



FCC TEST REPORT (PART 27)

REPORT NO.: RF121112C19-2
MODEL NO.: JT-B1APAAAAM
FCC ID: ACJ-JT-B1APAAZAMA
RECEIVED: Nov. 12, 2012
TESTED: Dec. 20 ~ Dec. 21, 2012
ISSUED: Jan. 03, 2013

APPLICANT: Panasonic Corporation of North America

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ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch

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TEST LOCATION: No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF121112C19-2	Original release	Jan. 03, 2013



1 CERTIFICATION

PRODUCT: Tablet Computer
MODEL NO.: JT-B1APAAAAM
BRAND: Panasonic
APPLICANT: Panasonic Corporation of North America
TESTED: Dec. 20 ~ Dec. 21, 2012
TEST SAMPLE: Production Unit
TEST STANDARDS: **FCC Part 27, Subpart C, L**
FCC Part 2
ANSI C63.4-2009

The above equipment (model: JT-B1APAAAAM) 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 EMC characteristics under the conditions specified in this report.

PREPARED BY :  , DATE : Jan. 03, 2013
Pettie Chen / Senior Specialist

APPROVED BY :  , DATE : Jan. 03, 2013
Anderson Chiu / Senior Engineer

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

OPERATING BAND: 704–716 MHz			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
2.1046 27.50(C)(10)	Maximum Peak Output Power	PASS	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 27.53(g)	Occupied Bandwidth	PASS	Meet the requirement of limit.
27.53(g)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 27.53(g)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 27.53(g)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -41.27dB at 2130.00MHz.

OPERATING BAND: 1710~1755 MHz			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
2.1046 27.50(d)(4)	Maximum Peak Output Power	PASS	Meet the requirement of limit.
2.1055 27.54	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 27.53(h)	Occupied Bandwidth	PASS	Meet the requirement of limit.
27.50(d)(5)	Peak to average ratio	PASS	Meet the requirement of limit.
27.53(h)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 27.53(h)	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 27.53(h)	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -24.46dB at 5145.00MHz.

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	UNCERTAINTY
Conducted emissions	150kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



2.2 TEST SITE AND INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 06, 2012	Aug. 05, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Feb. 03, 2012	Feb. 02, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 06, 2012	Apr. 05, 2013
HORN Antenna SCHWARZBECK	9120D	209	Sep. 03, 2012	Sep. 02, 2013
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 11, 2012	Jul. 10, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier Agilent	8447D	2944A10633	Oct. 25, 2012	Oct. 24, 2013
Preamplifier Agilent	8449B	3008A01964	Oct. 25, 2012	Oct. 24, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 28, 2012	Aug. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 28, 2012	Aug. 27, 2013
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100	TT93021703	NA	NA
Turn Table Controller ADT.	SC100	SC93021703	NA	NA
Mini-Circuits Power Splitter	ZN2PD-9G	NA	Mar. 23, 2012	Mar. 22, 2013
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA
Communications Tester-Wireless	E5515C	MY50266653	Oct. 08, 2012	Oct. 09, 2013

- 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. The test was performed in HwaYa Chamber 3.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The FCC Site Registration No. is 988962.
 6. The IC Site Registration No. is IC 7450F-3.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	Tablet Computer	
MODEL NO.	JT-B1APAAAAM	
POWER SUPPLY	3.7Vdc (from Battery) 5.0Vdc (from AC adapter)	
MODULATION TECHNOLOGY	LTE Band 17	QPSK, 16QAM
	LTE Band 4	QPSK, 16QAM
FREQUENCY RANGE	LTE Band 17 Channel Bandwidth: 5MHz	706.5MHz ~ 713.5MHz
	LTE Band 17 Channel Bandwidth: 10MHz	709MHz ~ 711MHz
	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~1752.5MHz
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~1750.0MHz
EMISSION DESIGNATOR	LTE Band 17 Channel Bandwidth: 5MHz	QPSK: 4M50G7D 16QAM: 4M50W7D
	LTE Band 17 Channel Bandwidth: 10MHz	QPSK: 8M94G7D 16QAM: 8M95W7D
	LTE Band 4 Channel Bandwidth: 5MHz	QPSK: 4M49G7D 16QAM: 4M49W7D
	LTE Band 4 Channel Bandwidth: 10MHz	QPSK: 8M92G7D 16QAM: 8M93W7D
MAX. ERP POWER (mW)	LTE Band 17 Channel Bandwidth: 5MHz	363.92mW (25.61dBm)
	LTE Band 17 Channel Bandwidth: 10MHz	309.74mW (24.91dBm)
MAX. EIRP POWER (mW)	LTE Band 4 Channel Bandwidth: 5MHz	358.10mW (25.54dBm)
	LTE Band 4 Channel Bandwidth: 10MHz	308.32mW (24.89dBm)
CATEGORY	LTE: 3	
ANTENNA TYPE	LTE Band 17	Fixed Internal antenna with -4.5dBi gain
	LTE Band 4	Fixed Internal antenna with -2.0dBi gain
I/O PORTS	Refer to users' manual	
DATA CABLE	NA	
ACCESSORY DEVICES	NA	

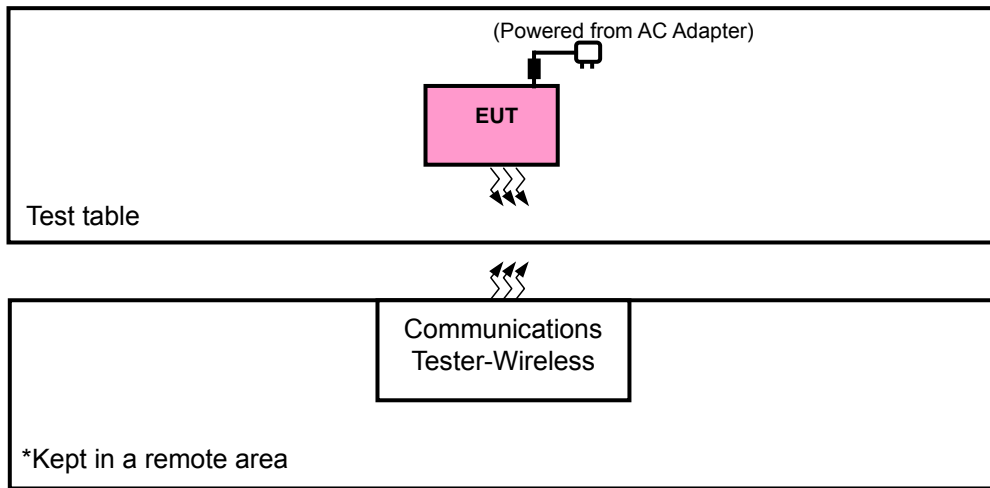
NOTE:

1. The EUT contains the following accessories.

No.	Product	Brand	MODEL	Description
1	Power adapter	Panasonic	JT-H300AD-11	I/P: 100-240Vac, 220mA O/P: 5.0Vdc, 1600mA DC 1.4m shielded cable with 1 core
2	Battery	Panasonic	JT-B1-BT000U	Rating: 3.7 Vdc, 5720mAh Type: Li-ion
3	USB cable	Mitsumi	ADP-717SR	1.2m shielded cable with 2 cores

2. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 CONFIGURATION OF SYSTEM UNDER TEST



3.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit.

3.4 DESCRIPTION OF TEST MODES

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y-plane for LTE Band 4 and X-axis for LTE Band 17. Following channel(s) was (were) selected for the final test as listed below:

LTE Band 17

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	1 RB / 12 RB Offset
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset
FREQUENCY STABILITY	23755 to 23825	23790	5MHz	QPSK	1 RB / 12 RB Offset
	23780 to 23800	23790	10MHz	QPSK	1 RB / 24 RB Offset
OCCUPIED BANDWIDTH	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
BAND EDGE	23755 to 23825	23755, 23825	5MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 24 RB Offset
					25 RB / 0 RB Offset
	23780 to 23800	23780, 23800	10MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 49 RB Offset
					50 RB / 0 RB Offset
CONDUCTED EMISSION	23755 to 23825	23755	5MHz	QPSK	1 RB / 12 RB Offset
	23780 to 23800	23790	10MHz	QPSK	1 RB / 24 RB Offset
RADIATED EMISSION (Frequency range 30MHz~1GHz)	23755 to 23825	23755	5MHz	QPSK	1 RB / 12 RB Offset
		23755		16QAM	1 RB / 12 RB Offset
	23780 to 23800	23790	10MHz	QPSK	1 RB / 24 RB Offset
		23780		16QAM	1 RB / 24 RB Offset
RADIATED EMISSION (Frequency range above 1GHz)	23755 to 23825	23755, 23790, 23825	5MHz	QPSK	1 RB / 12 RB Offset
				16QAM	1 RB / 12 RB Offset
	23780 to 23800	23755, 23790, 23825	10MHz	QPSK	1 RB / 24 RB Offset
				16QAM	1 RB / 24 RB Offset



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LTE Band 4

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB / 12 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset
FREQUENCY STABILITY	19975 to 20375	20175	5MHz	QPSK	1 RB / 24 RB Offset
	20000 to 20350	20175	10MHz	QPSK	1 RB / 0 RB Offset
OCCUPIED BANDWIDTH	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	25 RB / 0 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	50 RB / 0 RB Offset
PEAK TO AVERAGE RATIO	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB / 12 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB / 24 RB Offset
BAND EDGE	19975 to 20375	19975, 20375	5MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 24 RB Offset
					25 RB / 0 RB Offset
	20000 to 20350	20000, 20350	10MHz	QPSK	1 RB / 0 RB Offset
					1 RB / 49 RB Offset
					50 RB / 0 RB Offset
CONDCUDED EMISSION	19975 to 20375	19975	5MHz	QPSK	1 RB / 12 RB Offset
	20000 to 20350	20000	10MHz	QPSK	1 RB / 24 RB Offset
RADIATED EMISSION (Frequency range 30MHz~1GHz)	19975 to 20375	19975	5MHz	QPSK	1 RB / 12 RB Offset
				16QAM	1 RB / 12 RB Offset
	20000 to 20350	20000	10MHz	QPSK	1 RB / 24 RB Offset
				16QAM	1 RB / 24 RB Offset
RADIATED EMISSION (Frequency range 30MHz~1GHz)	19975 to 20375	19975, 20175, 20375	5MHz	QPSK	1 RB / 12 RB Offset
				16QAM	1 RB / 12 RB Offset
	20000 to 20350	20000, 20175, 20350	10MHz	QPSK	1 RB / 24 RB Offset
				16QAM	1 RB / 24 RB Offset

TEST CONDITION:

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
ERP/EIRP	24deg. C, 64%RH	120Vac, 60Hz	Howard Kao
FREQUENCY STABILITY	24deg. C, 64%RH	120Vac, 60Hz	Howard Kao
OCCUPIED BANDWIDTH	24deg. C, 64%RH	120Vac, 60Hz	Howard Kao
BAND EDGE	24deg. C, 64%RH	120Vac, 60Hz	Howard Kao
CONDCUDED EMISSION	24deg. C, 64%RH	120Vac, 60Hz	Howard Kao
RADIATED EMISSION	24deg. C, 64%RH	120Vac, 60Hz	Match Tsui



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3.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 27

ANSI C63.4-2009

ANSI/TIA/EIA-603-C 2004

NOTE: 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

Fixed, mobile, and portable (hand-held) stations operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

Portable stations (hand-held devices) operating in the 704-716 MHz band are limited to 3 watts ERP

