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, DTS/b/g/n

MODEL NUMBER: LGLS751, LG-LS751, LS751

FCC ID: ZNFLS751

REPORT NUMBER: 15I20232-E1 REVISION A

ISSUE DATE: APRIL 06, 2015

Prepared for
LG ELECTRONICS MOBILECOMM U.S.A., INC
1000 SYLVAN AVENUE
ENGLEWOOD CLIFFS,
NEW JERSEY, 07632, U.S.A

Prepared by
UL VERIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, U.S.A.
TEL: (510) 771-1000
FAX: (510) 661-0888

NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	03/24/15	Initial Issue	D. Coronia
A	04/06/15	Updated standard cover page	D. Coronia

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	LG ELECTRONICS MOBILECOMM U.S.A., INC
EUT DESCRIPTION:	CDMA/LTE PHONE + BLUETOOTH, DTS b/g/n
MODEL:	LGLS751, LG-LS751, LS751
SERIAL NUMBER:	808D1BB1
DATE TESTED:	MARCH 2 – 24, 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.

Approved & Released For
UL Verification Services Inc. By:

DAN CORONIA
CONSUMER TECHNOLOGY DIVISION
WiSE PROJECT LEAD
UL VERIFICATION SERVICES INC

Tested By:

STEVEN TRAN
CONSUMER TECHNOLOGY DIVISION
WiSE LAB ENGINEER
UL VERIFICATION SERVICES INC

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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
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☐ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☒ Chamber G(IC: 2324B-7)
	☐ 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)

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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

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

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5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a CDMA/LTE PHONE + BLUETOOTH, DTS/b/g/n

5.2. MAXIMUM OUTPUT POWER

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

FCC Part 22 and 24						
Band	Frequency Range(MHz)	Modulation	Conducted		Radiated	
			AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
BC10	816~824	1xRTT	25.10	323.59	22.24	167.53
	816~824	EVDO REL. 0	24.80	301.99	22.00	158.49
	816~824	EVDO REV. A	24.80	301.99		
BC0	824~849	1xRTT	24.50	281.84	22.80	190.59
	824~849	EVDO REL. 0	24.50	281.84	21.70	147.91
	824~849	EVDO REV. A	24.50	281.84		
BC1	1850~1910	1xRTT	24.50	281.84	25.25	334.73
	1850~1910	EVDO REL. 0	24.50	281.84	25.66	368.13
	1850~1910	EVDO REV. A	24.50	281.84		

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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	24.44	277.97
			16QAM	22.70	186.21	23.63	230.67
		15MHz	QPSK	23.70	234.42	24.36	272.90
			16QAM	22.70	186.21	23.64	231.21
		10MHz	QPSK	23.70	234.42	25.34	341.98
			16QAM	22.70	186.21	24.41	276.06
		5MHz	QPSK	23.70	234.42	25.70	371.54
			16QAM	22.70	186.21	24.38	274.16
		3MHz	QPSK	23.70	234.42	25.29	338.06
			16QAM	22.70	186.21	24.19	262.42
		1.4MHz	QPSK	23.70	234.42	25.98	396.28
			16QAM	22.70	186.21	25.12	325.09

LTE Band 4

FCC Part 24							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE4	1710~1755	20MHz	QPSK	23.70	234.42	24.75	298.54
			16QAM	22.70	186.21	23.85	242.66
		15MHz	QPSK	23.70	234.42	24.77	299.92
			16QAM	22.70	186.21	23.89	244.91
		10MHz	QPSK	23.60	229.09	24.81	302.69
			16QAM	22.50	177.83	23.83	241.55
		5MHz	QPSK	23.40	218.78	24.66	292.42
			16QAM	22.40	173.78	23.70	234.42
		3MHz	QPSK	23.50	223.87	24.87	306.90
			16QAM	22.70	186.21	23.95	248.31
		1.4MHz	QPSK	23.60	229.09	24.73	297.17
			16QAM	22.60	181.98	23.83	241.55

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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	23.40	218.78	22.25	167.88
			16QAM	22.60	181.97	21.08	128.23
		5MHz	QPSK	23.50	223.87	21.47	140.28
			16QAM	22.40	173.78	20.98	125.31
		3MHz	QPSK	23.40	218.78	22.28	169.04
			16QAM	22.60	181.97	22.18	165.20
		1.4MHz	QPSK	23.50	223.87	21.08	128.23
			16QAM	22.40	173.78	21.08	128.23

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	24.20	263.03	18.25	66.83
			16QAM	23.20	208.93	17.90	61.66
		5MHz	QPSK	24.20	263.03	17.60	57.54
			16QAM	23.20	208.93	17.40	54.95
		3MHz	QPSK	24.20	263.03	17.82	60.53
			16QAM	23.20	208.93	17.52	56.49
		1.4MHz	QPSK	24.20	263.03	17.64	58.08
			16QAM	23.20	208.93	17.28	53.46

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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	24.44	277.97
			16QAM	22.70	186.21	23.63	230.67
		15MHz	QPSK	23.70	234.42	24.36	272.90
			16QAM	22.70	186.21	23.64	231.21
		10MHz	QPSK	23.70	234.42	25.34	341.98
			16QAM	22.70	186.21	24.41	276.06
		5MHz	QPSK	23.70	234.42	25.70	371.54
			16QAM	22.70	186.21	24.38	274.16
		3MHz	QPSK	23.70	234.42	25.29	338.06
			16QAM	22.70	186.21	24.19	262.42
		1.4MHz	QPSK	23.70	234.42	25.98	396.28
			16QAM	22.70	186.21	25.12	325.09

LTE Band 26

FCC Part 22							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation mW	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE26	824~849	15MHz	QPSK	23.40	218.78	22.18	165.20
			16QAM	22.50	177.83	21.38	137.40
		10MHz	QPSK	23.50	223.87	21.76	149.97
			16QAM	22.50	177.83	20.56	113.76
		5MHz	QPSK	23.40	218.78	21.47	140.28
			16QAM	22.40	173.78	20.16	103.75
		3MHz	QPSK	23.40	218.78	21.78	150.66
			16QAM	22.40	173.78	20.56	113.76
		1.4MHz	QPSK	23.40	218.78	21.56	143.22
			16QAM	22.40	173.78	20.36	108.64

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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	23.50	223.87	22.25	167.88
			16QAM	22.50	177.83	21.08	128.23
		5MHz	QPSK	23.40	218.78	22.20	165.96
			16QAM	22.40	173.78	20.98	125.31
		3MHz	QPSK	23.40	218.78	22.28	169.04
			16QAM	22.40	173.78	21.08	128.23
		1.4MHz	QPSK	23.40	218.78	22.18	165.20
			16QAM	22.40	173.78	21.08	128.23

LTE Band 41

FCC Part 27							
Band	Frequency Range(MHz)	BandWidth (MHz)	Modulation mW	Conducted		Radiated	
				AVG(dBm)	AVG(mW)	AVG(dBm)	AVG(mW)
LTE41	2496~2690	20MHz	QPSK	24.00	251.19	24.77	299.92
			16QAM	23.00	199.53	23.97	249.46
		15MHz	QPSK	24.00	251.19	24.36	272.90
			16QAM	23.00	199.53	23.66	232.27
		10MHz	QPSK	23.90	245.47	25.07	321.37
			16QAM	23.00	199.53	24.47	279.90
		5MHz	QPSK	24.00	251.19	25.37	344.35
			16QAM	23.00	199.53	24.97	314.05

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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)
CDMA BC1 / LTE2, 1850~1910MHz	0.45
LTE4, 1710~1755MHz	-0.85
CDMA BC0 / LTE5, 824~849MHz	-1.20
LTE12, 699~716MHz	-3.83
LTE25, 1850~1915MHz	0.57
CDMA BC10 / LTE26, 814~849MHz	-1.39
LTE41, 2496~2690MHz	-0.07

