REPORT No.: SZ15080082W02

FCC RF TEST REPORT

APPLICANT	:	TCL Communication Ltd.
PRODUCT NAME	:	Car Wifi Hotspot
MODEL NAME	:	Y856UB
TRADE NAME	:	ALCATEL ONETOUCH
BRAND NAME	:	ALCATEL ONETOUCH
FCC ID	:	2ACCJB028
STANDARD(S)	:	47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E 47 CFR Part 27, Subpart C&M 47 CFR Part 90, Subpart S
ISSUE DATE	:	2015-11-11

SHENZHEN MORLAB COMMUNICATIONS TECHNOLOGY Co., Ltd.

MORLAB GROUP
FL1-3, Building A, FeiYang Science Park, No.8 LongChang Road, Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China
Tel: 86-755-36698555 Fax: 86-755-36698525
Http://www.morlab.com E-mail: service@morlab.cn

DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	2015-11-11	First edition

TEST REPORT DECLARATION

Applicant	TCL Communication Ltd.
Applicant Address	5F, C-Tower, No.232, Liangjing Road, Zhangjiang High-tech Park, Pudong, Shanghai, China
Manufacturer	TCL Mobile Communication Co. Ltd. Huizhou
Manufacturer Address	70 Huifeng 4rd., ZhongKai High-Technology Development District, Huizhou, Guangdong, PRC. 516006
Product Name	Car Wifi Hotspot
Model Name	Y856UB
Brand Name	ALCATEL ONETOUCH
HW Version	03
SW Version	Y856_00_03.28_07
Test Standards	47 CFR Part 22, Subpart H 47 CFR Part 24, Subpart E 47 CFR Part 27, Subpart C&M 47 CFR Part 90, Subpart S
Test Date	2015-10-8 to 2015-10-30
Test Result	PASS

Tested by : Zou Jian
Zou Jian(Test Engineer)

Reviewed by : Qiu Xiaojun
Qiu Xiaojun(RF Manager)

Approved by : Zeng Dexin
Zeng Dexin(Chief Engineer)

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type ..... :	Car Wifi Hotspot
Serial No. ..... :	(n.a, marked #1 by test site)
Hardware Version..... :	03
Software Version	Y856_00_03.28_07
Applicant ..... :	TCL Communication Ltd. 5F, C-Tower, No.232, Liangjing Road, Zhangjiang High-tech Park, Pudong, Shanghai, China
Manufacturer ..... :	TCL Mobile Communication Co. Ltd. Huizhou 70 Huifeng 4rd., ZhongKai High-Technology Development District, Huizhou, Guangdong, PRC. 516006
Modulation Type..... :	FDD-LTE Band 25: QPSK, 16QAM FDD-LTE Band 26: QPSK, 16QAM TDD-LTE Band 41: QPSK, 16QAM
Tx Frequency Range..... ..... :	LTE Band 25: 1850.7MHz ~1914.3MHz LTE Band 26: 824.7MHz ~848.3MHz (Part 22) LTE Band 26: 814.7MHz ~823.3MHz (Part 90) LTE Band 41: 2498.5MHz ~ 2687.5MHz
Rx Frequency Range ..... :	LTE Band 25: 1930.7MHz ~ 1994.3MHz LTE Band 26: 869.7MHz ~ 893.3MHz (Part 22) LTE Band 26: 859.7MHz ~ 868.3MHz (Part 90) LTE Band 41: 2498.5MHz ~ 2687.5MHz
Emission Designator ..... :	1M11G7D (LTE Band 25, QPSK, BW 1.4MHz) 1M10W7D (LTE Band 25, 16QAM, BW 1.4MHz) 2M72G7D (LTE Band 25, QPSK, BW 3MHz) 2M71 W7D (LTE Band 25, 16QAM, BW 3MHz) 4M51G7D (LTE Band 25, QPSK, BW 5MHz) 4M52 W7D (LTE Band 25, 16QAM, BW 5MHz) 9M00G7D (LTE Band 25, QPSK, BW 10MHz) 9M00W7D (LTE Band 25, 16QAM, BW 10MHz) 13M48G7D (LTE Band 25, QPSK, BW 15MHz) 13M49W7D (LTE Band 25, 16QAM, BW 15MHz) 17M93G7D (LTE Band 25, QPSK, BW 20MHz) 17M98W7D (LTE Band 25, 16QAM, BW 20MHz) 1M10G7D (LTE Band 26, QPSK, BW 1.4MHz) (Part 22) 1M10W7D (LTE Band 26, 16QAM, BW 1.4MHz) (Part 22)

2M72G7D (LTE Band 26, QPSK, BW 3MHz) (Part 22)
2M72W7D (LTE Band 26, 16QAM, BW 3MHz) (Part 22)
4M51G7D (LTE Band 26, QPSK, BW 5MHz) (Part 22)
4M50W7D (LTE Band 26, 16QAM, BW 5MHz) (Part 22)
9M02G7D (LTE Band 26, QPSK, BW 10MHz) (Part 22)
9M01W7D (LTE Band 26, 16QAM, BW 10MHz) (Part 22)
13M45G7D (LTE Band 26, QPSK, BW 15MHz) (Part 22)
13M46W7D (LTE Band 26, 16QAM, BW 15MHz) (Part 22)
1M11G7D (LTE Band 26, QPSK, BW 1.4MHz) (Part 90)
1M10W7D (LTE Band 26, 16QAM, BW 1.4MHz) (Part 90)
2M72G7D (LTE Band 26, QPSK, BW 3MHz) (Part 90)
2M71W7D (LTE Band 26, 16QAM, BW 3MHz) (Part 90)
4M50G7D (LTE Band 26, QPSK, BW 5MHz) (Part 90)
4M51W7D (LTE Band 26, 16QAM, BW 5MHz) (Part 90)
9M02G7D (LTE Band 26, QPSK, BW 10MHz) (Part 90)
9M01W7D (LTE Band 26, 16QAM, BW 10MHz) (Part 90)
4M51G7D (LTE Band 41, QPSK, BW 5MHz)
4M50W7D (LTE Band 41, 16QAM, BW 5MHz)
8M99G7D (LTE Band 41, QPSK, BW 10MHz)
8M98W7D (LTE Band 41, 16QAM, BW 10MHz)
13M44G7D (LTE Band 41, QPSK, BW 15MHz)
13M46W7D (LTE Band 41, 16QAM, BW 15MHz)
17M94G7D (LTE Band 41, QPSK, BW 20MHz)
17M91W7D (LTE Band 41, 16QAM, BW 20MHz)

