



TEST REPORT

APPLICANT : Jiangsu SEUIC Technology Co.,Ltd.

PRODUCT NAME : Portable Data Collection Terminal

MODEL NAME : CRUISE 1

BRAND NAME : CRUISE/SEUIC

FCC ID : 2AC68-CRUISE1S

STANDARD(S) : 47 CFR Part 22, Subpart H
47 CFR Part 24, Subpart E
47 CFR Part 27, Subpart D&H&L&M

RECEIPT DATE : 2019-12-13

TEST DATE : 2019-12-13 to 2020-02-22

ISSUE DATE : 2020-02-22

Edited by: He Dekuan
He Dekuan (Rapporteur)

Approved by: Peng Huarui
Peng Huarui (Supervisor)

NOTE: This document is issued by MORLAB, the test report shall not be reproduced except in full without prior written permission of the company. The test results apply only to the particular sample(s) tested and to the specific tests carried out which is available on request for validation and information confirmed at our website.





DIRECTORY

1. Technical Information	4
1.1. Applicant and Manufacturer Information	4
1.2. Equipment Under Test (EUT) Description	4
1.3. Test Standards and Results	6
1.4. Environmental Conditions	10
2. 47 CFR Part 2, Part 22H, Part 24E and 27H&L&M Requirements	11
2.1. Transmitter Conducted Output Power And ERP/EIPR	11
2.2. Occupied Bandwidth	53
2.3. Frequency Stability	71
2.4. Peak to Average Ratio	83
2.5. Conducted Spurious Emissions	109
2.6. Band Edge	158
2.7. Radiated Spurious Emissions	179
Annex A Test Uncertainty	197
Annex B Testing Laboratory Information	198



Change History		
Version	Date	Reason for change
1.0	2020-02-22	First edition



1. Technical Information

Note: Provide by applicant.

1.1. Applicant and Manufacturer Information

Applicant:	Jiangsu SEUIC Technology Co.,Ltd.
Applicant Address:	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China
Manufacturer:	Jiangsu SEUIC Technology Co.,Ltd.
ManufacturerAddress:	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, 210061, Nanjing City, Jiangsu Province, China

1.2. Equipment Under Test (EUT) Description

Product Name:	Portable Data Collection Terminal	
Hardware Version:	SLB761X_MB_V1.00_PCB	
Software Version:	D700S_G_V0.3.0	
Modulation Type:	QPSK, 16QAM,	
Operation Band:	Band 5 / 7 / 38 / 40 / 41	
Frequency Range:	LTE Band 5	Tx:824MHz - 849MHz
		Rx:869MHz - 894MHz
	LTE Band 7	Tx:2500MHz - 2570MHz
		Rx:2620MHz - 2690MHz
	LTE Band 38	Tx:2570MHz - 2620MHz
		Rx:2570MHz - 2620MHz
	LTE Band 40	Tx: 2305MHz– 2315MHz
		Rx:2305MHz– 2315MHz
		Tx: 2350MHz– 2360MHz
		Rx: 2350MHz– 2360MHz
LTE Band 41	Tx:2555MHz-2655MHz	
	Rx:2555MHz-2655MHz	
Channel Bandwidth	LTE Band 5	1.4MHz, 3 MHz, 5 MHz, 10MHz
	LTE Band 7	5 MHz, 10MHz, 15 MHz, 20 MHz
	LTE Band 38	5 MHz, 10MHz, 15 MHz, 20 MHz



	LTE Band 40	5 MHz, 10MHz
	LTE Band 41	5 MHz, 10MHz, 15 MHz, 20MHz
Antenna Type:	Fixed Internal	
Antenna Gain:	LTE Band 5	-3.35 dBi
	LTE Band 7	1.85 dBi
	LTE Band 38	2.05 dBi
	LTE Band 40	0.89 dBi
	LTE Band 41	2.00 dBi
Accessory Information:	Battery	
	Brand Name:	N/A
	Model No.:	BT01700CRUISE
	Capacity:	4500mAh
	Rated Voltage:	3.80V
	Charge Limit:	4.35V
	AC Adapter Type1	
	Brand Name:	N/A
	Model No.:	TPA-23A050200UU01
	Rated Input:	100-240V~50/60Hz 0.3A
	Rated Output:	5V=2A

Note 1: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.



1.3. Maximum ERP/EIRP and Emission Designator

LTE Band5		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.035	0.028	8M99G7D	8M97W7D
5		0.034	0.027	4M50G7D	4M50W7D
3		0.035	0.028	2M70G7D	2M70W7D
1.4		0.035	0.029	1M10G7D	1M10W7D
LTE Band7		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.192	0.150	17M9G7D	17M9W7D
15		0.191	0.150	13M5G7D	13M4W7D
10		0.187	0.149	9M00G7D	8M96W7D
5		0.188	0.142	4M49G7D	4M5W7D
LTE Band38		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
20		0.247	0.196	17M9G7D	17M9W7D
15		0.245	0.183	13M5G7D	13M5W7D
10		0.239	0.185	8M98G7D	8M97W7D
5		0.240	0.170	4M52G7D	4M51W7D
LTE Band40 2305MHz 2320MHz		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.185	0.138	8M96G7D	8M95W7D
5		0.192	0.143	4M51G7D	4M51W7D
LTE Band40 2350MHz 2360MHz		Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
BW(MHz)		QPSK	16QAM	QPSK	16QAM
10		0.183	0.138	8M96G7D	8M96W7D
5		0.183	0.142	4M51G7D	4M50W7D



LTE Band41	Maximum ERP/EIRP (W)		Emission Designator (99%OBW)	
	BW(MHz)	QPSK	16QAM	QPSK
20	0.245	0.191	17M9G7D	17M9W7D
15	0.259	0.182	13M5G7D	13M5W7D
10	0.243	0.186	8M97G7D	8M97W7D
5	0.249	0.182	4M51G7D	4M52W7D



1.4. Test Standards and Results

The objective of the report is to perform testing according to Part 2, Part 22, Part 24 and Part 27 for the EUT FCC ID Certification:

No	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22	Public Mobile Services
3	47 CFR Part 27	Miscellaneous Wireless Communications Services



Test detailed items/section required by FCC rules and results are as below:

Section	Description	Test Date	Test Engineer	Result	Method Determination /Remark
2.1046, 22.913(a)(2), 24.232(c),27.50(c)(10) 27.50(d)(4),27.50(h)(2) 27.50(a)(3)	Transmitter Conducted Output Power and ERP/EIRP	Dec 29, 2019	Gao Mingzhou Peng Xuewei	PASS	No deviation
2.1049	Occupied Bandwidth	Dec 26, 2019 and Jan 11, 2020	Gao Mingzhou	PASS	No deviation
2.1055, 22.355, 24.235, 27.54	Frequency Stability	Dec 13 to 28, 2019	Gao Mingzhou	PASS	No deviation
24.232(d), 27.50(d)(5)	Peak to Average Radio	Dec 26, 2019 and Jan 11, 2020	Gao Mingzhou	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Conducted Spurious Emissions	Dec 11 to 13, 2019 Feb 22 2020	Gao Mingzhou	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Band Edge	Dec 11, and 16, 2019	Gao Mingzhou	PASS	No deviation
2.1051, 22.917(a), 24.238, 27.53(g)(h) 27.53(m)(4)(a)(4)	Radiated Spurious Emissions	Dec 29 , 2019	Peng Xuewei	PASS	No deviation

Note 1: The tests were performed according to the method of measurements prescribed in KDB971168 D01 v03 and ANSI/TIA-603-E-2016.