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5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	LG	MCS-02WR	RA4Y1031433	N/A
Earphone	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	NA
2	Jack	1	Headset	Shielded	1m	NA
3	RF In/out	1	Communication Test Set	Un-shielded	2m	NA

TEST SETUP

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

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47173 BENICIA STREET, FREMONT, CA 94538, USA TEL: (510) 771-1000 FAX: (510) 661-0888
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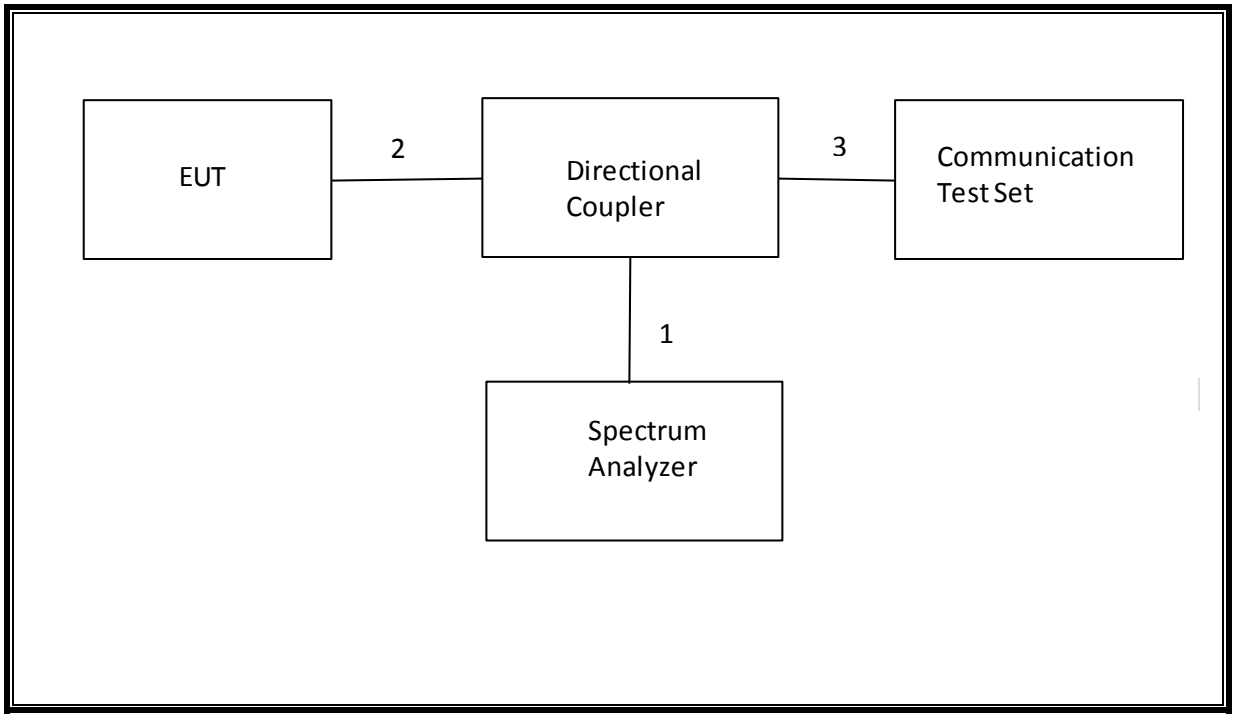
SETUP DIAGRAM FOR TESTS (CONDUCTED TEST SETUP)



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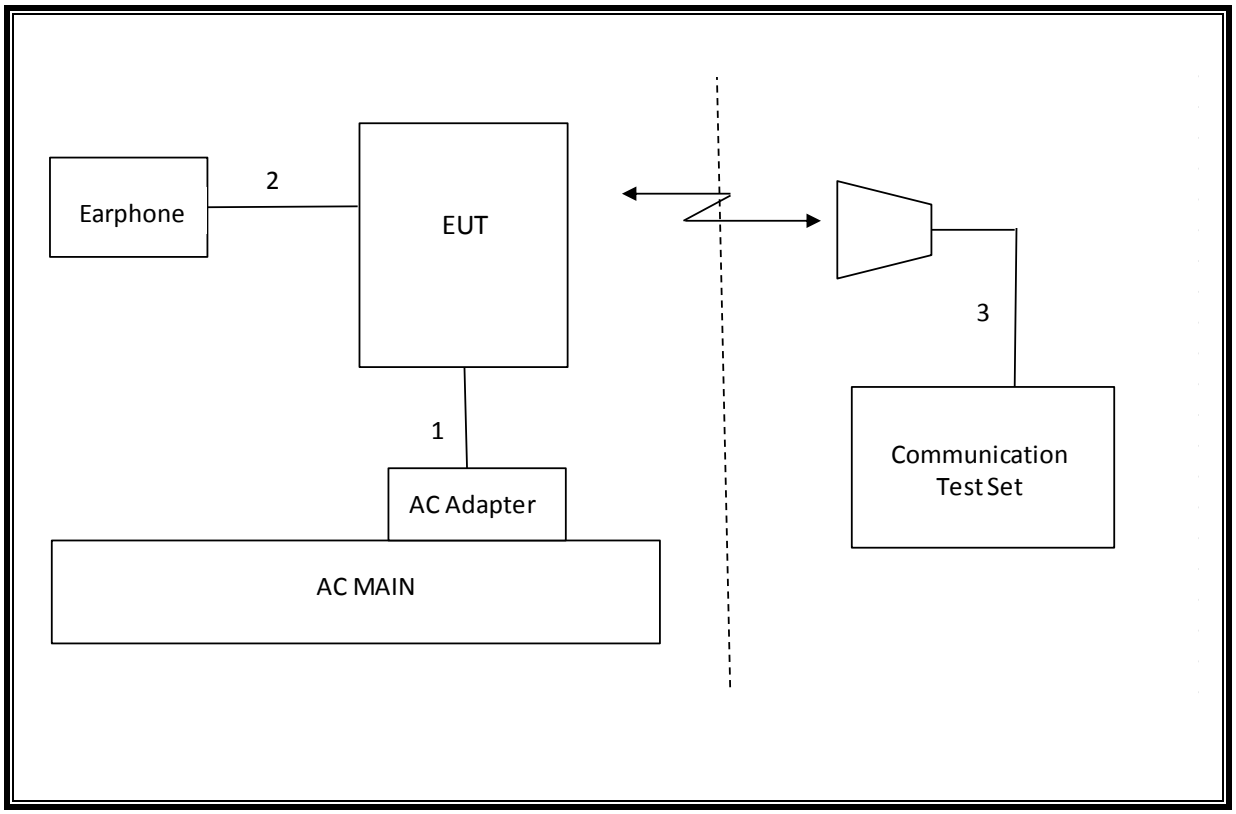
SETUP DIAGRAM FOR TESTS (RADIATED TEST SETUP)



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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	05/11/15
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

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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	17.9 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	-15.4 dBm
27.53(m)	RSS-199(4.5)		-25dBm		Pass	-26.1 dBm
2.1046	N/A	Conducted output power	N/A		Pass	25.1 dBm
27.53(m) 90.691	RSS-199(4.5)	Emission Mask			Pass	-24.8 dBm
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	0.044 PPM
22.913(a)(2)	RSS-132(4.4)	Effective Radiated Power	38 dBm	Radiated	Pass	22.3 dBm
27.50(c)(10)	N/A		34.77 dBm		Pass	18.3 dBm
90.635	N/A		50dBm		Pass	22.3dBm
24.232(c) 27.50(h)(2)	RSS-133(6.4) RSS-199(4.4)	Equivalent Isotropic Radiated Power	33dBm		Pass	26 dBm
27.50(d)(4)	RSS-139(6.4)		30dBm		Pass	24.8 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	-22.2 dBm
27.53(m)	RSS-199(4.5)		-25dBm		Pass	-35.2 dBm