Antenna Type ..... : PIFA Antenna
Power Supply ..... 12V DC Power

1.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2 and Part 22, Part 24, Part 90, 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 24	Personal Communications Services
4	47 CFR Part 90	Private Land Mobile Radio Services
5	47 CFR Part 27	Miscellaneous Wireless Communications Services

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

No.	Section	Description	Result
1	2.1046	Transmitter Conducted Output Power	PASS
2	2.1049, 22.917(b), 24.232(d), 27.50(d)(5), 90.209	Occupied Bandwidth	PASS
3	2.1049, 22.917 24.238, 27.53(g), 90.213	Frequency Stability	PASS
4	2.1055, 24.235	Peak to Average Radio	PASS
5	2.1051, 22.917 24.238, 27.53(g), 90.691	Conducted Spurious Emissions	PASS
6	2.1051, 22.917, 24.238, 27.53(g)(h), 27.53(m)(4)	Band Edge	PASS
7	2.1051, 90.691	Emission Masks-In-band Emissions	PASS
8	22.913, 24.232, 27.50(d)(4)	Equivalent Isotropic Radiated Power	PASS
9	2.1053, 2.1057, 22.917, 24.238, 27.53(g), 90.691	Radiated Spurious Emissions	PASS

1.3 Facilities and Accreditations

1.3.1 Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101. The test site is constructed in conformance with the requirements of TIA/EIA 603.D: 2010, ANSI C63.4: 2009 and CISPR Publication 22: 2010. The FCC registration number is 695796.

1.3.2 Test Environment 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 & 24E & 90S & 27M REQUIREMENTS

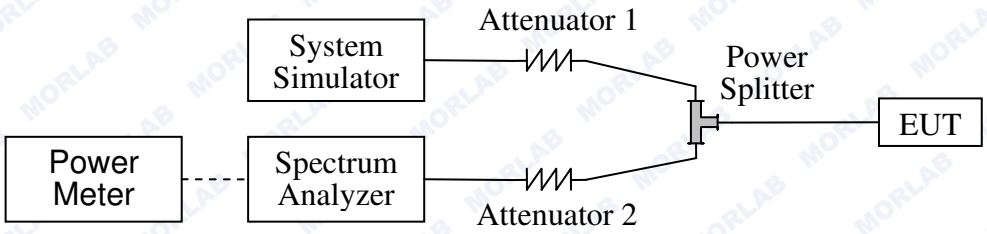
2.1 Transmitter Conducted Output Power

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).

2.1.2 Test Description

Test Setup:



The EUT, which is powered by the Battery, 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 50Ohm; 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.

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Rohde& Schwarz	CMW500	1201.0002k50/124534/wk	2015.02.26	2016.02.25
Spectrum Analyzer	Rohde& Schwarz	FSL	10246	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E4445A	MY44200685	2015.02.26	2016.02.25
Power Meter	Agilent	E4418B	GB43318055	2015.02.26	2016.02.25
Power Meter	Agilent	E4418B	GB43318055	2015.02.26	2016.02.25
Power Sensor	Agilent	8482A	MY41091706	2015.02.26	2016.02.25
Power Splitter	Weinschel	1506A	NW521	2015.02.26	2016.02.25
Attenuator 1	Resnet	20dB	(n.a.)	2015.02.26	2016.02.25
Attenuator 2	Resnet	3dB	(n.a.)	2015.02.26	2016.02.25

2.1.3 Test Results

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	20MHz	L 26140	1860	QPSK	1	0	21.03
					1	49	23.16
					1	99	23.50
					50	0	22.12
					50	25	22.31
					50	49	22.60
					100	0	22.54
				16-QAM	1	0	20.10
					1	49	22.35
					1	99	22.94
					50	0	20.86
					50	25	21.20
					50	49	21.16
					100	0	21.49
		M 26365	1882.5	QPSK	1	0	23.59
					1	49	23.46
					1	99	23.46
					50	0	22.39
					50	25	22.52
					50	49	22.57
					100	0	22.62
				16-QAM	1	0	22.74
					1	49	22.79
					1	99	22.53
					50	0	21.52
					50	25	21.38
					50	49	21.77
					100	0	21.60
		H 26590	1905	QPSK	1	0	23.02
					1	49	23.45
					1	99	21.37
					50	0	22.43
					50	25	22.13
					50	49	22.33
					100	0	22.39
				16-QAM	1	0	22.60
					1	49	22.52
					1	99	20.96
					50	0	20.12
					50	25	20.94
					50	49	21.06
					100	0	21.41

