

# FCC TEST REPORT (PART 27)

-				
Applicant:	Meizu Technology Co., Ltd.			
Address:	Meizu Tech Bldg., Technology & Innovation Coast, Zhuhai, Guangdong Province, China			
Manufacturer or Supplier:	Meizu Technology Co., Ltd.			
Address:	Meizu Tech Bldg., Technology & Ir	nnovation Coast, Zhuhai, Guangdong Province, China		
Product:	LTE Mobile Phone			
Brand Name:	MEIZU			
Model Name:	M881H			
FCC ID:	2ANQ6-M881H			
Date of tests:	Jan. 04, 2018 ~ Feb. 02, 2018			
The tests have bee	The tests have been carried out according to the requirements of the following standard:			
<ul><li></li></ul>	<ul> <li>         ☐ FCC Part 27, Subpart C, L         ☐ ANSI/TIA/EIA-603- D         ☐ ANSI/TIA/EIA-603-E     </li> </ul>			
CONCLUSION: Th	CONCLUSION: The submitted sample was found to COMPLY with the test requirement			
Prepared by Yuqiang Yin  Approved by Sam Tung  Engineer / Mobile Department  Manager / Mobile Department				
Jugians		M		
Da	Date: Mar. 26, 2018 Date: Mar. 26, 2018			

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<b>Test Report</b>	No.:	<b>RF17</b>	1229V	V006-	-6
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# **RELEASE CONTROL RECORD**

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED	
RF171229W006-6	Original release	Mar. 26, 2018	

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## 1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

	APPLIED STANDARD: FCC Part 27 & Part 2				
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 -27.82dB at 46.490MHz.		

#### 1.1 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	9kHz~30MHz	2.66dB	
	9KHz ~ 30MHz	2.68dB	
Radiated emissions	30MHz ~ 1GMHz	3.26dB	
Radiated ethissions	1GHz ~ 18GHz	4.48dB	
	18GHz ~ 40GHz	4.12dB	

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

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#### 1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Mar. 01,17	Feb. 28,18
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510332	Mar. 01,17	Feb. 28,18
Bilog Antenna 1	ETS-LINDGREN	3143B	00161964	Nov. 26,16	Nov. 25,18
Bilog Antenna 2	ETS-LINDGREN	3143B	00161965	Nov. 26,16	Nov. 25,18
Horn Antenna 1	ETS-LINDGREN	3117	00168728	Nov. 26,16	Nov. 25,18
Horn Antenna 2	ETS-LINDGREN	3117	00168692	Nov. 26,16	Nov. 25,18
Loop antenna	Daze	ZN30900A	0708	Nov. 20,17	Nov. 19,18
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40 -K-SG/QMS-00 361		Dec. 16,16	Dec. 15,18
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Mar. 01,17	Feb. 28,18
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jul. 24,17	Jul. 23,18
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jul. 24,17	Jul. 23,18
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Jul. 24,17	Jul. 23,18
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn- CT0001143-1216	May 06,17	May 05,18
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated _V7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SM A	1505	Jul. 24,17	Jul. 23,18
Power Meter	Anritsu	ML2495A	1506002	Mar. 01,17	Feb. 28,18
Power Sensor	Anritsu	MA2411B	1339352	Mar. 01,17	Feb. 28,18
Humid & Temp Programmable Tester	Juyi	ITH-120-45-CP -AR	IAA1504-001	Jul. 18,17	Jul. 17,18
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 01,17	Feb. 28,18

**NOTE:** 1. The calibration interval of the above test instruments is 12 months or 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

- 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
- The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
- 4. The FCC Site Registration No. is 525120.



## **2 GENERAL INFORMATION**

## 2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	LTE Mobile Phone			
MODEL NAME	M881H			
POWER SUPPLY	5/9/12Vdc (adapter or host equipment) 3.85Vdc (Li-ion, battery)			
MODULATION TYPE	LTE QPSK, 16QAM, 64QAM			
	LTE Band 4 Channel Bandwidth: 1.4MHz	1710.7MHz ~ 1754.3MHz		
	LTE Band 4 Channel Bandwidth: 3MHz	1711.5MHz ~ 1753.5MHz		
FREQUENCY RANGE	LTE Band 4 Channel Bandwidth: 5MHz	1712.5MHz ~ 1752.5MHz		
	LTE Band 4 Channel Bandwidth: 10MHz	1715.0MHz ~ 1750.0MHz		
	LTE Band 4 Channel Bandwidth: 15MHz	1717.5MHz ~ 1747.5MHz		
	LTE Band 4 Channel Bandwidth: 20MHz	1720.0MHz ~ 1745.0MHz		
	LTE Daniel 4	QPSK: 1M09G7D		
	LTE Band 4 Channel Bandwidth: 1.4MHz	16QAM: 1M08W7D		
		64QAM: 1M08W7D		
	LTE Band 4 Channel Bandwidth: 3MHz	QPSK: 2M69G7D		
		16QAM: 2M68W7D		
		64QAM: 2M69W7D		
	175 5	QPSK: 4M48G7D		
	LTE Band 4 Channel Bandwidth: 5MHz	16QAM: 4M48W7D		
EMISSION	Charmer Bandwidth. 3WHZ	64QAM: 4M51W7D		
DESIGNATOR	175 0 14	QPSK: 8M95G7D		
	LTE Band 4 Channel Bandwidth: 10MHz	16QAM: 8M94W7D		
	Charmer Bandwidth. 10MHz	64QAM: 8M95W7D		
	LTE David 4	QPSK: 13M4G7D		
	LTE Band 4 Channel Bandwidth: 15MHz	16QAM: 13M4W7D		
	Charmer Bandwidth. 15WHZ	64QAM: 13M4W7D		
	LTE Daniel 4	QPSK: 17M9G7D		
	LTE Band 4 Channel Bandwidth: 20MHz	16QAM: 17M9W7D		
		64QAM: 17M9W7D		
MAX. ERP/EIRP	LTE Band 4 Channel Bandwidth: 1.4MHz	225mW		
POWER	LTE Band 4 Channel Bandwidth: 3MHz	224mW		

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	LTE Band 4 Channel Bandwidth: 5MHz	224mW
	LTE Band 4 Channel Bandwidth: 10MHz	228mW
	LTE Band 4 Channel Bandwidth: 15MHz	224mW
	LTE Band 4 Channel Bandwidth: 20MHz	202mW
ANTENNA TYPE	Fixed Internal Antenna with 1dE	Зі
HW VERSION	V1.0	
SW VERSION	Flyme7.0.2.0G	
ACCESSORY DEVICE	Refer to note as below	
DATA CABLE	USB cable: non-shielded, detac Earphone cable: non-shielded,	

#### NOTE:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. The EUT was powered by the following adapter:

ADAPTER	
BRAND:	MEIZU
MODEL:	UP1220A
INPUT:	AC 100-240V, 700mA
OUTPUT:	DC 5/9/12V, 2000mA

3. The EUT matched the following USB cables and Earphone:

USB CABLE 1	
BRAND:	N/A
MODEL:	N/A
SIGNAL LINE:	1.0 METER

USB CABLE 2						
BRAND:	N/A					
MODEL:	N/A					
SIGNAL LINE:	1.0 METER					

EARPHONE					
BRAND:	MEIZU				
MODEL:	EP21HD				
SIGNAL LINE:	1.2 METER				

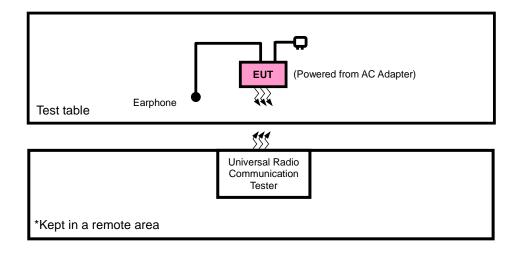
4. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

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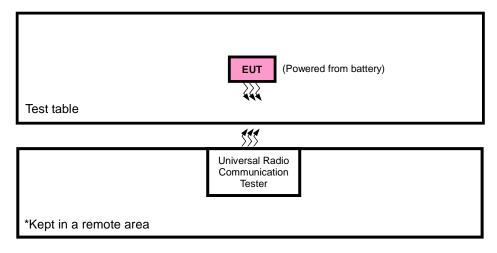


## 2.2 CONFIGURATION OF SYSTEM UNDER TEST

## FOR RADIATION EMISSION TEST



#### FOR CONDUCTED & E.R.P./E.I.R.P TEST



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#### 2.3 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	LONG WEI	PS-6403D	010934269	N/A
2	PC	HP	A6608CN	3CR83825X3	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.0m
2	AC Line: Unshielded, Detachable 1.5m

#### NOTE:

#### 2.4 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 in ERP/EIRP and radiated emission was found when positioned on X-plane for LTE. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
Α	EUT + Adapter + USB Cable + Earphone with LTE link
В	EUT + Battery with LTE link

<sup>1.</sup> All power cords of the above support units are non shielded (1.8m).



#### LTE BAND 4

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
В	EIRP	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		19957 to 20393	19957, 20393	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	19965, 20385	3MHz	QPSK	1 RB / 0 RB Offset
В	FREQUENCY	19975 to 20375	19975, 20375	5MHz	QPSK	1 RB / 0 RB Offset
	STABILITY	20000 to 20350	20000, 20350	10MHz	IHZ QPSK, 16QAM, 64QAM IHZ QPSK, 16QAM, 64QAM MHZ QPSK IHZ QPSK IHZ QPSK MHZ QPSK, 16QAM, 64QAM MHZ QPSK	1 RB / 0 RB Offset
		20025 to 20325	20025, 20325	20175, 20385 3MHz QPS 20175, 20375 5MHz QPS 20175, 20350 10MHz QPS 20175, 20325 15MHz QPS 20175, 20300 20MHz QPS 57, 20393 1.4MHz 65, 20385 3MHz 75, 20375 5MHz 00, 20350 10MHz QPS 20175, 20300 20MHz 25, 20325 15MHz 00, 20350 10MHz QPS 20175, 20393 1.4MHz QPS 20175, 20393 1.4MHz QPS 20175, 20385 3MHz QPS 20175, 20385 15MHz QPS 20175, 20375 5MHz QPS 20175, 20350 10MHz QPS 20175, 20350 10MHz QPS 20175, 20300 20MHz QPS 20175, 20393 1.4MHz QPS 20175, 20393 1.4MHz QPS 20175, 20395 15MHz QPS 20175, 20395 15MHz QPS 20175, 20395 10MHz QPS 20175, 20395 15MHz QPS 20175, 20350 10MHz QPS 20175, 20300 20MHz QPS 20175, 20393 1.4MHz 20393 1.4MHz 19965 3MHz 19975 5MHz 20375 5MHz 20000 10MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20300	20MHz	QPSK	1 RB / 0 RB Offset
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	6 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	15 RB / 0 RB Offset
В	OCCUPIED	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
	BANDWIDTH	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
В	PEAK TO	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
	AVERAGE RATIO	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			19957	1.4MHz	QPSK	1 RB / 0 RB Offset 6 RB / 0 RB Offset
		19957 to 20393				1 RB / 5 RB Offset
			20393	1.4MHz	QPSK	6 RB / 0 RB Offset
			40005	OMI I-		1 RB / 0 RB Offset
			19965	3MHz	QPSK	15 RB / 0 RB Offset
		19965 to 20385	00005	OMI I-		1 RB / 14 RB Offset
_			20385	SIVIHZ	QPSK	15 RB / 0 RB Offset
В	BAND EDGE		40075	EMIL.		1 RB / 0 RB Offset
			19975	SIVITZ	QPSK	25 RB / 0 RB Offset
		19975 to 20375	20275	EMU-	0.001/	1 RB / 24 RB Offset
			203/3	SIVITZ	QPSK	25 RB / 0 RB Offset
			20000	101/14	00011	1 RB / 0 RB Offset
			20000	I UIVIMZ	QPSK	50 RB / 0 RB Offset
		20000 to 20350	20350	10MHz	OPSK	1 RB / 49 RB Offset
					α. σιτ	50 RB / 0 RB Offset