4.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

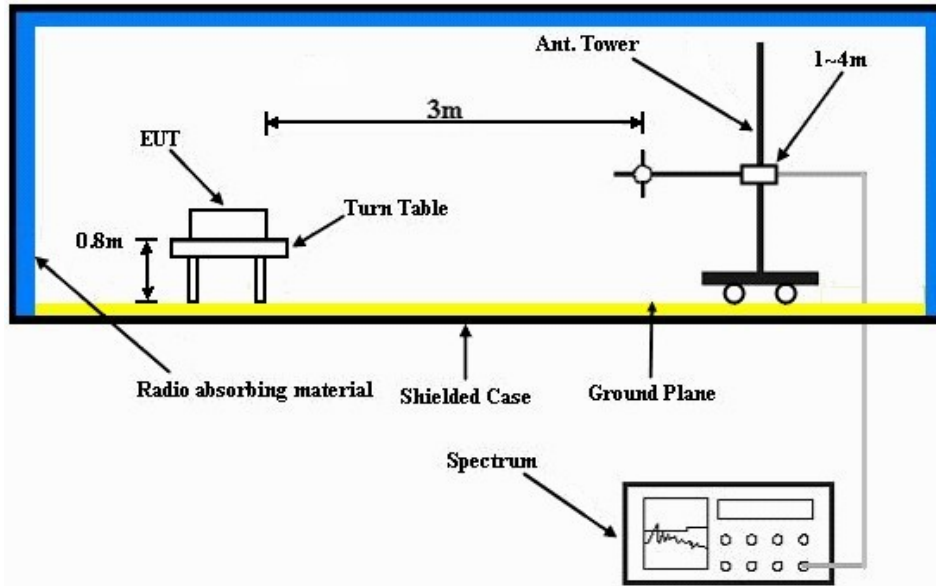
- a. The EUT was set up for the maximum power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels (low, middle and high operational frequency range). RBW and VBW is 10MHz for LTE.
- b. E.I.R.P power measurement. In the semi-anechoic 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.
- c. 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 a. Record the power level of S.G
- d. $EIRP = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$
- e. $E.R.P = E.I.R.P - 2.15 \text{ dB}$

CONDUCTED POWER MEASUREMENT:

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

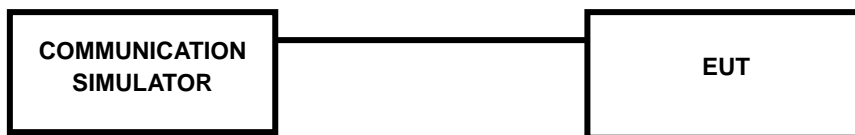
4.1.3 TEST SETUP

EIRP / ERP MEASUREMENT:



For 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

AVERAGE CONDUCTED OUTPUT POWER (dBm)

LTE Band 17								
BW	Modulation	CH	Frequency	RB	RB Offset	MPR	Target	Measured
			(MHz)				Power	Power
5 MHz	QPSK	23755	706.5	1	0	0	23	22.39
		23790	710.0	1	0	0	23	22.43
		23825	713.5	1	0	0	23	22.37
		23755	706.5	1	12	0	23	22.44
		23790	710.0	1	12	0	23	22.48
		23825	713.5	1	12	0	23	22.42
		23755	706.5	1	24	0	23	22.38
		23790	710.0	1	24	0	23	22.42
		23825	713.5	1	24	0	23	22.36
		23755	706.5	12	0	1	23	21.66
		23790	710.0	12	0	1	23	21.70
		23825	713.5	12	0	1	23	21.64
		23755	706.5	12	6	1	23	21.55
		23790	710.0	12	6	1	23	21.59
		23825	713.5	12	6	1	23	21.53
		23755	706.5	12	13	1	23	21.64
		23790	710.0	12	13	1	23	21.68
		23825	713.5	12	13	1	23	21.62
	23755	706.5	25	0	1	23	21.44	
	23790	710.0	25	0	1	23	21.48	
	23825	713.5	25	0	1	23	21.42	
	23755	706.5	1	0	1	23	21.62	
	23790	710.0	1	0	1	23	21.66	
	23825	713.5	1	0	1	23	21.60	
	23755	706.5	1	12	1	23	21.78	
	23790	710.0	1	12	1	23	21.82	
	23825	713.5	1	12	1	23	21.76	
	23755	706.5	1	24	1	23	21.68	
	23790	710.0	1	24	1	23	21.72	
	23825	713.5	1	24	1	23	21.66	
23755	706.5	12	0	2	23	20.55		
23790	710.0	12	0	2	23	20.59		
23825	713.5	12	0	2	23	20.53		
23755	706.5	12	6	2	23	20.50		
23790	710.0	12	6	2	23	20.54		
23825	713.5	12	6	2	23	20.48		
23755	706.5	12	13	2	23	20.56		
23790	710.0	12	13	2	23	20.60		
23825	713.5	12	13	2	23	20.54		
23755	706.5	25	0	2	23	20.74		
23790	710.0	25	0	2	23	20.78		
23825	713.5	25	0	2	23	20.72		



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LTE Band 17								
BW	Modulation	CH	Frequency	RB	RB Offset	MPR	Target	Measured
			(MHz)				Power	Power
10MHz	QPSK	23780	709	1	0	0	23	22.63
		23790	710	1	0	0	23	22.41
		23800	711	1	0	0	23	22.30
		23780	709	1	24	0	23	22.80
		23790	710	1	24	0	23	22.58
		23800	711	1	24	0	23	22.41
		23780	709	1	49	0	23	22.74
		23790	710	1	49	0	23	22.56
		23800	711	1	49	0	23	22.20
		23780	709	25	0	1	23	21.51
		23790	710	25	0	1	23	21.58
		23800	711	25	0	1	23	21.53
		23780	709	25	12	1	23	21.59
		23790	710	25	12	1	23	21.54
		23800	711	25	12	1	23	21.47
		23780	709	25	25	1	23	21.65
		23790	710	25	25	1	23	21.60
		23800	711	25	25	1	23	21.61
	23780	709	50	0	1	23	21.62	
	23790	710	50	0	1	23	21.52	
	23800	711	50	0	1	23	21.52	
	23780	709	1	0	0	23	21.54	
	23790	710	1	0	0	23	21.54	
	23800	711	1	0	0	23	21.62	
	23780	709	1	24	0	23	21.83	
	23790	710	1	24	0	23	21.73	
	23800	711	1	24	0	23	21.75	
	23780	709	1	49	0	23	21.80	
	23790	710	1	49	0	23	21.81	
	23800	711	1	49	0	23	21.67	
	23780	709	25	0	1	23	20.70	
	23790	710	25	0	1	23	20.76	
	23800	711	25	0	1	23	20.68	
	23780	709	25	12	1	23	20.74	
	23790	710	25	12	1	23	20.64	
	23800	711	25	12	1	23	20.61	
23780	709	25	25	1	23	20.75		
23790	710	25	25	1	23	20.80		
23800	711	25	25	1	23	20.85		
23780	709	50	0	1	23	20.55		
23790	710	50	0	1	23	20.50		
23800	711	50	0	1	23	20.44		



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LTE Band 4								
BW	Modulation	CH	Frequency	RB	RB Offset	MPR	Target	Measured
			(MHz)				Power	Power
5 MHz	QPSK	19975	1712.5	1	0	0	23	22.85
		20175	1732.5	1	0	0	23	22.79
		20375	1752.5	1	0	0	23	22.97
		19975	1712.5	1	12	0	23	22.90
		20175	1732.5	1	12	0	23	22.84
		20375	1752.5	1	12	0	23	22.99
		19975	1712.5	1	24	0	23	22.61
		20175	1732.5	1	24	0	23	22.55
		20375	1752.5	1	24	0	23	22.73
		19975	1712.5	12	0	1	23	21.97
		20175	1732.5	12	0	1	23	21.91
		20375	1752.5	12	0	1	23	22.09
		19975	1712.5	12	6	1	23	21.94
		20175	1732.5	12	6	1	23	21.88
		20375	1752.5	12	6	1	23	22.06
		19975	1712.5	12	13	1	23	21.85
		20175	1732.5	12	13	1	23	21.79
		20375	1752.5	12	13	1	23	21.97
		19975	1712.5	25	0	1	23	21.93
		20175	1732.5	25	0	1	23	21.87
		20375	1752.5	25	0	1	23	22.05
	19975	1712.5	1	0	1	23	22.16	
	20175	1732.5	1	0	1	23	22.10	
	20375	1752.5	1	0	1	23	22.28	
	19975	1712.5	1	12	1	23	22.29	
	20175	1732.5	1	12	1	23	22.23	
	20375	1752.5	1	12	1	23	22.41	
	19975	1712.5	1	24	1	23	21.94	
	20175	1732.5	1	24	1	23	21.88	
	20375	1752.5	1	24	1	23	22.06	
	19975	1712.5	12	0	2	23	20.94	
	20175	1732.5	12	0	2	23	20.88	
	20375	1752.5	12	0	2	23	21.06	
	19975	1712.5	12	6	2	23	20.94	
	20175	1732.5	12	6	2	23	20.88	
	20375	1752.5	12	6	2	23	21.06	
19975	1712.5	12	13	2	23	20.84		
20175	1732.5	12	13	2	23	20.78		
20375	1752.5	12	13	2	23	20.96		
19975	1712.5	25	0	2	23	21.39		
20175	1732.5	25	0	2	23	21.33		
20375	1752.5	25	0	2	23	21.51		
	16QAM	19975	1712.5	1	0	1	23	22.16
		20175	1732.5	1	0	1	23	22.10
		20375	1752.5	1	0	1	23	22.28
		19975	1712.5	1	12	1	23	22.29
		20175	1732.5	1	12	1	23	22.23
		20375	1752.5	1	12	1	23	22.41
		19975	1712.5	1	24	1	23	21.94
		20175	1732.5	1	24	1	23	21.88
		20375	1752.5	1	24	1	23	22.06
		19975	1712.5	12	0	2	23	20.94
		20175	1732.5	12	0	2	23	20.88
		20375	1752.5	12	0	2	23	21.06



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LTE Band 4								
BW	Modulation	CH	Frequency	RB	RB Offset	MPR	Target	Measured
			(MHz)				Power	Power
10MHz	QPSK	20000	1715.0	1	0	0	23	22.97
		20175	1732.5	1	0	0	23	22.68
		20350	1750.0	1	0	0	23	22.96
		20000	1715.0	1	24	0	23	22.98
		20175	1732.5	1	24	0	23	22.71
		20350	1750.0	1	24	0	23	23.00
		20000	1715.0	1	49	0	23	22.99
		20175	1732.5	1	49	0	23	22.60
		20350	1750.0	1	49	0	23	22.71
		20000	1715.0	25	0	1	23	22.15
		20175	1732.5	25	0	1	23	22.03
		20350	1750.0	25	0	1	23	22.20
		20000	1715.0	25	12	1	23	22.02
		20175	1732.5	25	12	1	23	22.05
		20350	1750.0	25	12	1	23	22.12
		20000	1715.0	25	25	1	23	21.99
		20175	1732.5	25	25	1	23	21.91
		20350	1750.0	25	25	1	23	22.06
	20000	1715.0	50	0	1	23	22.00	
	20175	1732.5	50	0	1	23	21.88	
	20350	1750.0	50	0	1	23	22.07	
	20000	1715.0	1	0	0	23	22.18	
	20175	1732.5	1	0	0	23	22.28	
	20350	1750.0	1	0	0	23	22.23	
	20000	1715.0	1	24	0	23	22.34	
	20175	1732.5	1	24	0	23	22.24	
	20350	1750.0	1	24	0	23	22.44	
	20000	1715.0	1	49	0	23	22.24	
	20175	1732.5	1	49	0	23	22.13	
	20350	1750.0	1	49	0	23	22.11	
	20000	1715.0	25	0	1	23	21.49	
	20175	1732.5	25	0	1	23	21.44	
	20350	1750.0	25	0	1	23	21.53	
	20000	1715.0	25	12	1	23	21.36	
	20175	1732.5	25	12	1	23	21.33	
	20350	1750.0	25	12	1	23	21.50	
20000	1715.0	25	25	1	23	21.39		
20175	1732.5	25	25	1	23	21.34		
20350	1750.0	25	25	1	23	21.48		
20000	1715.0	50	0	1	23	21.12		
20175	1732.5	50	0	1	23	21.03		
20350	1750.0	50	0	1	23	21.14		



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ERP (dBm)

LTE BAND 17

CHANNEL BANDWIDTH: 5MHz QPSK (1RB / 12RB offset)

MODE		TX channel 23755					
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	706.50	-4.69	26.68	-1.07	25.61	34.77	-9.16
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	706.50	-11.76	16.41	-1.07	15.34	34.77	-19.43

MODE		TX channel 23790					
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	710.00	-6.46	24.91	-1.07	23.84	34.77	-10.93
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	710.00	-15.01	13.16	-1.07	12.09	34.77	-22.68

MODE		TX channel 23825					
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	713.50	-6.74	24.63	-1.07	23.56	34.77	-11.21
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	713.50	-14.93	13.24	-1.07	12.17	34.77	-22.60



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LTE BAND 17

CHANNEL BANDWIDTH: 5MHz 16QAM (1RB / 12RB offset)

MODE		TX channel 23755					
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	706.50	-6.19	25.18	-1.07	24.11	34.77	-10.66
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	706.50	-13.93	14.24	-1.07	13.17	34.77	-21.60