Note 2: The path loss during the RF test is calibrated to correct the results by the offset setting in the test equipments. The ref offset 26.5dB contains two parts that cable loss 16.5dB and



Attenuator 10dB.

1.5. Environmental Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106



2. 47 CFR Part 2, Part 22H and 27H&L&M Requirements

2.1. Transmitter Conducted Output Power And ERP/EIRP

2.1.1. Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

According to FCC section 24.232 (c) for LTE Band 2/25, Mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50 (d) for LTE Band 4, fixed, mobile and portable (hand-held) stations in the 1710-1755MHz band are limited to 1wat EIRP.

According to FCC section 22.913 (a.2) for LTE Band 5/26, the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 27.50 (h) for LTE Band 7/41, Mobile and other user stations. Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

According to FCC section 27.50 (c) for LTE Band 12/17, Portable stations (hand-held devices) operating in the 704-716MHz band are limited to 3watts ERP.



Conducted Output Power

LTE Band5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20450	20525	20600
Frequency (MHz)				829	836.5	844
10	QPSK	1	0	20.77	20.84	20.97
10	QPSK	1	25	20.75	20.74	20.87
10	QPSK	1	49	20.73	20.74	20.86
10	QPSK	25	0	19.82	19.86	19.87
10	QPSK	25	12	19.83	19.84	19.87
10	QPSK	25	25	19.87	19.81	19.95
10	QPSK	50	0	19.83	19.93	19.96
10	16QAM	1	0	19.67	19.72	19.91
10	16QAM	1	25	19.90	19.95	19.86
10	16QAM	1	49	19.93	19.95	19.68
10	16QAM	25	0	18.93	18.77	18.85
10	16QAM	25	12	18.62	18.57	18.96
10	16QAM	25	25	18.98	18.66	18.87
10	16QAM	50	0	18.95	18.76	18.91



LTE Band5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20425	20525	20625
Frequency (MHz)				826.5	836.5	846.5
5	QPSK	1	0	20.72	20.66	20.66
5	QPSK	1	12	20.71	20.71	20.78
5	QPSK	1	24	20.75	20.65	20.62
5	QPSK	12	0	19.87	19.95	19.88
5	QPSK	12	7	19.93	19.82	19.90
5	QPSK	12	13	19.94	19.78	19.87
5	QPSK	25	0	19.91	19.84	19.83
5	16QAM	1	0	19.73	19.55	19.76
5	16QAM	1	12	19.45	19.45	19.70
5	16QAM	1	24	19.44	19.54	19.81
5	16QAM	12	0	18.96	18.82	18.81
5	16QAM	12	7	18.62	18.93	18.57
5	16QAM	12	13	18.52	18.88	18.63
5	16QAM	25	0	18.69	18.74	18.76



LTE Band5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20415	20525	20635
Frequency (MHz)				825.5	836.5	847.5
3	QPSK	1	0	20.91	20.59	20.80
3	QPSK	1	8	20.88	20.75	20.53
3	QPSK	1	14	20.49	20.85	20.67
3	QPSK	8	0	19.88	19.82	19.86
3	QPSK	8	4	19.90	19.86	19.92
3	QPSK	8	7	19.97	19.85	19.83
3	QPSK	15	0	19.89	19.89	19.86
3	16QAM	1	0	19.48	19.60	19.81
3	16QAM	1	8	19.62	19.54	19.79
3	16QAM	1	14	19.73	19.95	19.79
3	16QAM	8	0	18.66	18.80	19.00
3	16QAM	8	4	18.77	18.72	18.72
3	16QAM	8	7	18.92	18.95	18.90
3	16QAM	15	0	18.62	18.88	18.91



LTE Band5						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20407	20525	20643
Frequency (MHz)				824.7	836.5	848.3
1.4	QPSK	1	0	20.70	20.63	20.67
1.4	QPSK	1	3	20.68	20.66	20.81
1.4	QPSK	1	5	20.67	20.52	20.55
1.4	QPSK	3	0	20.82	20.84	20.85
1.4	QPSK	3	1	20.97	20.91	20.97
1.4	QPSK	3	3	20.91	20.90	20.87
1.4	QPSK	6	0	19.87	19.78	19.73
1.4	16QAM	1	0	19.56	19.79	19.51
1.4	16QAM	1	3	19.72	19.73	19.64
1.4	16QAM	1	5	19.77	19.67	19.43
1.4	16QAM	3	0	19.74	19.86	19.78
1.4	16QAM	3	1	20.08	19.76	19.78
1.4	16QAM	3	3	20.17	19.94	19.77
1.4	16QAM	6	0	18.87	18.85	18.74



LTE Band 7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20850	21100	21350
Frequency (MHz)				2510	2535	2560
20	QPSK	1	0	20.88	20.98	20.91
20	QPSK	1	49	20.63	20.61	20.89
20	QPSK	1	99	20.88	20.95	20.67
20	QPSK	50	0	19.87	19.97	19.96
20	QPSK	50	24	19.89	19.93	19.90
20	QPSK	50	50	19.90	19.83	19.87
20	QPSK	100	0	19.89	19.91	19.85
20	16QAM	1	0	19.83	19.54	19.53
20	16QAM	1	49	19.45	19.56	19.90
20	16QAM	1	99	19.55	19.89	19.92
20	16QAM	50	0	18.62	18.79	18.99
20	16QAM	50	24	18.82	18.89	18.77
20	16QAM	50	50	18.87	18.73	18.98
20	16QAM	100	0	18.91	18.88	18.89



LTE Band7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20825	21100	21375
Frequency (MHz)				2507.5	2535	2562.5
15	QPSK	1	0	20.64	20.97	20.76
15	QPSK	1	37	20.73	20.80	20.97
15	QPSK	1	74	20.78	20.90	20.85
15	QPSK	36	0	19.94	19.79	19.89
15	QPSK	36	20	19.94	19.93	19.85
15	QPSK	36	39	19.66	19.87	19.92
15	QPSK	75	0	19.93	19.88	19.92
15	16QAM	1	0	19.63	19.69	19.90
15	16QAM	1	37	19.87	19.89	19.60
15	16QAM	1	74	19.56	19.56	19.84
15	16QAM	36	0	18.83	18.79	18.67
15	16QAM	36	20	18.94	18.76	18.99
15	16QAM	36	39	18.62	18.91	18.69
15	16QAM	75	0	18.97	18.92	18.97



LTE Band7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20800	21100	21400
Frequency (MHz)				2505	2535	2565
10	QPSK	1	0	20.68	20.57	20.86
10	QPSK	1	25	20.85	20.76	20.81
10	QPSK	1	49	20.81	20.75	20.61
10	QPSK	25	0	19.91	19.92	20.00
10	QPSK	25	12	19.93	19.98	19.86
10	QPSK	25	25	20.00	20.00	19.89
10	QPSK	50	0	19.94	19.91	19.96
10	16QAM	1	0	19.64	19.88	19.78
10	16QAM	1	25	19.82	19.64	19.76
10	16QAM	1	49	19.59	19.86	19.71
10	16QAM	25	0	18.80	18.80	19.00
10	16QAM	25	12	18.91	18.81	19.00
10	16QAM	25	25	18.66	18.88	18.98
10	16QAM	50	0	18.93	18.94	18.98