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			20025	15MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325				75 RB / 0 RB Offset
		20023 10 20323	20325	15MHz	QPSK	1 RB / 74 RB Offset
В	BAND EDGE		20323	13WII IZ	QF SR	75 RB / 0 RB Offset
Ь	BAND EDGE		20050	20MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20200	20000	ZOWINZ	QPSK	100 RB / 0 RB Offset
		20050 to 20300	20200	20141.1-	ODCK	1 RB / 99 RB Offset
			20300	20MHz	QPSK	100 RB / 0 RB Offset
		19957 to 20393	19957, 20175, 20393	1.4MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19965 to 20385	19965, 20175, 20385	3MHz	QPSK, 16QAM	1 RB / 0 RB Offset
В	CONDCUDETED	19975 to 20375	19975, 20175, 20375	5MHz	QPSK, 16QAM	1 RB / 0 RB Offset
	EMISSION	20000 to 20350	20000, 20175, 20350	10MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20025 to 20325	20025, 20175, 20325	15MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK, 16QAM	1 RB / 0 RB Offset
		19957 to 20393	20175	1.4MHz	QPSK	1 RB / 0 RB Offset
		19965 to 20385	20175	3MHz	QPSK	1 RB / 0 RB Offset
А	RADIATED	19975 to 20375	20175	5MHz	QPSK	1 RB / 0 RB Offset
^	EMISSION	20000 to 20350	20175	10MHz	QPSK	1 RB / 0 RB Offset
		20025 to 20325	20175	15MHz	QPSK	1 RB / 0 RB Offset
		20050 to 20300	20050, 20175, 20300	20MHz	QPSK	1 RB / 0 RB Offset

**Note:** This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

## **TEST CONDITION:**

TEST ITEM	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
EIRP(ERP)	24deg. C, 60%RH	3.85Vdc from Battery	Star Le
FREQUENCY STABILITY	24deg. C, 61%RH	DC 3.4V/3.85V/4.4V	Wenliang Wu
OCCUPIED BANDWIDTH	24deg. C, 61%RH	3.85Vdc from Battery	Wenliang Wu
PEAK TO AVERAGE RATIO	24deg. C, 61%RH	3.85Vdc from Battery	Wenliang Wu
BAND EDGE	24deg. C, 61%RH	3.85Vdc from Battery	Wenliang Wu
CONDCUDETED EMISSION	24deg. C, 61%RH	3.85Vdc from Battery	Wenliang Wu
RADIATED EMISSION	24deg. C, 60%RH	DC 5/9/12V from adaptor	Star Le

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#### 2.5 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
KDB 971168 D01 Power Meas License Digital Systems v03
ANSI/TIA/EIA-603-D
ANSI/TIA/EIA-603-E

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



#### 3 TEST TYPES AND RESULTS

### 3.1 OUTPUT POWER MEASUREMENT

#### 3.1.1 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 699-716 MHz bands are limited to 3 watts ERP.

#### 3.1.2 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 = 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

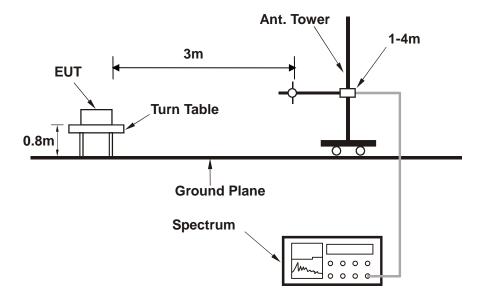
#### CONDUCTED POWER MEASUREMENT:

- 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.



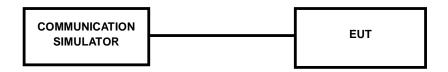
#### 3.1.3 TEST SETUP

#### **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).

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## 3.1.4 TEST RESULTS

## AVERAGE CONDUCTED OUTPUT POWER (dBm)

	LTE Band 4									
BW	Modulation	RB	RB	Low CH 19957	Mid CH 20175	High CH 20393	MDD			
BW	Wodulation	Size	Offset	Frequency 1710.7 MHz	Frequency 1732.5 MHz	Frequency 1754.3 MHz	MPR			
		1	0	22.99	23.11	22.99	0			
		1	2	22.93	22.98	22.91	0			
		1	5	22.81	22.84	22.75	0			
	QPSK	3	0	23.04	23.10	23.05	0			
		3	1	23.05	23.12	22.95	0			
		3	3	22.96	23.01	22.92	0			
		6	0	22.00	22.03	21.96	1			
		1	0	22.28	22.34	22.25	1			
		1	2	22.27	22.29	22.24	1			
		1	5	22.19	22.24	22.20	1			
1.4MHz	16QAM	3	0	22.06	22.13	22.02	1			
		3	1	21.99	22.14	21.99	1			
		3	3	21.99	22.06	21.99	1			
		6	0	21.03	21.15	21.01	2			
		1	0	21.11	21.21	21.13	2			
		1	2	21.07	21.21	21.07	2			
		1	5	21.10	21.12	21.07	2			
	64QAM	3	0	21.20	20.30	20.17	3			
		3	1	21.17	20.29	20.14	3			
		3	3	21.16	20.21	20.17	3			
		6	0	20.19	20.26	20.15	3			

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				LTE Band 4			
DW	Modulation	RB	RB	Low CH 19965	Mid CH 20175	High CH 20385	MDD
BW	Modulation	Size	Offset	Frequency 1711.5 MHz	Frequency 1732.5 MHz	Frequency 1753.5 MHz	MPR
		1	0	23.01	23.13	22.98	0
		1	7	22.89	22.99	22.91	0
		1	14	22.77	22.84	22.75	0
	QPSK	8	0	22.03	22.13	22.05	1
		8	3	21.98	22.12	21.97	1
		8	7	21.93	22.08	21.96	1
		15	0	21.97	22.04	21.90	1
		1	0	22.25	22.40	22.28	1
		1	7	22.24	22.32	22.22	1
		1	14	22.22	22.24	22.20	1
3MHz	16QAM	8	0	21.02	21.14	21.02	2
		8	3	21.04	21.09	21.02	2
		8	7	21.01	21.04	20.95	2
		15	0	21.03	21.09	21.04	2
		1	0	21.17	21.24	21.07	2
		1	7	21.10	21.15	21.06	2
		1	14	21.11	21.14	21.07	2
	64QAM	8	0	20.23	20.34	20.18	3
		8	3	20.21	20.23	20.19	3
		8	7	20.13	20.25	20.13	3
		15	0	20.21	20.23	20.19	3

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	LTE Band 4									
<b>5</b> 111	Madadaa	RB	RB	Low CH 19975	Mid CH 20175	High CH 20375				
BW	Modulation	Size	Offset	Frequency 1712.5 MHz	Frequency 1732.5 MHz	Frequency 1752.5 MHz	MPR			
		1	0	23.02	23.08	22.99	0			
		1	12	22.94	22.96	22.91	0			
		1	24	22.78	22.83	22.79	0			
	QPSK	12	0	22.06	22.13	22.02	1			
		12	6	21.98	22.13	21.98	1			
		12	13	21.97	22.04	21.97	1			
		25	0	21.95	22.07	21.93	1			
		1	0	22.26	22.36	22.28	1			
		1	12	22.21	22.35	22.21	1			
		1	24	22.22	22.24	22.19	1			
5 MHz	16QAM	12	0	21.02	21.12	20.99	2			
		12	6	21.01	21.13	20.98	2			
		12	13	20.96	21.06	20.98	2			
		25	0	21.03	21.10	21.01	2			
		1	0	21.11	21.21	21.13	2			
		1	12	21.07	21.21	21.06	2			
		1	24	21.04	21.19	21.07	2			
	64QAM	12	0	20.24	20.31	20.17	3			
		12	6	20.15	20.30	20.18	3			
		12	13	20.17	20.24	20.10	3			
		25	0	20.17	20.29	20.17	3			

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	LTE Band 4									
<b>5</b> 111	Mad Jadan	RB	RB	Low CH 20000	Mid CH 20175	High CH 20350				
BW	Modulation	Size	Offset	Frequency 1715 MHz	Frequency 1732.5 MHz	Frequency 1750 MHz	MPR			
		1	0	22.99	23.11	22.99	0			
		1	24	22.94	22.96	22.92	0			
		1	49	22.75	22.87	22.75	0			
	QPSK	25	0	22.07	22.12	22.05	1			
		25	12	22.04	22.07	21.98	1			
		25	25	21.95	22.01	21.96	1			
		50	0	22.00	22.07	21.90	1			
	16QAM	1	0	22.26	22.33	22.24	1			
		1	24	22.26	22.31	22.24	1			
		1	49	22.22	22.25	22.16	1			
10 MHz		25	0	21.04	21.10	21.05	2			
		25	12	21.05	21.07	21.03	2			
		25	25	20.95	21.07	20.95	2			
		50	0	21.07	21.09	21.05	2			
		1	0	21.10	21.22	21.10	2			
		1	24	21.12	21.17	21.10	2			
		1	49	21.10	21.13	21.04	2			
	64QAM	25	0	20.22	20.28	20.23	3			
		25	12	20.22	20.29	20.12	3			
		25	25	20.16	20.21	20.12	3			
		50	0	20.22	20.25	20.18	3			

