

FCC TEST REPORT

(PART 27)

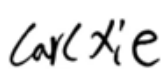
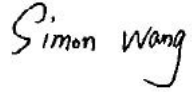
Applicant:	Astronomy Data Processing Corporation
Address:	2228 Cotner Ave Los Angeles, CA 90064

Manufacturer or Supplier:	Astronomy Data Processing Corporation
Address:	2228 Cotner Ave Los Angeles, CA 90064
Product:	Edge Controller 01
Model Name:	EC-01
FCC ID	2BM4513EA
Date of tests	Dec. 22, 2025 - Feb. 05, 2026

The tests have been carried out according to the requirements of the following standard:

☒ FCC Part 27	☒ ANSI/TIA/EIA-603-E
☒ ANSI/TIA/EIA-603-D	☒ ANSI C63.26-2015
☒ FCC Part 2	

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Carl Xie Engineer / Mobile Department	Approved by Simon Wang Manager / Mobile Department
	
Date: Feb. 05, 2026	Date: Feb. 05, 2026

BOOMWAVE TEST (SHENZHEN) CO., LTD. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report. The results documented in this report apply only the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. without written approval of BOOMWAVE TEST (SHENZHEN) CO., LTD., the test report shall not be reproduced except in full.



Test Report No.: RF260413B003

TABLE OF CONTENTS

1. SUMMARY OF TEST RESULTS	4
1.1 MEASUREMENT UNCERTAINTY.....	5
1.2 TEST SITE AND INSTRUMENTS.....	6
2. GENERAL INFORMATION.....	8
2.1 GENERAL DESCRIPTION OF EUT.....	8
2.2 CONFIGURATION OF SYSTEM UNDER TEST	12
2.3 DESCRIPTION OF SUPPORT UNITS.....	13
2.4 TEST ITEM AND TEST CONFIGURATION	14
2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	17
3. TEST TYPES AND RESULTS	18
3.1 OUTPUT POWER MEASUREMENT	18
3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT	18
3.1.2 TEST PROCEDURES	18
3.1.3 TEST SETUP	19
3.1.4 TEST RESULTS	20
3.2 FREQUENCY STABILITY MEASUREMENT	40
3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT	40
3.2.2 TEST PROCEDURE.....	40
3.2.3 TEST SETUP	40
3.2.3 TEST RESULTS	41
3.3 OCCUPIED BANDWIDTH MEASUREMENT	42
3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT	42
3.3.2 TEST SETUP	42
3.3.3 TEST PROCEDURES	42
3.3.4 TEST RESULTS	42
3.4 BAND EDGE MEASUREMENT	43
3.4.1 LIMITS OF BAND EDGE MEASUREMENT	43
3.4.2 TEST SETUP	44
3.4.3 TEST PROCEDURES	45
3.4.4 TEST RESULTS	45
3.5 CONDUCTED SPURIOUS EMISSIONS.....	46
3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT	46
3.5.2 TEST PROCEDURE.....	47
3.5.3 TEST SETUP	47
3.5.4 TEST RESULTS	47
3.6 RADIATED EMISSION MEASUREMENT	48
3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT	48
3.6.2 TEST PROCEDURES	49
3.6.3 DEVIATION FROM TEST STANDARD	49
3.6.4 TEST SETUP	50
3.6.5 TEST RESULTS	52
3.7 PEAK TO AVERAGE RATIO	98
3.7.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT	98
3.7.2 TEST SETUP	98
3.7.3 TEST PROCEDURES	98
3.7.4 TEST RESULTS	98
4 INFORMATION ON THE TESTING LABORATORIES	99
5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	100

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF260413B003	Original release	Feb. 05, 2026



Test Report No.: RF260413B003

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	TEST LAB*
§27.50(c)(10) §27.50(b)(10)	Effective Radiated Power (Band 12) (Band 13) (Band 17)(Band 30)	Compliance	A
§27.50(d)(4) §27.50(h)(2)	Equivalent Isotropically Radiated Power (Band 7)	Compliance	A
§2.1053 §27.53(c)(2) §27.53(f) §27.53(g) §27.53(h) §27.53(m)(4)	Radiated Spurious Emissions (Band 7) (Band 12) (Band 13) (Band 17)(Band 30)	Compliance	A

* Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

*Test Lab Information Reference

Lab A:

Boomwave Test (Shenzhen) Co., Ltd.

Lab Address:

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm, Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

Accredited Test Lab Cert 7607.01

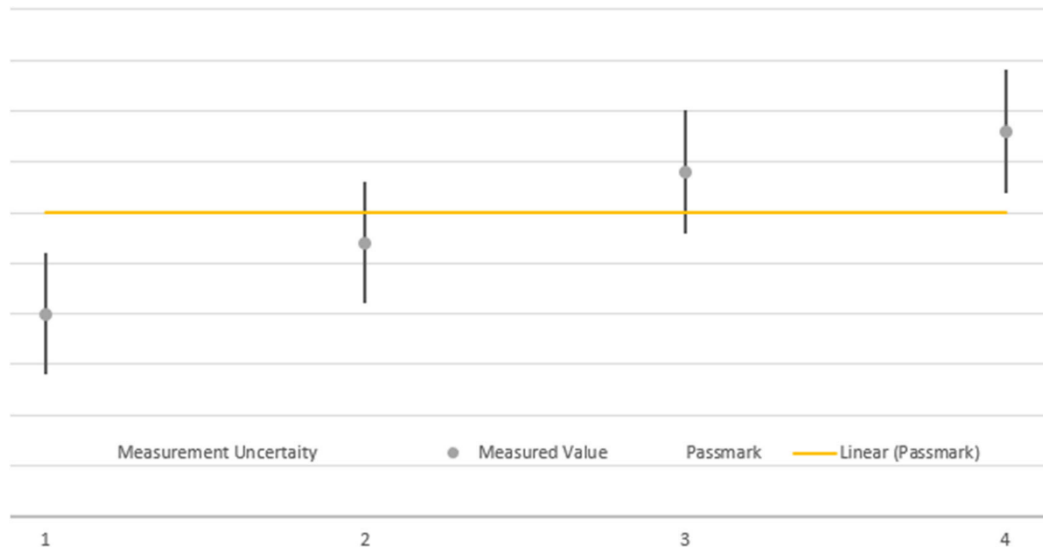
The FCC Site Registration No. is 646781; The Designation No. is CN1429.

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	UNCERTAINTY
Frequency Stability	±76.97Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions & Radiated Power (30MHz~1GHz)	±4.98dB
Radiated emissions & Radiated Power (1GHz ~6GHz)	±4.70dB
Radiated emissions (6GHz ~18GHz)	±4.60dB
Radiated emissions (18GHz ~40GHz)	±4.12dB
Conducted emissions	±4.01dB
Occupied Channel Bandwidth	±43.58KHz
Conducted Output power	±2.06dB
Band Edge Measurements	±4.70dB

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



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.



Test Report No.: RF260413B003

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	2025/7/3	2026/7/2
BiConiLog Antenna	ETS-LINDGREN	3143B	161965	2025/7/17	2026/7/16
Horn Antenna	SCHWARZBECK	BBHA9120D	3297	2025/9/27	2026/9/26
Horn Antenna	STEATITE	QWH-SL-18-40-K-SG QMS-00361	15433	2025/7/19	2026/7/18
Preamplifier	Tonscend	TPA184045	AP24L8060388	2025/7/3	2026/7/2
MXE EMI Receiver	keysight	N9038B	MY50018017	2025/7/1	2026/6/30
MXG Vector Signal Generator	Keysight	N5183B	MY59100137	2025/6/30	2026/6/29
Preamplifier	Tonscend	TPA001330	806JSAPO40804251015	2025/6/30	2026/6/29
Preamplifier	Tonscend	TPA011845	AP24L8060392	2025/6/30	2026/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927166	2025/6/30	2026/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927165	2025/6/30	2026/6/29
Active Receive Loop Antenna	SCHWARZBECK	FMZB 1519 B	00173	2025/6/30	2026/6/29
Temp. & Humi. Recorder	Kejian	HTC-01	157246	2025/7/2	2026/7/1
HIGH pass FILTER_1-18	EWT	EWT-57-0222	EWT-57-0222	2025/6/30	2026/6/29
HIGH pass FILTER_7-18	EWT	EWT-57-0223	EWT-57-0223	2025/6/30	2026/6/29
HIGH pass FILTER_3-18	EWT	EWT-57-0221	EWT-57-0221	2025/6/30	2026/6/29
DC~1GHz Lowpass Filter	EWT	EWT-56-0649	EWT-56-0649	2025/7/3	2026/7/2
Cable 1	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 2	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 3	N/A	N/A	N/A	2025/9/28	2026/9/27
Wireless communication integrated tester	Rohde&Schwarz	CMW500	182016	2025/6/30	2026/6/29
EXA Signal Analyzer	KEYSIGHT	N9010B	MY62170156	2025/6/30	2026/6/29
RF Control Unit	Tonscend	JS0806-1	21K8060504	2025/6/16	2026/6/15
DC Power Supply	AGILENT	HMP2020	100598	2025/7/1	2026/6/30
10dB attenuator	JFW INDUSTRIES INC	50HF-010-SMA	50HF-010-SMA-1	2025/6/30	2026/6/29
10dB attenuator	JFW INDUSTRIES INC	50HF-010-SMA	50HF-010-SMA-2	2025/6/30	2026/6/29
hygrothermograph	Anymetrers	----	TH101B	2025/7/22	2026/7/21

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

**Test Report No.: RF260413B003**

Temperature Box	zhongkemeiqi	MA22040172	MQ-DTH50F-2	2025/7/1	2026/6/30
power divider	WOKEN	71688	204-003180-01	2025/6/30	2026/6/29

NOTE:

1. The calibration interval of the above test instruments is 12 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.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 646781; The Designation No. is CN1429.

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT*	Edge Controller 01	
MODEL NAME*	EC-01	
NOMINAL VOLTAGE*	19Vdc	
MODULATION TECHNOLOGY	LTE	QPSK,16QAM, 64QAM
FREQUENCY RANGE	LTE Band 7 Channel Bandwidth: 5MHz	2502.5MHz ~ 2567.5MHz
	LTE Band 7 Channel Bandwidth: 10MHz	2505MHz ~ 2565MHz
	LTE Band 7 Channel Bandwidth: 15MHz	2507.5MHz ~ 2562.5MHz
	LTE Band 7 Channel Bandwidth: 20MHz	2510MHz ~ 2560MHz
	LTE Band 12 Channel Bandwidth: 1.4MHz	699.7MHz ~ 715.3MHz
	LTE Band 12 Channel Bandwidth: 3MHz	700.5MHz ~ 714.5MHz
	LTE Band 12 Channel Bandwidth: 5MHz	701.5MHz ~ 713.5MHz
	LTE Band 12 Channel Bandwidth: 10MHz	704MHz ~ 711MHz
	LTE Band 13 Channel Bandwidth: 5MHz	779.5MHz ~ 784.5MHz
	LTE Band 13 Channel Bandwidth: 10MHz	782MHz
	LTE Band 17 Channel Bandwidth: 5MHz	706.5MHz ~ 713.5MHz
	LTE Band 17 Channel Bandwidth: 10MHz	709MHz ~ 711 MHz
	LTE Band 30 Channel Bandwidth: 5MHz	2307.5MHz ~ 2312.5MHz
	LTE Band 30 Channel Bandwidth: 10MHz	2310MHz
EMISSION DESIGNATOR	LTE Band 7 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M48W7D
	LTE Band 7 Channel Bandwidth: 10MHz	QPSK: 8M95G7D
		16QAM: 8M95W7D
		64QAM: 8M94W7D

EMISSION DESIGNATOR	LTE Band 7 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 7 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
	LTE Band 12 Channel Bandwidth: 1.4MHz	QPSK: 1M11G7D
		16QAM: 1M11W7D
		64QAM: 1M11W7D
	LTE Band 12 Channel Bandwidth: 3MHz	QPSK: 2M70G7D
		16QAM: 2M70W7D
		64QAM: 2M70W7D
	LTE Band 12 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M49W7D
	LTE Band 12 Channel Bandwidth: 10MHz	QPSK: 8M94G7D
		16QAM: 8M96W7D
		64QAM: 8M94W7D
	LTE Band 13 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M49W7D
		64QAM: 4M48W7D
	LTE Band 13 Channel Bandwidth: 10MHz	QPSK: 8M92G7D
		16QAM: 8M93W7D
		64QAM: 8M92W7D
	LTE Band 17 Channel Bandwidth: 5MHz	QPSK: 4M48G7D
		16QAM: 4M48W7D
		64QAM: 4M48W7D
	LTE Band 17	QPSK: 8M96G7D

	Channel Bandwidth: 10MHz	16QAM: 8M96W7D
		64QAM: 8M95W7D
	LTE Band 30 Channel Bandwidth: 5MHz	QPSK: 4M51G7D
		16QAM: 4M52W7D
		64QAM: 4M51W7D
	CLTE Band 30 Channel Bandwidth: 10MHz	QPSK: 9M01G7D
		16QAM: 9M00W7D
		64QAM: 8M99W7D
MAX. EIRP/ERP POWER	LTE Band 7 Channel Bandwidth: 5MHz	566.24mW
	LTE Band 7 Channel Bandwidth: 10MHz	574.12mW
	LTE Band 7 Channel Bandwidth: 15MHz	567.54mW
	LTE Band 7 Channel Bandwidth: 20MHz	561.05mW
	LTE Band 12 Channel Bandwidth: 1.4MHz	174.98 mW
	LTE Band 12 Channel Bandwidth: 3MHz	172.98 mW
	LTE Band 12 Channel Bandwidth: 5MHz	172.58mW
	LTE Band 12 Channel Bandwidth: 10MHz	169.82mW
	LTE Band 13 Channel Bandwidth: 5MHz	171.00mW
	LTE Band 13 Channel Bandwidth: 10MHz	171.00mW
	LTE Band 17 Channel Bandwidth: 5MHz	177.42mW
	LTE Band 17 Channel Bandwidth: 10MHz	170.22mW
	LTE Band 30 Channel Bandwidth: 5MHz	214.29mW
	LTE Band 30 Channel Bandwidth: 10MHz	216.27mW
ANTENNA GAIN*	☒ Provided by client	
	LTE BAND7	3.5dBi

Test Report No.: RF260413B003

	LTE BAND12	0.5dBi
	LTE BAND13	0.5dBi
	LTE BAND17	0.5dBi
	LTE BAND30	1.6dBi
ANTENNA TYPE*	PIFA Antenna	
HW VERSION*	1.0	
SW VERSION*	V1	
I/O PORTS*	Refer to user's manual	
CABLE SUPPLIED*	N/A	
EXTREME TEMPERATURE*	-20℃-60℃	
EXTREME VOLTAGE*	15V-20V	

NOTE:

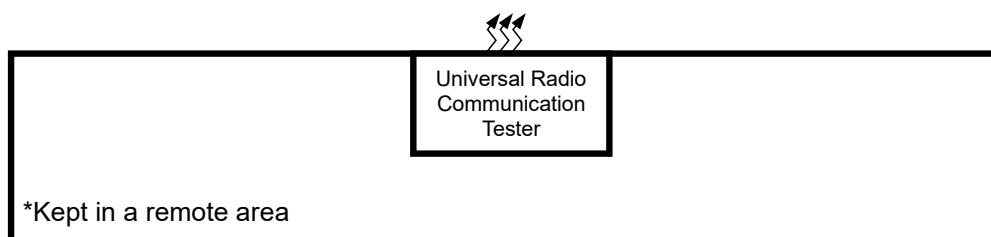
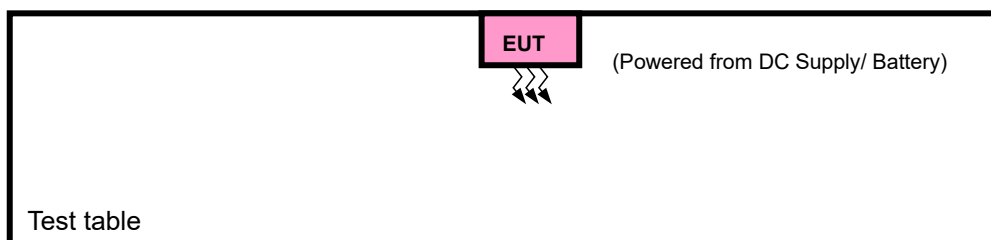
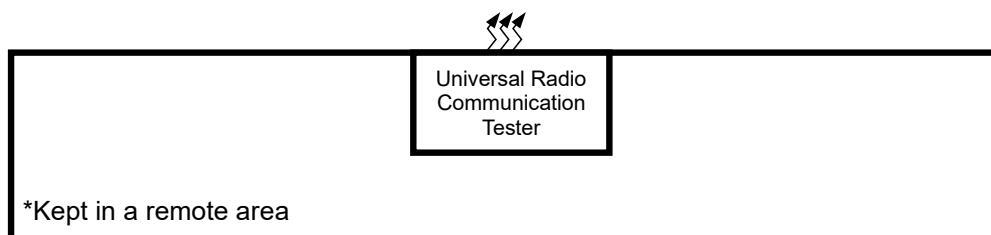
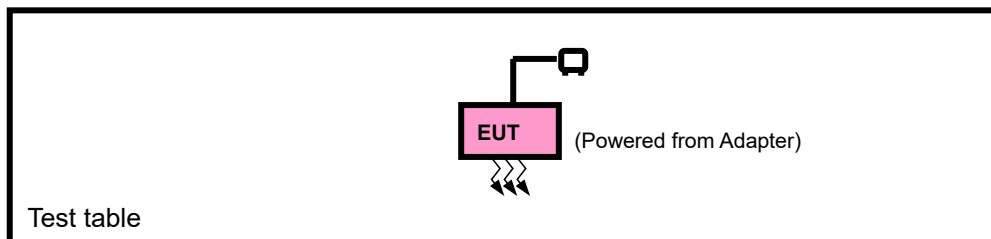
1. *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information , Test Lab is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.
2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

MODULATION MODE	TX FUNCTION
LTE	1TX/1RX

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

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST





Test Report No.: RF260413B003

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	Laptop	Lenovo	ThinkPad E14	HRSW00024	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

2.4 TEST ITEM AND TEST CONFIGURATION

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 EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

EUT CONFIGURE MODE	DESCRIPTION
A	EUT + Adapter with LTE link
B	EUT + DC Supply with LTE link

LTE BAND 7 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	EIRP	20775 to 21425	20775, 21100, 21425	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		20800 to 21400	20800, 21100, 21400	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		20850 to 21350	20850, 21100, 21350	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
A	RADIATED EMISSION	20775 to 21425	21100	5MHz	QPSK	1 RB / 0 RB offset
		20800 to 21400	21100	10MHz	QPSK	1 RB / 0 RB offset
		20825 to 21375	20825, 21100, 21375	15MHz	QPSK	1 RB / 0 RB offset
		20850 to 21350	21100	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.

LTE BAND 12 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23017 to 23173	23017, 23095 , 23173	1.4MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		23025 to 23165	23025, 23095 ,23165	3MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		23060 to 23130	23060, 23095 ,23130	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
A	RADIATED EMISSION	23017 to 23173	23095	1.4MHz	QPSK	1 RB / 0 RB offset
		23025 to 23165	23095	3MHz	QPSK	1 RB / 0 RB offset
		23035 to 23155	23035, 23095 ,23155	5MHz	QPSK	1 RB / 0 RB offset
		23060 to 23130	23095	10MHz	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.

LTE BAND 13 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23205 to 23255	23205, 23230, 23255	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		23230	23230	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
A	RADIATED EMISSION	23205 to 23255	23205, 23230, 23255	5MHz	QPSK	1 RB / 0 RB offset
		23230	23230	10MHz	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 Report No.: RF260413B003

LTE BAND 17 MODE						
EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	23755 to 23825	23755, 23790, 23825	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset
		23780 to 23800	23780, 23790, 23800	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB offset

Note:

1. This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.
2. LTE Band 17 are covered by LTE Band 12, Because it is a subset of LTE Band 12 with the same output power and supported bandwidths, So the RSE test data please refer to LTE Band 12.

LTE BAND 30

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
A	ERP	27685 to 27735	27685, 27710, 27735	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		27710	27710	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
A	RADIATED EMISSION	27685 to 27735	27685, 27710, 27735	5MHz	QPSK	1 RB / 0 RB Offset
		27710	27710	10MHz	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
ERP	23deg. C, 70%RH	DC 19V By Battery	Carl Xie
RADIATED EMISSION	23deg. C, 70%RH	AC 120V/60Hz	Carl Xie

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

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 v03r01

ANSI/TIA/EIA-603-D

ANSI/TIA/EIA-603-E

ANSI C63.26-2015

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



Test Report No.: RF260413B003

3. TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

The radiated peak output power shall be according to the specific rule Part 27.50(h)(2) that “User stations are limited to 2 watts” and 27.50(i) specific that “Peak transmit power must be measure over any interval of continuous transmission using instrumentation calibration in terms of rms-equivalent voltage.”

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

According to the specific rule Part 27.50(c)(10) Portable stations (hand-held devices) in the 600 MHz uplink band and the 698–746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

Part 27.50(b)(10): Portable stations (hand-held devices) transmitting in the 746–757 MHz, 776–788 MHz, and 805–806 MHz bands are limited to 3 watts ERP.

3.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

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

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as P_{Meas} , typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

L_C = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

CONDUCTED POWER MEASUREMENT:

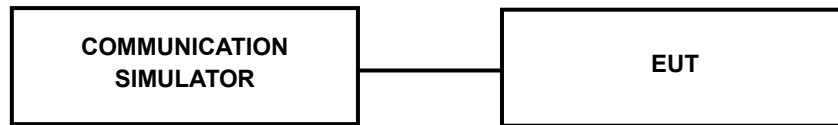
- The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



Test Report No.: RF260413B003

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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



Test Report No.: RF260413B003

3.1.4 TEST RESULTS

We have verified power(except LTE Band 30).The test data is better than module report, so power test data please refer to module report(No. : SEWM2304000122RG01,FCC ID: XMR2023RM520NGL)
Considering antenna gain is changed compared with module, so we update ERP/EIRP.