LTE Band7						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				20775	21100	21425
Frequency (MHz)				2502.5	2535	2567.5
5	QPSK	1	0	20.62	20.72	20.59
5	QPSK	1	12	20.90	20.68	20.80
5	QPSK	1	24	20.59	20.65	20.66
5	QPSK	12	0	19.83	19.89	19.67
5	QPSK	12	7	19.84	19.93	19.74
5	QPSK	12	13	19.83	19.97	19.78
5	QPSK	25	0	19.88	19.89	19.82
5	16QAM	1	0	19.67	19.26	19.66
5	16QAM	1	12	19.45	19.55	19.68
5	16QAM	1	24	19.45	19.35	19.23
5	16QAM	12	0	18.68	18.76	18.55
5	16QAM	12	7	18.94	18.79	18.60
5	16QAM	12	13	18.82	18.96	18.79
5	16QAM	25	0	18.96	18.87	18.61



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37850	38000	38150
Frequency (MHz)				2580	2595	2610
20	QPSK	1	0	21.78	21.88	21.72
20	QPSK	1	49	21.59	21.71	21.74
20	QPSK	1	99	21.56	21.66	21.79
20	QPSK	50	0	20.53	20.79	20.85
20	QPSK	50	24	20.64	20.68	20.69
20	QPSK	50	50	20.66	20.66	20.70
20	QPSK	100	0	20.67	20.69	20.71
20	16QAM	1	0	20.64	20.55	20.50
20	16QAM	1	49	20.66	20.54	20.87
20	16QAM	1	99	20.58	20.63	20.73
20	16QAM	50	0	19.56	19.62	19.82
20	16QAM	50	24	19.54	19.73	19.90
20	16QAM	50	50	19.59	19.72	19.71
20	16QAM	100	0	19.50	19.65	19.69



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37825	38000	38175
Frequency (MHz)				2577.5	2595	2612.5
15	QPSK	1	0	21.58	21.77	21.85
15	QPSK	1	37	21.57	21.71	21.81
15	QPSK	1	74	21.54	21.76	21.58
15	QPSK	36	0	20.77	20.63	20.66
15	QPSK	36	20	20.56	20.73	20.82
15	QPSK	36	39	20.65	20.78	20.79
15	QPSK	75	0	20.50	20.80	20.86
15	16QAM	1	0	20.52	20.38	20.53
15	16QAM	1	37	20.54	20.52	20.57
15	16QAM	1	74	20.51	20.53	20.53
15	16QAM	36	0	19.64	19.63	19.57
15	16QAM	36	20	19.54	19.64	19.66
15	16QAM	36	39	19.59	19.71	19.65
15	16QAM	75	0	19.74	19.74	19.93



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37800	38000	38200
Frequency (MHz)				2575	2595	2615
10	QPSK	1	0	21.57	21.76	21.70
10	QPSK	1	25	21.73	21.68	21.52
10	QPSK	1	49	21.67	21.71	21.53
10	QPSK	25	0	20.58	20.62	20.87
10	QPSK	25	12	20.62	20.69	20.85
10	QPSK	25	25	20.51	20.61	20.76
10	QPSK	50	0	20.75	20.74	20.82
10	16QAM	1	0	20.51	20.45	20.61
10	16QAM	1	25	20.59	20.56	20.63
10	16QAM	1	49	20.62	20.52	20.33
10	16QAM	25	0	19.64	19.69	19.96
10	16QAM	25	12	19.57	19.77	19.87
10	16QAM	25	25	19.67	19.78	19.74
10	16QAM	50	0	19.79	19.56	19.80



LTE Band 38						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				37775	38000	38225
Frequency (MHz)				2572.5	2595	2617.5
5	QPSK	1	0	21.58	21.76	21.46
5	QPSK	1	12	21.56	21.76	21.74
5	QPSK	1	24	21.74	21.74	21.51
5	QPSK	12	0	20.66	20.73	20.84
5	QPSK	12	7	20.78	20.78	20.85
5	QPSK	12	13	20.59	20.63	20.77
5	QPSK	25	0	20.51	20.67	20.70
5	16QAM	1	0	19.97	20.21	20.25
5	16QAM	1	12	19.96	20.12	20.01
5	16QAM	1	24	19.92	20.08	20.11
5	16QAM	12	0	19.41	19.79	19.62
5	16QAM	12	7	19.53	19.63	19.64
5	16QAM	12	13	19.54	19.67	19.63
5	16QAM	25	0	19.68	19.50	19.79



LTE Band 40 (2305MHz ~ 2315MHz)						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	38750	/
Frequency (MHz)				/	2310	/
10	QPSK	1	0	/	21.97	/
10	QPSK	1	25	/	21.82	/
10	QPSK	1	49	/	21.77	/
10	QPSK	25	0	/	21.07	/
10	QPSK	25	12	/	21.01	/
10	QPSK	25	25	/	20.93	/
10	QPSK	50	0	/	21.07	/
10	16QAM	1	0	/	20.63	/
10	16QAM	1	25	/	20.89	/
10	16QAM	1	49	/	20.50	/
10	16QAM	25	0	/	19.83	/
10	16QAM	25	12	/	19.63	/
10	16QAM	25	25	/	19.97	/
10	16QAM	50	0	/	19.77	/



LTE Band 40 (2305MHz ~ 2315MHz)						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				38725	38750	38775
Frequency (MHz)				2307.5	2310	2312.5
5	QPSK	1	0	21.77	21.82	21.69
5	QPSK	1	12	21.88	21.94	21.94
5	QPSK	1	24	21.69	21.74	21.79
5	QPSK	12	0	20.91	21.07	20.98
5	QPSK	12	7	21.05	21.02	21.00
5	QPSK	12	13	20.94	20.93	20.93
5	QPSK	25	0	20.98	21.04	20.91
5	16QAM	1	0	20.60	20.56	20.41
5	16QAM	1	12	20.66	20.61	20.58
5	16QAM	1	24	20.58	20.49	20.45
5	16QAM	12	0	19.94	19.80	19.82
5	16QAM	12	7	19.78	19.96	19.72
5	16QAM	12	13	19.97	19.97	19.75
5	16QAM	25	0	19.77	19.68	19.87



LTE Band 40 (2350MHz ~ 2360MHz)						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				/	39200	/
Frequency (MHz)				/	2355	/
10	QPSK	1	0	/	21.74	/
10	QPSK	1	25	/	21.63	/
10	QPSK	1	49	/	21.67	/
10	QPSK	25	0	/	20.85	/
10	QPSK	25	12	/	20.80	/
10	QPSK	25	25	/	20.72	/
10	QPSK	50	0	/	20.85	/
10	16QAM	1	0	/	20.49	/
10	16QAM	1	25	/	20.51	/
10	16QAM	1	49	/	20.22	/
10	16QAM	25	0	/	19.88	/
10	16QAM	25	12	/	19.74	/
10	16QAM	25	25	/	19.81	/
10	16QAM	50	0	/	19.88	/