MODE		TX channel 23790					
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	710.00	-7.39	23.98	-1.07	22.91	34.77	-11.86
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	710.00	-15.96	12.21	-1.07	11.14	34.77	-23.63

MODE		TX channel 23825					
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	713.50	-7.88	23.49	-1.07	22.42	34.77	-12.35
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	713.50	-16.05	12.12	-1.07	11.05	34.77	-23.72



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LTE BAND 17

CHANNEL BANDWIDTH: 10MHz QPSK (1RB / 24RB offset)

MODE		TX channel 23780					
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	709.00	-6.57	24.80	-1.07	23.73	34.77	-11.04
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	709.00	-15.23	12.94	-1.07	11.87	34.77	-22.90

MODE		TX channel 23790					
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	710.00	-5.58	25.79	-1.07	24.72	34.77	-10.05
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	710.00	-15.06	13.11	-1.07	12.04	34.77	-22.73

MODE		TX channel 23800					
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	711.00	-5.67	25.70	-1.07	24.63	34.77	-10.14
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	711.00	-15.44	12.73	-1.07	11.66	34.77	-23.11



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LTE BAND 17

CHANNEL BANDWIDTH: 10MHz 16QAM (1RB / 24RB offset)

MODE		TX channel 23780					
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	709.00	-5.39	25.98	-1.07	24.91	34.77	-9.86
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	709.00	-14.87	13.30	-1.07	12.23	34.77	-22.54

MODE		TX channel 23790					
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	710.00	-6.18	25.19	-1.07	24.12	34.77	-10.65
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	710.00	-15.53	12.64	-1.07	11.57	34.77	-23.20

MODE		TX channel 23800					
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	711.00	-6.55	24.82	-1.07	23.75	34.77	-11.02
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	711.00	-15.96	12.21	-1.07	11.14	34.77	-23.63



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LTE BAND 4

CHANNEL BANDWIDTH: 5MHz QPSK (1RB / 12RB offset)

MODE		TX channel 19975					
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	1712.5	-12.21	23.38	0.99	24.37	30.00	-5.63
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	1712.5	-10.14	24.55	0.99	25.54	30.00	-4.46

MODE		TX 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	1732.5	-13.93	21.73	1.00	22.73	30.00	-7.27
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	1732.5	-11.78	22.95	1.00	23.95	30.00	-6.05

MODE		TX channel 20375					
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	1752.5	-15.29	20.44	1.02	21.46	30.00	-8.54
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	1752.5	-13.56	21.20	1.02	22.22	30.00	-7.78



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EIRP (dBm)

LTE BAND 4

CHANNEL BANDWIDTH: 5MHz 16QAM (1RB / 12RB offset)

MODE		TX channel 19975					
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	1712.5	-13.31	22.28	0.99	23.27	30.00	-6.73
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	1712.5	-10.83	23.86	0.99	24.85	30.00	-5.15

MODE		TX 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	1732.5	-15.13	20.53	1.00	21.53	30.00	-8.47
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	1732.5	-12.13	22.60	1.00	23.60	30.00	-6.40

MODE		TX channel 20375					
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	1752.5	-15.58	20.15	1.02	21.17	30.00	-8.83
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	1752.5	-12.05	22.71	1.02	23.73	30.00	-6.27



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LTE BAND 4

CHANNEL BANDWIDTH: 10MHz QPSK (1RB / 24RB offset)

MODE		TX channel 20000					
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	1715.0	-13.95	21.65	0.99	22.64	30.00	-7.36
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	1715.0	-10.80	23.90	0.99	24.89	30.00	-5.11

MODE		TX 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	1732.5	-15.81	19.85	1.00	20.85	30.00	-9.15
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	1732.5	-12.07	22.66	1.00	23.66	30.00	-6.34

MODE		TX channel 20350					
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	1750.0	-16.21	19.52	1.01	20.53	30.00	-9.47
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	1750.0	-11.90	22.87	1.01	23.88	30.00	-6.12



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LTE BAND 4

CHANNEL BANDWIDTH: 10MHz 16QAM (1RB / 24RB offset)

MODE		TX channel 20000					
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	1715.0	-14.18	21.42	0.99	22.41	30.00	-7.59
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	1715.0	-11.06	23.64	0.99	24.63	30.00	-5.37

MODE		TX 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	1732.5	-15.97	19.69	1.00	20.69	30.00	-9.31
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	1732.5	-12.22	22.51	1.00	23.51	30.00	-6.49

MODE		TX channel 20350					
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	1750.0	-16.35	19.38	1.01	20.39	30.00	-9.61
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	1750.0	-12.06	22.71	1.01	23.72	30.00	-6.28

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

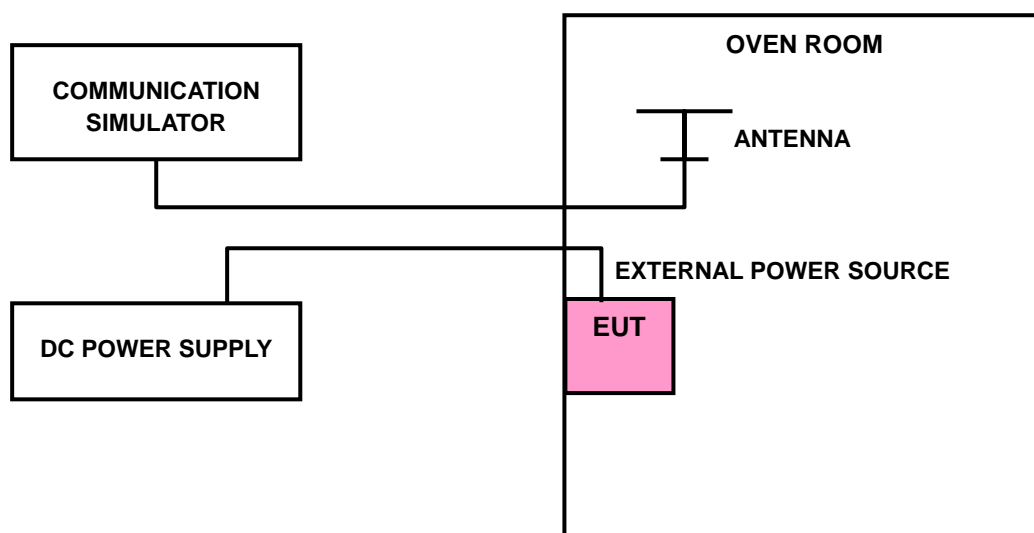
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

4.2.2 TEST PROCEDURE

- a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the $\pm 0.5^{\circ}\text{C}$ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 TEST SETUP



4.2.4 TEST RESULTS

VOLTAGE (Volts)	FREQUENCY ERROR (ppm)				LIMIT (ppm)
	LTE BAND 17		LTE BAND 4		
	5MHz	10MHz	5MHz	10MHz	
3.7	0.0024	-0.0021	-0.0003	-0.0033	2.5
3.0	-0.0023	0.0048	-0.0007	-0.0013	2.5
5.0	-0.0015	0.0021	0.0046	-0.0025	2.5

NOTE: The applicant defined the normal working voltage of the adapter and battery is from 3.0Vdc to 5.0Vdc.

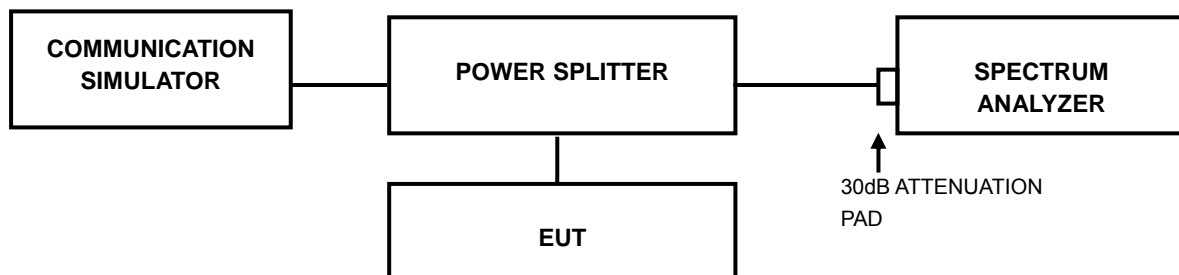
TEMP. (°C)	FREQUENCY ERROR (ppm)				LIMIT (ppm)
	LTE BAND 17		LTE BAND 4		
	5MHz	10MHz	5MHz	10MHz	
-10	-0.0015	0.0021	0.0051	-0.0014	2.5
0	0.0007	0.0028	0.0016	-0.0018	2.5
10	0.0048	0.0052	-0.0043	-0.0019	2.5
20	0.0023	0.0034	-0.0020	-0.0027	2.5
30	-0.0011	0.0034	-0.0035	-0.0022	2.5
40	-0.0017	0.0013	-0.0033	-0.0035	2.5

4.3 OCCUPIED BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

4.3.2 TEST SETUP



4.3.3 TEST PROCEDURES

- The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

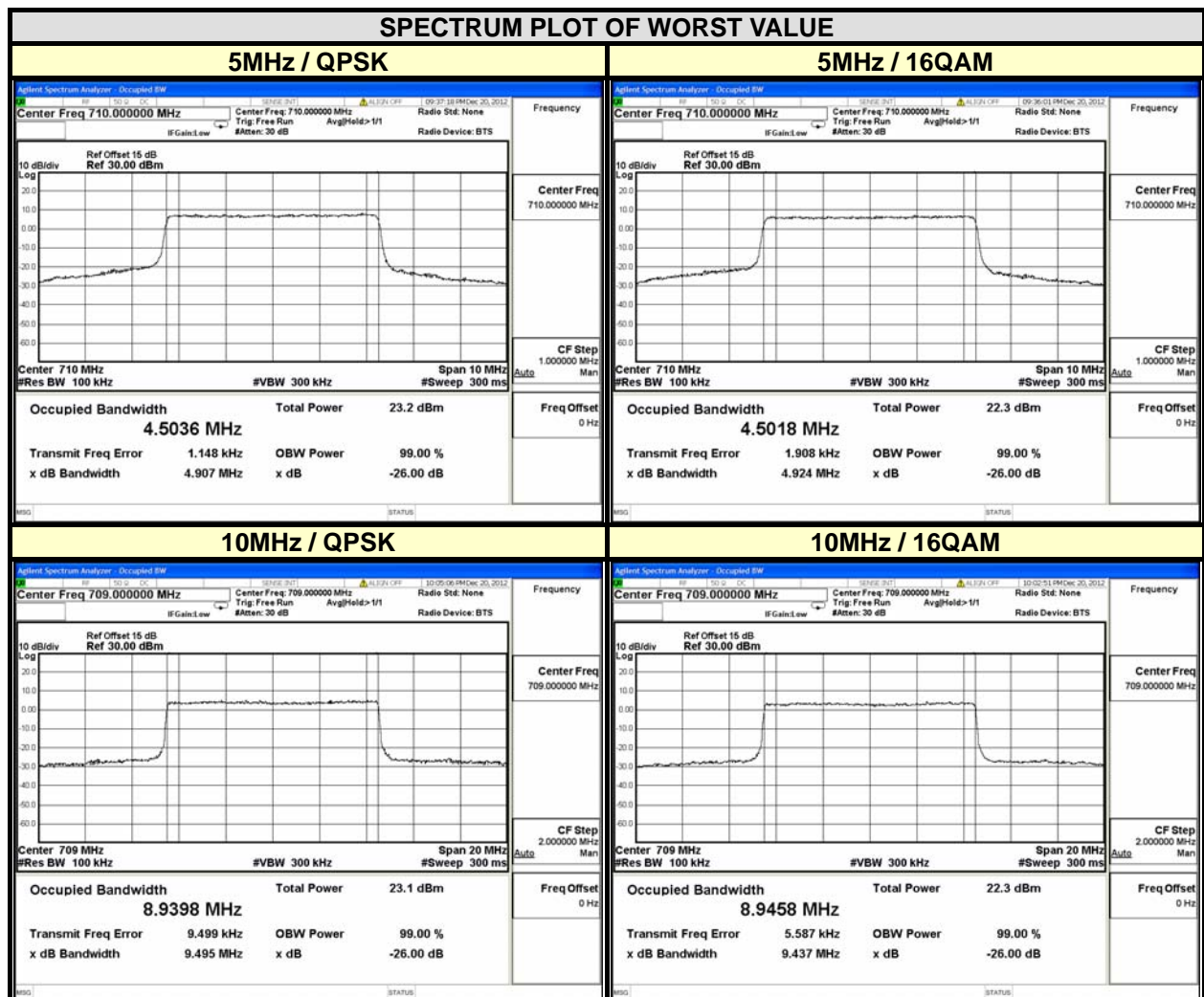


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4.3.4 TEST RESULTS

LTE BAND 17

CHANNEL BANDWIDTH: 5MHz				CHANNEL BANDWIDTH: 10MHz			
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	
		QPSK	16QAM			QPSK	16QAM
23755	706.5	4.50	4.49	23780	709.0	8.94	8.95
23790	710.0	4.50	4.50	23790	710.0	8.93	8.94
23825	713.5	4.49	4.49	23800	711.0	8.93	8.94

