



FCC CFR47 PART 22 SUBPART H  
FCC CFR47 PART 24 SUBPART E  
FCC CFR47 PART 27 SUBPART H  
FCC CFR47 PART 27 SUBPART L  
FCC CFR47 PART 27 SUBPART M  
FCC CFR47 PART 90 SUBPART S

**CERTIFICATION TEST REPORT**

**FOR**

**CDMA/LTE Phone + Bluetooth and DTS WLAN b/g/n**

**MODEL NUMBER: LG-LS665, LGLS665, LS665**

**FCC ID: ZNFLS665**

**REPORT NUMBER: 15I20413-E1**

**ISSUE DATE: APRIL 27, 2015**

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**NVLAP LAB CODE 200065-0**

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# 1. ATTESTATION OF TEST RESULTS

**COMPANY NAME:** LG ELECTRONICS MOBILECOMM U.S.A., INC  
**EUT DESCRIPTION:** CDMA/LTE PHONE + BLUETOOTH, with DTS WLAN b/g/n  
**MODEL:** LG-LS665, LGLS665, LS665  
**SERIAL NUMBER:** 1T0HK (Radiated), 11T0HJ 8065FB39 (Conducted)  
**DATE TESTED:** MARCH 26-27 - APRIL 17, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22H, 24E, 27H, 27L, 27M, and 90S	PASS

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

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## 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 22, FCC CFR Part 24, FCC CFR 47 Part 27, and FCC CFR 47 Part 90.

## 3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
<input checked="" type="checkbox"/> Chamber A(IC: 2324B-1)	<input type="checkbox"/> Chamber D(IC: 2324B-4)
<input checked="" type="checkbox"/> Chamber B(IC: 2324B-2)	<input type="checkbox"/> Chamber E(IC: 2324B-5)
<input checked="" type="checkbox"/> Chamber C(IC: 2324B-3)	<input type="checkbox"/> Chamber F(IC: 2324B-6)
	<input checked="" type="checkbox"/> Chamber G(IC: 2324B-7)
	<input type="checkbox"/> Chamber H(IC: 2324B-8)

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

## 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards

### 4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

EIRP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss( between the SG and substitution antenna) + Substitution Antenna Factor (dBi)

ERP = PSA reading with EUT worst orientation (dBm) + Path loss (dB) – cable loss( between the SG and substitution antenna)

(Path loss = Signal generator output – PSA reading with substitution antenna)

### 4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB
Radiated Disturbance, 1GHz to 40 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

## 5. EQUIPMENT UNDER TEST

### 5.1. DESCRIPTION OF EUT

The EUT is a CDMA/LTE PHONE + BLUETOOTH and DTS WLAN b/g/n.

### 5.2. MAXIMUM OUTPUT POWER

#### CDMA

The transmitter has a maximum peak conducted and radiated ERP / EIRP output powers as follows:

FCC Part 22/24						
Band	Frequency Range(MHz)	Modulation	Conducted		Radiated	
			AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
BC10	816~824	1xRTT	24.90	309.03	23.30	213.80
	816~824	EVDO REL. 0	24.80	302.00	23.30	213.80
	816~824	EVDO REV. A	24.60	288.40		
BC0	824~849	1xRTT	24.50	281.84	23.50	223.87
	824~849	EVDO REL. 0	24.40	275.42	21.70	147.91
	824~849	EVDO REV. A	24.40	275.42		
BC1	1850~1910	1xRTT	24.10	257.04	26.50	446.68
	1850~1910	EVDO REL. 0	24.00	251.19	26.38	434.51
	1850~1910	EVDO REV. A	24.00	251.19		



### 5.3. MAXIMUM OUTPUT POWER (LTE)

The transmitter has a maximum peak conducted and radiated ERP / EIRP output powers as follows:

#### LTE Band 2

FCC Part 24							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE2	1850~1910	20MHz	QPSK	23.70	234.42	26.30	426.58
			16QAM	22.70	186.21	25.80	380.19
		15MHz	QPSK	23.70	234.42	26.10	407.38
			16QAM	22.70	186.21	25.60	363.08
		10MHz	QPSK	23.70	234.42	26.10	407.38
			16QAM	22.70	186.21	25.50	354.81
		5MHz	QPSK	23.70	234.42	25.80	380.19
			16QAM	22.70	186.21	24.70	295.12
		3MHz	QPSK	23.70	234.42	26.66	463.45
			16QAM	22.70	186.21	26.28	424.62
		1.4MHz	QPSK	23.70	234.42	25.47	352.05
			16QAM	22.70	186.21	25.10	323.59

**LTE Band 4**

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE4	1710~1755	20MHz	QPSK	24.50	281.84	24.23	264.85
			16QAM	23.50	223.87	23.73	236.05
		15MHz	QPSK	24.50	281.84	24.52	283.14
			16QAM	23.50	223.87	24.02	252.35
		10MHz	QPSK	24.50	281.84	24.71	295.80
			16QAM	23.50	223.87	24.21	263.63
		5MHz	QPSK	24.50	281.84	23.96	248.89
			16QAM	23.50	223.87	23.55	226.46
		3MHz	QPSK	24.50	281.84	24.06	254.68
			16QAM	23.50	223.87	23.67	232.81
		1.4MHz	QPSK	24.50	281.84	24.09	256.45
			16QAM	23.50	223.87	23.69	233.88

**LTE Band 5**

FCC Part 22							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE5	824~849	10MHz	QPSK	23.70	234.42	22.80	190.55
			16QAM	23.00	199.53	21.87	153.82
		5MHz	QPSK	23.70	234.42	22.70	186.21
			16QAM	23.00	199.53	21.80	151.36
		3MHz	QPSK	23.50	223.87	22.80	190.55
			16QAM	23.00	199.53	21.94	156.31
		1.4MHz	QPSK	23.50	223.87	22.70	186.21
			16QAM	23.00	199.53	21.70	147.91

**LTE Band 12**

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE12	699~716	10MHz	QPSK	24.40	275.42	20.20	104.71
			16QAM	23.40	218.78	19.78	95.06
		5MHz	QPSK	24.40	275.42	20.30	107.15
			16QAM	23.40	218.78	19.78	95.06
		3MHz	QPSK	24.40	275.42	20.40	109.65
			16QAM	23.40	218.78	19.90	97.72
		1.4MHz	QPSK	24.40	275.42	20.42	110.15
			16QAM	23.40	218.78	19.90	97.72

**LTE Band 25**

FCC Part 24							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE25	1850~1915	20MHz	QPSK	23.70	234.42	26.30	426.58
			16QAM	22.70	186.21	25.80	380.19
		15MHz	QPSK	23.70	234.42	26.10	407.38
			16QAM	22.70	186.21	25.60	363.08
		10MHz	QPSK	23.70	234.42	26.10	407.38
			16QAM	22.70	186.21	25.50	354.81
		5MHz	QPSK	23.70	234.42	25.80	380.19
			16QAM	22.70	186.21	25.30	338.84
		3MHz	QPSK	23.70	234.42	26.66	463.45
			16QAM	22.70	186.21	26.28	424.62
		1.4MHz	QPSK	23.70	234.42	25.47	352.37
			16QAM	22.70	186.21	25.10	323.59

**LTE Band 26**

FCC Part 22							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE26	824~849	15MHz	QPSK	23.70	234.42	22.77	189.23
			16QAM	23.10	204.17	21.90	154.88
		10MHz	QPSK	23.70	234.42	22.80	190.55
			16QAM	23.00	199.53	21.87	153.82
		5MHz	QPSK	23.70	234.42	22.70	186.21
			16QAM	23.00	199.53	21.80	151.36
		3MHz	QPSK	23.50	223.87	22.80	190.55
			16QAM	23.00	199.53	21.94	156.31
		1.4MHz	QPSK	23.50	223.87	22.70	186.21
			16QAM	23.70	234.42	21.70	147.91

**LTE Band 26**

FCC Part 90							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE26	814~824	10MHz	QPSK	23.40	218.78	21.73	148.94
			16QAM	23.00	199.53	20.76	119.12
		5MHz	QPSK	23.70	234.42	21.54	142.56
			16QAM	23.00	199.53	20.50	112.20
		3MHz	QPSK	23.40	218.78	21.67	146.89
			16QAM	23.00	199.53	20.80	120.23
		1.4MHz	QPSK	23.40	218.78	21.48	140.60
			QPSK	23.00	199.53	20.50	112.20

**LTE Band 41**

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE41	2496~2690	20MHz	QPSK	23.70	234.42	24.43	24.43
			16QAM	22.30	169.82	23.83	23.83
		15MHz	QPSK	23.60	229.09	25.13	25.13
			16QAM	22.70	186.21	24.43	24.43
		10MHz	QPSK	23.50	223.87	24.75	24.75
			16QAM	22.70	186.21	24.18	24.18
		5MHz	QPSK	22.90	194.98	25.09	25.09
			16QAM	22.70	186.21	23.91	23.91

#### 5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna for the [List the bands supported] with a maximum peak gain as follow:

Frequency (MHz)	Peak Gain (dBi)
BC10, 816~824MHz	-0.70
BC0, 824~849MHz	-0.70
BC1, 1850~1910MHz	0.50
LTE2, 1850~1910MHz	0.50
LTE B4 1710~1755MHz	1.10
LTE5, 824~849MHz	-0.70
LTE12, 699~716MHz	-3.50
LTE25, 1850~1915MHz	0.50
LTE26, 814~849MHz	-0.70
LTE41, 2496~2690MHz	1.10

## 5.5. DESCRIPTION OF TEST SETUP

### SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	STA-U34WRI	RE510002619	N/A
Headset	LG	N/A	N/A	N/A

### I/O CABLES (CONDUCTED SETUP)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	RF Out	1	Spectrum Analyzer	Shielded	None	NA
2	Antenna Port	1	EUT	Shielded	0.1m	NA
3	RF In/Out	1	Communication Test Set	Shielded	1m	NA

### I/O CABLES (RADIATED SETUP)

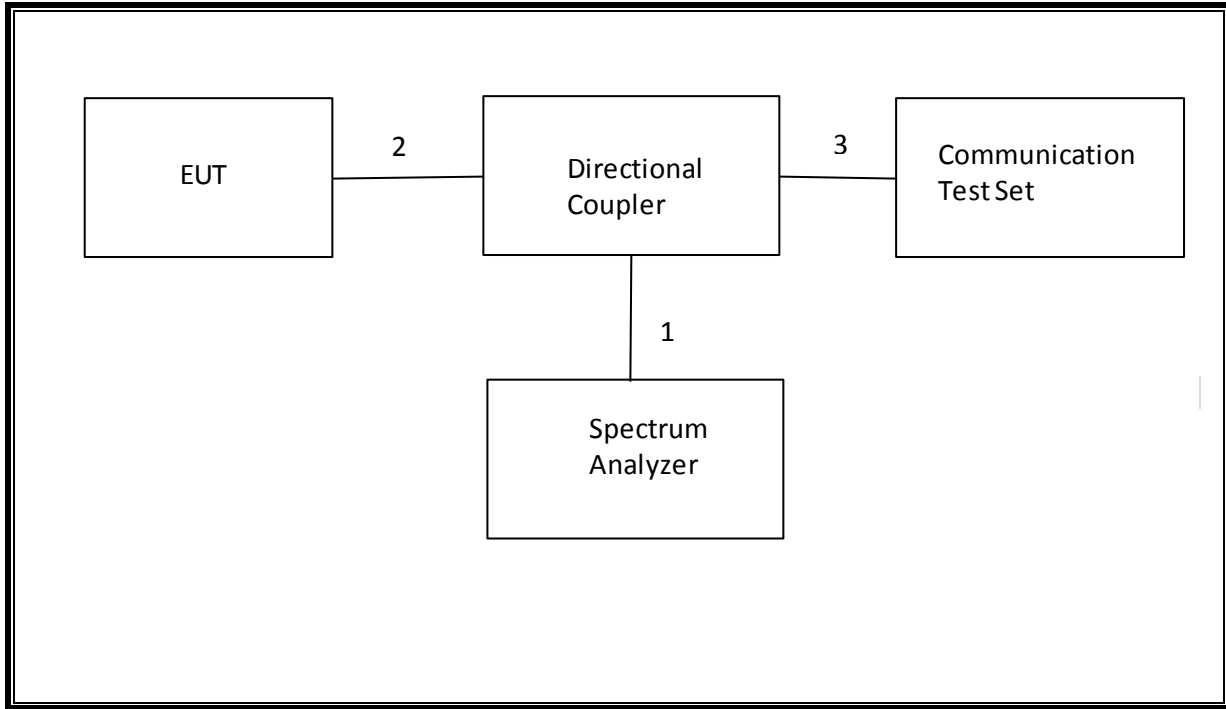
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	USB	1	AC Adapter	Un-shielded	1.2m	No
2	Jack	1	Headset	Shielded	1m	No
3	RF In/out	1	Communication Test Set	Un-shielded	2m	Yes

### TEST SETUP

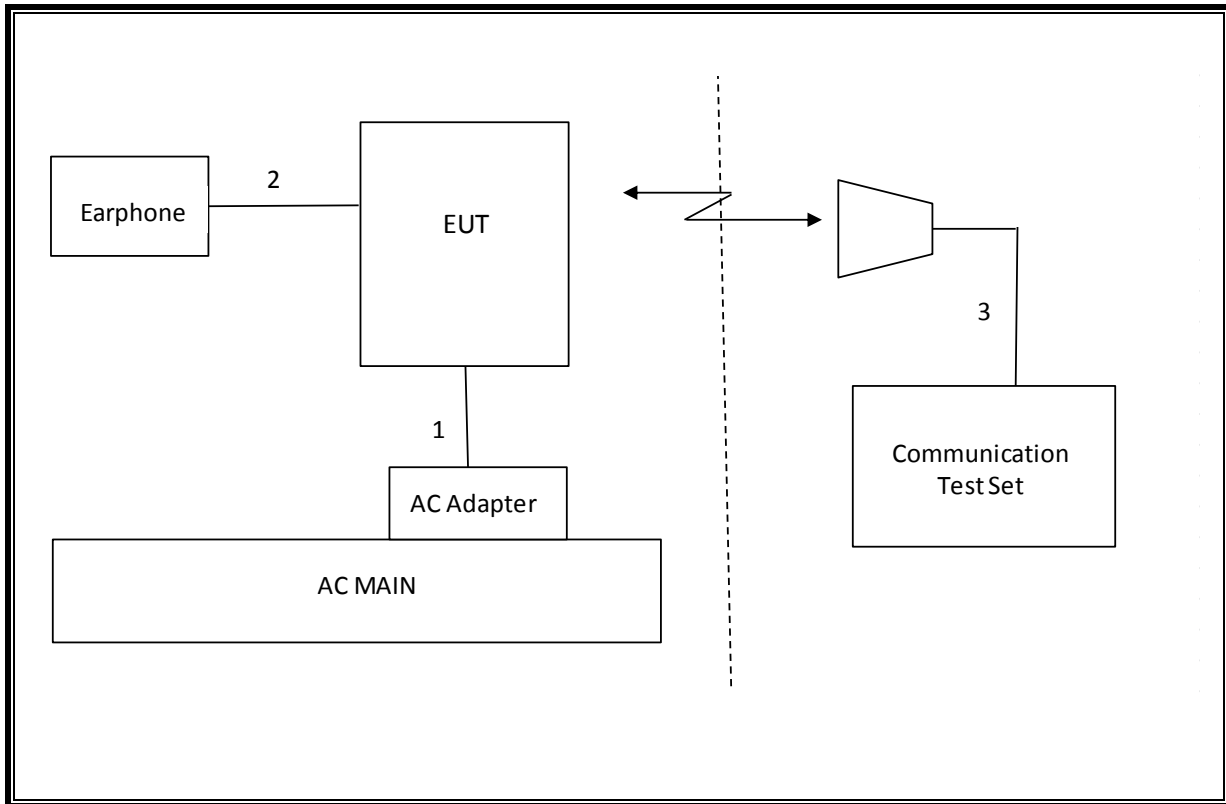
The EUT is continuously communicated to the call box during the tests.



**SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)**



**SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)**



## 5.6. DESCRIPTION OF TEST SETUP

**Mode: LTE**

**PAR** – Full RB is used for testing.

**Occupied bandwidth**- full RB is used for testing and 10.1.2 table column 4 shows the RB allocation.

**Band edge**- 1 RB and full RB are used for testing and test plot are provided in section 10.2.1

**Out of Band Emission**- 1 RB is used for testing

**ERP/EIRP** – 1RB is used for testing and table 11.1.2 column 4 shows the RB allocation

**Spurious Emission**- 1RB is used for testing.

## 6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01179	05/01/15
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	04/22/15
Antenna, Horn, 18 GHz	EMCO	3115	C00783	10/25/15
Antenna, Horn, 18 GHz	EMCO	3115	C00784	10/25/15
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	05/12/15
Communications Test Set	R&S	CMW500	T159	07/02/15
DC power supply, 8 V @ 3 A or 15 V	Agilent / HP	E3610A	None	CNR
Vector signal generator, 6 GHz	Agilent / HP	E4438C	None	06/18/15
Antenna, Tuned Dipole 400-1000	ETS	3121C DB4	C00993	02/11/16
Directional Coupler	RF-Lambda	RFDC5M06G15	None	CNR
Antenna, Horn, 26.5 GHz	ARA	MWH-1826/B	C00589	12/17/15

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 07/22/14
Conducted Software	UL	UL EMC	Version 9.5, 05/17/14
CLT Software	UL	UL RF	Version 1.0, 02/02/15
Antenna Port Software	UL	UL RF	Version 2.1.1.1, 1/20/15

## 7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result	Note
2.1049	N/A	Occupied Band width (99%)	N/A	Conducted	Pass	17.94 MHz
22.917(a) 24.238(a) 27.53(g) 90.691	RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1)	Band Edge / Conducted Spurious Emission	-13dBm		Pass	-14.1 dBm
27.53(m)	RSS-199(4.5)		-25dBm		Pass	-38.7 dBm
2.1046	N/A	Conducted output power	N/A		Pass	24.9 dBm
27.53(m) 90.691	RSS-199(4.5)	Emission Mask			Pass	Band 41 Band 26
22.355 24.235 27.54 90.213	RSS-132(4.3) RSS-133(6.3) RSS-139(6.3) RSS-199(4.3)	Frequency Stability	2.5PPM		Pass	0.032 PPM
22.913(a)(2)	RSS-132(4.4)	Effective Radiated Power	38 dBm		Pass	23.5 dBm
27.50(c)(10)	N/A		34.77 dBm		Pass	20.42 dBm
90.635	N/A		50dBm		Pass	21.73 dBm
24.232(c ) 27.50(h)(2)	RSS-133(6.4) RSS-199(4.4)	Equivalent Isotropic Radiated Power	33dBm		Pass	26.66 dBm
27.50(d)(4)	RSS-139(6.4)		30dBm	Pass	24.71 dBm	
22.917(a) 24.238(a) 27.53(g)	RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1)	Radiated Spurious Emission	-13dBm	Pass	-27.2 dBm	
27.53(m)	RSS-199(4.5)		-25dBm	Pass	-39.4 dBm	

## 8. OUTPUT POWER VERIFICATION

### 8.1. CDMA2000

#### 8.1.1. 1xRTT

##### TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
CDMA2000 Mobile Test	B.13.08, L

- Call Setup > Shift & Preset
- Cell Info > Cell Parameters > System ID (SID) > 7  
> Network ID (NID) > 1
- Protocol Rev > 6 (IS-2000-0)
- Radio Config (RC) > Please see following table or details
- FCH Service Option (SO) Setup > Please see following table or details
- Traffic Data Rate > Full
- TDSO SCH Info > F-SCH Parameters > F-SCH Data Rate > 153.6 kbps  
> R-SCH Parameters > R-SCH Data Rate > 153.6 kbps
- Rvs Power Ctrl > Active bits
  - Rvs Power Ctrl > All Up bits (Maximum TxPout)

**CDMA2000 OUTPUT POWER RESULT**

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC10	RC1, SO55 (Loopback)	476	817.90	24.8
		580	820.50	24.8
		684	823.10	24.8
	RC3, SO55 (Loopback)	476	817.90	24.8
		580	820.50	24.8
		684	823.10	24.8
	RC3, SO32 (+F-SCH)	476	817.90	24.8
		580	820.50	24.9
		684	823.10	24.9

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC0	RC1, SO55 (Loopback)	1013	824.70	24.5
		384	836.52	24.5
		777	848.31	24.3
	RC3, SO55 (Loopback)	1013	824.70	24.5
		384	836.52	24.5
		777	848.31	24.3
	RC3, SO32 (+F-SCH)	1013	824.70	24.5
		384	836.52	24.5
		777	848.31	24.4

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC1	RC1, SO55 (Loopback)	25	1851.25	24.1
		600	1880.00	24.0
		1175	1908.75	24.0
	RC3, SO55 (Loopback)	25	1851.25	24.1
		600	1880.00	24.0
		1175	1908.75	24.1
	RC3, SO32 (+F-SCH)	25	1851.25	24.0
		600	1880.00	23.9
		1175	1908.75	24.1

## 8.1.2. 1xEV-DO Release 0

### TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	A.09.13

#### EVDO Release 0 - RTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > RTAP
  - RTAP Rate > 153.6 kbps
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)

#### EVDO Release 0 - FTAP

- Call Setup > Shift & Preset
- Call Control:
  - Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots
- Call Params:
  - Cell Power > -105.5 dBm/1.23 MHz
  - Cell Band > (Select US Cellular or US PCS)
  - Channel > (Enter channel number)
  - Application Config > Enhanced Test Application Protocol > FTAP (default)
  - FTAP Rate > 307.2 kbps (2 Slot, QPSK)
  - Rvs Power Ctrl > Active bits
  - Protocol Rel > 0 (1xEV-DO)
- Press "Start Data Connection" when "Session Open" appear in "Active Cell"
- Rvs Power Ctrl > All Up bits (Maximum TxPout)



**1XEVD0 REL 0 OUTPUT POWER RESULT**

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC10	307.2 kbps (2 slot, QPSK)	476	817.90	24.7
		580	820.50	24.8
		684	823.10	24.8

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2 kbps (2 slot, QPSK)	1013	824.70	24.4
		384	836.52	24.4
		777	848.31	24.3

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2 kbps (2 slot, QPSK)	25	1851.25	23.9
		600	1880.00	24.0
		1175	1908.75	23.9

### 8.1.3. 1xEV-DO Rev. A

#### TEST PROCEDURE

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

<u>Application</u>	<u>Rev, License</u>
1xEV-DO Terminal Test	A.09.13

#### EVDO Release A – RETAP

- Call Setup > Shift & Preset
  - Cell Power > -60 dBm/1.23 MHz
  - Protocol Rev > A (1xEV-DO-A)
  - Application Config > Enhanced Test Application Protocol > RETAP
  - R-Data Pkt Size > 4096
  - Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
  - Rvs Power Ctrl > All Up bits (to get the maximum power)

#### EVDO Release A - FETAP

- Call Setup > Shift & Preset
  - Cell Power > -60 dBm/1.23 MHz
  - Protocol Rev > A (1xEV-DO-A)
  - Application Config > Enhanced Test Application Protocol > FETAP
  - F-Traffic Format > 4 (1024, 2,128) Canonical (307.2k, QPSK)
  - Protocol Subtype Config > Release A Physical Layer Subtype > Subtype 2
- > PL Subtype 2 Access Channel MAC Subtype > Default (Subtype 0)
- Access Network Info > Cell Parameters > Sector ID > 00000000 > Subnet Mask > 0
  - Generator Info > Termination Parameters > Max Forward Packet Duration > 16 Slots > ACK R-Data After > Subpacket 0 (All ACK)
  - Rvs Power Ctrl > All Up bits (to get the maximum power)

**1xEVDO REV A OUTPUT RESULT**

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
BC10	307.2k, QPSK/ ACK channel is transmitted at all the slots	476	817.90	24.6
		580	820.50	24.7
		684	823.10	24.6

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2k, QPSK/ ACK channel is transmitted at all the slots	1013	824.70	24.2
		384	836.52	24.4
		777	848.31	24.2

Band	FETAP Traffic Format	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2k, QPSK/ ACK channel is transmitted at all the slots	25	1851.25	23.9
		600	1880.00	24.0
		1175	1908.75	23.9