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8. CONDUCTED POWER VERIFICATION

8.1. CDMA2000

8.1.1. 1xRTT

TEST PROCEDURE

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

Application	Rev, License
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)

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CDMA2000 OUTPUT POWER RESULT

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC10	RC1, SO55 (Loopback)	476	817.90	25.0
		580	820.50	25.0
		684	823.10	25.0
	RC3, SO55 (Loopback)	476	817.90	25.0
		580	820.50	25.0
		684	823.10	25.0
	RC3, SO32 (+F-SCH)	476	817.90	25.0
		580	820.50	25.0
		684	823.10	25.0

Band	Mode	Ch	Freq. (MHz)	Avg Pwr (dBm)
BC0	RC1, SO55 (Loopback)	1013	824.70	24.7
		384	836.52	24.7
		777	848.31	24.7
	RC3, SO55 (Loopback)	1013	824.70	24.7
		384	836.52	24.7
		777	848.31	24.7
	RC3, SO32 (+F-SCH)	1013	824.70	24.7
		384	836.52	24.7
		777	848.31	24.7

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

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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.

Application	Rev, License
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 Parms:
  - 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 Parms:
  - 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)

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1XEVDO REL 0 OUTPUT POWER RESULT

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC10	307.2 kbps (2 slot, QPSK)	476	817.90	25.0
		580	820.50	25.0
		684	823.10	25.0

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC0	307.2 kbps (2 slot, QPSK)	1013	824.70	24.7
		384	836.52	24.7
		777	848.31	24.7

Band	FTAP Rate	Channel	f (MHz)	Avg Pwr (dBm)
BC1	307.2 kbps (2 slot, QPSK)	25	1851.25	24.0
		600	1880.00	24.1
		1175	1908.75	24.1

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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.

Application	Rev, License
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)

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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	25.0
		580	820.50	25.0
		684	823.10	25.0

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	24.7
		384	836.52	24.7
		777	848.31	24.7

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	24.0
		600	1880.00	24.0
		1175	1908.75	24.1

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9.1. LTE OUTPUT VERIFICATION

9.1.1. 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	23.7
			1	49	0	23.7	23.7	23.7
			1	99	0	23.6	23.6	23.6
			50	0	1	22.7	22.7	22.7
			50	25	1	22.7	22.7	22.7
			50	49	1	22.6	22.7	22.7
			100	0	1	22.7	22.7	22.7
		16QAM	1	0	1	22.7	22.7	22.7
			1	49	1	22.7	22.7	22.7
			1	99	1	22.6	22.6	22.6
			50	0	2	21.7	21.7	21.7
			50	25	2	21.6	21.7	21.7
			50	49	2	21.6	21.7	21.7
			100	0	2	21.6	21.7	21.7
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	23.5	23.7	23.3
			1	74	0	23.3	23.6	23.3
			36	0	1	22.6	22.7	22.7
			36	18	1	22.6	22.7	22.6
			36	35	1	22.6	22.7	22.6
			75	0	1	22.6	22.7	22.5
		16QAM	1	0	1	22.6	22.7	22.7
			1	37	1	22.6	22.7	22.6
			1	74	1	22.6	22.7	22.6
			36	0	2	21.7	21.7	21.4
			36	18	2	21.7	21.7	21.3
			36	35	2	21.6	21.7	21.3
			75	0	2	21.5	21.6	21.5

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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	23.6
			1	24	0	23.5	23.7	23.6
			1	49	0	23.5	23.7	23.4
			25	0	1	22.7	22.7	22.6
			25	12	1	22.5	22.6	22.6
			25	24	1	22.6	22.7	22.6
			50	0	1	22.6	22.7	22.6
		16QAM	1	0	1	22.6	22.7	22.7
			1	24	1	22.7	22.7	22.6
			1	49	1	22.7	22.7	22.7
			25	0	2	21.7	21.7	21.7
			25	12	2	21.5	21.7	21.7
			25	24	2	21.6	21.6	21.7
			50	0	2	21.5	21.7	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	23.5	23.7	23.6
			1	12	0	23.7	23.7	23.7
			1	24	0	23.4	23.7	23.6
			12	0	1	22.7	22.6	22.6
			12	6	1	22.6	22.7	22.5
			12	11	1	22.6	22.6	22.5
			25	0	1	22.7	22.6	22.5
		16QAM	1	0	1	22.5	22.7	22.6
			1	12	1	22.7	22.7	22.7
			1	24	1	22.4	22.7	22.7
			12	0	2	21.7	21.7	21.6
			12	6	2	21.6	21.7	21.5
			12	11	2	21.7	21.6	21.5
			25	0	2	21.7	21.6	21.6

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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	23.6	23.5
			1	7	0	23.5	23.6	23.6
			1	14	0	23.5	23.7	23.3
			6	0	1	22.7	22.6	22.5
			6	3	1	22.6	22.7	22.6
			6	5	1	22.6	22.7	22.6
			15	0	1	22.6	22.6	22.5
		16QAM	1	0	1	22.7	22.7	22.3
			1	7	1	22.7	22.7	22.7
			1	14	1	22.7	22.7	22.6
			6	0	2	21.5	21.2	21.6
			6	3	2	21.7	21.2	21.6
			6	5	2	21.7	21.6	21.7
			15	0	2	21.6	21.7	21.7

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	23.7	23.4	23.4
			1	2	0	23.7	23.7	23.4
			1	5	0	23.7	23.7	23.3
			3	0	0	23.6	23.6	23.4
			3	1	0	23.6	23.6	23.5
			3	2	0	23.6	23.7	23.6
			6	0	1	22.7	22.6	22.7
		16QAM	1	0	1	22.7	22.6	22.7
			1	2	1	22.7	22.6	21.9
			1	5	1	22.7	22.7	22.2
			3	0	1	22.6	22.6	22.7
			3	1	1	22.7	22.5	22.3
			3	2	1	22.7	22.6	22.6
			6	0	2	21.7	21.3	21.7

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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	23.4	23.4	23.4
			1	49	0	23.2	23.4	23.4
			1	99	0	23.2	23.2	23.7
			50	0	1	22.5	22.5	22.5
			50	24	1	22.4	22.4	22.4
			50	50	1	22.3	22.3	22.4
			100	0	1	22.4	22.4	22.5
		16QAM	1	0	1	22.4	22.6	22.5
			1	49	1	22.2	22.7	22.5
			1	99	1	22.2	22.7	22.5
			50	0	2	21.4	21.6	21.5
			50	24	2	21.4	21.5	21.4
			50	50	2	21.3	21.4	21.4
			100	0	2	21.3	21.5	21.5
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20025	20175	20325
						1717.5 MHz	1732.5 MHz	1747.5 MHz
LTE Band 4	15	QPSK	1	0	0	23.6	23.4	23.7
			1	37	0	23.4	23.5	23.7
			1	74	0	23.4	23.3	23.6
			36	0	1	22.5	22.4	22.5
			36	20	1	22.3	22.4	22.4
			36	39	1	22.3	22.3	22.3
			75	0	1	22.3	22.4	22.4
		16QAM	1	0	1	22.6	22.4	22.7
			1	37	1	22.4	22.4	22.6
			1	74	1	22.3	22.2	22.6
			36	0	2	21.5	21.3	21.6
			36	20	2	21.3	21.4	21.5
			36	39	2	21.2	21.4	21.5
			75	0	2	21.3	21.3	21.5

