

# FCC TEST REPORT (PART 96)

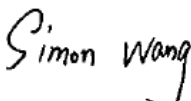

Applicant:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany

Manufacturer or Supplier:	i.safe MOBILE GmbH
Address:	i_Park Tauberfranken 10 97922 Lauda-Koenigshofen Germany
Product:	Smartphone
Brand Name:	i.safe MOBILE
Model Name:	M540A01
Marketing Name:	IS540.1,IS540.M1,IS540.2,IS540.RG
FCC ID:	2AACZ-M540A01
Date of tests:	Nov. 24, 2022 ~ Feb. 03, 2023

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

**47 CFR FCC Part 96**

**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: Feb. 03, 2023	Date: Feb. 03, 2023

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**BUREAU  
VERITAS**

Test Report No.: W7L-P22110036RF10

## RELEASE CONTROL RECORD

ISSUE NO.	DESCRIPTION	DATE ISSUED
W7L-P22110036RF10	Original release	Feb. 03, 2023



# 1 SUMMARY OF TEST RESULTS

47 CFR FCC PART 96		
FCC CLAUSE	TEST ITEM	RESULT
2.1046 96.41(b)	Maximum Peak Output Power and Maximum EIRP	Compliance
2.1046 96.41(e)	Conducted Band Edge	Compliance
2.1049	Occupied Bandwidth	Compliance
2.1055	Frequency Stability	Compliance
2.1051 96.41(e)	Conducted Spurious Emissions	Compliance
2.1053 96.41(e)	Radiated Spurious Emissions	Compliance
96.41(g)	Peak-to-Average Power Ratio	Compliance

**Note:**

Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

## 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
Effective Radiated Power	±1.48dB
Frequency Stability	±39.27Hz
Radiated emissions (9KHz~30MHz)	±2.68dB
Radiated emissions	±4.98dB
Conducted emissions	±4.01 dB
Occupied Channel Bandwidth	±21.7KHz
Band Edge Measurements	±1.48dB
Peak to average ratio	±0.76dB

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	Feb. 21,22	Feb. 20,23
EXA Signal Analyzer	KEYSIGHT	N9010A-544	MY54510355	May.15,22	May.14,23
Loop Antenna	Schwarzbeck	FMZB 1519B	00173	Sep.04,22	Sep.03,23
Bilog Antenna	ETS-LINDGRE N	3143B	00161965	Mar. 06,22	Mar. 05,23
Horn Antenna	ETS-LINDGRE N	3117	00168692	Mar. 06,22	Mar. 05,23
Horn Antenna (18GHz-40GHz)	N/A	QWH-SL-18-40-K- SG/QMS-00361	15433	Aug. 24, 22	Aug. 23, 23
Radio Communication Analyzer	ANRITSU	MT8820C	6201465426	Feb. 15,22	Feb. 14,23
Signal Pre-Amplifier	EMSI	EMC 9135	980249	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 012645B	980257	May.12,22	May.11,23
Signal Pre-Amplifier	EMSI	EMC 184045B	980259	Feb. 21,22	Feb.20,23
3m Semi-anechoic Chamber	ETS-LINDGRE N	9m*6m*6m	Euroshieldpn- CT0001143-121 6	May. 19,20	May. 18,23
Test Software	E3	V 9.160323	N/A	N/A	N/A
Test Software	JS1120	3.1.36	N/A	N/A	N/A
10dB Attenuator	JFW/USA	50HF-010-SMA	1505	May. 07,22	May. 06,23
Power Meter	Anritsu	ML2495A	1506002	Feb. 22,22	Feb. 21,23
Power Sensor	Anritsu	MA2411B	1339352	May. 07,22	May. 06,23
Temperature Chamber	ESPEC	SH-242	93000855	May. 12,22	May. 11,23
MXG Analog Microvave Signal Generator	KEYSIGHT	N5183A	MY50143024	Feb. 18,22	Feb. 17,23
Base station R&S CMW500	Rohde&Schwa rz	CMW500	153085	May.12,22	May.11,23
DC Source	Kikusui/JP	PMX18-5A	0000001	Aug. 24,22	Aug. 23,23

- 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

<b>PRODUCT</b>	Smartphone	
<b>BRAND NAME</b>	i.safe MOBILE	
<b>MODEL NAME</b>	M540A01	
<b>MARKETING NAME</b>	IS540.1,IS540.M1,IS540.2,IS540.RG	
<b>NOMINAL VOLTAGE</b>	5.0Vdc(adapter or host equipment) 3.7Vdc (Li-ion, battery)	
<b>MODULATION TECHNOLOGY</b>	<b>LTE</b>	QPSK, 16QAM, 64QAM
<b>FREQUENCY RANGE</b>	<b>LTE Band 42 Channel Bandwidth: 5MHz</b>	3552.5 MHz ~ 3597.5MHz
	<b>LTE Band 42 Channel Bandwidth: 10MHz</b>	3555MHz ~ 3595MHz
	<b>LTE Band 42 Channel Bandwidth: 15MHz</b>	3557.5MHz ~ 3592.5MHz
	<b>LTE Band 42 Channel Bandwidth: 20MHz</b>	3560MHz ~ 3590MHz
	<b>LTE Band 43 Channel Bandwidth: 5MHz</b>	3602.5MHz ~ 3697.5MHz
	<b>LTE Band 43 Channel Bandwidth: 10MHz</b>	3605MHz ~ 3695MHz
	<b>LTE Band 43 Channel Bandwidth: 15MHz</b>	3607.5MHz ~ 3692.5MHz
	<b>LTE Band 43 Channel Bandwidth: 20MHz</b>	3610MHz ~ 3690MHz
	<b>LTE Band 48 Channel Bandwidth: 5MHz</b>	3552.5MHz ~ 3697.5MHz
	<b>LTE Band 48 Channel Bandwidth: 10MHz</b>	3555MHz ~ 3695MHz
	<b>LTE Band 48 Channel Bandwidth: 15MHz</b>	3557.5MHz ~ 3692.5MHz
	<b>LTE Band 48 Channel Bandwidth: 20MHz</b>	3560MHz ~ 3690MHz
	<b>LTE Band CA_48C Channel Bandwidth: 5MHz+20MHz</b>	3553.3MHz ~ 3690MHz
	<b>LTE Band CA_48C Channel Bandwidth: 20MHz +5MHz</b>	3560MHz ~ 3696.7MHz
	<b>LTE Band CA_48C Channel Bandwidth: 10MHz +20MHz</b>	3555.5MHz ~ 3690MHz