Test Report No.: RF260413B003

LTE Band7

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Gain(dBi)	EIRP(dBm)	EIRP(mW)	Limit(W)	Verdict
Band7	5MHz	QPSK	20775	1RB#0	24.03	3.5	27.53	566.24	2	PASS
Band7	5MHz	QPSK	20775	1RB#12	24.02	3.5	27.52	564.94	2	PASS
Band7	5MHz	QPSK	20775	1RB#24	23.95	3.5	27.45	555.90	2	PASS
Band7	5MHz	QPSK	20775	25RB#0	23.08	3.5	26.58	454.99	2	PASS
Band7	5MHz	QPSK	21100	1RB#0	23.87	3.5	27.37	545.76	2	PASS
Band7	5MHz	QPSK	21100	1RB#12	23.88	3.5	27.38	547.02	2	PASS
Band7	5MHz	QPSK	21100	1RB#24	23.89	3.5	27.39	548.28	2	PASS
Band7	5MHz	QPSK	21100	25RB#0	22.86	3.5	26.36	432.51	2	PASS
Band7	5MHz	QPSK	21425	1RB#0	23.76	3.5	27.26	532.11	2	PASS
Band7	5MHz	QPSK	21425	1RB#12	23.79	3.5	27.29	535.80	2	PASS
Band7	5MHz	QPSK	21425	1RB#24	23.75	3.5	27.25	530.88	2	PASS
Band7	5MHz	QPSK	21425	25RB#0	23.81	3.5	27.31	538.27	2	PASS
Band7	5MHz	16QAM	20775	1RB#0	23.13	3.5	26.63	460.26	2	PASS
Band7	5MHz	16QAM	20775	1RB#12	23.17	3.5	26.67	464.52	2	PASS
Band7	5MHz	16QAM	20775	1RB#24	23.13	3.5	26.63	460.26	2	PASS
Band7	5MHz	16QAM	20775	25RB#0	22.11	3.5	25.61	363.92	2	PASS
Band7	5MHz	16QAM	21100	1RB#0	22.96	3.5	26.46	442.59	2	PASS
Band7	5MHz	16QAM	21100	1RB#12	22.93	3.5	26.43	439.54	2	PASS
Band7	5MHz	16QAM	21100	1RB#24	23.04	3.5	26.54	450.82	2	PASS
Band7	5MHz	16QAM	21100	25RB#0	21.94	3.5	25.44	349.95	2	PASS
Band7	5MHz	16QAM	21425	1RB#0	22.89	3.5	26.39	435.51	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band7	5MHz	16QAM	21425	1RB#12	23.04	3.5	26.54	450.82	2	PASS
Band7	5MHz	16QAM	21425	1RB#24	23.08	3.5	26.58	454.99	2	PASS
Band7	5MHz	16QAM	21425	25RB#0	21.80	3.5	25.30	338.84	2	PASS
Band7	5MHz	64QAM	20775	1RB#0	22.06	3.5	25.56	359.75	2	PASS
Band7	5MHz	64QAM	20775	1RB#12	22.22	3.5	25.72	373.25	2	PASS
Band7	5MHz	64QAM	20775	1RB#24	22.07	3.5	25.57	360.58	2	PASS
Band7	5MHz	64QAM	20775	25RB#0	21.07	3.5	24.57	286.42	2	PASS
Band7	5MHz	64QAM	21100	1RB#0	22.00	3.5	25.50	354.81	2	PASS
Band7	5MHz	64QAM	21100	1RB#12	22.00	3.5	25.50	354.81	2	PASS
Band7	5MHz	64QAM	21100	1RB#24	22.10	3.5	25.60	363.08	2	PASS
Band7	5MHz	64QAM	21100	25RB#0	20.95	3.5	24.45	278.61	2	PASS
Band7	5MHz	64QAM	21425	1RB#0	21.95	3.5	25.45	350.75	2	PASS
Band7	5MHz	64QAM	21425	1RB#12	22.07	3.5	25.57	360.58	2	PASS
Band7	5MHz	64QAM	21425	1RB#24	22.01	3.5	25.51	355.63	2	PASS
Band7	5MHz	64QAM	21425	25RB#0	20.81	3.5	24.31	269.77	2	PASS
Band7	10MHz	QPSK	20800	1RB#0	24.04	3.5	27.54	567.54	2	PASS
Band7	10MHz	QPSK	20800	1RB#24	24.09	3.5	27.59	574.12	2	PASS
Band7	10MHz	QPSK	20800	1RB#49	23.98	3.5	27.48	559.76	2	PASS
Band7	10MHz	QPSK	20800	50RB#0	23.15	3.5	26.65	462.38	2	PASS
Band7	10MHz	QPSK	21100	1RB#0	23.69	3.5	27.19	523.60	2	PASS
Band7	10MHz	QPSK	21100	1RB#24	23.97	3.5	27.47	558.47	2	PASS
Band7	10MHz	QPSK	21100	1RB#49	23.99	3.5	27.49	561.05	2	PASS
Band7	10MHz	QPSK	21100	50RB#0	22.84	3.5	26.34	430.53	2	PASS
Band7	10MHz	QPSK	21400	1RB#0	23.23	3.5	26.73	470.98	2	PASS
Band7	10MHz	QPSK	21400	1RB#24	23.85	3.5	27.35	543.25	2	PASS
Band7	10MHz	QPSK	21400	1RB#49	23.78	3.5	27.28	534.56	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band7	10MHz	QPSK	21400	50RB#0	22.89	3.5	26.39	435.51	2	PASS
Band7	10MHz	16QAM	20800	1RB#0	23.30	3.5	26.80	478.63	2	PASS
Band7	10MHz	16QAM	20800	1RB#24	23.31	3.5	26.81	479.73	2	PASS
Band7	10MHz	16QAM	20800	1RB#49	23.10	3.5	26.60	457.09	2	PASS
Band7	10MHz	16QAM	20800	50RB#0	22.14	3.5	25.64	366.44	2	PASS
Band7	10MHz	16QAM	21100	1RB#0	22.97	3.5	26.47	443.61	2	PASS
Band7	10MHz	16QAM	21100	1RB#24	23.12	3.5	26.62	459.20	2	PASS
Band7	10MHz	16QAM	21100	1RB#49	23.03	3.5	26.53	449.78	2	PASS
Band7	10MHz	16QAM	21100	50RB#0	21.87	3.5	25.37	344.35	2	PASS
Band7	10MHz	16QAM	21400	1RB#0	23.06	3.5	26.56	452.90	2	PASS
Band7	10MHz	16QAM	21400	1RB#24	23.04	3.5	26.54	450.82	2	PASS
Band7	10MHz	16QAM	21400	1RB#49	22.82	3.5	26.32	428.55	2	PASS
Band7	10MHz	16QAM	21400	50RB#0	21.90	3.5	25.40	346.74	2	PASS
Band7	10MHz	64QAM	20800	1RB#0	22.17	3.5	25.67	368.98	2	PASS
Band7	10MHz	64QAM	20800	1RB#24	22.28	3.5	25.78	378.44	2	PASS
Band7	10MHz	64QAM	20800	1RB#49	22.14	3.5	25.64	366.44	2	PASS
Band7	10MHz	64QAM	20800	50RB#0	21.08	3.5	24.58	287.08	2	PASS
Band7	10MHz	64QAM	21100	1RB#0	22.32	3.5	25.82	381.94	2	PASS
Band7	10MHz	64QAM	21100	1RB#24	22.19	3.5	25.69	370.68	2	PASS
Band7	10MHz	64QAM	21100	1RB#49	22.16	3.5	25.66	368.13	2	PASS
Band7	10MHz	64QAM	21100	50RB#0	20.91	3.5	24.41	276.06	2	PASS
Band7	10MHz	64QAM	21400	1RB#0	22.03	3.5	25.53	357.27	2	PASS
Band7	10MHz	64QAM	21400	1RB#24	21.89	3.5	25.39	345.94	2	PASS
Band7	10MHz	64QAM	21400	1RB#49	21.84	3.5	25.34	341.98	2	PASS
Band7	10MHz	64QAM	21400	50RB#0	20.90	3.5	24.40	275.42	2	PASS
Band7	15MHz	QPSK	20825	1RB#0	23.88	3.5	27.38	547.02	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band7	15MHz	QPSK	20825	1RB#38	23.93	3.5	27.43	553.35	2	PASS
Band7	15MHz	QPSK	20825	1RB#74	23.78	3.5	27.28	534.56	2	PASS
Band7	15MHz	QPSK	20825	75RB#0	22.92	3.5	26.42	438.53	2	PASS
Band7	15MHz	QPSK	21100	1RB#0	23.89	3.5	27.39	548.28	2	PASS
Band7	15MHz	QPSK	21100	1RB#38	23.78	3.5	27.28	534.56	2	PASS
Band7	15MHz	QPSK	21100	1RB#74	24.04	3.5	27.54	567.54	2	PASS
Band7	15MHz	QPSK	21100	75RB#0	22.82	3.5	26.32	428.55	2	PASS
Band7	15MHz	QPSK	21375	1RB#0	23.71	3.5	27.21	526.02	2	PASS
Band7	15MHz	QPSK	21375	1RB#38	23.61	3.5	27.11	514.04	2	PASS
Band7	15MHz	QPSK	21375	1RB#74	23.61	3.5	27.11	514.04	2	PASS
Band7	15MHz	QPSK	21375	75RB#0	22.78	3.5	26.28	424.62	2	PASS
Band7	15MHz	16QAM	20825	1RB#0	22.95	3.5	26.45	441.57	2	PASS
Band7	15MHz	16QAM	20825	1RB#38	22.89	3.5	26.39	435.51	2	PASS
Band7	15MHz	16QAM	20825	1RB#74	22.99	3.5	26.49	445.66	2	PASS
Band7	15MHz	16QAM	20825	75RB#0	21.96	3.5	25.46	351.56	2	PASS
Band7	15MHz	16QAM	21100	1RB#0	22.91	3.5	26.41	437.52	2	PASS
Band7	15MHz	16QAM	21100	1RB#38	23.01	3.5	26.51	447.71	2	PASS
Band7	15MHz	16QAM	21100	1RB#74	22.88	3.5	26.38	434.51	2	PASS
Band7	15MHz	16QAM	21100	75RB#0	21.76	3.5	25.26	335.74	2	PASS
Band7	15MHz	16QAM	21375	1RB#0	22.76	3.5	26.26	422.67	2	PASS
Band7	15MHz	16QAM	21375	1RB#38	22.74	3.5	26.24	420.73	2	PASS
Band7	15MHz	16QAM	21375	1RB#74	22.66	3.5	26.16	413.05	2	PASS
Band7	15MHz	16QAM	21375	75RB#0	21.83	3.5	25.33	341.19	2	PASS
Band7	15MHz	64QAM	20825	1RB#0	22.02	3.5	25.52	356.45	2	PASS
Band7	15MHz	64QAM	20825	1RB#38	22.01	3.5	25.51	355.63	2	PASS
Band7	15MHz	64QAM	20825	1RB#74	22.02	3.5	25.52	356.45	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band7	15MHz	64QAM	20825	75RB#0	20.95	3.5	24.45	278.61	2	PASS
Band7	15MHz	64QAM	21100	1RB#0	22.17	3.5	25.67	368.98	2	PASS
Band7	15MHz	64QAM	21100	1RB#38	21.99	3.5	25.49	354.00	2	PASS
Band7	15MHz	64QAM	21100	1RB#74	21.98	3.5	25.48	353.18	2	PASS
Band7	15MHz	64QAM	21100	75RB#0	20.70	3.5	24.20	263.03	2	PASS
Band7	15MHz	64QAM	21375	1RB#0	21.86	3.5	25.36	343.56	2	PASS
Band7	15MHz	64QAM	21375	1RB#38	21.89	3.5	25.39	345.94	2	PASS
Band7	15MHz	64QAM	21375	1RB#74	21.76	3.5	25.26	335.74	2	PASS
Band7	15MHz	64QAM	21375	75RB#0	20.79	3.5	24.29	268.53	2	PASS
Band7	20MHz	QPSK	20850	1RB#0	23.82	3.5	27.32	539.51	2	PASS
Band7	20MHz	QPSK	20850	1RB#49	23.71	3.5	27.21	526.02	2	PASS
Band7	20MHz	QPSK	20850	1RB#99	23.72	3.5	27.22	527.23	2	PASS
Band7	20MHz	QPSK	20850	100RB#0	22.97	3.5	26.47	443.61	2	PASS
Band7	20MHz	QPSK	21100	1RB#0	23.69	3.5	27.19	523.60	2	PASS
Band7	20MHz	QPSK	21100	1RB#49	23.86	3.5	27.36	544.50	2	PASS
Band7	20MHz	QPSK	21100	1RB#99	23.99	3.5	27.49	561.05	2	PASS
Band7	20MHz	QPSK	21100	100RB#0	22.79	3.5	26.29	425.60	2	PASS
Band7	20MHz	QPSK	21350	1RB#0	23.67	3.5	27.17	521.19	2	PASS
Band7	20MHz	QPSK	21350	1RB#49	23.76	3.5	27.26	532.11	2	PASS
Band7	20MHz	QPSK	21350	1RB#99	23.85	3.5	27.35	543.25	2	PASS
Band7	20MHz	QPSK	21350	100RB#0	22.75	3.5	26.25	421.70	2	PASS
Band7	20MHz	16QAM	20850	1RB#0	22.95	3.5	26.45	441.57	2	PASS
Band7	20MHz	16QAM	20850	1RB#49	22.97	3.5	26.47	443.61	2	PASS
Band7	20MHz	16QAM	20850	1RB#99	22.76	3.5	26.26	422.67	2	PASS
Band7	20MHz	16QAM	20850	100RB#0	21.84	3.5	25.34	341.98	2	PASS
Band7	20MHz	16QAM	21100	1RB#0	22.81	3.5	26.31	427.56	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band7	20MHz	16QAM	21100	1RB#49	22.80	3.5	26.30	426.58	2	PASS
Band7	20MHz	16QAM	21100	1RB#99	22.91	3.5	26.41	437.52	2	PASS
Band7	20MHz	16QAM	21100	100RB#0	21.81	3.5	25.31	339.63	2	PASS
Band7	20MHz	16QAM	21350	1RB#0	22.82	3.5	26.32	428.55	2	PASS
Band7	20MHz	16QAM	21350	1RB#49	23.04	3.5	26.54	450.82	2	PASS
Band7	20MHz	16QAM	21350	1RB#99	22.59	3.5	26.09	406.44	2	PASS
Band7	20MHz	16QAM	21350	100RB#0	21.75	3.5	25.25	334.97	2	PASS
Band7	20MHz	64QAM	20850	1RB#0	22.10	3.5	25.60	363.08	2	PASS
Band7	20MHz	64QAM	20850	1RB#49	22.01	3.5	25.51	355.63	2	PASS
Band7	20MHz	64QAM	20850	1RB#99	21.83	3.5	25.33	341.19	2	PASS
Band7	20MHz	64QAM	20850	100RB#0	20.86	3.5	24.36	272.90	2	PASS
Band7	20MHz	64QAM	21100	1RB#0	21.77	3.5	25.27	336.51	2	PASS
Band7	20MHz	64QAM	21100	1RB#49	21.87	3.5	25.37	344.35	2	PASS
Band7	20MHz	64QAM	21100	1RB#99	21.92	3.5	25.42	348.34	2	PASS
Band7	20MHz	64QAM	21100	100RB#0	20.74	3.5	24.24	265.46	2	PASS
Band7	20MHz	64QAM	21350	1RB#0	21.97	3.5	25.47	352.37	2	PASS
Band7	20MHz	64QAM	21350	1RB#49	21.91	3.5	25.41	347.54	2	PASS
Band7	20MHz	64QAM	21350	1RB#99	21.81	3.5	25.31	339.63	2	PASS
Band7	20MHz	64QAM	21350	100RB#0	20.73	3.5	24.23	264.85	2	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