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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	23.4	23.5	23.6
			1	25	0	23.4	23.4	23.6
			1	49	0	23.3	23.3	23.4
			25	0	1	22.4	22.4	22.3
			25	12	1	22.2	22.2	22.3
			25	25	1	22.2	22.2	22.3
			50	0	1	22.2	22.3	22.3
		16QAM	1	0	1	22.2	22.2	22.5
			1	25	1	22.4	22.3	22.4
			1	49	1	22.0	22.4	22.4
			25	0	2	21.4	21.4	21.5
			25	12	2	21.4	21.4	21.4
			25	25	2	21.2	21.3	21.3
			50	0	2	21.2	21.3	21.4
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	23.3	23.4	23.3
			1	12	0	23.4	23.2	23.4
			1	24	0	23.2	23.2	23.3
			12	0	1	22.2	22.2	22.3
			12	7	1	22.3	22.2	22.3
			12	13	1	22.3	22.1	22.2
			25	0	1	22.4	22.1	22.3
		16QAM	1	0	1	22.4	22.0	22.0
			1	12	1	22.2	22.0	22.1
			1	24	1	22.0	21.9	22.3
			12	0	2	21.4	21.0	21.3
			12	7	2	21.4	21.0	21.1
			12	13	2	21.6	20.9	21.2
			25	0	2	21.6	21.4	21.4

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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	23.4	23.3	23.5
			1	8	0	23.4	23.3	23.4
			1	14	0	23.3	23.3	23.4
			8	0	1	22.4	22.4	22.6
			8	4	1	22.5	22.4	22.4
			8	7	1	22.4	22.4	22.4
			15	0	1	22.5	22.5	22.5
		16QAM	1	0	1	22.4	22.6	22.5
			1	8	1	22.4	22.6	22.4
			1	14	1	22.7	22.4	22.3
			8	0	2	21.4	21.2	21.7
			8	4	2	21.6	21.2	21.6
			8	7	2	21.6	21.0	21.6
			15	0	2	21.6	21.4	21.5

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	23.4	23.4	23.3
			1	3	0	23.4	23.4	23.6
			1	5	0	23.4	23.5	23.4
			3	0	0	23.3	23.3	23.4
			3	1	0	23.5	23.3	23.4
			3	3	0	23.4	23.4	23.4
			6	0	1	22.4	22.3	22.5
		16QAM	1	0	1	22.4	22.2	22.6
			1	3	1	22.5	22.4	22.6
			1	5	1	22.4	22.6	22.6
			3	0	1	22.6	22.0	22.2
			3	1	1	22.6	22.0	22.1
			3	3	1	22.6	22.0	22.1
			6	0	2	21.6	21.2	21.6

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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	23.4	23.3
			1	25	0	23.5	23.3	23.3
			1	49	0	23.4	23.4	23.3
			25	0	1	22.4	22.3	22.4
			25	12	1	22.3	22.3	22.4
			25	25	1	22.3	22.4	22.4
			50	0	1	22.3	22.4	22.3
		16QAM	1	0	1	22.2	22.3	22.3
			1	25	1	22.4	22.4	22.3
			1	49	1	22.4	22.6	22.3
			25	0	2	21.4	21.2	21.6
			25	12	2	21.2	21.3	21.4
			25	25	2	21.2	21.2	21.4
			50	0	2	21.2	21.1	21.2

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)		
						20425	20525	20625
						826.5 MHz	836.5 MHz	846.5 MHz
LTE Band 5	5	QPSK	1	0	0	23.4	23.4	23.4
			1	12	0	23.4	23.5	23.4
			1	24	0	23.3	23.4	23.3
			12	0	1	22.0	22.3	22.3
			12	7	1	22.3	22.2	22.3
			12	13	1	22.3	22.3	22.3
			25	0	1	22.3	22.3	22.3
		16QAM	1	0	1	22.2	22.1	22.2
			1	12	1	22.2	22.1	22.1
			1	24	1	22.4	22.1	22.2
			12	0	2	21.2	21.1	21.2
			12	7	2	21.1	21.2	21.1
			12	13	2	21.1	21.3	21.3
			25	0	2	21.2	21.2	21.3

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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	23.4	23.3	23.3
			1	8	0	23.3	23.3	23.4
			1	14	0	23.4	23.2	23.3
			8	0	1	22.4	22.4	22.3
			8	4	1	22.3	22.4	22.3
			8	7	1	22.4	22.3	22.2
			15	0	1	22.3	22.3	22.3
		16QAM	1	0	1	22.2	22.2	22.6
			1	8	1	22.3	22.3	22.4
			1	14	1	22.2	22.4	22.4
			8	0	2	21.4	21.2	21.2
			8	4	2	21.3	21.0	21.1
			8	7	2	21.1	21.5	21.3
			15	0	2	21.2	21.2	21.3

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	23.3	23.4	23.4
			1	3	0	23.3	23.5	23.4
			1	5	0	23.3	23.3	23.4
			3	0	0	23.2	23.3	23.4
			3	1	0	23.4	23.3	23.3
			3	3	0	23.4	23.4	23.3
			6	0	1	22.3	22.3	22.2
		16QAM	1	0	1	22.4	22.3	22.4
			1	3	1	22.1	22.1	22.4
			1	5	1	22.1	22.0	22.3
			3	0	1	22.1	22.2	22.4
			3	1	1	22.2	22.0	22.3
			3	3	1	22.4	22.1	22.3
			6	0	2	21.0	21.1	21.3

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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	24.2	24.1	24.2
			1	25	0	24.1	24.2	24.1
			1	49	0	24.0	24.0	24.2
			25	0	1	23.1	23.2	23.2
			25	12	1	23.0	23.2	23.2
			25	25	1	23.2	23.1	23.2
			50	0	1	23.2	23.1	23.2
		16QAM	1	0	1	23.2	23.2	23.2
			1	25	1	23.2	23.2	23.2
			1	49	1	23.2	23.2	23.2
			25	0	2	22.2	22.1	22.2
			25	12	2	22.1	22.1	22.1
			25	25	2	22.2	22.0	22.2
			50	0	2	22.2	22.2	22.2
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	23.9	23.9
			1	12	0	24.1	24.2	24.2
			1	24	0	23.9	23.7	24.0
			12	0	1	23.2	23.2	23.2
			12	7	1	23.1	23.2	23.1
			12	13	1	23.2	23.1	23.2
			25	0	1	23.1	23.2	23.2
		16QAM	1	0	1	23.2	23.2	23.2
			1	12	1	23.0	23.2	23.2
			1	24	1	22.9	22.9	23.2
			12	0	2	22.1	22.2	22.2
			12	7	2	22.1	22.1	22.1
			12	13	2	22.1	22.1	22.2
			25	0	2	22.2	22.2	22.2

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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	24.1	24.2	24.0
			1	8	0	23.9	24.1	24.1
			1	14	0	24.0	24.0	24.2
			8	0	1	23.2	23.2	23.1
			8	4	1	23.2	23.2	23.2
			8	7	1	23.2	23.1	23.2
			15	0	1	23.2	23.2	23.2
		16QAM	1	0	1	23.2	23.2	23.1
			1	8	1	23.2	23.2	23.2
			1	14	1	23.1	23.2	23.1
			8	0	2	22.1	22.1	22.1
			8	4	2	22.0	22.2	22.2
			8	7	2	22.2	22.1	22.2
			15	0	2	22.1	22.2	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	24.1	24.2	24.0
			1	3	0	24.1	24.1	24.1
			1	5	0	24.2	24.1	24.1
			3	0	0	24.0	24.0	24.1
			3	1	0	24.1	24.1	24.2
			3	3	0	24.1	24.0	24.2
			6	0	1	23.2	23.1	23.2
		16QAM	1	0	1	23.2	23.0	23.2
			1	3	1	23.2	23.0	23.2
			1	5	1	23.2	23.2	22.9
			3	0	1	22.8	22.9	23.2
			3	1	1	23.1	23.1	23.0
			3	3	1	23.1	23.1	23.2
			6	0	2	22.2	22.0	22.1