<b>FREQUENCY RANGE</b>	LTE Band CA_48C Channel Bandwidth: 20MHz +10MHz	3560MHz ~ 3694.5MHz
	LTE Band CA_48C Channel Bandwidth: 15MHz +20MHz	3557.8MHz ~ 3690MHz
	LTE Band CA_48C Channel Bandwidth: 20MHz +15MHz	3560MHz ~ 3692.2MHz
	LTE Band CA_48C Channel Bandwidth: 20MHz +20MHz	3560MHz ~ 3690MHz
<b>EMISSION DESIGNATOR</b>	LTE Band 48 Channel Bandwidth: 5MHz	QPSK: 4M50G7D
		16QAM: 4M50W7D
		64QAM: 4M50W7D
	LTE Band 48 Channel Bandwidth: 10MHz	QPSK: 8M98G7D
		16QAM: 8M98W7D
		64QAM: 8M98W7D
	LTE Band 48 Channel Bandwidth: 15MHz	QPSK: 13M5G7D
		16QAM: 13M5W7D
		64QAM: 13M5W7D
	LTE Band 48 Channel Bandwidth: 20MHz	QPSK: 17M9G7D
		16QAM: 17M9W7D
		64QAM: 17M9W7D
	LTE Band CA_48C Channel Bandwidth: 5MHz+20MHz	QPSK: 22M6G7D
		16QAM: 22M7W7D
		64QAM: 22M6W7D
	LTE Band CA_48C Channel Bandwidth: 20MHz +5MHz	QPSK: 22M9G7D
		16QAM: 22M9W7D
		64QAM: 22M8W7D
	LTE Band CA_48C Channel Bandwidth: 10MHz +20MHz	QPSK: 27M9G7D
		16QAM: 27M7W7D
64QAM: 27M5W7D		
LTE Band CA_48C Channel Bandwidth: 20MHz +10MHz	QPSK: 27M9G7D	
	16QAM: 27M7W7D	
	64QAM: 27M7W7D	
LTE Band CA_48C Channel Bandwidth: 15MHz +20MHz	QPSK: 32M4G7D	
	16QAM: 32M5W7D	
	64QAM: 32M4W7D	
LTE Band CA_48C Channel Bandwidth: 20MHz +15MHz	QPSK: 32M5G7D	
	16QAM: 32M5W7D	
	64QAM: 32M5W7D	
LTE Band CA_48C Channel Bandwidth:	QPSK: 37M4G7D	
	16QAM: 37M4W7D	





	<b>20MHz +20MHz</b>	64QAM: 37M4W7D
<b>MAX. EIRP POWER</b>	<b>LTE Band 42 Channel Bandwidth: 5MHz</b>	139.64mW
	<b>LTE Band 42 Channel Bandwidth: 10MHz</b>	140.6mW
	<b>LTE Band 42 Channel Bandwidth: 15MHz</b>	139.64mW
	<b>LTE Band 42 Channel Bandwidth: 20MHz</b>	141.25mW
	<b>LTE Band 43 Channel Bandwidth: 5MHz</b>	150.66mW
	<b>LTE Band 43 Channel Bandwidth: 10MHz</b>	151.71mW
	<b>LTE Band 43 Channel Bandwidth: 15MHz</b>	151.01mW
	<b>LTE Band 43 Channel Bandwidth: 20MHz</b>	153.11mW
	<b>LTE Band 48 Channel Bandwidth: 5MHz</b>	141.25mW
	<b>LTE Band 48 Channel Bandwidth: 10MHz</b>	141.25mW
	<b>LTE Band 48 Channel Bandwidth: 15MHz</b>	141.25mW
	<b>LTE Band 48 Channel Bandwidth: 20MHz</b>	142.89mW
	<b>LTE Band CA_48C Channel Bandwidth: 5MHz+20MHz</b>	128.82mW
	<b>LTE Band CA_48C Channel Bandwidth: 20MHz +5MHz</b>	128.23mW
	<b>LTE Band CA_48C Channel Bandwidth: 10MHz +20MHz</b>	129.42mW
	<b>LTE Band CA_48C Channel Bandwidth: 20MHz +10MHz</b>	128.82mW
	<b>LTE Band CA_48C Channel Bandwidth: 15MHz +20MHz</b>	129.42mW
	<b>LTE Band CA_48C Channel Bandwidth: 20MHz +15MHz</b>	129.12mW
<b>LTE Band CA_48C Channel Bandwidth: 20MHz +20MHz</b>	130.62mW	



<b>ANTENNA GAIN</b>	PIFA Antenna with -1.3dBi gain for LTE42 PIFA Antenna with -1.3dBi gain for LTE43 PIFA Antenna with -1.3dBi gain for LTE48 PIFA Antenna with -1.3dBi gain for LTE48C
<b>HW VERSION</b>	V02
<b>SW VERSION</b>	IS540_ROW_00.00_1_20221017
<b>I/O PORTS</b>	Refer to user's manual
<b>DATA CABLE</b>	USB cable1: non-shielded cable, with w/o ferrite core, 1.0 meter USB cable2: non-shielded cable, with w/o ferrite core, 1.0 meter
<b>EXTREME TEMPERATURE</b>	-10-50 °C
<b>EXTREME VOLTAGE</b>	3.6V - 4.2V