LTE Band 12

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Gain(dBi)	ERP(dBm)	ERP(mW)	Limit(W)	Verdict
Band12	1.4MHz	QPSK	23017	1RB#0	23.89	0.5	22.24	167.49	3	PASS
Band12	1.4MHz	QPSK	23017	1RB#2	24.00	0.5	22.35	171.79	3	PASS
Band12	1.4MHz	QPSK	23017	1RB#5	23.82	0.5	22.17	164.82	3	PASS
Band12	1.4MHz	QPSK	23017	6RB#0	22.98	0.5	21.33	135.83	3	PASS
Band12	1.4MHz	QPSK	23095	1RB#0	23.86	0.5	22.21	166.34	3	PASS
Band12	1.4MHz	QPSK	23095	1RB#2	24.08	0.5	22.43	174.98	3	PASS
Band12	1.4MHz	QPSK	23095	1RB#5	23.90	0.5	22.25	167.88	3	PASS
Band12	1.4MHz	QPSK	23095	6RB#0	22.88	0.5	21.23	132.74	3	PASS
Band12	1.4MHz	QPSK	23173	1RB#0	23.87	0.5	22.22	166.72	3	PASS
Band12	1.4MHz	QPSK	23173	1RB#2	23.95	0.5	22.30	169.82	3	PASS
Band12	1.4MHz	QPSK	23173	1RB#5	23.82	0.5	22.17	164.82	3	PASS
Band12	1.4MHz	QPSK	23173	6RB#0	22.93	0.5	21.28	134.28	3	PASS
Band12	1.4MHz	16QAM	23017	1RB#0	23.21	0.5	21.56	143.22	3	PASS
Band12	1.4MHz	16QAM	23017	1RB#2	23.03	0.5	21.38	137.40	3	PASS
Band12	1.4MHz	16QAM	23017	1RB#5	23.05	0.5	21.40	138.04	3	PASS
Band12	1.4MHz	16QAM	23017	6RB#0	21.99	0.5	20.34	108.14	3	PASS
Band12	1.4MHz	16QAM	23095	1RB#0	22.92	0.5	21.27	133.97	3	PASS
Band12	1.4MHz	16QAM	23095	1RB#2	23.17	0.5	21.52	141.91	3	PASS
Band12	1.4MHz	16QAM	23095	1RB#5	22.94	0.5	21.29	134.59	3	PASS
Band12	1.4MHz	16QAM	23095	6RB#0	21.93	0.5	20.28	106.66	3	PASS
Band12	1.4MHz	16QAM	23173	1RB#0	23.06	0.5	21.41	138.36	3	PASS
Band12	1.4MHz	16QAM	23173	1RB#2	22.99	0.5	21.34	136.14	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band12	1.4MHz	16QAM	23173	1RB#5	22.97	0.5	21.32	135.52	3	PASS
Band12	1.4MHz	16QAM	23173	6RB#0	22.00	0.5	20.35	108.39	3	PASS
Band12	1.4MHz	64QAM	23017	1RB#0	21.94	0.5	20.29	106.91	3	PASS
Band12	1.4MHz	64QAM	23017	1RB#2	22.14	0.5	20.49	111.94	3	PASS
Band12	1.4MHz	64QAM	23017	1RB#5	21.93	0.5	20.28	106.66	3	PASS
Band12	1.4MHz	64QAM	23017	6RB#0	20.98	0.5	19.33	85.70	3	PASS
Band12	1.4MHz	64QAM	23095	1RB#0	22.37	0.5	20.72	118.03	3	PASS
Band12	1.4MHz	64QAM	23095	1RB#2	22.03	0.5	20.38	109.14	3	PASS
Band12	1.4MHz	64QAM	23095	1RB#5	21.99	0.5	20.34	108.14	3	PASS
Band12	1.4MHz	64QAM	23095	6RB#0	20.99	0.5	19.34	85.90	3	PASS
Band12	1.4MHz	64QAM	23173	1RB#0	22.03	0.5	20.38	109.14	3	PASS
Band12	1.4MHz	64QAM	23173	1RB#2	21.95	0.5	20.30	107.15	3	PASS
Band12	1.4MHz	64QAM	23173	1RB#5	22.10	0.5	20.45	110.92	3	PASS
Band12	1.4MHz	64QAM	23173	6RB#0	20.98	0.5	19.33	85.70	3	PASS
Band12	3MHz	QPSK	23025	1RB#0	23.86	0.5	22.21	166.34	3	PASS
Band12	3MHz	QPSK	23025	1RB#8	24.01	0.5	22.36	172.19	3	PASS
Band12	3MHz	QPSK	23025	1RB#14	23.73	0.5	22.08	161.44	3	PASS
Band12	3MHz	QPSK	23025	15RB#0	22.99	0.5	21.34	136.14	3	PASS
Band12	3MHz	QPSK	23095	1RB#0	23.87	0.5	22.22	166.72	3	PASS
Band12	3MHz	QPSK	23095	1RB#8	24.01	0.5	22.36	172.19	3	PASS
Band12	3MHz	QPSK	23095	1RB#14	23.82	0.5	22.17	164.82	3	PASS
Band12	3MHz	QPSK	23095	15RB#0	22.84	0.5	21.19	131.52	3	PASS
Band12	3MHz	QPSK	23165	1RB#0	23.79	0.5	22.14	163.68	3	PASS
Band12	3MHz	QPSK	23165	1RB#8	24.03	0.5	22.38	172.98	3	PASS
Band12	3MHz	QPSK	23165	1RB#14	23.89	0.5	22.24	167.49	3	PASS
Band12	3MHz	QPSK	23165	15RB#0	22.91	0.5	21.26	133.66	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band12	3MHz	16QAM	23025	1RB#0	22.94	0.5	21.29	134.59	3	PASS
Band12	3MHz	16QAM	23025	1RB#8	23.19	0.5	21.54	142.56	3	PASS
Band12	3MHz	16QAM	23025	1RB#14	22.90	0.5	21.25	133.35	3	PASS
Band12	3MHz	16QAM	23025	15RB#0	21.99	0.5	20.34	108.14	3	PASS
Band12	3MHz	16QAM	23095	1RB#0	23.04	0.5	21.39	137.72	3	PASS
Band12	3MHz	16QAM	23095	1RB#8	22.95	0.5	21.30	134.90	3	PASS
Band12	3MHz	16QAM	23095	1RB#14	23.05	0.5	21.40	138.04	3	PASS
Band12	3MHz	16QAM	23095	15RB#0	21.91	0.5	20.26	106.17	3	PASS
Band12	3MHz	16QAM	23165	1RB#0	23.03	0.5	21.38	137.40	3	PASS
Band12	3MHz	16QAM	23165	1RB#8	23.02	0.5	21.37	137.09	3	PASS
Band12	3MHz	16QAM	23165	1RB#14	22.95	0.5	21.30	134.90	3	PASS
Band12	3MHz	16QAM	23165	15RB#0	21.92	0.5	20.27	106.41	3	PASS
Band12	3MHz	64QAM	23025	1RB#0	22.11	0.5	20.46	111.17	3	PASS
Band12	3MHz	64QAM	23025	1RB#8	22.04	0.5	20.39	109.40	3	PASS
Band12	3MHz	64QAM	23025	1RB#14	22.00	0.5	20.35	108.39	3	PASS
Band12	3MHz	64QAM	23025	15RB#0	21.01	0.5	19.36	86.30	3	PASS
Band12	3MHz	64QAM	23095	1RB#0	22.22	0.5	20.57	114.02	3	PASS
Band12	3MHz	64QAM	23095	1RB#8	22.08	0.5	20.43	110.41	3	PASS
Band12	3MHz	64QAM	23095	1RB#14	21.93	0.5	20.28	106.66	3	PASS
Band12	3MHz	64QAM	23095	15RB#0	20.90	0.5	19.25	84.14	3	PASS
Band12	3MHz	64QAM	23165	1RB#0	22.12	0.5	20.47	111.43	3	PASS
Band12	3MHz	64QAM	23165	1RB#8	22.14	0.5	20.49	111.94	3	PASS
Band12	3MHz	64QAM	23165	1RB#14	21.94	0.5	20.29	106.91	3	PASS
Band12	3MHz	64QAM	23165	15RB#0	20.93	0.5	19.28	84.72	3	PASS
Band12	5MHz	QPSK	23035	1RB#0	23.94	0.5	22.29	169.43	3	PASS
Band12	5MHz	QPSK	23035	1RB#12	23.90	0.5	22.25	167.88	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band12	5MHz	QPSK	23035	1RB#24	23.82	0.5	22.17	164.82	3	PASS
Band12	5MHz	QPSK	23035	25RB#0	22.94	0.5	21.29	134.59	3	PASS
Band12	5MHz	QPSK	23095	1RB#0	22.78	0.5	21.13	129.72	3	PASS
Band12	5MHz	QPSK	23095	1RB#12	23.94	0.5	22.29	169.43	3	PASS
Band12	5MHz	QPSK	23095	1RB#24	23.84	0.5	22.19	165.58	3	PASS
Band12	5MHz	QPSK	23095	25RB#0	22.88	0.5	21.23	132.74	3	PASS
Band12	5MHz	QPSK	23155	1RB#0	22.97	0.5	21.32	135.52	3	PASS
Band12	5MHz	QPSK	23155	1RB#12	23.95	0.5	22.30	169.82	3	PASS
Band12	5MHz	QPSK	23155	1RB#24	24.02	0.5	22.37	172.58	3	PASS
Band12	5MHz	QPSK	23155	25RB#0	22.86	0.5	21.21	132.13	3	PASS
Band12	5MHz	16QAM	23035	1RB#0	23.08	0.5	21.43	139.00	3	PASS
Band12	5MHz	16QAM	23035	1RB#12	23.02	0.5	21.37	137.09	3	PASS
Band12	5MHz	16QAM	23035	1RB#24	22.92	0.5	21.27	133.97	3	PASS
Band12	5MHz	16QAM	23035	25RB#0	21.93	0.5	20.28	106.66	3	PASS
Band12	5MHz	16QAM	23095	1RB#0	22.91	0.5	21.26	133.66	3	PASS
Band12	5MHz	16QAM	23095	1RB#12	23.11	0.5	21.46	139.96	3	PASS
Band12	5MHz	16QAM	23095	1RB#24	22.92	0.5	21.27	133.97	3	PASS
Band12	5MHz	16QAM	23095	25RB#0	21.98	0.5	20.33	107.89	3	PASS
Band12	5MHz	16QAM	23155	1RB#0	23.07	0.5	21.42	138.68	3	PASS
Band12	5MHz	16QAM	23155	1RB#12	23.07	0.5	21.42	138.68	3	PASS
Band12	5MHz	16QAM	23155	1RB#24	23.04	0.5	21.39	137.72	3	PASS
Band12	5MHz	16QAM	23155	25RB#0	21.92	0.5	20.27	106.41	3	PASS
Band12	5MHz	64QAM	23035	1RB#0	22.01	0.5	20.36	108.64	3	PASS
Band12	5MHz	64QAM	23035	1RB#12	22.20	0.5	20.55	113.50	3	PASS
Band12	5MHz	64QAM	23035	1RB#24	21.97	0.5	20.32	107.65	3	PASS
Band12	5MHz	64QAM	23035	25RB#0	20.95	0.5	19.30	85.11	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band12	5MHz	64QAM	23095	1RB#0	22.17	0.5	20.52	112.72	3	PASS
Band12	5MHz	64QAM	23095	1RB#12	22.07	0.5	20.42	110.15	3	PASS
Band12	5MHz	64QAM	23095	1RB#24	22.07	0.5	20.42	110.15	3	PASS
Band12	5MHz	64QAM	23095	25RB#0	20.94	0.5	19.29	84.92	3	PASS
Band12	5MHz	64QAM	23155	1RB#0	22.10	0.5	20.45	110.92	3	PASS
Band12	5MHz	64QAM	23155	1RB#12	22.17	0.5	20.52	112.72	3	PASS
Band12	5MHz	64QAM	23155	1RB#24	22.02	0.5	20.37	108.89	3	PASS
Band12	5MHz	64QAM	23155	25RB#0	20.89	0.5	19.24	83.95	3	PASS
Band12	10MHz	QPSK	23060	1RB#0	23.89	0.5	22.24	167.49	3	PASS
Band12	10MHz	QPSK	23060	1RB#24	23.85	0.5	22.20	165.96	3	PASS
Band12	10MHz	QPSK	23060	1RB#49	23.89	0.5	22.24	167.49	3	PASS
Band12	10MHz	QPSK	23060	50RB#0	22.96	0.5	21.31	135.21	3	PASS
Band12	10MHz	QPSK	23095	1RB#0	23.16	0.5	21.51	141.58	3	PASS
Band12	10MHz	QPSK	23095	1RB#24	23.95	0.5	22.30	169.82	3	PASS
Band12	10MHz	QPSK	23095	1RB#49	23.86	0.5	22.21	166.34	3	PASS
Band12	10MHz	QPSK	23095	50RB#0	22.92	0.5	21.27	133.97	3	PASS
Band12	10MHz	QPSK	23130	1RB#0	23.79	0.5	22.14	163.68	3	PASS
Band12	10MHz	QPSK	23130	1RB#24	23.89	0.5	22.24	167.49	3	PASS
Band12	10MHz	QPSK	23130	1RB#49	23.71	0.5	22.06	160.69	3	PASS
Band12	10MHz	QPSK	23130	50RB#0	22.85	0.5	21.20	131.83	3	PASS
Band12	10MHz	16QAM	23060	1RB#0	22.98	0.5	21.33	135.83	3	PASS
Band12	10MHz	16QAM	23060	1RB#24	23.04	0.5	21.39	137.72	3	PASS
Band12	10MHz	16QAM	23060	1RB#49	22.87	0.5	21.22	132.43	3	PASS
Band12	10MHz	16QAM	23060	50RB#0	21.97	0.5	20.32	107.65	3	PASS
Band12	10MHz	16QAM	23095	1RB#0	23.21	0.5	21.56	143.22	3	PASS
Band12	10MHz	16QAM	23095	1RB#24	23.02	0.5	21.37	137.09	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

**Test Report No.: RF260413B003**

Band12	10MHz	16QAM	23095	1RB#49	22.90	0.5	21.25	133.35	3	PASS
Band12	10MHz	16QAM	23095	50RB#0	21.94	0.5	20.29	106.91	3	PASS
Band12	10MHz	16QAM	23130	1RB#0	23.17	0.5	21.52	141.91	3	PASS
Band12	10MHz	16QAM	23130	1RB#24	23.09	0.5	21.44	139.32	3	PASS
Band12	10MHz	16QAM	23130	1RB#49	23.12	0.5	21.47	140.28	3	PASS
Band12	10MHz	16QAM	23130	50RB#0	21.85	0.5	20.20	104.71	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

LTE Band13

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Gain(dBi)	ERP(dBm)	ERP(mW)	Limit(W)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.93	0.5	22.28	169.04	3	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.92	0.5	22.27	168.66	3	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.74	0.5	22.09	161.81	3	PASS
Band13	5MHz	QPSK	23205	25RB#0	23.00	0.5	21.35	136.46	3	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.98	0.5	22.33	171.00	3	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.84	0.5	22.19	165.58	3	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.83	0.5	22.18	165.20	3	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.94	0.5	21.29	134.59	3	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.79	0.5	22.14	163.68	3	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.91	0.5	22.26	168.27	3	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.94	0.5	22.29	169.43	3	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.83	0.5	21.18	131.22	3	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.01	0.5	21.36	136.77	3	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.04	0.5	21.39	137.72	3	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.19	0.5	21.54	142.56	3	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.95	0.5	20.30	107.15	3	PASS
Band13	5MHz	16QAM	23230	1RB#0	23.14	0.5	21.49	140.93	3	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.93	0.5	21.28	134.28	3	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.92	0.5	21.27	133.97	3	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.96	0.5	20.31	107.40	3	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.05	0.5	21.40	138.04	3	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.94	0.5	21.29	134.59	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

**Test Report No.: RF260413B003**

Band13	5MHz	16QAM	23255	1RB#24	22.99	0.5	21.34	136.14	3	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.88	0.5	20.23	105.44	3	PASS
Band13	5MHz	64QAM	23205	1RB#0	22.14	0.5	20.49	111.94	3	PASS
Band13	5MHz	64QAM	23205	1RB#12	22.24	0.5	20.59	114.55	3	PASS
Band13	5MHz	64QAM	23205	1RB#24	22.12	0.5	20.47	111.43	3	PASS
Band13	5MHz	64QAM	23205	25RB#0	21.01	0.5	19.36	86.30	3	PASS
Band13	5MHz	64QAM	23230	1RB#0	22.32	0.5	20.67	116.68	3	PASS
Band13	5MHz	64QAM	23230	1RB#12	22.20	0.5	20.55	113.50	3	PASS
Band13	5MHz	64QAM	23230	1RB#24	21.89	0.5	20.24	105.68	3	PASS
Band13	5MHz	64QAM	23230	25RB#0	20.93	0.5	19.28	84.72	3	PASS
Band13	5MHz	64QAM	23255	1RB#0	22.11	0.5	20.46	111.17	3	PASS
Band13	5MHz	64QAM	23255	1RB#12	22.11	0.5	20.46	111.17	3	PASS
Band13	5MHz	64QAM	23255	1RB#24	22.04	0.5	20.39	109.40	3	PASS
Band13	5MHz	64QAM	23255	25RB#0	20.87	0.5	19.22	83.56	3	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.90	0.5	22.25	167.88	3	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.98	0.5	22.33	171.00	3	PASS
Band13	10MHz	QPSK	23230	1RB#49	23.85	0.5	22.20	165.96	3	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.92	0.5	21.27	133.97	3	PASS
Band13	10MHz	16QAM	23230	1RB#0	23.00	0.5	21.35	136.46	3	PASS
Band13	10MHz	16QAM	23230	1RB#24	23.07	0.5	21.42	138.68	3	PASS
Band13	10MHz	16QAM	23230	1RB#49	23.06	0.5	21.41	138.36	3	PASS
Band13	10MHz	16QAM	23230	50RB#0	22.14	0.5	20.49	111.94	3	PASS
Band13	10MHz	64QAM	23230	1RB#0	22.06	0.5	20.41	109.90	3	PASS
Band13	10MHz	64QAM	23230	1RB#24	22.13	0.5	20.48	111.69	3	PASS
Band13	10MHz	64QAM	23230	1RB#49	22.04	0.5	20.39	109.40	3	PASS
Band13	10MHz	64QAM	23230	50RB#0	21.06	0.5	19.41	87.30	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

LTE Band17

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Gain(dBi)	ERP(dBm)	ERP(mW)	Limit(W)	Verdict
Band17	5MHz	QPSK	23755	1RB#0	23.95	0.5	22.30	169.82	3	PASS
Band17	5MHz	QPSK	23755	1RB#12	23.84	0.5	22.19	165.58	3	PASS
Band17	5MHz	QPSK	23755	1RB#24	23.78	0.5	22.13	163.31	3	PASS
Band17	5MHz	QPSK	23755	25RB#0	22.85	0.5	21.20	131.83	3	PASS
Band17	5MHz	QPSK	23790	1RB#0	23.89	0.5	22.24	167.49	3	PASS
Band17	5MHz	QPSK	23790	1RB#12	24.14	0.5	22.49	177.42	3	PASS
Band17	5MHz	QPSK	23790	1RB#24	23.74	0.5	22.09	161.81	3	PASS
Band17	5MHz	QPSK	23790	25RB#0	22.90	0.5	21.25	133.35	3	PASS
Band17	5MHz	QPSK	23825	1RB#0	23.97	0.5	22.32	170.61	3	PASS
Band17	5MHz	QPSK	23825	1RB#12	23.85	0.5	22.20	165.96	3	PASS
Band17	5MHz	QPSK	23825	1RB#24	23.71	0.5	22.06	160.69	3	PASS
Band17	5MHz	QPSK	23825	25RB#0	22.97	0.5	21.32	135.52	3	PASS
Band17	5MHz	16QAM	23755	1RB#0	23.08	0.5	21.43	139.00	3	PASS
Band17	5MHz	16QAM	23755	1RB#12	23.02	0.5	21.37	137.09	3	PASS
Band17	5MHz	16QAM	23755	1RB#24	22.96	0.5	21.31	135.21	3	PASS
Band17	5MHz	16QAM	23755	25RB#0	21.90	0.5	20.25	105.93	3	PASS
Band17	5MHz	16QAM	23790	1RB#0	22.94	0.5	21.29	134.59	3	PASS
Band17	5MHz	16QAM	23790	1RB#12	23.01	0.5	21.36	136.77	3	PASS
Band17	5MHz	16QAM	23790	1RB#24	22.97	0.5	21.32	135.52	3	PASS
Band17	5MHz	16QAM	23790	25RB#0	21.85	0.5	20.20	104.71	3	PASS
Band17	5MHz	16QAM	23825	1RB#0	23.06	0.5	21.41	138.36	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band17	5MHz	16QAM	23825	1RB#12	22.87	0.5	21.22	132.43	3	PASS
Band17	5MHz	16QAM	23825	1RB#24	22.83	0.5	21.18	131.22	3	PASS
Band17	5MHz	16QAM	23825	25RB#0	21.89	0.5	20.24	105.68	3	PASS
Band17	5MHz	64QAM	23755	1RB#0	22.06	0.5	20.41	109.90	3	PASS
Band17	5MHz	64QAM	23755	1RB#12	21.94	0.5	20.29	106.91	3	PASS
Band17	5MHz	64QAM	23755	1RB#24	21.86	0.5	20.21	104.95	3	PASS
Band17	5MHz	64QAM	23755	25RB#0	20.93	0.5	19.28	84.72	3	PASS
Band17	5MHz	64QAM	23790	1RB#0	21.88	0.5	20.23	105.44	3	PASS
Band17	5MHz	64QAM	23790	1RB#12	22.08	0.5	20.43	110.41	3	PASS
Band17	5MHz	64QAM	23790	1RB#24	21.95	0.5	20.30	107.15	3	PASS
Band17	5MHz	64QAM	23790	25RB#0	20.83	0.5	19.18	82.79	3	PASS
Band17	5MHz	64QAM	23825	1RB#0	22.10	0.5	20.45	110.92	3	PASS
Band17	5MHz	64QAM	23825	1RB#12	21.86	0.5	20.21	104.95	3	PASS
Band17	5MHz	64QAM	23825	1RB#24	21.96	0.5	20.31	107.40	3	PASS
Band17	5MHz	64QAM	23825	25RB#0	20.88	0.5	19.23	83.75	3	PASS
Band17	10MHz	QPSK	23780	1RB#0	23.96	0.5	22.31	170.22	3	PASS
Band17	10MHz	QPSK	23780	1RB#24	23.86	0.5	22.21	166.34	3	PASS
Band17	10MHz	QPSK	23780	1RB#49	23.64	0.5	21.99	158.12	3	PASS
Band17	10MHz	QPSK	23780	50RB#0	22.92	0.5	21.27	133.97	3	PASS
Band17	10MHz	QPSK	23790	1RB#0	23.87	0.5	22.22	166.72	3	PASS
Band17	10MHz	QPSK	23790	1RB#24	23.90	0.5	22.25	167.88	3	PASS
Band17	10MHz	QPSK	23790	1RB#49	23.74	0.5	22.09	161.81	3	PASS
Band17	10MHz	QPSK	23790	50RB#0	22.85	0.5	21.20	131.83	3	PASS
Band17	10MHz	QPSK	23800	1RB#0	23.79	0.5	22.14	163.68	3	PASS
Band17	10MHz	QPSK	23800	1RB#24	23.84	0.5	22.19	165.58	3	PASS
Band17	10MHz	QPSK	23800	1RB#49	23.71	0.5	22.06	160.69	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

Band17	10MHz	QPSK	23800	50RB#0	22.84	0.5	21.19	131.52	3	PASS
Band17	10MHz	16QAM	23780	1RB#0	22.89	0.5	21.24	133.05	3	PASS
Band17	10MHz	16QAM	23780	1RB#24	23.05	0.5	21.40	138.04	3	PASS
Band17	10MHz	16QAM	23780	1RB#49	22.83	0.5	21.18	131.22	3	PASS
Band17	10MHz	16QAM	23780	50RB#0	21.90	0.5	20.25	105.93	3	PASS
Band17	10MHz	16QAM	23790	1RB#0	22.93	0.5	21.28	134.28	3	PASS
Band17	10MHz	16QAM	23790	1RB#24	23.07	0.5	21.42	138.68	3	PASS
Band17	10MHz	16QAM	23790	1RB#49	22.96	0.5	21.31	135.21	3	PASS
Band17	10MHz	16QAM	23790	50RB#0	21.84	0.5	20.19	104.47	3	PASS
Band17	10MHz	16QAM	23800	1RB#0	22.95	0.5	21.30	134.90	3	PASS
Band17	10MHz	16QAM	23800	1RB#24	23.11	0.5	21.46	139.96	3	PASS
Band17	10MHz	16QAM	23800	1RB#49	22.95	0.5	21.30	134.90	3	PASS
Band17	10MHz	16QAM	23800	50RB#0	21.80	0.5	20.15	103.51	3	PASS
Band17	10MHz	64QAM	23780	1RB#0	22.23	0.5	20.58	114.29	3	PASS
Band17	10MHz	64QAM	23780	1RB#24	21.96	0.5	20.31	107.40	3	PASS
Band17	10MHz	64QAM	23780	1RB#49	21.85	0.5	20.20	104.71	3	PASS
Band17	10MHz	64QAM	23780	50RB#0	20.90	0.5	19.25	84.14	3	PASS
Band17	10MHz	64QAM	23790	1RB#0	21.97	0.5	20.32	107.65	3	PASS
Band17	10MHz	64QAM	23790	1RB#24	22.02	0.5	20.37	108.89	3	PASS
Band17	10MHz	64QAM	23790	1RB#49	22.11	0.5	20.46	111.17	3	PASS
Band17	10MHz	64QAM	23790	50RB#0	20.89	0.5	19.24	83.95	3	PASS
Band17	10MHz	64QAM	23800	1RB#0	21.90	0.5	20.25	105.93	3	PASS
Band17	10MHz	64QAM	23800	1RB#24	21.97	0.5	20.32	107.65	3	PASS
Band17	10MHz	64QAM	23800	1RB#49	21.90	0.5	20.25	105.93	3	PASS
Band17	10MHz	64QAM	23800	50RB#0	20.86	0.5	19.21	83.37	3	PASS

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

We had reduced the power and EIRP of LTE Band 30 as follows.