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				LTE Band 4			
BW	Modulation	RB	RB	Low CH 20025	Mid CH 20175	High CH 20325	
BW	Modulation	Size	Offset	Frequency 1717.5 MHz	Frequency 1732.5 MHz	Frequency 1747.5 MHz	MPR
		1	0	23.06	23.11	22.96	0
		1	37	22.92	23.01	22.87	0
		1	74	22.81	22.90	22.76	0
	QPSK	36	0	22.04	22.13	22.06	1
		36	19	22.05	22.12	21.98	1
		36	39	21.93	22.02	21.96	1
		75	0	22.00	22.05	21.95	1
		1	0	22.30	22.40	22.24	1
		1	37	22.25	22.32	22.24	1
		1	74	22.18	22.30	22.18	1
15 MHz	16QAM	36	0	21.08	21.10	21.06	2
		36	19	20.99	21.11	20.99	2
		36	39	21.00	21.05	20.98	2
		75	0	21.08	21.12	20.98	2
		1	0	21.12	21.23	21.11	2
		1	37	21.13	21.16	21.07	2
		1	74	21.06	21.12	21.07	2
	64QAM	36	0	20.27	20.34	20.17	3
		36	19	20.16	20.23	20.14	3
		36	39	20.19	20.28	20.14	3
1		75	0	20.21	20.23	20.19	3

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				LTE Band 4			
BW	Madulatian	RB	RB	Low CH 20050	Mid CH 20175	High CH 20300	
BW	Modulation	Size	Offset	Frequency 1720 MHz	Frequency 1732.5 MHz	Frequency 1745 MHz	MPR
		1	0	23.07	23.15	23.04	0
		1	50	22.96	23.04	22.93	0
		1	99	22.83	22.91	22.80	0
	QPSK	50	0	22.10	22.18	22.07	1
		50	25	22.06	22.14	22.03	1
		50	50	22.01	22.09	21.98	1
		100	0	22.01	22.09	21.98	1
		1	0	22.33	22.41	22.30	1
		1	50	22.29	22.37	22.26	1
		1	99	22.24	22.32	22.21	1
20 MHz	16QAM	50	0	21.10	21.18	21.07	2
		50	25	21.07	21.15	21.04	2
		50	50	21.03	21.11	21.00	2
		100	0	21.09	21.17	21.06	2
		1	0	21.18	21.26	21.15	2
		1	50	21.15	21.23	21.12	2
		1	99	21.12	21.20	21.09	2
	64QAM	50	0	20.28	20.36	20.25	3
		50	25	20.23	20.31	20.20	3
		50	50	20.21	20.29	20.18	3
		100	0	20.23	20.31	20.20	3

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#### **EIRP**

#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 1.4MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19957	1710.7	-18.29	41.29	23.00	199.71	Н	1
20175	1732.5	-17.84	41.36	23.52	224.91	Н	1
20393	1754.3	-19.31	42.74	23.43	220.44	Н	1
19957	1710.7	-25.20	44.25	19.05	80.26	V	1
20175	1732.5	-25.00	44.20	19.20	83.18	V	1
20393	1754.3	-25.47	44.09	18.61	72.66	V	1

#### **CHANNEL BANDWIDTH: 1.4MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19957	1710.7	-19.16	41.29	22.13	163.46	Н	1
20175	1732.5	-18.77	41.36	22.59	181.55	Н	1
20393	1754.3	-20.27	42.74	22.47	176.73	Н	1
19957	1710.7	-26.07	44.25	18.18	65.69	V	1
20175	1732.5	-25.93	44.20	18.27	67.14	V	1
20393	1754.3	-26.43	44.09	17.65	58.25	V	1

#### **CHANNEL BANDWIDTH: 1.4MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19957	1710.7	-19.90	41.29	21.39	137.85	Н	1
20175	1732.5	-19.87	41.36	21.50	141.09	Н	1
20393	1754.3	-20.73	42.74	22.01	158.71	Н	1
19957	1710.7	-27.98	44.25	16.27	42.32	V	1
20175	1732.5	-27.86	44.20	16.34	43.05	V	1
20393	1754.3	-28.19	44.09	15.90	38.86	V	1

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#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 3MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19965	1711.5	-18.27	41.27	23.00	199.39	Н	1
20175	1732.5	-17.90	41.36	23.46	221.82	Н	1
20385	1753.5	-19.26	42.76	23.50	223.98	Н	1
19965	1711.5	-25.18	44.26	19.08	80.95	V	1
20175	1732.5	-25.06	44.20	19.14	82.04	V	1
20385	1753.5	-25.42	44.23	18.81	76.03	V	1

#### **CHANNEL BANDWIDTH: 3MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19965	1711.5	-19.34	41.27	21.93	155.85	Н	1
20175	1732.5	-18.79	41.36	22.57	180.72	Н	1
20385	1753.5	-20.25	42.76	22.51	178.32	Н	1
19965	1711.5	-26.25	44.26	18.01	63.27	V	1
20175	1732.5	-25.95	44.20	18.25	66.83	V	1
20385	1753.5	-26.41	44.23	17.82	60.53	V	1

#### **CHANNEL BANDWIDTH: 3MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19965	1711.5	-19.88	41.27	21.39	137.63	Н	1
20175	1732.5	-19.93	41.36	21.44	139.16	Н	1
20385	1753.5	-20.68	42.76	22.08	161.25	Н	1
19965	1711.5	-27.96	44.26	16.30	42.68	V	1
20175	1732.5	-27.92	44.20	16.28	42.46	V	1
20385	1753.5	-28.14	44.23	16.09	40.66	V	1

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#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 5MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19975	1712.5	-18.33	41.39	23.06	202.26	Н	1
20175	1732.5	-17.85	41.36	23.51	224.39	Н	1
20375	1752.5	-19.21	42.63	23.42	219.99	Н	1
19975	1712.5	-25.24	44.17	18.93	78.09	V	1
20175	1732.5	-25.01	44.20	19.19	82.99	V	1
20375	1752.5	-25.37	44.35	18.97	78.94	V	1

#### **CHANNEL BANDWIDTH: 5MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19975	1712.5	-19.16	41.39	22.23	167.07	Н	1
20175	1732.5	-18.87	41.36	22.49	177.42	Н	1
20375	1752.5	-20.31	42.63	22.32	170.77	Н	1
19975	1712.5	-26.07	44.17	18.10	64.51	V	1
20175	1732.5	-26.03	44.20	18.17	65.61	V	1
20375	1752.5	-26.47	44.35	17.87	61.28	V	1

#### **CHANNEL BANDWIDTH: 5MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
19975	1712.5	-19.94	41.39	21.45	139.60	Н	1
20175	1732.5	-19.88	41.36	21.49	140.77	Н	1
20375	1752.5	-20.63	42.63	22.00	158.38	Н	1
19975	1712.5	-28.02	44.17	16.15	41.17	V	1
20175	1732.5	-27.87	44.20	16.33	42.95	V	1
20375	1752.5	-28.09	44.35	16.26	42.22	V	1

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#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 10MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20000	1715.0	-18.14	41.49	23.35	216.07	Н	1
20175	1732.5	-17.79	41.36	23.57	227.51	Н	1
20350	1750.0	-19.08	42.28	23.21	209.31	Н	1
20000	1715.0	-25.05	44.06	19.01	79.67	V	1
20175	1732.5	-24.95	44.20	19.25	84.14	V	1
20350	1750.0	-25.24	44.43	19.19	82.95	V	1

#### **CHANNEL BANDWIDTH: 10MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20000	1715.0	-19.29	41.49	22.20	165.81	Н	1
20175	1732.5	-18.89	41.36	22.47	176.60	Н	1
20350	1750.0	-20.24	42.28	22.05	160.25	Н	1
20000	1715.0	-26.20	44.06	17.86	61.14	V	1
20175	1732.5	-26.05	44.20	18.15	65.31	V	1
20350	1750.0	-26.40	44.43	18.03	63.50	V	1

#### **CHANNEL BANDWIDTH: 10MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20000	1715.0	-19.75	41.49	21.74	149.14	Н	1
20175	1732.5	-19.82	41.36	21.55	142.72	Н	1
20350	1750.0	-20.50	42.28	21.78	150.70	Н	1
20000	1715.0	-27.83	44.06	16.23	42.00	V	1
20175	1732.5	-27.81	44.20	16.39	43.55	V	1
20350	1750.0	-27.96	44.43	16.47	44.36	V	1

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#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 15MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20025	1717.5	-18.15	41.34	23.19	208.35	Н	1
20175	1732.5	-17.86	41.36	23.50	223.87	Н	1
20325	1747.5	-19.15	42.09	22.94	196.83	Н	1
20025	1717.5	-25.06	44.04	18.98	79.14	V	1
20175	1732.5	-25.02	44.20	19.18	82.79	V	1
20325	1747.5	-25.31	44.22	18.90	77.68	V	1

#### **CHANNEL BANDWIDTH: 15MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20025	1717.5	-19.01	41.34	22.33	170.92	Н	1
20175	1732.5	-18.73	41.36	22.63	183.23	Н	1
20325	1747.5	-20.00	42.09	22.09	161.85	Н	1
20025	1717.5	-25.92	44.04	18.12	64.92	V	1
20175	1732.5	-25.89	44.20	18.31	67.76	V	1
20325	1747.5	-26.16	44.22	18.05	63.87	V	1

#### **CHANNEL BANDWIDTH: 15MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20025	1717.5	-19.76	41.34	21.58	143.81	Н	1
20175	1732.5	-19.89	41.36	21.48	140.44	Н	1
20325	1747.5	-20.57	42.09	21.51	141.71	Н	1
20025	1717.5	-27.84	44.04	16.20	41.73	V	1
20175	1732.5	-27.88	44.20	16.32	42.85	V	1
20325	1747.5	-28.03	44.22	16.19	41.54	V	1

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#### LTE BAND 4

#### **CHANNEL BANDWIDTH: 20MHz QPSK**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20050	1720.0	-18.73	41.28	22.55	179.93	Н	1
20175	1732.5	-18.31	41.36	23.05	201.88	Н	1
20300	1745.0	-19.73	41.96	22.23	167.19	Н	1
20050	1720.0	-25.64	44.14	18.50	70.71	V	1
20175	1732.5	-25.47	44.20	18.73	74.58	V	1
20300	1745.0	-25.89	43.88	17.99	62.95	V	1