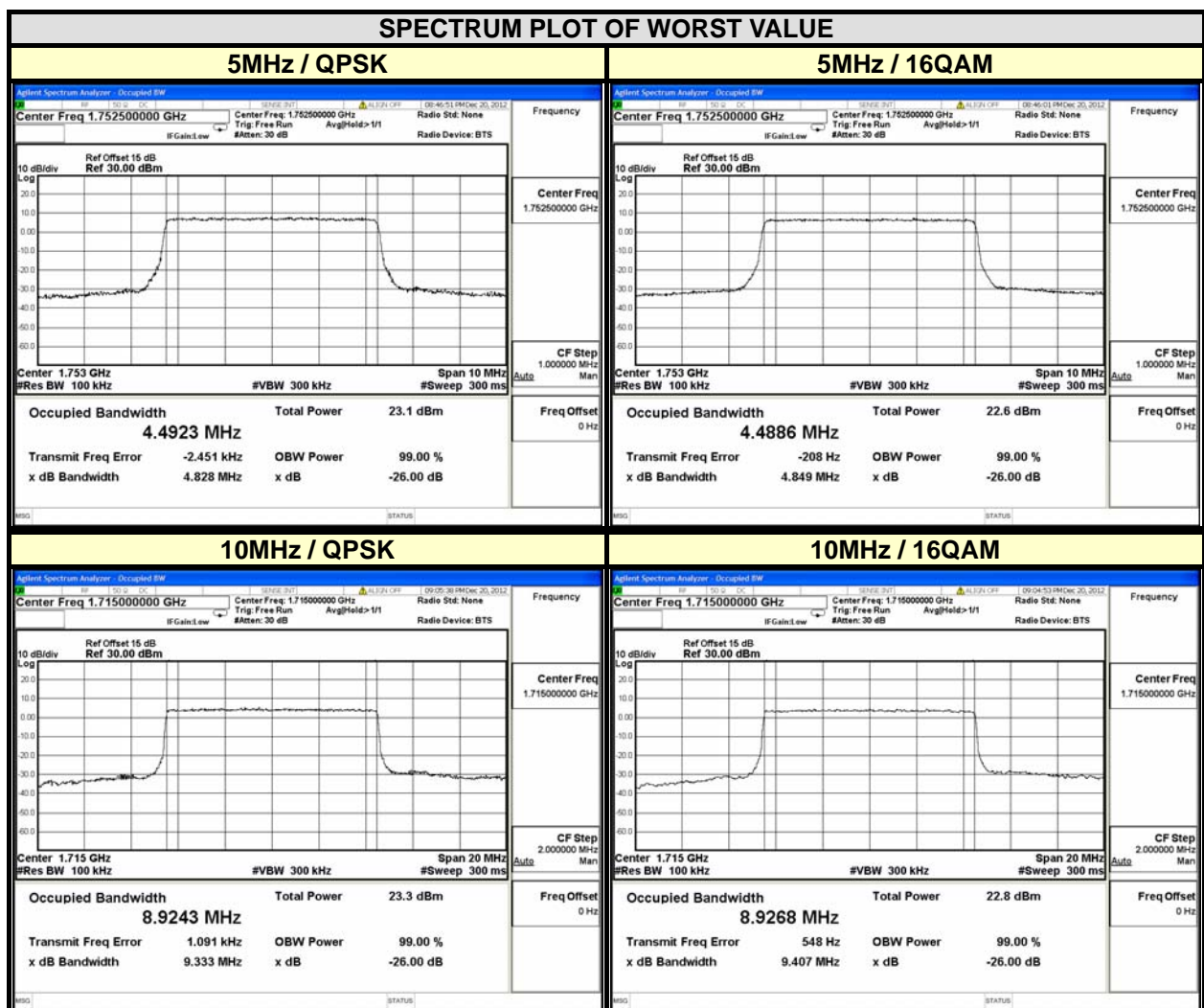




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LTE BAND 4

CHANNEL BANDWIDTH: 5MHz				CHANNEL BANDWIDTH: 10MHz			
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	
		QPSK	16QAM			QPSK	16QAM
19975	1712.5	4.49	4.49	20000	1715.0	8.92	8.93
20175	1732.5	4.49	4.49	20175	1732.5	8.92	8.93
20375	1752.5	4.49	4.49	20350	1750.0	8.92	8.92

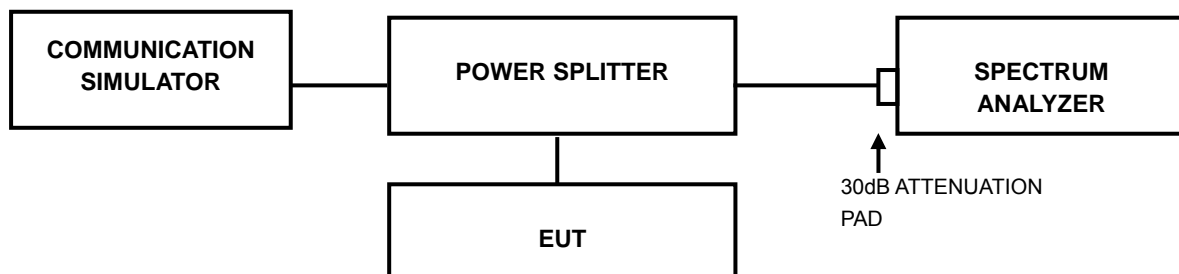


4.4 PEAK TO AVERAGE RATIO

4.4.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

4.4.2 TEST SETUP



4.4.3 TEST PROCEDURES

1. Set resolution/measurement bandwidth \geq signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1%.

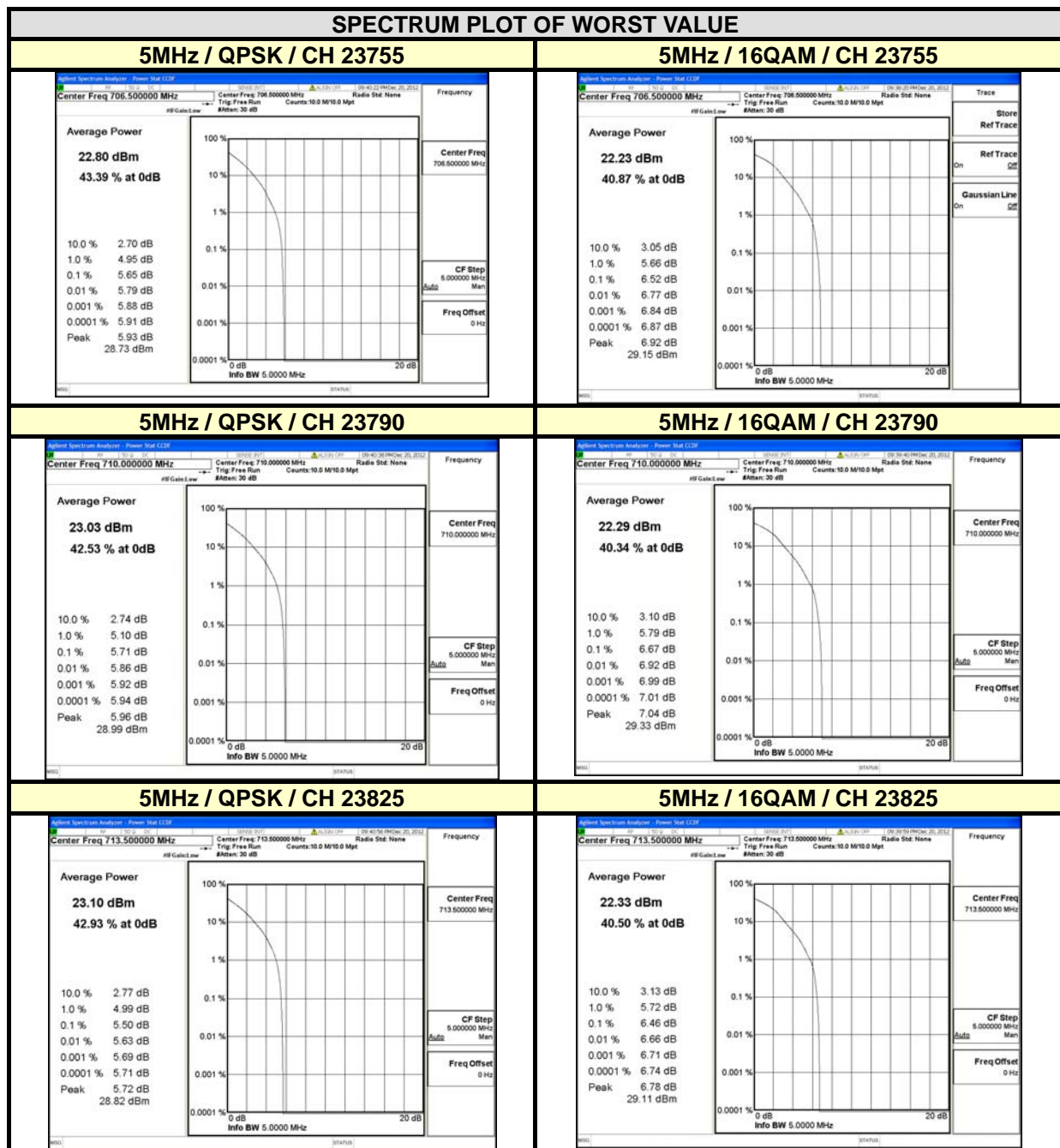


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4.4.4 TEST RESULTS

LTE BAND 17

CHANNEL BANDWIDTH: 5MHz			
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
23755	706.5	5.79	6.77
23790	710.0	5.86	6.92
23825	713.5	5.63	6.66

