	0.119
					8	3	20.67	0.117
					8	7	20.56	0.114
					15	0	20.64	0.116

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band5	5 MHz	QPSK	20425	826.5	1	0	22.97	0.198
					1	12	22.75	0.188
					1	24	22.99	0.199
					12	0	22.07	0.161
					12	6	21.92	0.156
					12	13	22.11	0.163
					25	0	22.14	0.164
			20525	836.5	1	0	23.04	0.201
					1	12	22.71	0.187
					1	24	**23.20**	**0.209**
					12	0	21.95	0.157
					12	6	21.95	0.157
					12	13	21.98	0.158
					25	0	22.04	0.160
			20625	846.5	1	0	23.06	0.202
					1	12	22.84	0.192
					1	24	23.18	0.208
					12	0	22.15	0.164
					12	6	22.02	0.159
					12	13	22.13	0.163
					25	0	22.10	0.162
		16QAM	20425	826.5	1	0	22.14	0.164
					1	12	21.78	0.151
					1	24	22.11	0.163
					12	0	21.19	0.132
					12	6	21.02	0.126
					12	13	21.15	0.130
					25	0	21.20	0.132
			20525	836.5	1	0	**22.40**	**0.174**
					1	12	21.96	0.157
					1	24	22.16	0.164
					12	0	21.21	0.132
					12	6	21.17	0.131
					12	13	21.24	0.133
					25	0	21.18	0.131
			20625	846.5	1	0	22.38	0.173
					1	12	21.84	0.153
					1	24	22.13	0.163
					12	0	21.13	0.130
					12	6	21.00	0.126
					12	11	21.12	0.129
					25	0	21.19	0.132

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band5	10 MHz	QPSK	20450	829.0	1	0	23.19	0.208
					1	24	22.92	0.196
					1	49	22.97	0.198
					25	0	22.13	0.163
					25	12	21.98	0.158
					25	25	21.98	0.158
					50	0	22.12	0.163
			20525	836.5	1	0	**23.24**	**0.211**
					1	24	22.87	0.194
					1	49	22.86	0.193
					25	0	22.13	0.163
					25	12	22.05	0.160
					25	25	22.01	0.159
					50	0	22.09	0.162
			20600	844.0	1	0	23.10	0.204
					1	24	22.90	0.195
					1	49	22.85	0.193
					25	0	22.05	0.160
					25	12	22.02	0.159
					25	25	22.00	0.158
					50	0	22.06	0.161
		16QAM	20450	829.0	1	0	22.24	0.167
					1	24	22.06	0.161
					1	49	21.92	0.156
					25	0	20.81	0.121
					25	12	20.60	0.115
					25	25	20.60	0.115
					50	0	20.81	0.121
			20525	836.5	1	0	22.22	0.167
					1	24	22.21	0.166
					1	49	22.27	0.169
					25	0	21.00	0.126
					25	12	20.82	0.121
					25	25	20.76	0.119
					50	0	20.74	0.119
			20600	844.0	1	0	**22.44**	**0.175**
					1	24	22.32	0.171
					1	49	22.44	0.175
					25	0	20.87	0.122
					25	12	20.71	0.118
					25	25	20.70	0.117
					50	0	20.86	0.122

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band12	1.4 MHz	QPSK	23017	699.7	1	0	22.88	0.194
					1	2	23.09	0.204
					1	5	23.14	0.206
					3	0	23.02	0.200
					3	1	22.97	0.198
					3	3	23.04	0.201
					6	0	22.17	0.165
			23095	707.5	1	0	**23.20**	**0.209**
					1	2	23.13	0.206
					1	5	23.10	0.204
					3	0	23.10	0.204
					3	1	23.15	0.207
					3	3	23.12	0.205
					6	0	22.19	0.166
			23173	715.3	1	0	23.08	0.203
					1	2	23.00	0.200
					1	5	23.08	0.203
					3	0	23.04	0.201
					3	1	23.03	0.201
					3	3	23.05	0.202
					6	0	22.23	0.167
		16QAM	23017	699.7	1	0	22.03	0.160
					1	2	22.24	0.167
					1	5	**22.37**	**0.173**
					3	0	21.63	0.146
					3	1	21.60	0.145
					3	3	21.61	0.145
					6	0	20.96	0.125
			23095	707.5	1	0	22.04	0.160
					1	2	22.06	0.161
					1	5	22.03	0.160
					3	0	21.60	0.145
					3	1	21.82	0.152
					3	3	21.84	0.153
					6	0	20.84	0.121
			23173	715.3	1	0	21.90	0.155
					1	2	22.01	0.159
					1	5	22.32	0.171
					3	0	21.91	0.155
					3	1	22.23	0.167
					3	3	22.09	0.162
					6	0	20.98	0.125