## 8.2. LTE OUTPUT VERIFICATION

### 8.2.1. LTE OUTPUT RESULT

#### LTE Band 2

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18700	18900	19100
						1860 MHz	1880 MHz	1900 MHz
LTE Band 2	20	QPSK	1	0	0	23.7	23.7	23.5
			1	49	0	23.7	23.7	23.3
			1	99	0	23.7	23.4	23.3
			50	0	1	22.7	22.7	22.6
			50	24	1	22.7	22.7	22.5
			50	50	1	22.6	22.5	22.4
		16QAM	100	0	1	22.6	22.6	22.5
			1	0	1	22.7	22.7	22.7
			1	49	1	22.7	22.5	22.7
			1	99	1	22.6	22.4	22.5
			50	0	2	21.7	21.5	21.5
			50	24	2	21.7	21.6	21.5
			50	50	2	21.6	21.6	21.4
			100	0	2	21.7	21.5	21.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18675	18900	19125
						1857.5 MHz	1880 MHz	1902.5 MHz
LTE Band 2	15	QPSK	1	0	0	23.7	23.7	23.6
			1	37	0	23.7	23.6	23.3
			1	74	0	23.7	23.5	23.6
			36	0	1	22.7	22.6	22.5
			36	20	1	22.7	22.6	22.4
			36	39	1	22.7	22.5	22.6
			75	0	1	22.7	22.5	22.4
		16QAM	1	0	1	22.7	22.7	22.7
			1	37	1	22.7	22.7	22.7
			1	74	1	22.7	22.7	22.7
			36	0	2	21.6	21.7	21.6
			36	20	2	21.7	21.5	21.6
			36	39	2	21.6	21.5	21.6
			75	0	2	21.6	21.4	21.5

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18650	18900	19150
						1855 MHz	1880 MHz	1905 MHz
LTE Band 2	10	QPSK	1	0	0	23.7	23.7	23.5
			1	25	0	23.6	23.5	23.4
			1	49	0	23.6	23.5	23.4
			25	0	1	22.6	22.6	22.6
			25	12	1	22.6	22.6	22.6
			25	25	1	22.6	22.6	22.4
		16QAM	50	0	1	22.7	22.6	22.6
			1	0	1	22.7	22.7	22.7
			1	25	1	22.7	22.7	22.7
			1	49	1	22.7	22.7	22.7
			25	0	2	21.6	21.6	21.6
			25	12	2	21.6	21.5	21.6
			25	25	2	21.7	21.4	21.4
			50	0	2	21.6	21.6	21.6
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18625	18900	19175
						1852.5 MHz	1880 MHz	1907.5 MHz
LTE Band 2	5	QPSK	1	0	0	23.4	23.4	23.6
			1	12	0	23.6	23.5	23.7
			1	24	0	23.5	23.3	23.5
			12	0	1	22.5	22.5	22.5
			12	7	1	22.6	22.6	22.4
			12	13	1	22.6	22.5	22.5
		16QAM	25	0	1	22.6	22.5	22.5
			1	0	1	22.7	22.7	22.6
			1	12	1	22.7	22.7	22.5
			1	24	1	22.6	22.6	22.5
			12	0	2	21.6	21.5	21.4
			12	7	2	21.6	21.6	21.3
			12	13	2	21.6	21.4	21.2
			25	0	2	21.6	21.7	21.4

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18615	18900	19185
						1851.5 MHz	1880 MHz	1908.5 MHz
LTE Band 2	3	QPSK	1	0	0	23.5	23.5	23.4
			1	8	0	23.7	23.4	23.4
			1	14	0	23.5	23.5	23.3
			8	0	1	22.6	22.6	22.4
			8	4	1	22.7	22.6	22.3
			8	7	1	22.5	22.6	22.4
			15	0	1	22.6	22.5	22.4
		16QAM	1	0	1	22.7	22.7	22.7
			1	8	1	22.7	22.7	22.7
			1	14	1	22.7	22.7	22.5
			8	0	2	21.7	21.5	21.5
			8	4	2	21.3	21.5	21.5
			8	7	2	21.4	21.4	21.6
			15	0	2	21.6	21.6	21.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						18607	18900	19193
						1850.7 MHz	1880 MHz	1909.3 MHz
LTE Band 2	1.4	QPSK	1	0	0	23.5	23.5	23.4
			1	3	0	23.5	23.7	23.4
			1	5	0	23.5	23.7	23.4
			3	0	0	23.7	23.6	23.5
			3	1	0	23.6	23.6	23.5
			3	3	0	23.6	23.6	23.5
			6	0	1	22.6	22.6	22.7
		16QAM	1	0	1	22.7	22.7	22.7
			1	3	1	22.7	22.7	22.7
			1	5	1	22.7	22.7	22.7
			3	0	1	22.7	22.5	22.7
			3	1	1	22.5	22.6	22.7
			3	3	1	22.5	22.6	22.7
			6	0	2	21.4	21.3	21.7

**LTE Band 4**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20050	20175	20300
						1720 MHz	1732.5 MHz	1745 MHz
LTE Band 4	20	QPSK	1	0	0	24.5	24.5	24.5
			1	49	0	24.4	24.5	24.3
			1	99	0	24.5	24.3	24.3
			50	0	1	23.5	23.5	23.5
			50	24	1	23.4	23.4	23.4
			50	50	1	23.4	23.3	23.4
		16QAM	1	0	1	23.5	23.5	23.5
			1	49	1	23.5	23.3	23.5
			1	99	1	23.4	23.0	23.3
			50	0	2	22.5	22.5	22.5
			50	24	2	22.5	22.3	22.4
			50	50	2	22.4	22.4	22.2
			100	0	2	22.5	22.4	22.4
			100	0	2	22.5	22.4	22.4
LTE Band 4	15	QPSK	1	0	0	24.5	24.5	24.5
			1	37	0	24.4	24.3	24.4
			1	74	0	24.5	24.4	24.5
			36	0	1	23.5	23.5	23.5
			36	20	1	23.4	23.4	23.4
			36	39	1	23.3	23.3	23.4
			75	0	1	23.3	23.5	23.4
		16QAM	1	0	1	23.4	23.5	23.5
			1	37	1	23.2	23.5	23.5
			1	74	1	23.3	23.5	23.5
			36	0	2	22.4	22.5	22.4
			36	20	2	22.4	22.5	22.3
			36	39	2	22.4	22.5	22.3
			75	0	2	22.5	22.5	22.4

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20000	20175	20350
						1715 MHz	1732.5 MHz	1750 MHz
LTE Band 4	10	QPSK	1	0	0	24.5	24.4	24.5
			1	25	0	24.2	24.2	24.3
			1	49	0	24.3	24.5	24.3
			25	0	1	23.4	23.4	23.4
			25	12	1	23.4	23.4	23.4
			25	25	1	23.4	23.4	23.5
		16QAM	50	0	1	23.4	23.4	23.4
			1	0	1	23.5	23.5	23.5
			1	25	1	23.5	23.5	23.5
			1	49	1	23.5	23.5	23.5
			25	0	2	22.4	22.4	22.5
			25	12	2	22.4	22.5	22.4
			25	25	2	22.4	22.4	22.4
			50	0	2	22.4	22.4	22.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19975	20175	20375
						1712.5 MHz	1732.5 MHz	1752.5 MHz
LTE Band 4	5	QPSK	1	0	0	24.4	24.1	24.5
			1	12	0	24.5	24.3	24.5
			1	24	0	24.4	24.2	24.5
			12	0	1	23.3	23.3	23.4
			12	7	1	23.4	23.3	23.4
			12	13	1	23.4	23.3	23.4
		16QAM	25	0	1	23.4	23.3	23.4
			1	0	1	23.5	23.4	23.5
			1	12	1	23.5	23.5	23.5
			1	24	1	23.5	23.4	23.5
			12	0	2	22.4	22.4	22.2
			12	7	2	22.5	22.3	22.5
			12	13	2	22.5	22.4	22.5
			25	0	2	22.4	22.3	22.4



Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19965	20175	20385
						1711.5 MHz	1732.5 MHz	1753.5 MHz
LTE Band 4	3	QPSK	1	0	0	24.3	24.3	24.4
			1	8	0	24.3	24.5	24.5
			1	14	0	24.3	24.3	24.5
			8	0	1	23.4	23.3	23.4
			8	4	1	23.4	23.4	23.4
			8	7	1	23.4	23.3	23.3
		16QAM	15	0	1	23.4	23.3	23.4
			1	0	1	23.5	23.5	23.5
			1	8	1	23.5	23.5	23.5
			1	14	1	23.5	23.5	23.5
			8	0	2	22.5	22.5	22.4
			8	4	2	22.5	22.5	22.3
			8	7	2	22.5	22.4	22.3
			15	0	2	22.4	22.2	22.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						19957	20175	20393
						1710.7 MHz	1732.5 MHz	1754.3 MHz
LTE Band 4	1.4	QPSK	1	0	0	24.4	24.2	24.3
			1	3	0	24.4	24.2	24.4
			1	5	0	24.4	24.3	24.3
			3	0	0	24.3	24.4	24.5
			3	1	0	24.3	24.3	24.5
			3	3	0	24.3	24.4	24.5
		16QAM	6	0	1	23.3	23.3	23.5
			1	0	1	23.5	23.5	23.5
			1	3	1	23.5	23.5	23.5
			1	5	1	23.5	23.5	23.5
			3	0	1	23.5	23.2	23.1
			3	1	1	23.4	23.3	23.0
			3	3	1	23.2	23.3	23.5
			6	0	2	22.3	22.1	22.4

**LTE Band 5**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)			
						20450	20525	20600	
						829 MHz	836.5 MHz	844 MHz	
LTE Band 5	10	QPSK	1	0	0	23.4	23.5	23.7	
			1	25	0	23.3	23.4	23.4	
			1	49	0	23.4	23.4	23.3	
			25	0	1	21.5	21.5	21.5	
			25	12	1	21.5	21.4	21.3	
			25	25	1	21.5	21.4	21.4	
		16QAM	1	0	1	22.6	22.7	22.8	
			1	25	1	23.0	23.0	22.8	
			1	49	1	23.0	23.0	22.8	
			25	0	2	20.4	20.5	20.7	
			25	12	2	20.4	20.4	20.5	
			25	25	2	20.4	20.5	20.4	
			50	0	2	20.4	20.4	20.4	
			50	0	2	20.4	20.4	20.4	
LTE Band 5	5	QPSK	1	0	0	23.4	23.1	23.2	
			1	12	0	23.7	23.5	23.4	
			1	24	0	23.5	23.3	23.1	
LTE Band 5	5	QPSK	12	0	1	21.4	21.4	21.3	
			12	7	1	21.4	21.4	21.3	
			12	13	1	21.4	21.5	21.3	
			25	0	1	21.4	21.4	21.3	
			16QAM	1	0	1	22.8	22.6	22.5
				1	12	1	23.0	22.9	22.7
				1	24	1	22.8	22.6	22.5
		12		0	2	20.4	20.5	20.5	
		12		7	2	20.5	20.5	20.5	
		12		13	2	20.4	20.5	20.5	
		25		0	2	20.5	20.5	20.5	

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20415	20525	20635
						825.5 MHz	836.5 MHz	847.5 MHz
LTE Band 5	3	QPSK	1	0	0	23.2	23.4	23.3
			1	8	0	23.4	23.5	23.5
			1	14	0	23.3	23.4	23.3
			8	0	1	21.3	21.4	21.3
			8	4	1	21.3	21.4	21.4
			8	7	1	21.4	21.4	21.3
			15	0	1	21.3	21.4	21.4
		16QAM	1	0	1	22.7	23.0	22.4
			1	8	1	23.0	23.0	22.7
			1	14	1	23.0	23.1	22.9
			8	0	2	20.4	20.6	20.4
			8	4	2	20.5	20.6	20.3
			8	7	2	20.3	20.7	20.3
			15	0	2	20.4	20.7	20.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20407	20525	20643
						824.7 MHz	836.5 MHz	848.3 MHz
LTE Band 5	1.4	QPSK	1	0	0	23.4	23.4	23.3
			1	3	0	23.3	23.5	23.2
			1	5	0	23.4	23.5	23.2
			3	0	0	23.4	23.5	23.3
			3	1	0	23.4	23.6	23.4
			3	3	0	23.3	23.5	23.4
			6	0	1	21.4	21.5	21.4
		16QAM	1	0	1	23.0	22.9	22.5
			1	3	1	23.0	22.9	22.6
			1	5	1	23.0	22.9	22.6
			3	0	1	22.4	22.3	22.5
			3	1	1	22.1	22.4	22.6
			3	3	1	22.1	22.5	22.3
			6	0	2	20.2	20.2	20.5

**LTE Band 12**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						23060	23095	23130
						704 MHz	707.5 MHz	711 MHz
LTE Band 12	10	QPSK	1	0	0	24.4	24.4	24.4
			1	25	0	24.2	24.3	24.3
			1	49	0	24.3	24.2	24.4
			25	0	1	23.3	23.4	23.4
			25	12	1	23.3	23.3	23.4
			25	25	1	23.4	23.2	23.4
		16QAM	1	0	1	23.4	23.4	23.4
			1	25	1	23.4	23.4	23.4
			1	49	1	23.4	23.4	23.4
			25	0	2	22.4	22.4	22.4
			25	12	2	22.3	22.4	22.3
			25	25	2	22.4	22.4	22.3
			50	0	2	22.4	22.3	22.4
			50	0	2	22.4	22.3	22.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						23035	23095	23155
						701.5 MHz	707.5 MHz	713.5 MHz
LTE Band 12	5	QPSK	1	0	0	24.1	24.3	24.4
			1	12	0	24.3	24.4	24.4
			1	24	0	24.1	24.0	24.4
			12	0	1	23.2	23.3	23.3
			12	7	1	23.3	23.3	23.3
			12	13	1	23.2	23.2	23.3
			25	0	1	23.3	23.2	23.3
		16QAM	1	0	1	23.4	23.4	23.4
			1	12	1	23.4	23.4	23.4
			1	24	1	23.4	23.3	23.4
			12	0	2	22.4	22.4	22.4
			12	7	2	22.4	22.4	22.4
			12	13	2	22.3	22.2	22.4
			25	0	2	22.3	22.3	22.3

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						23025	23095	23165
						700.5 MHz	707.5 MHz	714.5 MHz
LTE Band 12	3	QPSK	1	0	0	24.3	24.4	24.2
			1	8	0	24.4	24.4	24.2
			1	14	0	24.3	24.4	24.2
			8	0	1	23.2	23.4	23.3
			8	4	1	23.3	23.3	23.3
			8	7	1	23.3	23.3	23.4
		16QAM	15	0	1	23.4	23.3	23.3
			1	0	1	23.2	23.4	23.4
			1	8	1	23.4	23.4	23.4
			1	14	1	23.4	23.4	23.4
			8	0	2	22.3	21.9	22.4
			8	4	2	22.2	21.8	22.4
			8	7	2	22.4	21.8	22.4
			15	0	2	22.4	22.4	22.2
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						23017	23095	23173
						699.7 MHz	707.5 MHz	715.3 MHz
LTE Band 12	1.4	QPSK	1	0	0	24.3	24.4	24.3
			1	3	0	24.4	24.4	24.4
			1	5	0	24.4	24.4	24.4
			3	0	0	24.3	24.3	24.4
			3	1	0	24.4	24.3	24.4
			3	3	0	24.4	24.3	24.4
		16QAM	6	0	1	23.3	23.3	23.4
			1	0	1	23.4	23.4	23.4
			1	3	1	23.4	23.4	23.4
			1	5	1	23.4	23.4	23.4
			3	0	1	23.4	23.3	23.4
			3	1	1	23.2	23.2	23.4
			3	3	1	23.1	23.3	23.4
			6	0	2	22.2	22.0	22.4

**LTE Band 25**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26140	26365	26590
						1860 MHz	1882.5 MHz	1905 MHz
LTE Band 25	20	QPSK	1	0	0	23.7	23.7	23.5
			1	49	0	23.7	23.7	23.3
			1	99	0	23.7	23.4	23.3
			50	0	1	22.7	22.7	22.6
			50	24	1	22.7	22.7	22.5
			50	50	1	22.6	22.5	22.4
		16QAM	1	0	1	22.7	22.7	22.7
			1	49	1	22.7	22.5	22.7
			1	99	1	22.6	22.4	22.5
			50	0	2	21.7	21.5	21.5
			50	24	2	21.7	21.6	21.5
			50	50	2	21.6	21.6	21.4
			100	0	2	21.7	21.5	21.5
			100	0	2	21.7	21.5	21.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26115	26365	26615
						1857.5 MHz	1882.5 MHz	1907.5 MHz
LTE Band 25	15	QPSK	1	0	0	23.7	23.7	23.6
			1	37	0	23.7	23.6	23.3
			1	74	0	23.7	23.5	23.6
			36	0	1	22.7	22.6	22.5
			36	20	1	22.7	22.6	22.4
			36	39	1	22.7	22.5	22.6
			75	0	1	22.7	22.5	22.4
		16QAM	1	0	1	22.7	22.7	22.7
			1	37	1	22.7	22.7	22.7
			1	74	1	22.7	22.7	22.7
			36	0	2	21.6	21.7	21.6
			36	20	2	21.7	21.5	21.6
			36	39	2	21.6	21.5	21.6
			75	0	2	21.6	21.4	21.5

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26090	26365	26640
						1855 MHz	1882.5 MHz	1910 MHz
LTE Band 25	10	QPSK	1	0	0	23.7	23.7	23.5
			1	25	0	23.6	23.5	23.4
			1	49	0	23.6	23.5	23.4
			25	0	1	22.6	22.6	22.6
			25	12	1	22.6	22.6	22.6
			25	25	1	22.6	22.6	22.4
		16QAM	50	0	1	22.7	22.6	22.6
			1	0	1	22.7	22.7	22.7
			1	25	1	22.7	22.7	22.7
			1	49	1	22.7	22.7	22.7
			25	0	2	21.6	21.6	21.6
			25	12	2	21.6	21.5	21.6
			25	25	2	21.7	21.4	21.4
			50	0	2	21.6	21.6	21.6
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26065	26365	26665
						1852.5 MHz	1882.5 MHz	1912.5 MHz
LTE Band 25	5	QPSK	1	0	0	23.4	23.4	23.6
			1	12	0	23.6	23.5	23.7
			1	24	0	23.5	23.3	23.5
			12	0	1	22.5	22.5	22.5
			12	7	1	22.6	22.6	22.4
			12	13	1	22.6	22.5	22.5
		16QAM	25	0	1	22.6	22.5	22.5
			1	0	1	22.7	22.7	22.6
			1	12	1	22.7	22.7	22.5
			1	24	1	22.6	22.6	22.5
			12	0	2	21.6	21.5	21.4
			12	7	2	21.6	21.6	21.3
			12	13	2	21.6	21.4	21.2
			25	0	2	21.6	21.7	21.4

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26055	26365	26675
						1851.5 MHz	1882.5 MHz	1913.5 MHz
LTE Band 25	3	QPSK	1	0	0	23.5	23.5	23.4
			1	8	0	23.7	23.4	23.4
			1	14	0	23.5	23.5	23.3
			8	0	1	22.6	22.6	22.4
			8	4	1	22.7	22.6	22.3
			8	7	1	22.5	22.6	22.4
		16QAM	15	0	1	22.6	22.5	22.4
			1	0	1	22.7	22.7	22.7
			1	8	1	22.7	22.7	22.7
			1	14	1	22.7	22.7	22.5
			8	0	2	21.7	21.5	21.5
			8	4	2	21.3	21.5	21.5
			8	7	2	21.4	21.4	21.6
			15	0	2	21.6	21.6	21.4
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26047	26365	26683
						1850.7 MHz	1882.5 MHz	1914.3 MHz
LTE Band 25	1.4	QPSK	1	0	0	23.5	23.5	23.4
			1	3	0	23.5	23.7	23.4
			1	5	0	23.5	23.7	23.4
			3	0	0	23.7	23.6	23.5
			3	1	0	23.6	23.6	23.5
			3	3	0	23.6	23.6	23.5
		16QAM	6	0	1	22.6	22.6	22.7
			1	0	1	22.7	22.7	22.7
			1	3	1	22.7	22.7	22.7
			1	5	1	22.7	22.7	22.7
			3	0	1	22.7	22.5	22.7
			3	1	1	22.5	22.6	22.7
			3	3	1	22.5	22.6	22.7
			6	0	2	21.4	21.3	21.7



**LTE Band 26**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26765	26865	26965
						821.5 MHz	831.5 MHz	841.5 MHz
LTE Band 26	15	QPSK	1	0	0	23.6	23.6	23.5
			1	37	0	23.6	23.5	23.5
			1	74	0	23.7	23.7	23.2
			36	0	1	21.5	21.5	21.6
			36	20	1	21.4	21.4	21.5
			36	39	1	21.4	21.5	21.4
		16QAM	75	0	1	21.5	21.5	21.6
			1	0	1	22.7	23.0	23.0
			1	37	1	22.4	23.1	23.0
			1	74	1	22.4	23.1	23.0
			36	0	2	20.6	20.7	20.7
			36	20	2	20.4	20.6	20.5
			36	39	2	20.5	20.6	20.5
			75	0	2	20.5	20.6	20.7
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26740	26865	26990
						819 MHz	831.5 MHz	844 MHz
LTE Band 26	10	QPSK	1	0	0	23.4	23.5	23.7
			1	25	0	23.3	23.4	23.4
			1	49	0	23.4	23.4	23.3
			25	0	1	21.5	21.5	21.5
			25	12	1	21.5	21.4	21.3
			25	25	1	21.5	21.4	21.4
			50	0	1	21.5	21.4	21.4
		16QAM	1	0	1	22.6	22.7	22.8
			1	25	1	23.0	23.0	22.8
			1	49	1	23.0	23.0	22.8
			25	0	2	20.4	20.5	20.7
			25	12	2	20.4	20.4	20.5
			25	25	2	20.4	20.5	20.4
			50	0	2	20.4	20.4	20.4

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26715	26865	27015
						816.5 MHz	831.5 MHz	846.5 MHz
LTE Band 26	5	QPSK	1	0	0	23.4	23.1	23.2
			1	12	0	23.7	23.5	23.4
			1	24	0	23.5	23.3	23.1
			12	0	1	21.4	21.4	21.3
			12	7	1	21.4	21.4	21.3
			12	13	1	21.4	21.5	21.3
		16QAM	25	0	1	21.4	21.4	21.3
			1	0	1	22.8	22.6	22.5
			1	12	1	23.0	22.9	22.7
			1	24	1	22.8	22.6	22.5
			12	0	2	20.4	20.5	20.5
			12	7	2	20.5	20.5	20.5
			12	13	2	20.4	20.5	20.5
			25	0	2	20.5	20.5	20.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26705	26865	27025
						815.5 MHz	831.5 MHz	847.5 MHz
LTE Band 26	3	QPSK	1	0	0	23.2	23.4	23.3
			1	8	0	23.4	23.5	23.5
			1	14	0	23.3	23.4	23.3
			8	0	1	21.3	21.4	21.3
			8	4	1	21.3	21.4	21.4
			8	7	1	21.4	21.4	21.3
		16QAM	15	0	1	21.3	21.4	21.4
			1	0	1	22.7	23.0	22.4
			1	8	1	23.0	23.0	22.7
			1	14	1	23.0	23.1	22.9
			8	0	2	20.4	20.6	20.4
			8	4	2	20.5	20.6	20.3
			8	7	2	20.3	20.7	20.3
			15	0	2	20.4	20.7	20.5

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						26697	26865	27033
						814.7 MHz	831.5 MHz	848.3 MHz
LTE Band 26	1.4	QPSK	1	0	0	23.4	23.4	23.3
			1	3	0	23.3	23.5	23.2
			1	5	0	23.4	23.5	23.2
			3	0	0	23.4	23.5	23.3
			3	1	0	23.4	23.6	23.4
			3	3	0	23.3	23.5	23.4
		6	0	1	21.4	21.5	21.4	
		16QAM	1	0	1	23.0	22.9	22.5
			1	3	1	23.0	22.9	22.6
			1	5	1	23.0	22.9	22.6
			3	0	1	22.4	22.3	22.5
			3	1	1	22.1	22.4	22.6
			3	3	1	22.1	22.5	22.3
			6	0	2	20.2	20.2	20.5

**LTE Band 41**

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						39750	40620	41490
						2506 MHz	2593 MHz	2680 MHz
LTE Band 41	20	QPSK	1	0	0	23.7	23.7	23.4
			1	49	0	23.4	23.2	23.1
			1	99	0	23.4	22.9	22.9
			50	0	1	22.5	22.4	22.5
			50	24	1	22.5	22.3	22.3
			50	50	1	22.4	22.1	22.2
		16QAM	1	0	1	22.3	22.3	22.2
			1	49	1	22.0	21.8	21.9
			1	99	1	21.9	21.7	21.7
			50	0	2	21.4	21.4	21.5
			50	24	2	21.4	21.2	21.3
			50	50	2	21.3	21.1	21.3
			100	0	2	21.4	21.3	21.2
			100	0	2	21.4	21.3	21.2
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						39725	40620	41515
						2503.5 MHz	2593 MHz	2682.5 MHz
LTE Band 41	15	QPSK	1	0	0	23.6	23.3	23.6
			1	37	0	23.4	23.1	23.1
			1	74	0	23.5	23.1	23.1
			36	0	1	22.4	22.3	22.2
			36	20	1	22.4	22.1	22.2
			36	39	1	22.3	22.1	22.1
			75	0	1	22.4	22.1	22.0
		16QAM	1	0	1	22.7	22.6	22.6
			1	37	1	22.7	22.3	22.6
			1	74	1	22.5	22.3	22.4
			36	0	2	21.3	21.2	21.2
			36	20	2	21.3	21.0	21.1
			36	39	2	21.3	21.0	21.1
			75	0	2	21.4	21.1	21.1