**NOTE:**

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

<b>MODULATION MODE</b>	<b>TX FUNCTION</b>
<b>LTE</b>	1TX/1RX

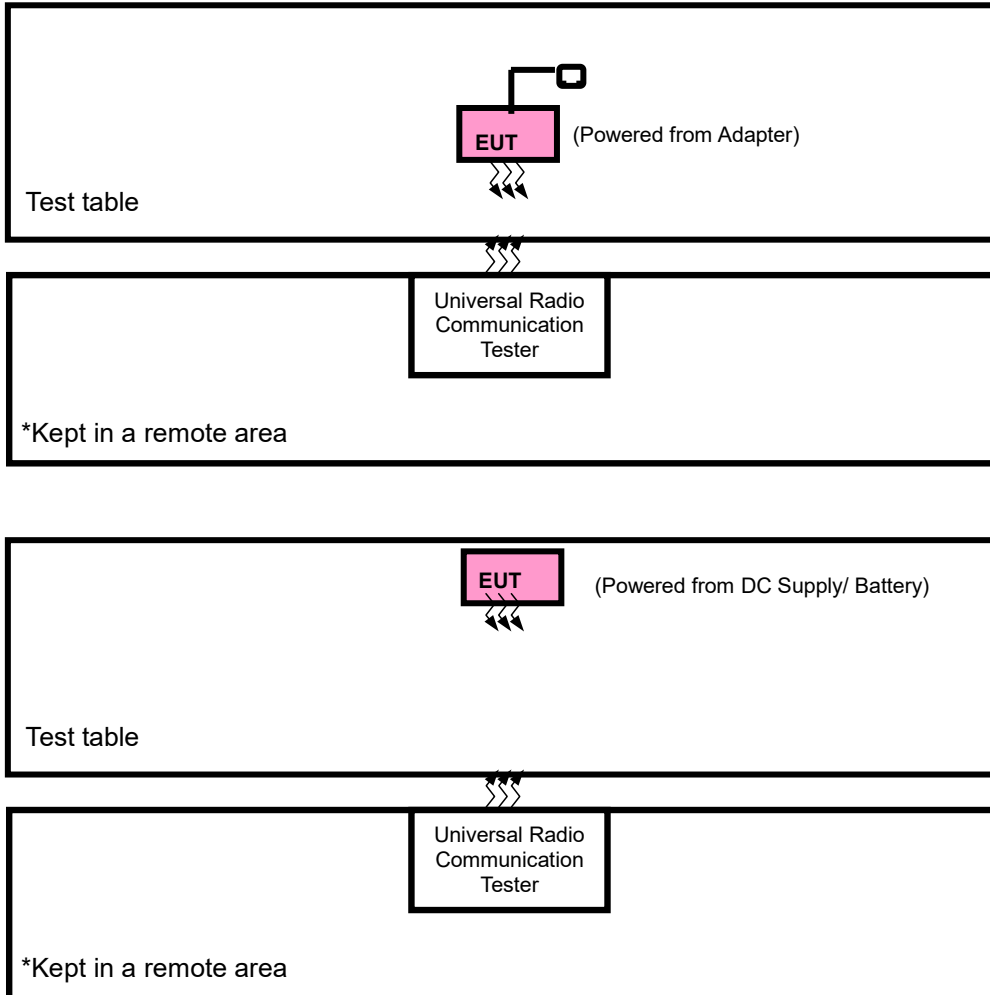
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. For Band Edge and Emission Mask: The all BW combinations were tested. Combination pairs of the same BW are considered generally equivalent. The RB combinations were selected such that the signal is active closest to the band limit, as this is the worst case.
5. For Out of Band Emissions: The all combination was tested. The highest power RB combination was selected as worst case.

**List of Accessory:**

<b>ACCESSORIES</b>	<b>BRAND</b>	<b>MANUFACTURER</b>	<b>MODEL</b>	<b>SPECIFICATION</b>
Battery	N/A	FPR Connectivity Technology Inc.	MBP540A01	Capacity: 3.7Vdc, 4400mAh
AC Adapter	N/A	SHENZHEN SHI YINGYUAN POWER SUPPLY TECHNOLOGY CO., LTD.	ICP12-050-2000B	I/P: 100-240Vac, 0.3A, O/P: 5.0Vdc, 2A
USB Cable 1	N/A	Winpower Technology Co., LTD	PROTECTOR 2.0	Signal Line, 1.0meter
USB Cable 2	N/A	Winpower Technology Co., LTD	USB2.0	Signal Line, 1.0meter



## 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:

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



LTE band 42

EUT CONFIGUR E MODE	TEST ITEM	AVAILABL E CHANNEL	TESTED CHANNEL	CHANNEL BANDWID TH	MODULATION	MODE
A	EIRP	43115 to 43565	43115 (3552.5MHz), 43340 (3575.0MHz), 43565 (3597.5MHz)	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43140 to 43540	43140 (3555.0MHz), 43340 (3575.0MHz), 43540 (3595.0MHz)	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43165 to 43515	43165 (3557.50MHz), 43340 (3575.0MHz), 43515 (3592.5MHz)	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43190 to 43490	43190 (3560.0MHz), 43340 (3575.0MHz), 43490 (3590.0MHz)	20MHz	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 42 are covered by LTE Band 48, Because it is a subset of LTE Band 48 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 48

LTE band 43

EUT CONFIGUR E MODE	TEST ITEM	AVAILABL E CHANNEL	TESTED CHANNEL	CHANNEL BANDWID TH	MODULATION	MODE
A	EIRP	43615 to 44565	43615 (3602.5MHz), 44090 (3650.0MHz), 44565 (3697.5MHz)	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43640 to 44540	43640 (3605.0MHz), 44090 (3650.0MHz), 44540 (3695.0MHz)	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43665 to 44515	43665 (3607.5MHz), 44090 (3650.0MHz), 44515 (3692.5MHz)	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		43690 to 44490	43690 (3610.0MHz), 44090 (3650.0MHz), 44490 (3690.0MHz)	20MHz	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 43 are covered by LTE Band 48, Because it is a subset of LTE Band 48 with the same output power and supported bandwidths, So the conducted test data and RSE test data please refer to LTE Band 48.