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band12	3 MHz	QPSK	23025	700.5	1	0	23.01	0.200
					1	7	22.88	0.194
					1	14	22.90	0.195
					8	0	22.05	0.160
					8	3	22.02	0.159
					8	7	21.96	0.157
					15	0	22.01	0.159
			23095	707.5	1	0	23.07	0.203
					1	7	22.85	0.193
					1	14	23.02	0.200
					8	0	22.09	0.162
					8	3	22.04	0.160
					8	7	21.97	0.157
					15	0	22.01	0.159
			23165	714.5	1	0	23.20	0.209
					1	7	23.22	0.210
					1	14	**23.24**	**0.211**
					8	0	22.09	0.162
					8	3	22.07	0.161
					8	7	22.01	0.159
					15	0	22.07	0.161
		16QAM	23025	700.5	1	0	22.32	0.171
					1	7	22.28	0.169
					1	14	**22.35**	**0.172**
					8	0	20.84	0.121
					8	3	20.68	0.117
					8	7	20.58	0.114
					15	0	20.67	0.117
			23095	707.5	1	0	22.24	0.167
					1	7	22.23	0.167
					1	14	22.13	0.163
					8	0	20.86	0.122
					8	3	20.66	0.116
					8	7	20.64	0.116
					15	0	20.77	0.119
			23165	714.5	1	0	22.19	0.166
					1	7	22.07	0.161
					1	14	22.04	0.160
					8	0	20.82	0.121
					8	3	20.74	0.119
					8	7	20.79	0.120
					15	0	20.77	0.119

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band12	5 MHz	QPSK	23035	701.5	1	0	22.76	0.189
					1	12	22.76	0.189
					1	24	22.92	0.196
					12	0	21.95	0.157
					12	6	21.94	0.156
					12	13	22.02	0.159
					25	0	21.89	0.155
			23095	707.5	1	0	22.96	0.198
					1	12	23.05	0.202
					1	24	22.97	0.198
					12	0	21.89	0.155
					12	6	21.89	0.155
					12	13	22.02	0.159
					25	0	21.99	0.158
			23155	713.5	1	0	22.93	0.196
					1	12	22.86	0.193
					1	24	**23.23**	**0.210**
					12	0	22.08	0.161
					12	6	22.11	0.163
					12	13	22.10	0.162
					25	0	22.01	0.159
		16QAM	23035	701.5	1	0	21.87	0.154
					1	12	21.70	0.148
					1	24	21.91	0.155
					12	0	21.02	0.126
					12	6	20.75	0.119
					12	13	20.80	0.120
					25	0	20.91	0.123
			23095	707.5	1	0	21.96	0.157
					1	12	22.31	0.170
					1	24	**22.33**	**0.171**
					12	0	20.94	0.124
					12	6	20.80	0.120
					12	13	20.84	0.121
					25	0	21.01	0.126
			23155	713.5	1	0	21.96	0.157
					1	12	21.89	0.155
					1	24	22.18	0.165
					12	0	20.97	0.125
					12	6	21.05	0.127
					12	11	21.06	0.128
					25	0	21.06	0.128

Band	Channel Bandwidth	Modulation	Channel	Frequency (MHz)	RB Configuration		Average Power	
					Size	Offset	(dBm)	(W)
LTE Band12	10 MHz	QPSK	23060	704.0	1	0	23.13	0.206
					1	24	23.11	0.205
					1	49	22.63	0.183
					25	0	21.81	0.152
					25	12	22.05	0.160
					25	25	21.99	0.158
					50	0	21.89	0.155
			23095	707.5	1	0	22.86	0.193
					1	24	**23.25**	**0.211**
					1	49	22.60	0.182
					25	0	22.00	0.158
					25	12	21.90	0.155
					25	25	21.79	0.151
					50	0	21.88	0.154
			23130	711.0	1	0	23.24	0.211
					1	24	23.10	0.204
					1	49	22.88	0.194
					25	0	22.08	0.161
					25	12	21.94	0.156
					25	25	21.97	0.157
					50	0	22.10	0.162
		16QAM	23060	704.0	1	0	22.08	0.161
					1	24	22.15	0.164
					1	49	22.22	0.167
					25	0	20.38	0.109
					25	12	20.63	0.116
					25	25	20.58	0.114
					50	0	20.61	0.115
			23095	707.5	1	0	22.21	0.166
					1	24	22.22	0.167
					1	49	22.13	0.163
					25	0	20.72	0.118
					25	12	20.75	0.119
					25	25	20.75	0.119
					50	0	20.63	0.116
			23130	711.0	1	0	22.22	0.167
					1	24	**22.27**	**0.169**
					1	49	21.93	0.156
					25	0	20.75	0.119
					25	12	20.70	0.117
					25	25	20.63	0.116
					50	0	20.79	0.120