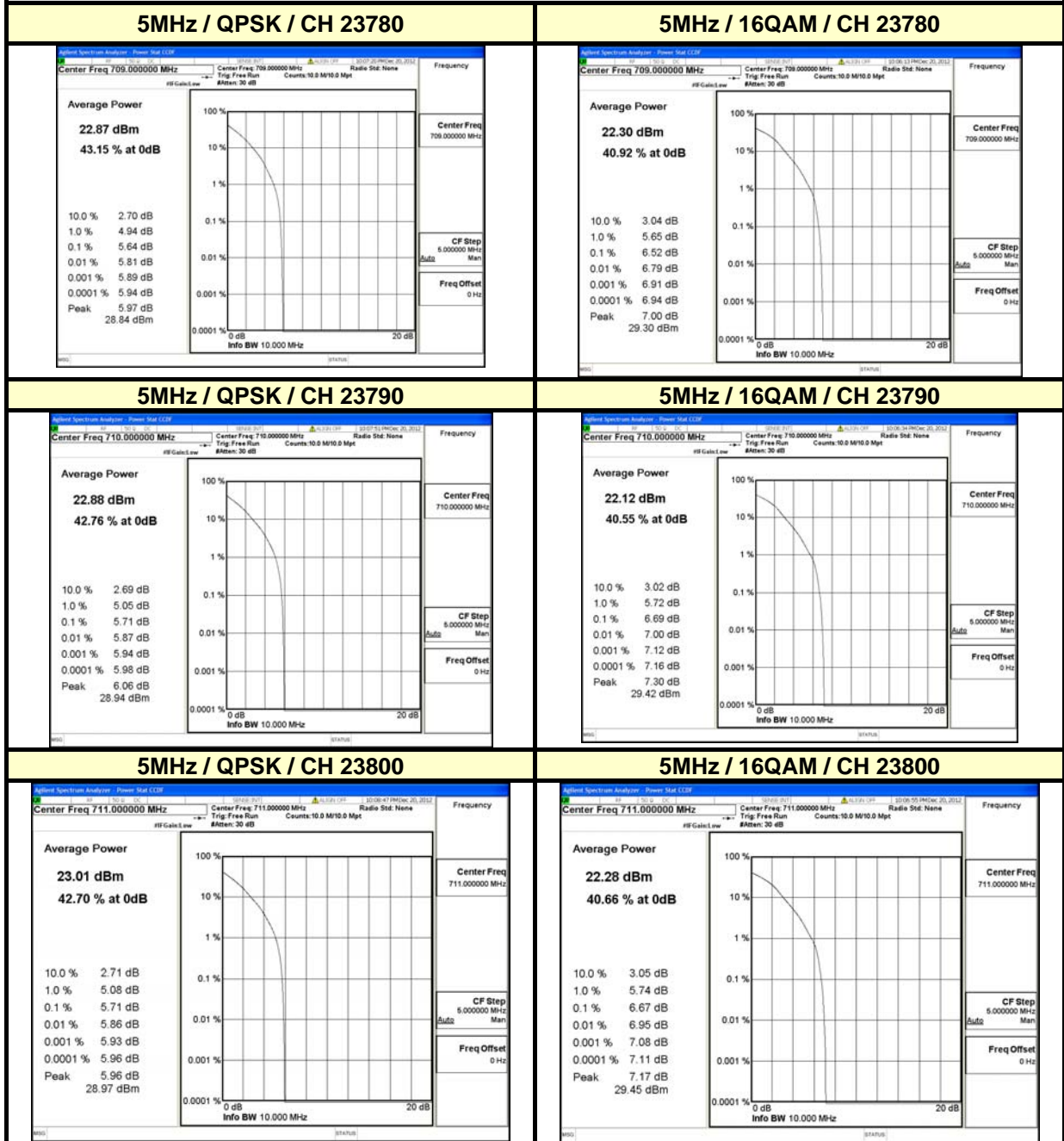




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CHANNEL BANDWIDTH: 10MHz			
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
23780	709.0	5.81	6.79
23790	710.0	5.87	7.00
23800	711.0	5.86	6.95

SPECTRUM PLOT OF WORST VALUE





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LTE BAND 4

CHANNEL BANDWIDTH: 5MHz			
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
19975	1712.5	6.12	6.67
20175	1732.5	6.27	6.85
20375	1752.5	6.07	6.65

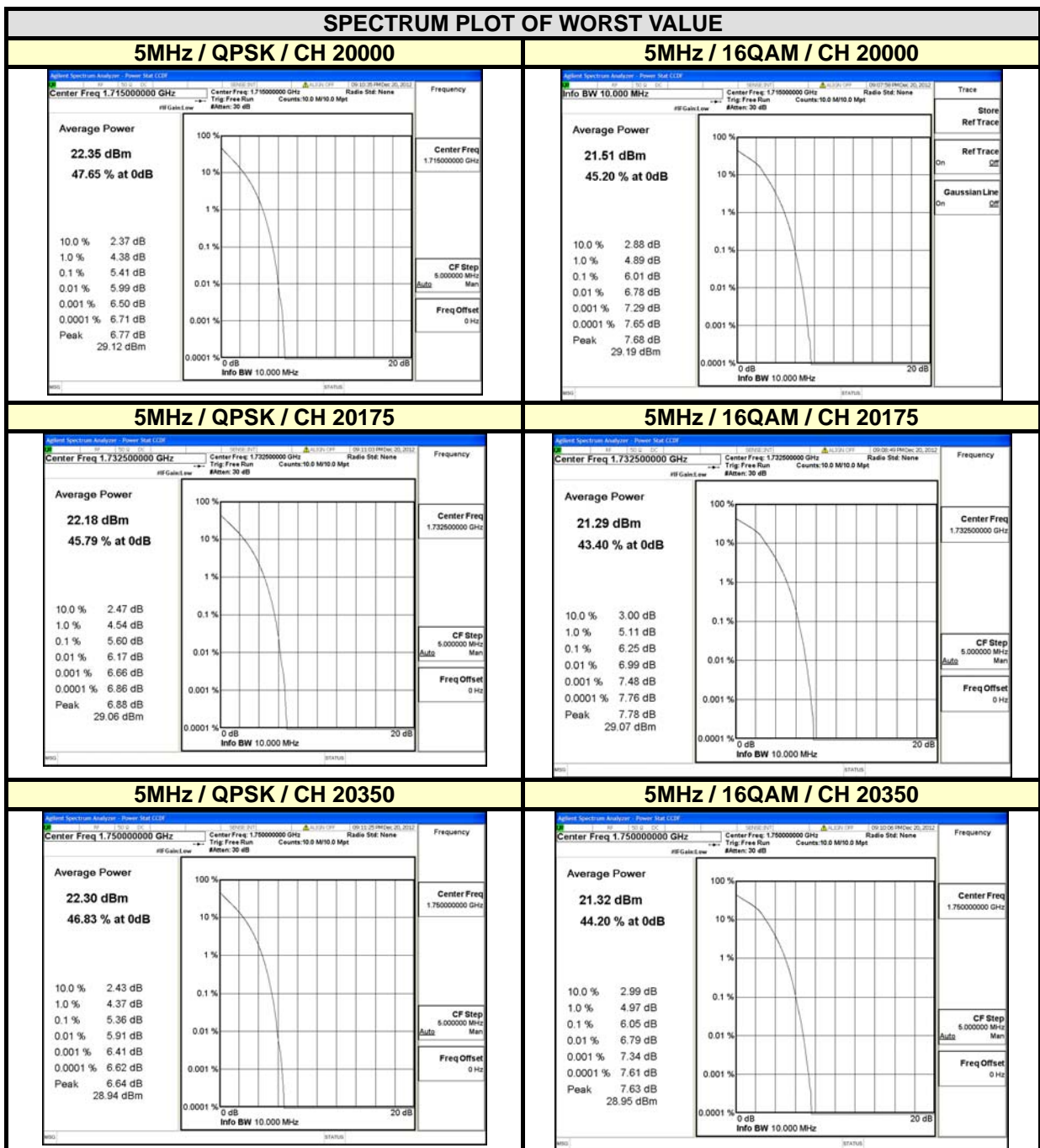
SPECTRUM PLOT OF WORST VALUE

5MHz / QPSK / CH 19975	5MHz / 16QAM / CH 19975
<p>Average Power 22.26 dBm 47.65 % at 0dB</p> <p>10.0 % 2.36 dB 1.0 % 4.33 dB 0.1 % 5.41 dB 0.01 % 6.12 dB 0.001 % 6.51 dB 0.0001 % 6.61 dB Peak 6.62 dB 26.85 dBm</p>	<p>Average Power 21.66 dBm 45.47 % at 0dB</p> <p>10.0 % 2.85 dB 1.0 % 4.81 dB 0.1 % 5.97 dB 0.01 % 6.67 dB 0.001 % 7.00 dB 0.0001 % 7.19 dB Peak 7.26 dB 28.92 dBm</p>
5MHz / QPSK / CH 20175	5MHz / 16QAM / CH 20175
<p>Average Power 22.19 dBm 45.53 % at 0dB</p> <p>10.0 % 2.50 dB 1.0 % 4.52 dB 0.1 % 5.59 dB 0.01 % 6.27 dB 0.001 % 6.58 dB 0.0001 % 6.70 dB Peak 6.71 dB 28.90 dBm</p>	<p>Average Power 21.57 dBm 43.66 % at 0dB</p> <p>10.0 % 3.00 dB 1.0 % 5.05 dB 0.1 % 6.20 dB 0.01 % 6.85 dB 0.001 % 7.14 dB 0.0001 % 7.31 dB Peak 7.35 dB 28.92 dBm</p>
5MHz / QPSK / CH 20375	5MHz / 16QAM / CH 20375
<p>Average Power 22.21 dBm 46.68 % at 0dB</p> <p>10.0 % 2.44 dB 1.0 % 4.34 dB 0.1 % 5.38 dB 0.01 % 6.07 dB 0.001 % 6.42 dB 0.0001 % 6.57 dB Peak 6.58 dB 28.79 dBm</p>	<p>Average Power 21.55 dBm 44.57 % at 0dB</p> <p>10.0 % 2.96 dB 1.0 % 4.88 dB 0.1 % 5.97 dB 0.01 % 6.65 dB 0.001 % 6.98 dB 0.0001 % 7.18 dB Peak 7.23 dB 28.78 dBm</p>



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CHANNEL BANDWIDTH: 10MHz			
CHANNEL	FREQUENCY (MHz)	PEAK TO AVERAGE RATIO (dB)	
		QPSK	16QAM
20000	1715.0	5.99	6.78
20175	1732.5	6.17	6.99
20350	1750.0	5.91	6.79



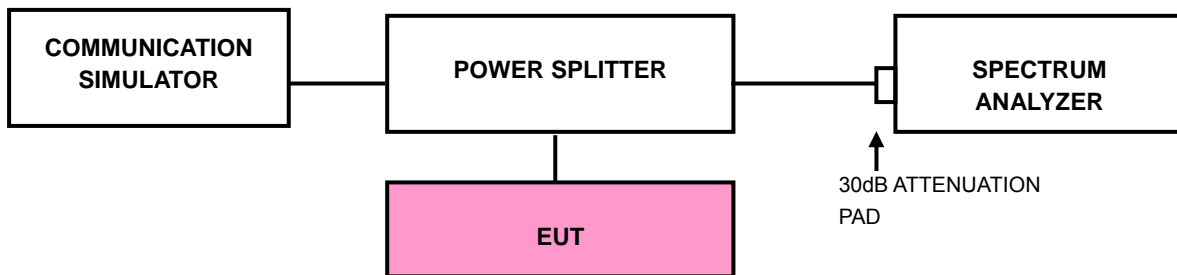
4.5 BAND EDGE MEASUREMENT

4.5.1 LIMITS OF BAND EDGE MEASUREMENT

For operations in the 704-716 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

For operations in the 1710 – 1755 MHz MHz bands, 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.

4.5.2 TEST SETUP



4.5.3 TEST PROCEDURES

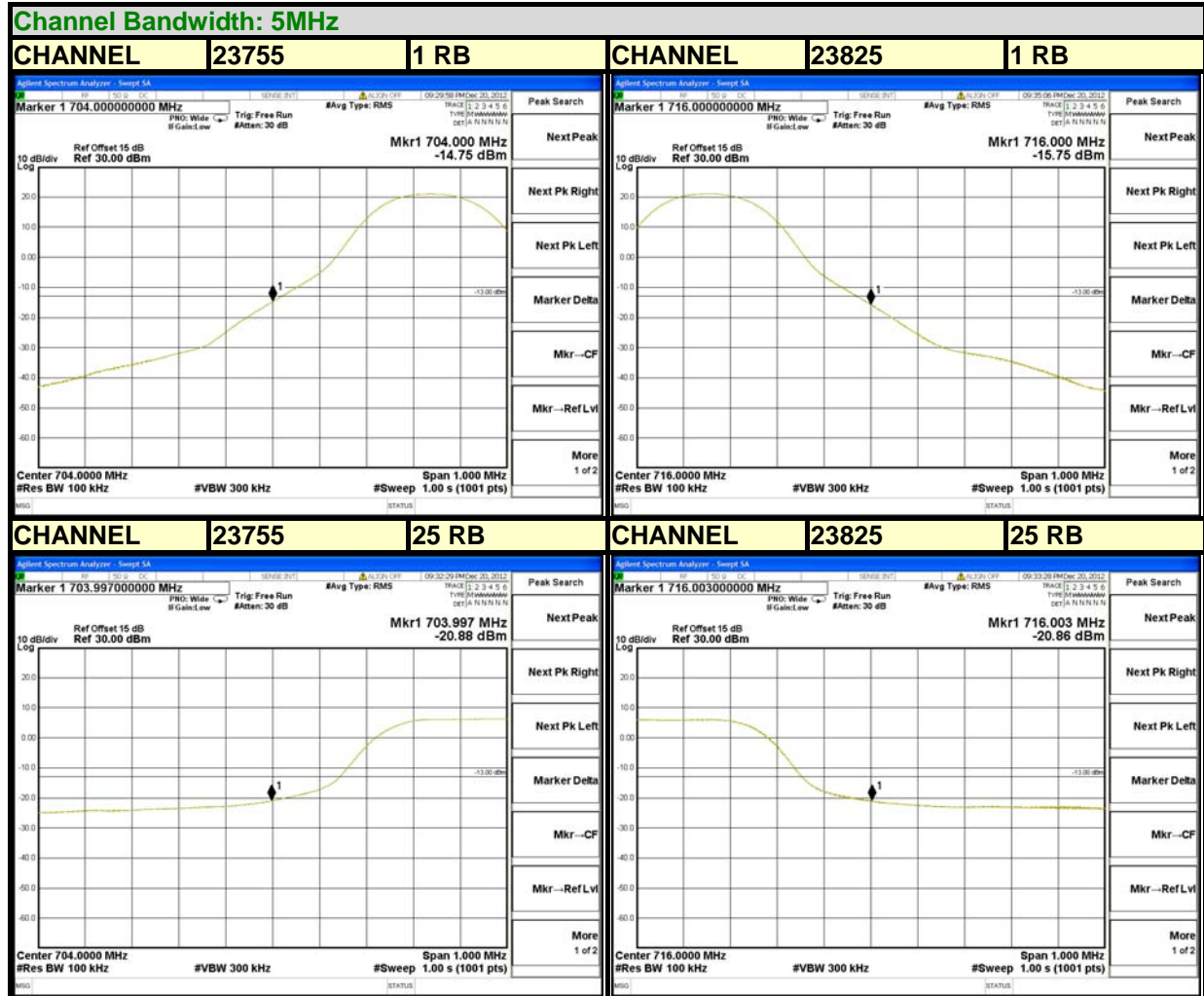
- a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 2 MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz.
- d. Record the max trace plot into the test report.