#### **CHANNEL BANDWIDTH: 20MHz 16QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20050	1720.0	-19.66	41.28	21.62	145.24	Н	1
20175	1732.5	-19.38	41.36	21.98	157.80	Н	1
20300	1745.0	-20.56	41.96	21.40	138.10	Н	1
20050	1720.0	-26.57	44.14	17.57	57.08	V	1
20175	1732.5	-26.54	44.20	17.66	58.29	V	1
20300	1745.0	-26.72	43.88	17.16	52.00	V	1

#### **CHANNEL BANDWIDTH: 20MHz 64QAM**

Channel	Frequency (MHz)	SPA LVL (dBm)	Correction Factor(dB)	EIRP(dBm)	EIRP(mW)	Polarization (H/V)	LIMIT (W)
20050	1720.0	-20.34	41.28	20.94	124.19	Н	1
20175	1732.5	-20.34	41.36	21.03	126.65	Н	1
20300	1745.0	-21.15	41.96	20.81	120.36	Н	1
20050	1720.0	-28.42	44.14	15.72	37.28	V	1
20175	1732.5	-28.33	44.20	15.87	38.60	V	1
20300	1745.0	-28.61	43.88	15.27	33.67	V	1

**REMARKS:** 1. EIRP Output Power (dBm) = SPA LVL (dBm) + Correction Factor (dB).

2. Correction factor (dB) = Free Space Loss + Antenna Factor + Cable Loss

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#### 3.2 FREQUENCY STABILITY MEASUREMENT

#### 3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

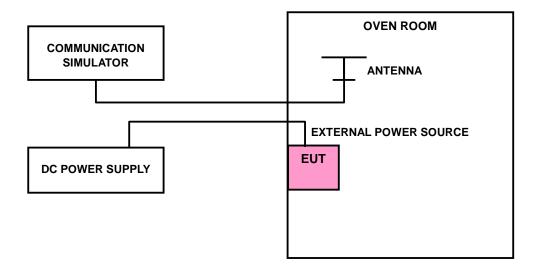
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### 3.2.2 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 ±0.5°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.

#### 3.2.3 TEST SETUP



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## 3.2.4 TEST RESULTS

#### LTE BAND 4

#### FREQUENCY ERROR VS. VOLTAGE

	1.41		
VOLTAGE (Volts)	FREQUENCY	LIMIT (ppm)	
	Low Channel	High Channel	
3.85	0.0008	0.0010	2.5
3.4	-0.0013	-0.0014	2.5
4.4	-0.0008	-0.0009	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

	1.4		
TEMP. (℃)	FREQUENCY	LIMIT (ppm)	
	Low Channel	High Channel	
-30	-0.0059	-0.0055	2.5
-20	-0.0054	-0.0049	2.5
-10	-0.0048	-0.0043	2.5
0	-0.0038	-0.0036	2.5
10	-0.0034	-0.0030	2.5
20	-0.0026	-0.0024	2.5
30	-0.0016	-0.0014	2.5
40	-0.0009	-0.0008	2.5
50	-0.0002	-0.0002	2.5



#### FREQUENCY ERROR VS. VOLTAGE

	3M		
VOLTAGE (Volts)	FREQUENCY	LIMIT (ppm)	
	Low Channel	High Channel	
3.85	0.0008	0.0009	2.5
3.4	-0.0008	-0.0011	2.5
4.4	0.0008 0.0008		2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

	3M		
TEMP. (°C)	FREQUENCY	LIMIT (ppm)	
	Low Channel	High Channel	
-30	-0.0060	-0.0055	2.5
-20	-0.0055	-0.0048	2.5
-10	-0.0044	-0.0042	2.5
0	-0.0039	-0.0036	2.5
10	-0.0028	-0.0026	2.5
20	-0.0024	-0.0019	2.5
30	-0.0019	-0.0017	2.5
40	-0.0011	-0.0010	2.5
50	-0.0002	-0.0003	2.5



## FREQUENCY ERROR VS. VOLTAGE

	5MHz		
VOLTAGE (Volts)	FREQUENCY	FREQUENCY ERROR (ppm)	
	Low Channel	High Channel	
3.85	0.0009	0.0010	2.5
3.4	-0.0007	-0.0012	2.5
4.4	0.0009	0.0008	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

	5MHz		
TEMP. (℃)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	Low Channel	High Channel	
-30	-0.0057	-0.0053	2.5
-20	-0.0049	-0.0046	2.5
-10	-0.0043	-0.0042	2.5
0	-0.0037	-0.0031	2.5
10	-0.0028	-0.0028	2.5
20	-0.0020	-0.0018	2.5
30	-0.0013	-0.0015	2.5
40	-0.0008	-0.0009	2.5
50	-0.0002	-0.0002	2.5



## FREQUENCY ERROR VS. VOLTAGE

	10MHz		
VOLTAGE (Volts)	FREQUENCY	FREQUENCY ERROR (ppm)	
	Low Channel High Channel		
3.85	0.0009	0.0012	2.5
3.4	-0.0011	-0.0013	2.5
4.4	0.0008	0.0009	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

	10MHz		
TEMP. (°C)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	Low Channel	High Channel	
-30	-0.0056	-0.0052	2.5
-20	-0.0048	-0.0048	2.5
-10	-0.0044	-0.0041	2.5
0	-0.0033	-0.0031	2.5
10	-0.0026	-0.0025	2.5
20	-0.0021	-0.0019	2.5
30	-0.0014	-0.0013	2.5
40	-0.0009	-0.0007	2.5
50	-0.0002	-0.0002	2.5



## FREQUENCY ERROR VS. VOLTAGE

	15MHz		
VOLTAGE (Volts)	FREQUENCY	FREQUENCY ERROR (ppm)	
	Low Channel	Low Channel High Channel	
3.85	0.0010	0.0009	2.5
3.4	-0.0012	-0.0012	2.5
4.4	0.0009	0.0010	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

## FREQUENCY ERROR vs. TEMPERATURE.

	15MHz		
TEMP. (℃)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	Low Channel	High Channel	
-30	-0.0055	-0.0054	2.5
-20	-0.0047	-0.0043	2.5
-10	-0.0042	-0.0039	2.5
0	-0.0032	-0.0031	2.5
10	-0.0026	-0.0024	2.5
20	-0.0019	-0.0021	2.5
30	-0.0013	-0.0012	2.5
40	-0.0009	-0.0008	2.5
50	-0.0002	-0.0003	2.5

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## FREQUENCY ERROR VS. VOLTAGE

	20MHz		
VOLTAGE (Volts)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	Low Channel	High Channel	
3.85	0.0011	0.0012	2.5
3.4	-0.0013	-0.0012	2.5
4.4	0.0009	0.0012	2.5

**NOTE:** The applicant defined the normal working voltage of the battery is from 3.4Vdc to 4.4Vdc.

## FREQUENCY ERROR vs. TEMPERATURE.

	20MHz		
TEMP. (℃)	FREQUENCY ERROR (ppm)		LIMIT (ppm)
	Low Channel	High Channel	
-30	-0.0052	-0.0049	2.5
-20	-0.0045	-0.0043	2.5
-10	-0.0040	-0.0036	2.5
0	-0.0032	-0.0030	2.5
10	-0.0025	-0.0021	2.5
20	-0.0019	-0.0017	2.5
30	-0.0011	-0.0009	2.5
40	-0.0005	-0.0004	2.5
50	-0.0002	-0.0001	2.5

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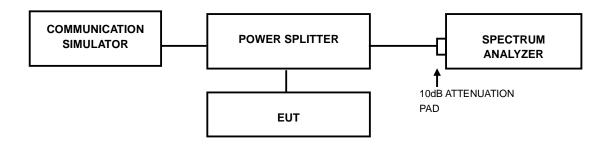


#### 3.3 OCCUPIED BANDWIDTH MEASUREMENT

#### 3.3.1 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.

#### 3.3.2 TEST SETUP



#### 3.3.3 TEST PROCEDURES

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



## 3.3.4 TEST RESULTS

#### LTE BAND 4

EIE B/MD T				
CHANNEL BANDWIDTH: 1.4MHz				
CHANNEL	Frequency 99% OCCUPIED Bandwidth (MHz)			
CHANNEL (MHz)		QPSK	16QAM	64QAM
19957	1710.7	1.09	1.08	1.08
20175	1732.5	1.08	1.08	1.08
20393	1754.3	1.09	1.08	1.08

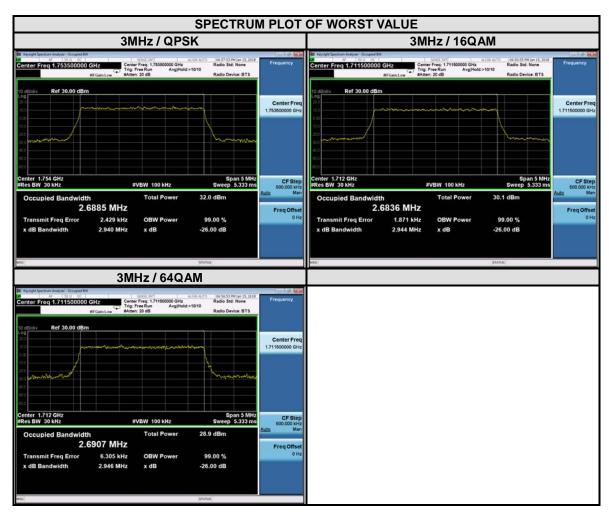


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## LTE BAND 4

CHANNEL BANDWIDTH: 3MHz					
CHANNEL	Frequency	99% OCCUPIED Bandwidth (MHz)			
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
19965	1711.5	2.68	2.68	2.69	
20175	1732.5	2.69	2.68	2.69	
20385	1753.5	2.69	2.68	2.69	



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### LTE BAND 4

CHANNEL BANDWIDTH: 5MHz				
99% OCCUPIED Bandwidth (MHz)				
CHANNEL	(MHz)	QPSK	16QAM	64QAM
19975	1712.5	4.48	4.47	4.49
20175	1732.5	4.48	4.47	4.51
20375	1752.5	4.47	4.48	4.48



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#### LTE BAND 4

LIL DAND T					
CHANNEL BANDWIDTH: 10MHz					
CHANNEL	Frequency	99% OCCUPIED Bandwidth (MHz)			
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
20000	1715	8.95	8.94	8.95	
20175	1732.5	8.94	8.92	8.95	
20350	1750	8.95	8.93	8.93	



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### LTE BAND 4

CHANNEL BANDWIDTH: 15MHz					
CHANNEL	Frequency 99% OCCUPIED Bandwidth (MHz)				
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
20025	1717.5	13.43	13.42	13.42	
20175	1732.5	13.39	13.41	13.37	
20325	1747.5	13.45	13.40	13.41	



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### LTE BAND 4

CHANNEL BANDWIDTH: 20MHz					
Frequency 99% OCCUPIED Bandwidth (MHz)					
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
20050	1720	17.89	17.91	17.86	
20175	1732.5	17.85	17.85	17.83	
20300	1745	17.88	17.88	17.86	



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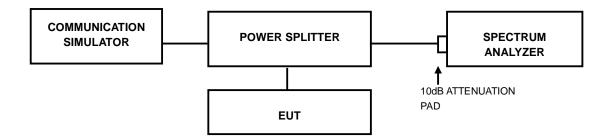


### 3.4 PEAK TO AVERAGE RATIO

### 3.4.1 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

### 3.4.2 TEST SETUP



## 3.4.3 TEST PROCEDURES

- 1. Set resolution/measurement bandwidth ≥ 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%.