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	15MHz	L 26115	1857.5	QPSK	1	0	21.20
					1	37	23.16
					1	74	23.40
					36	0	21.90
					36	18	22.21
					36	35	22.51
					75	0	22.47
				16-QAM	1	0	20.33
					1	37	22.26
					1	74	22.57
					36	0	21.11
					36	18	21.35
					36	35	21.08
					75	0	21.60
		M 26365	1882.5	QPSK	1	0	23.33
					1	37	23.59
					1	74	23.22
					36	0	22.50
					36	18	22.38
					36	35	22.52
					75	0	22.62
				16-QAM	1	0	22.76
					1	37	22.81
					1	74	22.74
					36	0	21.62
					36	18	21.35
					36	35	21.73
					75	0	21.61
		H 26615	1907.5	QPSK	1	0	23.35
					1	37	23.65
					1	74	21.68
					36	0	22.41
					36	18	22.10
					36	35	22.44
					75	0	22.32
				16-QAM	1	0	22.80
					1	37	22.42
					1	74	20.94
					36	0	21.56
					36	18	21.33
					36	35	21.03
					75	0	22.36

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	10MHz	L 26090	1855	QPSK	1	0	21.49
					1	24	22.08
					1	49	22.56
					25	0	21.84
					25	12	21.66
					25	24	22.36
					50	0	22.10
				16-QAM	1	0	20.64
					1	24	21.52
					1	49	21.86
					25	0	20.93
					25	12	20.51
					25	24	20.76
					50	0	21.20
		M 26365	1882.5	QPSK	1	0	23.64
					1	24	23.39
					1	49	23.44
					25	0	22.57
					25	12	22.62
					25	24	22.59
					50	0	22.58
				16-QAM	1	0	22.90
					1	24	22.45
					1	49	22.78
					25	0	21.62
					25	12	21.71
					25	24	21.55
					50	0	21.51
		H 26640	1910	QPSK	1	0	23.24
					1	24	23.16
					1	49	21.91
					25	0	22.39
					25	12	22.06
					25	24	22.36
					50	0	22.35
				16-QAM	1	0	22.43
					1	24	22.10
					1	49	20.78
					25	0	21.32
					25	12	21.09
					25	24	21.16
					50	0	22.05

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	5MHz	L 26065	1852.5	QPSK	1	0	21.76
					1	12	22.15
					1	24	22.03
					12	0	21.79
					12	6	21.86
					12	11	21.95
					25	0	21.83
				16-QAM	1	0	21.15
					1	12	21.23
					1	24	21.51
					12	0	20.76
					12	6	20.64
					12	11	20.49
					25	0	20.91
		M 26365	1882.5	QPSK	1	0	23.44
					1	12	23.36
					1	24	23.41
					12	0	22.59
					12	6	22.33
					12	11	22.46
					25	0	22.60
				16-QAM	1	0	22.33
					1	12	22.11
					1	24	22.16
					12	0	21.59
					12	6	21.63
					12	11	21.47
					25	0	21.57
		H 26665	1912.5	QPSK	1	0	22.69
					1	12	22.32
					1	24	21.87
					12	0	22.43
					12	6	22.02
					12	11	22.21
					25	0	22.38
				16-QAM	1	0	22.10
					1	12	21.22
					1	24	21.36
					12	0	21.06
					12	6	21.10
					12	11	21.03
					25	0	21.54

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	3MHz	L 26055	1851.5	QPSK	1	0	21.77
					1	7	21.94
					1	14	21.89
					8	0	21.11
					8	4	21.23
					8	7	21.52
					15	0	21.91
				16-QAM	1	0	20.95
					1	7	21.20
					1	14	21.17
					8	0	20.89
					8	4	20.96
					8	7	21.10
					15	0	21.09
		M 26365	1882.5	QPSK	1	0	23.62
					1	7	23.30
					1	14	23.44
					8	0	22.41
					8	4	22.06
					8	7	22.13
					15	0	22.63
				16-QAM	1	0	22.65
					1	7	22.76
					1	14	22.50
					8	0	21.43
					8	4	21.26
					8	7	21.82
					15	0	21.58
		H 26675	1913.5	QPSK	1	0	22.54
					1	7	22.44
					1	14	22.14
					8	0	21.62
					8	4	21.38
					8	7	21.42
					15	0	22.37
				16-QAM	1	0	21.44
					1	7	21.32
					1	14	21.10
					8	0	21.03
					8	4	21.41
					8	7	21.00
					15	0	21.57

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 25	1.4MHz	L 26047	1850.7	QPSK	1	0	21.98
					1	2	22.01
					1	5	21.95
					3	0	21.98
					3	1	21.56
					3	2	21.95
					6	0	21.92
				16-QAM	1	0	21.10
					1	2	21.22
					1	5	21.16
					3	0	21.20
					3	1	21.13
					3	2	21.11
					6	0	21.06
		M 26365	1882.5	QPSK	1	0	23.74
					1	2	23.35
					1	5	23.35
					3	0	23.47
					3	1	23.34
					3	2	23.41
					6	0	22.64
				16-QAM	1	0	22.40
					1	2	22.35
					1	5	22.36
					3	0	21.86
					3	2	21.91
					3	5	21.46
					6	0	21.61
		H 26683	1914.3	QPSK	1	0	22.42
					1	2	22.47
					1	5	22.30
					3	0	22.43
					3	1	22.52
					3	2	22.32
					6	0	22.38
				16-QAM	1	0	21.25
					1	2	21.31
					1	5	21.26
					3	0	21.06
					3	1	21.43
					3	2	21.58
					6	0	21.59