**LTE BAND 48 MODE**

EUT CONFIGUR E MODE	TEST ITEM	AVAILABL E CHANNEL	TESTED CHANNEL	CHANNEL BANDWID TH	MODULATION	MODE
<b>A</b>	EIRP	55265 to 56715	55265, 55990, 56715	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		55290 to 56690	55290, 55990, 56690	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
		55315 to 56665	55315, 55990, 56665	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		55340 to 56640	55340, 55990, 56640	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
<b>B</b>	FREQUENCY STABILITY	55265 to 56715	55265, 56715	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		55290 to 56690	55290, 56690	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0RB Offset
		55315 to 56665	55315, 56665	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		55340 to 56640	55340, 56640	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
<b>A</b>	OCCUPIED BANDWIDTH	55265 to 56715	55265, 55990, 56715	5MHz	QPSK, 16QAM, 64QAM	25 RB / 0 RB Offset
		55290 to 56690	55290, 55990, 56690	10MHz	QPSK, 16QAM, 64QAM	50 RB / 0 RB Offset
		55315 to 56665	55315, 55990, 56665	15MHz	QPSK, 16QAM, 64QAM	75 RB / 0 RB Offset
		55340 to 56640	55340, 55990, 56640	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
<b>A</b>	PEAK TO AVERAGE RATIO	55265 to 56715	55265, 55990, 56715	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
		55290 to 56690	55290, 55990, 56690	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
		55315 to 56665	55315, 55990, 56665	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
		55340 to 56640	55340, 55990, 56640	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 100 RB / 0 RB Offset
<b>A</b>	BAND EDGE	55265 to 56715	55265	5MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 25 RB / 0 RB Offset
			56715	5MHz	QPSK, 16QAM, 64QAM	1 RB / 24 RB Offset 25 RB / 0 RB Offset
		55290 to 56690	55290	10MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 50 RB / 0 RB Offset
			56690	10MHz	QPSK, 16QAM, 64QAM	1 RB / 49 RB Offset 50 RB / 0 RB Offset
		55315 to 56665	55315	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset 75 RB / 0 RB Offset
			56665	15MHz	QPSK, 16QAM, 64QAM	1 RB / 74 RB Offset



						75 RB / 0 RB Offset
		55340 to 56640	55340	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
			56640	20MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
<b>A</b>	CONDCUDET D EMISSION	55265 to 56715	55265, 55990, 56715	5MHz	QPSK, 16QAM, 64QAM	1 RB / 99 RB Offset
		55290 to 56690	55290, 55990, 56690	10MHz	QPSK, 16QAM, 64QAM	100 RB / 0 RB Offset
		55315 to 56665	55315, 55990, 56665	15MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
		55340 to 56640	55340, 55990, 56640	20MHz	QPSK, 16QAM, 64QAM	1 RB / 0 RB Offset
<b>A</b>	RADIATED EMISSION	55265 to 56715	55265, 55990, 56715	5MHz	QPSK	1 RB / 0 RB Offset
		55290 to 56690	55290, 55990, 56690	10MHz	QPSK	1 RB / 0RB Offset
		55315 to 56665	55315, 55990, 56665	15MHz	QPSK	1 RB / 0 RB Offset
		55340 to 56640	55340, 55990, 56640	20MHz	QPSK	1 RB / 0 RB Offset
<b>A</b>	ACLR	55265 to 56715	55265	5MHz	QPSK	1 RB / 0 RB Offset
			56715	5MHz	QPSK	25 RB / 0 RB Offset
		55290 to 56690	55290	10MHz	QPSK	1 RB / 24 RB Offset
			56690	10MHz	QPSK	25 RB / 0 RB Offset
		55315 to 56665	55290	10MHz	QPSK	1 RB / 0 RB Offset
			56690	10MHz	QPSK	50 RB / 0 RB Offset
		55315 to 56665	55315	15MHz	QPSK	1 RB / 49 RB Offset
			56665	15MHz	QPSK	50 RB / 0 RB Offset
		55340 to 56640	55315	15MHz	QPSK	1 RB / 0 RB Offset
			56665	15MHz	QPSK	75 RB / 0 RB Offset
		55340 to 56640	55340	20MHz	QPSK	1 RB / 74 RB Offset
			56640	20MHz	QPSK	75 RB / 0 RB Offset
55340 to 56640	55340	20MHz	QPSK	1 RB / 0 RB Offset		
	56640	20MHz	QPSK	100 RB / 0 RB Offset		
55340 to 56640	55340	20MHz	QPSK	1 RB / 99 RB Offset		
	56640	20MHz	QPSK	100 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 CA\_48C MODE**