LTE Band 30						
BW [MHz]	Modulation	RB Size	RB Offset	Low	Mid	High
		Channel			27710	
		Frequency (MHz)			2310	
10	QPSK	1	0		21.71	
		1	24		21.75	
		1	49		21.60	
		25	0		20.65	
		25	12		20.70	
		25	25		20.59	
		50	0		20.61	
	16QAM	1	0		21.05	
		1	24		21.12	
		1	49		20.89	
		25	0		19.66	
		25	12		19.71	
		25	25		19.64	
		50	0		19.61	
	64QAM	1	0		19.91	
		1	24		19.97	
		1	49		19.80	
		25	0		18.69	
		25	12		18.72	
		25	25		18.67	
		50	0		18.68	
BW [MHz]	Modulation	Channel		27685	27710	27735
		Frequency (MHz)		2307.5	2310	2312.5
5	QPSK	1	0	21.60	21.70	21.70
		1	12	21.65	21.70	21.71
		1	24	21.53	21.58	21.53
		12	0	20.59	20.57	20.50
		12	6	20.55	20.60	20.66
		12	13	20.55	20.48	20.49
		25	0	20.59	20.49	20.57
	16QAM	1	0	20.91	20.90	21.01
		1	12	20.99	20.98	20.99
		1	24	20.80	20.76	20.86
		12	0	19.65	19.53	19.55
		12	6	19.57	19.61	19.70
		12	13	19.49	19.50	19.53
		25	0	19.51	19.52	19.59


Test Report No.: RF260413B003

	64QAM	1	0	19.76	19.88	19.86
		1	12	19.89	19.95	19.92
		1	24	19.67	19.68	19.65
		12	0	18.63	18.63	18.55
		12	6	18.71	18.68	18.65
		12	13	18.54	18.53	18.63
		25	0	18.59	18.58	18.54

LTE Band 30							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
10M-QPSK	27710	2310	21.75	1.6	23.35	216.27	0.25
10M-16QAM	27710	2310	21.12	1.6	22.72	187.07	0.25
10M-64QAM	27710	2310	19.97	1.6	21.57	143.55	0.25
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
5M-QPSK	27685	2307.5	21.65	1.6	23.25	211.35	0.25
	27710	2310	21.70	1.6	23.30	213.80	0.25
	27735	2312.5	21.71	1.6	23.31	214.29	0.25
5M-16QAM	27685	2307.5	20.99	1.6	22.59	181.55	0.25
	27710	2310	20.98	1.6	22.58	181.13	0.25
	27735	2312.5	21.01	1.6	22.61	182.39	0.25
5M-64QAM	27685	2307.5	19.89	1.6	21.49	140.93	0.25
	27710	2310	19.95	1.6	21.55	142.89	0.25
	27735	2312.5	19.92	1.6	21.52	141.91	0.25

REMARKS: ERP Output Power (dBm) = EIRP (dBm) -2.15(dB).

3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

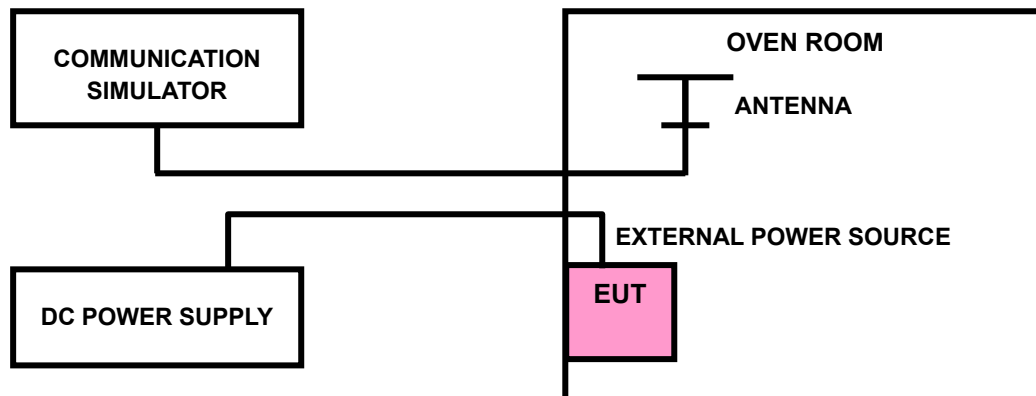
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- 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.
- 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.
- 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.

3.3.3 TEST SETUP





Test Report No.: RF260413B003

3.2.3 TEST RESULTS

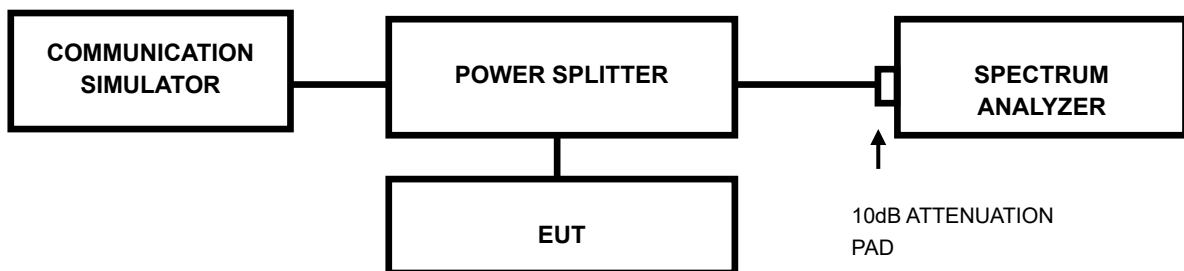
Please Refer to WWAN module(model name: RM520N-GL) test report(NO.: SEWM2304000122RG01,FCC ID: XMR2023RM520NGL).

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

- 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.

3.3.4 TEST RESULTS

Please Refer to WWAN module(model name: RM520N-GL) test report(NO.: SEWM2304000122RG01,FCC ID: XMR2023RM520NGL).

3.4 BAND EDGE MEASUREMENT

3.4.1 LIMITS OF BAND EDGE MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 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. 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.

According to FCC 27.53(h) specified that For operations in the 1710-1755 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. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

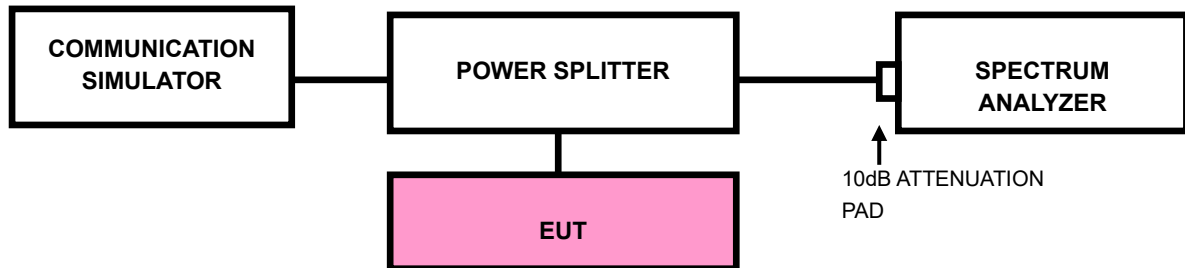
According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna

that is representative of the type that will be used with the equipment in normal operation.

3.4.2 TEST SETUP





Test Report No.: RF260413B003

3.4.3 TEST PROCEDURES

- a) All measurements were done at low and high operational frequency range
- b) Connect the transmitter to the spectrum analyzer via coaxial cable while ensuring proper impedance matching.
- c) Tune the analyzer to the nominal center frequency of the emission bandwidth

(EBW)
- d) .Set the resolution bandwidth (RBW) $\geq 1\%$ EBW in the 1MHz band immediately outside and adjacent to the band edge.
- e) Beyond the 1MHz band from the band edge, RBW=1MHz was used.
- f) Set the video bandwidth (VBW) to $\geq 3 \times$ RBW.
- g) Select the average power (RMS) display detector.
- h) Set the number of measurement points to ≥ 1001 .
- i) Use auto-coupled sweep time.
- j) Perform the measurement over an interval of time when the transmission is continuous and at its maximum power level.
- k) The RF fundamental frequency should be excluded against the limit line in the operating frequency band and use RBW is 10KHz or 100KHz.
- l) Record the max trace plot into the test report.

3.4.4 TEST RESULTS

Please Refer to WWAN module(model name: RM520N-GL) test report(NO.: SEWM2304000122RG01,FCC ID: XMR2023RM520NGL).

3.5



Test Report No.: RF260413B003

3.5 CONDUCTED SPURIOUS EMISSIONS

3.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 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. 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.

According to FCC 27.53(h) specified that For operations in the 1710-1755 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. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

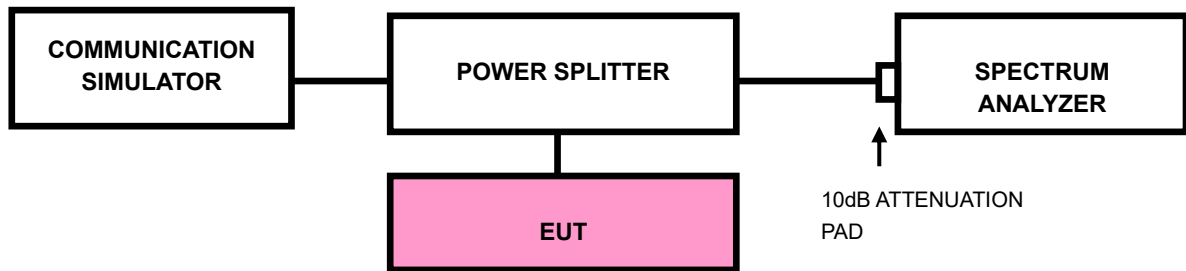
47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal

operation.

3.5.2 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 9kHz up to a frequency including its 10th harmonic. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

3.5.3 TEST SETUP



3.5.4 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

Please Refer to WWAN module(model name: RM520N-GL) test report(NO.: SEWM2304000122RG01,FCC ID: XMR2023RM520NGL).



Test Report No.: RF260413B003

3.6 RADIATED EMISSION MEASUREMENT

3.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

According to FCC 27.53(g) specified that For operations in the 600 MHz band and the 698-746 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. 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.

According to FCC 27.53(h) specified that For operations in the 1710-1755 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. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

According to FCC 27.53(m)(4) specified that For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees. For mobile digital stations, in the 1-megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed.

47 CFR 27.53(c)(2) : On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB;

47 CFR 27.53(f) : For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

3.6.2 TEST PROCEDURES

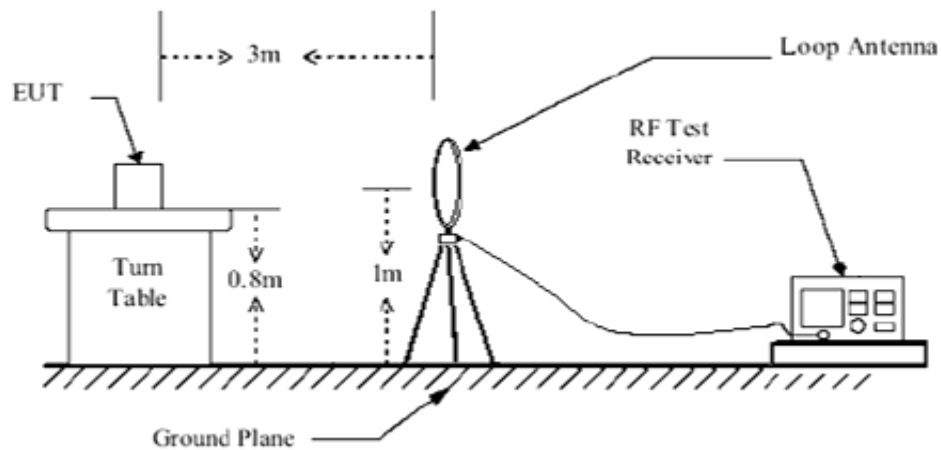
- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from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

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

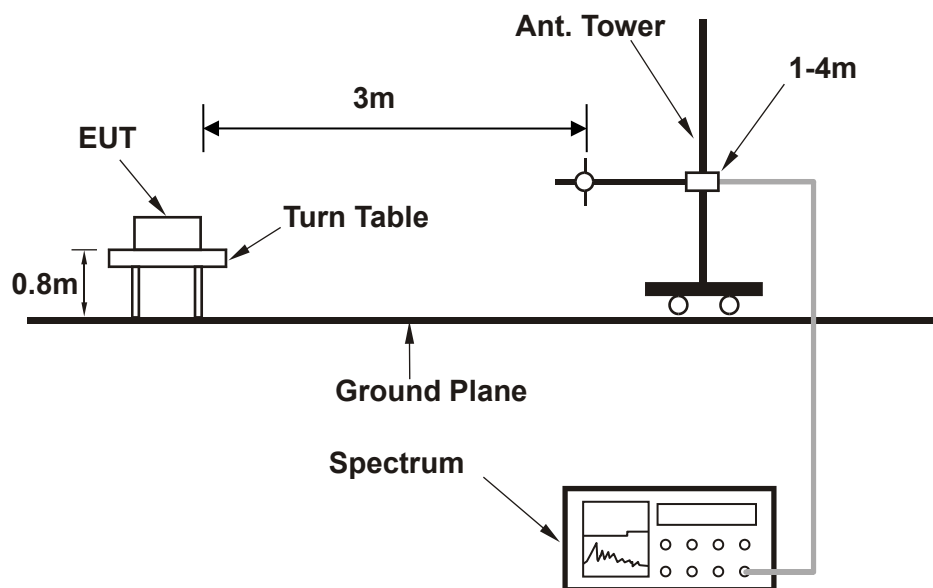
3.6.3 DEVIATION FROM TEST STANDARD

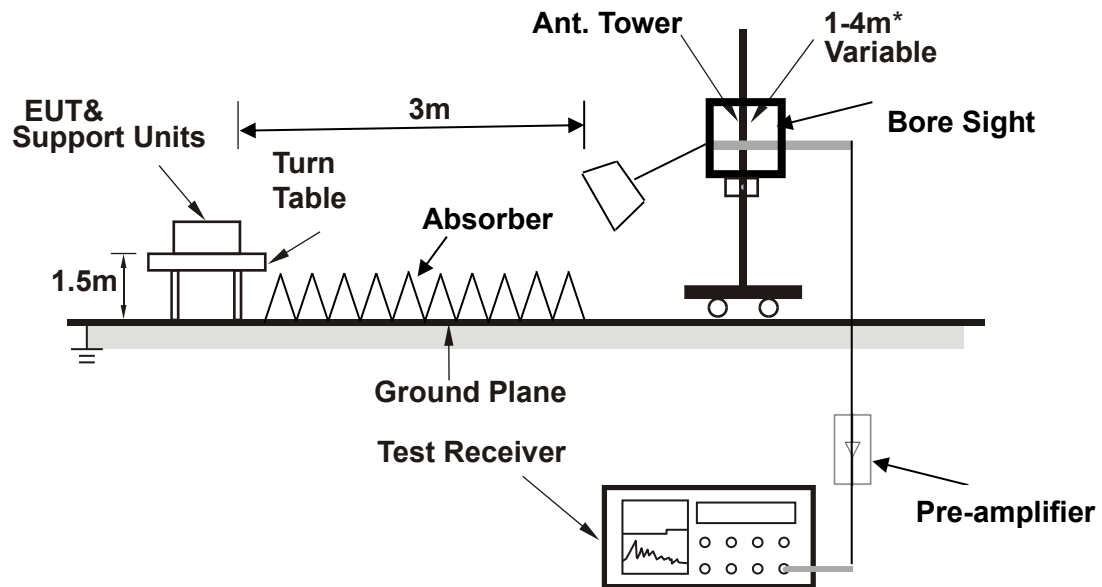
No deviation

< Frequency Range below 30MHz >



< Frequency Range 30MHz~1GHz >





Note: Above 1G is a directional antenna depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

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



Test Report No.: RF260413B003

3.6.5 TEST RESULTS

NOTE : The 9K~30MHz amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required in the report.

BELOW 1GHz WORST-CASE DATA

LTE Band 7 CHANNEL BANDWIDTH: 20MHz / QPSK									
MODE	TX channel 21100				FREQUENCY RANGE		30MHz~1GHz		
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH				INPUT POWER		120Vac 60HZ		
TESTED BY	Carl Xie								
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M									
NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	31.5523	-57.32	-59.68	-2.36	-25.00	34.68	Horizontal	PK	PASS
2	112.4665	-51.24	-68.69	-17.45	-25.00	43.69	Horizontal	PK	PASS
3	178.4397	-58.35	-73.41	-15.06	-25.00	48.41	Horizontal	PK	PASS
4	248.6817	-57.60	-64.66	-7.06	-25.00	39.66	Horizontal	PK	PASS
5	399.838	-65.38	-67.56	-2.18	-25.00	42.56	Horizontal	PK	PASS
6	593.1006	-66.41	-67.56	-1.15	-25.00	42.56	Horizontal	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit • Final Test — Horizontal

FCC PART 27-Limit

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 21100		FREQUENCY RANGE		30MHz~1GHz				
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH		INPUT POWER		120Vac 60HZ				
TESTED BY	Carl Xie								
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M									
NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	30	-49.28	-57.24	-7.96	-25.00	32.24	Vertical	PK	PASS
2	62.4045	-43.39	-62.90	-19.51	-25.00	37.90	Vertical	PK	PASS
3	84.7189	-45.77	-60.64	-14.87	-25.00	35.64	Vertical	PK	PASS
4	140.02	-63.33	-69.89	-6.56	-25.00	44.89	Vertical	PK	PASS
5	292.9226	-61.08	-71.90	-10.82	-25.00	46.90	Vertical	PK	PASS
6	537.4115	-65.50	-65.35	0.15	-25.00	40.35	Vertical	PK	PASS

FCC PART 27

Legend: — Limit • Final Test — Vertical

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

ABOVE 1GHz

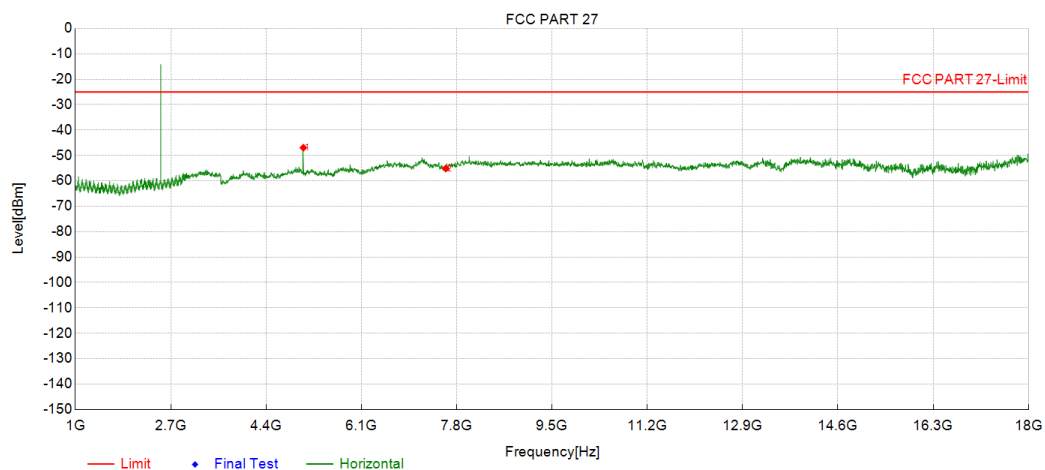
Note: For higher frequency, the emission is too low to be detected.

