

VARIANT FCC TEST REPORT

(PART 27)

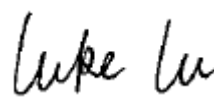
Applicant:	Fibocom Wireless Inc.
Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.

Manufacturer or Supplier:	Fibocom Wireless Inc.
Address:	1101, Tower A, Building 6, Shenzhen International Innovation Valley, Dashi 1st Rd, Nanshan, Shenzhen, China.
Product:	LTE module
Brand Name:	Fibocom
Model Name:	L850-GL
FCC ID:	ZMOL850GLD-D1
Date of tests:	Jan. 17, 2022 ~ Jan. 19, 2022

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

☒ **FCC Part 27, Subpart C, M** ☒ **ANSI/TIA/EIA-603-D**
☒ **FCC Part 2** ☒ **ANSI/TIA/EIA-603-E** ☒ **ANSI C63.26-2015**

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

Prepared by Simon Wang Engineer / Mobile Department	Approved by Luke Lu Manager / Mobile Department
 Date: Jan. 19, 2022	 Date: Jan. 19, 2022

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Test Report No.: W7L-220113W003RF03

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF180704C01-2	Original release	Jul. 19, 2018
W7L-181207W001RF03	Based on the original report RF180704C01-2 Changing FCC ID	Dec. 14, 2018
W7L-220113W003RF03	Based on the original report W7L-181207W001RF03 Changing components	Jan. 19, 2022

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
2.1046 27.50(h)(2)	Equivalent Isotropically Radiated Power	Compliance (See Note 1)
2.1055 27.54	Frequency Stability	(See Note 2)
2.1049	Occupied Bandwidth	(See Note 2)
2.1051 27.53(m)(4)(6)	Band Edge Measurements	(See Note 2)
2.1051 27.53(m)(4)(6)	Conducted Spurious Emissions	(See Note 2)
2.1053 27.53(m)(4)(6)	Radiated Spurious Emissions	Compliance (See Note 1)

NOTE:

1. Per the change notice provide by manufactory, the difference is changing components, all the change no effect any RF parameter and pre-scan all band radiated spurious emissions, worst case is reflected in the corresponding frequency band of other reports. This report only verify the power and only show the verify test data.

2. Please refer to original report W7L-181207W001RF03

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
Conducted Output power	$\pm 2.06\text{dB}$

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

1.2 TEST SITE AND INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
MXE EMI Receiver	KEYSIGHT	N9038A-544	MY54450026	Apr. 22,21	Apr. 21,22
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	Jun. 03,21	Jun. 02,22
Bilog Antenna	ETS-LINDGREN	3143B	00161965	Mar. 05,21	Mar. 04,22
Horn Antenna	ETS-LINDGREN	3117	00168728	Apr. 02,21	Apr. 01,22
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K-SG/QMS-00361	15433	Aug. 25, 21	Aug. 24, 22
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 25,21	Feb. 24,22
Signal Pre-Amplifier	EMSI	EMC 9135	980249	Jun. 02,21	Jun. 01,22
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	Jun. 03,21	Jun. 02,22
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Apr. 22,21	Apr. 21,22
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	ADT	ADT_Radiated_V 7.6.15.9.2	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	Jun. 03,21	Jun. 02,22
Power Meter	Anritsu	ML2495A	1506002	Apr. 07,21	Apr. 06,22
Power Sensor	Anritsu	MA2411B	1339352	May. 07,21	May. 06,22
Temperature Chamber	ESPEC	SH-242	93000855	Jun. 02,21	Jun. 01,22
MXG Analog Microwave Signal Generator	KEYSIGHT	N5183A	MY50143024	Mar. 05,21	Mar. 04,22
Power Divider	MCLI/USA	PS2-15	24880	N/A	N/A