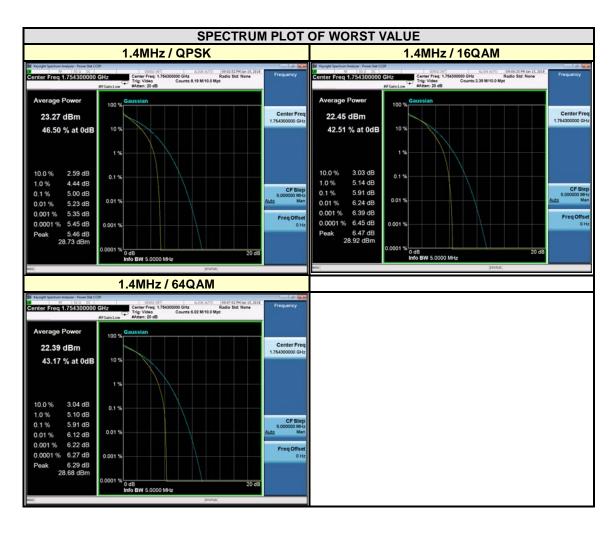
Page 42 of 85



### 3.4.4 TEST RESULTS

#### LTE BAND 4

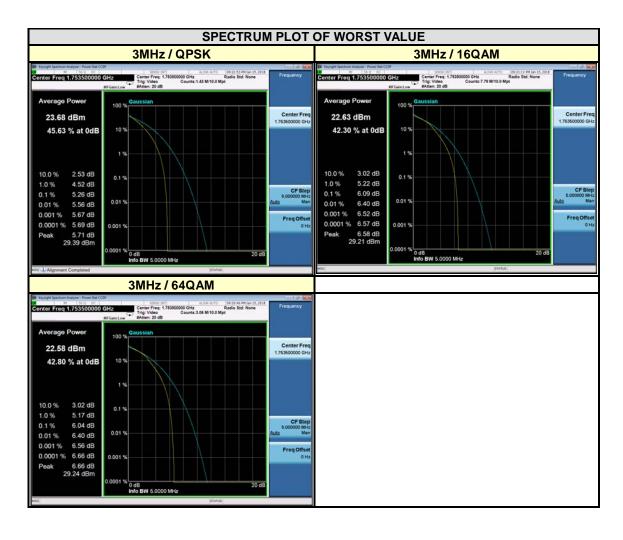
CHANNEL BANDWIDTH: 1.4MHz					
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)			
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
19957	1710.7	4.54	5.38	5.40	
20175	1732.5	4.51	5.31	5.34	
20393	1754.3	5.00	5.91	5.91	



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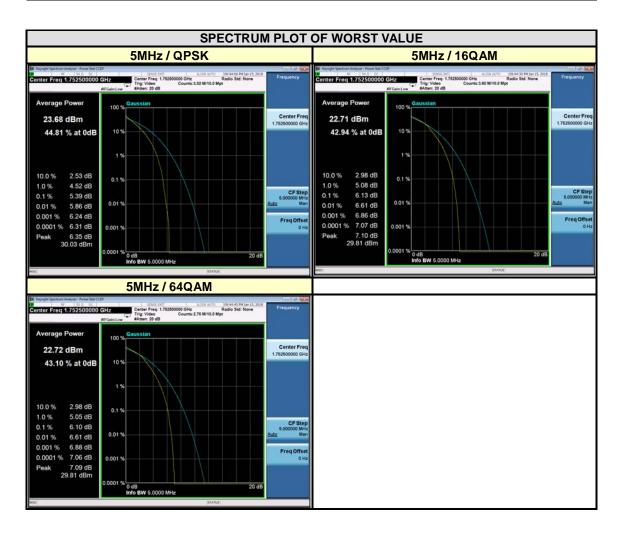
CHANNEL BANDWIDTH: 3MHz				
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)		
CHANNEL	(MHz)	QPSK	16QAM	64QAM
19965	1711.5	4.92	5.75	5.72
20175	1732.5	4.92	5.47	5.45
20385	1753.5	5.26	6.09	6.04



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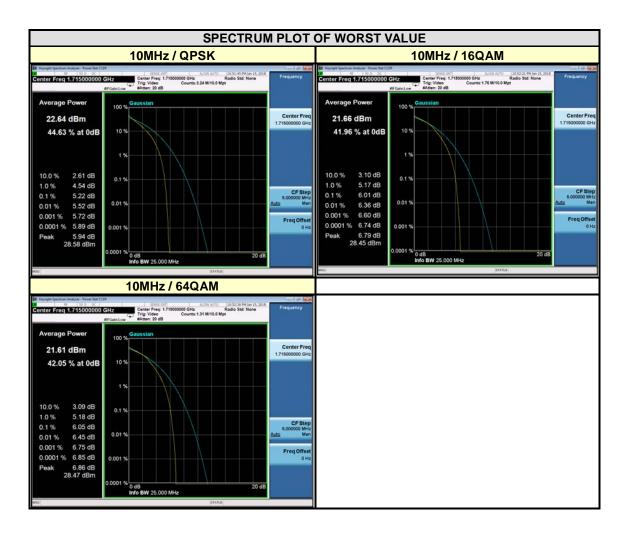
CHANNEL BANDWIDTH: 5MHz					
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)			
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
19975	1712.5	5.29	6.05	6.02	
20175	1732.5	4.96	5.67	5.63	
20375	1752.5	5.39	6.13	6.10	



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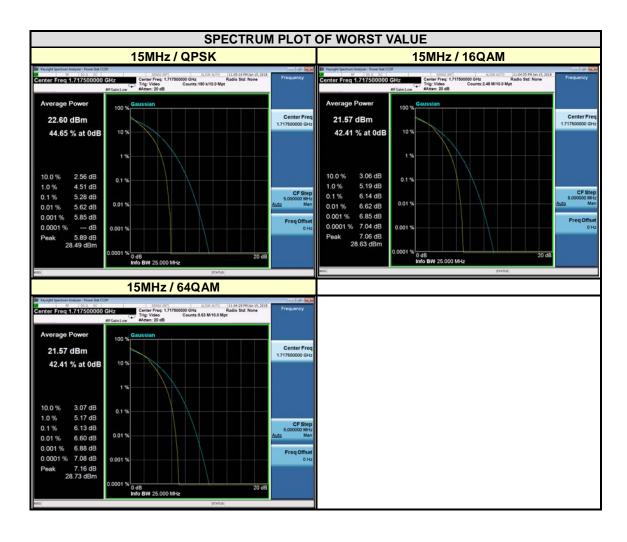
CHANNEL BANDWIDTH: 10MHz				
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)		
CHANNEL	(MHz)	QPSK	16QAM	64QAM
20000	1715	5.22	6.01	6.05
20175	1732.5	4.94	5.37	5.38
20350	1750	4.97	5.84	5.87



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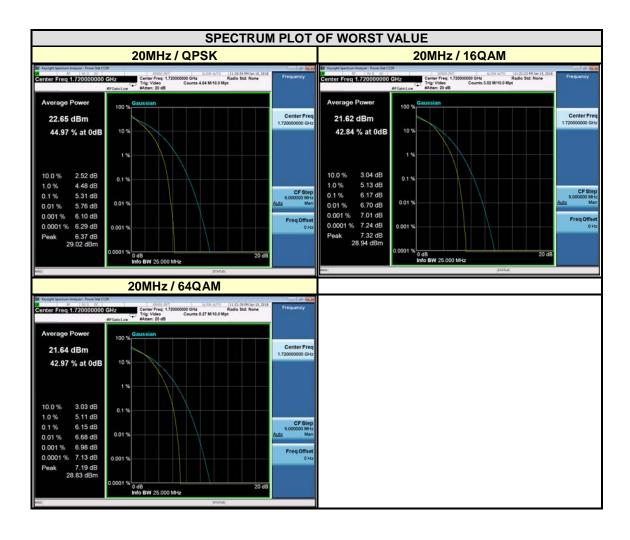
CHANNEL BANDWIDTH: 15MHz					
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)			
CHANNEL	(MHz)	QPSK	16QAM	64QAM	
20025	1717.5	5.28	6.14	6.13	
20175	1732.5	4.84	5.65	5.64	
20325	1747.5	5.00	5.80	5.81	



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CHANNEL BANDWIDTH: 20MHz				
CHANNEL	Frequency	PEAK TO AVERAGE RATIO (dB)		
CHANNEL	(MHz)	QPSK	16QAM	64QAM
20050	1720	5.31	6.17	6.15
20175	1732.5	4.99	5.79	5.79
20300	1745	5.02	5.85	5.85



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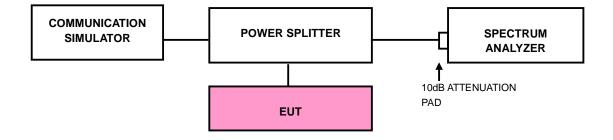
### 3.5 BAND EDGE MEASUREMENT

### 3.5.1 LIMITS OF BAND EDGE MEASUREMENT

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.

## 3.5.2 TEST SETUP



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#### 3.5.3 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 1~5 MHz. RBW of the spectrum is 20kHz and VBW of the spectrum is 100 kHz. (LTE bandwidth 1.4MHz)
- d. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 30kHz and VBW of the spectrum is 100kHz. (LTE bandwidth 3MHz)
- e. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 50kHz and VBW of the spectrum is 200kHz. (LTE bandwidth 5MHz)
- f. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz. (LTE bandwidth 10MHz)
- g. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz. (LTE bandwidth 15MHz)
- h. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz. (LTE bandwidth 20MHz)
- i. Record the max trace plot into the test report.