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						39700	40620	41540
						2501 MHz	2593 MHz	2685 MHz
LTE Band 41	10	QPSK	1	0	0	23.5	23.1	23.1
			1	25	0	23.3	22.8	22.8
			1	49	0	23.3	23.0	22.9
			25	0	1	22.3	22.2	22.2
			25	12	1	22.3	22.1	22.1
			25	25	1	22.2	22.1	22.0
		16QAM	50	0	1	22.3	22.0	22.1
			1	0	1	22.7	22.7	22.0
			1	25	1	22.7	22.7	21.7
			1	49	1	22.7	22.7	21.7
			25	0	2	21.5	21.1	21.1
			25	12	2	21.4	21.0	21.1
			25	25	2	21.2	20.9	21.0
			50	0	2	21.4	21.0	21.2
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						39675	40620	41565
						2498.5 MHz	2593 MHz	2687.5 MHz
LTE Band 41	5	QPSK	1	0	0	23.2	22.9	23.1
			1	12	0	23.3	23.3	23.0
			1	24	0	23.1	22.9	22.9
			12	0	1	22.3	22.1	22.2
			12	7	1	22.4	22.0	22.1
			12	13	1	22.3	22.1	22.1
		16QAM	25	0	1	22.2	22.0	22.2
			1	0	1	22.7	21.9	21.7
			1	12	1	22.7	22.0	21.7
			1	24	1	22.7	21.8	21.6
			12	0	2	21.5	20.9	21.3
			12	7	2	21.6	20.9	21.1
			12	13	2	21.5	21.0	21.2
			25	0	2	21.4	21.0	21.2

## 9. PEAK TO AVERAGE RATIO

### TEST PROCEDURE


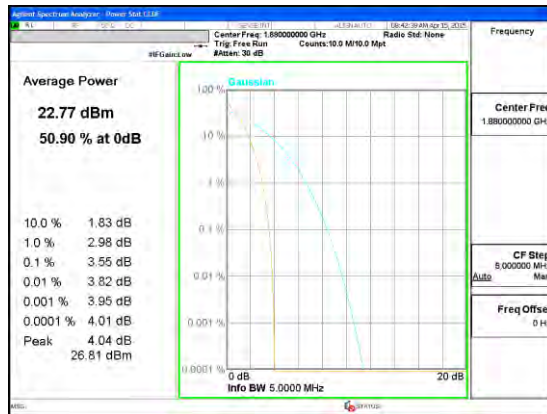
Per KDB 971168 D01 Power Meas License Digital Systems v02r02

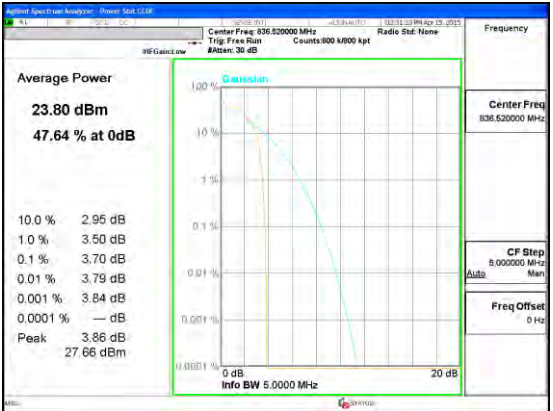
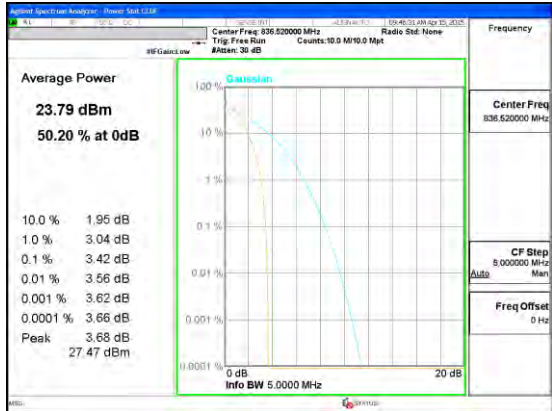
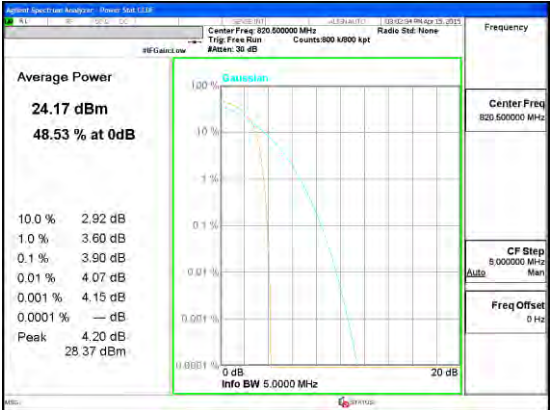
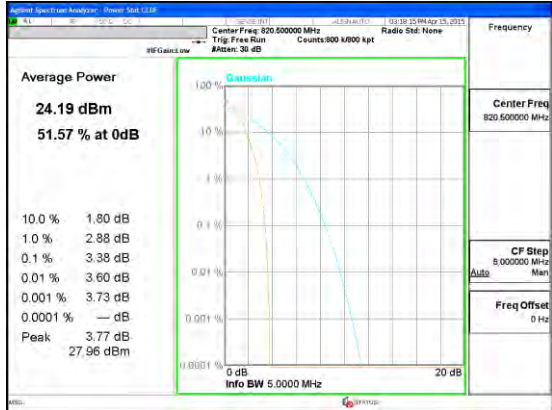
### TEST SPEC

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13 dB.

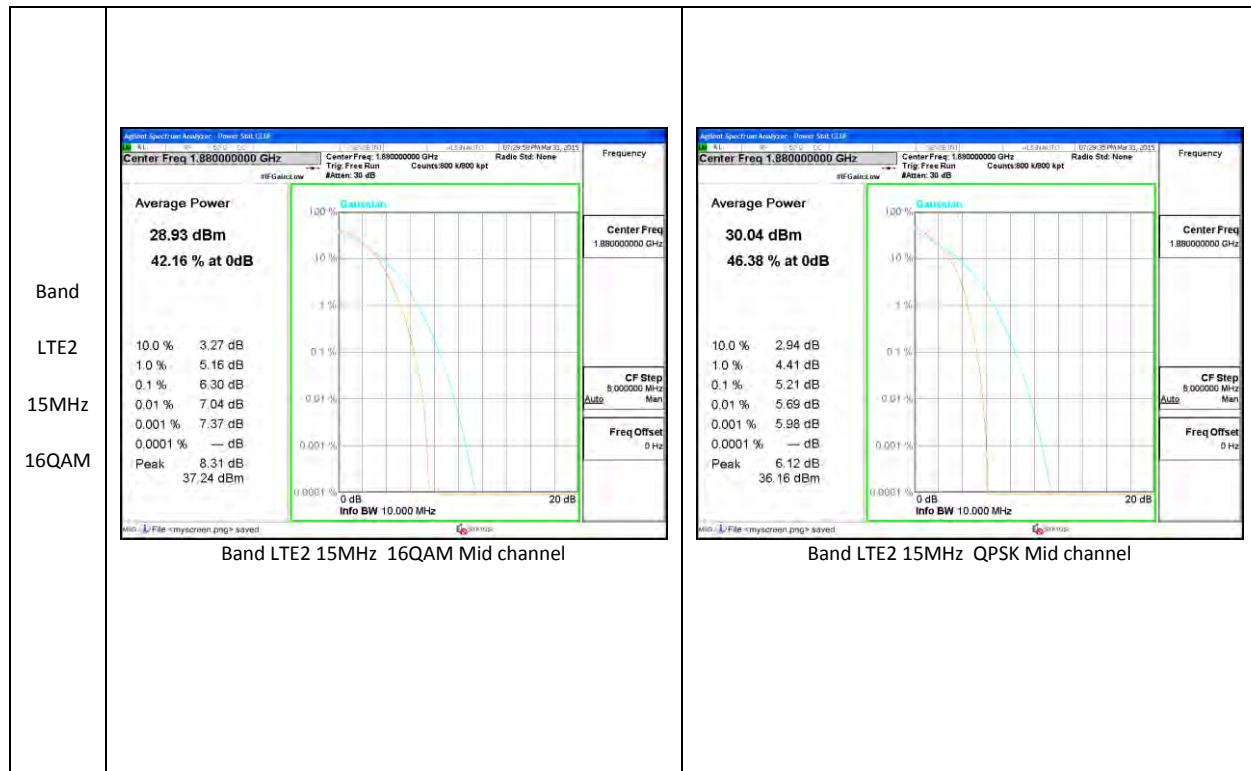
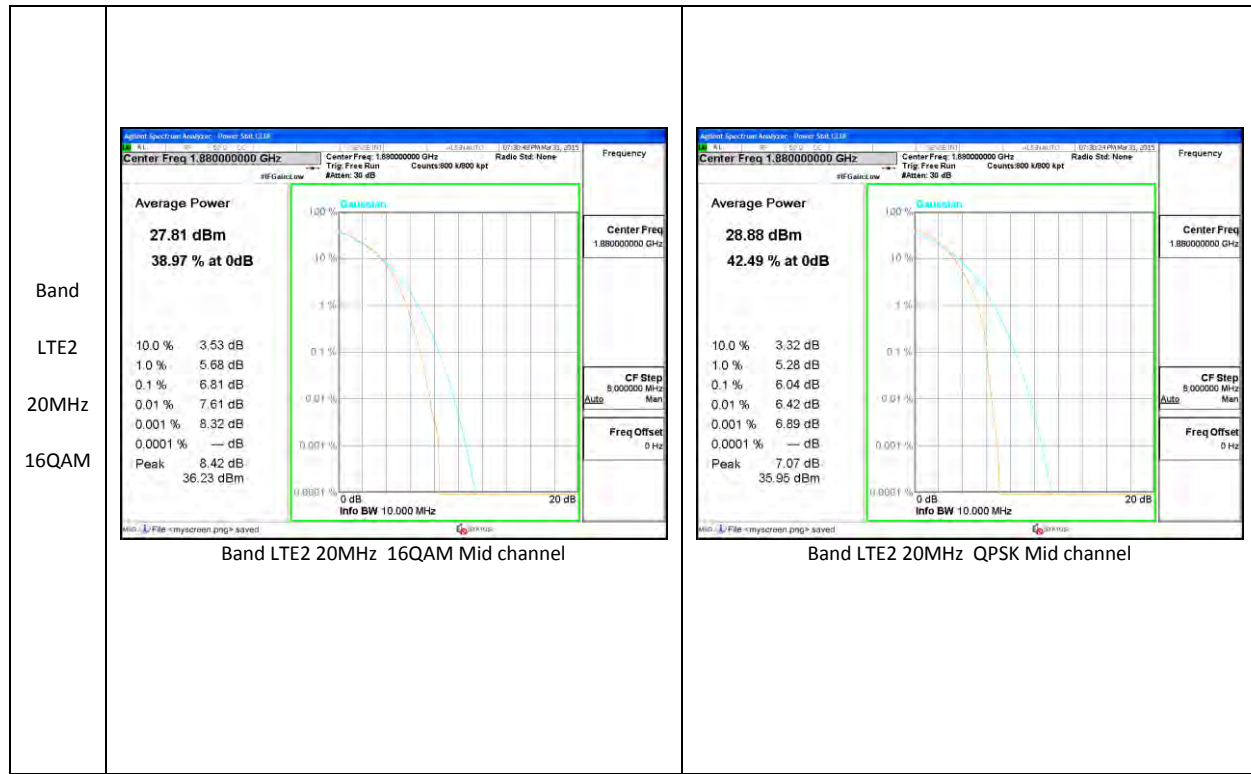
### 9.1. CONDUCTED PEAK TO AVERAGE RESULT

#### CDMA

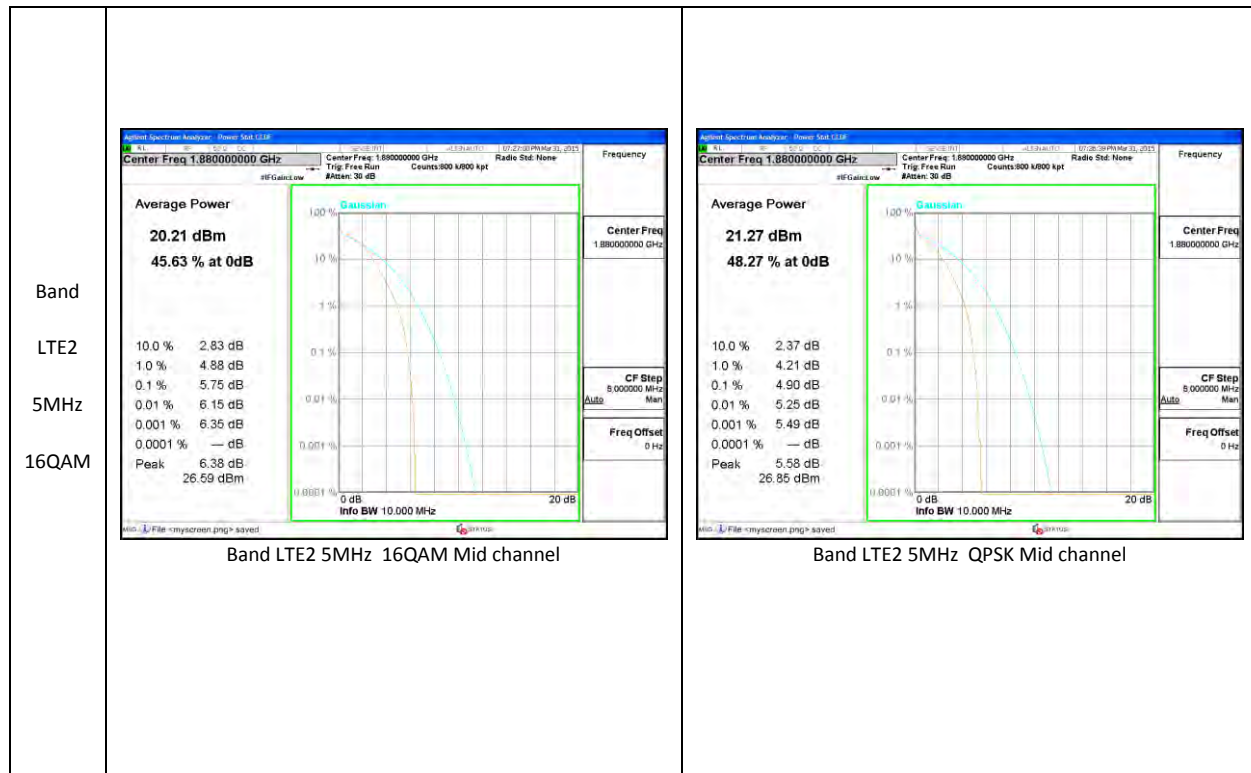
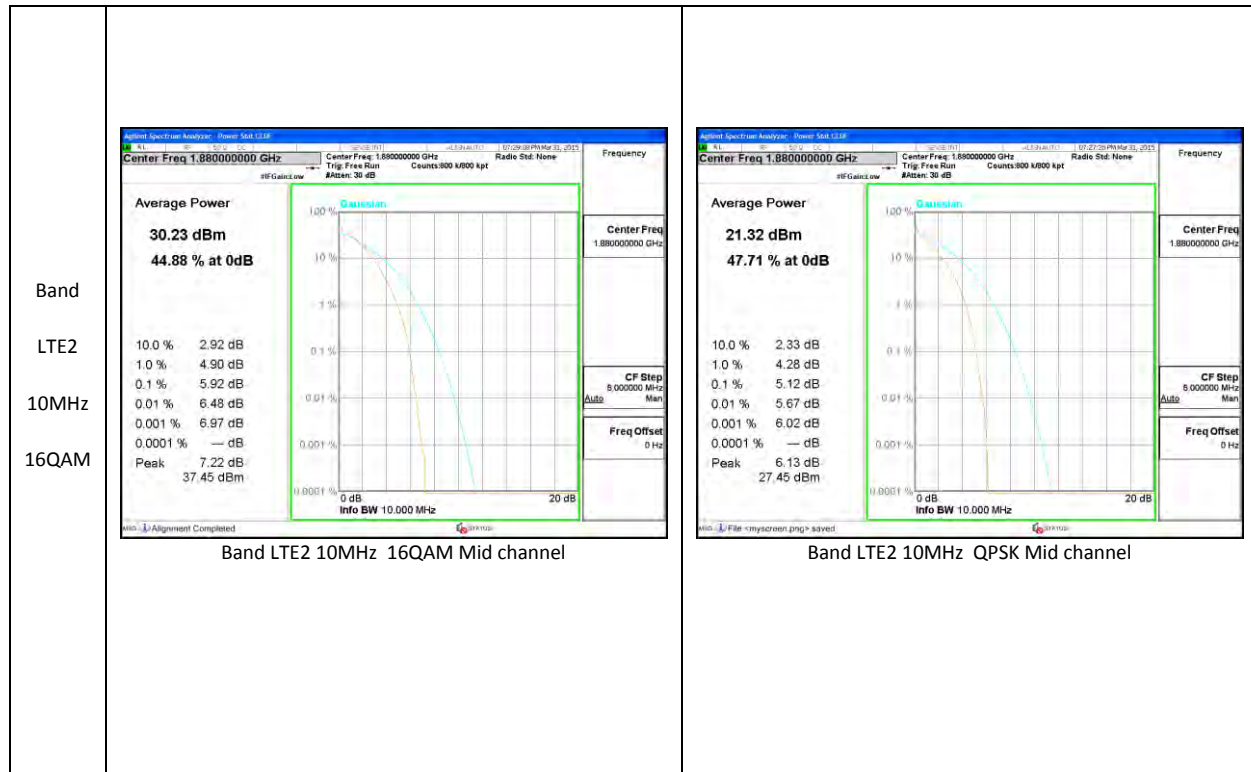
<p>Band</p> <p>BC1</p> <p>EVDO</p> <p>REL. 0</p>	 <p>Average Power  <b>22.71 dBm</b>  <b>48.16 % at 0dB</b></p> <p>10.0 % 2.93 dB      1.0 % 3.75 dB      0.1 % 4.13 dB      0.01 % 4.29 dB      0.001 % 4.39 dB      0.0001 % 4.48 dB      Peak 4.51 dB      27.22 dBm</p> <p>Center Freq 1.88000000 GHz      CF Step 5.000000 MHz      Freq Offset 0 Hz</p> <p>Band BC1 EVDO Rel. 0 Mid channel</p>	 <p>Average Power  <b>22.77 dBm</b>  <b>50.90 % at 0dB</b></p> <p>10.0 % 1.83 dB      1.0 % 2.98 dB      0.1 % 3.55 dB      0.01 % 3.82 dB      0.001 % 3.95 dB      0.0001 % 4.01 dB      Peak 4.04 dB      26.81 dBm</p> <p>Center Freq 1.88000000 GHz      CF Step 5.000000 MHz      Freq Offset 0 Hz</p> <p>Band BC1 1xRTT Mid channel</p>
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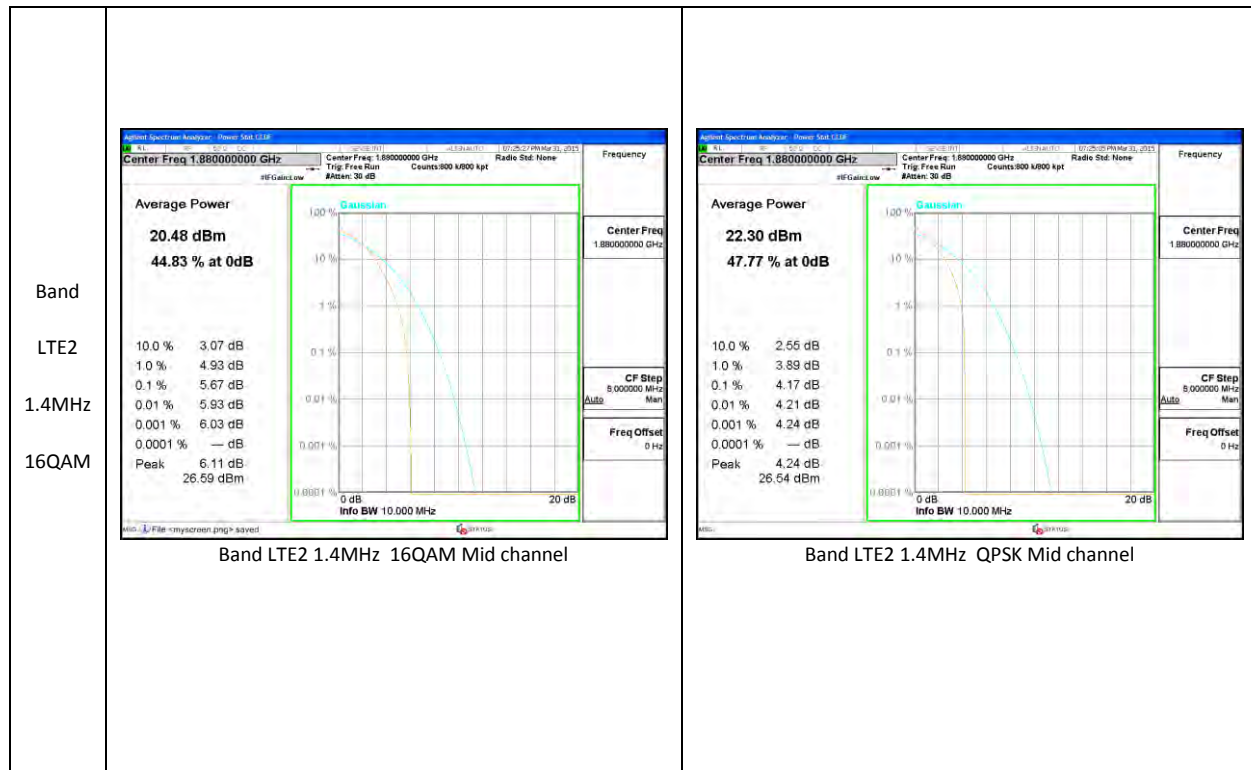
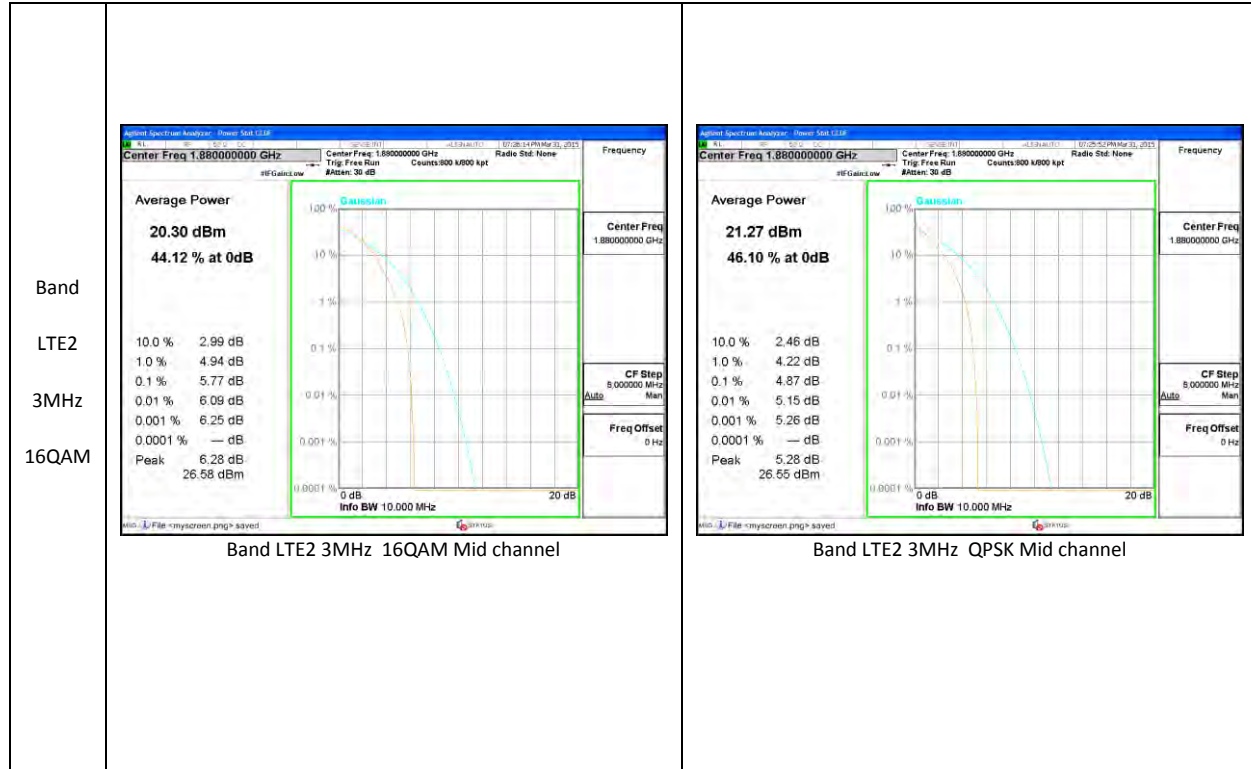
<p>Band BC0 EVDO REL. 0</p>	 <p style="text-align: center;">Band BC0 EVDO Rel. 0 Mid channel</p>	 <p style="text-align: center;">Band BC0 1xRTT Mid channel</p>
<p>Band BC10 EVDO REL. 0</p>	 <p style="text-align: center;">Band BC10 EVDO Rel. 0 Mid channel</p>	 <p style="text-align: center;">Band BC10 1xRTT Mid channel</p>