Effective Radiated Power / Equivalent Isotropic Radiated Power

Band 2								
Channel Bandwidth	Modulation	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	E.I.R.P.		Limit (W)
						(dBm)	(W)	
1.4 M	QPSK	1850.7	H	22.22	-2.26	19.96	0.099	< 2
			V	22.23	-1.73	20.50	0.112	< 2
		1880.0	H	22.17	-2.46	19.71	0.094	< 2
			V	22.15	-1.93	20.22	0.105	< 2
		1903.9	H	22.09	-2.64	19.45	0.088	< 2
			V	22.66	-2.11	**20.55**	**0.114**	< 2
	16QAM	1880.0	H	22.15	-2.46	19.69	0.093	< 2
			V	22.13	-1.93	**20.20**	**0.105**	< 2
3 M	QPSK	1851.5	H	22.52	-2.26	20.26	0.106	< 2
			V	22.25	-1.73	20.52	0.113	< 2
		1880.0	H	22.65	-2.45	20.20	0.105	< 2
			V	22.62	-1.91	**20.71**	**0.118**	< 2
		1908.5	H	22.69	-2.63	20.06	0.101	< 2
			V	22.71	-2.09	20.62	0.115	< 2
	16QAM	1880.0	H	22.11	-2.45	19.66	0.092	< 2
			V	22.03	-1.91	**20.12**	**0.103**	< 2
5 M	QPSK	1852.5	H	22.18	-2.26	19.92	0.098	< 2
			V	22.13	-1.73	20.40	0.110	< 2
		1880.0	H	22.61	-2.44	20.17	0.104	< 2
			V	22.59	-1.91	**20.68**	**0.117**	< 2
		1907.5	H	22.57	-2.62	19.95	0.099	< 2
			V	22.63	-2.09	20.54	0.113	< 2
	16QAM	1880.0	H	22.30	-2.44	19.86	0.097	< 2
			V	21.91	-1.91	**20.00**	**0.100**	< 2
10 M	QPSK	1855.0	H	22.19	-2.26	19.93	0.098	< 2
			V	22.20	-1.73	20.47	0.111	< 2
		1880.0	H	22.61	-2.43	20.18	0.104	< 2
			V	22.59	-1.90	**20.69**	**0.117**	< 2
		1905.0	H	22.65	-2.59	20.06	0.101	< 2
			V	22.66	-2.06	20.60	0.115	< 2
	16QAM	1880.0	H	22.14	-2.43	19.71	0.094	< 2
			V	21.98	-1.90	**20.08**	**0.102**	< 2
15 M	QPSK	1857.5	H	22.18	-2.26	19.92	0.098	< 2
			V	22.19	-1.73	20.46	0.111	< 2
		1880.0	H	22.44	-2.41	20.03	0.101	< 2
			V	22.38	-1.87	20.51	0.112	< 2
		1902.5	H	22.69	-2.55	20.14	0.103	< 2
			V	22.54	-2.02	**20.52**	**0.113**	< 2
	16QAM	1880.0	H	22.10	-2.41	19.69	0.093	< 2
			V	22.05	-1.87	**20.18**	**0.104**	< 2
20 M	QPSK	1860.0	H	22.20	-2.26	19.94	0.099	< 2
			V	22.20	-1.73	20.47	0.111	< 2
		1880.0	H	22.67	-2.40	20.27	0.106	< 2
			V	22.61	-1.87	**20.74**	**0.119**	< 2
		1900.0	H	22.61	-2.52	20.09	0.102	< 2
			V	22.56	-1.99	20.57	0.114	< 2
	16QAM	1880.0	H	22.06	-2.40	19.66	0.092	< 2
			V	21.88	-1.87	**20.01**	**0.100**	< 2