LTE Band 7

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5065.8132	-50.74	-46.95	3.79	-25.00	21.95	Horizontal	PK	PASS
2	7605.5211	-63.80	-55.12	8.68	-25.00	30.12	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5065.8132	-54.90	-50.94	3.96	-25.00	25.94	Vertical	PK	PASS
2	7605.5211	-64.12	-55.52	8.60	-25.00	30.52	Vertical	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit • Final Test — Vertical

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5061.2122	-53.14	-49.33	3.81	-25.00	24.33	Horizontal	PK	PASS
2	7605.5211	-62.65	-53.98	8.67	-25.00	28.98	Horizontal	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit ♦ Final Test — Horizontal

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5061.2122	-52.70	-48.73	3.97	-25.00	23.73	Vertical	PK	PASS
2	7605.5211	-62.86	-54.30	8.56	-25.00	29.30	Vertical	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit ♦ Final Test — Vertical

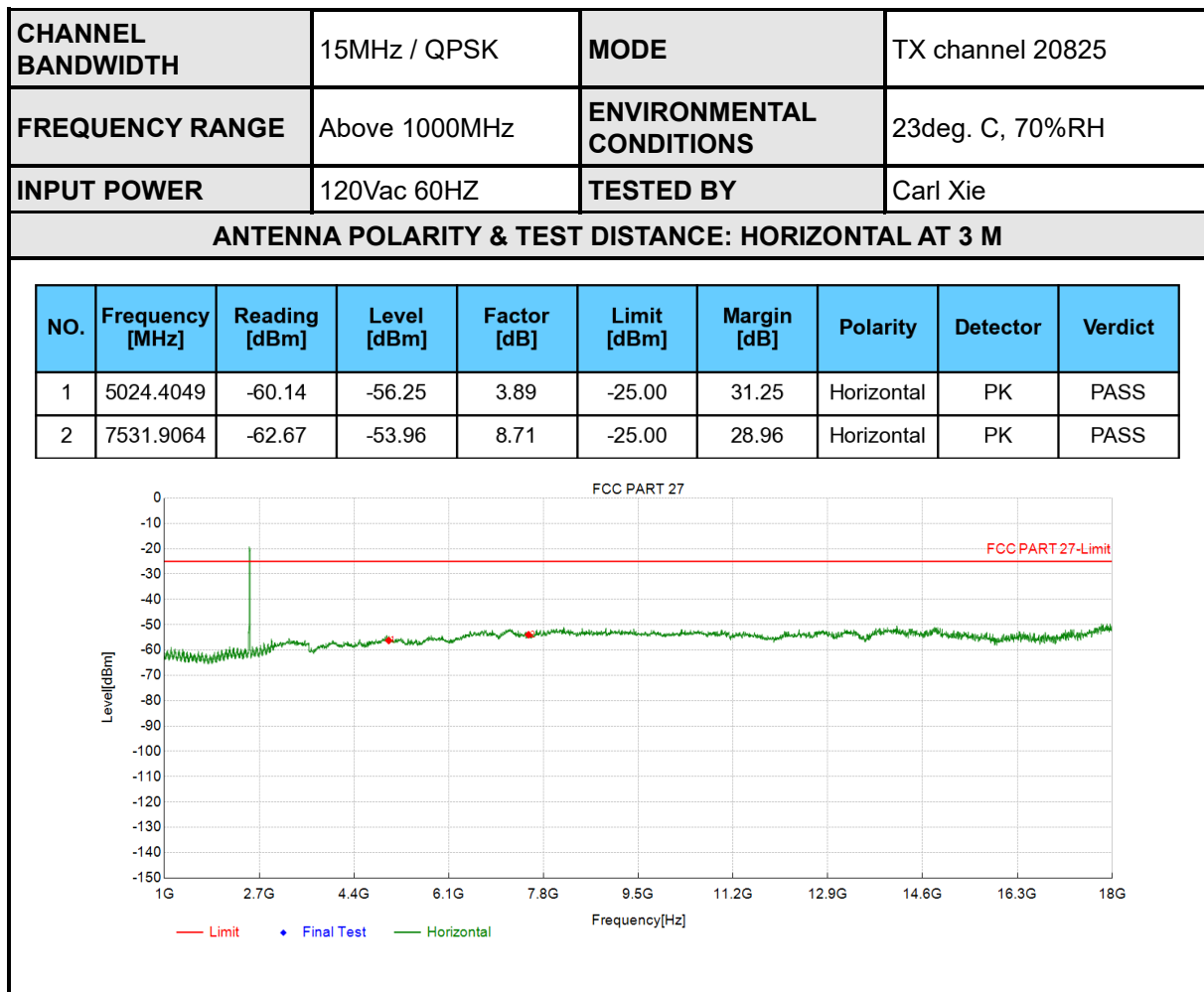
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



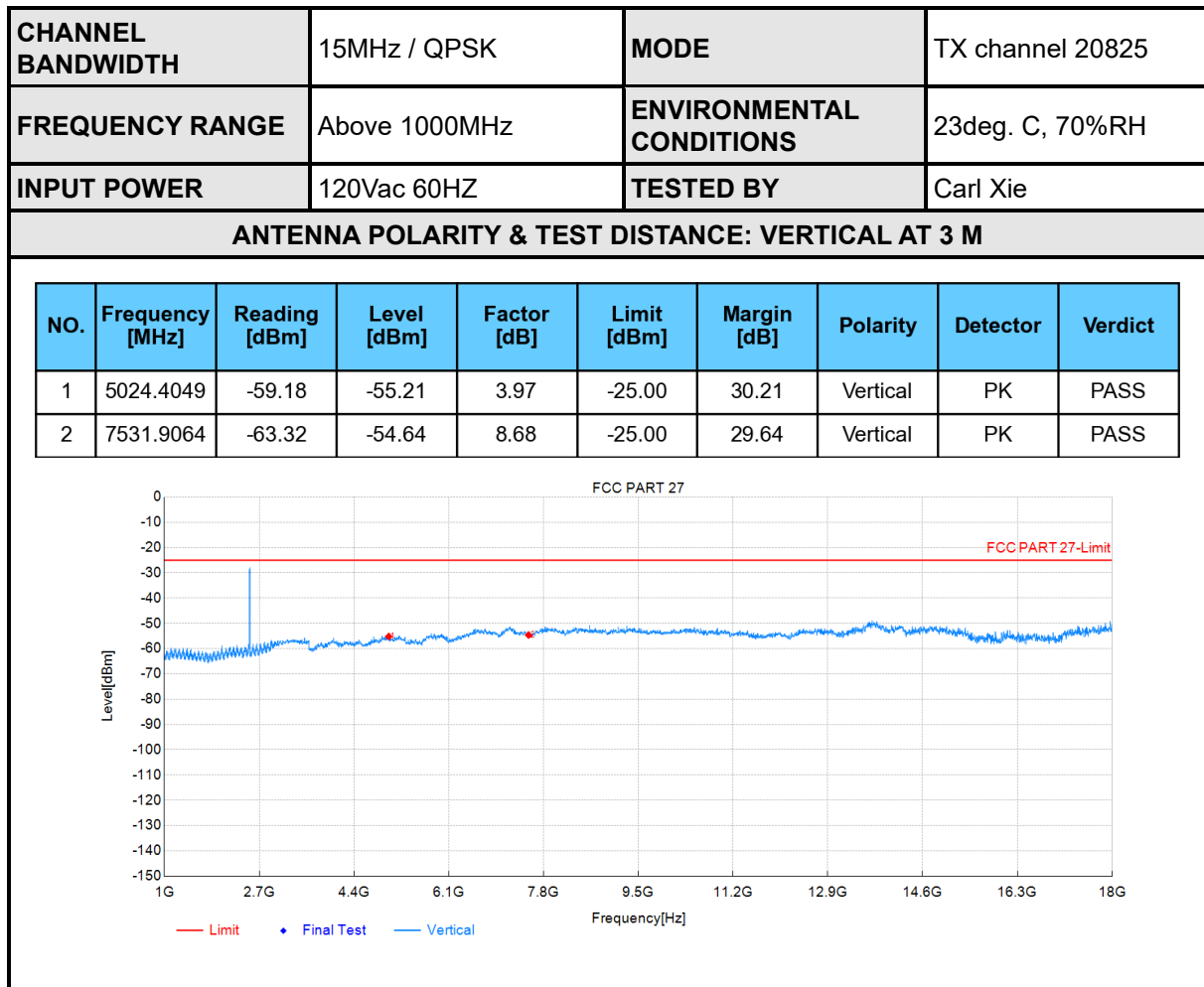
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

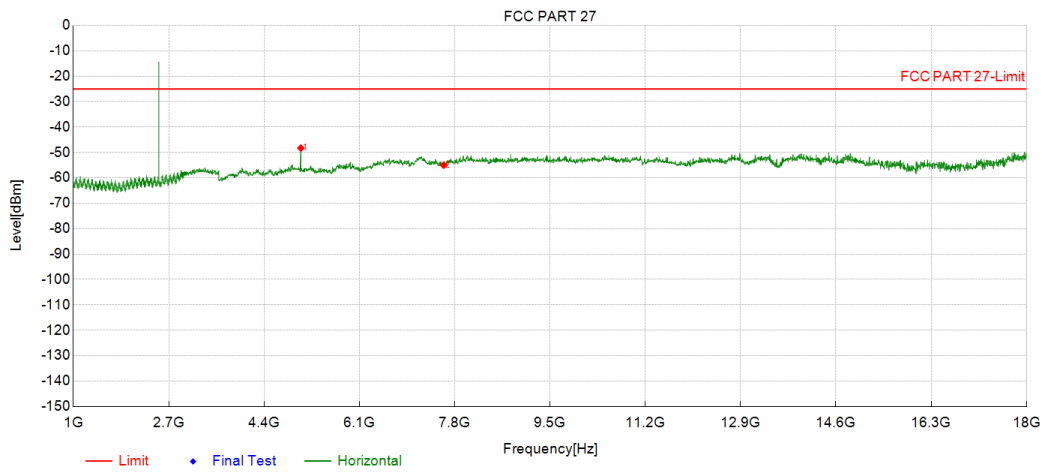


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5056.6113	-52.10	-48.29	3.81	-25.00	23.29	Horizontal	PK	PASS
2	7605.5211	-63.67	-54.99	8.68	-25.00	29.99	Horizontal	PK	PASS



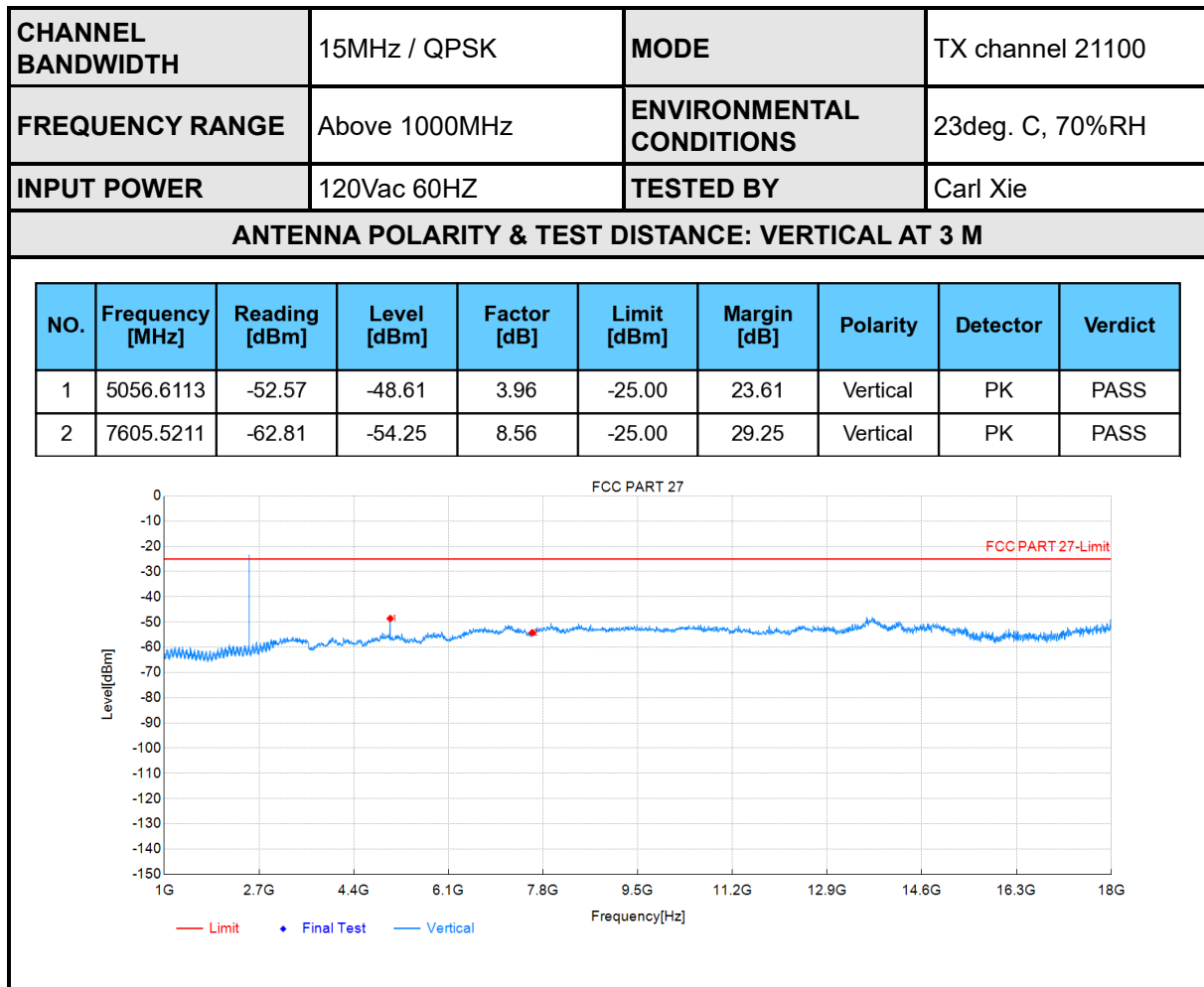
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	15MHz / QPSK	MODE	TX channel 21375
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5121.0242	-59.35	-55.70	3.65	-25.00	30.70	Horizontal	PK	PASS
2	7683.7367	-62.70	-53.85	8.85	-25.00	28.85	Horizontal	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit • Final Test — Horizontal

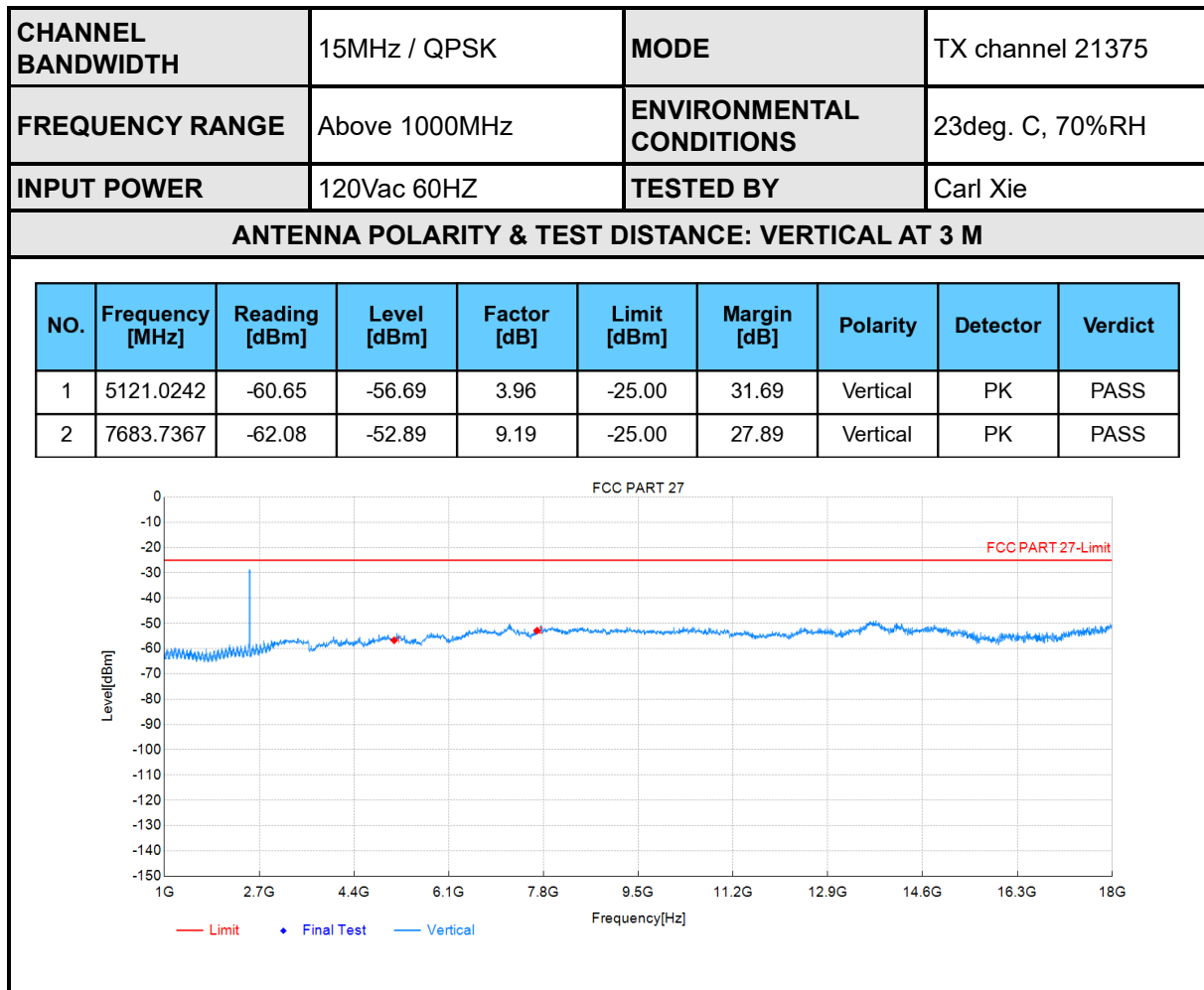
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

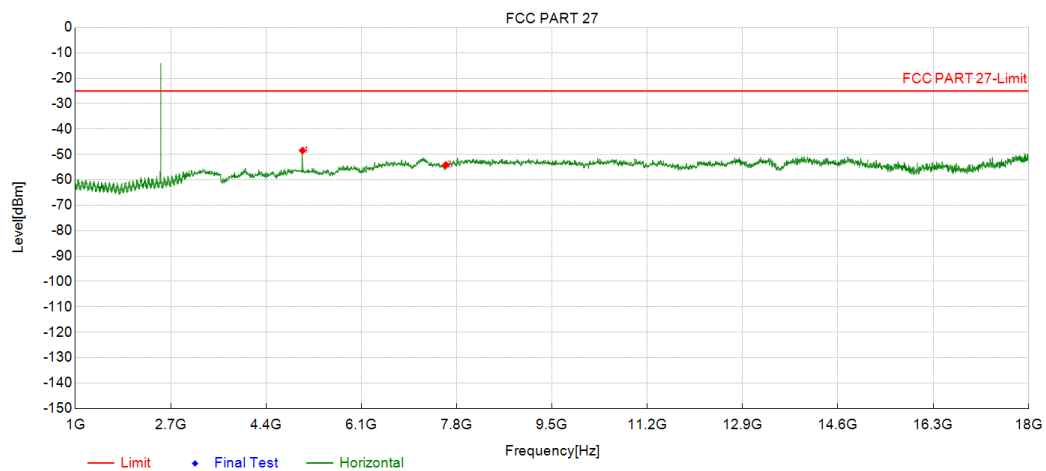


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5052.0104	-52.28	-48.45	3.83	-25.00	23.45	Horizontal	PK	PASS
2	7605.5211	-62.83	-54.16	8.67	-25.00	29.16	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

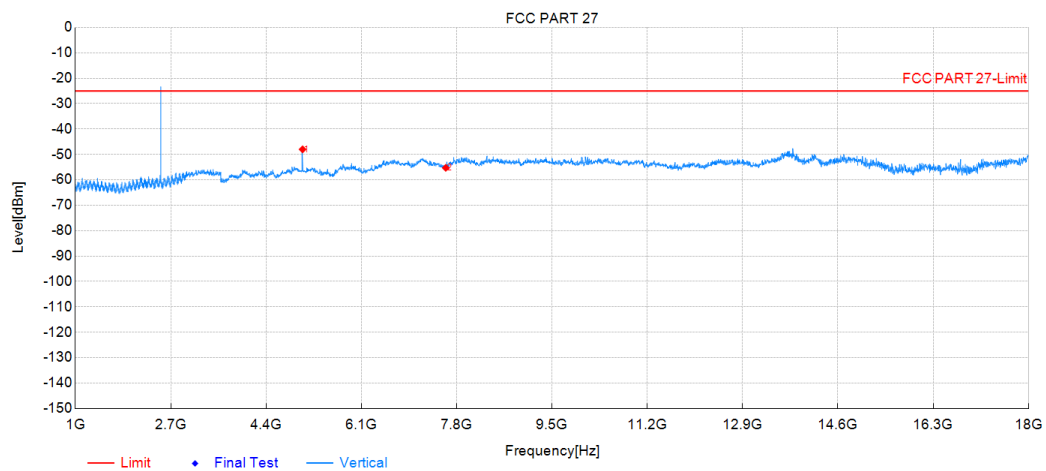


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	5052.0104	-51.97	-48.00	3.97	-25.00	23.00	Vertical	PK	PASS
2	7605.5211	-63.86	-55.26	8.60	-25.00	30.26	Vertical	PK	PASS



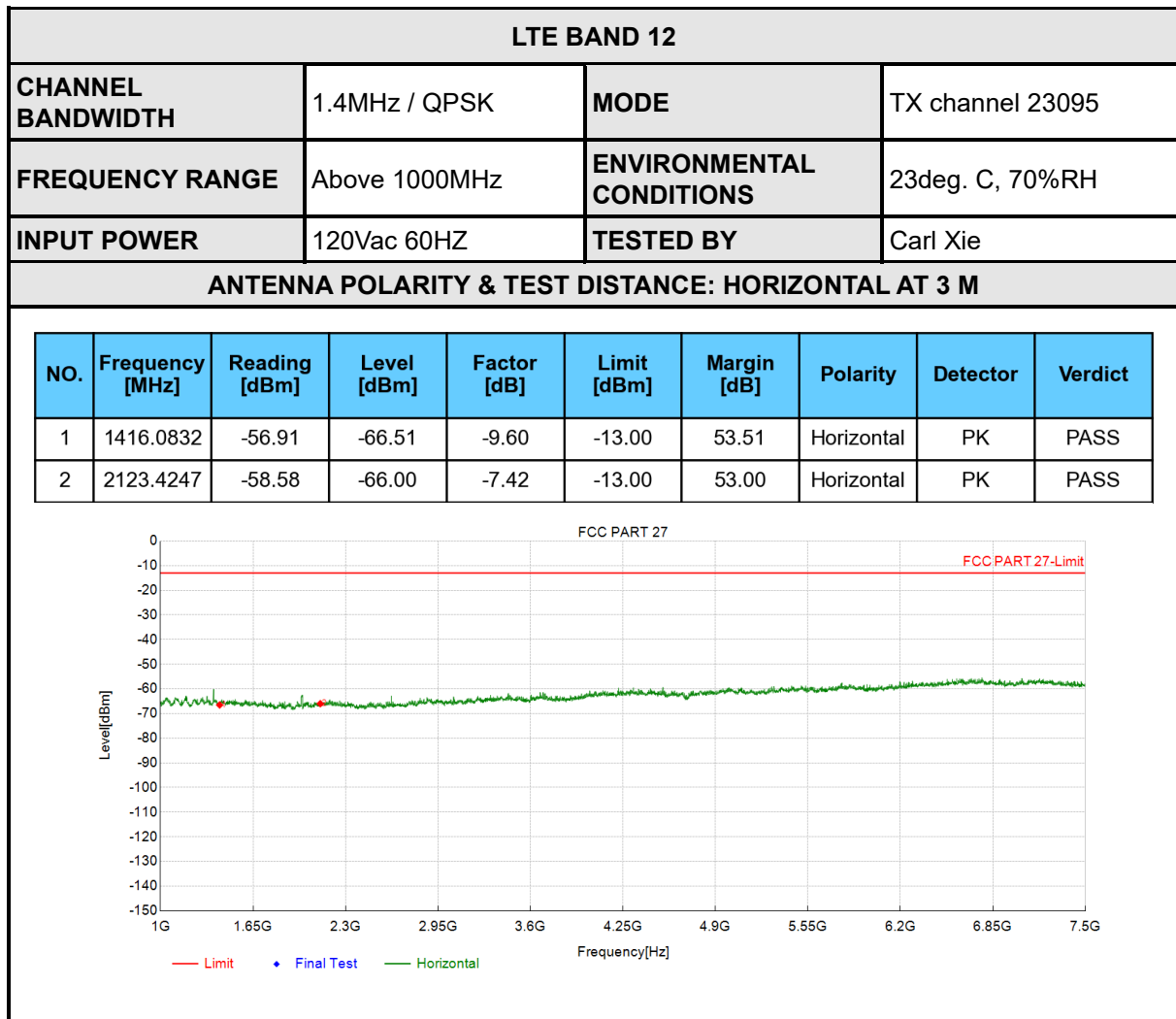
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	1.4MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1416.0832	-56.63	-65.78	-9.15	-13.00	52.78	Vertical	PK	PASS
2	2123.4247	-59.18	-66.47	-7.29	-13.00	53.47	Vertical	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