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	15MHz	L 26865	831.5	QPSK	1	0	23.25
					1	37	22.71
					1	74	22.72
					36	0	21.94
					36	18	21.56
					36	35	21.82
					75	0	22.05
				16-QAM	1	0	22.37
					1	37	22.06
					1	74	22.11
					36	0	21.53
					36	18	21.46
					36	35	21.32
					75	0	21.00
		M 26915	836.5	QPSK	1	0	22.75
					1	37	22.68
					1	74	22.67
					36	0	21.91
					36	18	21.53
					36	35	21.81
					75	0	21.97
				16-QAM	1	0	22.43
					1	37	22.12
					1	74	22.04
					36	0	21.26
					36	18	21.33
					36	35	21.14
					75	0	20.86
		H 26965	841.5	QPSK	1	0	23.12
					1	37	23.03
					1	74	22.99
					36	0	22.11
					36	18	22.09
					36	35	22.10
					75	0	22.21
				16-QAM	1	0	21.82
					1	37	21.65
					1	74	21.60
					36	0	21.06
					36	18	21.13
					36	35	21.09
					75	0	21.16

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	10MHz	L 26840	829	QPSK	1	0	23.27
					1	24	23.56
					1	49	23.29
					25	0	22.15
					25	12	22.49
					25	24	22.21
					50	0	22.28
				16-QAM	1	0	22.37
					1	24	22.59
					1	49	22.48
					25	0	21.41
					25	12	21.28
					25	24	21.52
					50	0	21.31
		M 26915	836.5	QPSK	1	0	22.72
					1	24	22.86
					1	49	23.00
					25	0	22.06
					25	12	22.15
					25	24	22.18
					50	0	22.26
				16-QAM	1	0	22.53
					1	24	22.41
					1	49	22.59
					25	0	21.13
					25	12	21.33
					25	24	21.09
					50	0	21.23
		H 26990	844	QPSK	1	0	21.29
					1	24	22.53
					1	49	22.88
					25	0	22.12
					25	12	22.20
					25	24	22.03
					50	0	22.13
				16-QAM	1	0	21.85
					1	24	21.78
					1	49	21.67
					25	0	21.03
					25	12	21.18
					25	24	21.12
					50	0	21.06

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	5MHz	L 26815	826.5	QPSK	1	0	23.19
					1	12	23.42
					1	24	23.32
					12	0	22.52
					12	6	22.66
					12	11	22.18
					25	0	22.29
				16-QAM	1	0	22.53
					1	12	22.43
					1	24	22.27
					12	0	21.56
					12	6	21.77
					12	11	21.33
					25	0	21.11
		M 26915	836.5	QPSK	1	0	23.11
					1	12	23.06
					1	24	23.13
					12	0	22.34
					12	6	22.18
					12	11	22.44
					25	0	22.19
				16-QAM	1	0	22.42
					1	12	22.60
					1	24	22.13
					12	0	21.38
					12	6	21.44
					12	11	21.25
					25	0	21.34
		H 27015	846.5	QPSK	1	0	22.95
					1	12	22.88
					1	24	22.97
					12	0	22.03
					12	6	22.11
					12	11	22.06
					25	0	22.02
				16-QAM	1	0	22.54
					1	12	22.52
					1	24	22.15
					12	0	21.42
					12	6	21.29
					12	11	21.33
					25	0	21.06

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	3MHz	L 26805	825.5	QPSK	1	0	23.35
					1	7	23.44
					1	14	23.37
					8	0	22.16
					8	4	22.52
					8	7	22.28
					15	0	22.32
				16-QAM	1	0	22.63
					1	7	22.53
					1	14	22.18
					8	0	21.25
					8	4	21.08
					8	7	21.33
					15	0	21.12
		M 26915	836.5	QPSK	1	0	23.26
					1	7	23.11
					1	14	23.03
					8	0	22.16
					8	4	22.34
					8	7	22.19
					15	0	22.24
				16-QAM	1	0	22.76
					1	7	22.34
					1	14	22.08
					8	0	21.16
					8	4	21.43
					8	7	21.38
					15	0	21.25
		H 27025	847.5	QPSK	1	0	22.90
					1	7	23.06
					1	14	22.96
					8	0	22.10
					8	4	21.96
					8	7	22.21
					15	0	22.02
				16-QAM	1	0	21.69
					1	7	21.88
					1	14	21.66
					8	0	21.12
					8	4	21.25
					8	7	21.36
					15	0	21.03

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	1.4MHz	L 26797	824.7	QPSK	1	0	23.28
					1	2	23.15
					1	5	23.23
					3	0	23.20
					3	1	23.05
					3	2	22.86
					6	0	22.32
				16-QAM	1	0	22.54
					1	2	22.42
					1	5	22.33
					3	0	21.71
					3	1	21.86
					3	2	21.52
					6	0	21.45
		M 26915	836.5	QPSK	1	0	23.27
					1	2	23.42
					1	5	23.62
					3	0	23.25
					3	1	23.41
					3	2	23.26
					6	0	22.29
				16-QAM	1	0	22.53
					1	2	22.44
					1	5	22.61
					3	0	22.06
					3	2	22.42
					3	5	22.13
					6	0	21.24
		H 27033	848.3	QPSK	1	0	22.89
					1	2	22.91
					1	5	22.99
					3	0	22.95
					3	1	22.88
					3	2	23.01
					6	0	22.10
				16-QAM	1	0	21.62
					1	2	21.70
					1	5	21.54
					3	0	21.52
					3	1	21.69
					3	2	21.24
					6	0	21.10