Radiated Emission

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1850.7 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH18607		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3701.400	-52.47	-6.81	-59.28	-13.00	-46.28	peak
2	5552.100	-51.01	-4.11	-55.12	-13.00	-42.12	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1850.7 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH18607		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3701.400	-52.98	-6.81	-59.79	-13.00	-46.79	peak
2	5552.100	-49.48	-4.11	-53.59	-13.00	-40.59	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.72	-6.68	-57.40	-13.00	-44.40	peak
2	5640.000	-50.55	-3.90	-54.45	-13.00	-41.45	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.45	-6.68	-56.13	-13.00	-43.13	peak
2	5640.000	-50.74	-3.90	-54.64	-13.00	-41.64	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1909.3 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH19193		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3818.600	-49.64	-6.58	-56.22	-13.00	-43.22	peak
2	5727.900	-50.71	-3.68	-54.39	-13.00	-41.39	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1909.3 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M_QPSK_CH19193		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3818.600	-50.12	-6.58	-56.70	-13.00	-43.70	peak
2	5727.900	-51.03	-3.68	-54.71	-13.00	-41.71	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.89	-6.68	-56.57	-13.00	-43.57	peak
2	5640.000	-51.69	-3.90	-55.59	-13.00	-42.59	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_1.4 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.23	-6.68	-56.91	-13.00	-43.91	peak
2	5640.000	-50.90	-3.90	-54.80	-13.00	-41.80	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1851.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH18615		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3703.000	-48.70	-6.81	-55.51	-13.00	-42.51	peak
2	5554.500	-50.34	-4.10	-54.44	-13.00	-41.44	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1851.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH18615		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3703.000	-50.57	-6.81	-57.38	-13.00	-44.38	peak
2	5554.500	-51.12	-4.10	-55.22	-13.00	-42.22	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.23	-6.68	-55.91	-13.00	-42.91	peak
2	5640.000	-51.20	-3.90	-55.10	-13.00	-42.10	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.25	-6.68	-56.93	-13.00	-43.93	peak
2	5640.000	-50.30	-3.90	-54.20	-13.00	-41.20	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1908.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH19185		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3817.000	-49.19	-6.58	-55.77	-13.00	-42.77	peak
2	5725.500	-50.53	-3.68	-54.21	-13.00	-41.21	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1908.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M_QPSK_CH19185		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3817.000	-49.54	-6.58	-56.12	-13.00	-43.12	peak
2	5725.500	-49.53	-3.68	-53.21	-13.00	-40.21	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.93	-6.68	-56.61	-13.00	-43.61	peak
2	5640.000	-51.34	-3.90	-55.24	-13.00	-42.24	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_3 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.71	-6.68	-56.39	-13.00	-43.39	peak
2	5640.000	-51.41	-3.90	-55.31	-13.00	-42.31	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1852.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH18625		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3705.000	-47.98	-6.81	-54.79	-13.00	-41.79	peak
2	5557.500	-48.88	-4.10	-52.98	-13.00	-39.98	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1852.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH18625		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3705.000	-49.50	-6.81	-56.31	-13.00	-43.31	peak
2	5557.500	-49.03	-4.10	-53.13	-13.00	-40.13	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.56	-6.68	-56.24	-13.00	-43.24	peak
2	5640.000	-50.01	-3.90	-53.91	-13.00	-40.91	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.17	-6.68	-55.85	-13.00	-42.85	peak
2	5640.000	-50.04	-3.90	-53.94	-13.00	-40.94	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1907.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH19175		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3815.000	-49.26	-6.58	-55.84	-13.00	-42.84	peak
2	5722.500	-50.48	-3.68	-54.16	-13.00	-41.16	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1907.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M_QPSK_CH19175		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3815.000	-49.36	-6.58	-55.94	-13.00	-42.94	peak
2	5722.500	-50.14	-3.68	-53.82	-13.00	-40.82	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-51.14	-6.68	-57.82	-13.00	-44.82	peak
2	5640.000	-52.08	-3.90	-55.98	-13.00	-42.98	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_5 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.19	-6.68	-56.87	-13.00	-43.87	peak
2	5640.000	-50.81	-3.90	-54.71	-13.00	-41.71	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1855 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH18650		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3710.000	-49.44	-6.79	-56.23	-13.00	-43.23	peak