**LTE Band 2**

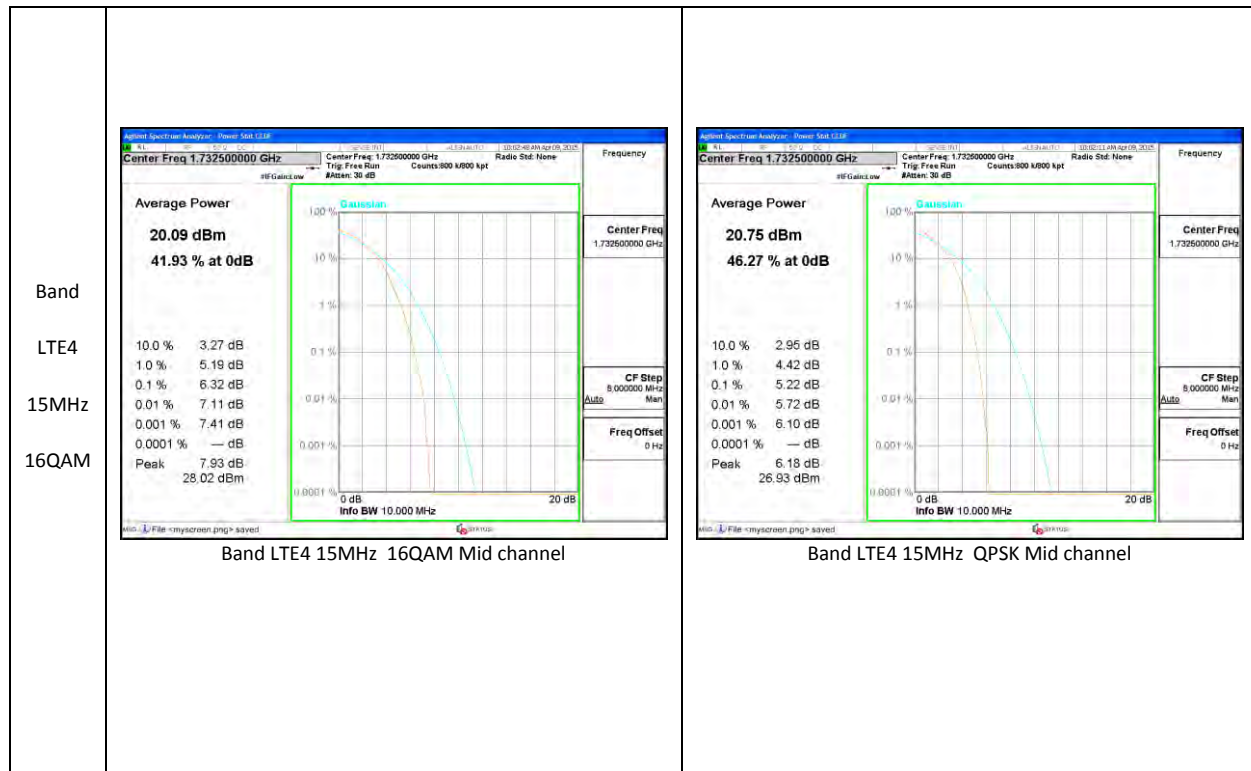
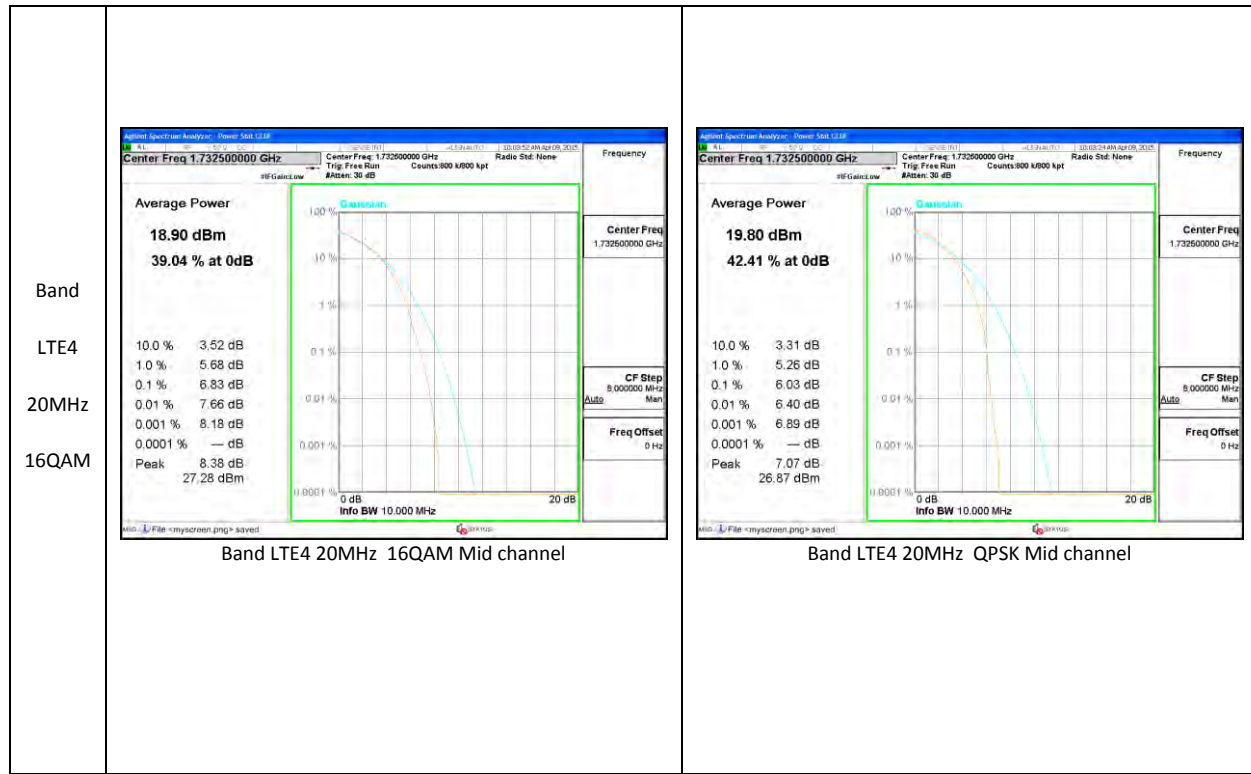


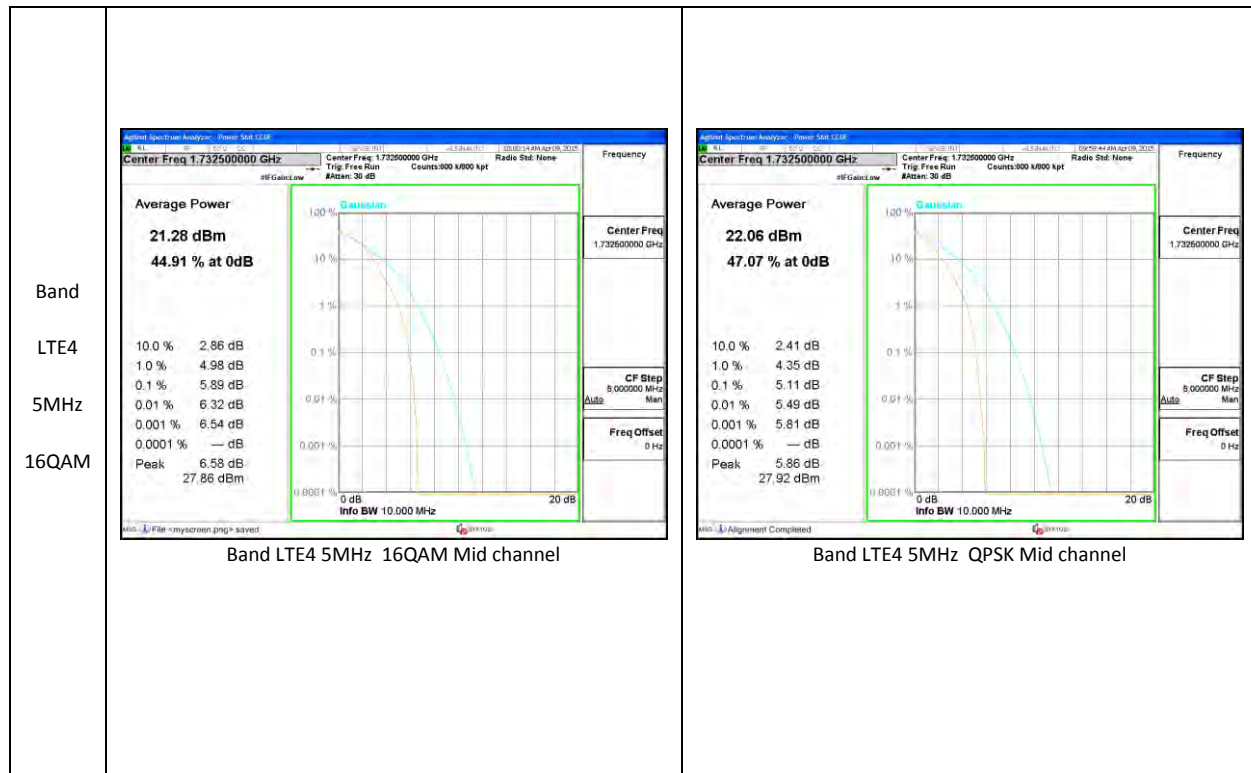
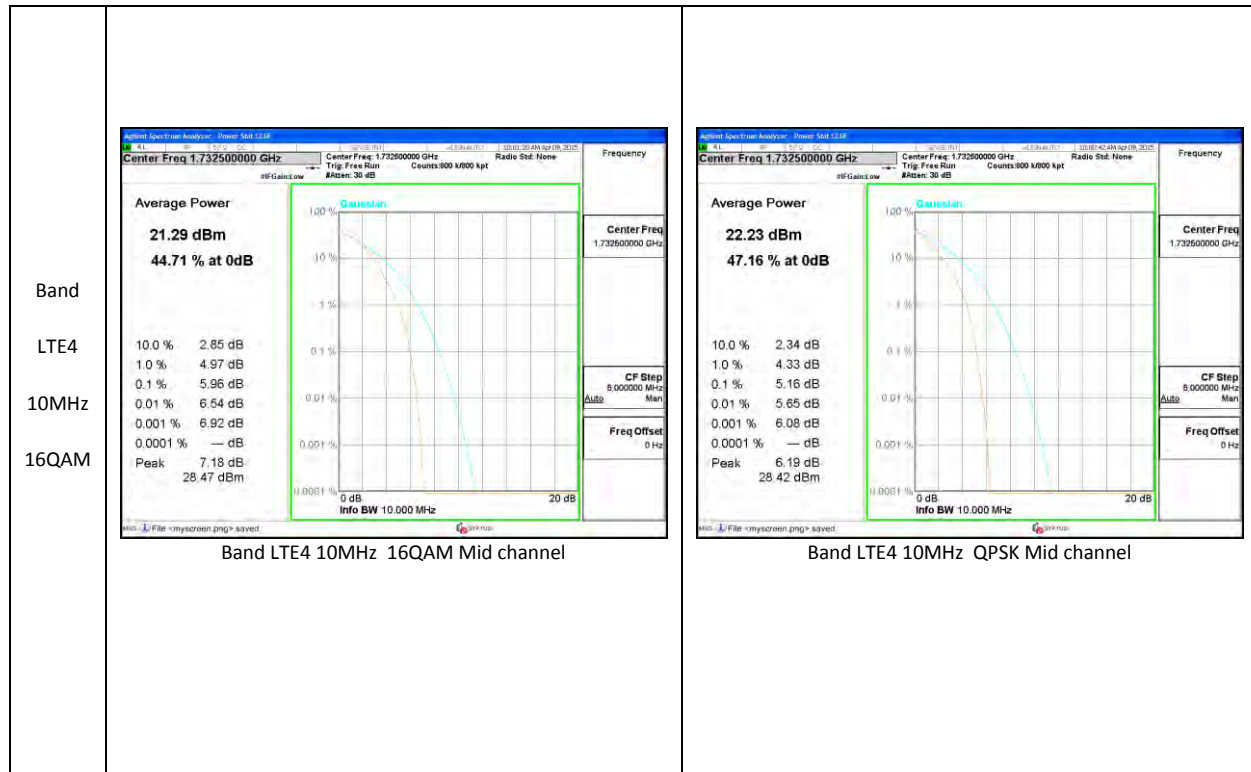




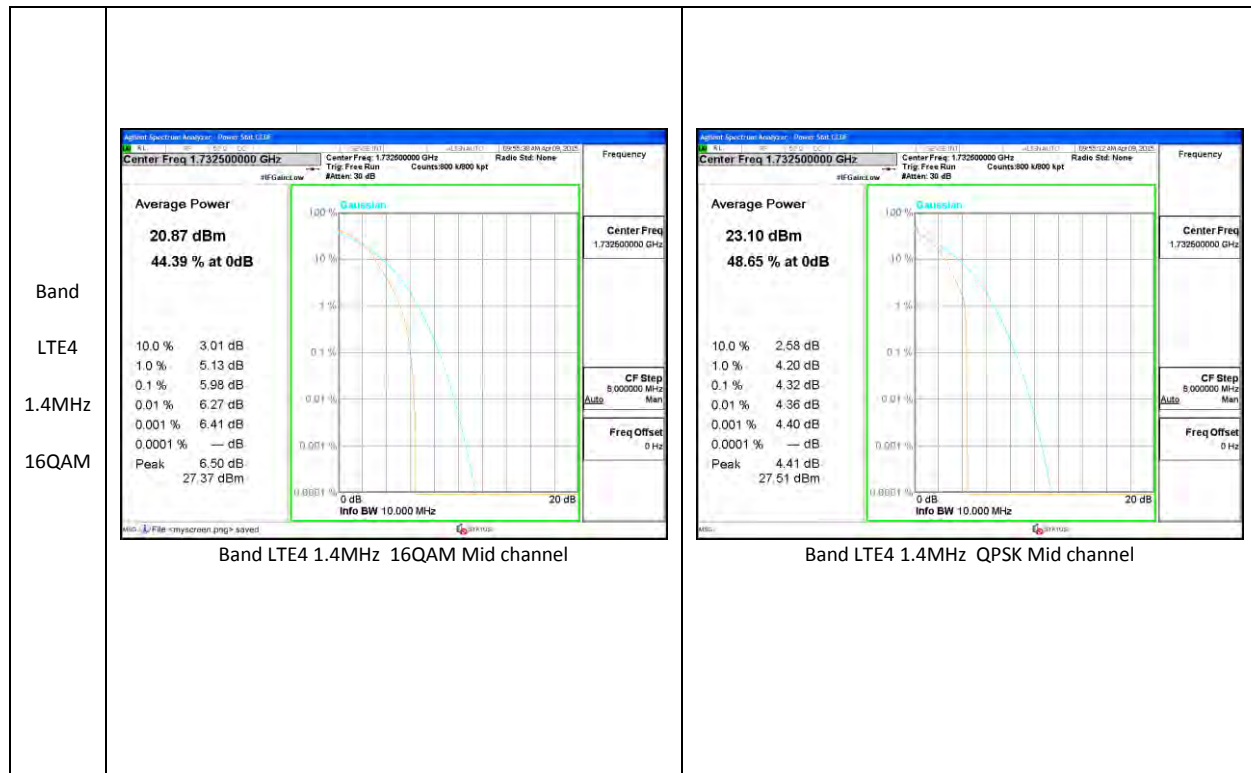
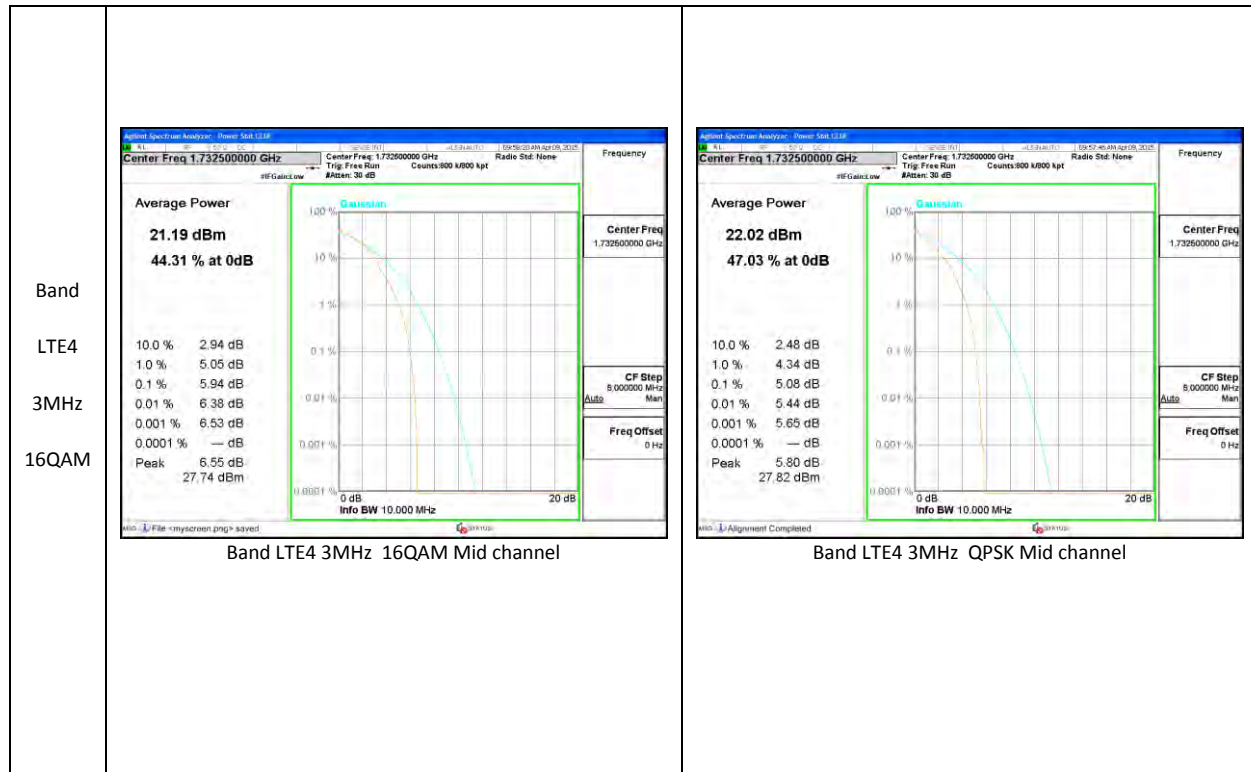


**LTE Band 4**

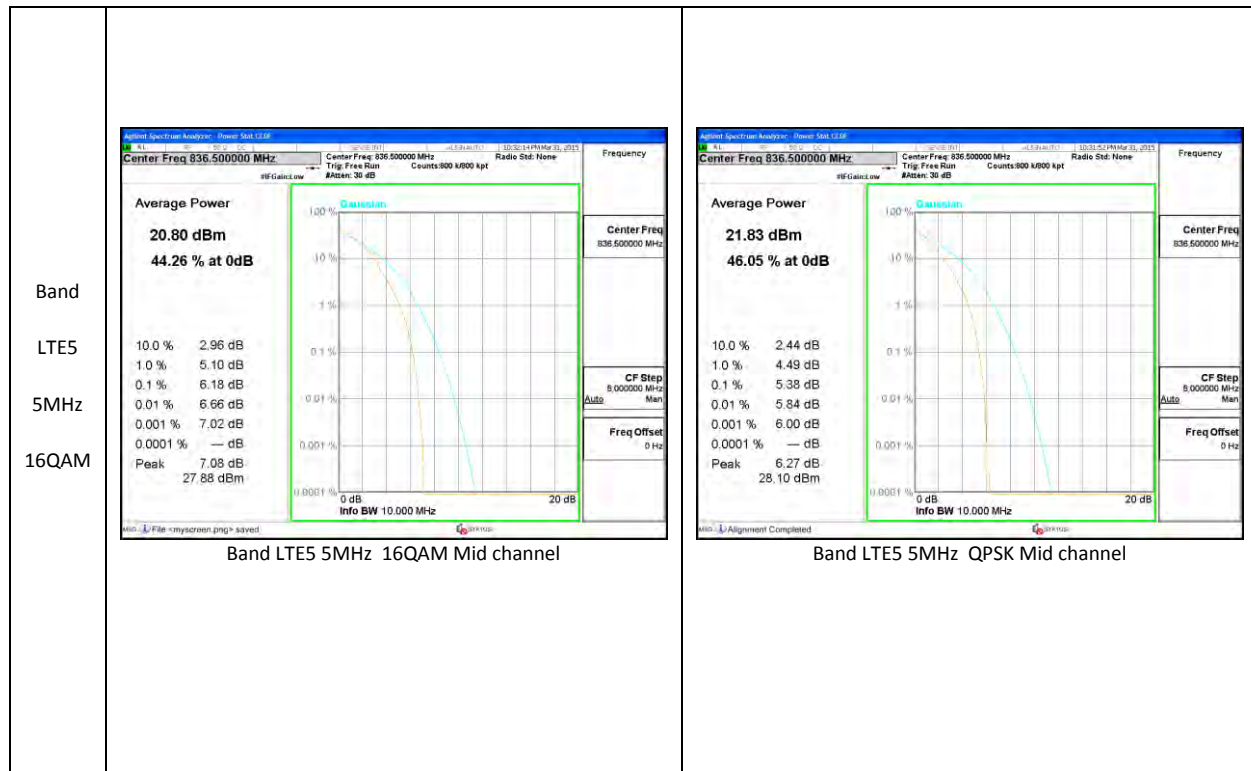
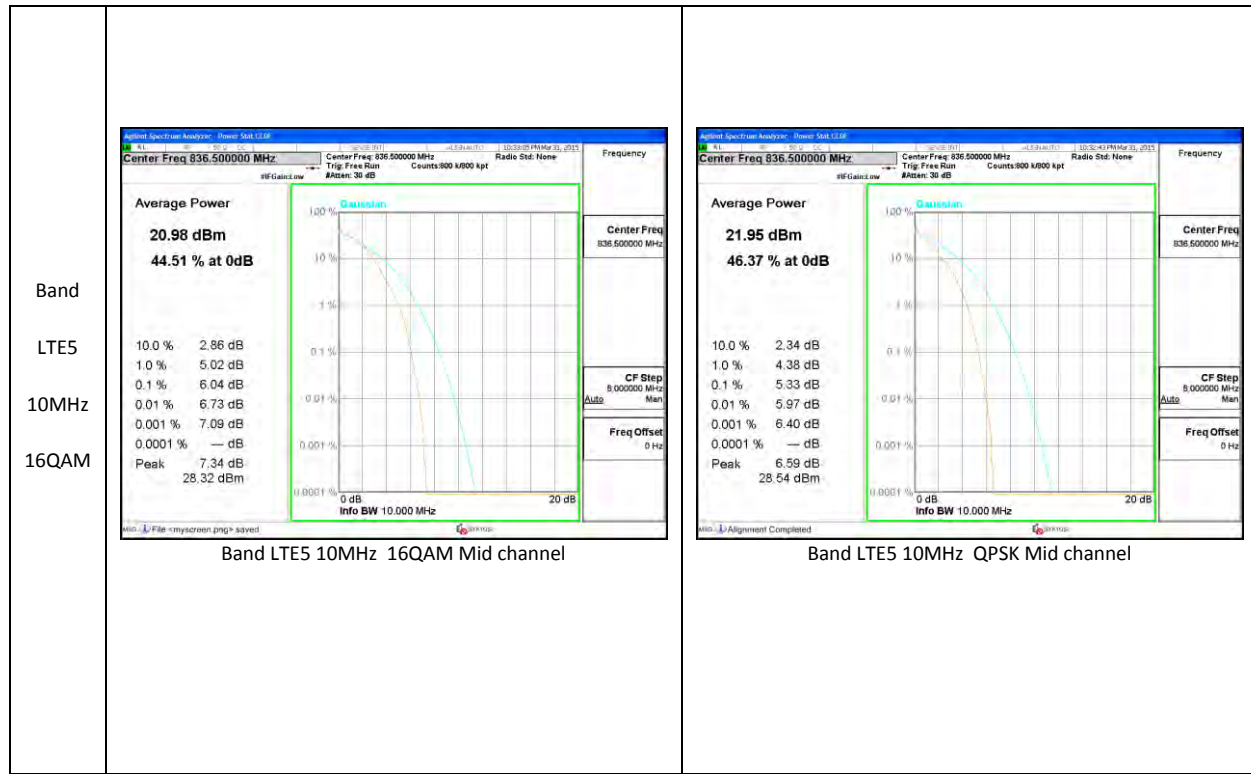