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	10MHz	N/A	N/A	QPSK	1	0	N/A
					1	24	N/A
					1	49	N/A
					25	0	N/A
					25	12	N/A
					25	24	N/A
					50	0	N/A
				16-QAM	1	0	N/A
					1	24	N/A
					1	49	N/A
					25	0	N/A
					25	12	N/A
					25	24	N/A
					50	0	N/A
		M 26740	819	QPSK	1	0	23.18
					1	24	23.06
					1	49	23.26
					25	0	22.45
					25	12	22.34
					25	24	22.52
					50	0	22.48
				16-QAM	1	0	22.64
					1	24	22.53
					1	49	22.74
					25	0	21.64
					25	12	21.58
					25	24	21.49
					50	0	21.43
		N/A	N/A	QPSK	1	0	N/A
					1	24	N/A
					1	49	N/A
					25	0	N/A
					25	12	N/A
					25	24	N/A
					50	0	N/A
				16-QAM	1	0	N/A
					1	24	N/A
					1	49	N/A
					25	0	N/A
					25	12	N/A
					25	24	N/A
					50	0	N/A

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	5MHz	L 26715	816.5	QPSK	1	0	23.42
					1	12	23.58
					1	24	23.35
					12	0	22.28
					12	6	22.21
					12	11	22.29
					25	0	22.30
				16-QAM	1	0	22.97
					1	12	22.85
					1	24	23.13
					12	0	21.86
					12	6	21.92
					12	11	21.76
					25	0	21.18
		M 26740	819	QPSK	1	0	23.30
					1	12	23.19
					1	24	23.24
					12	0	22.43
					12	6	22.63
					12	11	22.48
					25	0	22.42
				16-QAM	1	0	21.89
					1	12	21.96
					1	24	21.74
					12	0	21.85
					12	6	21.76
					12	11	21.92
					25	0	21.41
		H 26765	821.5	QPSK	1	0	23.52
					1	12	23.26
					1	24	23.43
					12	0	22.40
					12	6	22.26
					12	11	22.67
					25	0	22.42
				16-QAM	1	0	23.05
					1	12	22.81
					1	24	22.93
					12	0	22.58
					12	6	21.48
					12	11	21.63
					25	0	21.33

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	3MHz	L 26705	815.5	QPSK	1	0	23.19
					1	7	23.34
					1	14	23.21
					8	0	22.44
					8	4	22.19
					8	7	22.20
					15	0	22.34
				16-QAM	1	0	22.46
					1	7	22.71
					1	14	22.60
					8	0	21.82
					8	4	21.43
					8	7	21.62
					15	0	21.27
		M 26740	819	QPSK	1	0	23.34
					1	7	23.27
					1	14	23.51
					8	0	22.34
					8	4	22.60
					8	7	22.28
					15	0	22.45
				16-QAM	1	0	22.60
					1	7	22.41
					1	14	22.28
					8	0	21.53
					8	4	21.67
					8	7	21.50
					15	0	21.43
		H 26775	822.5	QPSK	1	0	23.34
					1	7	23.42
					1	14	23.17
					8	0	22.49
					8	4	22.56
					8	7	22.63
					15	0	22.47
				16-QAM	1	0	22.66
					1	7	22.32
					1	14	22.42
					8	0	21.52
					8	4	21.37
					8	7	21.67
					15	0	21.50

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 26	1.4MHz	L 26697	814.7	QPSK	1	0	23.09
					1	2	23.15
					1	5	23.05
					3	0	23.17
					3	1	23.06
					3	2	23.32
					6	0	22.36
				16-QAM	1	0	22.54
					1	2	22.56
					1	5	22.51
					3	0	21.75
					3	1	21.86
					3	2	21.53
					6	0	21.24
		M 26740	819	QPSK	1	0	23.31
					1	2	23.47
					1	5	23.16
					3	0	23.28
					3	1	23.20
					3	2	23.16
					6	0	22.31
				16-QAM	1	0	22.60
					1	2	22.37
					1	5	22.52
					3	0	21.56
					3	2	21.85
					3	5	21.49
					6	0	21.21
		H 26783	823.3	QPSK	1	0	23.12
					1	2	23.24
					1	5	23.19
					3	0	23.21
					3	1	23.11
					3	2	23.06
					6	0	22.31
				16-QAM	1	0	21.95
					1	2	22.13
					1	5	22.08
					3	0	21.46
					3	1	21.58
					3	2	21.67
					6	0	21.38

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 41	20MHz	L 39750	2506	QPSK	1	0	22.05
					1	49	22.82
					1	99	22.84
					50	0	21.69
					50	25	21.53
					50	49	21.80
					100	0	21.72
				16-QAM	1	0	21.66
					1	49	21.92
					1	99	21.48
					50	0	20.75
					50	25	20.69
					50	49	20.51
					100	0	20.63
		M 40620	2593	QPSK	1	0	22.84
					1	49	22.45
					1	99	22.29
					50	0	21.45
					50	25	21.34
					50	49	21.53
					100	0	21.46
				16-QAM	1	0	21.26
					1	49	21.40
					1	99	21.33
					50	0	20.58
					50	25	20.42
					50	49	20.64
					100	0	20.33
		H 41490	2680	QPSK	1	0	22.19
					1	49	21.93
					1	99	22.30
					50	0	20.85
					50	25	20.66
					50	49	20.76
					100	0	20.75
				16-QAM	1	0	20.52
					1	49	20.83
					1	99	20.71
					50	0	19.81
					50	25	20.16
					50	49	19.92
					100	0	19.77