- NOTE:**
1. The calibration interval of the above test instruments is 12 months or 36 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 525120; The Designation No. is CN1171.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	LTE module	
BRAND NAME	Fibocom	
MODEL NAME	L850-GL	
NOMINAL VOLTAGE	3.3Vdc (Form Host Equipment)	
MODULATION TECHNOLOGY	LTE	QPSK, 16QAM
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 38 Channel Bandwidth: 5MHz	2572.5MHz ~ 2617.5MHz
	LTE Band 38 Channel Bandwidth: 10MHz	2575MHz ~ 2615MHz
	LTE Band 38 Channel Bandwidth: 15MHz	2577.5MHz ~ 2612.5MHz
	LTE Band 38 Channel Bandwidth: 20MHz	2580MHz ~ 2610MHz
	LTE Band 41 Channel Bandwidth: 5MHz	2498.5MHz ~ 2687.5MHz
	LTE Band 41 Channel Bandwidth: 10MHz	2501MHz ~ 2685MHz
	LTE Band 41 Channel Bandwidth: 15MHz	2503.5MHz ~ 2682.5MHz
	LTE Band 41 Channel Bandwidth: 20MHz	2506MHz ~ 2680MHz

EMISSION DESIGNATOR	LTE Band 7 Channel Bandwidth: 5MHz	4M50G7D
	LTE Band 7 Channel Bandwidth: 10MHz	8M99G7D
	LTE Band 7 Channel Bandwidth: 15MHz	13M48G7D
	LTE Band 7 Channel Bandwidth: 20MHz	18M00G7D
	LTE Band 38 Channel Bandwidth: 5MHz	4M50W7D
	LTE Band 38 Channel Bandwidth: 10MHz	8M99G7D
	LTE Band 38 Channel Bandwidth: 15MHz	13M47G7D
	LTE Band 38 Channel Bandwidth: 20MHz	17M97G7D
	LTE Band 41 Channel Bandwidth: 5MHz	4M50W7D
	LTE Band 41 Channel Bandwidth: 10MHz	8M99G7D
	LTE Band 41 Channel Bandwidth: 15MHz	13M48G7D
	LTE Band 41 Channel Bandwidth: 20MHz	17M98G7D

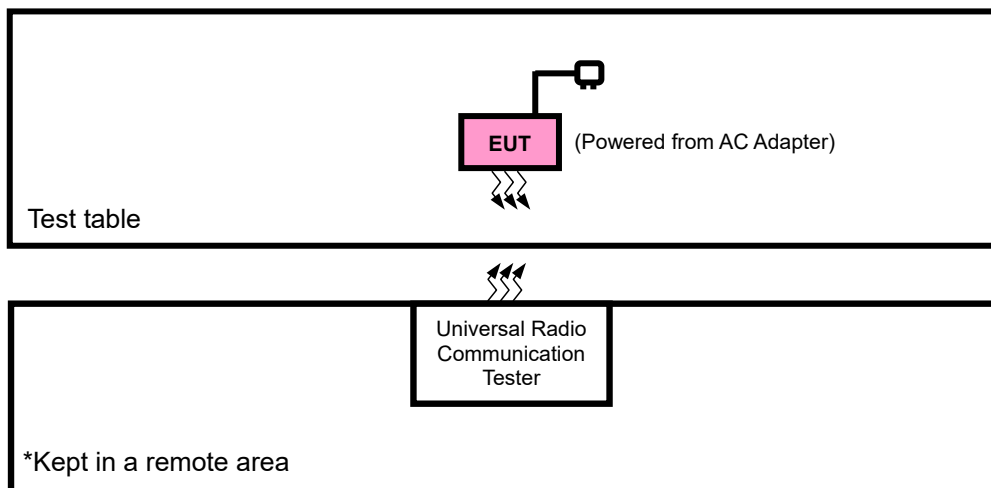
MAX. EIRP POWER	LTE Band 7 Channel Bandwidth: 5MHz	594.29mW
	LTE Band 7 Channel Bandwidth: 10MHz	590.20mW
	LTE Band 7 Channel Bandwidth: 15MHz	599.79mW
	LTE Band 7 Channel Bandwidth: 20MHz	601.17mW
	LTE Band 38 Channel Bandwidth: 5MHz	550.81mW
	LTE Band 38 Channel Bandwidth: 10MHz	554.63mW
	LTE Band 38 Channel Bandwidth: 15MHz	555.90mW
	LTE Band 38 Channel Bandwidth: 20MHz	559.76mW
	LTE Band 41 Channel Bandwidth: 5MHz	535.8mW
	LTE Band 41 Channel Bandwidth: 10MHz	540.75mW
	LTE Band 41 Channel Bandwidth: 15MHz	544.5mW
	LTE Band 41 Channel Bandwidth: 20MHz	545.76mW
ANTENNA TYPE	External Antenna with 5.0 dBi gain	
HW VERSION	V1.0.4	
SW VERSION	18500.5001.00.05.27.12	
I/O PORTS	Refer to user's manual	
CABLE SUPPLIED	N/A	
EXTREME TEMPERATURE	-10-55 °C	
EXTREME VOLTAGE	3.4V- 4.4V	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