EUT CONFIGURE MODE	TEST ITEM	AVAILABLE PCC CHANNEL	AVAILABLE SCC CHANNEL	TESTED CHANNEL	CHANNEL BANDWIDTH	MODULATION	MODE(PCC)	MODE(SCC)
A	EIRP	55340 to 56491	55511 to 56662	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		55318 to 56496	55489 to 56640	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 74RB Offset	1RB/ 0RB Offset
		55340 to 56541	55484 to 56685	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		55295 to 56496	55439 to 56640	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 49RB Offset	1RB/ 0RB Offset
		55340 to 56590	55457 to 56707	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
		55273 to 56523	55390 to 56640	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM	1RB / 24RB Offset	1RB / 0RB Offset
		55340 to 56442	55538 to 56640	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM, 64QAM	1RB/ 99RB Offset	1RB/ 0RB Offset
A	OCCUPIED BANDWIDTH	55340 to 56491	55511 to 56662	Low, Middle, High	20MHz+15MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	75RB/ 0RB Offset
		55318 to 56496	55489 to 56640	Low, Middle, High	15MHz+20MHz	QPSK, 16QAM, 64QAM	75RB/ 0RB Offset	100RB/ 0RB Offset
		55340 to 56541	55484 to 56685	Low, Middle, High	20MHz+10MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		55295 to 56496	55439 to 56640	Low, Middle, High	10MHz+20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		55340 to 56590	55457 to 56707	Low, Middle, High	20MHz +5MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	50RB/ 0RB Offset
		55273 to 56523	55390 to 56640	Low, Middle, High	5MHz +20MHz	QPSK, 16QAM, 64QAM	50RB/ 0RB Offset	100RB/ 0RB Offset
		55340 to 56442	55538 to 56640	Low, Middle, High	20MHz +20MHz	QPSK, 16QAM, 64QAM	100RB/ 0RB Offset	100RB/ 0RB Offset
A	BAND EDGE	55340 to 56442	55538 to 56640	Low	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
				High	20MHz+20MHz		1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
							100RB/ 0RB Offset	100RB/ 0RB Offset
A	CONDCUETED EMISSION	55340 to 56442	55538 to 56640	Low, Middle, High	20MHz+20MHz	QPSK, 16QAM, 64QAM	1RB / 99RB Offset	1RB/ 0RB Offset
A	RADIATED EMISSION	55340 to 56491	55511 to 56662	Middle	20MHz+15MHz	QPSK,	1RB/ 99RB Offset	1RB/ 0RB Offset
		55318 to 56496	55489 to 56640	Low, Middle, High,	15MHz+20MHz	QPSK,	1RB/ 74RB Offset	1RB/ 0RB Offset
		55340 to 56541	55484 to 56685	Middle	20MHz+10MHz	QPSK,	1RB/ 99RB Offset	1RB/ 0RB Offset
		55295 to 56496	55439 to 56640	Middle	10MHz+20MHz	QPSK,	1RB/ 49RB Offset	1RB/ 0RB Offset
		55340 to 56590	55457 to 56707	Middle,	20MHz +5MHz	QPSK,	1RB/ 99RB Offset	1RB/ 0RB Offset





		55273 to 56523	55390 to 56640	Middle	5MHz +20MHz	QPSK,	1RB/ 24RB Offset	1RB/ 0RB Offset
		55340 to 56442	55538 to 56640	Middle,	20MHz+20MHz	QPSK,	1RB / 99RB Offset 1RB / 0RB Offset	1RB/ 0RB Offset
A	ACLR	55340 to 56442	55538 to 56640	Low	20MHz+20MHz	QPSK	1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
					100RB/ 0RB Offset		100RB/ 0RB Offset	
				High	20MHz+20MHz		1RB/ 0RB Offset	1RB/ 99RB Offset
							1RB/ 99RB Offset	1RB/ 0RB Offset
	100RB/ 0RB Offset	100RB/ 0RB 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&EIRP	23deg. C, 70%RH	DC 5V By Adapter	Jace Hu
FREQUENCY STABILITY	23deg. C, 70%RH	DC 3.6V/3.7V/4.2V By DC Supply	James Fu
OCCUPIED BANDWIDTH	23deg. C, 70%RH	DC5V By Adapter	James Fu
BAND EDGE	23deg. C, 70%RH	DC 5V By Adapter	James Fu
CONDCUDED EMISSION	23deg. C, 70%RH	DC5V By Adapter	James Fu
RADIATED EMISSION	23deg. C, 70%RH	DC5V By Adapter	Jace Hu
PEAK TO AVERAGE RATIO	23deg. C, 70%RH	DC5V By Adapter	James Fu



## 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 96**

**KDB 971168 D02 Power Meas License Digital Systems v02r02**

**ANSI/TIA/EIA-603-E 2016**

**ANSI 63.26-2015**

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



### 3 TEST TYPES AND RESULTS

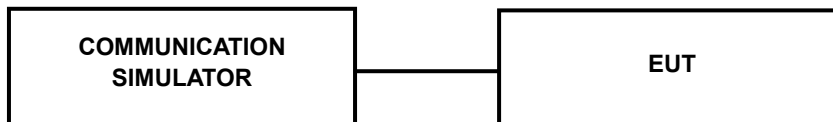
#### 3.1 MAXIMUM EIRP MEASUREMENT

##### 3.1.1 LIMITS OF MAXIMUM EIRP MEASUREMENT

Device	Maximum EIRP (dBm/10 MHz)
End User Device	23
Category A CBSD	30
Category B CBSD	47

##### 3.1.2 TEST SETUP

###### CONDUCTED POWER MEASUREMENT:



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

### 3.1.3 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:

$$\text{ERP or EIRP} = P_{\text{Meas}} + G_{\text{T}} - L_{\text{C}}$$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively  
(expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

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

$G_{\text{T}}$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$L_{\text{C}}$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

#### **CONDUCTED POWER MEASUREMENT:**

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

### 3.1.4 DEVIATION FROM TEST STANDARD

No deviation.