LTE Band 40 (2350MHz ~ 2360MHz)						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				39175	39200	39225
Frequency (MHz)				2352.5	2355	2357.5
5	QPSK	1	0	21.53	21.69	21.73
5	QPSK	1	12	21.66	21.69	21.72
5	QPSK	1	24	21.47	21.59	21.47
5	QPSK	12	0	20.75	20.83	20.77
5	QPSK	12	7	20.74	20.71	20.71
5	QPSK	12	13	20.72	20.73	20.65
5	QPSK	25	0	20.73	20.82	20.70
5	16QAM	1	0	20.55	20.52	20.27
5	16QAM	1	12	20.62	20.58	20.51
5	16QAM	1	24	20.58	20.58	20.57
5	16QAM	12	0	19.68	19.76	19.82
5	16QAM	12	7	19.98	19.68	19.96
5	16QAM	12	13	19.85	19.77	19.78
5	16QAM	25	0	19.89	19.77	19.89



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				40340	40740	41140
Frequency (MHz)				2565	2605	2645
20	QPSK	1	0	21.45	21.52	21.89
20	QPSK	1	49	21.24	21.72	21.81
20	QPSK	1	99	21.25	21.56	21.71
20	QPSK	50	0	20.56	20.77	20.91
20	QPSK	50	24	20.45	20.68	20.98
20	QPSK	50	50	20.40	20.76	21.00
20	QPSK	100	0	20.40	20.68	20.91
20	16QAM	1	0	20.28	20.23	20.80
20	16QAM	1	49	20.19	20.53	20.76
20	16QAM	1	99	19.94	20.29	20.16
20	16QAM	50	0	19.61	19.70	19.79
20	16QAM	50	24	19.50	19.73	19.76
20	16QAM	50	50	19.45	19.72	20.00
20	16QAM	100	0	19.44	19.73	19.90



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				40315	40740	41165
Frequency (MHz)				2562.5	2605	2647.5
15	QPSK	1	0	21.36	21.74	21.77
15	QPSK	1	37	21.71	21.65	22.13
15	QPSK	1	74	21.22	21.65	21.83
15	QPSK	36	0	20.54	20.77	21.02
15	QPSK	36	20	20.51	20.63	20.89
15	QPSK	36	39	20.36	20.70	20.96
15	QPSK	75	0	20.52	20.62	20.92
15	16QAM	1	0	20.21	20.39	20.40
15	16QAM	1	37	20.23	20.38	20.59
15	16QAM	1	74	20.06	20.33	20.60
15	16QAM	36	0	19.45	19.75	19.95
15	16QAM	36	20	19.65	19.64	19.93
15	16QAM	36	39	19.38	19.64	20.01
15	16QAM	75	0	19.57	19.67	19.89



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				40290	40740	41190
Frequency (MHz)				2550	2605	2650
10	QPSK	1	0	21.49	21.73	21.85
10	QPSK	1	25	21.37	21.72	21.83
10	QPSK	1	49	21.28	21.72	21.82
10	QPSK	25	0	20.58	20.82	20.96
10	QPSK	25	12	20.62	20.82	20.85
10	QPSK	25	25	20.59	20.67	21.04
10	QPSK	50	0	20.54	20.81	21.00
10	16QAM	1	0	20.25	20.39	20.66
10	16QAM	1	25	20.20	20.50	20.70
10	16QAM	1	49	20.09	20.38	20.65
10	16QAM	25	0	19.56	19.78	19.86
10	16QAM	25	12	19.49	19.78	19.95
10	16QAM	25	25	19.46	19.93	19.93
10	16QAM	50	0	19.60	19.76	20.00



LTE Band 41						
BW [MHz]	Modulation	RB Size	RB Offset	Average Power Low Ch. / Freq.	Average Power Middle Ch. / Freq.	Average Power High Ch. / Freq.
Channel				40265	40740	41215
Frequency (MHz)				2557.5	2605	2652.5
5	QPSK	1	0	21.24	21.67	21.82
5	QPSK	1	12	21.37	21.90	21.97
5	QPSK	1	24	21.24	21.54	21.72
5	QPSK	12	0	20.53	20.73	21.03
5	QPSK	12	7	20.56	20.74	20.81
5	QPSK	12	13	20.48	20.67	20.95
5	QPSK	25	0	20.50	20.76	21.00
5	16QAM	1	0	20.13	20.36	20.56
5	16QAM	1	12	20.19	20.43	20.59
5	16QAM	1	24	20.05	20.21	20.49
5	16QAM	12	0	19.59	19.89	20.01
5	16QAM	12	7	19.73	19.99	20.16
5	16QAM	12	13	19.62	19.61	20.03
5	16QAM	25	0	19.68	19.94	20.19



Effective Radiated Power and Effective Isotropic Radiated Power

LTE Band5				Measured ERP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20450		20525		20600	
Frequency (MHz)				829		836.5		844	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	15.27	0.034	15.34	0.034	15.47	0.035
10	QPSK	1	25	15.25	0.033	15.24	0.033	15.37	0.034
10	QPSK	1	49	15.23	0.033	15.24	0.033	15.36	0.034
10	QPSK	25	0	14.32	0.027	14.36	0.027	14.37	0.027
10	QPSK	25	12	14.33	0.027	14.34	0.027	14.37	0.027
10	QPSK	25	25	14.37	0.027	14.31	0.027	14.45	0.028
10	QPSK	50	0	14.33	0.027	14.43	0.028	14.46	0.028
10	16QAM	1	0	14.17	0.026	14.22	0.026	14.41	0.028
10	16QAM	1	25	14.40	0.028	14.45	0.028	14.36	0.027
10	16QAM	1	49	14.43	0.028	14.45	0.028	14.18	0.026
10	16QAM	25	0	13.43	0.022	13.27	0.021	13.35	0.022
10	16QAM	25	12	13.12	0.021	13.07	0.020	13.46	0.022
10	16QAM	25	25	13.48	0.022	13.16	0.021	13.37	0.022
10	16QAM	50	0	13.45	0.022	13.26	0.021	13.41	0.022



LTE Band5				Measured ERP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20425		20525		20625	
Frequency (MHz)				826.5		836.5		846.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	15.22	0.033	15.16	0.033	15.16	0.033
5	QPSK	1	12	15.21	0.033	15.21	0.033	15.28	0.034
5	QPSK	1	24	15.25	0.033	15.15	0.033	15.12	0.033
5	QPSK	12	0	14.37	0.027	14.45	0.028	14.38	0.027
5	QPSK	12	7	14.43	0.028	14.32	0.027	14.40	0.028
5	QPSK	12	13	14.44	0.028	14.28	0.027	14.37	0.027
5	QPSK	25	0	14.41	0.028	14.34	0.027	14.33	0.027
5	16QAM	1	0	14.23	0.026	14.05	0.025	14.26	0.027
5	16QAM	1	12	13.95	0.025	13.95	0.025	14.20	0.026
5	16QAM	1	24	13.94	0.025	14.04	0.025	14.31	0.027
5	16QAM	12	0	13.46	0.022	13.32	0.021	13.31	0.021
5	16QAM	12	7	13.12	0.021	13.43	0.022	13.07	0.020
5	16QAM	12	13	13.02	0.020	13.38	0.022	13.13	0.021
5	16QAM	25	0	13.19	0.021	13.24	0.021	13.26	0.021