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4.5.4 TEST RESULTS

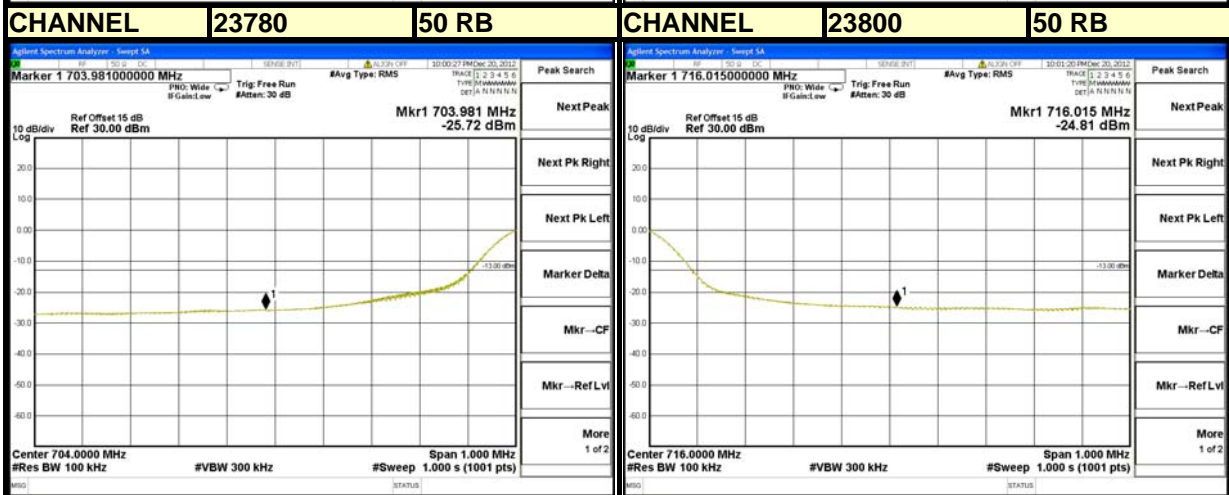
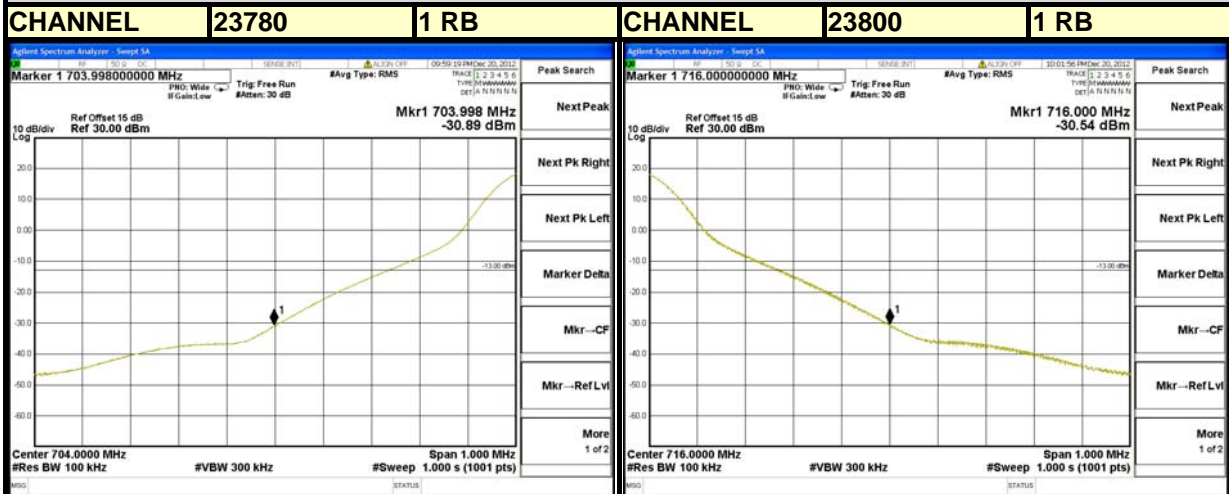
LTE BAND 17





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Channel Bandwidth: 10MHz

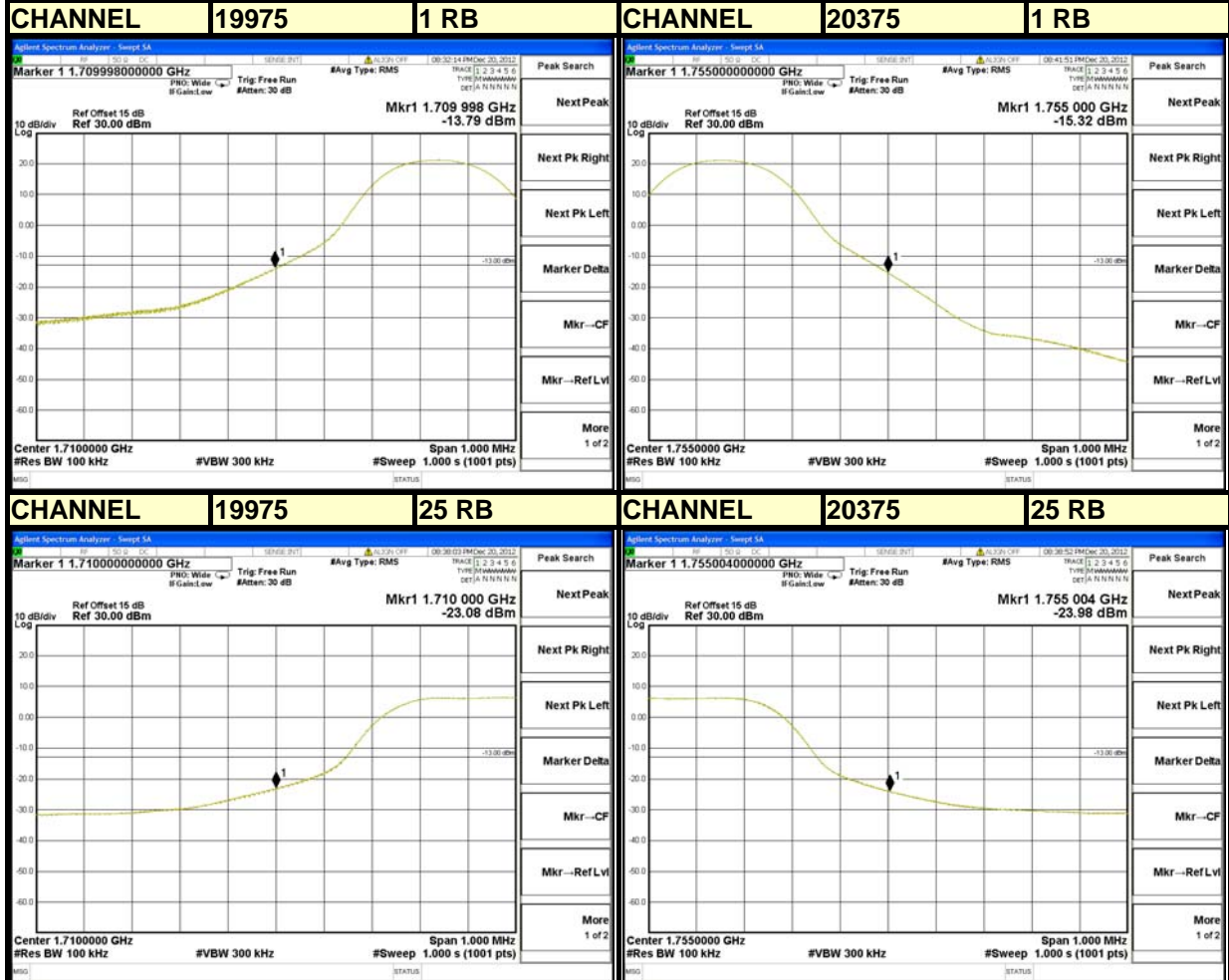




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LTE BAND 4

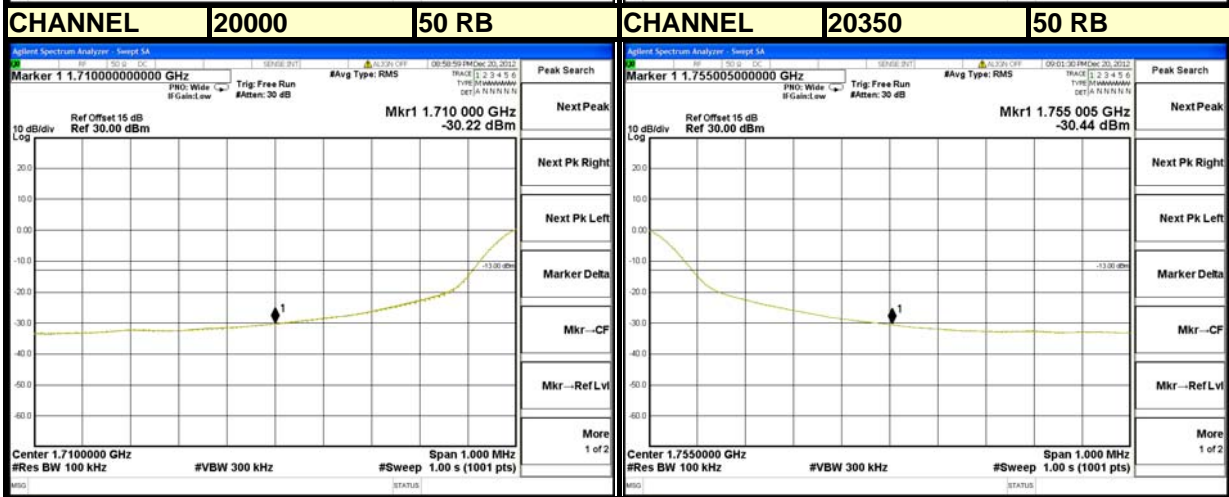
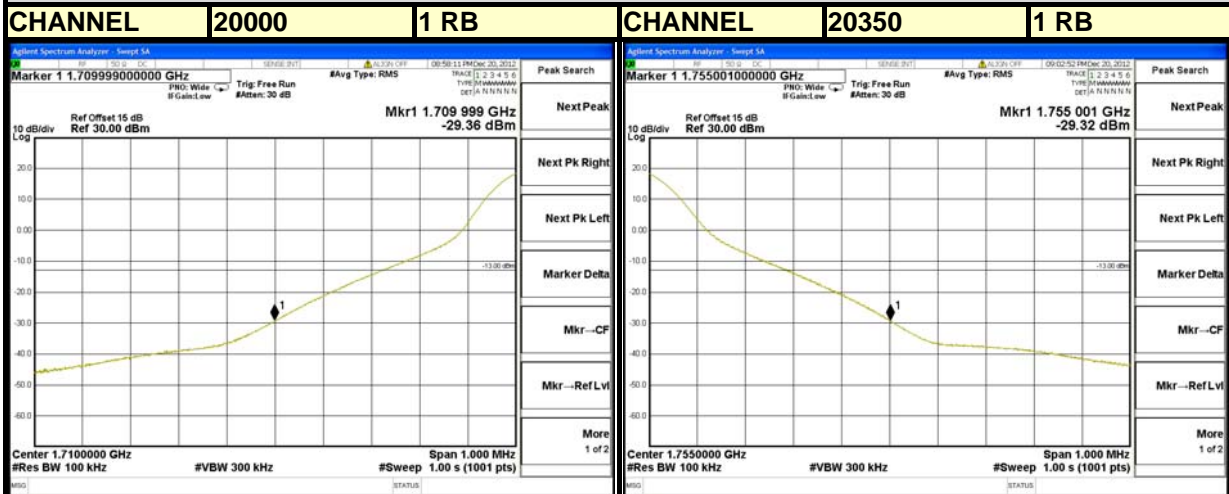
Channel Bandwidth: 5MHz