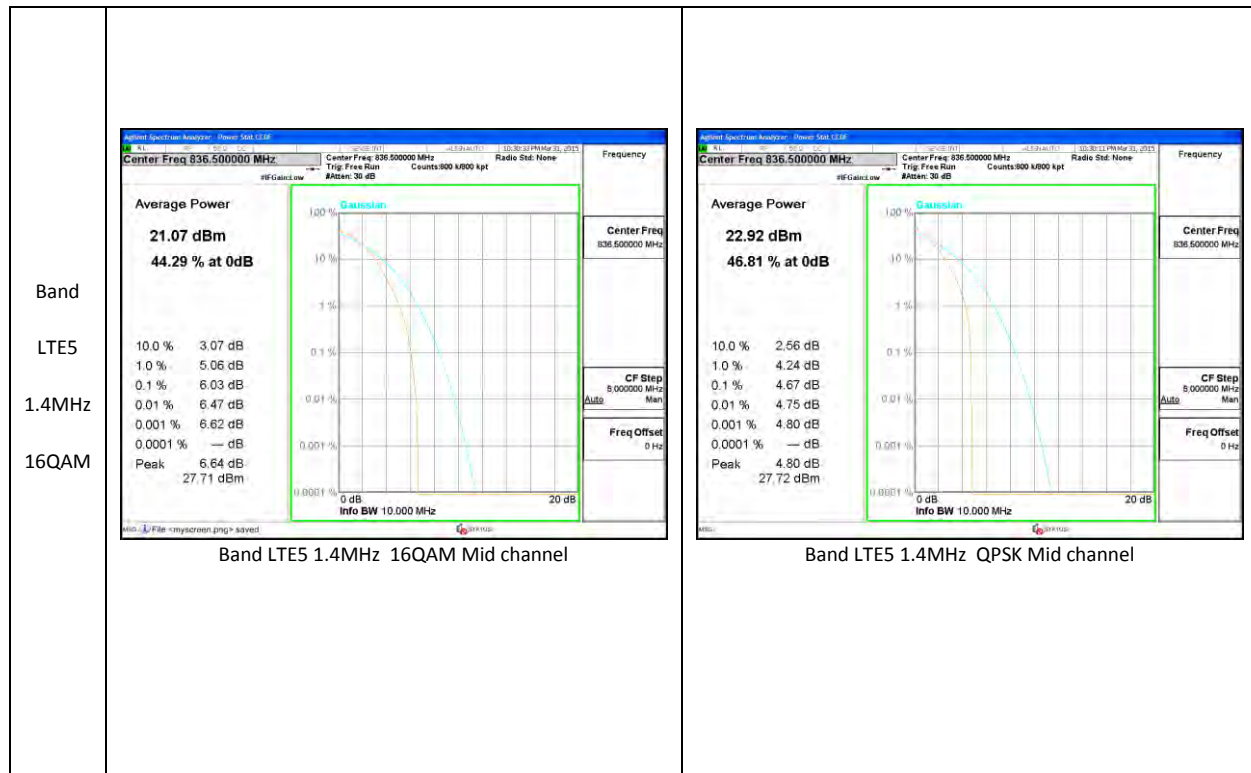
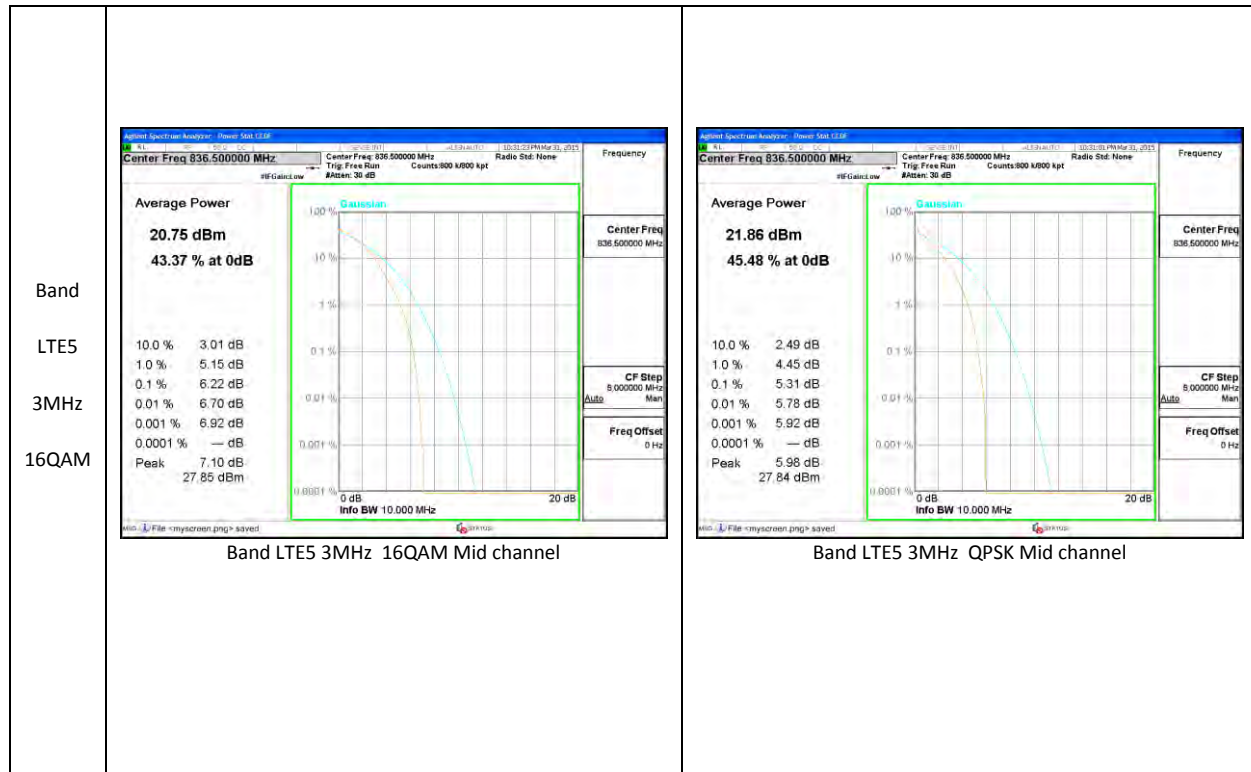




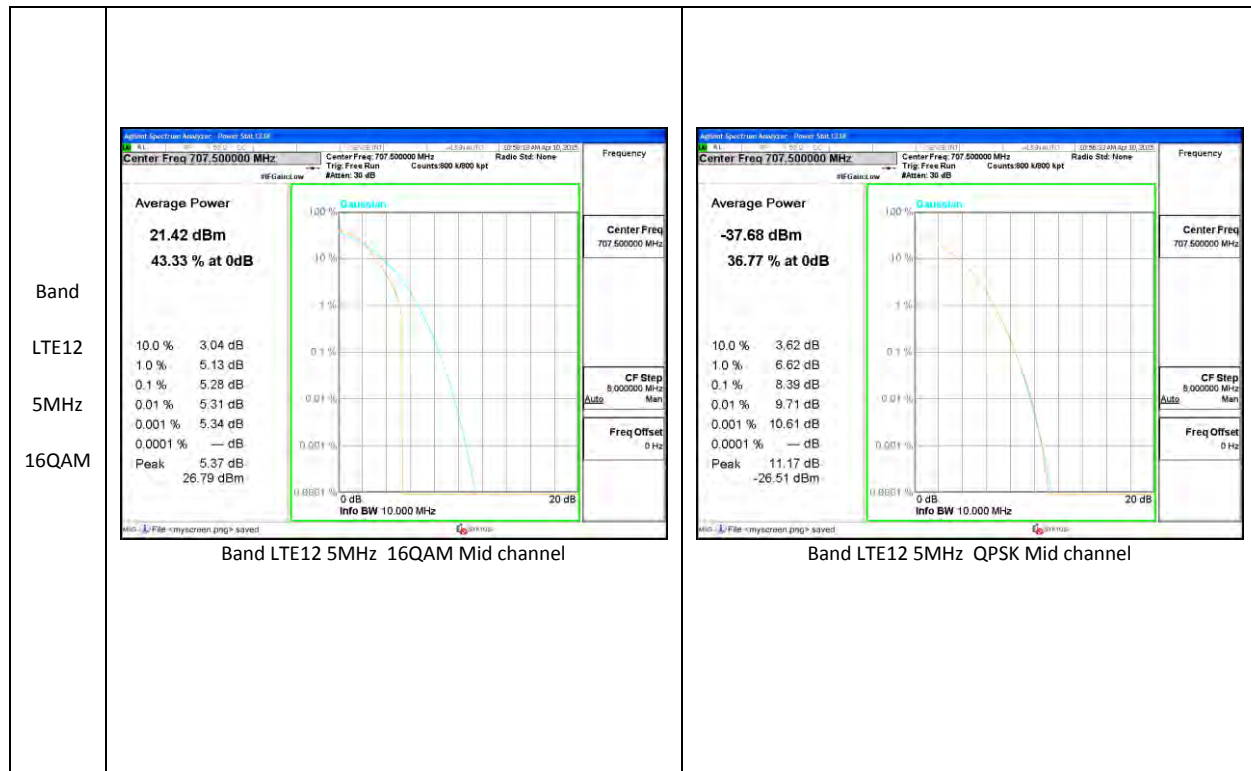
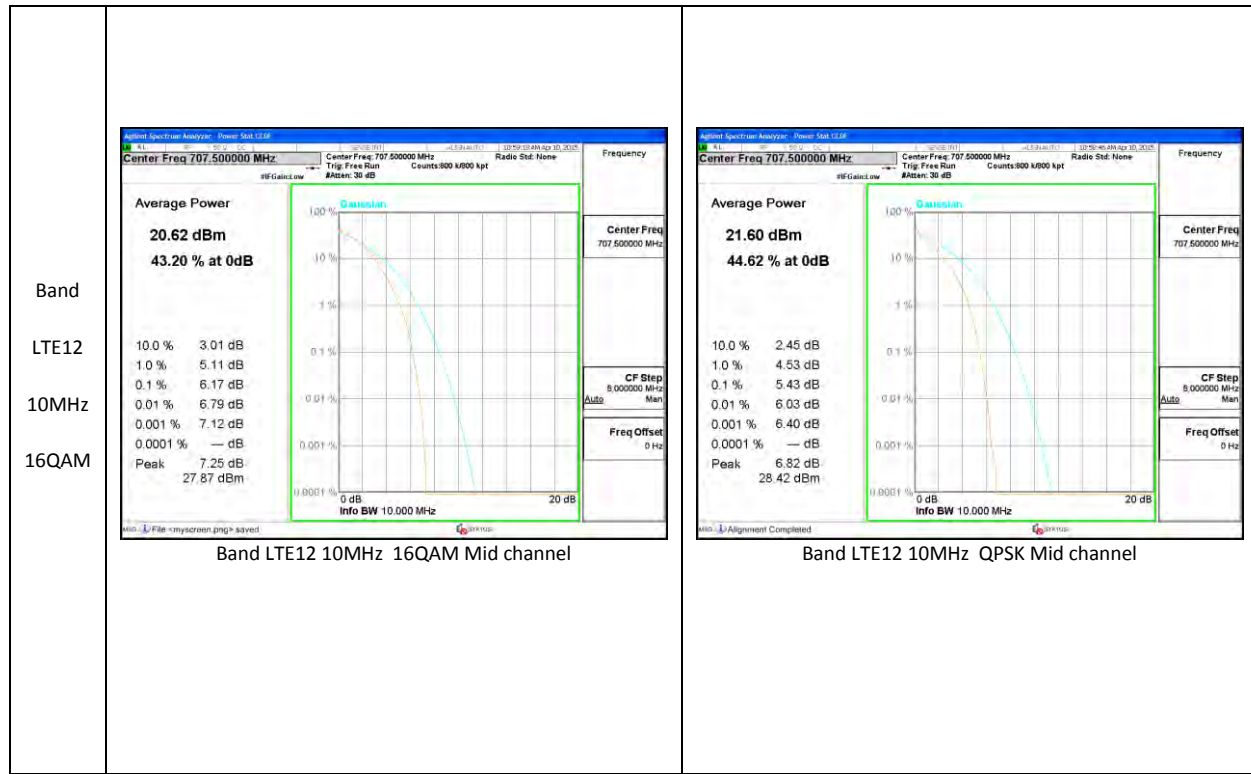


**LTE Band 5**

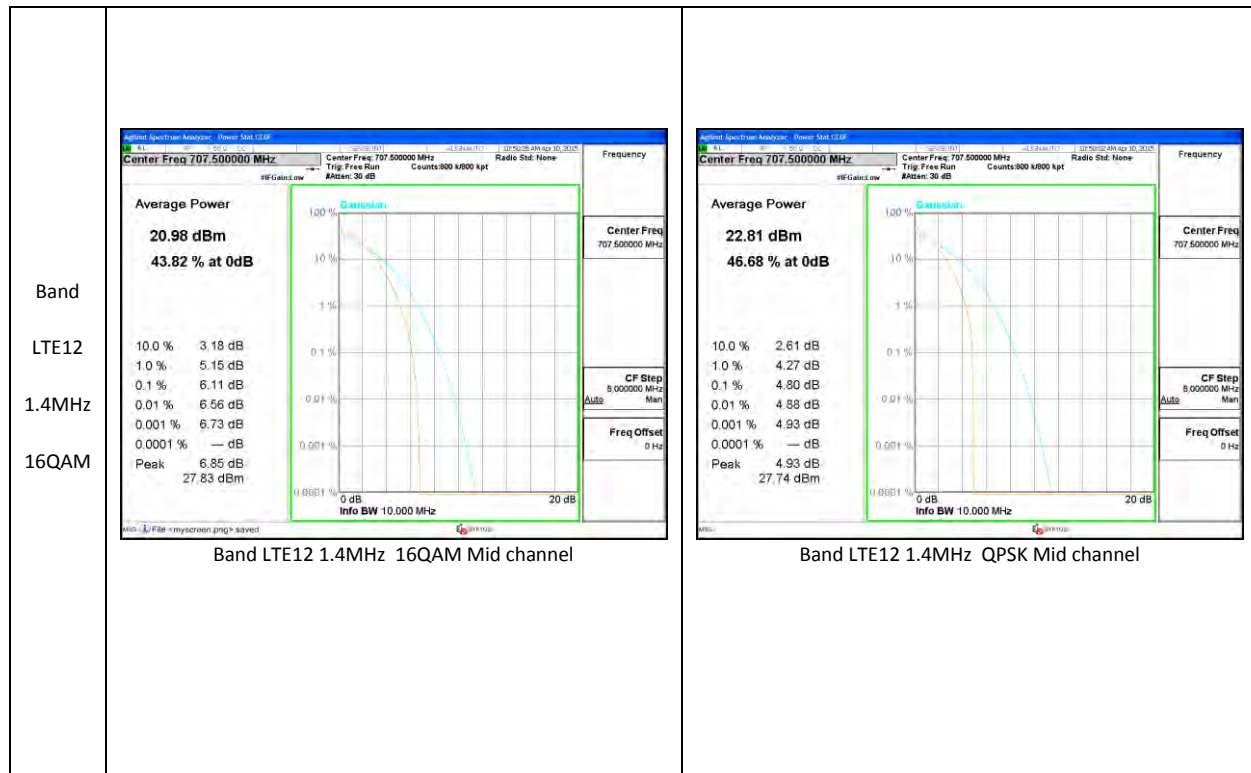
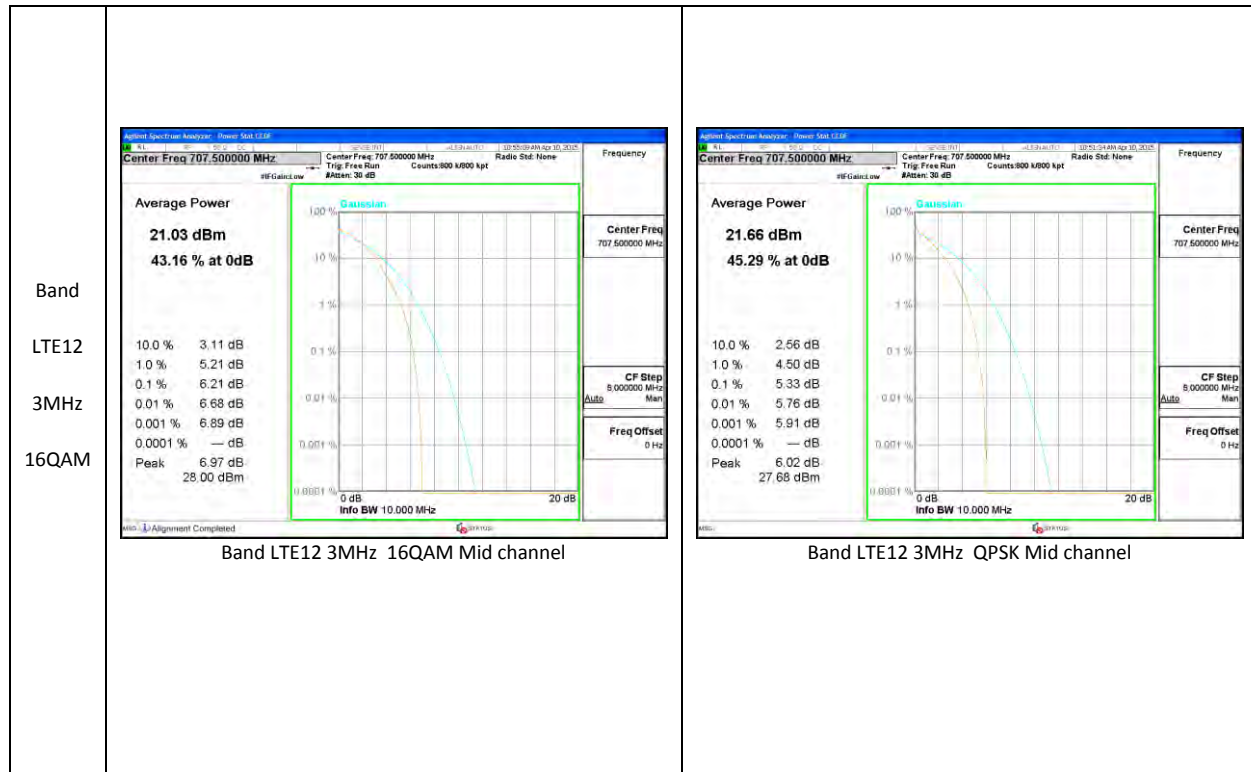




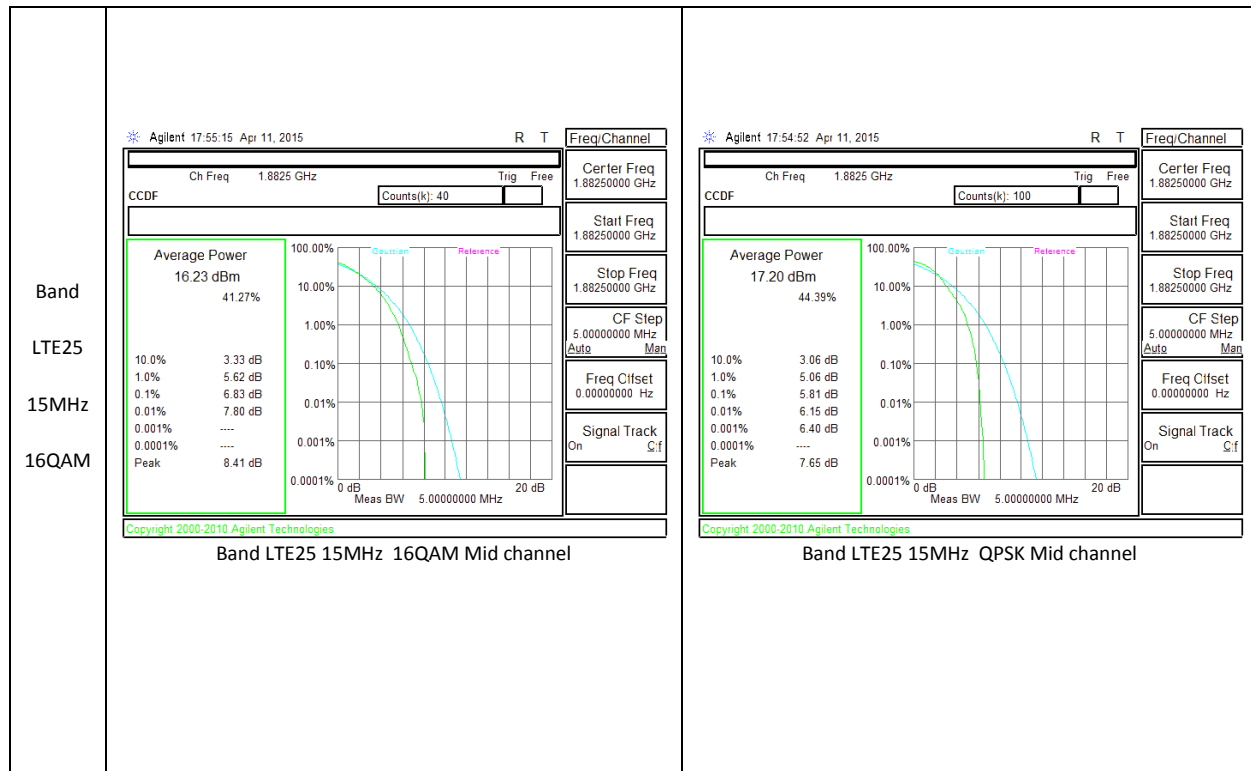
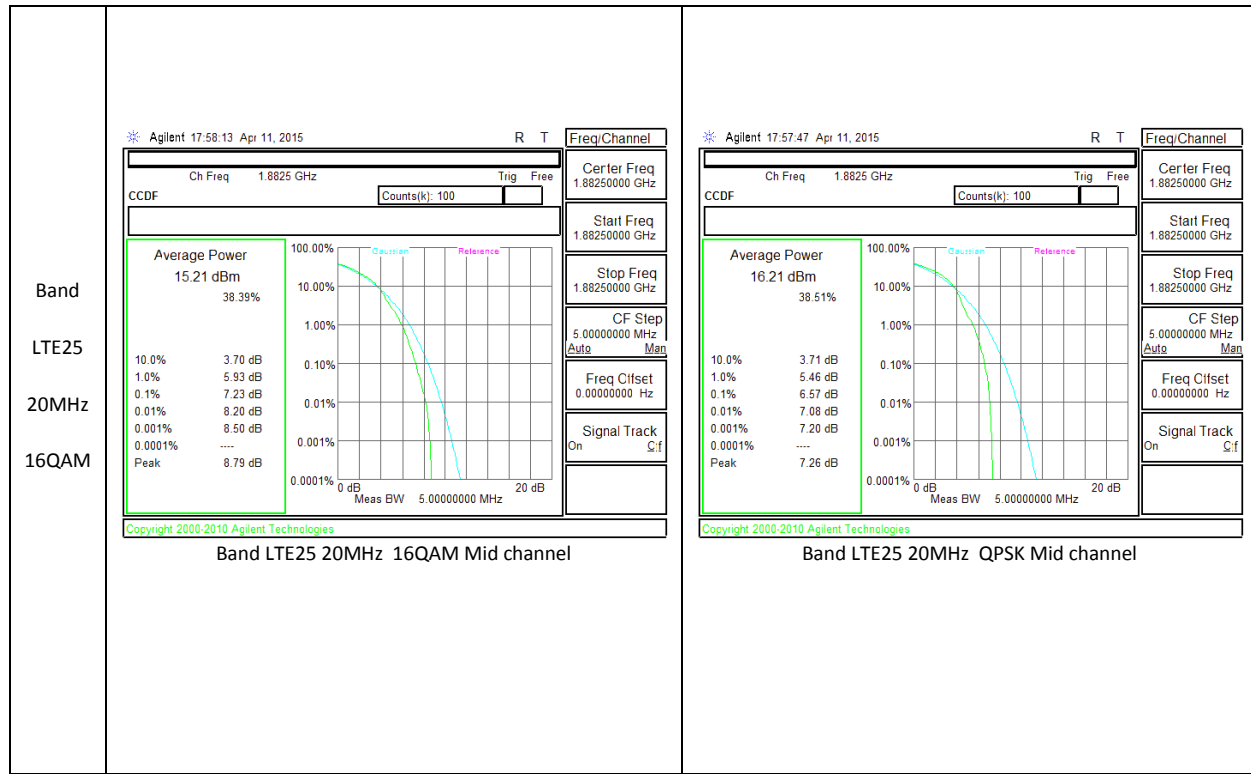
**LTE Band 12**