LTE Band5				Measured ERP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20415		20525		20635	
Frequency (MHz)				825.5		836.5		847.5	
				dbm	W	dbm	W	dbm	W
3	QPSK	1	0	15.41	0.035	15.09	0.032	15.30	0.034
3	QPSK	1	8	15.38	0.035	15.25	0.033	15.03	0.032
3	QPSK	1	14	14.99	0.032	15.35	0.034	15.17	0.033
3	QPSK	8	0	14.38	0.027	14.32	0.027	14.36	0.027
3	QPSK	8	4	14.40	0.028	14.36	0.027	14.42	0.028
3	QPSK	8	7	14.47	0.028	14.35	0.027	14.33	0.027
3	QPSK	15	0	14.39	0.027	14.39	0.027	14.36	0.027
3	16QAM	1	0	13.98	0.025	14.10	0.026	14.31	0.027
3	16QAM	1	8	14.12	0.026	14.04	0.025	14.29	0.027
3	16QAM	1	14	14.23	0.026	14.45	0.028	14.29	0.027
3	16QAM	8	0	13.16	0.021	13.30	0.021	13.50	0.022
3	16QAM	8	4	13.27	0.021	13.22	0.021	13.22	0.021
3	16QAM	8	7	13.42	0.022	13.45	0.022	13.40	0.022
3	16QAM	15	0	13.12	0.021	13.38	0.022	13.41	0.022



LTE Band5				Measured ERP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20407		20525		20643	
Frequency (MHz)				824.7		836.5		848.3	
				dbm	W	dbm	W	dbm	W
1.4	QPSK	1	0	15.20	0.033	15.13	0.033	15.17	0.033
1.4	QPSK	1	3	15.18	0.033	15.16	0.033	15.31	0.034
1.4	QPSK	1	5	15.17	0.033	15.02	0.032	15.05	0.032
1.4	QPSK	3	0	15.32	0.034	15.34	0.034	15.35	0.034
1.4	QPSK	3	1	15.47	0.035	15.41	0.035	15.47	0.035
1.4	QPSK	3	3	15.41	0.035	15.40	0.035	15.37	0.034
1.4	QPSK	6	0	14.37	0.027	14.28	0.027	14.23	0.026
1.4	16QAM	1	0	14.06	0.025	14.29	0.027	14.01	0.025
1.4	16QAM	1	3	14.22	0.026	14.23	0.026	14.14	0.026
1.4	16QAM	1	5	14.27	0.027	14.17	0.026	13.93	0.025
1.4	16QAM	3	0	14.24	0.027	14.36	0.027	14.28	0.027
1.4	16QAM	3	1	14.58	0.029	14.26	0.027	14.28	0.027
1.4	16QAM	3	3	14.67	0.029	14.44	0.028	14.27	0.027
1.4	16QAM	6	0	13.37	0.022	13.35	0.022	13.24	0.021



LTE Band7				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20850		21100		21350	
Frequency (MHz)				2510		2535		2560	
				dbm	W	dbm	W	dbm	W
20	QPSK	1	0	22.73	0.187	22.83	0.192	22.76	0.189
20	QPSK	1	49	22.48	0.177	22.46	0.176	22.74	0.188
20	QPSK	1	99	22.73	0.187	22.80	0.191	22.52	0.179
20	QPSK	50	0	21.72	0.149	21.82	0.152	21.81	0.152
20	QPSK	50	24	21.74	0.149	21.78	0.151	21.75	0.150
20	QPSK	50	50	21.75	0.150	21.68	0.147	21.72	0.149
20	QPSK	100	0	21.74	0.149	21.76	0.150	21.70	0.148
20	16QAM	1	0	21.68	0.147	21.39	0.138	21.38	0.137
20	16QAM	1	49	21.30	0.135	21.41	0.138	21.75	0.150
20	16QAM	1	99	21.40	0.138	21.74	0.149	21.77	0.150
20	16QAM	50	0	20.47	0.111	20.64	0.116	20.84	0.121
20	16QAM	50	24	20.67	0.117	20.74	0.119	20.62	0.115
20	16QAM	50	50	20.72	0.118	20.58	0.114	20.83	0.121
20	16QAM	100	0	20.76	0.119	20.73	0.118	20.74	0.119



LTE Band7				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20825		21100		21375	
Frequency (MHz)				2507.5		2535		2562.5	
				dbm	W	dbm	W	dbm	W
15	QPSK	1	0	22.49	0.177	22.82	0.191	22.61	0.182
15	QPSK	1	37	22.58	0.181	22.65	0.184	22.82	0.191
15	QPSK	1	74	22.63	0.183	22.75	0.188	22.70	0.186
15	QPSK	36	0	21.79	0.151	21.64	0.146	21.74	0.149
15	QPSK	36	20	21.79	0.151	21.78	0.151	21.70	0.148
15	QPSK	36	39	21.51	0.142	21.72	0.149	21.77	0.150
15	QPSK	75	0	21.78	0.151	21.73	0.149	21.77	0.150
15	16QAM	1	0	21.48	0.141	21.54	0.143	21.75	0.150
15	16QAM	1	37	21.72	0.149	21.74	0.149	21.45	0.140
15	16QAM	1	74	21.41	0.138	21.41	0.138	21.69	0.148
15	16QAM	36	0	20.68	0.117	20.64	0.116	20.52	0.113
15	16QAM	36	20	20.79	0.120	20.61	0.115	20.84	0.121
15	16QAM	36	39	20.47	0.111	20.76	0.119	20.54	0.113
15	16QAM	75	0	20.82	0.121	20.77	0.119	20.82	0.121



LTE Band7				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20800		21100		21400	
Frequency (MHz)				2505		2535		2565	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	22.53	0.179	22.42	0.175	22.71	0.187
10	QPSK	1	25	22.70	0.186	22.61	0.182	22.66	0.185
10	QPSK	1	49	22.66	0.185	22.60	0.182	22.46	0.176
10	QPSK	25	0	21.76	0.150	21.77	0.150	21.85	0.153
10	QPSK	25	12	21.78	0.151	21.83	0.152	21.71	0.148
10	QPSK	25	25	21.85	0.153	21.85	0.153	21.74	0.149
10	QPSK	50	0	21.79	0.151	21.76	0.150	21.81	0.152
10	16QAM	1	0	21.49	0.141	21.73	0.149	21.63	0.146
10	16QAM	1	25	21.67	0.147	21.49	0.141	21.61	0.145
10	16QAM	1	49	21.44	0.139	21.71	0.148	21.56	0.143
10	16QAM	25	0	20.65	0.116	20.65	0.116	20.85	0.122
10	16QAM	25	12	20.76	0.119	20.66	0.116	20.85	0.122
10	16QAM	25	25	20.51	0.112	20.73	0.118	20.83	0.121
10	16QAM	50	0	20.78	0.120	20.79	0.120	20.83	0.121



LTE Band7				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				20775		21100		21425	
Frequency (MHz)				2502.5		2535		2567.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	22.47	0.177	22.57	0.181	22.44	0.175
5	QPSK	1	12	22.75	0.188	22.53	0.179	22.65	0.184
5	QPSK	1	24	22.44	0.175	22.50	0.178	22.51	0.178
5	QPSK	12	0	21.68	0.147	21.74	0.149	21.52	0.142
5	QPSK	12	7	21.69	0.148	21.78	0.151	21.59	0.144
5	QPSK	12	13	21.68	0.147	21.82	0.152	21.63	0.146
5	QPSK	25	0	21.73	0.149	21.74	0.149	21.67	0.147
5	16QAM	1	0	21.52	0.142	21.11	0.129	21.51	0.142
5	16QAM	1	12	21.30	0.135	21.40	0.138	21.53	0.142
5	16QAM	1	24	21.30	0.135	21.20	0.132	21.08	0.128
5	16QAM	12	0	20.53	0.113	20.61	0.115	20.40	0.110
5	16QAM	12	7	20.79	0.120	20.64	0.116	20.45	0.111
5	16QAM	12	13	20.67	0.117	20.81	0.121	20.64	0.116
5	16QAM	25	0	20.81	0.121	20.72	0.118	20.46	0.111