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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	23.5	23.5	23.7
			1	49	0	23.5	23.6	23.7
			1	99	0	23.5	23.5	23.7
			50	0	1	22.6	22.6	22.5
			50	24	1	22.5	22.7	22.5
			50	50	1	22.4	22.6	22.3
			100	0	1	22.6	22.7	22.5
		16QAM	1	0	1	22.7	22.4	22.7
			1	49	1	22.7	22.3	22.5
			1	99	1	22.7	22.0	22.4
			50	0	2	21.5	21.5	21.5
			50	24	2	21.5	21.5	21.4
			50	50	2	21.4	21.5	21.2
			100	0	2	21.4	21.6	21.4
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	23.6	23.6	23.7
			1	37	0	23.6	23.7	23.7
			1	74	0	23.5	23.7	23.5
			36	0	1	22.6	22.7	22.6
			36	20	1	22.6	22.7	22.4
			36	39	1	22.5	22.7	22.3
			75	0	1	22.5	22.6	22.4
		16QAM	1	0	1	22.7	22.6	22.7
			1	37	1	22.7	22.6	22.7
			1	74	1	22.7	22.4	22.7
			36	0	2	21.7	21.5	21.5
			36	20	2	21.7	21.4	21.4
			36	39	2	21.6	21.5	21.3
			75	0	2	21.5	21.5	21.4

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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	23.7
			1	25	0	23.7	23.7	23.4
			1	49	0	23.7	23.5	23.5
			25	0	1	22.6	22.6	22.4
			25	12	1	22.6	22.7	22.4
			25	25	1	22.7	22.7	22.3
			50	0	1	22.5	22.7	22.7
		16QAM	1	0	1	22.7	22.7	22.3
			1	25	1	22.7	22.7	22.6
			1	49	1	22.7	22.7	22.2
			25	0	2	21.5	21.7	21.4
			25	12	2	21.6	21.7	21.3
			25	25	2	21.6	21.6	21.3
			50	0	2	21.4	21.6	21.3
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	23.6	23.4	23.1
			1	12	0	23.5	23.6	23.7
			1	24	0	23.6	23.5	23.2
			12	0	1	22.5	22.5	22.4
			12	7	1	22.6	22.7	22.3
			12	13	1	22.6	22.6	22.4
			25	0	1	22.5	22.6	22.4
		16QAM	1	0	1	22.6	22.6	22.0
			1	12	1	22.4	22.7	22.0
			1	24	1	22.7	22.7	22.0
			12	0	2	21.5	21.6	21.3
			12	7	2	21.7	21.7	21.3
			12	13	2	21.7	21.7	21.4
			25	0	2	21.4	21.5	21.5

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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	23.4	23.4
			1	8	0	23.4	23.7	23.4
			1	14	0	23.3	23.6	23.5
			8	0	1	22.5	22.5	22.3
			8	4	1	22.5	22.6	22.4
			8	7	1	22.5	22.7	22.4
			15	0	1	22.5	22.6	22.4
		16QAM	1	0	1	22.6	22.7	22.1
			1	8	1	22.6	22.7	22.7
			1	14	1	22.7	22.7	22.7
			8	0	2	21.5	21.3	21.1
			8	4	2	21.7	21.4	21.7
			8	7	2	21.6	21.5	21.1
			15	0	2	21.5	21.5	21.7
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	23.4	23.7	23.5
			1	3	0	23.4	23.7	23.5
			1	5	0	23.4	23.7	23.5
			3	0	0	23.4	23.5	23.3
			3	1	0	23.5	23.5	23.4
			3	3	0	23.6	23.7	23.4
			6	0	1	22.5	22.7	22.4
		16QAM	1	0	1	22.7	22.4	22.5
			1	3	1	22.6	22.5	22.5
			1	5	1	22.6	22.5	22.6
			3	0	1	22.6	22.3	22.0
			3	1	1	22.4	22.6	22.1
			3	3	1	22.5	22.7	22.1
			6	0	2	21.7	21.6	21.7

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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	23.4	23.4	23.4
			1	37	0	23.4	23.4	23.4
			1	74	0	23.3	23.4	23.3
			36	0	1	22.4	22.3	22.2
			36	20	1	22.3	22.3	22.2
			36	39	1	22.2	22.2	22.2
			75	0	1	22.3	22.2	22.3
		16QAM	1	0	1	22.3	22.5	22.3
			1	37	1	22.6	22.4	22.1
			1	74	1	22.3	22.3	22.0
			36	0	2	21.4	21.2	21.0
			36	20	2	21.3	21.3	21.0
			36	39	2	21.3	21.2	20.9
			75	0	2	21.3	21.1	21.3
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	23.5	23.4	23.4
			1	25	0	23.4	23.4	23.3
			1	49	0	23.5	23.3	23.4
			25	0	1	22.1	22.2	22.3
			25	12	1	22.2	22.3	22.2
			25	25	1	22.3	22.2	22.2
			50	0	1	22.2	22.3	22.2
		16QAM	1	0	1	22.4	22.5	22.4
			1	25	1	22.4	22.3	22.4
			1	49	1	22.4	22.2	22.3
			25	0	2	21.2	21.2	21.2
			25	12	2	21.2	21.2	21.2
			25	25	2	21.2	21.1	21.1
			50	0	2	21.2	21.1	21.1

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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	23.4	23.3
			1	12	0	23.3	23.3	23.4
			1	24	0	23.3	23.3	23.4
			12	0	1	22.2	22.2	22.1
			12	7	1	22.2	22.3	22.2
			12	13	1	22.2	22.3	22.1
			25	0	1	22.1	22.3	22.2
		16QAM	1	0	1	22.1	22.1	22.2
			1	12	1	22.3	22.1	22.4
			1	24	1	22.0	22.1	22.2
			12	0	2	21.0	20.9	21.1
			12	7	2	21.2	20.9	21.0
			12	13	2	21.0	20.9	20.9
			25	0	2	21.2	21.2	21.0
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	23.4	23.4	23.3
			1	8	0	23.3	23.4	23.4
			1	14	0	23.3	23.3	23.2
			8	0	1	22.1	22.2	22.2
			8	4	1	22.2	22.1	22.1
			8	7	1	22.3	22.2	22.1
			15	0	1	22.2	22.1	22.2
		16QAM	1	0	1	22.0	22.4	22.4
			1	8	1	22.1	22.2	22.0
			1	14	1	21.9	22.4	22.1
			8	0	2	21.0	21.2	21.4
			8	4	2	21.0	21.2	21.1
			8	7	2	21.1	21.2	21.0
			15	0	2	21.0	21.1	21.2

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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	23.4
			1	3	0	23.4	23.3	23.3
			1	5	0	23.3	23.2	23.3
			3	0	0	23.2	23.2	23.2
			3	1	0	23.2	23.3	23.2
			3	3	0	23.3	23.3	23.3
			6	0	1	22.2	22.2	22.2
		16QAM	1	0	1	22.2	22.2	22.4
			1	3	1	22.3	22.2	22.3
			1	5	1	22.3	22.3	22.4
			3	0	1	22.4	22.2	22.3
			3	1	1	22.2	22.1	22.2
			3	3	1	22.1	22.1	22.3
			6	0	2	21.3	21.0	21.1