2.3 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	DC source	LONG WEI	PS-6403D	010934269	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	DC Line: Unshielded, Detachable 1.8m

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:

DESCRIPTION
EUT + AC Adapter with LTE link

LTE BAND 7 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
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

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

LTE BAND 38 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	37775 to 38225	37775, 38000, 38225	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
	37800 to 38200	37800, 38000, 38200	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
	37825 to 38175	37825, 38000, 38175	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
	37850 to 38150	37850, 38000, 38150	20MHz	QPSK, 16QAM, 64QAM	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 41 MODE

TEST ITEM	AVAILABLE CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE
EIRP	39675 to 41565	39675, 40620, 41565	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
	39700 to 41540	39700, 40620, 41540	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
	39725 to 41515	39725, 40620, 41515	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
	39750 to 41490	39750, 40620, 41490	20MHz	QPSK, 16QAM, 64QAM	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 3.3V	Jace Hu

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.

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.”

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.

3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



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

3.1.4 TEST RESULTS

AVERAGE CONDUCTED OUTPUT POWER (dBm)

LTE BAND 7

Band/BW	Modulation	RB Size	RB Offset	Low CH 20775	Mid CH 21100	High CH 21425	MPR
				Frequency 2502.5 MHz	Frequency 2535 MHz	Frequency 2567.5 MHz	
7/ 5	QPSK	1	0	22.74	22.44	22.44	0
		1	12	22.65	22.43	22.50	0
		1	24	22.70	22.51	22.59	0
		12	0	21.65	21.48	21.70	1
		12	6	21.74	21.59	21.56	1
		12	13	21.71	21.54	21.83	1
		25	0	21.86	21.62	21.72	1
	16QAM	1	0	21.75	21.64	21.62	1
		1	12	21.73	21.57	21.73	1
		1	24	21.78	21.65	21.78	1
		12	0	20.81	20.46	20.75	2
		12	6	20.69	20.66	20.69	2
		12	13	20.75	20.49	20.74	2
		25	0	20.85	20.53	20.56	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20800	Mid CH 21100	High CH 21400	MPR
				Frequency 2505 MHz	Frequency 2535 MHz	Frequency 2565 MHz	
7/ 10	QPSK	1	0	22.71	22.47	22.44	0
		1	24	22.65	22.43	22.51	0
		1	49	22.67	22.55	22.55	0
		25	0	21.66	21.47	21.73	1
		25	12	21.80	21.53	21.56	1
		25	25	21.69	21.51	21.82	1
		50	0	21.91	21.62	21.69	1
	16QAM	1	0	21.75	21.61	21.58	1
		1	24	21.78	21.53	21.76	1
		1	49	21.78	21.66	21.75	1
		25	0	20.83	20.44	20.81	2
		25	12	20.73	20.60	20.74	2
		25	25	20.74	20.50	20.71	2
		50	0	20.89	20.52	20.60	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20825	Mid CH 21100	High CH 21375	MPR
				Frequency 2507.5 MHz	Frequency 2535 MHz	Frequency 2562.5 MHz	
7/ 15	QPSK	1	0	22.78	22.47	22.41	0
		1	37	22.63	22.48	22.46	0
		1	74	22.73	22.58	22.56	0
		36	0	21.63	21.48	21.74	1
		36	19	21.81	21.58	21.56	1
		36	39	21.67	21.52	21.82	1
		75	0	21.91	21.60	21.74	1
	16QAM	1	0	21.79	21.68	21.58	1
		1	37	21.77	21.54	21.76	1
		1	74	21.74	21.71	21.77	1
		36	0	20.87	20.44	20.82	2
		36	19	20.67	20.64	20.70	2
		36	39	20.79	20.48	20.74	2
		75	0	20.90	20.55	20.53	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 20850	Mid CH 21100	High CH 21350	MPR
				Frequency 2510 MHz	Frequency 2535 MHz	Frequency 2560 MHz	
7/ 20	QPSK	1	0	22.79	22.51	22.49	0
		1	50	22.67	22.51	22.52	0
		1	99	22.75	22.59	22.60	0
		50	0	21.69	21.53	21.75	1
		50	25	21.82	21.60	21.61	1
		50	50	21.75	21.59	21.84	1
		100	0	21.92	21.64	21.77	1
	16QAM	1	0	21.82	21.69	21.64	1
		1	50	21.81	21.59	21.78	1
		1	99	21.80	21.73	21.80	1
		50	0	20.89	20.52	20.83	2
		50	25	20.75	20.68	20.75	2
		50	50	20.82	20.54	20.76	2
		100	0	20.91	20.60	20.61	2