LTE Band38				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37850		38000		38150	
Frequency (MHz)				2580		2595		2610	
				dbm	W	dbm	W	dbm	W
20	QPSK	1	0	23.83	0.242	23.93	0.247	23.77	0.238
20	QPSK	1	49	23.64	0.231	23.76	0.238	23.79	0.239
20	QPSK	1	99	23.61	0.230	23.71	0.235	23.84	0.242
20	QPSK	50	0	22.58	0.181	22.84	0.192	22.90	0.195
20	QPSK	50	24	22.69	0.186	22.73	0.187	22.74	0.188
20	QPSK	50	50	22.71	0.187	22.71	0.187	22.75	0.188
20	QPSK	100	0	22.72	0.187	22.74	0.188	22.76	0.189
20	16QAM	1	0	22.69	0.186	22.60	0.182	22.55	0.180
20	16QAM	1	49	22.71	0.187	22.59	0.182	22.92	0.196
20	16QAM	1	99	22.63	0.183	22.68	0.185	22.78	0.190
20	16QAM	50	0	21.61	0.145	21.67	0.147	21.87	0.154
20	16QAM	50	24	21.59	0.144	21.78	0.151	21.95	0.157
20	16QAM	50	50	21.64	0.146	21.77	0.150	21.76	0.150
20	16QAM	100	0	21.55	0.143	21.70	0.148	21.74	0.149



LTE Band38				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37825		38000		38175	
Frequency (MHz)				2577.5		2595		2612.5	
				dbm	W	dbm	W	dbm	W
15	QPSK	1	0	23.63	0.231	23.82	0.241	23.90	0.245
15	QPSK	1	37	23.62	0.230	23.76	0.238	23.86	0.243
15	QPSK	1	74	23.59	0.229	23.81	0.240	23.63	0.231
15	QPSK	36	0	22.82	0.191	22.68	0.185	22.71	0.187
15	QPSK	36	20	22.61	0.182	22.78	0.190	22.87	0.194
15	QPSK	36	39	22.70	0.186	22.83	0.192	22.84	0.192
15	QPSK	75	0	22.55	0.180	22.85	0.193	22.91	0.195
15	16QAM	1	0	22.57	0.181	22.43	0.175	22.58	0.181
15	16QAM	1	37	22.59	0.182	22.57	0.181	22.62	0.183
15	16QAM	1	74	22.56	0.180	22.58	0.181	22.58	0.181
15	16QAM	36	0	21.69	0.148	21.68	0.147	21.62	0.145
15	16QAM	36	20	21.59	0.144	21.69	0.148	21.71	0.148
15	16QAM	36	39	21.64	0.146	21.76	0.150	21.70	0.148
15	16QAM	75	0	21.79	0.151	21.79	0.151	21.98	0.158



LTE Band38				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37800		38000		38200	
Frequency (MHz)				2575		2595		2615	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	23.62	0.230	23.81	0.240	23.75	0.237
10	QPSK	1	25	23.78	0.239	23.73	0.236	23.57	0.228
10	QPSK	1	49	23.72	0.236	23.76	0.238	23.58	0.228
10	QPSK	25	0	22.63	0.183	22.67	0.185	22.92	0.196
10	QPSK	25	12	22.67	0.185	22.74	0.188	22.90	0.195
10	QPSK	25	25	22.56	0.180	22.66	0.185	22.81	0.191
10	QPSK	50	0	22.80	0.191	22.79	0.190	22.87	0.194
10	16QAM	1	0	22.56	0.180	22.50	0.178	22.66	0.185
10	16QAM	1	25	22.64	0.184	22.61	0.182	22.68	0.185
10	16QAM	1	49	22.67	0.185	22.57	0.181	22.38	0.173
10	16QAM	25	0	21.69	0.148	21.74	0.149	22.01	0.159
10	16QAM	25	12	21.62	0.145	21.82	0.152	21.92	0.156
10	16QAM	25	25	21.72	0.149	21.83	0.152	21.79	0.151
10	16QAM	50	0	21.84	0.153	21.61	0.145	21.85	0.153



LTE Band38				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				37775		38000		38225	
Frequency (MHz)				2572.5		2595		2617.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	23.63	0.231	23.81	0.240	23.51	0.224
5	QPSK	1	12	23.61	0.230	23.81	0.240	23.79	0.239
5	QPSK	1	24	23.79	0.239	23.79	0.239	23.56	0.227
5	QPSK	12	0	22.71	0.187	22.78	0.190	22.89	0.195
5	QPSK	12	7	22.83	0.192	22.83	0.192	22.90	0.195
5	QPSK	12	13	22.64	0.184	22.68	0.185	22.82	0.191
5	QPSK	25	0	22.56	0.180	22.72	0.187	22.75	0.188
5	16QAM	1	0	22.02	0.159	22.26	0.168	22.30	0.170
5	16QAM	1	12	22.01	0.159	22.17	0.165	22.06	0.161
5	16QAM	1	24	21.97	0.157	22.13	0.163	22.16	0.164
5	16QAM	12	0	21.46	0.140	21.84	0.153	21.67	0.147
5	16QAM	12	7	21.58	0.144	21.68	0.147	21.69	0.148
5	16QAM	12	13	21.59	0.144	21.72	0.149	21.68	0.147
5	16QAM	25	0	21.73	0.149	21.55	0.143	21.84	0.153



LTE Band 40 (2305MHz ~ 2315MHz)				Measured EIRP			
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.		High Ch. / Freq.
Channel				/	38750		/
Frequency (MHz)				/	2310		/
				/	dbm	W	/
10	QPSK	1	0	/	22.66	0.185	/
10	QPSK	1	25	/	21.96	0.157	/
10	QPSK	1	49	/	21.90	0.155	/
10	QPSK	25	0	/	21.82	0.152	/
10	QPSK	25	12	/	21.96	0.157	/
10	QPSK	25	25	/	21.52	0.142	/
10	QPSK	50	0	/	21.78	0.151	/
10	16QAM	1	0	/	21.39	0.138	/
10	16QAM	1	25	/	20.72	0.118	/
10	16QAM	1	49	/	20.52	0.113	/
10	16QAM	25	0	/	20.86	0.122	/
10	16QAM	25	12	/	20.66	0.116	/
10	16QAM	25	25	/	19.97	0.099	/
10	16QAM	50	0	/	19.77	0.095	/



LTE Band 40 (2305MHz ~ 2315MHz)				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				38725		38750		38775	
Frequency (MHz)				2307.5		2310		2312.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	22.66	0.185	22.71	0.187	22.58	0.181
5	QPSK	1	12	22.77	0.189	22.83	0.192	22.83	0.192
5	QPSK	1	24	22.58	0.181	22.63	0.183	22.68	0.185
5	QPSK	12	0	21.80	0.151	21.96	0.157	21.87	0.154
5	QPSK	12	7	21.94	0.156	21.91	0.155	21.89	0.155
5	QPSK	12	13	21.83	0.152	21.82	0.152	21.82	0.152
5	QPSK	25	0	21.87	0.154	21.93	0.156	21.80	0.151
5	16QAM	1	0	21.49	0.141	21.45	0.140	21.30	0.135
5	16QAM	1	12	21.55	0.143	21.50	0.141	21.47	0.140
5	16QAM	1	24	21.47	0.140	21.38	0.137	21.34	0.136
5	16QAM	12	0	20.83	0.121	20.69	0.117	20.71	0.118
5	16QAM	12	7	20.67	0.117	20.85	0.122	20.61	0.115
5	16QAM	12	13	20.86	0.122	20.86	0.122	20.64	0.116
5	16QAM	25	0	20.66	0.116	20.57	0.114	20.76	0.119