### 3.1.5 TEST RESULTS

LTE band 42:

Band/BW	Modulation	RB Size	RB Offset	Low CH (43115)	Mid CH (43340)	High CH (43565)
				Frequency (3552.5)MHz	Frequency (3575)MHz	Frequency (3597.5)MHz
42/ 5	QPSK	1	0	22.63	22.72	22.75
		1	12	22.57	22.69	22.71
		1	24	22.59	22.66	22.69
		12	0	21.59	21.71	21.74
		12	6	21.59	21.67	21.67
		12	13	21.51	21.66	21.65
		25	0	21.63	21.65	21.74
	16QAM	1	0	21.67	21.70	21.74
		1	12	21.53	21.64	21.67
		1	24	21.52	21.61	21.68
		12	0	20.60	20.69	20.74
		12	6	20.56	20.65	20.72
		12	13	20.54	20.69	20.69
		25	0	20.53	20.68	20.70
	64QAM	1	0	20.21	20.21	20.24
		1	12	20.15	20.33	20.35
		1	24	20.18	20.17	20.17
		12	0	19.63	19.76	19.75
		12	6	19.68	19.68	19.77
		12	13	19.62	19.62	19.66
		25	0	19.56	19.65	19.69



Band/BW	Modulation	RB Size	RB Offset	Low CH (43140)	Mid CH (43340)	High CH (43540)
				Frequency (3555)MHz	Frequency (3575)MHz	Frequency (3595)MHz
42/ 10	QPSK	1	0	22.64	22.73	22.78
		1	24	22.63	22.66	22.71
		1	49	22.57	22.63	22.68
		25	0	21.64	21.70	21.71
		25	12	21.59	21.62	21.63
		25	25	21.56	21.63	21.68
		50	0	21.63	21.65	21.71
	16QAM	1	0	21.69	21.70	21.80
		1	24	21.57	21.64	21.72
		1	49	21.51	21.56	21.65
		25	0	20.64	20.68	20.78
		25	12	20.55	20.60	20.69
		25	25	20.59	20.67	20.73
		50	0	20.59	20.62	20.67
	64QAM	1	0	20.19	20.25	20.30
		1	24	20.22	20.27	20.29
		1	49	20.17	20.21	20.19
		25	0	19.68	19.73	19.76
		25	12	19.69	19.68	19.71
		25	25	19.64	19.66	19.73
		50	0	19.56	19.63	19.70



Band/BW	Modulation	RB Size	RB Offset	Low CH (43165)	Mid CH (43340)	High CH (43515)
				Frequency (3557.5)MHz	Frequency (3575)MHz	Frequency (3592.5)MHz
42/ 15	QPSK	1	0	22.59	22.72	22.75
		1	37	22.62	22.73	22.74
		1	74	22.61	22.62	22.65
		36	0	21.59	21.74	21.77
		36	19	21.65	21.64	21.61
		36	39	21.52	21.69	21.64
		75	0	21.62	21.59	21.74
	16QAM	1	0	21.73	21.72	21.77
		1	37	21.53	21.68	21.71
		1	74	21.57	21.58	21.69
		36	0	20.58	20.67	20.74
		36	19	20.61	20.62	20.73
		36	39	20.54	20.73	20.70
		75	0	20.58	20.69	20.70
	64QAM	1	0	20.23	20.24	20.27
		1	37	20.17	20.34	20.35
		1	74	20.21	20.20	20.17
		36	0	19.64	19.77	19.72
		36	19	19.69	19.62	19.77
		36	39	19.64	19.65	19.70
		75	0	19.62	19.69	19.74





Band/BW	Modulation	RB Size	RB Offset	Low CH (43190)	Mid CH (43340)	High CH (43490)
				Frequency (3560)MHz	Frequency (3575)MHz	Frequency (3590)MHz
42/ 20	QPSK	1	0	22.67	22.77	22.80
		1	50	22.65	22.74	22.76
		1	99	22.63	22.67	22.70
		50	0	21.65	21.76	21.79
		50	25	21.66	21.69	21.69
		50	50	21.59	21.71	21.70
		100	0	21.65	21.67	21.76
	16QAM	1	0	21.75	21.78	21.82
		1	50	21.59	21.70	21.73
		1	99	21.59	21.63	21.70
		50	0	20.66	20.74	20.79
		50	25	20.63	20.67	20.74
		50	50	20.62	20.75	20.75
		100	0	20.61	20.70	20.72
	64QAM	1	0	20.25	20.29	20.32
		1	50	20.23	20.35	20.37
		1	99	20.22	20.25	20.25
		50	0	19.69	19.79	19.78
		50	25	19.70	19.70	19.79
		50	50	19.66	19.70	19.74
		100	0	19.64	19.71	19.75



LTE Band 43

Band/BW	Modulation	RB Size	RB Offset	Low CH (43615)	Mid CH (44090)	High CH (44565)
				Frequency (3602.5)MHz	Frequency (3650)MHz	Frequency (3697.5)MHz
43/ 5	QPSK	1	0	23.01	23.08	23.06
		1	12	22.93	22.86	22.90
		1	24	22.79	22.90	22.78
		12	0	21.97	21.97	22.01
		12	6	21.95	22.05	21.98
		12	13	21.89	21.87	21.94
		25	0	21.92	22.04	21.97
	16QAM	1	0	22.17	22.10	22.17
		1	12	21.96	21.96	21.88
		1	24	21.85	21.94	21.86
		12	0	20.98	20.97	20.99
		12	6	20.98	20.97	21.02
		12	13	20.92	20.95	20.89
		25	0	20.93	21.00	20.95
	64QAM	1	0	20.76	20.86	20.79
		1	12	20.71	20.66	20.67
		1	24	20.53	20.63	20.56
		12	0	20.02	20.02	19.90
		12	6	20.01	20.05	20.07
		12	13	19.94	19.94	19.91
		25	0	19.96	20.03	20.00