## 3.5.4 TEST RESULTS

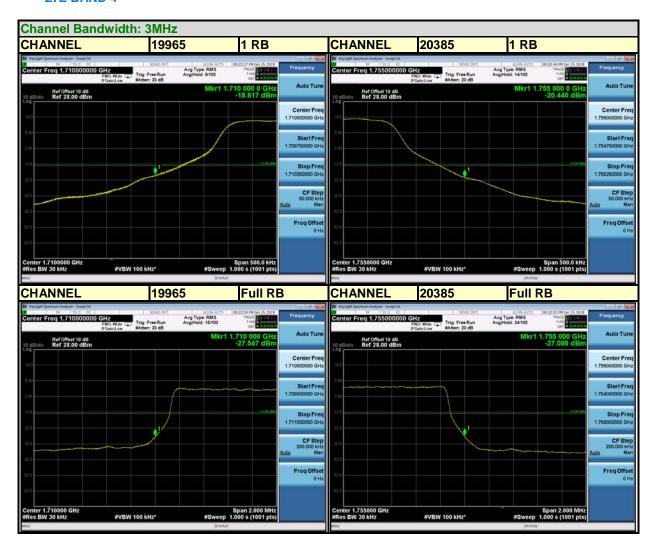
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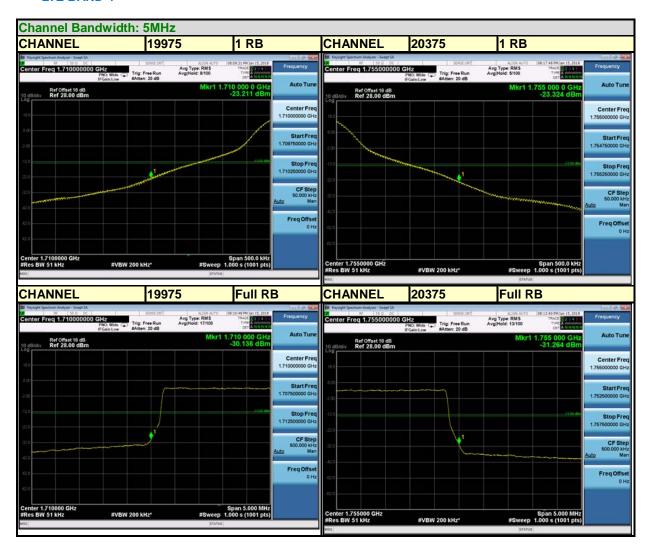
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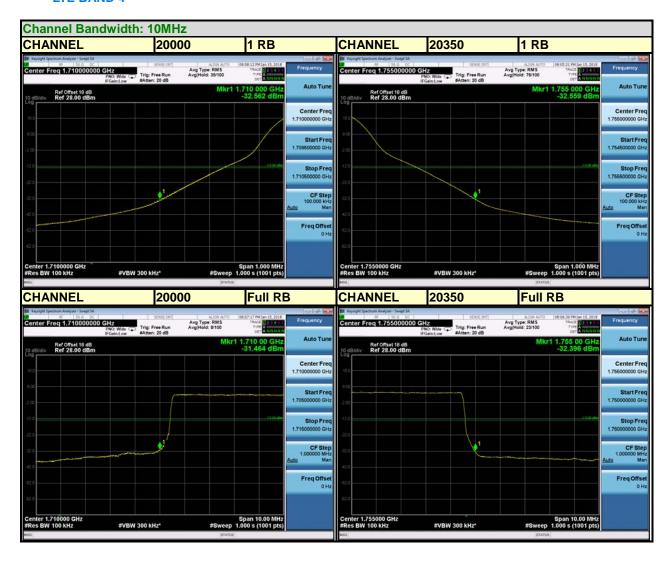


#### LTE BAND 4





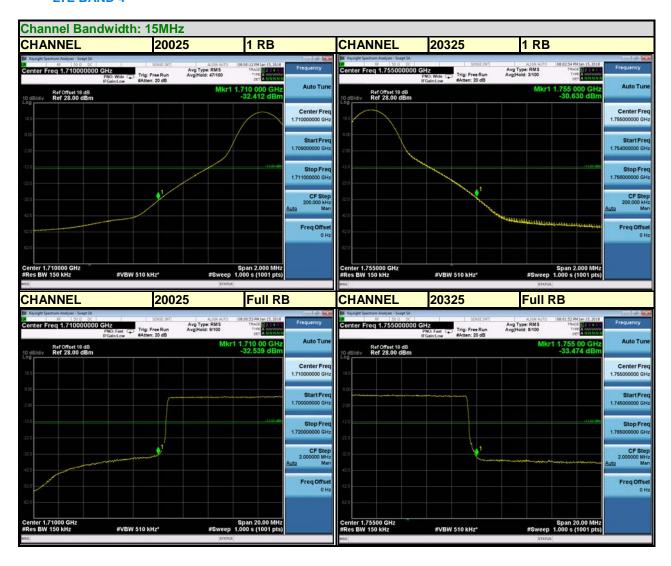
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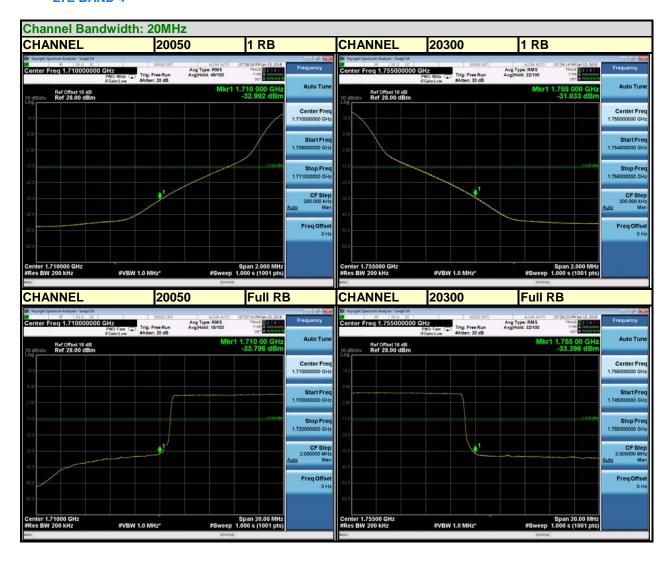


#### LTE BAND 4





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#### 3.6 CONDUCTED SPURIOUS EMISSIONS

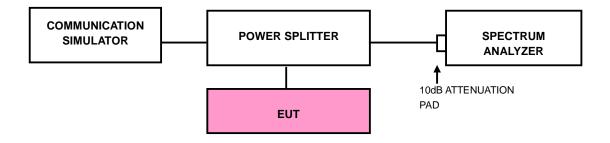
### 3.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

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 -13 dBm

### 3.6.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at middle operational frequency range.
- b. Measuring frequency range is from 30 MHz to 18.0GHz for LTE Band 4. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