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LTE Band 41

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)				
						39750	40185	40620	41055	41490
						2506 MHz	2549.5 MHz	2593 MHz	2636.5 MHz	2680 MHz
LTE Band 41	20	QPSK	1	0	0	**23.7**	**24.0**	**23.9**	**24.0**	23.9
			1	49	0	23.5	24.0	23.7	23.9	**23.4**
			1	99	0	23.6	23.8	23.7	23.7	23.4
			50	0	1	**22.8**	**23.0**	**22.9**	**22.7**	**22.8**
			50	25	1	22.8	22.8	22.9	22.6	22.6
			50	49	1	22.8	22.7	22.8	22.5	22.6
			100	0	1	22.8	22.8	**23.0**	22.7	22.6
		16QAM	1	0	1	23.0	23.0	23.0	23.0	22.3
			1	49	1	22.8	22.9	23.0	22.7	22.0
			1	99	1	22.6	22.7	23.0	22.6	22.8
			50	0	2	21.9	21.9	22.0	21.8	21.7
			50	25	2	21.7	21.8	21.9	21.7	21.7
			50	49	2	21.7	21.7	21.8	21.6	21.6
			100	0	2	21.6	21.7	22.0	21.7	21.7
Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)				
						39725	40173	40620	41068	41515
						2503.5 MHz	2548.3 MHz	2593 MHz	2637.8 MHz	2682.5 MHz
LTE Band 41	15	QPSK	1	0	0	23.9	23.8	23.9	23.8	23.7
			1	37	0	23.8	23.6	23.9	24.0	23.5
			1	74	0	23.6	23.5	23.7	23.5	23.4
			36	0	1	22.8	22.9	22.8	22.7	22.8
			36	18	1	22.8	22.7	22.7	22.6	22.7
			36	35	1	22.7	22.7	22.7	22.5	22.7
			75	0	1	22.8	22.8	22.8	22.6	22.7
		16QAM	1	0	1	23.0	23.0	22.7	23.0	23.0
			1	37	1	23.0	23.0	22.5	22.7	23.0
			1	74	1	23.0	23.0	22.5	22.8	23.0
			36	0	2	21.7	21.7	21.9	21.9	21.7
			36	18	2	21.6	21.7	21.9	21.7	21.7
			36	35	2	21.6	21.6	21.9	21.6	21.7
			75	0	2	21.7	21.9	21.9	21.5	21.8

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Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)				
						39700	40160	40620	41080	41540
						2501 MHz	2547 MHz	2593 MHz	2639 MHz	2685 MHz
LTE Band 41	10	QPSK	1	0	0	23.8	23.9	23.9	23.8	23.7
			1	24	0	23.5	23.8	23.7	23.5	23.5
			1	49	0	23.7	23.7	23.7	23.5	23.5
			25	0	1	22.8	22.8	22.9	22.7	22.8
			25	12	1	22.8	22.8	22.8	22.6	22.8
			25	24	1	22.7	22.8	22.7	22.6	22.7
			50	0	1	22.7	22.8	22.7	22.6	22.7
		16QAM	1	0	1	23.0	23.0	23.0	22.9	23.0
			1	24	1	23.0	23.0	22.4	22.4	23.0
			1	49	1	23.0	23.0	22.3	22.2	23.0
			25	0	2	21.9	21.9	21.9	21.8	21.8
			25	12	2	21.8	21.8	21.8	21.7	21.6
			25	24	2	21.7	21.8	21.8	21.6	21.6
			50	0	2	21.6	21.8	21.9	21.8	21.8

Band	BW (MHz)	Mode	RB Allocation	RB offset	Target MPR	Avg Pwr (dBm)				
						39675	40148	40620	41093	41565
						2498.5 MHz	2545.8 MHz	2593 MHz	2640.3 MHz	2687.5 MHz
LTE Band 41	5	QPSK	1	0	0	23.7	23.7	23.8	23.4	23.5
			1	12	0	23.7	24.0	24.0	24.0	23.5
			1	24	0	23.5	23.8	23.6	23.6	23.3
			12	0	1	22.6	22.9	22.9	22.6	22.6
			12	6	1	22.6	22.8	22.8	22.5	22.7
			12	11	1	22.7	22.8	22.8	22.6	22.7
			25	0	1	22.6	22.8	22.9	22.6	22.7
		16QAM	1	0	1	23.0	23.0	23.0	23.0	22.1
			1	12	1	23.0	23.0	23.0	22.4	22.1
			1	24	1	23.0	23.0	23.0	22.0	22.0
			12	0	2	21.6	22.0	21.8	21.4	21.7
			12	6	2	21.7	21.9	21.5	21.3	21.7
			12	11	2	21.7	21.9	22.0	21.4	21.8
			25	0	2	21.7	21.9	21.9	21.7	22.0

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10. 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.

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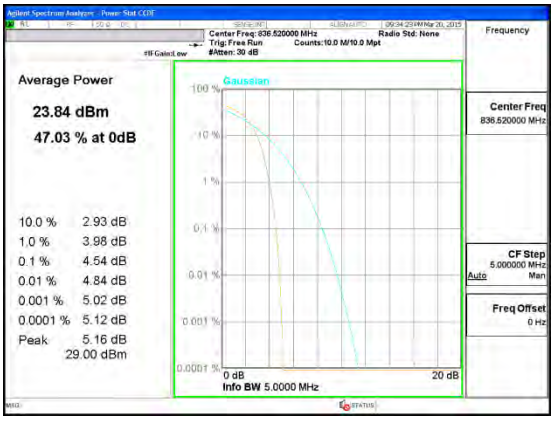
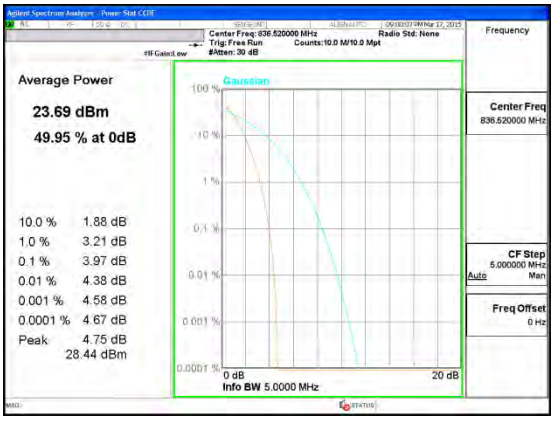
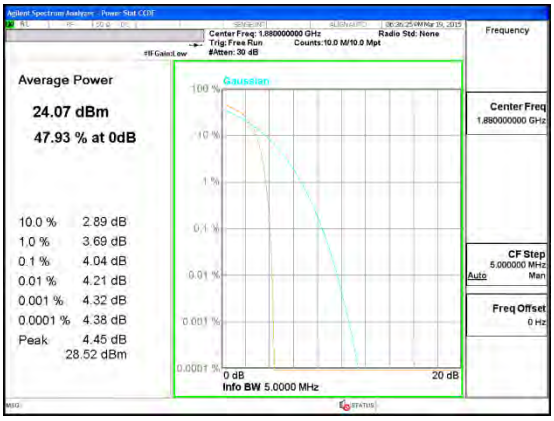
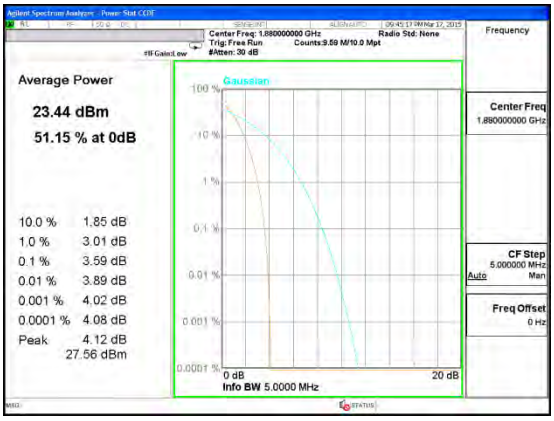
10.1. CONDUCTED PEAK TO AVERAGE RESULT