Band/BW	Modulation	RB Size	RB Offset	Low CH (43640)	Mid CH (44090)	High CH (44540)
				Frequency (3605)MHz	Frequency (3650)MHz	Frequency (3695)MHz
43/ 10	QPSK	1	0	22.98	23.11	23.06
		1	24	22.92	22.88	22.90
		1	49	22.85	22.84	22.78
		25	0	21.95	21.94	22.00
		25	12	22.00	22.05	21.95
		25	25	21.89	21.84	21.90
		50	0	21.97	22.00	22.00
	16QAM	1	0	22.17	22.11	22.14
		1	24	21.98	21.94	21.94
		1	49	21.89	21.88	21.91
		25	0	20.97	20.98	20.96
		25	12	21.02	20.96	21.06
		25	25	20.91	20.96	20.86
		50	0	20.98	20.96	20.99
	64QAM	1	0	20.82	20.80	20.76
		1	24	20.69	20.63	20.73
		1	49	20.60	20.62	20.50
		25	0	20.01	19.99	19.92
		25	12	20.06	20.01	20.08
		25	25	19.98	19.93	19.91
		50	0	19.96	20.01	20.00



Band/BW	Modulation	RB Size	RB Offset	Low CH (43665)	Mid CH (44090)	High CH (44515)
				Frequency (3607.5)MHz	Frequency (3650)MHz	Frequency (3692.5)MHz
43/ 15	QPSK	1	0	22.98	23.08	23.09
		1	37	22.94	22.90	22.89
		1	74	22.84	22.90	22.77
		36	0	21.97	21.97	22.00
		36	19	21.95	22.05	22.00
		36	39	21.94	21.84	21.95
		75	0	21.92	22.02	21.97
	16QAM	1	0	22.16	22.12	22.17
		1	37	22.03	21.97	21.88
		1	74	21.85	21.93	21.88
		36	0	21.03	20.95	20.96
		36	19	20.98	20.96	21.05
		36	39	20.98	20.98	20.83
		75	0	20.94	20.94	20.95
	64QAM	1	0	20.82	20.86	20.77
		1	37	20.73	20.63	20.74
		1	74	20.59	20.63	20.54
		36	0	20.05	20.05	19.90
		36	19	20.01	19.99	20.08
		36	39	20.00	19.94	19.85
		75	0	20.00	20.00	20.03



Band/BW	Modulation	RB Size	RB Offset	Low CH (43690)	Mid CH (44090)	High CH (44490)
				Frequency (3610)MHz	Frequency (3650)MHz	Frequency (3690)MHz
43/ 20	QPSK	1	0	23.06	23.15	23.11
		1	50	22.95	22.94	22.92
		1	99	22.87	22.91	22.83
		50	0	22.01	22.02	22.02
		50	25	22.01	22.07	22.03
		50	50	21.96	21.92	21.96
		100	0	22.00	22.06	22.02
	16QAM	1	0	22.19	22.18	22.19
		1	50	22.04	22.02	21.96
		1	99	21.91	21.96	21.92
		50	0	21.05	21.02	21.01
		50	25	21.04	21.04	21.07
		50	50	20.99	21.00	20.91
		100	0	21.01	21.02	21.01
	64QAM	1	0	20.84	20.87	20.81
		1	50	20.75	20.71	20.75
		1	99	20.61	20.64	20.58
		50	0	20.06	20.07	19.98
		50	25	20.07	20.07	20.10
		50	50	20.01	19.99	19.93
		100	0	20.04	20.05	20.05



LTE band 48:

Band/BW	Modulation	RB Size	RB Offset	Low CH (55265)	Mid CH (55990)	High CH (56715)
				Frequency (3552.5)MHz	Frequency (3625.0)MHz	Frequency (3697.5)MHz
48/ 5	QPSK	1	0	22.28	22.47	22.80
		1	12	22.18	22.25	22.73
		1	24	22.09	22.23	22.61
		12	0	21.21	21.32	21.75
		12	6	21.18	21.27	21.66
		12	13	21.10	21.25	21.68
		25	0	21.25	21.33	21.62
	16QAM	1	0	21.20	21.32	21.71
		1	12	21.31	21.40	21.83
		1	24	21.39	21.36	21.81
		12	0	20.24	20.33	20.72
		12	6	20.28	20.27	20.71
		12	13	20.25	20.34	20.79
		25	0	20.23	20.26	20.77
	64QAM	1	0	20.34	20.48	20.81
		1	12	20.32	20.37	20.86
		1	24	20.33	20.34	20.74
		12	0	20.13	20.26	20.68
		12	6	20.17	20.20	20.52
		12	13	20.04	20.16	20.55
		25	0	20.19	20.18	20.66



Band/BW	Modulation	RB Size	RB Offset	Low CH (55290)	Mid CH (55990)	High CH (56690)
				Frequency (3555)MHz	Frequency (3625.0)MHz	Frequency (3695)MHz
48/ 10	QPSK	1	0	22.29	22.42	22.80
		1	24	22.23	22.21	22.73
		1	49	22.10	22.29	22.61
		25	0	21.24	21.34	21.75
		25	12	21.18	21.32	21.66
		25	25	21.14	21.29	21.68
		50	0	21.23	21.36	21.62
	16QAM	1	0	21.21	21.30	21.71
		1	24	21.28	21.38	21.83
		1	49	21.39	21.40	21.81
		25	0	20.24	20.34	20.72
		25	12	20.25	20.24	20.71
		25	25	20.20	20.37	20.79
		50	0	20.23	20.25	20.77
	64QAM	1	0	20.28	20.50	20.81
		1	24	20.29	20.39	20.86
		1	49	20.26	20.34	20.74
		25	0	20.14	20.25	20.68
		25	12	20.11	20.20	20.52
		25	25	20.08	20.16	20.55
		50	0	20.15	20.18	20.66