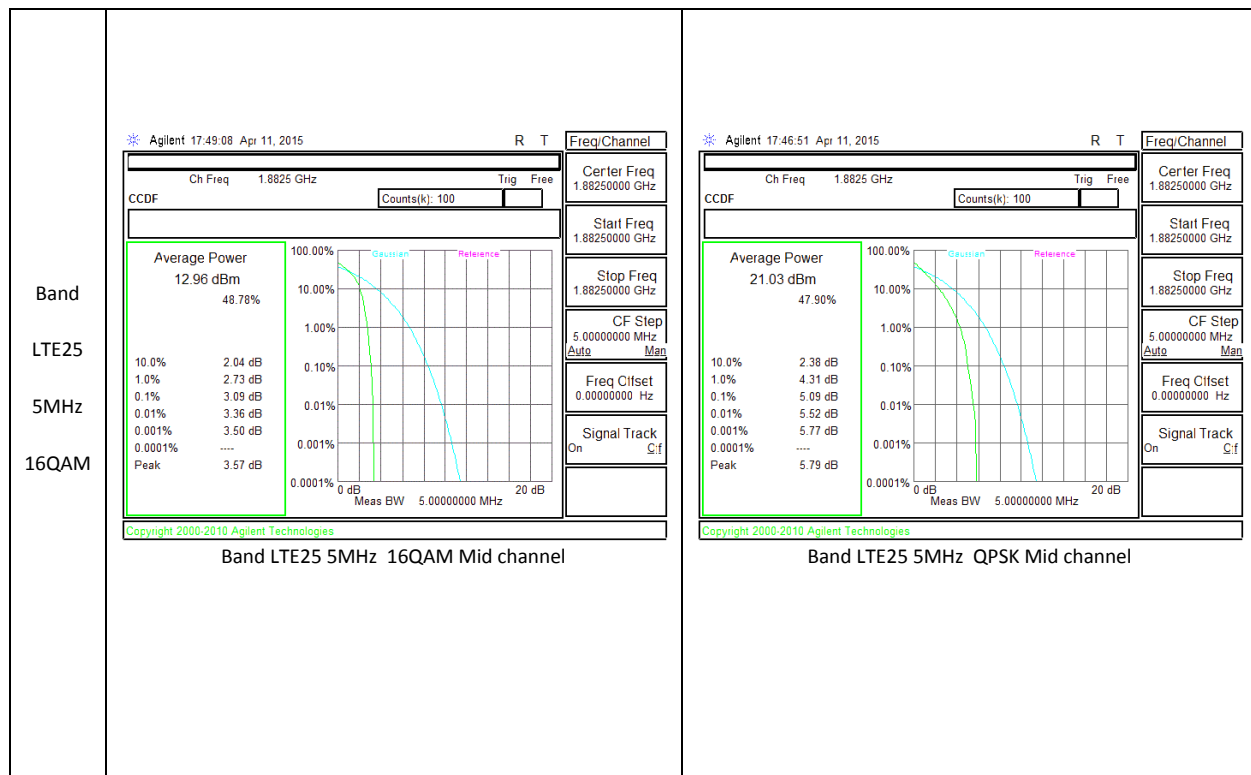
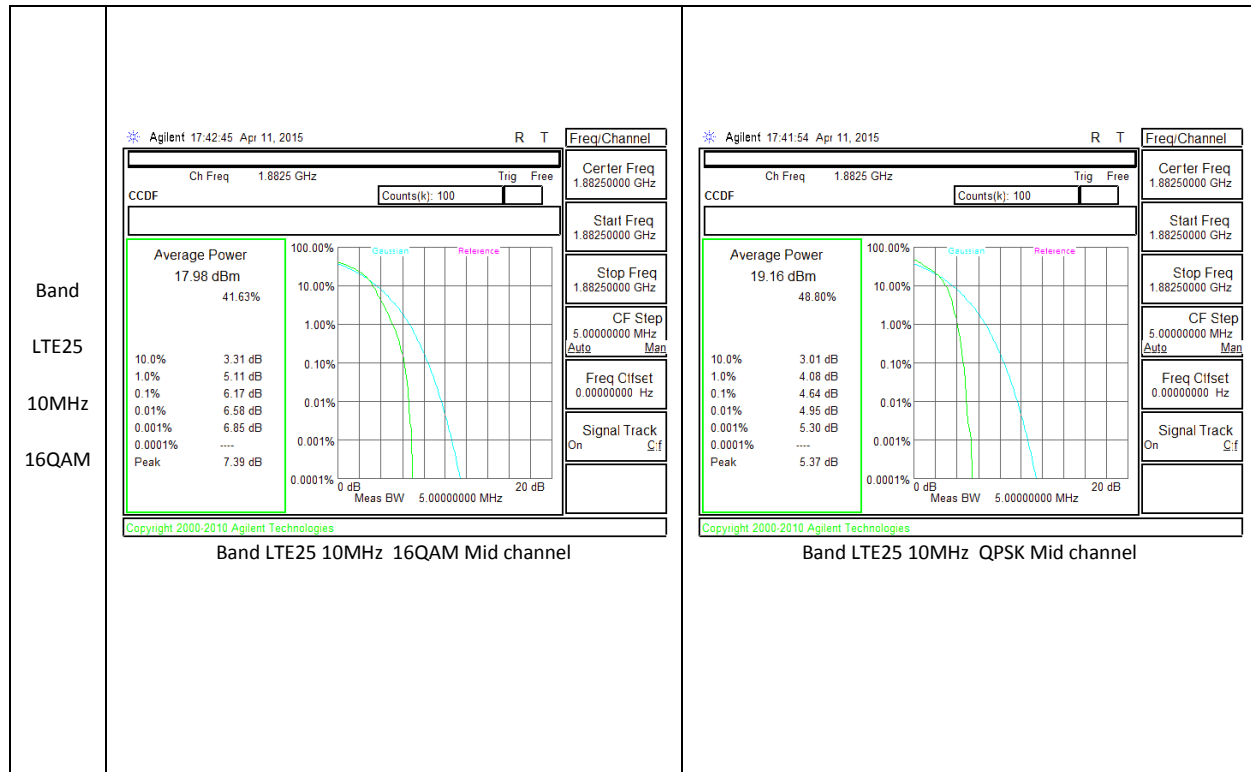


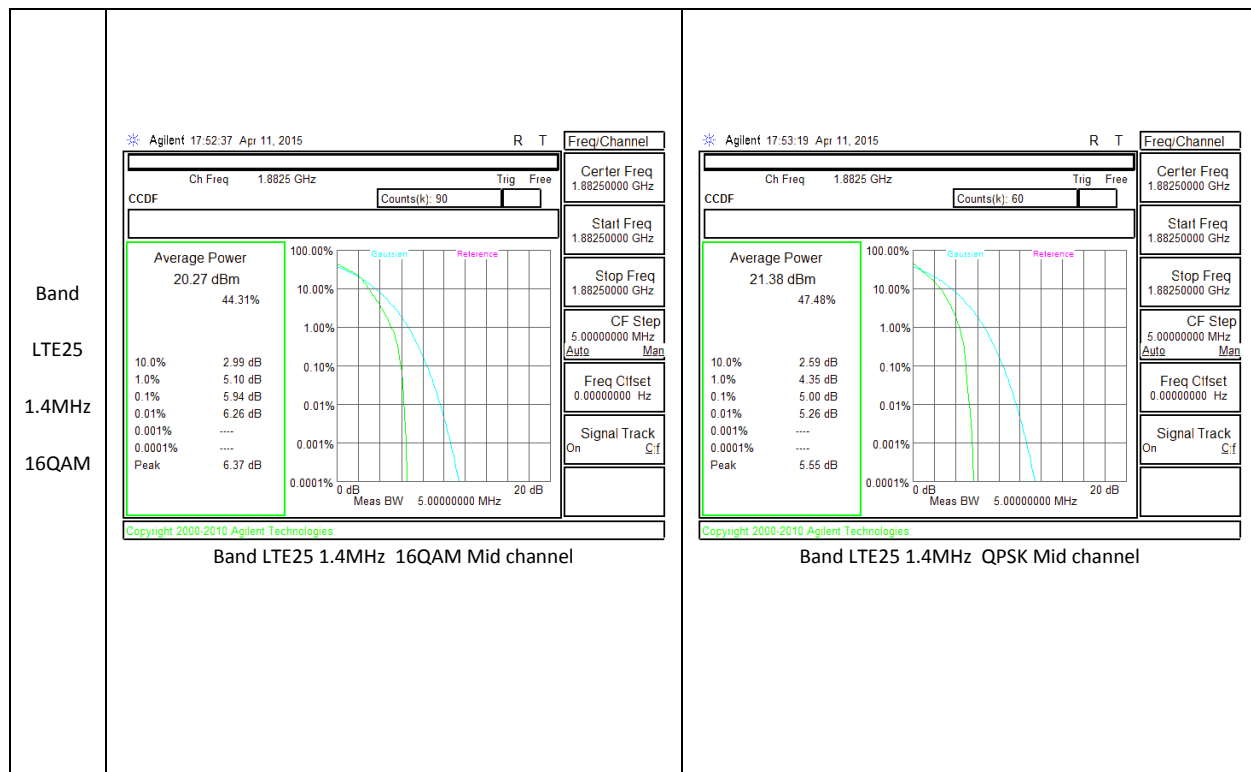
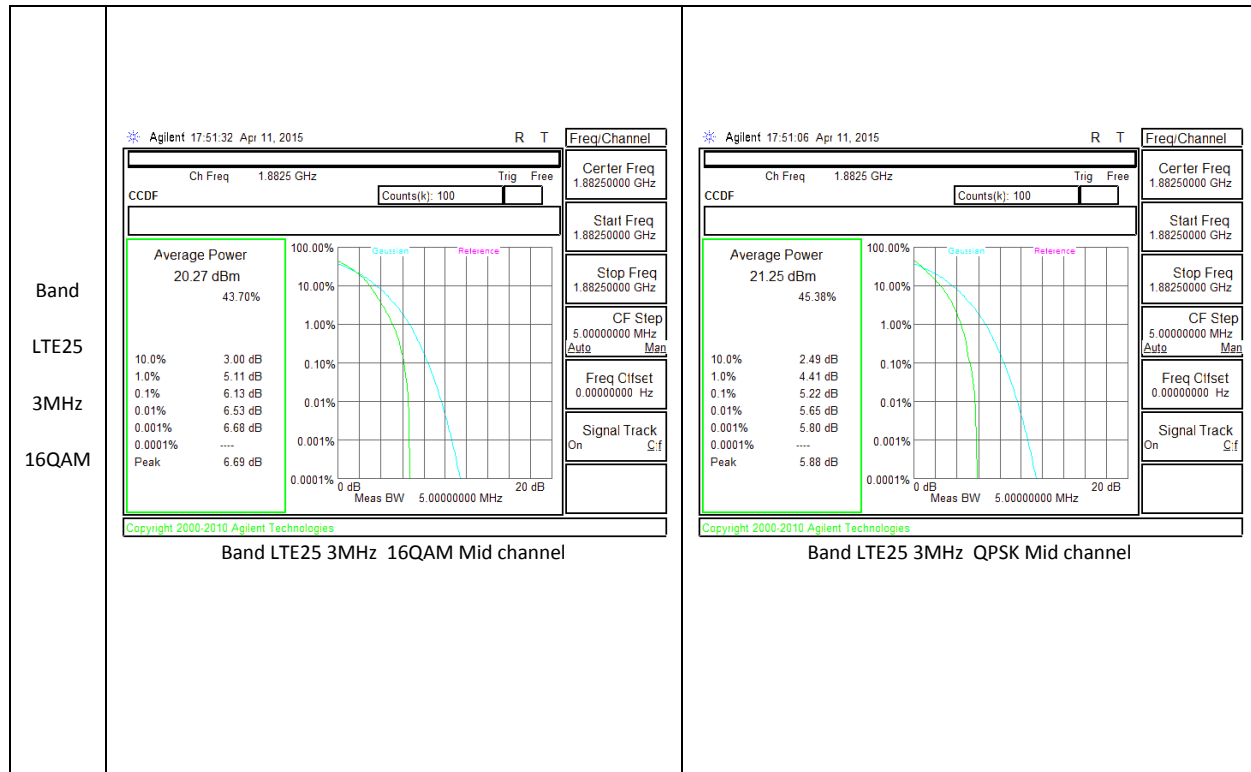




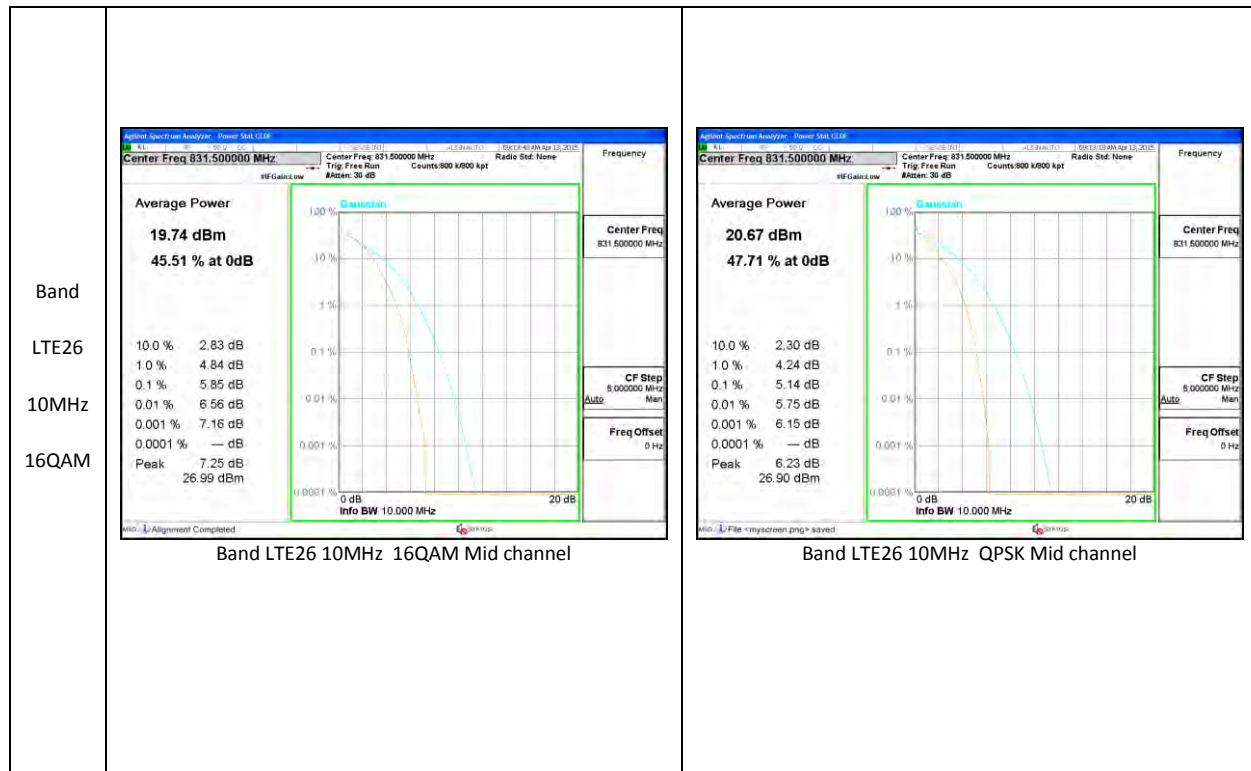
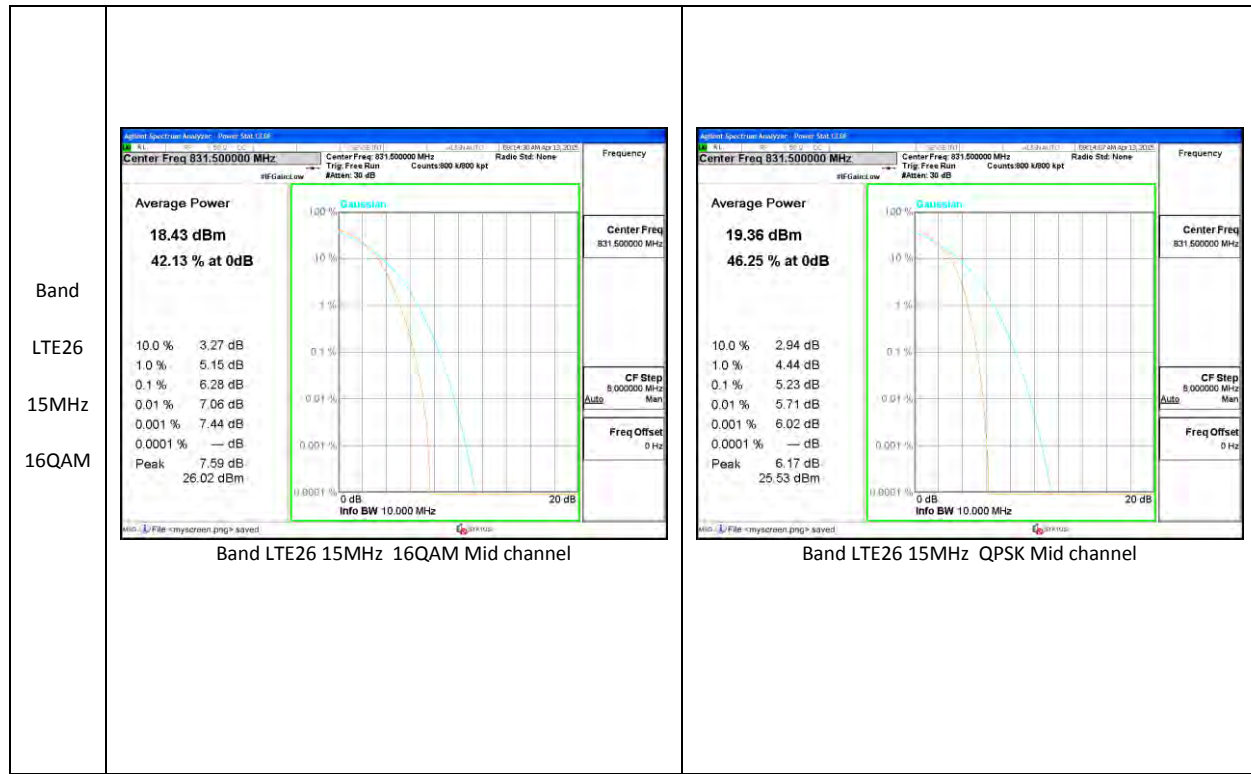
**LTE Band 25**







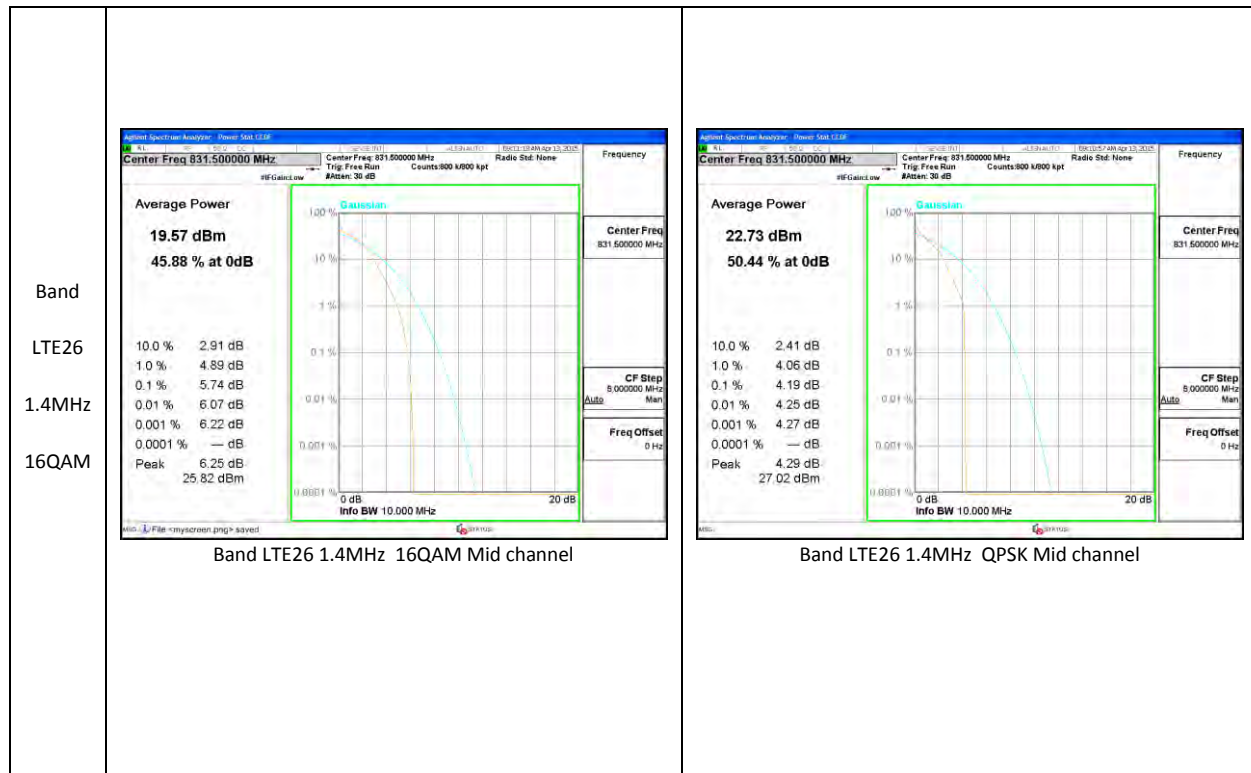
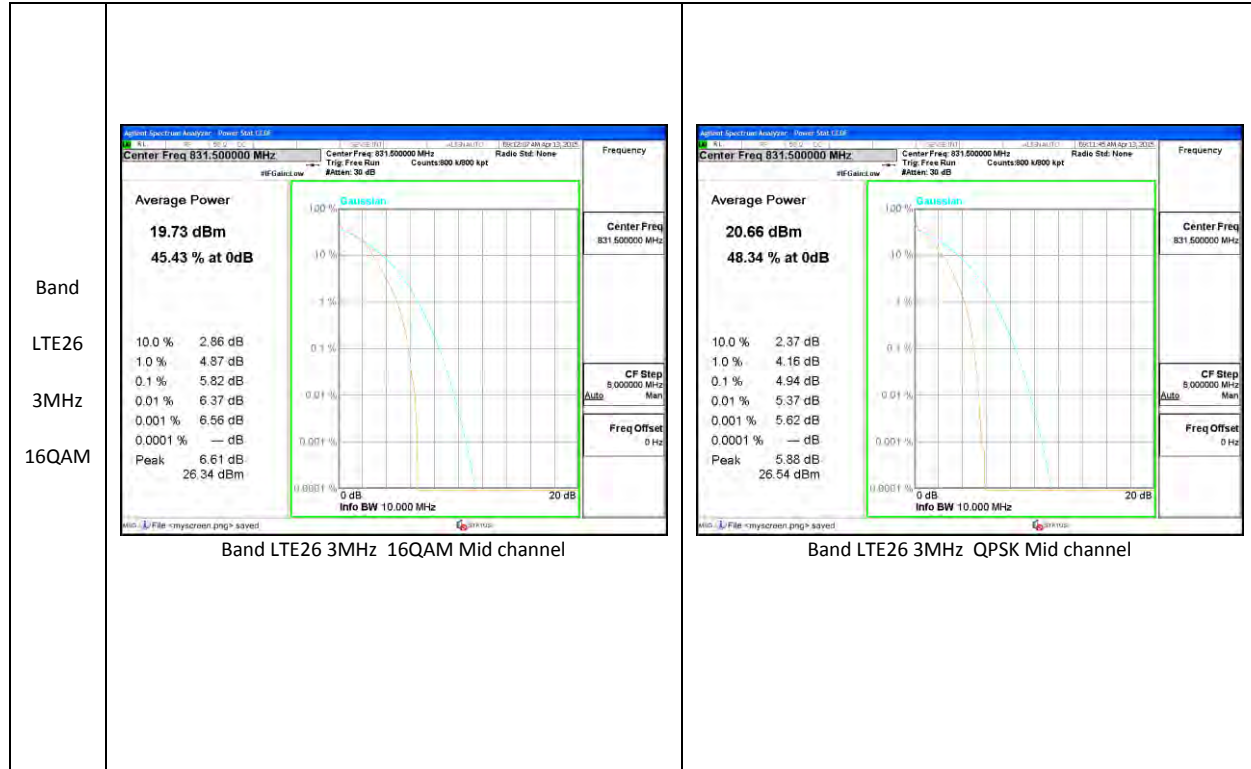