2	5565.000	-47.81	-4.08	-51.89	-13.00	-38.89	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1855 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH18650		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3710.000	-48.87	-6.79	-55.66	-13.00	-42.66	peak
2	5565.000	-49.65	-4.08	-53.73	-13.00	-40.73	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.27	-6.68	-55.95	-13.00	-42.95	peak
2	5640.000	-50.26	-3.90	-54.16	-13.00	-41.16	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.57	-6.68	-56.25	-13.00	-43.25	peak
2	5640.000	-50.59	-3.90	-54.49	-13.00	-41.49	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1905 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH19150		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3810.000	-48.74	-6.59	-55.33	-13.00	-42.33	peak
2	5715.000	-50.31	-3.71	-54.02	-13.00	-41.02	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1905 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M_QPSK_CH19150		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3810.000	-48.64	-6.59	-55.23	-13.00	-42.23	peak
2	5715.000	-49.98	-3.71	-53.69	-13.00	-40.69	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.96	-6.68	-56.64	-13.00	-43.64	peak
2	5640.000	-50.89	-3.90	-54.79	-13.00	-41.79	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_10 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.06	-6.68	-56.74	-13.00	-43.74	peak
2	5640.000	-51.23	-3.90	-55.13	-13.00	-42.13	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1857.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH18675		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3715.000	-48.39	-6.78	-55.17	-13.00	-42.17	peak
2	5572.500	-49.65	-4.06	-53.71	-13.00	-40.71	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1857.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH18675		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3715.000	-48.17	-6.78	-54.95	-13.00	-41.95	peak
2	5572.500	-49.52	-4.06	-53.58	-13.00	-40.58	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-48.05	-6.68	-54.73	-13.00	-41.73	peak
2	5640.000	-50.08	-3.90	-53.98	-13.00	-40.98	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.59	-6.68	-56.27	-13.00	-43.27	peak
2	5640.000	-50.30	-3.90	-54.20	-13.00	-41.20	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1902.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH19125		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3805.000	-49.36	-6.60	-55.96	-13.00	-42.96	peak
2	5707.500	-49.75	-3.73	-53.48	-13.00	-40.48	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1902.5 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M_QPSK_CH19125		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3805.000	-49.56	-6.60	-56.16	-13.00	-43.16	peak
2	5707.500	-49.68	-3.73	-53.41	-13.00	-40.41	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.37	-6.68	-56.05	-13.00	-43.05	peak
2	5640.000	-51.57	-3.90	-55.47	-13.00	-42.47	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_15 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.12	-6.68	-56.80	-13.00	-43.80	peak
2	5640.000	-51.29	-3.90	-55.19	-13.00	-42.19	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1860 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH18700		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3720.000	-48.29	-6.77	-55.06	-13.00	-42.06	peak
2	5580.000	-49.16	-4.04	-53.20	-13.00	-40.20	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1860 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH18700		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3720.000	-48.54	-6.77	-55.31	-13.00	-42.31	peak
2	5580.000	-49.41	-4.04	-53.45	-13.00	-40.45	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-48.80	-6.68	-55.48	-13.00	-42.48	peak
2	5640.000	-50.20	-3.90	-54.10	-13.00	-41.10	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.04	-6.68	-55.72	-13.00	-42.72	peak
2	5640.000	-50.51	-3.90	-54.41	-13.00	-41.41	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1900 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH19100		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3800.000	-49.40	-6.60	-56.00	-13.00	-43.00	peak
2	5700.000	-50.46	-3.74	-54.20	-13.00	-41.20	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1900 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M_QPSK_CH19100		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3800.000	-49.32	-6.60	-55.92	-13.00	-42.92	peak
2	5700.000	-50.70	-3.74	-54.44	-13.00	-41.44	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M-16QAM_CH18900		
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-49.61	-6.68	-56.29	-13.00	-43.29	peak
2	5640.000	-51.37	-3.90	-55.27	-13.00	-42.27	peak

Standard:	Part 22H&24E&27	Test Distance:	3 m
Test item:	Harmonic	Power:	AC 120 V/60 Hz
Frequency:	1880 MHz	Temp.(℃)/Hum.(%RH):	26(℃)/60 %RH
Mode:	4 G_Band 2_20 M-16QAM_CH18900		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	3760.000	-50.30	-6.68	-56.98	-13.00	-43.98	peak
2	5640.000	-50.99	-3.90	-54.89	-13.00	-41.89	peak