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Channel Bandwidth: 10MHz



4.6 CONDUCTED SPURIOUS EMISSIONS

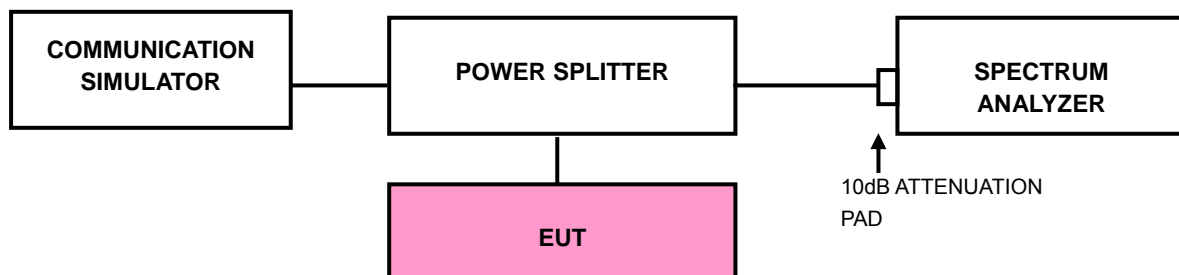
4.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 -13dBm

4.6.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
- b. Measuring frequency range is from 30 MHz to 7.2GHz for LTE Band 17 and from 30MHz to 18GHz for LTE Band 4. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

4.6.3 TEST SETUP

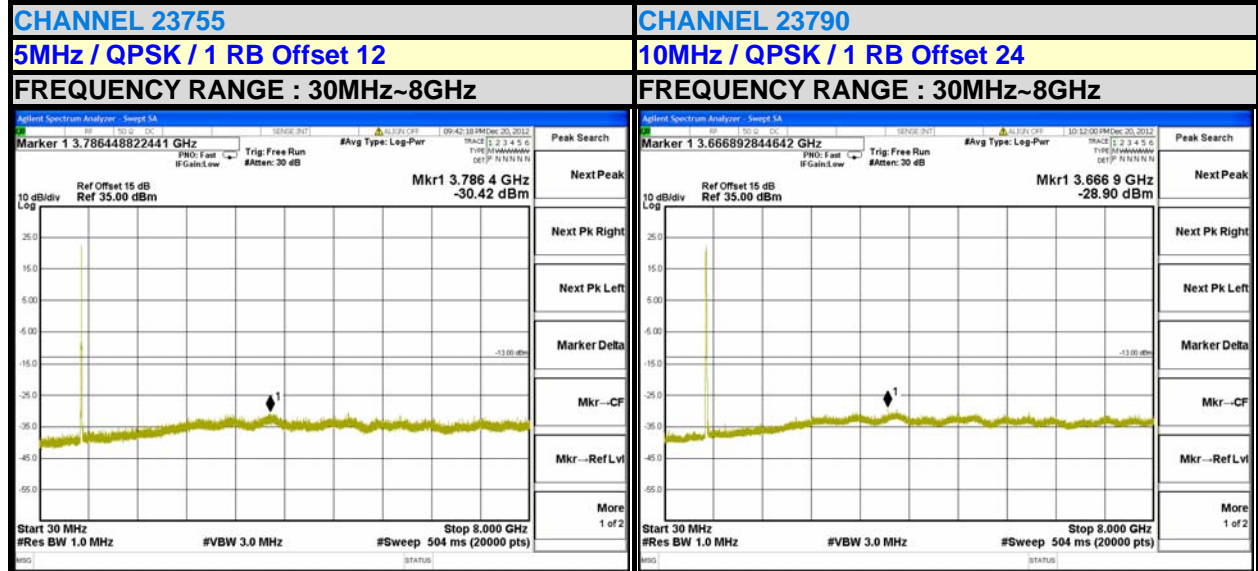




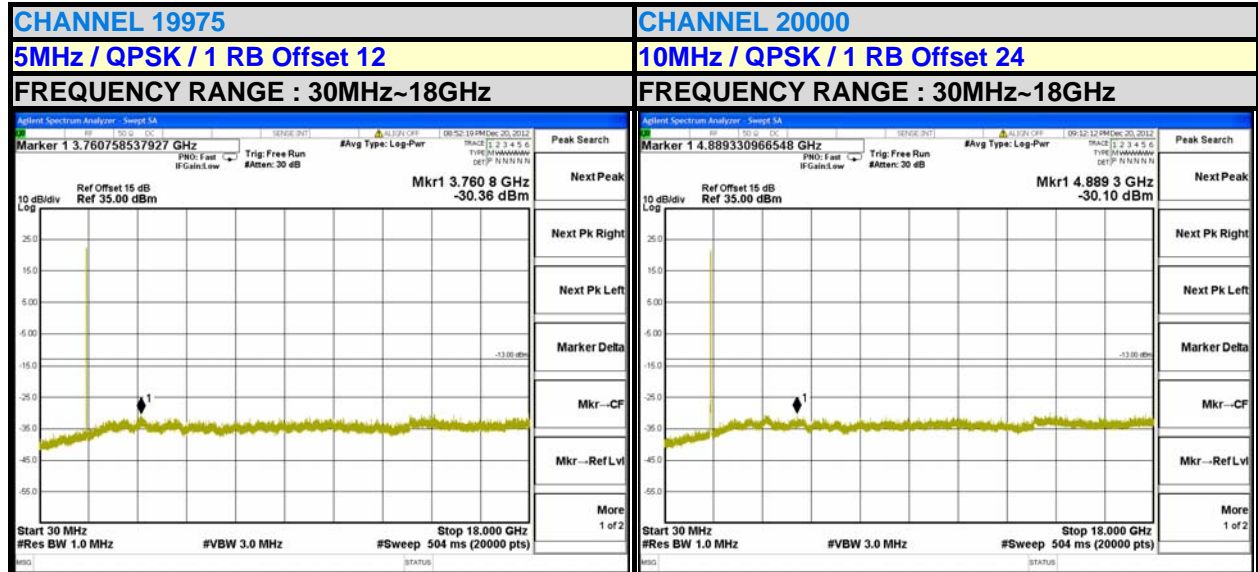
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4.6.4 TEST RESULTS

LTE BAND 17



LTE BAND 4



4.7 RADIATED EMISSION MEASUREMENT

4.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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 -13dBm

4.7.2 TEST PROCEDURES

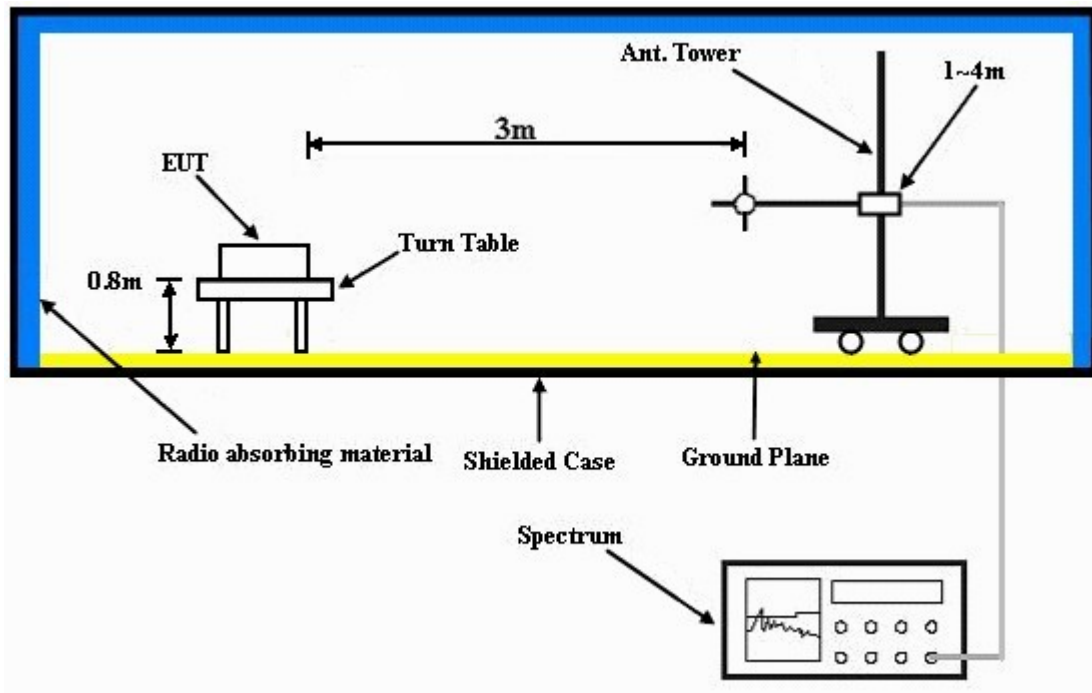
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. 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 a. Record the power level of S.G
- c. $\text{EIRP} = \text{Output power level of S.G} - \text{TX cable loss} + \text{Antenna gain of substitution horn}$.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, $\text{E.R.P power} = \text{E.I.R.P power} - 2.15\text{dBi}$.

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.7.3 DEVIATION FROM TEST STANDARD

No deviation

4.7.4 TEST SETUP



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

4.7.5 TEST RESULTS

LTE BAND 17

CHANNEL BANDWIDTH: 5MHz / QPSK

Below 1GHz

MODE	TX channel 23755	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	753.62	-76.03	-77.27	4.58	-72.69	-13.00	-59.69
2	806.00	-75.56	-76.42	4.02	-72.40	-13.00	-59.40
3	871.96	-75.23	-75.68	3.95	-71.73	-13.00	-58.73
4	901.06	-74.66	-74.70	3.90	-70.80	-13.00	-57.80
5	955.38	-74.78	-73.78	3.91	-69.87	-13.00	-56.87
6	982.54	-75.77	-74.46	3.92	-70.54	-13.00	-57.54
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	161.92	-69.01	-70.01	0.63	-69.38	-13.00	-56.38
2	842.86	-76.02	-74.24	3.97	-70.27	-13.00	-57.27
3	906.88	-75.23	-72.09	3.91	-68.18	-13.00	-55.18
4	928.22	-75.31	-71.64	3.91	-67.73	-13.00	-54.73
5	953.44	-75.38	-71.13	3.90	-67.23	-13.00	-54.23
6	984.48	-75.47	-70.92	3.91	-67.01	-13.00	-54.01

REMARKS:

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



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Above 1GHz

MODE	Channel 23755	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2119.50	-60.60	-61.52	6.36	-55.16	-13.00	-42.16

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	2119.50	-64.20	-61.95	6.36	-55.59	-13.00	-42.59

REMARKS:

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



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MODE	Channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2130.00	-60.31	-61.23	6.36	-54.87	-13.00	-41.87

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	2130.00	-64.22	-61.97	6.36	-55.61	-13.00	-42.61

REMARKS:

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



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MODE	Channel 23825	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2140.50	-60.37	-61.29	6.36	-54.93	-13.00	-41.93

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	2140.50	-64.03	-61.78	6.36	-55.42	-13.00	-42.42

REMARKS:

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



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LTE BAND 17

CHANNEL BANDWIDTH: 5MHz / 16QAM

Below 1GHz

MODE	TX channel 23755	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	782.72	-75.29	-76.31	4.24	-72.07	-13.00	-59.07
2	838.98	-75.64	-76.40	3.97	-72.43	-13.00	-59.43
3	879.72	-75.02	-75.36	3.93	-71.43	-13.00	-58.43
4	922.40	-74.27	-73.89	3.91	-69.98	-13.00	-56.98
5	967.02	-75.42	-74.28	3.91	-70.37	-13.00	-57.37
6	988.36	-75.21	-73.81	3.90	-69.91	-13.00	-56.91
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	156.10	-67.84	-68.87	0.18	-68.69	-13.00	-55.69
2	683.78	-75.63	-76.87	5.11	-71.76	-13.00	-58.76
3	833.16	-75.21	-73.60	3.98	-69.62	-13.00	-56.62
4	877.78	-74.28	-71.78	3.93	-67.85	-13.00	-54.85
5	967.02	-75.63	-71.25	3.91	-67.34	-13.00	-54.34
6	988.36	-75.50	-70.90	3.90	-67.00	-13.00	-54.00