CDMA

Band BC0 EVDO REL. 0	 Band BC0 EVDO Rel. 0 Mid channel	 Band BC0 1xRTT Mid channel

Band BC1 EVDO REL. 0	 Band BC1 EVDO Rel. 0 Mid channel	 Band BC1 1xRTT Mid channel

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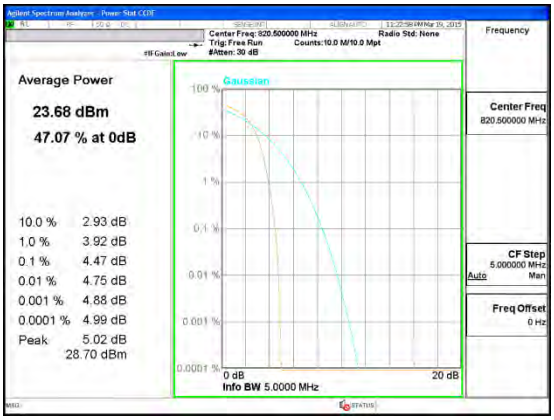
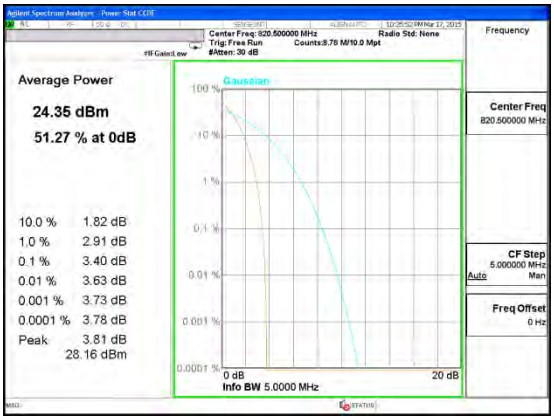
Band BC10 EVDO REL. 0	 Band BC10 EVDO Rel. 0 Mid channel	 Band BC10 1xRTT Mid channel

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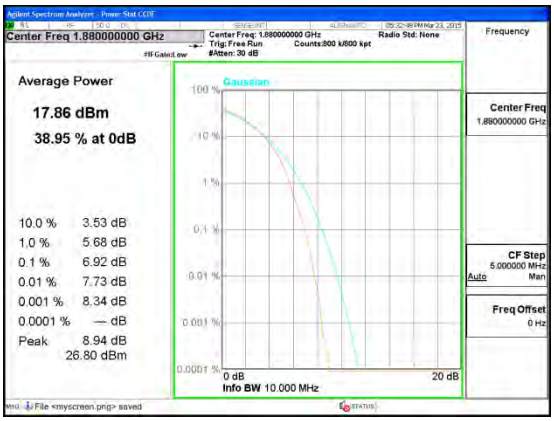
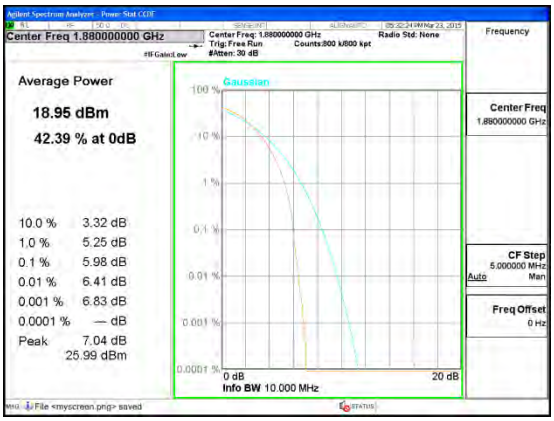
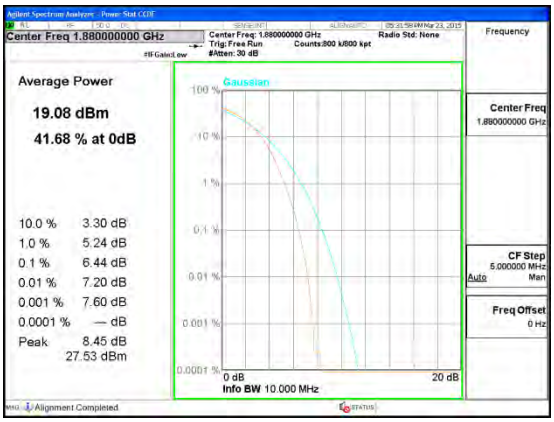
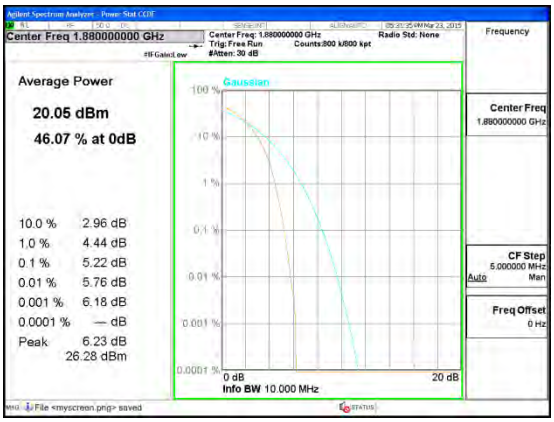
LTE Band 2

Band LTE2 20MHz 16QAM	 Band LTE2 20MHz 16QAM Mid channel	 Band LTE2 20MHz QPSK Mid channel

Band LTE2 15MHz 16QAM	 Band LTE2 15MHz 16QAM Mid channel	 Band LTE2 15MHz QPSK Mid channel

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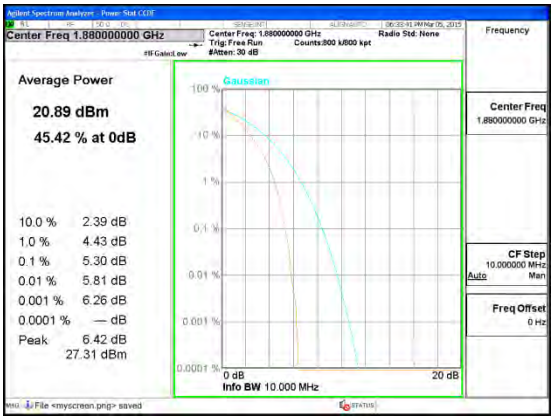
Band LTE2 10MHz 16QAM	 Band LTE2 10MHz 16QAM Mid channel	 Band LTE2 10MHz QPSK Mid channel
Band LTE2 5MHz 16QAM	 Band LTE2 5MHz 16QAM Mid channel	 Band LTE2 5MHz QPSK Mid channel