Limit Final Test Vertical

FCC PART 27-Limit

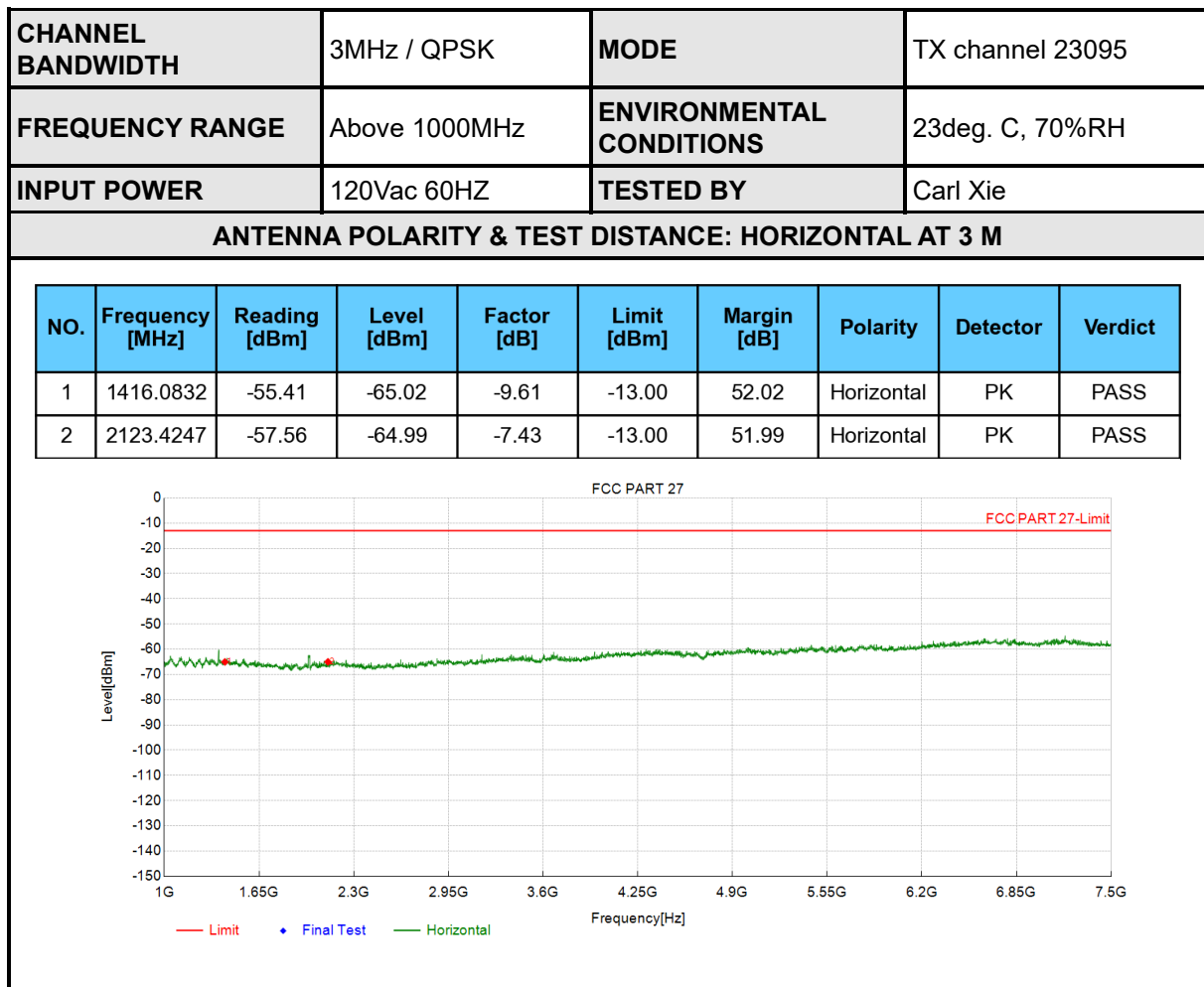
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	3MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1416.0832	-56.36	-65.51	-9.15	-13.00	52.51	Vertical	PK	PASS
2	2123.4247	-59.12	-66.41	-7.29	-13.00	53.41	Vertical	PK	PASS

FCC PART 27

Legend: — Limit • Final Test — Vertical

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

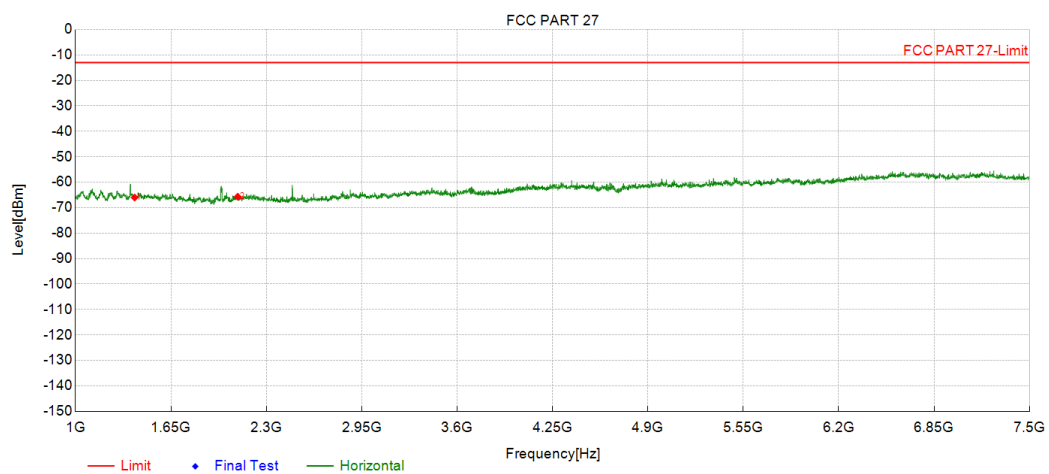


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23035
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1403.0806	-56.38	-66.01	-9.63	-13.00	53.01	Horizontal	PK	PASS
2	2105.221	-58.09	-65.66	-7.57	-13.00	52.66	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email: shimin.wang@boomwavelab.com

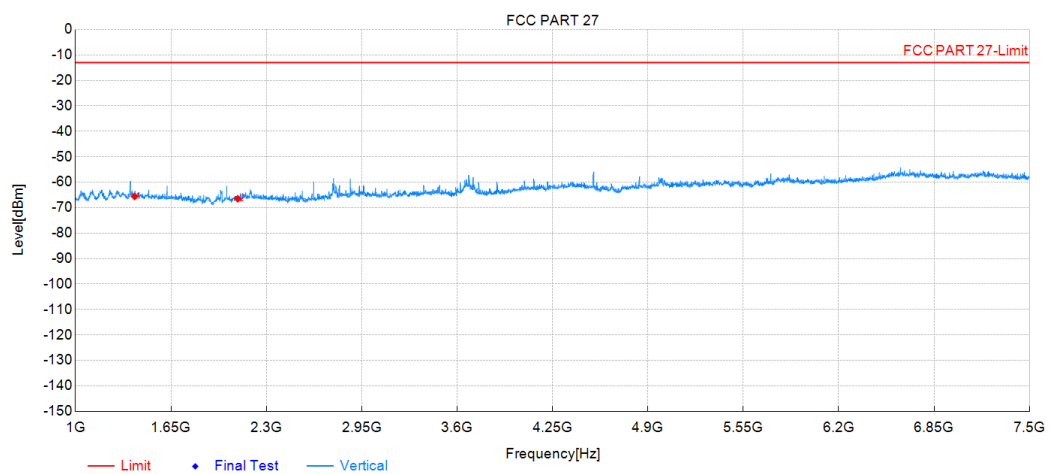


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23035
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1403.0806	-56.45	-65.58	-9.13	-13.00	52.58	Vertical	PK	PASS
2	2105.221	-59.08	-66.51	-7.43	-13.00	53.51	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

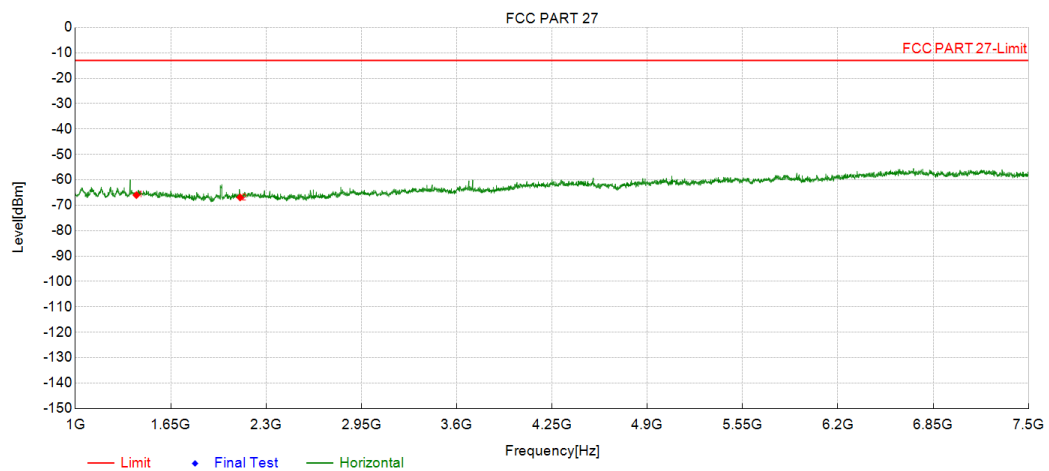


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1416.0832	-56.40	-66.00	-9.60	-13.00	53.00	Horizontal	PK	PASS
2	2123.4247	-59.49	-66.91	-7.42	-13.00	53.91	Horizontal	PK	PASS



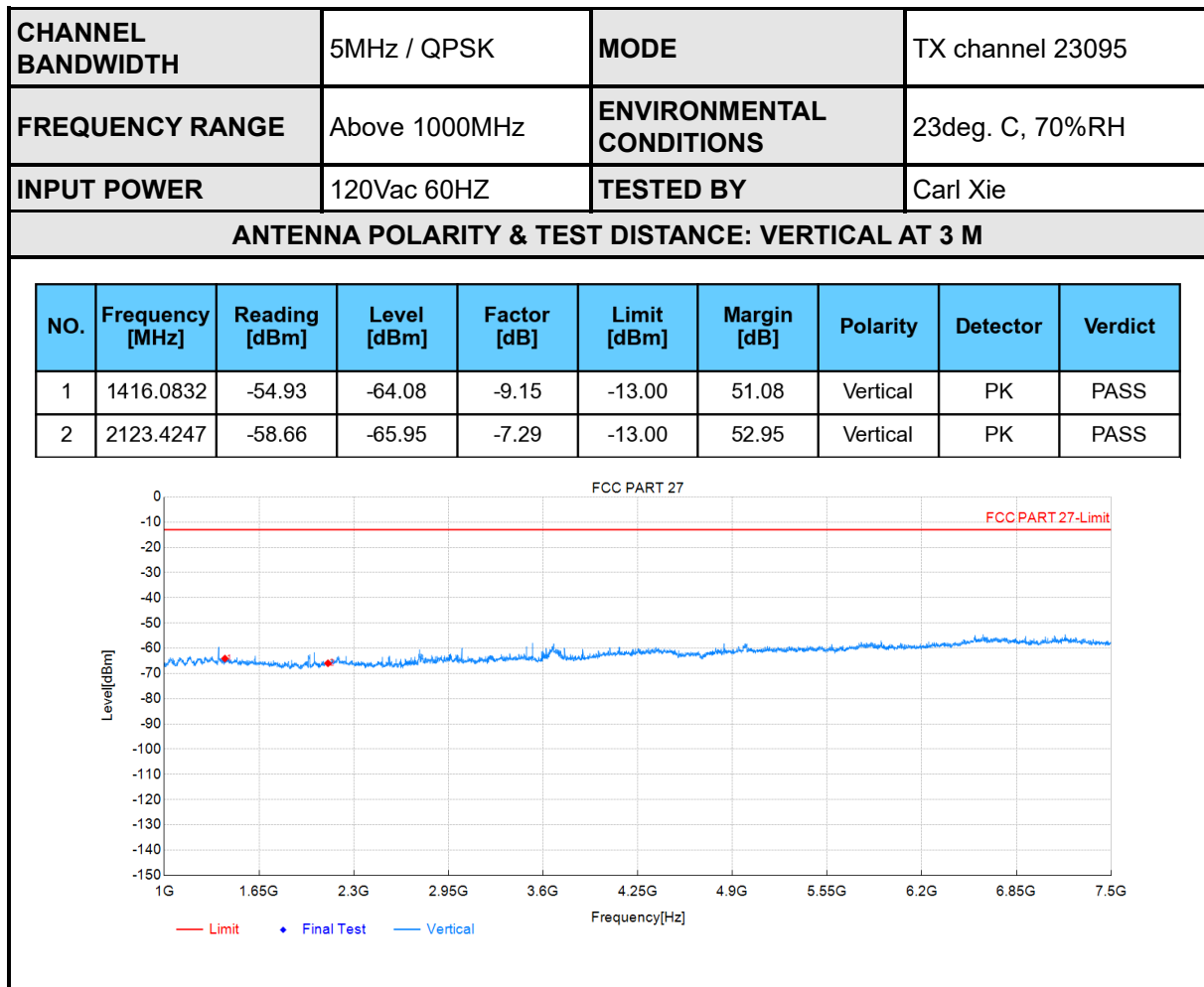
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

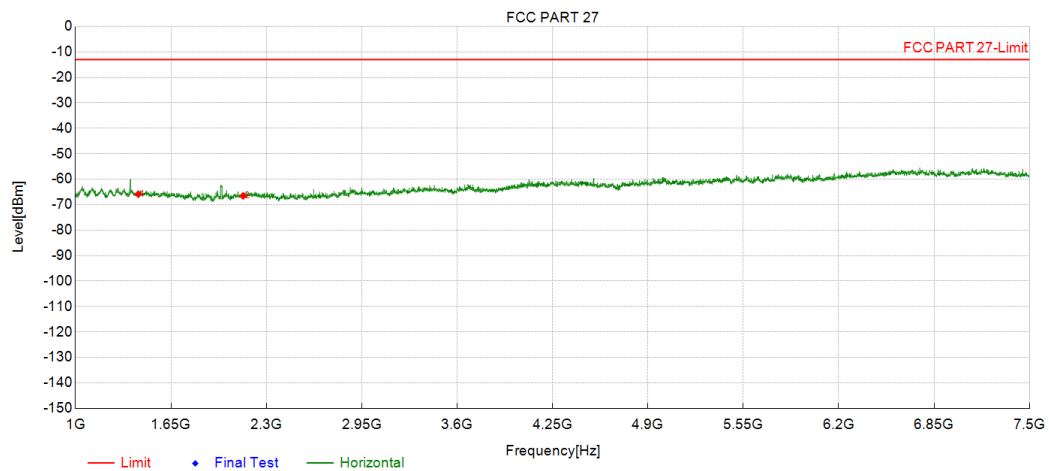


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23155
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1427.7856	-56.29	-65.88	-9.59	-13.00	52.88	Horizontal	PK	PASS
2	2141.6283	-59.28	-66.54	-7.26	-13.00	53.54	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

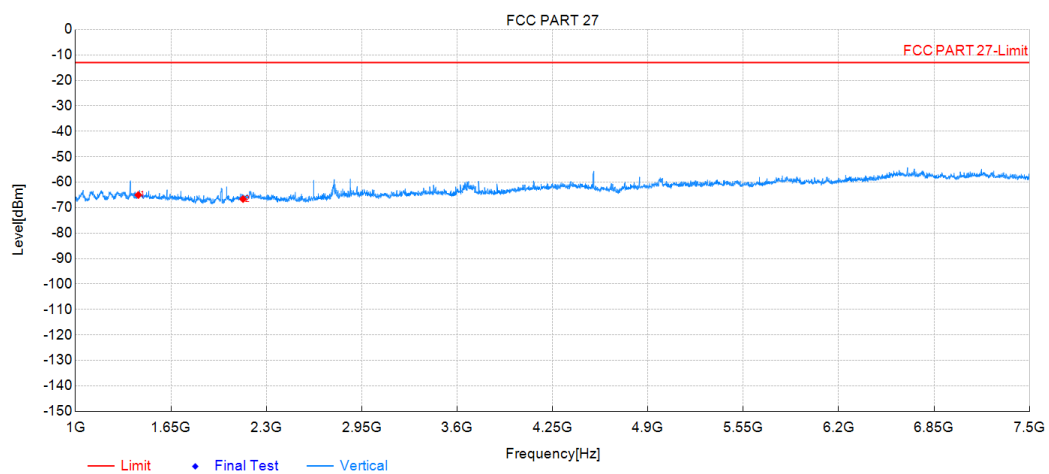


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23155
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1427.7856	-55.85	-65.02	-9.17	-13.00	52.02	Vertical	PK	PASS
2	2141.6283	-59.48	-66.61	-7.13	-13.00	53.61	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

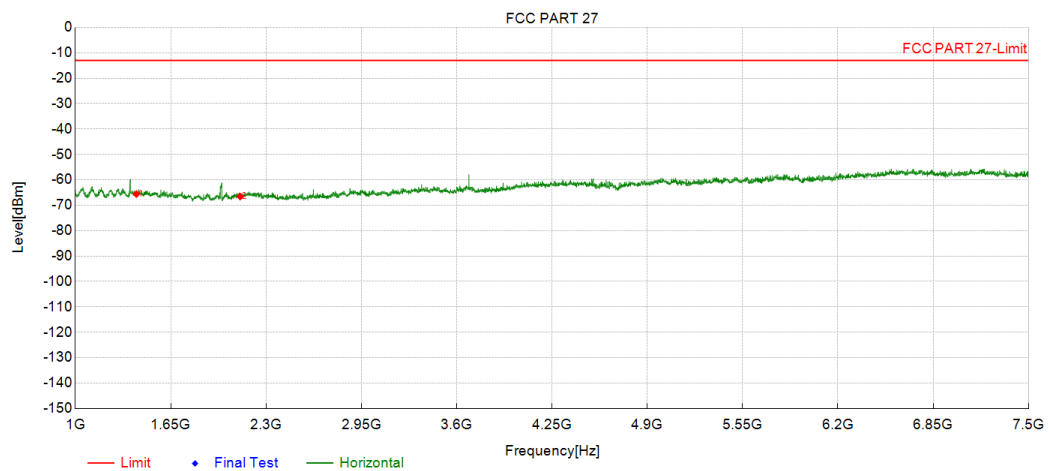


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1416.0832	-55.99	-65.60	-9.61	-13.00	52.60	Horizontal	PK	PASS
2	2123.4247	-59.15	-66.57	-7.42	-13.00	53.57	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23095
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1416.0832	-56.36	-65.51	-9.15	-13.00	52.51	Vertical	PK	PASS
2	2123.4247	-58.92	-66.21	-7.29	-13.00	53.21	Vertical	PK	PASS

FCC PART 27

Level[dBm]

Frequency[Hz]

— Limit ♦ Final Test — Vertical

Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



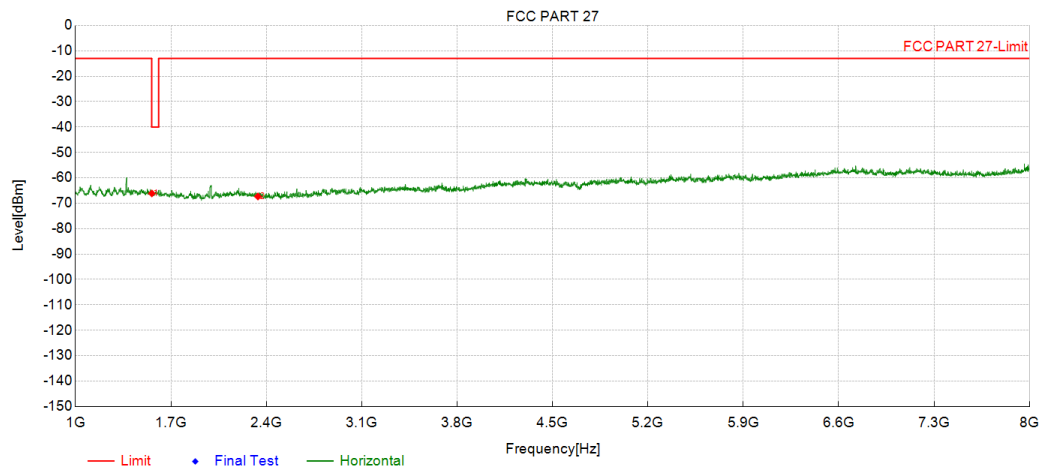
Test Report No.: RF260413B003

LTE B13

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23205
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1560.112	-56.72	-66.12	-9.40	-40.00	26.12	Horizontal	PK	PASS
2	2338.6677	-60.73	-67.32	-6.59	-13.00	54.32	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