**LTE Band 26**

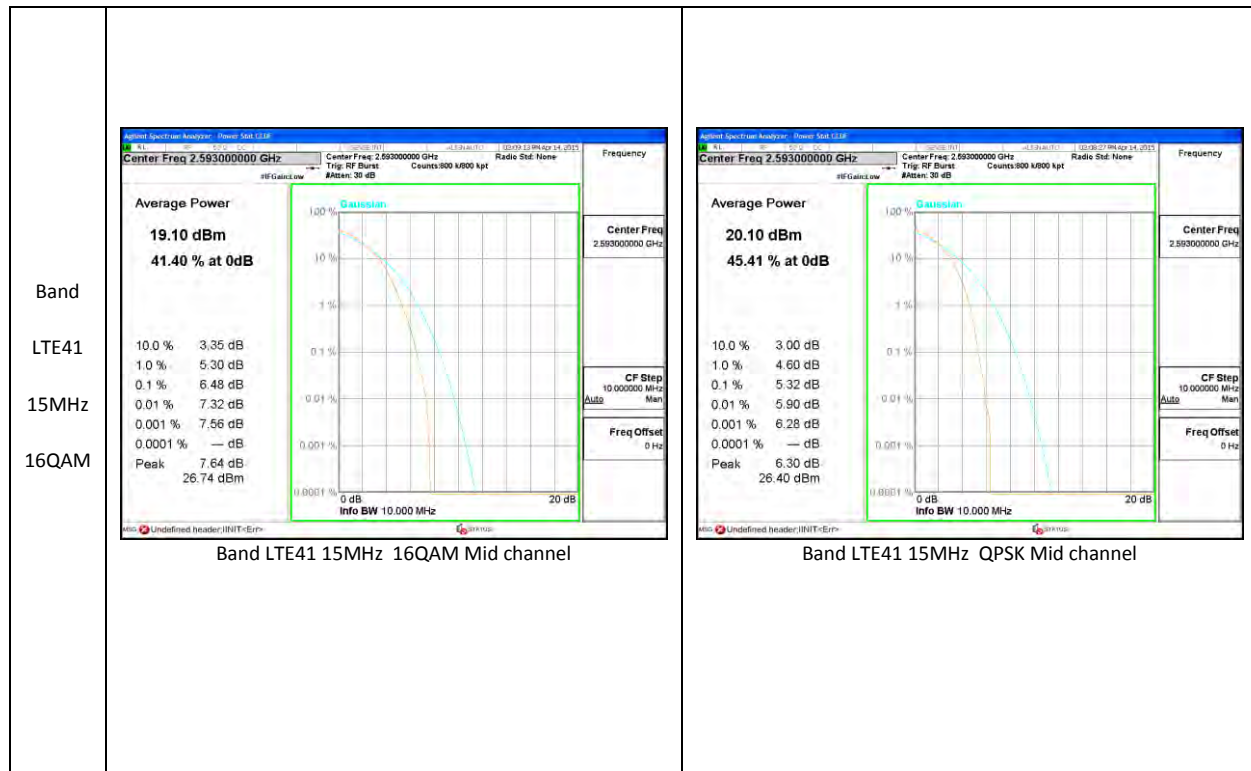
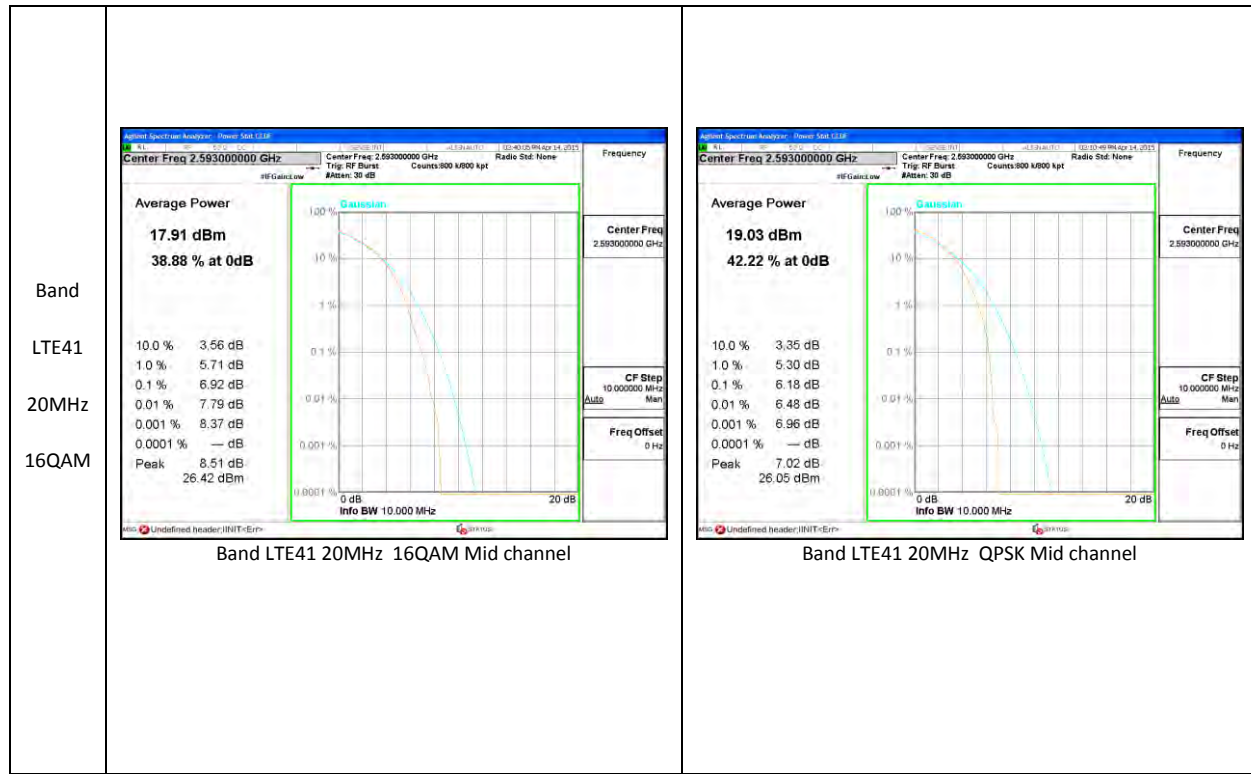


Band		
LTE26		
5MHz		
16QAM		
	Band LTE26 5MHz 16QAM Mid channel	Band LTE26 5MHz QPSK Mid channel

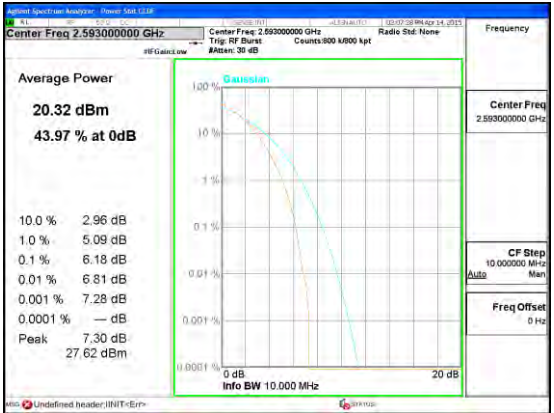
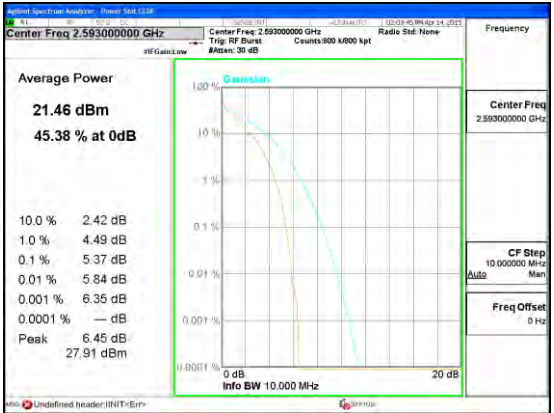


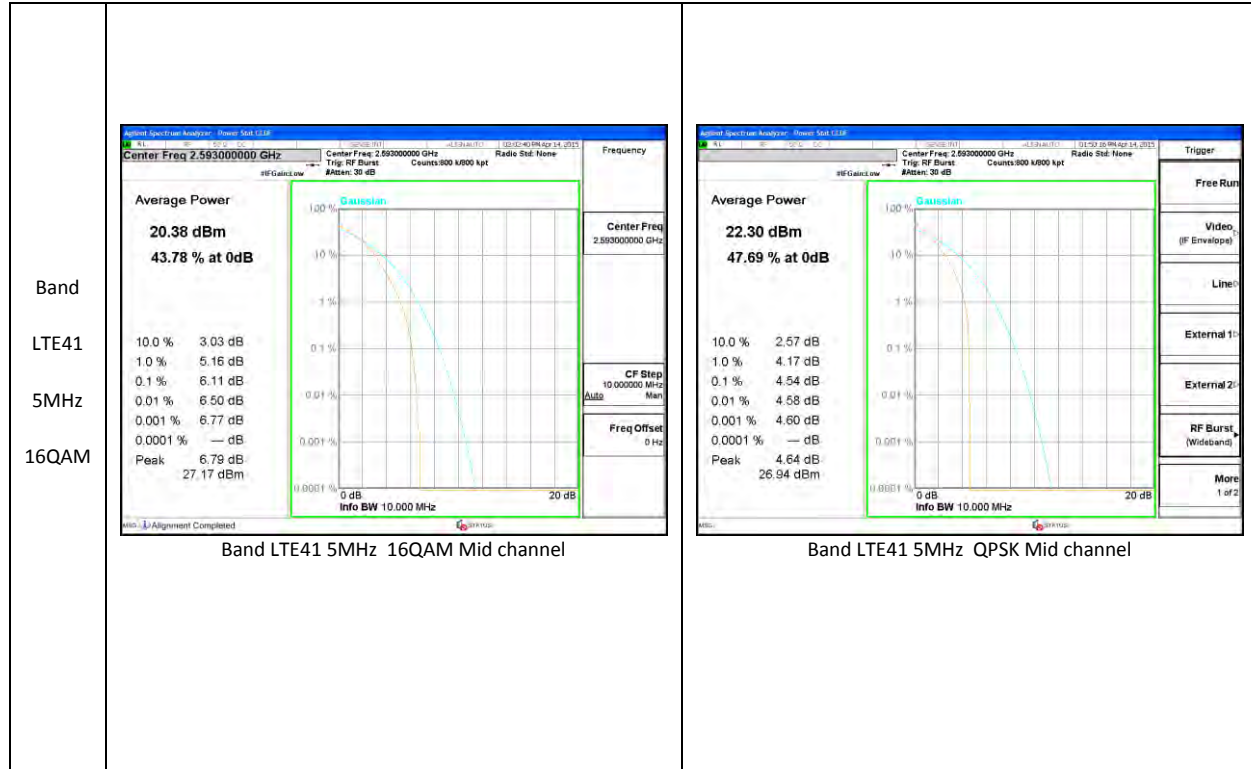


**LTE Band 41**





<p>Band</p> <p>LTE41</p> <p>10MHz</p> <p>16QAM</p>	 <p><b>Average Power</b>  <b>20.32 dBm</b>  <b>43.97 % at 0dB</b></p> <table border="1"> <tr><td>10.0 %</td><td>2.96 dB</td></tr> <tr><td>1.0 %</td><td>5.09 dB</td></tr> <tr><td>0.1 %</td><td>6.18 dB</td></tr> <tr><td>0.01 %</td><td>6.81 dB</td></tr> <tr><td>0.001 %</td><td>7.28 dB</td></tr> <tr><td>0.0001 %</td><td>— dB</td></tr> <tr><td>Peak</td><td>7.30 dB</td></tr> <tr><td></td><td>27.62 dBm</td></tr> </table> <p>Center Freq: 2.593000000 GHz        Info BW: 10.000 MHz</p>	10.0 %	2.96 dB	1.0 %	5.09 dB	0.1 %	6.18 dB	0.01 %	6.81 dB	0.001 %	7.28 dB	0.0001 %	— dB	Peak	7.30 dB		27.62 dBm	 <p><b>Average Power</b>  <b>21.46 dBm</b>  <b>45.38 % at 0dB</b></p> <table border="1"> <tr><td>10.0 %</td><td>2.42 dB</td></tr> <tr><td>1.0 %</td><td>4.49 dB</td></tr> <tr><td>0.1 %</td><td>5.37 dB</td></tr> <tr><td>0.01 %</td><td>5.84 dB</td></tr> <tr><td>0.001 %</td><td>6.35 dB</td></tr> <tr><td>0.0001 %</td><td>— dB</td></tr> <tr><td>Peak</td><td>6.45 dB</td></tr> <tr><td></td><td>27.91 dBm</td></tr> </table> <p>Center Freq: 2.593000000 GHz        Info BW: 10.000 MHz</p>	10.0 %	2.42 dB	1.0 %	4.49 dB	0.1 %	5.37 dB	0.01 %	5.84 dB	0.001 %	6.35 dB	0.0001 %	— dB	Peak	6.45 dB		27.91 dBm
10.0 %	2.96 dB																																	
1.0 %	5.09 dB																																	
0.1 %	6.18 dB																																	
0.01 %	6.81 dB																																	
0.001 %	7.28 dB																																	
0.0001 %	— dB																																	
Peak	7.30 dB																																	
	27.62 dBm																																	
10.0 %	2.42 dB																																	
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0.1 %	5.37 dB																																	
0.01 %	5.84 dB																																	
0.001 %	6.35 dB																																	
0.0001 %	— dB																																	
Peak	6.45 dB																																	
	27.91 dBm																																	



## 10. LIMITS AND CONDUCTED RESULTS

### 10.1. OCCUPIED BANDWIDTH

#### RULE PART(S)

FCC: §2.1049

IC: RSS-132, 4.5; RSS-133, 6.5

#### LIMITS

For reporting purposes only

#### TEST PROCEDURE

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer. The occupied bandwidth was measured with the spectrum analyzer at the low, middle and high channel in each band. The -26dB bandwidth was also measured and recorded.

(KDB 971168 D01 Power Meas License Digital Systems v02r02)

#### MODES TESTED

CDMA, LTE

**10.1.1. OCCUPIED BANDWIDTH RESULTS**

**CDMA**

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
BC10	1xRTT	476	817.9	1.274	1.438
		580	820.5	1.274	1.434
		684	823.1	1.272	1.437
	EVDO REL. 0	476	817.9	1.276	1.440
		580	820.5	1.271	1.428
		684	823.1	1.281	1.438
BC0	1xRTT	1013	824.7	1.266	1.419
		384	836.52	1.268	1.409
		777	848.31	1.278	1.551
	EVDO REL. 0	1013	824.7	1.273	1.418
		384	836.52	1.276	1.419
		777	848.31	1.295	1.920
BC1	1xRTT	25	1851.25	1.277	1.427
		600	1880	1.276	1.422
		1175	1908.75	1.278	1.424
	EVDO REL. 0	25	1851.25	1.278	1.432
		600	1880	1.276	1.503
		1175	1908.75	1.277	1.425

### 10.1.2. LTE OCCUPIED BANDWIDTH RESULTS

#### LTE Band 2

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE2	20	QPSK	100/0	1860	17.911	19.331
			100/0	1880	17.926	19.338
			100/0	1900	17.888	19.357
		16QAM	100/0	1860	17.906	19.389
			100/0	1880	17.893	19.372
			100/0	1900	17.861	19.412
	15	QPSK	75/0	1857.5	13.442	14.696
			75/0	1880	13.463	14.624
			75/0	1902.5	13.438	14.589
		16QAM	75/0	1857.5	13.458	14.673
			75/0	1880	13.437	14.637
			75/0	1902.5	13.414	14.532
	10	QPSK	50/0	1855	8.981	9.912
			50/0	1880	8.996	9.844
			50/0	1905	8.976	9.867
		16QAM	50/0	1855	8.954	9.880
			50/0	1880	8.958	9.901
			50/0	1905	8.997	9.831
	5	QPSK	25/0	1852.5	4.499	4.966
			25/0	1880	4.503	5.000
			25/0	1907.5	4.500	4.956
		16QAM	25/0	1852.5	4.507	4.958
			25/0	1880	4.509	5.007
			25/0	1907.5	4.514	4.985

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE2	3	QPSK	15/0	1851.5	2.699	2.982
			15/0	1880	2.703	2.998
			15/0	1908.5	2.706	2.993
		16QAM	15/0	1851.5	2.706	2.996
			15/0	1880	2.696	2.985
			15/0	1908.5	2.696	2.995
	1.4	QPSK	6/0	1850.7	1.090	1.285
			6/0	1880	1.089	1.288
			6/0	1909.3	1.084	1.303
		16QAM	6/0	1850.7	1.096	1.299
			6/0	1880	1.087	1.294
			6/0	1909.3	1.090	1.300

**LTE Band 4**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE4	20	QPSK	100/0	1720	17.913	19.398
			100/0	1732.5	17.919	19.297
			100/0	1745	17.939	19.418
		16QAM	100/0	1720	17.930	19.301
			100/0	1732.5	17.899	19.293
			100/0	1745	17.886	19.262
	15	QPSK	75/0	1717.5	13.456	14.669
			75/0	1732.5	13.458	14.667
			75/0	1747.5	13.453	14.647
		16QAM	75/0	1717.5	13.464	14.589
			75/0	1732.5	13.465	14.624
			75/0	1747.5	13.456	14.652
	10	QPSK	50/0	1715	9.009	9.837
			50/0	1732.5	8.986	9.852
			50/0	1750	8.983	9.888
		16QAM	50/0	1715	8.982	9.848
			50/0	1732.5	8.966	9.847
			50/0	1750	8.989	9.830
	5	QPSK	25/0	1712.5	4.501	4.939
			25/0	1732.5	4.504	4.997
			25/0	1752.5	4.497	4.952
16QAM		25/0	1712.5	4.506	4.975	
		25/0	1732.5	4.505	4.979	
		25/0	1752.5	4.507	4.987	

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE4	3	QPSK	15/0	1711.5	2.695	2.983
			15/0	1732.5	2.695	2.987
			15/0	1753.5	2.701	2.991
		16QAM	15/0	1711.5	2.701	2.973
			15/0	1732.5	2.696	2.983
			15/0	1753.5	2.694	3.000
	1.4	QPSK	6/0	1710.7	1.090	1.288
			6/0	1732.5	1.091	1.279
			6/0	1754.3	1.083	1.275
		16QAM	6/0	1710.7	1.095	1.306
			6/0	1732.5	1.084	1.289
			6/0	1754.3	1.090	1.289



**LTE Band 5**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE5	10	QPSK	50/0	829	8.994	9.877
			50/0	836.5	8.992	9.861
			50/0	844	8.977	9.847
		16QAM	50/0	829	8.998	9.910
			50/0	836.5	8.971	9.855
			50/0	844	8.997	9.854
	5	QPSK	25/0	826.5	4.506	4.962
			25/0	836.5	4.505	5.017
			25/0	846.5	4.501	4.950
		16QAM	25/0	826.5	4.507	4.982
			25/0	836.5	4.510	4.982
			25/0	846.5	4.509	5.014
	3	QPSK	15/0	825.5	2.699	2.962
			15/0	836.5	2.700	2.983
			15/0	847.5	2.703	2.990
		16QAM	15/0	825.5	2.702	2.970
			15/0	836.5	2.696	2.984
			15/0	847.5	2.693	2.990
	1.4	QPSK	6/0	824.7	1.089	1.289
			6/0	836.5	1.083	1.268
			6/0	848.3	1.089	1.275
		16QAM	6/0	824.7	1.088	1.283
			6/0	836.5	1.089	1.281
			6/0	848.3	1.098	1.296

**LTE Band 12**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE12	10	QPSK	50/0	704	9.014	9.816
			50/0	707.5	9.014	9.880
			50/0	711	8.941	9.736
		16QAM	50/0	704	8.998	9.873
			50/0	707.5	9.003	9.897
			50/0	711	8.966	9.805
	5	QPSK	25/0	701.5	4.491	4.947
			25/0	707.5	4.514	5.032
			25/0	713.5	4.496	4.928
		16QAM	25/0	701.5	4.498	4.975
			25/0	707.5	4.514	4.984
			25/0	713.5	4.503	4.980
	3	QPSK	15/0	700.5	2.696	2.974
			15/0	707.5	2.701	2.986
			15/0	714.5	2.703	2.983
		16QAM	15/0	700.5	2.701	2.984
			15/0	707.5	2.700	2.983
			15/0	714.5	2.699	2.990
	1.4	QPSK	6/0	699.7	1.089	1.276
			6/0	707.5	1.086	1.282
			6/0	715.3	1.089	1.275
16QAM		6/0	699.7	1.087	1.287	
		6/0	707.5	1.089	1.281	
		6/0	715.3	1.093	1.295	

**LTE Band 25**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE25	20	QPSK	100/0	1860	17.880	19.210
			100/0	1882.5	17.870	19.210
			100/0	1905	17.870	19.200
		16QAM	100/0	1860	17.890	19.270
			100/0	1882.5	17.870	19.180
			100/0	1905	17.850	19.240
	15	QPSK	75/0	1857.5	13.400	14.480
			75/0	1882.5	13.410	14.690
			75/0	1907.5	13.420	14.560
		16QAM	75/0	1857.5	13.440	14.520
			75/0	1882.5	13.400	14.590
			75/0	1907.5	13.420	14.500
	10	QPSK	50/0	1855	8.959	9.902
			50/0	1882.5	8.989	9.752
			50/0	1910	8.987	9.870
		16QAM	50/0	1855	8.963	9.790
			50/0	1882.5	8.971	9.788
			50/0	1910	8.995	9.824
	5	QPSK	25/0	1852.5	4.504	4.989
			25/0	1882.5	4.505	4.936
			25/0	1912.5	4.506	5.004
		16QAM	25/0	1852.5	4.502	4.993
			25/0	1882.5	4.493	4.964
			25/0	1912.5	4.520	5.014

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE25	3	QPSK	15/0	1851.5	2.686	2.979
			15/0	1882.5	2.680	2.944
			15/0	1913.5	2.685	2.956
		16QAM	15/0	1851.5	2.695	2.961
			15/0	1882.5	2.686	2.960
			15/0	1913.5	2.691	2.999
	1.4	QPSK	6/0	1850.7	1.089	1.282
			6/0	1882.5	1.085	1.329
			6/0	1914.3	1.079	1.293
		16QAM	6/0	1850.7	1.080	1.288
			6/0	1882.5	1.082	1.274
			6/0	1914.3	1.087	1.288

**LTE Band 26**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE26	15	QPSK	75/0	821.5	13.446	14.748
			75/0	831.5	13.463	14.538
			75/0	841.5	13.416	14.578
		16QAM	75/0	821.5	13.443	14.657
			75/0	831.5	13.447	14.751
			75/0	841.5	13.417	14.579
	10	QPSK	50/0	819	8.978	9.883
			50/0	831.5	9.000	9.872
			50/0	844	8.971	9.835
		16QAM	50/0	819	9.003	9.866
			50/0	831.5	8.981	9.871
			50/0	844	8.990	9.817
	5	QPSK	25/0	816.5	4.498	4.964
			25/0	831.5	4.504	5.011
			25/0	846.5	4.503	4.956
		16QAM	25/0	816.5	4.509	4.977
			25/0	831.5	4.501	4.976
			25/0	846.5	4.507	4.990
	3	QPSK	15/0	815.5	2.700	2.965
			15/0	831.5	2.700	2.979
			15/0	847.5	2.704	2.997
		16QAM	15/0	815.5	2.702	2.973
			15/0	831.5	2.697	2.979
			15/0	847.5	2.698	2.996
1.4	QPSK	6/0	814.7	1.090	1.297	
		6/0	831.5	1.082	1.276	
		6/0	848.3	1.091	1.390	
	16QAM	6/0	814.7	1.087	1.286	
		6/0	831.5	1.089	1.293	
		6/0	848.3	1.098	1.293	

**LTE Band 41**

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE41	20	QPSK	100/0	2506	17.929	19.72
			100/0	2593	17.943	19.55
			100/0	2680	17.879	19.32
		16QAM	100/0	2506	17.889	19.68
			100/0	2593	17.908	19.99
			100/0	2680	17.905	19.49
	15	QPSK	75/0	2503.5	13.454	14.60
			75/0	2593	13.459	14.61
			75/0	2682.5	13.449	15.04
		16QAM	75/0	2503.5	13.459	15.29
			75/0	2593	13.455	14.62
			75/0	2682.5	13.447	14.74
	10	QPSK	50/0	2501	9.004	9.798
			50/0	2593	8.979	9.824
			50/0	2685	8.967	9.752
		16QAM	50/0	2501	8.967	9.834
			50/0	2593	9.016	9.881
			50/0	2685	8.998	9.821
	5	QPSK	25/0	2498.5	4.512	5.020
			25/0	2593	4.504	5.006
			25/0	2687.5	4.508	4.960
16QAM		25/0	2498.5	4.511	4.980	
		25/0	2593	4.495	4.964	
		25/0	2687.5	4.506	4.981	

### 10.1.3. OCCUPIED BANDWIDTH PLOTS

#### CDMA

<p>Band BC1 EVDO REL. 0</p>	 <p>Band BC1 EVDO Rel. 0 OBW Mid channel</p>	 <p>Band BC1 1xRTT OBW Mid channel</p>
<p>Band BC0 EVDO REL. 0</p>	 <p>Band BC0 EVDO Rel. 0 OBW Mid channel</p>	 <p>Band BC0 1xRTT OBW Mid channel</p>