LTE Band 40 (2350MHz ~ 2360MHz)				Measured EIRP			
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.	Middle Ch. / Freq.		High Ch. / Freq.
Channel				/	39200		/
Frequency (MHz)				/	2355		/
				/	dbm	W	/
10	QPSK	1	0	/	22.63	0.183	/
10	QPSK	1	25	/	22.52	0.179	/
10	QPSK	1	49	/	22.56	0.180	/
10	QPSK	25	0	/	21.74	0.149	/
10	QPSK	25	12	/	21.69	0.148	/
10	QPSK	25	25	/	21.61	0.145	/
10	QPSK	50	0	/	21.74	0.149	/
10	16QAM	1	0	/	21.38	0.137	/
10	16QAM	1	25	/	21.40	0.138	/
10	16QAM	1	49	/	21.11	0.129	/
10	16QAM	25	0	/	20.77	0.119	/
10	16QAM	25	12	/	20.63	0.116	/
10	16QAM	25	25	/	20.70	0.117	/
10	16QAM	50	0	/	20.77	0.119	/



LTE Band 40 (2350MHz ~ 2360MHz)				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				39175		39200		39225	
Frequency (MHz)				2352.5		2355		2357.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	22.42	0.175	22.58	0.181	22.62	0.183
5	QPSK	1	12	22.55	0.180	22.58	0.181	22.61	0.182
5	QPSK	1	24	22.36	0.172	22.48	0.177	22.36	0.172
5	QPSK	12	0	21.64	0.146	21.72	0.149	21.66	0.147
5	QPSK	12	7	21.63	0.146	21.60	0.145	21.60	0.145
5	QPSK	12	13	21.61	0.145	21.62	0.145	21.54	0.143
5	QPSK	25	0	21.62	0.145	21.71	0.148	21.59	0.144
5	16QAM	1	0	21.44	0.139	21.41	0.138	21.16	0.131
5	16QAM	1	12	21.51	0.142	21.47	0.140	21.40	0.138
5	16QAM	1	24	21.47	0.140	21.47	0.140	21.46	0.140
5	16QAM	12	0	20.57	0.114	20.65	0.116	20.71	0.118
5	16QAM	12	7	20.87	0.122	20.57	0.114	20.85	0.122
5	16QAM	12	13	20.74	0.119	20.66	0.116	20.67	0.117
5	16QAM	25	0	20.78	0.120	20.66	0.116	20.78	0.120



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				40340		40740		41140	
Frequency (MHz)				2565		2605		2645	
				dbm	W	dbm	W	dbm	W
20	QPSK	1	0	23.45	0.221	23.52	0.225	23.89	0.245
20	QPSK	1	49	23.24	0.211	23.72	0.236	23.81	0.240
20	QPSK	1	99	23.25	0.211	23.56	0.227	23.71	0.235
20	QPSK	50	0	22.56	0.180	22.77	0.189	22.91	0.195
20	QPSK	50	24	22.45	0.176	22.68	0.185	22.98	0.199
20	QPSK	50	50	22.40	0.174	22.76	0.189	23.00	0.200
20	QPSK	100	0	22.40	0.174	22.68	0.185	22.91	0.195
20	16QAM	1	0	22.28	0.169	22.23	0.167	22.80	0.191
20	16QAM	1	49	22.19	0.166	22.53	0.179	22.76	0.189
20	16QAM	1	99	21.94	0.156	22.29	0.169	22.16	0.164
20	16QAM	50	0	21.61	0.145	21.70	0.148	21.79	0.151
20	16QAM	50	24	21.50	0.141	21.73	0.149	21.76	0.150
20	16QAM	50	50	21.45	0.140	21.72	0.149	22.00	0.158
20	16QAM	100	0	21.44	0.139	21.73	0.149	21.90	0.155



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				40315		40740		41165	
Frequency (MHz)				2562.5		2605		2647.5	
				dbm	W	dbm	W	dbm	W
15	QPSK	1	0	23.36	0.217	23.74	0.237	23.77	0.238
15	QPSK	1	37	23.71	0.235	23.65	0.232	24.13	0.259
15	QPSK	1	74	23.22	0.210	23.65	0.232	23.83	0.242
15	QPSK	36	0	22.54	0.179	22.77	0.189	23.02	0.200
15	QPSK	36	20	22.51	0.178	22.63	0.183	22.89	0.195
15	QPSK	36	39	22.36	0.172	22.70	0.186	22.96	0.198
15	QPSK	75	0	22.52	0.179	22.62	0.183	22.92	0.196
15	16QAM	1	0	22.21	0.166	22.39	0.173	22.40	0.174
15	16QAM	1	37	22.23	0.167	22.38	0.173	22.59	0.182
15	16QAM	1	74	22.06	0.161	22.33	0.171	22.60	0.182
15	16QAM	36	0	21.45	0.140	21.75	0.150	21.95	0.157
15	16QAM	36	20	21.65	0.146	21.64	0.146	21.93	0.156
15	16QAM	36	39	21.38	0.137	21.64	0.146	22.01	0.159
15	16QAM	75	0	21.57	0.144	21.67	0.147	21.89	0.155



LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				40290		40740		41190	
Frequency (MHz)				2550		2605		2650	
				dbm	W	dbm	W	dbm	W
10	QPSK	1	0	23.49	0.223	23.73	0.236	23.85	0.243
10	QPSK	1	25	23.37	0.217	23.72	0.236	23.83	0.242
10	QPSK	1	49	23.28	0.213	23.72	0.236	23.82	0.241
10	QPSK	25	0	22.58	0.181	22.82	0.191	22.96	0.198
10	QPSK	25	12	22.62	0.183	22.82	0.191	22.85	0.193
10	QPSK	25	25	22.59	0.182	22.67	0.185	23.04	0.201
10	QPSK	50	0	22.54	0.179	22.81	0.191	23.00	0.200
10	16QAM	1	0	22.25	0.168	22.39	0.173	22.66	0.185
10	16QAM	1	25	22.20	0.166	22.50	0.178	22.70	0.186
10	16QAM	1	49	22.09	0.162	22.38	0.173	22.65	0.184
10	16QAM	25	0	21.56	0.143	21.78	0.151	21.86	0.153
10	16QAM	25	12	21.49	0.141	21.78	0.151	21.95	0.157
10	16QAM	25	25	21.46	0.140	21.93	0.156	21.93	0.156
10	16QAM	50	0	21.60	0.145	21.76	0.150	22.00	0.158