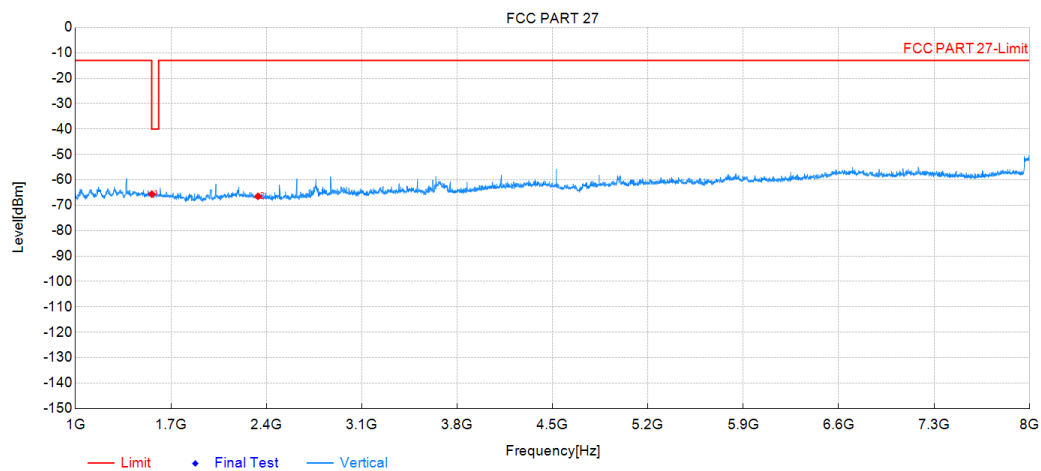


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23205
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1560.112	-56.23	-65.62	-9.39	-40.00	25.62	Vertical	PK	PASS
2	2338.6677	-60.05	-66.48	-6.43	-13.00	53.48	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

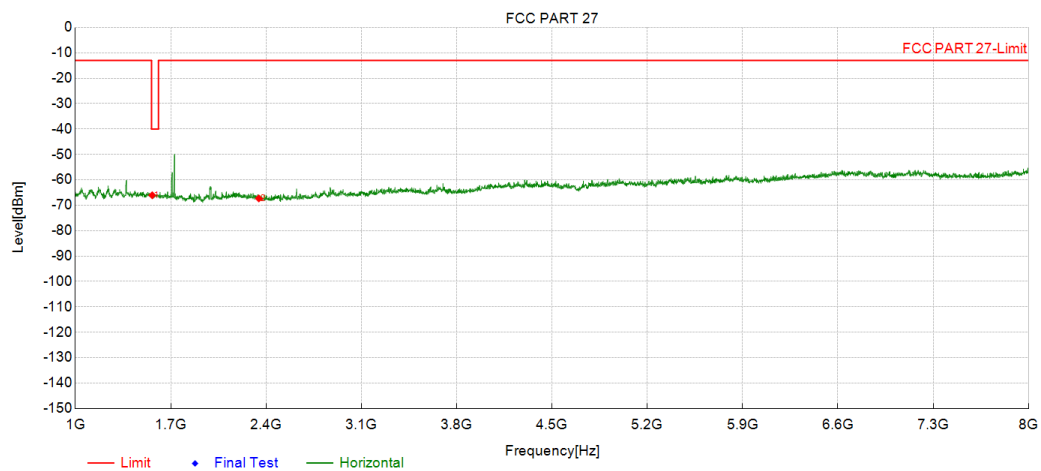


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23230
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1564.3129	-56.67	-66.06	-9.39	-40.00	26.06	Horizontal	PK	PASS
2	2347.0694	-60.73	-67.31	-6.58	-13.00	54.31	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

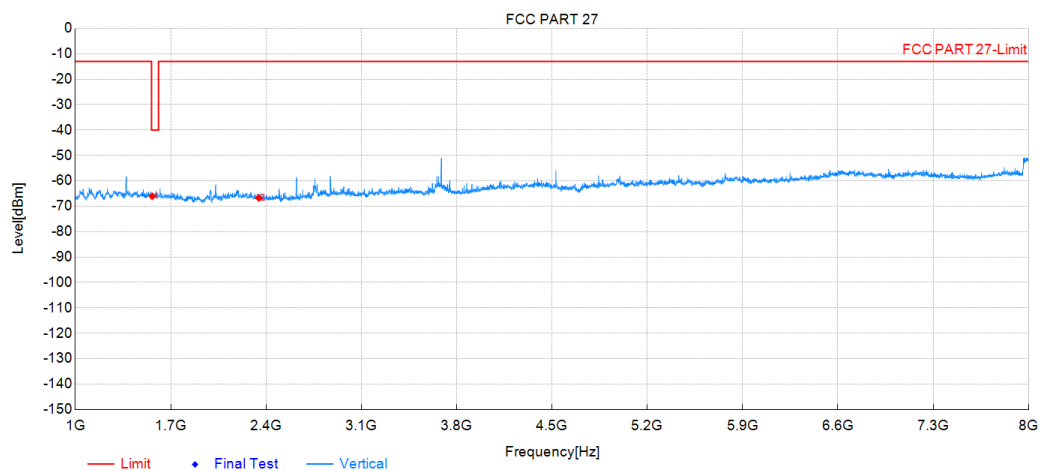


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23230
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1564.3129	-56.67	-66.07	-9.40	-40.00	26.07	Vertical	PK	PASS
2	2347.0694	-60.30	-66.72	-6.42	-13.00	53.72	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email: shimin.wang@boomwavelab.com

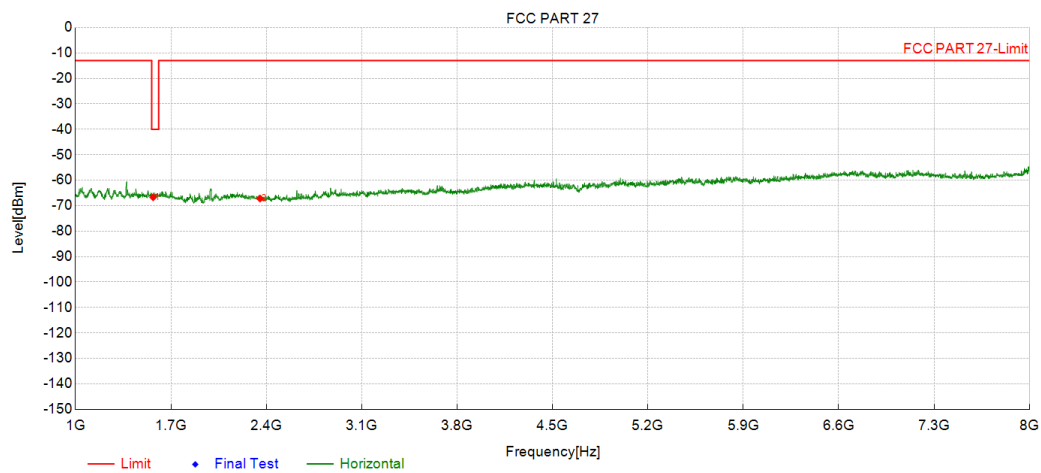


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23255
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1569.914	-57.32	-66.70	-9.38	-40.00	26.70	Horizontal	PK	PASS
2	2354.0708	-60.62	-67.19	-6.57	-13.00	54.19	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

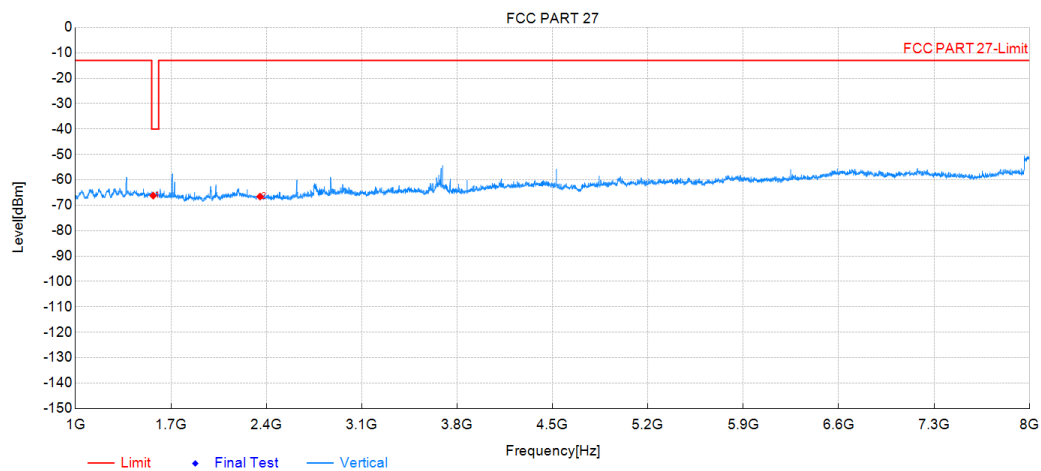


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	5MHz / QPSK	MODE	TX channel 23255
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1569.914	-56.79	-66.20	-9.41	-40.00	26.20	Vertical	PK	PASS
2	2354.0708	-60.17	-66.59	-6.42	-13.00	53.59	Vertical	PK	PASS



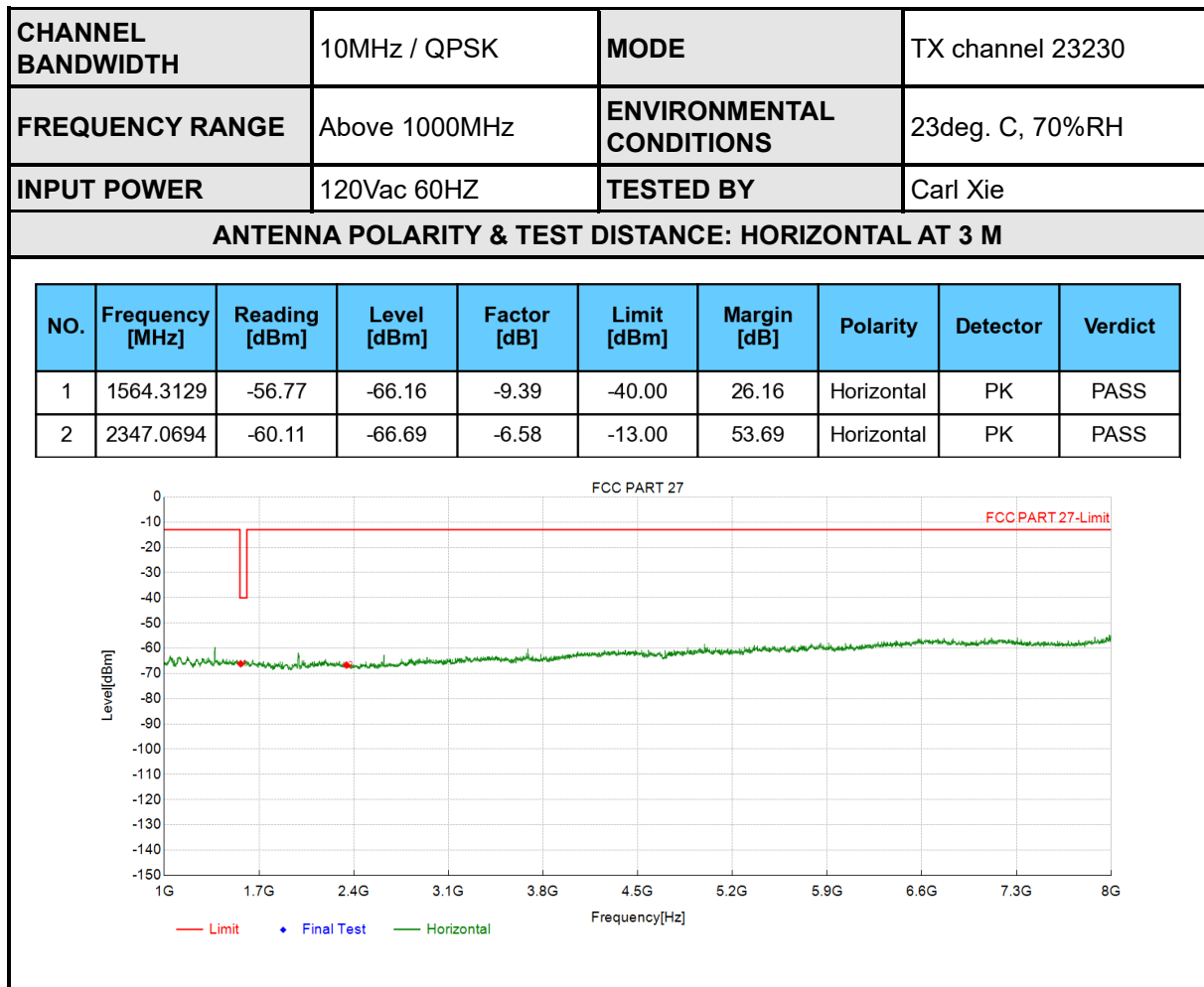
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

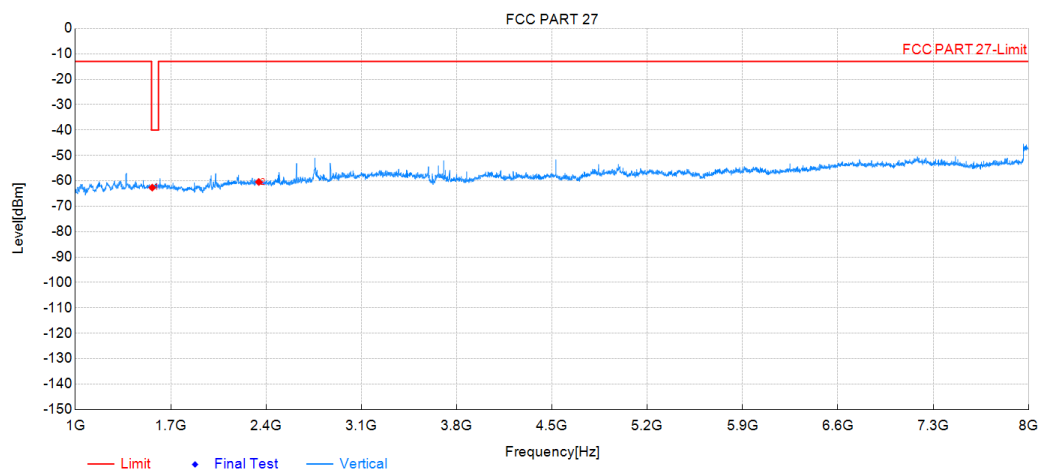


Test Report No.: RF260413B003

CHANNEL BANDWIDTH	10MHz / QPSK	MODE	TX channel 23230
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	1564.3129	-53.25	-62.65	-9.40	-40.00	22.65	Vertical	PK	PASS
2	2347.0694	-54.03	-60.45	-6.42	-13.00	47.45	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

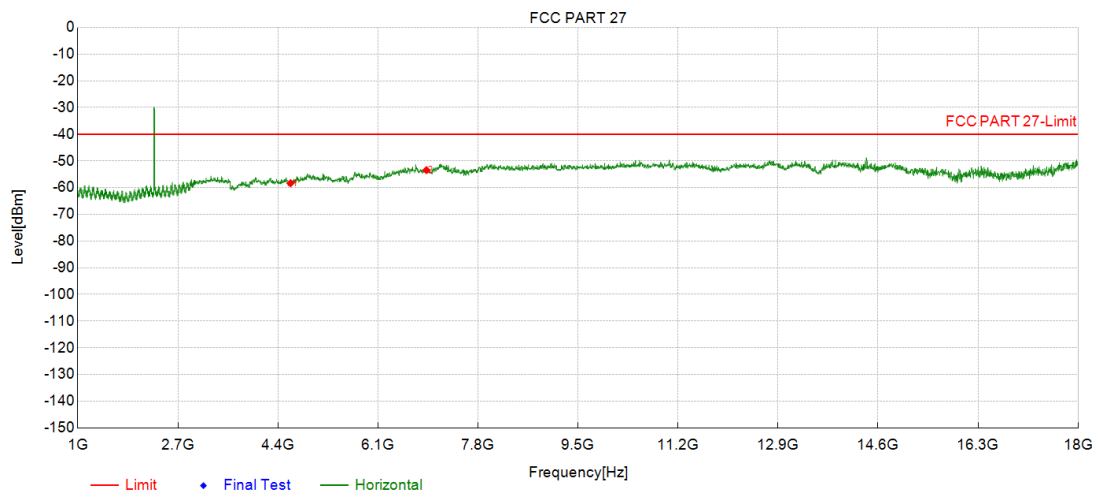
LTE B30

CHANNEL BANDWIDTH: 5MHz / QPSK

CH27685

MODE	TX channel 27685	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4615.7231	-60.14	-58.35	1.79	-40.00	18.35	Horizontal	PK	PASS
2	6924.4849	-61.70	-53.45	8.25	-40.00	13.45	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

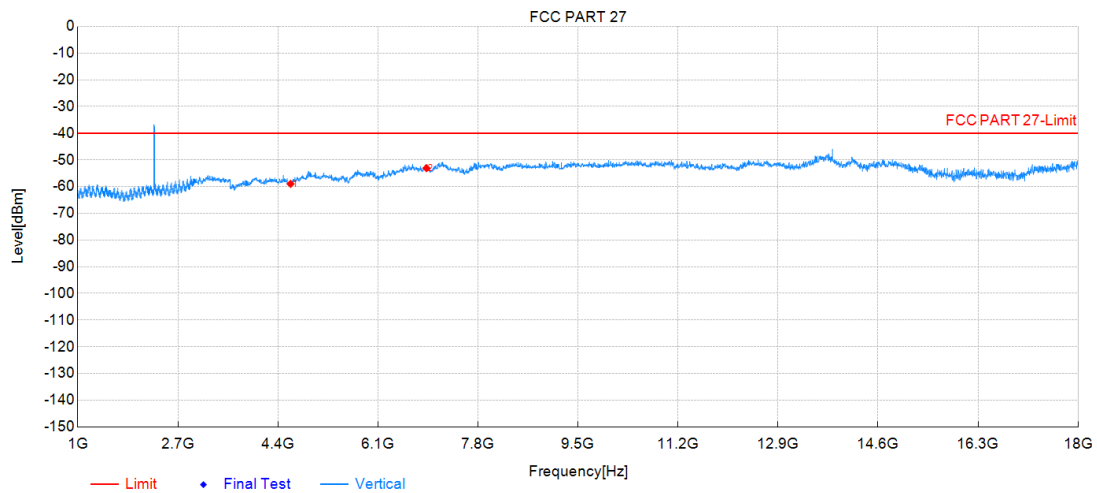
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 27685	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4615.7231	-60.41	-58.97	1.44	-40.00	18.97	Vertical	PK	PASS
2	6924.4849	-61.51	-53.07	8.44	-40.00	13.07	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

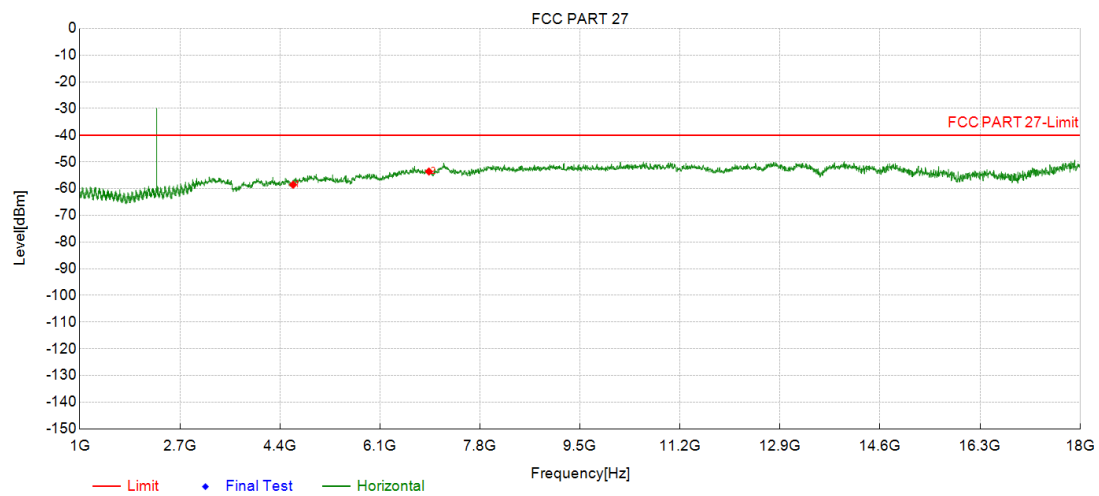


Test Report No.: RF260413B003

CH27710

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4623.9248	-60.37	-58.55	1.82	-40.00	18.55	Horizontal	PK	PASS
2	6932.6865	-61.83	-53.59	8.24	-40.00	13.59	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

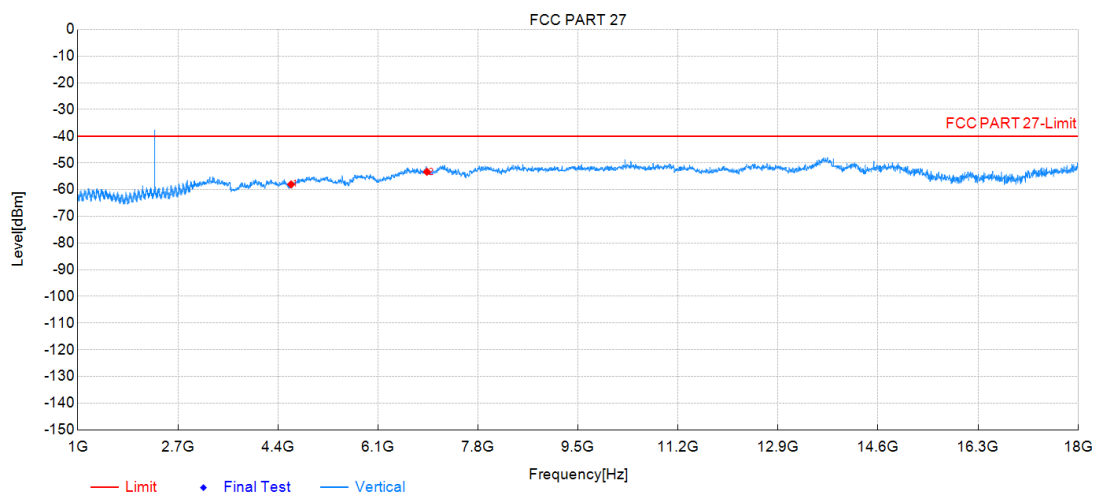
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4623.9248	-59.52	-58.03	1.49	-40.00	18.03	Vertical	PK	PASS
2	6932.6865	-61.75	-53.32	8.43	-40.00	13.32	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