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 41	15MHz	L 39725	2503.5	QPSK	1	0	22.62
					1	37	22.52
					1	74	22.61
					36	0	21.65
					36	18	21.72
					36	35	21.67
					75	0	21.70
				16-QAM	1	0	21.53
					1	37	21.43
					1	74	21.60
					36	0	20.71
					36	18	20.52
					36	35	20.39
					75	0	20.51
		M 40620	2593	QPSK	1	0	22.51
					1	37	22.37
					1	74	22.40
					36	0	21.47
					36	18	21.38
					36	35	21.44
					75	0	21.52
				16-QAM	1	0	21.42
					1	37	21.59
					1	74	21.32
					36	0	20.56
					36	18	20.71
					36	35	20.28
					75	0	20.37
		H 41515	2682.5	QPSK	1	0	22.22
					1	37	21.87
					1	74	22.35
					36	0	20.84
					36	18	20.53
					36	35	20.79
					75	0	20.92
				16-QAM	1	0	20.88
					1	37	20.67
					1	74	20.82
					36	0	19.93
					36	18	19.75
					36	35	19.66
					75	0	19.84

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 41	10MHz	L 39700	2501	QPSK	1	0	22.72
					1	24	22.62
					1	49	22.68
					25	0	21.53
					25	12	21.43
					25	24	21.66
					50	0	21.71
				16-QAM	1	0	21.34
					1	24	21.52
					1	49	21.44
					25	0	20.85
					25	12	20.42
					25	24	20.62
					50	0	20.32
		M 40620	2593	QPSK	1	0	22.41
					1	24	22.36
					1	49	22.29
					25	0	21.53
					25	12	21.38
					25	24	21.16
					50	0	21.46
				16-QAM	1	0	21.62
					1	24	21.43
					1	49	21.71
					25	0	20.37
					25	12	20.59
					25	24	20.25
					50	0	20.36
		H 41540	2685	QPSK	1	0	22.16
					1	24	22.07
					1	49	22.31
					25	0	20.75
					25	12	21.06
					25	24	20.95
					50	0	20.66
				16-QAM	1	0	20.73
					1	24	20.86
					1	49	20.39
					25	0	19.96
					25	12	20.04
					25	24	19.86
					50	0	19.77

Band	Band Width	Channel	Freq.(MHz)	Modulation	RB Configuration		Average Power (dBm)
					RB Size	RB Offset	
LTE Band 41	5MHz	L 39675	2498.5	QPSK	1	0	22.41
					1	12	22.32
					1	24	22.51
					12	0	21.43
					12	6	21.38
					12	11	21.16
					25	0	21.56
				16-QAM	1	0	21.38
					1	12	21.42
					1	24	21.26
					12	0	20.48
					12	6	20.39
					12	11	20.75
					25	0	20.61
		M 40620	2593	QPSK	1	0	22.42
					1	12	22.38
					1	24	22.24
					12	0	21.52
					12	6	21.39
					12	11	21.08
					25	0	21.33
				16-QAM	1	0	21.37
					1	12	21.26
					1	24	21.69
					12	0	20.42
					12	6	20.83
					12	11	20.63
					25	0	20.29
		H 41565	2687.5	QPSK	1	0	22.16
					1	12	21.93
					1	24	22.42
					12	0	20.91
					12	6	20.73
					12	11	20.62
					25	0	20.71
				16-QAM	1	0	20.69
					1	12	20.74
					1	24	20.59
					12	0	19.86
					12	6	19.66
					12	11	19.92
					25	0	19.57

2.2 Occupied Bandwidth

2.2.1 Definition

According to FCC section 2.1049 and 27.53(g), 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

See section 2.1.2 of this report.

2.2.3 Test Results

LTE Band 25

Low channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26047	1850.7	1.1034	1.1017	26055	1851.5	2.7142	2.7070
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26047	1850.7	1.323	1.293	26055	1851.5	2.997	2.996

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26065	1852.5	4.5130	4.5125	26090	1855.0	8.9606	8.9992
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26065	1852.5	5.034	5.010	26090	1855.0	9.963	9.797

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26115	1857.5	13.477	13.486	26140	1860.0	17.879	17.903
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26115	1857.5	14.78	14.74	26140	1860.0	19.37	19.46

Middle channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	1.0990	1.1027	26365	1882.5	2.7165	2.7140
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	1.304	1.307	26365	1882.5	2.998	3.005

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	4.5118	4.5095	26365	1882.5	9.0006	8.9972
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	4.995	5.021	26365	1882.5	9.926	9.850

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	13.471	13.457	26365	1882.5	17.927	17.983
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26365	1882.5	14.74	14.74	26365	1882.5	19.42	19.53

High channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26683	1914.3	1.1082	1.1006	26675	1913.5	2.7145	2.7062
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26683	1914.3	1.302	1.326	26675	1913.5	2.992	3.013

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26665	1912.5	4.5094	4.5191	26640	1910	8.9842	8.9692
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26665	1912.5	4.998	5.018	26640	1910	9.940	9.855

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26615	1907.5	13.411	13.465	26590	1905	17.898	17.877
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26615	1907.5	14.72	14.63	26590	1905	19.59	19.43

Low channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM
	

Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM
	

Spectrum Plot of Worst Value

5MHz/QPSK

5MHz/16QAM

Spectrum Plot of Worst Value

10MHz/QPSK

10MHz/16QAM

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM

Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM

Middle channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM

Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM
	

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	
Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM
	

High channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM

Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM

Spectrum Plot of Worst Value

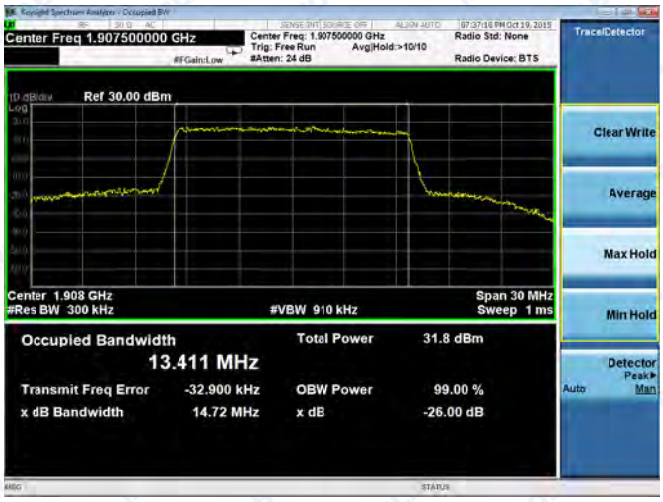
5MHz/QPSK

5MHz/16QAM

Spectrum Plot of Worst Value

10MHz/QPSK

10MHz/16QAM

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM
	

LTE Band 26

Low channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26797	824.7	1.1018	1.0932	26805	825.5	2.7151	2.7026
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26797	824.7	1.311	1.275	26805	825.5	2.993	2.993

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26815	826.5	4.5113	4.4988	26840	829	8.9834	8.9905
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26815	826.5	5.033	4.998	26840	829	9.907	9.910

Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)	
		QPSK	16QAM
26865	831.5	13.420	13.430
Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		QPSK	16QAM
26865	831.5	14.60	14.67

Middle channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26915	836.5	1.0966	1.0999	26915	836.5	2.7104	2.7205
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26915	836.5	1.300	1.310	26915	836.5	3.006	3.014

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26915	836.5	4.5070	4.5037	26915	836.5	9.0202	9.0125
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26915	836.5	4.964	5.403	26915	836.5	9.916	9.847

Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)	
		QPSK	16QAM
26915	836.5	13.449	13.464
Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		QPSK	16QAM
26915	836.5	14.69	14.67

High channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
27033	848.3	1.1031	1.0975	27025	847.5	2.7099	2.7000
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
27033	848.3	1.277	1.293	27025	847.5	2.994	3.007

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
27015	846.5	4.4902	4.4984	26990	844	8.9700	8.9777
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
27015	846.5	4.952	4.974	26990	844	9.917	9.912

Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)	
		QPSK	16QAM
26965	841.5	13.453	13.461
Channel Bandwidth: 15MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		QPSK	16QAM
26965	841.5	14.85	14.74

Low channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM
	
Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM
	

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM
	

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

Middle channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM
	
Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM
	

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM
	

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

High channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM

Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM
	

Spectrum Plot of Worst Value	
15MHz/QPSK	**15MHz/16QAM**
	

LTE Band 26

Low channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26697	814.7	1.1015	1.0977	26705	815.5	2.7158	2.7033
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26697	814.7	1.310	1.287	26705	815.5	2.977	2.980

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)	
		QPSK	16QAM
26715	816.5	4.5025	4.5004
Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		QPSK	16QAM
26715	816.5	4.990	5.000

Middle channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26740	819	1.0968	1.1001	26740	819	2.7118	2.7133
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26740	819	1.291	1.301	26740	819	2.985	2.968

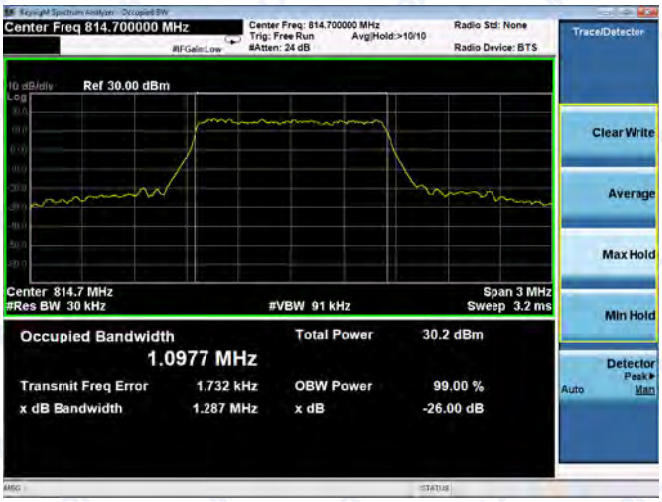
Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26740	819	4.5037	4.5060	26740	819	9.0229	9.0071
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26740	819	4.991	4.987	26740	819	10.01	9.794

High channel:

Channel Bandwidth: 1.4MHz				Channel Bandwidth: 3MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26783	823.3	1.1052	1.0971	26775	822.5	2.7090	2.7027
Channel Bandwidth: 1.4MHz				**Channel Bandwidth: 3MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
26783	823.3	1.281	1.294	26775	822.5	2.997	3.010

Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)	
		QPSK	16QAM
26765	821.5	4.5004	4.5062
Channel Bandwidth: 5MHz			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
		QPSK	16QAM
26765	821.5	4.990	5.001

Low channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	**1.4MHz/16QAM**
	

Spectrum Plot of Worst Value	
3MHz/QPSK	**3MHz/16QAM**
	

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Middle channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM
	
Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM
	

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM
	

High channel:

Spectrum Plot of Worst Value	
1.4MHz/QPSK	1.4MHz/16QAM
	
Spectrum Plot of Worst Value	
3MHz/QPSK	3MHz/16QAM
	

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM
	

LTE Band 41

Low channel:

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
39675	2498.5	4.5057	4.5024	39700	2501	8.9866	8.9304
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
39675	2498.5	4.978	4.994	39700	2501	9.857	9.722

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
39725	2503.5	13.413	13.464	39750	2506	17.883	17.891
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
39725	2503.5	14.69	14.64	39750	2506	19.37	19.33

Middle channel:

Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
40620	2593	4.5113	4.5035	40620	2593	8.9821	8.9832
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
40620	2593	4.963	4.999	40620	2593	9.807	9.799

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
40620	2593	13.438	13.441	40620	2593	17.944	17.909
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
40620	2593	14.57	14.67	40620	2593	19.39	19.40

High channel:

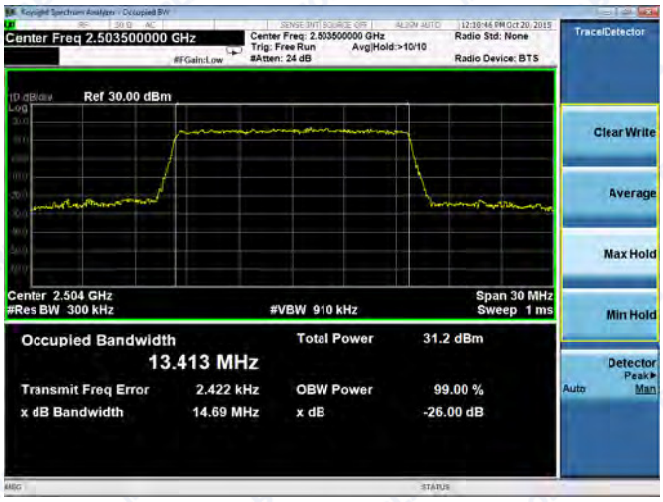
Channel Bandwidth: 5MHz				Channel Bandwidth: 10MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
41565	2687.5	4.5039	4.4930	41540	2685	8.9868	8.9739
Channel Bandwidth: 5MHz				**Channel Bandwidth: 10MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
41565	2687.5	5.000	4.959	41540	2685	9.839	9.839

Channel Bandwidth: 15MHz				Channel Bandwidth: 20MHz			
Channel	Frequency (MHz)	99% Bandwidth (MHz)		Channel	Frequency (MHz)	99% Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
41515	2682.5	13.401	13.454	41490	2680	17.874	17.867
Channel Bandwidth: 15MHz				**Channel Bandwidth: 20MHz**			
Channel	Frequency (MHz)	26dB Bandwidth (MHz)		Channel	Frequency (MHz)	26dB Bandwidth(MHz)	
		QPSK	16QAM			QPSK	16QAM
41515	2682.5	14.61	14.74	41490	2680	19.30	19.37

Low channel:

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

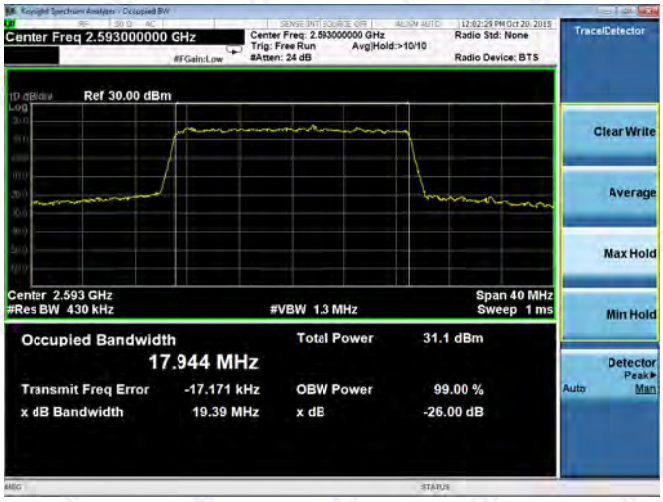
Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM
	

Middle channel:

Spectrum Plot of Worst Value	
5MHz/QPSK	5MHz/16QAM

Spectrum Plot of Worst Value	
10MHz/QPSK	10MHz/16QAM

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM
	

High channel:

Spectrum Plot of Worst Value	
5MHz/QPSK	**5MHz/16QAM**
	
Spectrum Plot of Worst Value	
10MHz/QPSK	**10MHz/16QAM**
	

Spectrum Plot of Worst Value	
15MHz/QPSK	15MHz/16QAM
	

Spectrum Plot of Worst Value	
20MHz/QPSK	20MHz/16QAM
	

2.3 Frequency Stability

2.3.1 Requirement

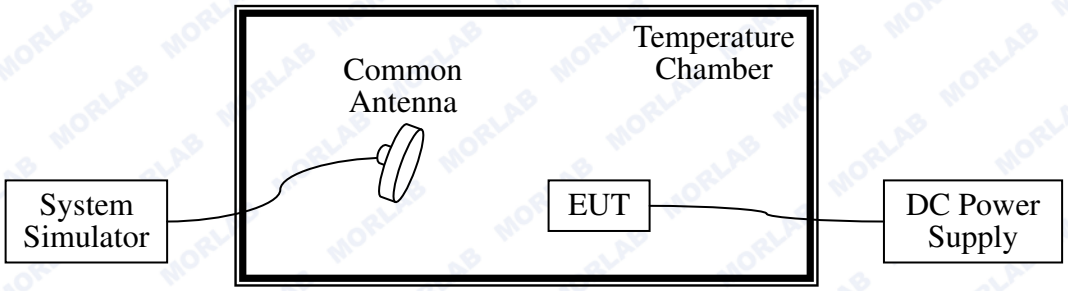
According to FCC section 2.1055 and FCC section 27.54, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

(a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.

(b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.3.2 Test Description

Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Rohde& Schwarz	CMW500	1201.0002k50/124534/wk	2015.02.26	2016.02.25
DC Power Supply	Good Will	GPS-3030DD	EF920938	2015.02.26	2016.02.25
Temperature Chamber	YinHe Experimental Equip.	HL4003T	(n.a.)	2015.02.26	2016.02.25