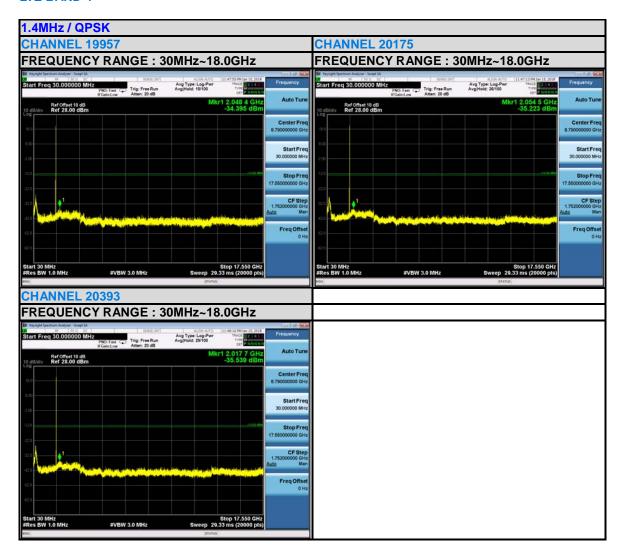
#### 3.6.3 TEST SETUP



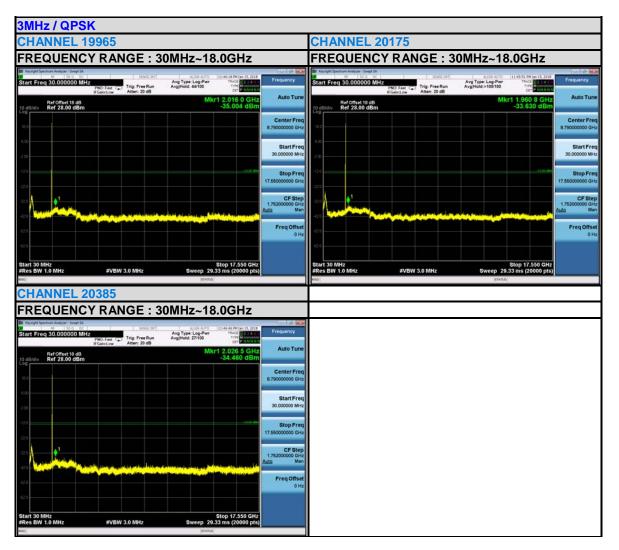


## 3.6.4 TEST RESULTS

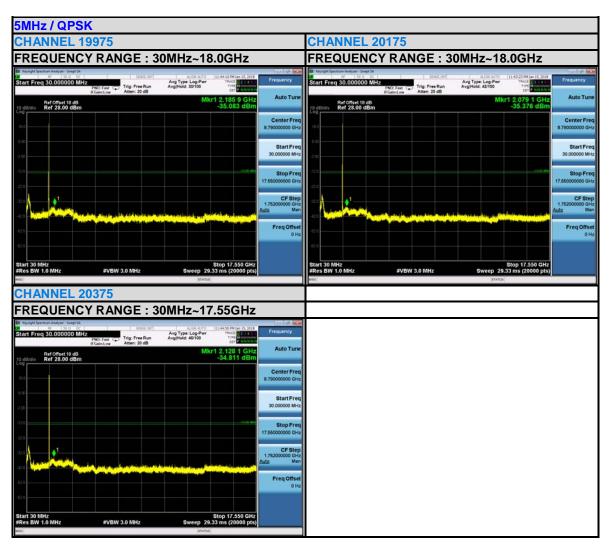
#### LTE BAND 4



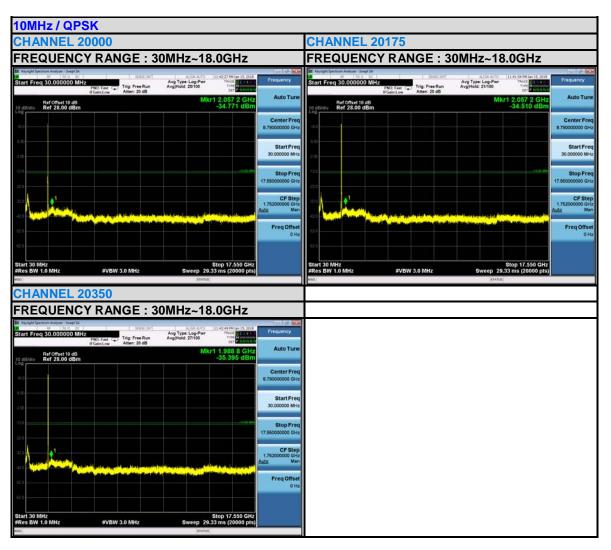




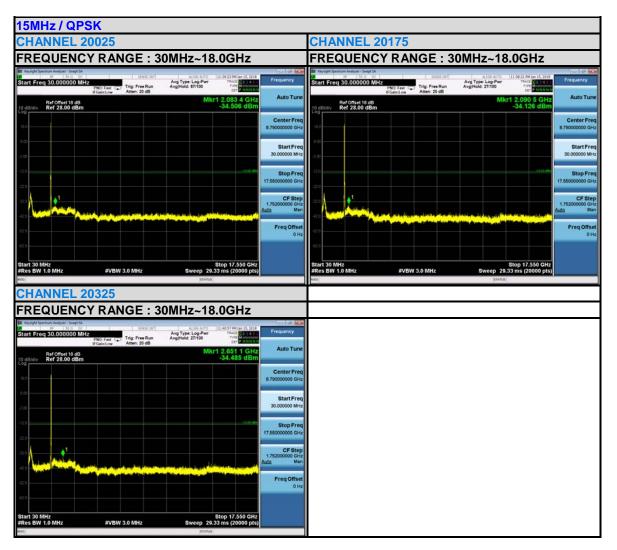




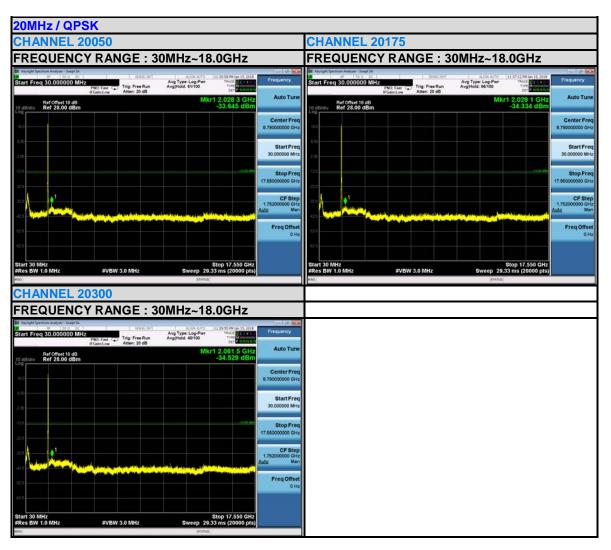












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#### 3.7 RADIATED EMISSION MEASUREMENT

#### 3.7.1 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 log10(P) dB. The limit of emission equal to -13dBm

#### 3.7.2 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. EIRP = Output power level of S.G TX cable loss + 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, E.R.P power = E.I.P.R power - 2.15dBi.

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

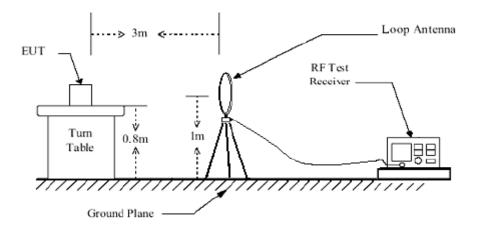
#### 3.7.3 DEVIATION FROM TEST STANDARD

No deviation

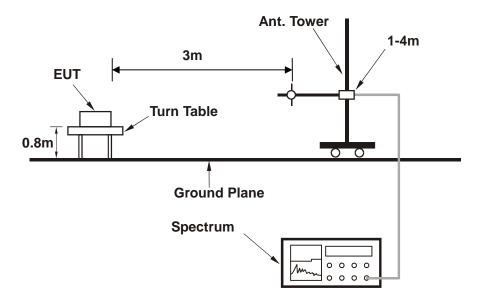


## 3.7.4 TEST SETUP

### <Below 30MHz>



## <Above 30MHz>



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

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## 3.7.5 TEST RESULTS

### **BELOW 1GHz WORST-CASE DATA**

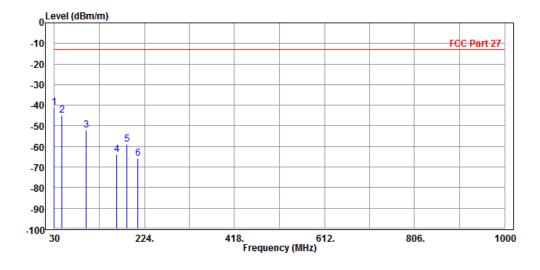
9 KHz – 30 KHz data: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

## 30 MHz – 1GHz data:

#### LTE Band 4:

MODE	TX channel 20175	FREQUENCY RANGE	Below 1000MHz	
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter	
TESTED BY	Star Le			
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M				

			Read	Limit	0ver			
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
_								
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	30.000	-41.05	-60.39	-13.00	-28.05	19.34	Peak	Horizontal
2	46.490	-44.94	-51.28	-13.00	-31.94	6.34	Peak	Horizontal
3	97.900	-52.21	-41.50	-13.00	-39.21	-10.71	Peak	Horizontal
4	164.830	-63.94	-45.64	-13.00	-50.94	-18.30	Peak	Horizontal
5	186.170	-58.82	-41.22	-13.00	-45.82	-17.60	Peak	Horizontal
6	210.420	-65.71	-48.68	-13.00	-52.71	-17.03	Peak	Horizontal



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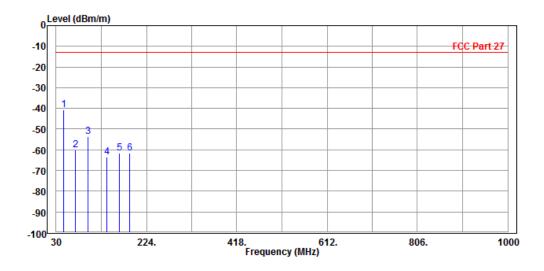
Email: <a href="mailto:customerservice.dg@cn.bureauveritas.com">customerservice.dg@cn.bureauveritas.com</a>

Report Version 1



MODE	TX channel 20175 FREQUENCY RANGE		Below 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter			
TESTED BY	TESTED BY Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						

	Freq	Level	Read Level			Factor	Remark	Pol/Phase
_	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1 PP	46.490	-40.82	-37.18	-13.00	-27.82	-3.64	Peak	Vertical
2	70.740	-60.11	-44.93	-13.00	-47.11	-15.18	Peak	Vertical
3	97.900	-53.45	-42.81	-13.00	-40.45	-10.64	Peak	Vertical
4	138.640	-63.66	-48.37	-13.00	-50.66	-15.29	Peak	Vertical
5	165.800	-61.55	-46.89	-13.00	-48.55	-14.66	Peak	Vertical
6	188.110	-61.53	-49.39	-13.00	-48.53	-12.14	Peak	Vertical



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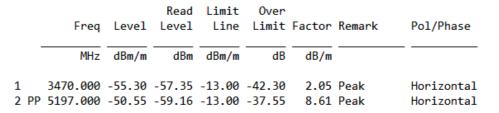
### **ABOVE 1GHz**

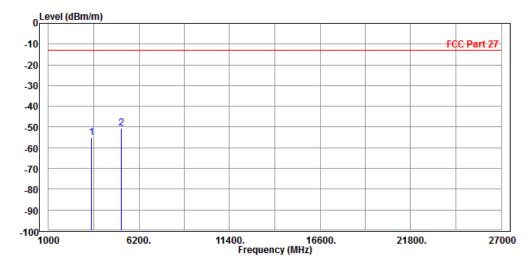
Note: For higher frequency, the emission is too low to be detected.

#### LTE BAND 4

### **CHANNEL BANDWIDTH: 1.4MHz/QPSK**

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter			
TESTED BY	Star Le					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						



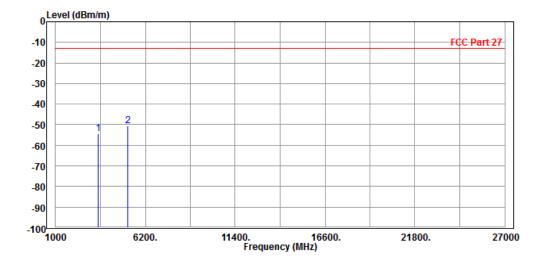


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MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter			
TESTED BY	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						

			Read	Limit	0ver			
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1	3470.000	-54.24	-56.77	-13.00	-41.24	2.53	Peak	Vertical
2 PP	5197.000	-50.48	-58.46	-13.00	-37.48	7.98	Peak	Vertical

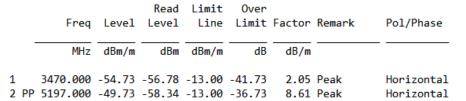


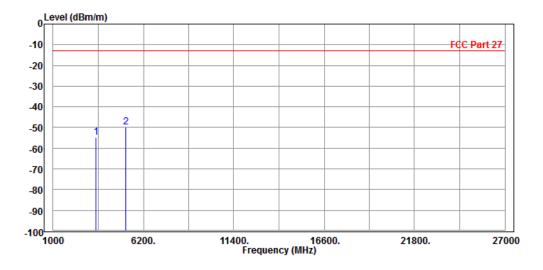
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## **CHANNEL BANDWIDTH: 3MHz/QPSK**

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter			
TESTED BY Star Le						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						



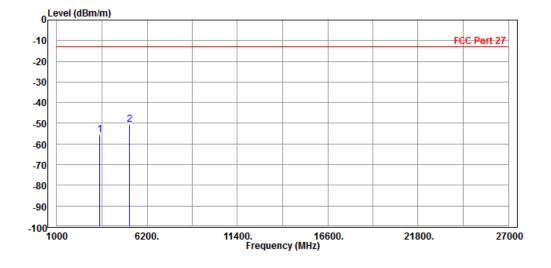


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MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter			
TESTED BY	ED BY Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						

	Freq	Level		Limit Line			Remark	Pol/Phase
-	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
	3470.000 5197.000							Vertical Vertical