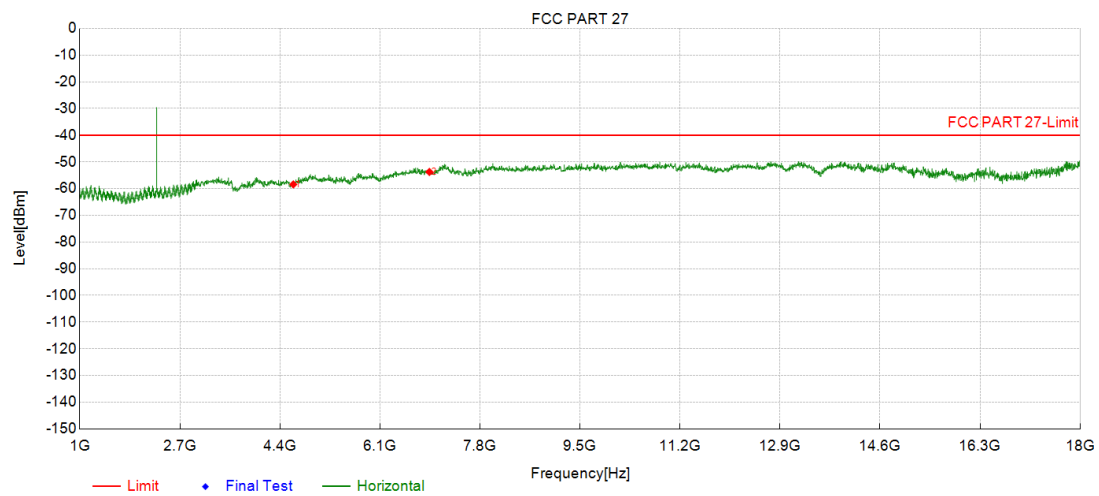


Test Report No.: RF260413B003

CH27735

MODE	TX channel 27735	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4628.0256	-60.26	-58.41	1.85	-40.00	18.41	Horizontal	PK	PASS
2	6940.8882	-61.99	-53.75	8.24	-40.00	13.75	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

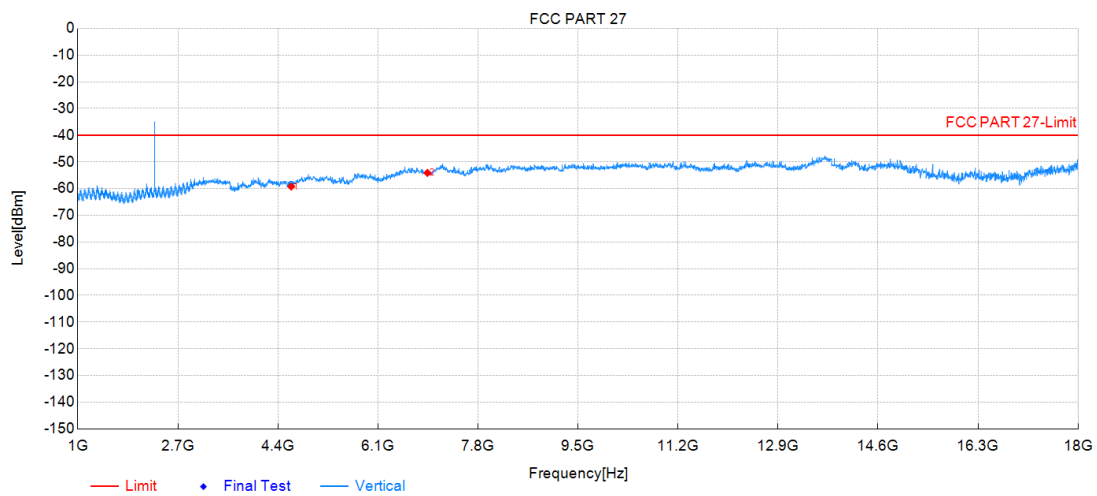
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 27735	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4628.0256	-60.76	-59.23	1.53	-40.00	19.23	Vertical	PK	PASS
2	6940.8882	-62.53	-54.10	8.43	-40.00	14.10	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

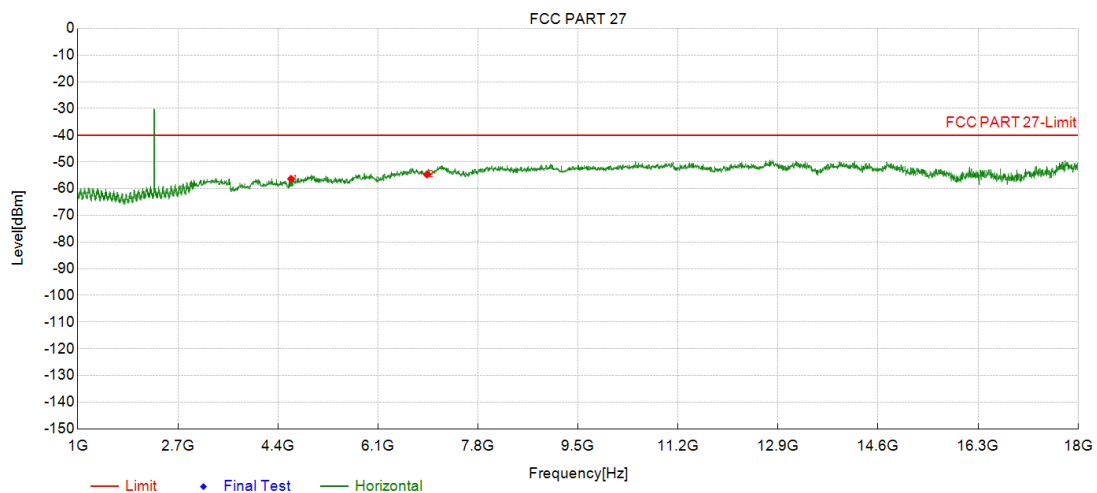
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003
CHANNEL BANDWIDTH: 10MHz / QPSK

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4623.9248	-58.17	-56.35	1.82	-40.00	16.35	Horizontal	PK	PASS
2	6932.6865	-62.92	-54.68	8.24	-40.00	14.68	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

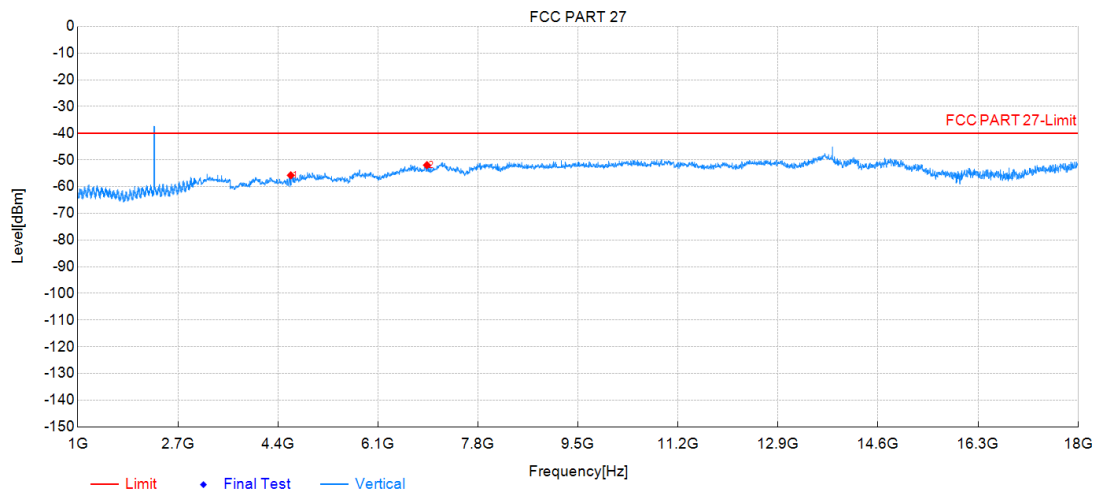
Mobile: +86 15118052731
Email: shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	4619.824	-57.24	-55.78	1.46	-40.00	15.78	Vertical	PK	PASS
2	6932.6865	-60.39	-51.95	8.44	-40.00	11.95	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003
Harmonics

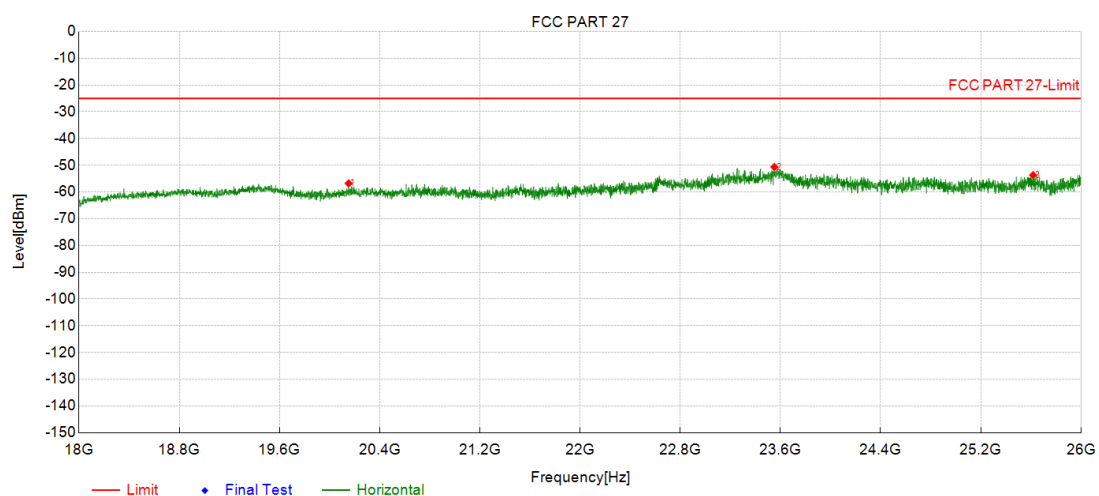
LTE B7

CHANNEL BANDWIDTH: 20MHz / QPSK

CHANNEL BANDWIDTH	20MHz / QPSK	MODE	TX channel 21100
FREQUENCY RANGE	Above 1000MHz	ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH
INPUT POWER	120Vac 60HZ	TESTED BY	Carl Xie

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	20152.4305	-66.07	-56.78	9.29	-25.00	31.78	Horizontal	PK	PASS
2	23551.5103	-67.31	-50.66	16.65	-25.00	25.66	Horizontal	PK	PASS
3	25617.5235	-65.64	-53.68	11.96	-25.00	28.68	Horizontal	PK	PASS



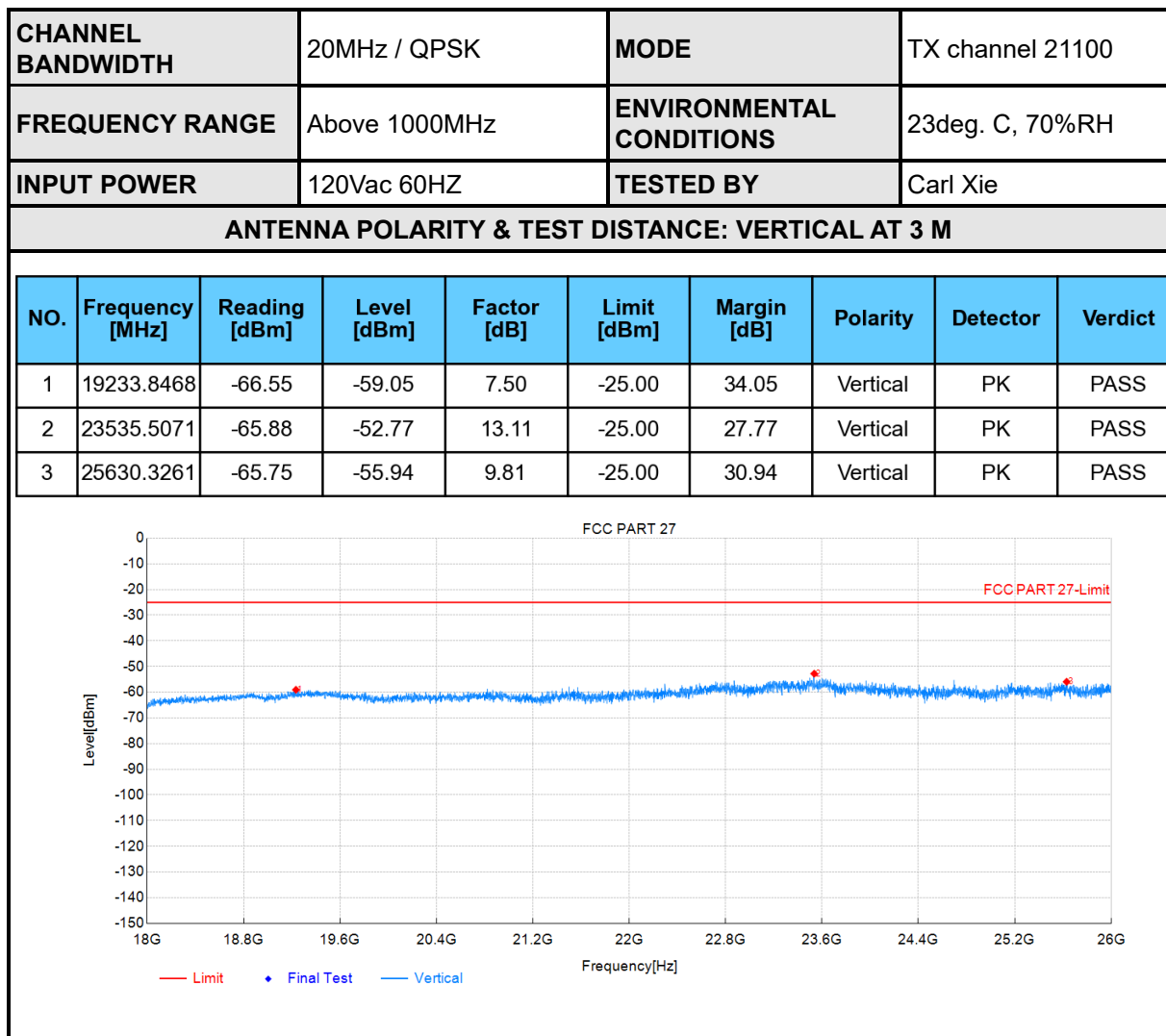
Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



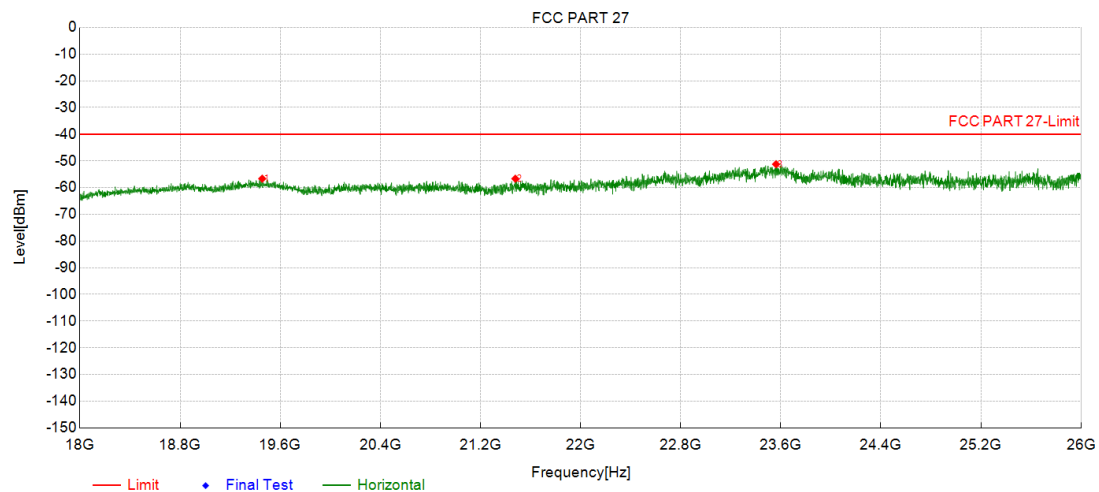
Test Report No.: RF260413B003
LTE B30

CHANNEL BANDWIDTH: 5MHz / QPSK

CH27710

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	19456.2913	-65.96	-56.65	9.31	-40.00	16.65	Horizontal	PK	PASS
2	21479.0958	-67.11	-56.65	10.46	-40.00	16.65	Horizontal	PK	PASS
3	23562.7125	-67.99	-51.25	16.74	-40.00	11.25	Horizontal	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

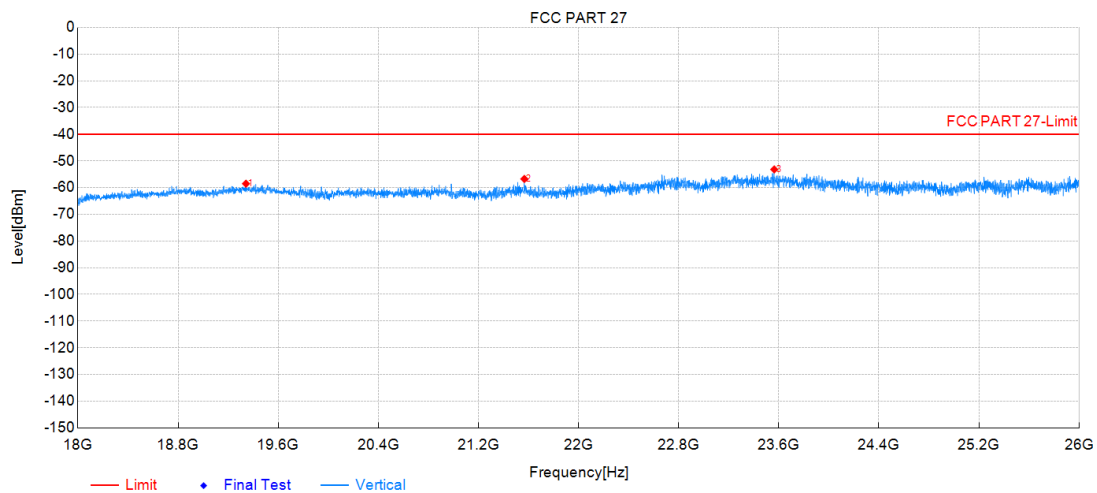
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

MODE	TX channel 27710	FREQUENCY RANGE	Above 1000MHz
ENVIRONMENTAL CONDITIONS	23deg. C, 70%RH	INPUT POWER	AC 120V/60Hz
TESTED BY	Carl Xie		
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M			

NO.	Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1	19342.6685	-65.95	-58.52	7.43	-40.00	18.52	Vertical	PK	PASS
2	21567.1134	-65.84	-56.74	9.10	-40.00	16.74	Vertical	PK	PASS
3	23564.3129	-66.32	-53.18	13.14	-40.00	13.18	Vertical	PK	PASS



Boomwave Test (Shenzhen)
Co., Ltd.

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan
4th Rd, Chiwan Comm, Zhaoshang St, Nanshan
Dist, Shenzhen, Guangdong, Shenzhen, China

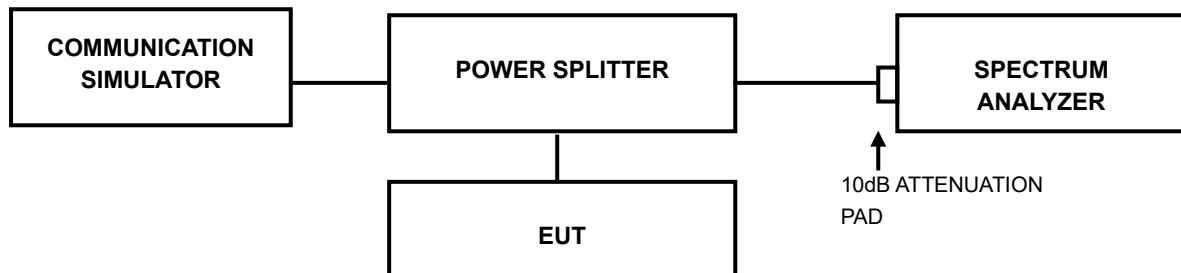
Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

3.7 PEAK TO AVERAGE RATIO

3.7.1 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

3.7.2 TEST SETUP



3.7.3 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%.

3.7.4 TEST RESULTS

Please Refer to WWAN module(model name: RM520N-GL) test report(NO.: SEWM2304000122RG01,FCC ID: XMR2023RM520NGL).



Test Report No.: RF260413B003

4 INFORMATION ON THE TESTING LABORATORIES

We, Boomwave Test (Shenzhen) co., Ltd., were founded in 2025 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Boomwave Test (Shenzhen) Co., Ltd.

Lab Address:

Rm B38, Warehouse A5(Chiwan #1), #3 Chiwan 4th Rd, Chiwan Comm, Zhaoshang St, Nanshan Dist, Shenzhen, Guangdong, Shenzhen, China

Accredited Test Lab Cert 7607.01

Shenzhen EMC/RF Lab:

Mobile: +86 15118052731

Email: shimin.wang@boomwavelab.com



Test Report No.: RF260413B003

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.