Band/BW	Modulation	RB Size	RB Offset	Low CH (55315)	Mid CH (55990)	High CH (56665)
				Frequency (3557.5)MHz	Frequency (3625.0)MHz	Frequency (3692.5)MHz
48/ 15	QPSK	1	0	22.26	22.50	22.80
		1	37	22.23	22.23	22.73
		1	74	22.07	22.18	22.61
		36	0	21.25	21.27	21.75
		36	19	21.24	21.35	21.66
		36	39	21.12	21.26	21.68
		75	0	21.28	21.32	21.62
	16QAM	1	0	21.21	21.38	21.71
		1	37	21.33	21.35	21.83
		1	74	21.39	21.32	21.81
		36	0	20.26	20.38	20.72
		36	19	20.29	20.25	20.71
		36	39	20.19	20.33	20.79
		75	0	20.27	20.21	20.77
	64QAM	1	0	20.27	20.48	20.81
		1	37	20.34	20.30	20.86
		1	74	20.32	20.35	20.74
		36	0	20.12	20.24	20.68
		36	19	20.18	20.16	20.52
		36	39	20.07	20.15	20.55
		75	0	20.20	20.16	20.66





Band/BW	Modulation	RB Size	RB Offset	Low CH (55340)	Mid CH (55990)	High CH (56640)
				Frequency (3560)MHz	Frequency (3625.0)MHz	Frequency (3690)MHz
48/ 20	QPSK	1	0	22.34	22.53	22.85
		1	50	22.25	22.32	22.74
		1	99	22.15	22.26	22.66
		50	0	21.28	21.39	21.77
		50	25	21.26	21.32	21.71
		50	50	21.18	21.32	21.70
		100	0	21.29	21.41	21.70
	16QAM	1	0	21.28	21.40	21.77
		1	50	21.36	21.46	21.85
		1	99	21.41	21.40	21.86
		50	0	20.32	20.44	20.79
		50	25	20.31	20.31	20.76
		50	50	20.27	20.41	20.81
		100	0	20.29	20.33	20.78
	64QAM	1	0	20.35	20.51	20.86
		1	50	20.37	20.45	20.87
		1	99	20.34	20.38	20.79
		50	0	20.18	20.33	20.70
		50	25	20.19	20.29	20.60
		50	50	20.12	20.23	20.60
		100	0	20.21	20.20	20.68



LTE Band CA\_48C

CA_48C								
Combination 20MHz+20MHz (100RB+100RB)								
PCC	SCC	Modulation	PCC		SCC		Total RB Size	Measured Power (dBm)
Channel	Channel		RB Size	RB offset	RB Size	RB offset		
55340	55538	QPSK	1	0	0	0	1	22.46
		16QAM	1	0	0	0	1	21.71
		64QAM	1	0	0	0	1	20.16
55990	56188	QPSK	1	0	0	0	1	22.31
		16QAM	1	0	0	0	1	21.49
		64QAM	1	0	0	0	1	20.04
56640	56442	QPSK	1	0	0	0	1	22.26
		16QAM	1	0	0	0	1	21.52
		64QAM	1	0	0	0	1	20.01



**EIRP**

**LTE Band 42**

**CHANNEL BANDWIDTH: 5MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43115	3552.5	22.63	-1.3	21.33	135.83	23
43340	3575	22.72	-1.3	21.42	138.68	23
43565	3597.5	22.75	-1.3	21.45	139.64	23

**CHANNEL BANDWIDTH: 5MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43115	3552.5	21.67	-1.3	20.37	108.89	23
43340	3575	21.7	-1.3	20.4	109.65	23
43565	3597.5	21.74	-1.3	20.44	110.66	23

**CHANNEL BANDWIDTH: 5MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43115	3552.5	20.21	-1.3	18.91	77.8	23
43340	3575	20.33	-1.3	19.03	79.98	23
43565	3597.5	20.35	-1.3	19.05	80.35	23



**CHANNEL BANDWIDTH: 10MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43140	3555	22.64	-1.3	21.34	136.14	23
43340	3575	22.73	-1.3	21.43	139	23
43540	3595	22.78	-1.3	21.48	140.6	23

**CHANNEL BANDWIDTH: 10MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43140	3555	21.69	-1.3	20.39	109.4	23
43340	3575	21.7	-1.3	20.4	109.65	23
43540	3595	21.8	-1.3	20.5	112.2	23

**CHANNEL BANDWIDTH: 10MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43140	3555	20.22	-1.3	18.92	77.98	23
43340	3575	20.27	-1.3	18.97	78.89	23
43540	3595	20.3	-1.3	19	79.43	23



**CHANNEL BANDWIDTH: 15MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43165	3557.5	22.62	-1.3	21.32	135.52	23
43340	3575	22.73	-1.3	21.43	139	23
43515	3592.5	22.75	-1.3	21.45	139.64	23

**CHANNEL BANDWIDTH: 15MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43165	3557.5	21.73	-1.3	20.43	110.41	23
43340	3575	21.72	-1.3	20.42	110.15	23
43515	3592.5	21.77	-1.3	20.47	111.43	23

**CHANNEL BANDWIDTH: 15MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43165	3557.5	20.23	-1.3	18.93	78.16	23
43340	3575	20.34	-1.3	19.04	80.17	23
43515	3592.5	20.35	-1.3	19.05	80.35	23



**CHANNEL BANDWIDTH: 20MHz QPSK**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43190	3560	22.67	-1.3	21.37	137.09	23
43340	3575	22.77	-1.3	21.47	140.28	23
43490	3590	22.8	-1.3	21.5	141.25	23

**CHANNEL BANDWIDTH: 20MHz 16QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43190	3560	21.75	-1.3	20.45	110.92	23
43340	3575	21.78	-1.3	20.48	111.69	23
43490	3590	21.82	-1.3	20.52	112.72	23

**CHANNEL BANDWIDTH: 20MHz 64QAM**

Channel	Frequency (MHz)	Conducted Power (dBm)	G <sub>T</sub> -L <sub>c</sub> (dB)	EIRP (dBm)	EIRP (mW)	Limit (dBm/10MHz)
43190	3560	20.25	-1.3	18.95	78.52	23
43340	3575	20.35	-1.3	19.05	80.35	23
43490	3590	20.37	-1.3	19.07	80.72	23