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VERITAS**

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LTE Band 38

Band/BW	Modulation	RB Size	RB Offset	Low CH 37775	Mid CH 38000	High CH 38225	MPR
				Frequency 2572.5 MHz	Frequency 2595 MHz	Frequency 2617.5MHz	
38/ 5	QPSK	1	0	22.39	22.41	22.19	0
		1	12	22.22	22.32	22.17	0
		1	24	22.25	22.38	22.24	0
		12	0	21.13	21.28	21.28	1
		12	6	21.20	21.37	21.12	1
		12	13	21.01	21.16	21.23	1
		25	0	21.25	21.33	21.21	1
	16QAM	1	0	21.49	21.70	21.46	1
		1	12	21.32	21.48	21.42	1
		1	24	21.30	21.49	21.40	1
		12	0	20.25	20.22	20.29	2
		12	6	20.04	20.33	20.14	2
		12	13	20.17	20.23	20.26	2
		25	0	20.28	20.28	20.09	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37800	Mid CH 38000	High CH 38200	MPR
				Frequency 2575 MHz	Frequency 2595 MHz	Frequency 2615 MHz	
38/ 10	QPSK	1	0	22.36	22.44	22.19	0
		1	24	22.22	22.32	22.18	0
		1	49	22.22	22.42	22.20	0
		25	0	21.14	21.27	21.31	1
		25	12	21.26	21.31	21.12	1
		25	25	20.99	21.13	21.22	1
		50	0	21.30	21.33	21.18	1
	16QAM	1	0	21.49	21.67	21.42	1
		1	24	21.37	21.44	21.45	1
		1	49	21.30	21.50	21.37	1
		25	0	20.27	20.20	20.35	2
		25	12	20.08	20.27	20.19	2
		25	25	20.16	20.24	20.23	2
		50	0	20.32	20.27	20.13	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37825	Mid CH 38000	High CH 38175	MPR
				Frequency 2577.5 MHz	Frequency 2595 MHz	Frequency 2612.5MHz	
38/ 15	QPSK	1	0	22.43	22.44	22.16	0
		1	37	22.20	22.37	22.13	0
		1	74	22.28	22.45	22.21	0
		36	0	21.11	21.28	21.32	1
		36	19	21.27	21.36	21.12	1
		36	39	20.97	21.14	21.22	1
		75	0	21.30	21.31	21.23	1
	16QAM	1	0	21.53	21.65	21.42	1
		1	37	21.36	21.45	21.45	1
		1	74	21.26	21.55	21.39	1
		36	0	20.31	20.20	20.36	2
		36	19	20.02	20.31	20.15	2
		36	39	20.21	20.22	20.26	2
		75	0	20.33	20.30	20.06	2

Band/BW	Modulation	RB Size	RB Offset	Low CH 37850	Mid CH 38000	High CH 38150	MPR
				Frequency 2580 MHz	Frequency 2595 MHz	Frequency 2610 MHz	
38/ 20	QPSK	1	0	22.44	22.48	22.24	0
		1	50	22.24	22.40	22.19	0
		1	99	22.30	22.46	22.25	0
		50	0	21.17	21.33	21.33	1
		50	25	21.28	21.38	21.17	1
		50	50	21.05	21.21	21.24	1
		100	0	21.31	21.35	21.26	1
	16QAM	1	0	21.56	21.67	21.48	1
		1	50	21.40	21.50	21.47	1
		1	99	21.32	21.57	21.42	1
		50	0	20.33	20.28	20.37	2
		50	25	20.10	20.35	20.20	2
		50	50	20.24	20.28	20.28	2
		100	0	20.34	20.35	20.14	2