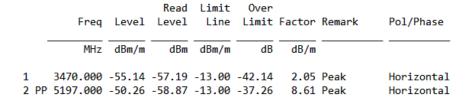


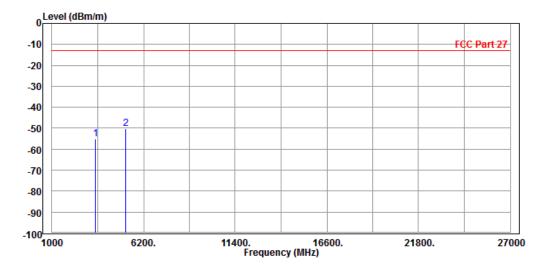
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## **CHANNEL BANDWIDTH: 5MHz/QPSK**

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter			
TESTED BY Star Le						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						



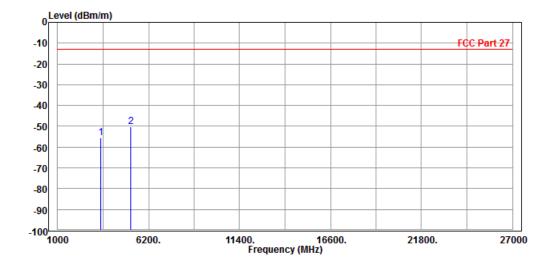


Tel: +86 755 8869 6566 Fax: +86 755 8869 6577



MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter				
TESTED BY	Star Le	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							

	Freq	Level		Limit Line		Factor	Remark	Pol/Phase
	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
_	3470.000 5197.000							Vertical Vertical



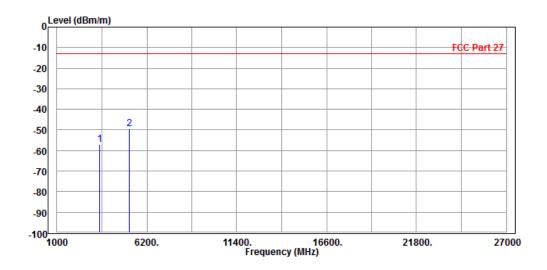
Tel: +86 755 8869 6566 Fax: +86 755 8869 6577



# **CHANNEL BANDWIDTH: 10MHz/QPSK**

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter				
TESTED BY	Star Le						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							

	Freq	Level		Limit Line		Factor	Remark	Pol/Phase
-	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
	3470.000 5186.000							Horizontal Horizontal

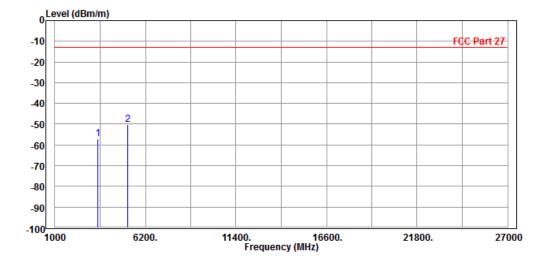


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MODE	TX channel 20175 FREQUENCY RANGE		Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter				
TESTED BY	Star Le	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							

	_			Limit				
	Freq	Level	Level	Line	Limit	Factor	Remark	Pol/Phase
	MHZ	aBm/m	dBm	aBm/m	dB	aB/m		
4	2470 000	F7 24	FO 74	42.00	44 24	2 52	DI-	V1
1	3470.000	-5/.21	-59.74	-13.00	-44.21	2.53	reak	Vertical
2	PP 5197.000	-50.33	-58.31	-13.00	-37.33	7.98	Peak	Vertical

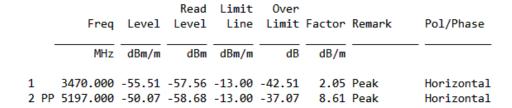


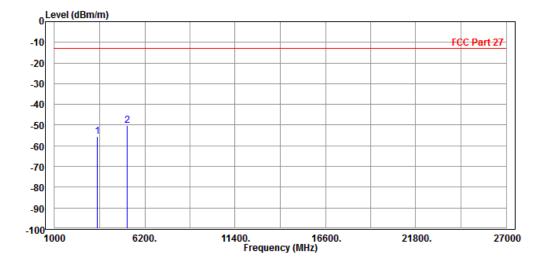
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## **CHANNEL BANDWIDTH: 15MHz/QPSK**

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH INPUT POWER		DC 5/9/12V from adapter				
TESTED BY	ED BY Star Le						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							



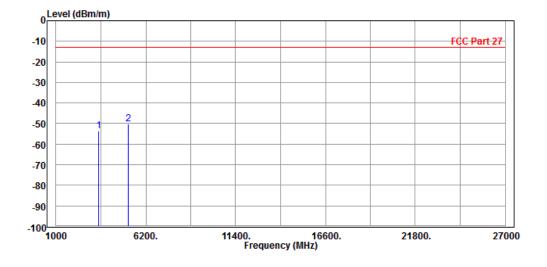


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MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	123deg C 70%RH		DC 5/9/12V from adapter				
TESTED BY	Star Le	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							

	Freq	Level		Limit Line		Factor	Remark	Pol/Phase	
-	MHz	dBm/m	dBm	dBm/m	dB	dB/m			
	3470.000 5197.000							Vertical Vertical	



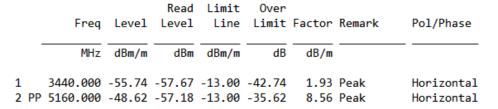
Tel: +86 755 8869 6566 Fax: +86 755 8869 6577

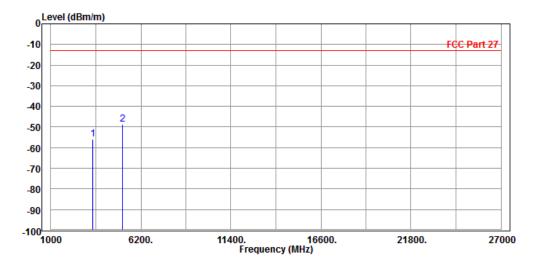


## **CHANNEL BANDWIDTH: 20MHz/QPSK**

#### CH20050

MODE	TX channel 20050	FREQUENCY RANGE	Above 1000MHz					
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter					
TESTED BY	ESTED BY Star Le							
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								

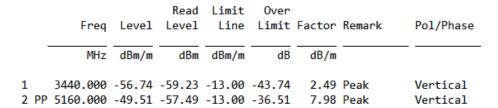


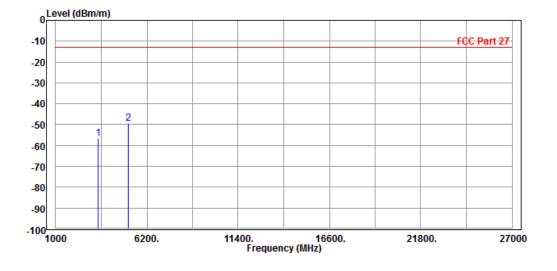


Tel: +86 755 8869 6566 Fax: +86 755 8869 6577



MODE	TX channel 20050	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter				
TESTED BY	Star Le	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							





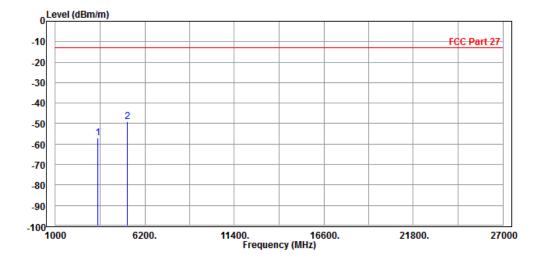
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#### CH20175

MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWER	DC 5/9/12V from adapter				
TESTED BY	Star Le	Star Le					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							

		Freq	Level		Limit Line		Factor	Remark	Pol/Phase
	-	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
_		3470.000 5186.000							Horizontal Horizontal

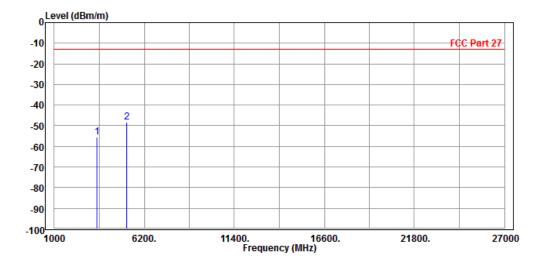


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MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter			
TESTED BY	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						

		Freq	Level		Limit		Factor	Remark	Pol/Phase
	-	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
1		3470.000 5197.000							Vertical Vertical

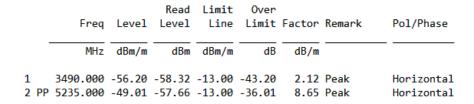


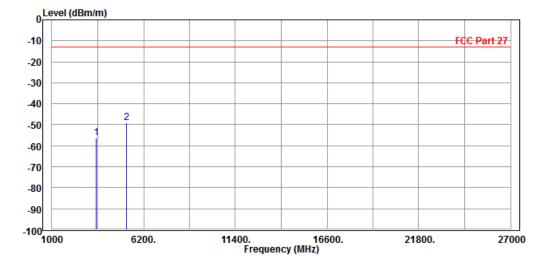
Tel: +86 755 8869 6566 Fax: +86 755 8869 6577



#### CH20300

MODE	TX channel 20300	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	DC 5/9/12V from adapter			
TESTED BY	Star Le					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M						



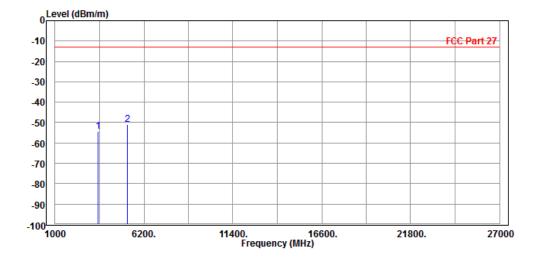


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MODE	TX channel 20175	FREQUENCY RANGE	Above 1000MHz			
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	IINPUT POWFR	DC 5/9/12V from adapter			
TESTED BY	Star Le					
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M						

		Freq	Level		Limit Line		Factor	Remark	Pol/Phase
	-	MHz	dBm/m	dBm	dBm/m	dB	dB/m		
_		3490.000 5235.000							Vertical Vertical



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# 4 INFORMATION ON THE TESTING LABORATORIES

We, BV 7LAYERS COMMUNICATIONS TECHNOLOGY (SHENZHEN) CO. LTD., were founded in 2015 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

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

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Web Site: www.adt.com.tw

**BV 7Layers Communications Technology** 

(Shenzhen) Co. Ltd

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



# 5 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.

---END---