REMARKS:

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



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Above 1GHz

MODE	Channel 23755	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2119.50	-61.01	-61.93	6.36	-55.57	-13.00	-42.57

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	2119.50	-64.48	-62.23	6.36	-55.87	-13.00	-42.87

REMARKS:

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



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MODE	Channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2130.00	49.75	48.83	6.36	55.19	-13.00	68.19

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	2130.00	-64.42	-62.17	6.36	-55.81	-13.00	-42.81

REMARKS:

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



A D T

MODE	Channel 23825	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2140.50	49.54	48.62	6.36	54.98	-13.00	67.98

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	2140.50	-63.98	-61.73	6.36	-55.37	-13.00	-42.37

REMARKS:

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



A D T

LTE BAND 17

CHANNEL BANDWIDTH: 10MHz / QPSK

Below 1GHz

MODE	TX channel 23790	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	844.80	-75.71	-76.46	3.97	-72.49	-13.00	-59.49
2	871.96	-74.51	-74.96	3.95	-71.01	-13.00	-58.01
3	904.94	-74.46	-74.43	3.91	-70.52	-13.00	-57.52
4	926.28	-75.40	-74.94	3.91	-71.03	-13.00	-58.03
5	939.86	-74.72	-74.00	3.93	-70.07	-13.00	-57.07
6	970.90	-74.98	-73.79	3.91	-69.88	-13.00	-56.88
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	159.98	-68.98	-69.47	0.39	-69.08	-13.00	-56.08
2	866.14	-75.09	-72.84	3.95	-68.89	-13.00	-55.89
3	904.94	-75.40	-72.31	3.91	-68.40	-13.00	-55.40
4	935.98	-75.38	-71.53	3.92	-67.61	-13.00	-54.61
5	967.02	-75.78	-71.40	3.91	-67.49	-13.00	-54.49
6	982.54	-75.37	-70.85	3.92	-66.93	-13.00	-53.93

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 23780	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2127.00	-60.09	-61.01	6.36	-54.65	-13.00	-41.65

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	2127.00	-63.22	-60.97	6.36	-54.61	-13.00	-41.61

REMARKS:

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



A D T

MODE	Channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2130.00	-59.71	-60.63	6.36	-54.27	-13.00	-41.27

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	2130.00	-63.33	-61.08	6.36	-54.72	-13.00	-41.72

REMARKS:

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



A D T

MODE	Channel 23800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2133.00	-59.91	-60.83	6.36	-54.47	-13.00	-41.47

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	2133.00	-63.43	-61.18	6.36	-54.82	-13.00	-41.82

REMARKS:

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

LTE BAND 17

CHANNEL BANDWIDTH: 10MHz / 16QAM

Below 1GHz

MODE	TX channel 23780	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	837.04	-74.49	-75.26	3.98	-71.28	-13.00	-58.28
2	871.96	-75.13	-75.58	3.95	-71.63	-13.00	-58.63
3	891.36	-74.84	-75.03	3.92	-71.11	-13.00	-58.11
4	908.82	-75.02	-74.91	3.91	-71.00	-13.00	-58.00
5	963.14	-75.63	-74.53	3.91	-70.62	-13.00	-57.62
6	990.30	-73.95	-72.52	3.90	-68.62	-13.00	-55.62
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	156.10	-68.99	-70.02	0.18	-69.84	-13.00	-56.84
2	804.06	-75.59	-74.49	4.02	-70.47	-13.00	-57.47
3	837.04	-75.23	-73.55	3.98	-69.57	-13.00	-56.57
4	906.88	-75.32	-72.18	3.91	-68.27	-13.00	-55.27
5	955.38	-74.50	-70.24	3.91	-66.33	-13.00	-53.33
6	996.12	-75.34	-70.68	3.91	-66.77	-13.00	-53.77

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 23780	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2127.00	-59.81	-60.73	6.36	-54.37	-13.00	-41.37

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	2127.00	-63.44	-61.19	6.36	-54.83	-13.00	-41.83

REMARKS:

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



A D T

MODE	Channel 23790	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2130.00	-59.77	-60.69	6.36	-54.33	-13.00	-41.33

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	2130.00	-63.23	-60.98	6.36	-54.62	-13.00	-41.62

REMARKS:

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



A D T

MODE	Channel 23800	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	2133.00	-59.83	-60.75	6.36	-54.39	-13.00	-41.39

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	2133.00	-63.37	-61.12	6.36	-54.76	-13.00	-41.76

REMARKS:

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



A D T

LTE BAND 4

CHANNEL BANDWIDTH: 5MHz / QPSK

Below 1GHz

MODE	TX channel 19975	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	844.80	-75.14	-73.74	3.97	-69.77	-13.00	-56.77
2	852.56	-74.70	-73.26	3.97	-69.29	-13.00	-56.29
3	897.18	-74.76	-72.71	3.91	-68.80	-13.00	-55.80
4	935.98	-75.25	-72.45	3.92	-68.53	-13.00	-55.53
5	968.96	-75.01	-71.69	3.90	-67.79	-13.00	-54.79
6	994.18	-75.13	-71.52	3.91	-67.61	-13.00	-54.61
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	159.98	-69.17	-67.51	0.39	-67.12	-13.00	-54.12
2	757.50	-76.09	-73.18	4.55	-68.63	-13.00	-55.63
3	809.88	-75.92	-72.58	4.02	-68.56	-13.00	-55.56
4	838.98	-75.12	-71.25	3.97	-67.28	-13.00	-54.28
5	937.92	-74.76	-68.71	3.92	-64.79	-13.00	-51.79
6	994.18	-75.61	-68.82	3.91	-64.91	-13.00	-51.91

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 19975	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5137.50	-58.48	-57.52	6.63	-50.89	-13.00	-37.89

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	5137.50	-53.50	-49.37	6.63	-42.74	-13.00	-29.74

REMARKS:

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



A D T

MODE	Channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5197.50	-57.01	-56.09	6.67	-49.42	-13.00	-36.42

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	5197.50	-52.97	-48.88	6.67	-42.21	-13.00	-29.21

REMARKS:

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



A D T

MODE	Channel 20375	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5257.50	-57.86	-56.95	6.68	-50.27	-13.00	-37.27

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	5257.50	-52.89	-48.81	6.68	-42.13	-13.00	-29.13

REMARKS:

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



A D T

LTE BAND 4

CHANNEL BANDWIDTH: 5MHz / 16QAM

Below 1GHz

MODE	TX channel 19975	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	749.74	-76.07	-75.19	4.62	-70.57	-13.00	-57.57
2	840.92	-75.49	-74.09	3.97	-70.12	-13.00	-57.12
3	899.12	-75.17	-73.09	3.90	-69.19	-13.00	-56.19
4	935.98	-75.20	-72.40	3.92	-68.48	-13.00	-55.48
5	953.44	-75.18	-72.04	3.90	-68.14	-13.00	-55.14
6	984.48	-75.38	-71.88	3.91	-67.97	-13.00	-54.97

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	159.98	-69.85	-68.19	0.39	-67.80	-13.00	-54.80
2	800.18	-75.62	-72.44	4.02	-68.42	-13.00	-55.42
3	840.92	-75.84	-71.94	3.97	-67.97	-13.00	-54.97
4	885.54	-74.88	-70.06	3.92	-66.14	-13.00	-53.14
5	951.50	-75.13	-68.75	3.90	-64.85	-13.00	-51.85
6	992.24	-75.81	-69.03	3.90	-65.13	-13.00	-52.13

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 19975	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5137.50	-67.57	-57.71	6.63	-51.08	-13.00	-38.08

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	5137.50	-58.50	-49.90	6.63	-43.27	-13.00	-30.27

REMARKS:

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



A D T

MODE	Channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5197.50	-66.67	-56.65	6.67	-49.98	-13.00	-36.98

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	5197.50	-58.21	-49.51	6.67	-42.84	-13.00	-29.84

REMARKS:

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



A D T

MODE	Channel 20375	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5257.50	-67.54	-57.32	6.68	-50.64	-13.00	-37.64

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	5257.50	-58.13	-49.31	6.68	-42.63	-13.00	-29.63

REMARKS:

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



A D T

LTE BAND 4

CHANNEL BANDWIDTH: 10MHz / QPSK

Below 1GHz

MODE	TX channel 20000	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	763.32	-75.96	-74.99	4.48	-70.51	-13.00	-57.51
2	850.62	-74.72	-73.30	3.97	-69.33	-13.00	-56.33
3	883.60	-74.67	-72.80	3.92	-68.88	-13.00	-55.88
4	918.52	-74.42	-71.97	3.91	-68.06	-13.00	-55.06
5	961.20	-75.04	-71.82	3.91	-67.91	-13.00	-54.91
6	994.18	-75.37	-71.76	3.91	-67.85	-13.00	-54.85

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	159.98	-69.19	-67.53	0.39	-67.14	-13.00	-54.14
2	759.44	-75.80	-72.88	4.53	-68.35	-13.00	-55.35
3	813.76	-75.96	-72.53	4.00	-68.53	-13.00	-55.53
4	906.88	-75.37	-70.08	3.91	-66.17	-13.00	-53.17
5	953.44	-75.28	-68.88	3.90	-64.98	-13.00	-51.98
6	974.78	-75.35	-68.75	3.91	-64.84	-13.00	-51.84

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 20000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5145.00	-53.21	-52.26	6.64	-45.62	-13.00	-32.62

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	5145.00	-48.22	-44.10	6.64	-37.46	-13.00	-24.46

REMARKS:

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



A D T

MODE	Channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5197.50	-53.96	-53.04	6.67	-46.37	-13.00	-33.37

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	5197.50	-49.17	-45.08	6.67	-38.41	-13.00	-25.41

REMARKS:

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



A D T

MODE	Channel 20350	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5250.00	-55.55	-54.64	6.68	-47.96	-13.00	-34.96

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	5250.00	-52.25	-48.17	6.68	-41.49	-13.00	-28.49

REMARKS:

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



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LTE BAND 4

CHANNEL BANDWIDTH: 10MHz / 16QAM

Below 1GHz

MODE	TX channel 20000	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	761.38	-75.83	-74.87	4.50	-70.37	-13.00	-57.37
2	833.16	-75.37	-74.00	3.98	-70.02	-13.00	-57.02
3	871.96	-74.75	-73.05	3.95	-69.10	-13.00	-56.10
4	899.12	-74.30	-72.22	3.90	-68.32	-13.00	-55.32
5	955.38	-74.95	-71.80	3.91	-67.89	-13.00	-54.89
6	992.24	-75.44	-71.84	3.90	-67.94	-13.00	-54.94

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	159.98	-70.08	-68.42	0.39	-68.03	-13.00	-55.03
2	745.86	-75.72	-72.98	4.68	-68.30	-13.00	-55.30
3	761.38	-75.85	-72.91	4.50	-68.41	-13.00	-55.41
4	864.20	-74.52	-70.16	3.95	-66.21	-13.00	-53.21
5	961.20	-75.05	-68.58	3.91	-64.67	-13.00	-51.67
6	980.60	-75.52	-68.87	3.92	-64.95	-13.00	-51.95

REMARKS:

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



A D T

Above 1GHz

MODE	Channel 20000	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5145.00	-53.86	-52.91	6.64	-46.27	-13.00	-33.27

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	5145.00	-48.72	-44.60	6.64	-37.96	-13.00	-24.96

REMARKS:

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



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MODE	Channel 20175	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5197.50	-54.47	-53.55	6.67	-46.88	-13.00	-33.88

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	5197.50	-49.69	-45.60	6.67	-38.93	-13.00	-25.93

REMARKS:

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



A D T

MODE	Channel 20350	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 64%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Match Tsui		

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	5250.00	-55.68	-54.77	6.68	-48.09	-13.00	-35.09

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	5250.00	-52.43	-48.35	6.68	-41.67	-13.00	-28.67

REMARKS:

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



5 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.

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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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6 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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