**BUREAU
VERITAS**

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LTE Band 41

Band/BW	Modulation	RB Size	RB Offset	Low CH (39675)	Mid CH (40620)	High CH (41565)	MPR
				Frequency (2498.5)MHz	Frequency (2593)MHz	Frequency (2687.5)MHz	
41/ 5	QPSK	1	0	22.27	22.24	21.92	0
		1	12	22.18	22.25	22.02	0
		1	24	22.19	22.29	21.95	0
		12	0	21.15	21.41	21.11	1
		12	6	21.27	21.41	20.96	1
		12	13	21.05	21.33	21.08	1
		25	0	21.26	21.39	20.99	1
	16QAM	1	0	21.23	21.37	21.09	1
		1	12	21.16	21.41	20.97	1
		1	24	21.12	21.32	21.01	1
		12	0	20.23	20.37	20.08	2
		12	6	20.04	20.34	19.95	2
		12	13	20.17	20.34	20.07	2
		25	0	20.28	20.25	19.94	2

Band/BW	Modulation	RB Size	RB Offset	Low CH (39700)	Mid CH (40620)	High CH (41540)	MPR
				Frequency (2501)MHz	Frequency (2593)MHz	Frequency (2685)MHz	
41/ 10	QPSK	1	0	22.24	22.27	21.92	0
		1	24	22.18	22.25	22.03	0
		1	49	22.16	22.33	21.91	0
		25	0	21.16	21.40	21.14	1
		25	12	21.33	21.35	20.96	1
		25	25	21.03	21.30	21.07	1
		50	0	21.31	21.39	20.96	1
	16QAM	1	0	21.23	21.34	21.05	1
		1	24	21.21	21.37	21.00	1
		1	49	21.12	21.33	20.98	1
		25	0	20.25	20.35	20.14	2
		25	12	20.08	20.28	20.00	2
		25	25	20.16	20.35	20.04	2
		50	0	20.32	20.24	19.98	2

Band/BW	Modulation	RB Size	RB Offset	Low CH (39725)	Mid CH (40620)	High CH (41515)	MPR
				Frequency (2503.5)MHz	Frequency (2593)MHz	Frequency (2682.5)MHz	
41/ 15	QPSK	1	0	22.31	22.27	21.89	0
		1	37	22.16	22.30	21.98	0
		1	74	22.22	22.36	21.92	0
		36	0	21.13	21.41	21.15	1
		36	19	21.34	21.40	20.96	1
		36	39	21.01	21.31	21.07	1
		75	0	21.31	21.37	21.01	1
	16QAM	1	0	21.27	21.41	21.05	1
		1	37	21.20	21.38	21.00	1
		1	74	21.08	21.38	21.00	1
		36	0	20.29	20.35	20.15	2
		36	19	20.02	20.32	19.96	2
		36	39	20.21	20.33	20.07	2
		75	0	20.33	20.27	19.91	2

Band/BW	Modulation	RB Size	RB Offset	Low CH (39750)	Mid CH (40620)	High CH (41490)	MPR
				Frequency (2506)MHz	Frequency (2593)MHz	Frequency (2680)MHz	
41/ 20	QPSK	1	0	22.32	22.31	21.97	0
		1	50	22.20	22.33	22.04	0
		1	99	22.24	22.37	21.96	0
		50	0	21.19	21.46	21.16	1
		50	25	21.35	21.42	21.01	1
		50	50	21.09	21.38	21.09	1
		100	0	21.32	21.41	21.04	1
	16QAM	1	0	21.30	21.42	21.11	1
		1	50	21.24	21.43	21.02	1
		1	99	21.14	21.40	21.03	1
		50	0	20.31	20.43	20.16	2
		50	25	20.10	20.36	20.01	2
		50	50	20.24	20.39	20.09	2
		100	0	20.34	20.32	19.99	2