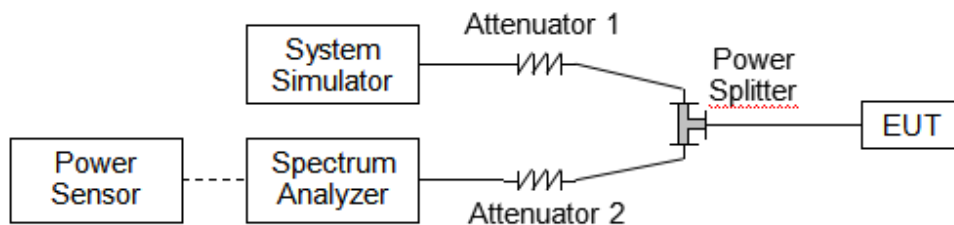
LTE Band 41				Measured EIRP					
BW [MHz]	Modulation	RB Size	RB Offset	Low Ch. / Freq.		Middle Ch. / Freq.		High Ch. / Freq.	
Channel				40265		40740		41215	
Frequency (MHz)				2557.5		2605		2652.5	
				dbm	W	dbm	W	dbm	W
5	QPSK	1	0	23.24	0.211	23.67	0.233	23.82	0.241
5	QPSK	1	12	23.37	0.217	23.90	0.245	23.97	0.249
5	QPSK	1	24	23.24	0.211	23.54	0.226	23.72	0.236
5	QPSK	12	0	22.53	0.179	22.73	0.187	23.03	0.201
5	QPSK	12	7	22.56	0.180	22.74	0.188	22.81	0.191
5	QPSK	12	13	22.48	0.177	22.67	0.185	22.95	0.197
5	QPSK	25	0	22.50	0.178	22.76	0.189	23.00	0.200
5	16QAM	1	0	22.13	0.163	22.36	0.172	22.56	0.180
5	16QAM	1	12	22.19	0.166	22.43	0.175	22.59	0.182
5	16QAM	1	24	22.05	0.160	22.21	0.166	22.49	0.177
5	16QAM	12	0	21.59	0.144	21.89	0.155	22.01	0.159
5	16QAM	12	7	21.73	0.149	21.99	0.158	22.16	0.164
5	16QAM	12	13	21.62	0.145	21.61	0.145	22.03	0.160
5	16QAM	25	0	21.68	0.147	21.94	0.156	22.19	0.166

2.2. Occupied Bandwidth

2.2.1. Requirement

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission. Occupied bandwidth is also known as the 99% emission bandwidth.

2.2.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.2.3. Test procedure

KDB 971168 D01v03 Section 4.1 and ANSI/TIA-603-E-2016.

2.2.4. Test Result



LTE Band5				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
1.4	Low	QPSK	1.10	1.28
	Low	16QAM	1.09	1.28
	Mid	QPSK	1.10	1.29
	Mid	16QAM	1.10	1.31
	High	QPSK	1.10	1.28
	High	16QAM	1.10	1.30
3	Low	QPSK	2.70	2.97
	Low	16QAM	2.70	2.99
	Mid	QPSK	2.69	2.98
	Mid	16QAM	2.70	2.98
	High	QPSK	2.70	2.99
	High	16QAM	2.70	2.98
5	Low	QPSK	4.50	5.01
	Low	16QAM	4.50	5.00
	Mid	QPSK	4.50	4.99
	Mid	16QAM	4.50	4.98
	High	QPSK	4.49	5.05
	High	16QAM	4.50	5.02
10	Low	QPSK	8.99	9.65
	Low	16QAM	8.95	9.86
	Mid	QPSK	8.99	9.85
	Mid	16QAM	8.97	9.80
	High	QPSK	8.96	9.83
	High	16QAM	8.92	9.82



LTE Band 7				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.49	5.04
	Low	16QAM	4.49	4.99
	Mid	QPSK	4.49	5.02
	Mid	16QAM	4.49	4.96
	High	QPSK	4.49	4.86
	High	16QAM	4.50	4.99
10	Low	QPSK	8.98	9.89
	Low	16QAM	8.95	9.80
	Mid	QPSK	9.00	9.82
	Mid	16QAM	8.95	9.80
	High	QPSK	8.96	9.82
	High	16QAM	8.96	9.85
15	Low	QPSK	13.45	14.71
	Low	16QAM	13.44	14.65
	Mid	QPSK	13.34	14.52
	Mid	16QAM	13.43	14.65
	High	QPSK	13.44	14.60
	High	16QAM	13.42	14.70
20	Low	QPSK	17.91	19.51
	Low	16QAM	17.92	19.48
	Mid	QPSK	17.90	19.38
	Mid	16QAM	17.90	19.36
	High	QPSK	17.91	19.39
	High	16QAM	17.90	19.41



LTE Band 38				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.50	5.27
	Low	16QAM	4.51	5.36
	Mid	QPSK	4.51	5.45
	Mid	16QAM	4.50	5.51
	High	QPSK	4.52	5.75
	High	16QAM	4.51	5.25
10	Low	QPSK	8.98	14.30
	Low	16QAM	8.97	12.65
	Mid	QPSK	8.97	10.46
	Mid	16QAM	8.96	13.41
	High	QPSK	8.96	10.66
	High	16QAM	8.95	10.82
15	Low	QPSK	13.46	27.98
	Low	16QAM	13.48	29.83
	Mid	QPSK	13.44	28.37
	Mid	16QAM	13.47	18.99
	High	QPSK	13.50	19.38
	High	16QAM	13.48	25.27
20	Low	QPSK	17.93	19.64
	Low	16QAM	17.91	29.70
	Mid	QPSK	17.90	19.92
	Mid	16QAM	17.92	24.16
	High	QPSK	17.91	19.58
	High	16QAM	17.91	32.40



LTE Band 40 (2305MHz ~ 2315MHz)				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.50	5.32
	Low	16QAM	4.49	5.09
	Mid	QPSK	4.51	5.23
	Mid	16QAM	4.50	5.10
	High	QPSK	4.51	5.01
	High	16QAM	4.51	5.11
10	Mid	QPSK	8.96	10.01
	Mid	16QAM	8.95	10.06

LTE Band 40(2350MHz ~ 2360MHz)				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	5.03
	Low	16QAM	4.50	4.95
	Mid	QPSK	4.51	5.32
	Mid	16QAM	4.50	5.10
	High	QPSK	4.51	5.30
	High	16QAM	4.50	5.05
10	Mid	QPSK	8.96	9.75
	Mid	16QAM	8.96	9.80



LTE Band 41				
BW(MHz)	Channel Level	Modulation	99% BW(MHz)	26dB BW(MHz)
5	Low	QPSK	4.51	5.58
	Low	16QAM	4.50	5.39
	Mid	QPSK	4.51	5.61
	Mid	16QAM	4.52	5.52
	High	QPSK	4.51	5.50
	High	16QAM	4.52	5.50
10	Low	QPSK	8.97	11.45
	Low	16QAM	8.97	10.38
	Mid	QPSK	8.96	10.70
	Mid	16QAM	8.95	10.25
	High	QPSK	8.97	10.60
	High	16QAM	8.95	10.34
15	Low	QPSK	13.49	15.18
	Low	16QAM	13.52	27.68
	Mid	QPSK	13.48	15.21
	Mid	16QAM	13.49	21.99
	High	QPSK	13.46	14.97
	High	16QAM	13.46	15.31
20	Low	QPSK	17.94	20.16
	Low	16QAM	17.93	19.78
	Mid	QPSK	17.94	20.51
	Mid	16QAM	17.94	21.19
	High	QPSK	17.90	19.53
	High	16QAM	17.93	20.30