<p>Band LTE2 15MHz 16QAM</p>	 <p>Band LTE2 15MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE2 15MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE2 10MHz 16QAM</p>	 <p>Band LTE2 10MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE2 10MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE2 5MHz 16QAM</p>	 <p>Center Freq 1.88000000 GHz</p> <p>Ref Offset 10.0 dB Ref 30.00 dBm</p> <p>Center Freq 1.88000000 GHz</p> <p>CF Step 750.000 kHz</p> <p>Center 1.88 GHz #VBW 220 kHz Span 7.5 MHz Sweep 3.76 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>29.3 dBm</td> </tr> <tr> <td>4.5087 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>5.586 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td>-26.00 dB</td> </tr> <tr> <td>5.007 MHz</td> <td></td> <td></td> </tr> </table> <p>Band LTE2 5MHz OBW 16QAM Mid Channel FRB.gif</p>	Occupied Bandwidth	Total Power	29.3 dBm	4.5087 MHz			Transmit Freq Error	OBW Power	99.00 %	5.586 kHz			x dB Bandwidth		-26.00 dB	5.007 MHz			 <p>Center Freq 1.88000000 GHz</p> <p>Ref Offset 10.0 dB Ref 30.00 dBm</p> <p>Center Freq 1.88000000 GHz</p> <p>CF Step 750.000 kHz</p> <p>Center 1.88 GHz #VBW 220 kHz Span 7.5 MHz Sweep 3.76 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.2 dBm</td> </tr> <tr> <td>4.5033 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>4.336 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td>-26.00 dB</td> </tr> <tr> <td>5.000 MHz</td> <td></td> <td></td> </tr> </table> <p>Band LTE2 5MHz OBW QPSK Mid Channel FRB.gif</p>	Occupied Bandwidth	Total Power	30.2 dBm	4.5033 MHz			Transmit Freq Error	OBW Power	99.00 %	4.336 kHz			x dB Bandwidth		-26.00 dB	5.000 MHz		
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<p>Band LTE2 3MHz 16QAM</p>	 <p>Center Freq 1.88000000 GHz</p> <p>Ref Offset 10.0 dB Ref 30.00 dBm</p> <p>Center Freq 1.88000000 GHz</p> <p>CF Step 450.000 kHz</p> <p>Center 1.88 GHz #VBW 130 kHz Span 4.5 MHz Sweep 2.28 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>29.5 dBm</td> </tr> <tr> <td>2.6964 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>4.183 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td>-26.00 dB</td> </tr> <tr> <td>2.985 MHz</td> <td></td> <td></td> </tr> </table> <p>Band LTE2 3MHz OBW 16QAM Mid Channel FRB.gif</p>	Occupied Bandwidth	Total Power	29.5 dBm	2.6964 MHz			Transmit Freq Error	OBW Power	99.00 %	4.183 kHz			x dB Bandwidth		-26.00 dB	2.985 MHz			 <p>Center Freq 1.88000000 GHz</p> <p>Ref Offset 10.0 dB Ref 30.00 dBm</p> <p>Center Freq 1.88000000 GHz</p> <p>CF Step 450.000 kHz</p> <p>Center 1.88 GHz #VBW 130 kHz Span 4.5 MHz Sweep 2.28 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.4 dBm</td> </tr> <tr> <td>2.7029 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-196 Hz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td></td> <td>-26.00 dB</td> </tr> <tr> <td>2.988 MHz</td> <td></td> <td></td> </tr> </table> <p>Band LTE2 3MHz OBW QPSK Mid Channel FRB.gif</p>	Occupied Bandwidth	Total Power	30.4 dBm	2.7029 MHz			Transmit Freq Error	OBW Power	99.00 %	-196 Hz			x dB Bandwidth		-26.00 dB	2.988 MHz		
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Transmit Freq Error	OBW Power	99.00 %																																				
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x dB Bandwidth		-26.00 dB																																				
2.988 MHz																																						



**LTE Band 4**

<p>Band LTE4 20MHz 16QAM</p>	 <p>Band LTE4 20MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 20MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE4 15MHz 16QAM</p>	 <p>Band LTE4 15MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 15MHz OBW QPSK Mid Channel FRB.gif</p>



<p>Band LTE4 10MHz 16QAM</p>	 <p>Band LTE4 10MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 10MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE4 5MHz 16QAM</p>	 <p>Band LTE4 5MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 5MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE4 3MHz 16QAM</p>	 <p>Band LTE4 3MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 3MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE4 1.4MHz 16QAM</p>	 <p>Band LTE4 1.4MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE4 1.4MHz OBW QPSK Mid Channel FRB.gif</p>

**LTE Band 5**

<p>Band LTE5 10MHz 16QAM</p>	 <p>Band LTE5 10MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE5 10MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE5 5MHz 16QAM</p>	 <p>Band LTE5 5MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE5 5MHz OBW QPSK Mid Channel FRB.gif</p>

Band LTE5 3MHz 16QAM	<p>Center Freq 836.500000 MHz                  Ref Offset 10.0 dB                  Ref 30.00 dBm</p> <p>Center Freq 836.500000 MHz                  CF Step 450.000 kHz                  Span 4.5 MHz                  Sweep 2.28 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.1 dBm</td> </tr> <tr> <td>2.6962 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>2.245 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>2.984 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	30.1 dBm	2.6962 MHz			Transmit Freq Error	OBW Power	99.00 %	2.245 kHz			x dB Bandwidth	x dB	-26.00 dB	2.984 MHz			<p>Center Freq 836.500000 MHz                  Ref Offset 10.0 dB                  Ref 30.00 dBm</p> <p>Center Freq 836.500000 MHz                  CF Step 450.000 kHz                  Span 4.5 MHz                  Sweep 2.28 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>31.0 dBm</td> </tr> <tr> <td>2.6996 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-26 Hz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>2.983 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	31.0 dBm	2.6996 MHz			Transmit Freq Error	OBW Power	99.00 %	-26 Hz			x dB Bandwidth	x dB	-26.00 dB	2.983 MHz		
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Band LTE5 1.4MHz 16QAM	<p>Center Freq 836.500000 MHz                  Ref Offset 10.0 dB                  Ref 30.00 dBm</p> <p>Center Freq 836.500000 MHz                  CF Step 210.000 kHz                  Span 2.1 MHz                  Sweep 4.2 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>29.7 dBm</td> </tr> <tr> <td>1.0890 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>953 Hz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>1.281 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	29.7 dBm	1.0890 MHz			Transmit Freq Error	OBW Power	99.00 %	953 Hz			x dB Bandwidth	x dB	-26.00 dB	1.281 MHz			<p>Center Freq 836.500000 MHz                  Ref Offset 10.0 dB                  Ref 30.00 dBm</p> <p>Center Freq 836.500000 MHz                  CF Step 210.000 kHz                  Span 2.1 MHz                  Sweep 4.2 ms</p> <table border="1"> <tr> <td>Occupied Bandwidth</td> <td>Total Power</td> <td>30.8 dBm</td> </tr> <tr> <td>1.0829 MHz</td> <td></td> <td></td> </tr> <tr> <td>Transmit Freq Error</td> <td>OBW Power</td> <td>99.00 %</td> </tr> <tr> <td>-1.863 kHz</td> <td></td> <td></td> </tr> <tr> <td>x dB Bandwidth</td> <td>x dB</td> <td>-26.00 dB</td> </tr> <tr> <td>1.268 MHz</td> <td></td> <td></td> </tr> </table>	Occupied Bandwidth	Total Power	30.8 dBm	1.0829 MHz			Transmit Freq Error	OBW Power	99.00 %	-1.863 kHz			x dB Bandwidth	x dB	-26.00 dB	1.268 MHz		
Occupied Bandwidth	Total Power	29.7 dBm																																				
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x dB Bandwidth	x dB	-26.00 dB																																				
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**LTE Band 12**

<p>Band LTE12 10MHz 16QAM</p>	<p>Band LTE12 10MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Band LTE12 10MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE12 5MHz 16QAM</p>	<p>Band LTE12 5MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Band LTE12 5MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE12 3MHz 16QAM</p>	 <p>Band LTE12 3MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE12 3MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE12 1.4MHz 16QAM</p>	 <p>Band LTE12 1.4MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE12 1.4MHz OBW QPSK Mid Channel FRB.gif</p>

**LTE Band 25**

<p>Band LTE25 20MHz 16QAM</p>	<p>Agilent 15:50:40 Apr 11, 2015 R T</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.86750000 GHz</p> <p>Stop Freq 1.89750000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On</p> <p>Occupied Bandwidth 17.8664 MHz</p> <p>Transmit Freq Error -427.697 Hz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 20MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:50:19 Apr 11, 2015 R T</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.86750000 GHz</p> <p>Stop Freq 1.89750000 GHz</p> <p>CF Step 3.00000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 17.8740 MHz</p> <p>Transmit Freq Error -393.960 Hz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 20MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE25 15MHz 16QAM</p>	<p>Agilent 15:47:03 Apr 11, 2015 R T</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87125000 GHz</p> <p>Stop Freq 1.89375000 GHz</p> <p>CF Step 2.25000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On</p> <p>Occupied Bandwidth 13.4020 MHz</p> <p>Transmit Freq Error 12.354 kHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 15MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:46:42 Apr 11, 2015 R T</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87125000 GHz</p> <p>Stop Freq 1.89375000 GHz</p> <p>CF Step 2.25000000 MHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 13.4106 MHz</p> <p>Transmit Freq Error 7.787 kHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 15MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE25 10MHz 16QAM</p>	<p>Agilent 15:43:19 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87500000 GHz</p> <p>Stop Freq 1.89000000 GHz</p> <p>CF Step 1.50000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Occupied Bandwidth 8.9713 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 3.040 kHz</p> <p>x dB Bandwidth 3.738 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 10MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:42:58 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87500000 GHz</p> <p>Stop Freq 1.89000000 GHz</p> <p>CF Step 1.50000000 MHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Occupied Bandwidth 8.9891 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error 585.029 Hz</p> <p>x dB Bandwidth 3.752 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 10MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE25 5MHz 16QAM</p>	<p>Agilent 15:40:13 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87875000 GHz</p> <p>Stop Freq 1.88625000 GHz</p> <p>CF Step 750.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Occupied Bandwidth 4.4932 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -6.695 kHz</p> <p>x dB Bandwidth 4.364 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 5MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:39:52 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.87875000 GHz</p> <p>Stop Freq 1.88625000 GHz</p> <p>CF Step 750.000000 kHz Auto Man</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track On Off</p> <p>Occupied Bandwidth 4.5047 MHz</p> <p>Occ BN % Pwr 99.00 % x dB -26.00 dB</p> <p>Transmit Freq Error -5.381 kHz</p> <p>x dB Bandwidth 4.336 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 5MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE25 3MHz 16QAM</p>	<p>Agilent 15:37:17 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.88025000 GHz</p> <p>Stop Freq 1.88475000 GHz</p> <p>CF Step 450.000000 kHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 2.6857 MHz</p> <p>Transmit Freq Error -363.967 Hz</p> <p>x dB Bandwidth 2.960 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 3MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:36:56 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.88025000 GHz</p> <p>Stop Freq 1.88475000 GHz</p> <p>CF Step 450.000000 kHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 2.6798 MHz</p> <p>Transmit Freq Error -4.155 kHz</p> <p>x dB Bandwidth 2.944 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 3MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE25 1.4MHz 16QAM</p>	<p>Agilent 15:33:57 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.88145000 GHz</p> <p>Stop Freq 1.88355000 GHz</p> <p>CF Step 210.000000 kHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 1.0825 MHz</p> <p>Transmit Freq Error -68.347 Hz</p> <p>x dB Bandwidth 1.274 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 1.4MHz OBW 16QAM Mid Channel FRB.gif</p>	<p>Agilent 15:33:36 Apr 11, 2015</p> <p>Ch Freq 1.8825 GHz Trig Free</p> <p>Center Freq 1.88250000 GHz</p> <p>Start Freq 1.88145000 GHz</p> <p>Stop Freq 1.88355000 GHz</p> <p>CF Step 210.000000 kHz</p> <p>Freq Offset 0.00000000 Hz</p> <p>Signal Track Off</p> <p>Occupied Bandwidth 1.0848 MHz</p> <p>Transmit Freq Error 950.492 Hz</p> <p>x dB Bandwidth 1.329 MHz</p> <p>File Operation Status, C:PICTURE.GIF file saved</p> <p>Band LTE25 1.4MHz OBW QPSK Mid Channel FRB.gif</p>

**LTE Band 26**

<p>Band LTE26 15MHz 16QAM</p>	 <p>Band LTE26 15MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE26 15MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE26 10MHz 16QAM</p>	 <p>Band LTE26 10MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE26 10MHz OBW QPSK Mid Channel FRB.gif</p>



<p>Band LTE26 5MHz 16QAM</p>	 <p>Band LTE26 5MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE26 5MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE26 3MHz 16QAM</p>	 <p>Band LTE26 3MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE26 3MHz OBW QPSK Mid Channel FRB.gif</p>





**LTE Band 41**

<p>Band LTE41 20MHz 16QAM</p>	 <p>Band LTE41 20MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE41 20MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE41 15MHz 16QAM</p>	 <p>Band LTE41 15MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE41 15MHz OBW QPSK Mid Channel FRB.gif</p>

<p>Band LTE41 10MHz 16QAM</p>	 <p>Band LTE41 10MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE41 10MHz OBW QPSK Mid Channel FRB.gif</p>
<p>Band LTE41 5MHz 16QAM</p>	 <p>Band LTE41 5MHz OBW 16QAM Mid Channel FRB.gif</p>	 <p>Band LTE41 5MHz OBW QPSK Mid Channel FRB.gif</p>

## 10.2. BAND EDGE EMISSIONS

### RULE PART(S)

FCC: §22.359, §24.238, §27.53 and §90.691

### LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB.

Part 27: (m)(4) For mobile station, the attenuation factor shall be not less than  $43+10\log(P)$ dB at the channel edge and  $(55+10\log(P))$ dB at 5.5MHz from the channel edges.

Part 90:

(a)(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $116 \log_{10}(f/6.1)$  decibels or  $50 + 10 \log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(a)(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10\log_{10}(P)$  decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz. {NOTE: Use 100 kHz reference bandwidth.}

### TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r02

The transmitter output was connected to an Agilent 8960 or a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

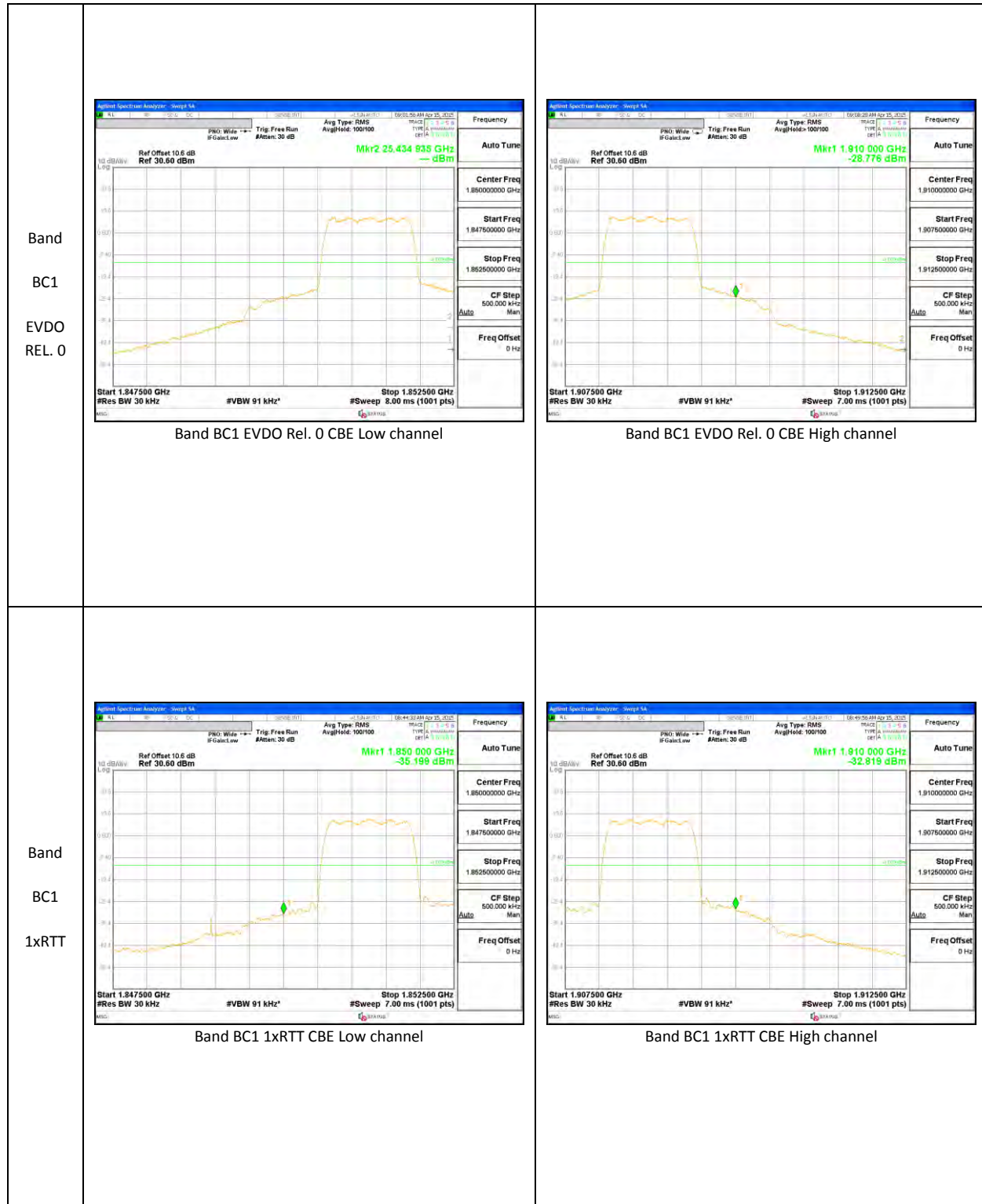
### MODES TESTED

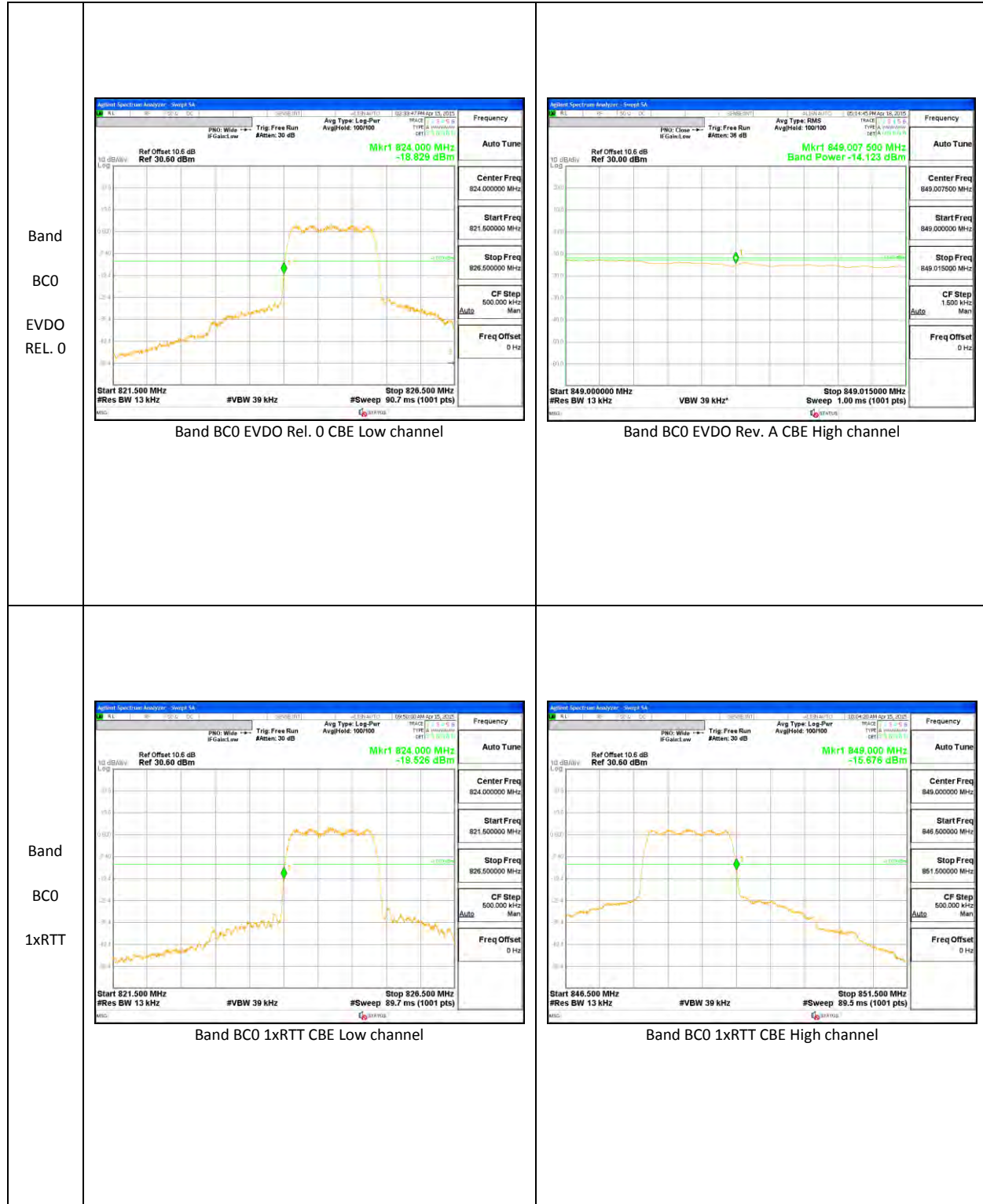
CDMA, LTE

### RESULTS

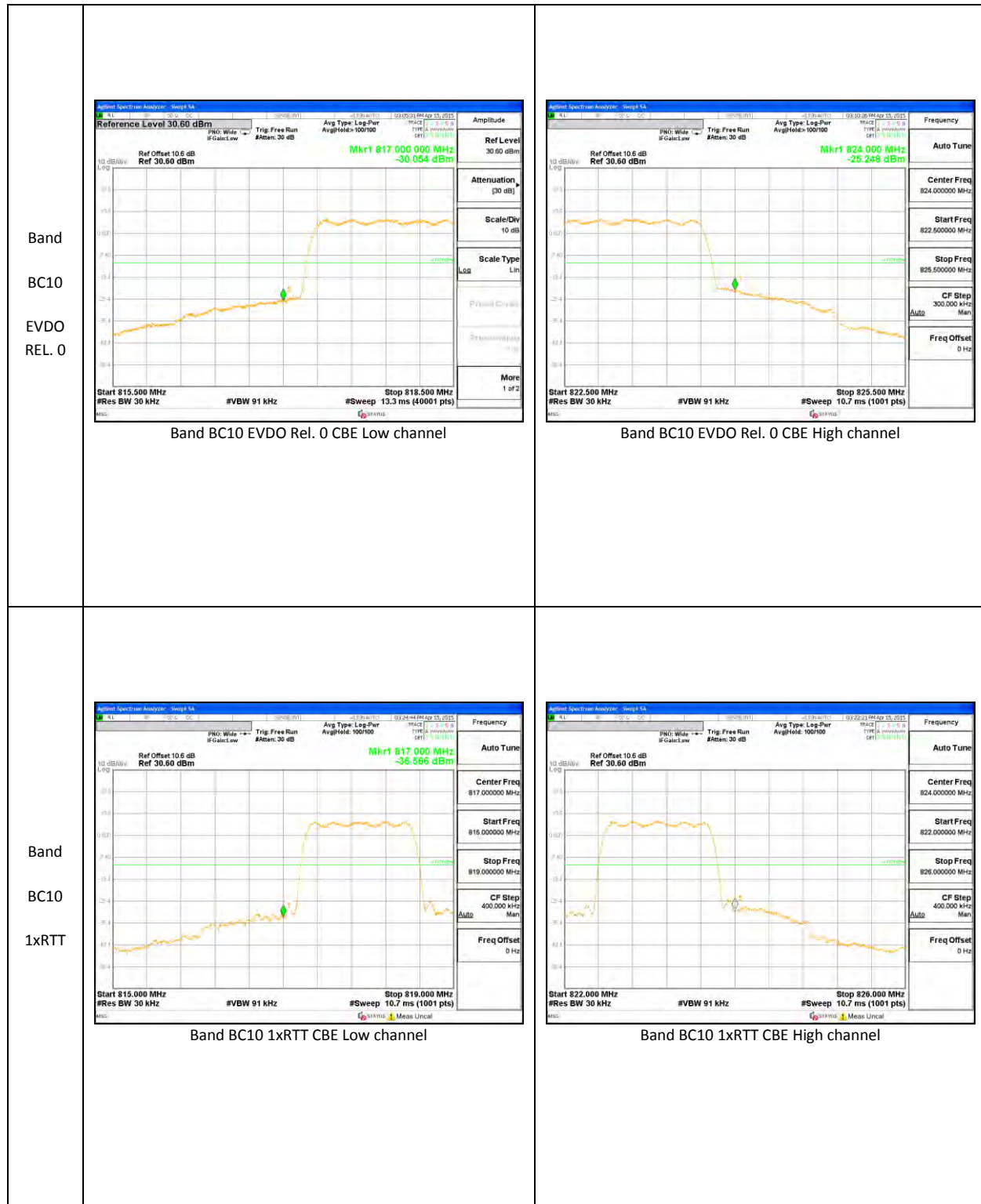
### 10.2.1. BAND EDGE PLOTS

#### CDMA









**LTE Band 2**