EIRP

LTE BAND 7

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	22.74	5	27.74	594.29	2
21100	2535	22.51	5	27.51	563.64	2
21425	2567.5	22.59	5	27.59	574.12	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20775	2502.5	21.78	5	26.78	476.43	2
21100	2535	21.65	5	26.65	462.38	2
21425	2567.5	21.78	5	26.78	476.43	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	22.71	5	27.71	590.2	2
21100	2535	22.55	5	27.55	568.85	2
21400	2565	22.55	5	27.55	568.85	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20800	2505	21.78	5	26.78	476.43	2
21100	2535	21.66	5	26.66	463.45	2
21400	2565	21.76	5	26.76	474.24	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	22.78	5	27.78	599.79	2
21100	2535	22.58	5	27.58	572.8	2
21375	2562.5	22.56	5	27.56	570.16	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20825	2507.5	21.79	5	26.79	477.53	2
21100	2535	21.71	5	26.71	468.81	2
21375	2562.5	21.77	5	26.77	475.34	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	22.79	5	27.79	601.17	2
21100	2535	22.59	5	27.59	574.12	2
21350	2560	22.6	5	27.6	575.44	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _C (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
20850	2510	21.82	5	26.82	480.84	2
21100	2535	21.73	5	26.73	470.98	2
21350	2560	21.8	5	26.8	478.63	2

LTE Band 38

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	22.39	5	27.39	548.28	2
38000	2595	22.41	5	27.41	550.81	2
38225	2617.5	22.24	5	27.24	529.66	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37775	2572.5	21.49	5	26.49	445.66	2
38000	2595	21.7	5	26.7	467.74	2
38225	2617.5	21.46	5	26.46	442.59	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	22.36	5	27.36	544.5	2
38000	2595	22.44	5	27.44	554.63	2
38200	2615	22.2	5	27.2	524.81	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37800	2575	21.49	5	26.49	445.66	2
38000	2595	21.67	5	26.67	464.52	2
38200	2615	21.45	5	26.45	441.57	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	22.43	5	27.43	553.35	2
38000	2595	22.45	5	27.45	555.9	2
38175	2612.5	22.21	5	27.21	526.02	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37825	2577.5	21.53	5	26.53	449.78	2
38000	2595	21.65	5	26.65	462.38	2
38175	2612.5	21.45	5	26.45	441.57	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	22.44	5	27.44	554.63	2
38000	2595	22.48	5	27.48	559.76	2
38150	2610	22.25	5	27.25	530.88	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
37850	2580	21.56	5	26.56	452.90	2
38000	2595	21.67	5	26.67	464.52	2
38150	2610	21.48	5	26.48	444.63	2

LTE Band 41

CHANNEL BANDWIDTH: 5MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40065	2537.5	22.27	5	27.27	533.33	2
40640	25.95	22.29	5	27.29	535.8	2
41215	2562.5	22.02	5	27.02	503.5	2

CHANNEL BANDWIDTH: 5MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40065	2537.5	21.23	5	26.23	419.76	2
40640	25.95	21.41	5	26.41	437.52	2
41215	2562.5	21.09	5	26.09	406.44	2

CHANNEL BANDWIDTH: 10MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40090	2540	22.24	5	27.24	529.66	2
40640	2595	22.33	5	27.33	540.75	2
41190	2650	22.03	5	27.03	504.66	2

CHANNEL BANDWIDTH: 10MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _T -L _c (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40090	2540	21.23	5	26.23	419.76	2
40640	2595	21.37	5	26.37	433.51	2
41190	2650	21.05	5	26.05	402.72	2

CHANNEL BANDWIDTH: 15MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40115	2542.5	22.31	5	27.31	538.27	2
40640	2595	22.36	5	27.36	544.5	2
41165	2647.5	21.98	5	26.98	498.88	2

CHANNEL BANDWIDTH: 15MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40115	2542.5	21.27	5	26.27	423.64	2
40640	2595	21.41	5	26.41	437.52	2
41165	2647.5	21.05	5	26.05	402.72	2

CHANNEL BANDWIDTH: 20MHz QPSK

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40140	2545	22.32	5	27.32	539.51	2
40640	2595	22.37	5	27.37	545.76	2
41140	2645	22.04	5	27.04	505.82	2

CHANNEL BANDWIDTH: 20MHz 16QAM

Channel	Frequency (MHz)	Conducted Power (dBm)	G _{T-Lc} (dB)	EIRP (dBm)	EIRP (mW)	Limit (W)
40140	2545	21.3	5	26.3	426.58	2
40640	2595	21.43	5	26.43	439.54	2
41140	2645	21.11	5	26.11	408.32	2



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4 INFORMATION ON THE TESTING LABORATORIES

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

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



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5 APPENDIX A – 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.

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