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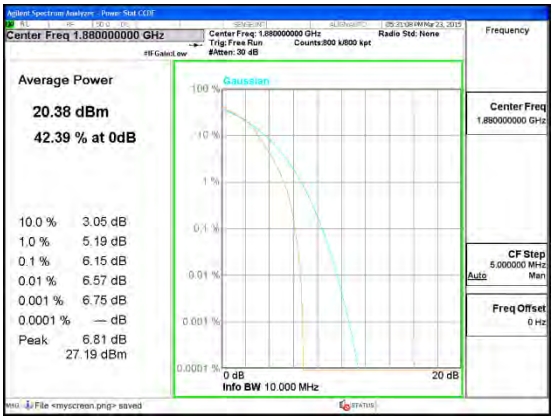
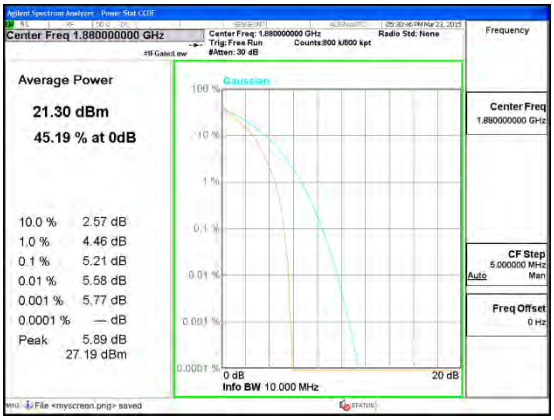
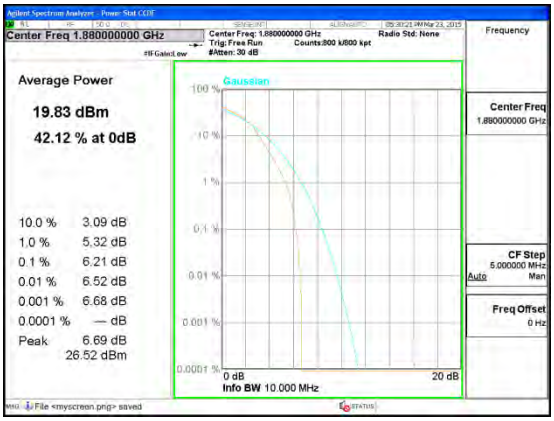
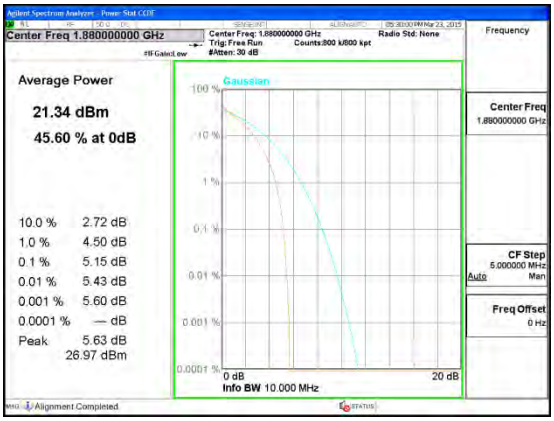
Band LTE2 3MHz 16QAM	 Band LTE2 3MHz 16QAM Mid channel	 Band LTE2 3MHz QPSK Mid channel

Band LTE2 1.4MHz 16QAM	 Band LTE2 1.4MHz 16QAM Mid channel	 Band LTE2 1.4MHz QPSK Mid channel

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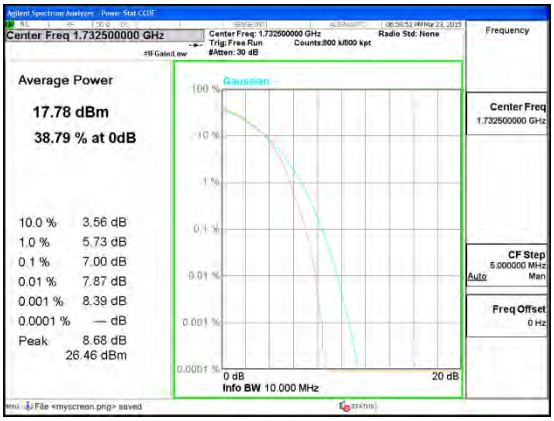
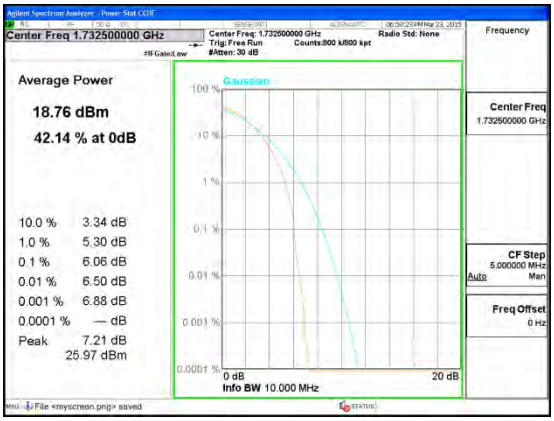
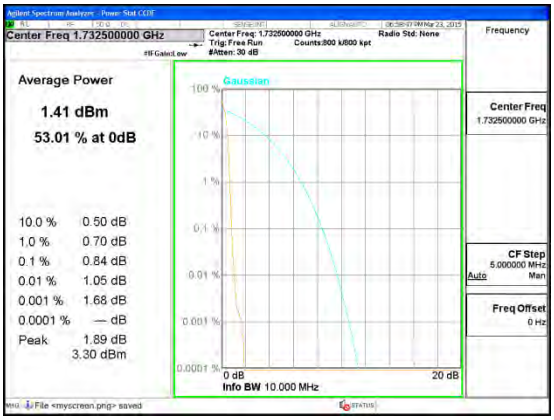
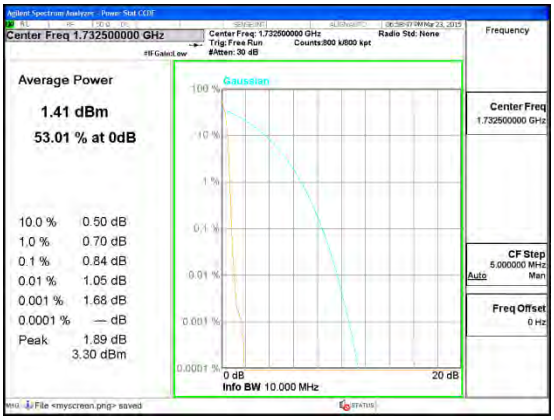
LTE Band 4

Band LTE4 20MHz 16QAM	 Band LTE4 20MHz 16QAM Mid channel	 Band LTE4 20MHz QPSK Mid channel

Band LTE4 15MHz 16QAM	 Band LTE4 15MHz 16QAM Mid channel	 Band LTE4 15MHz QPSK Mid channel

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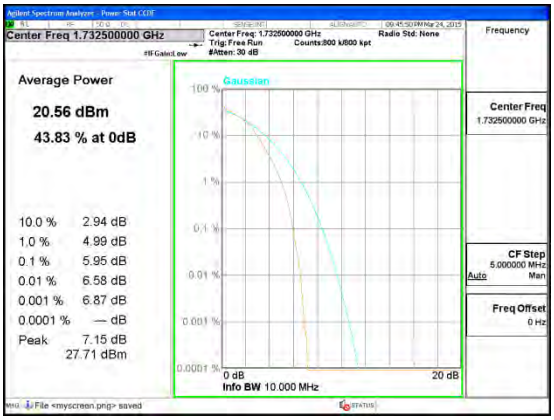
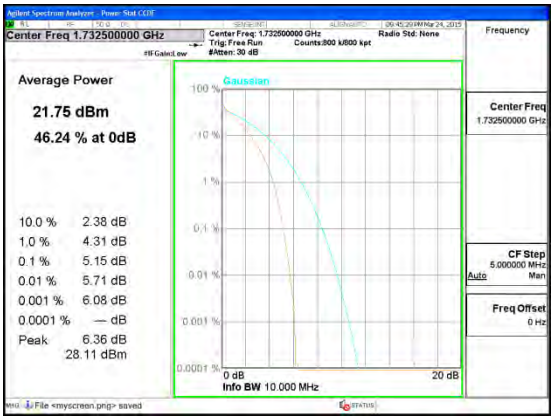
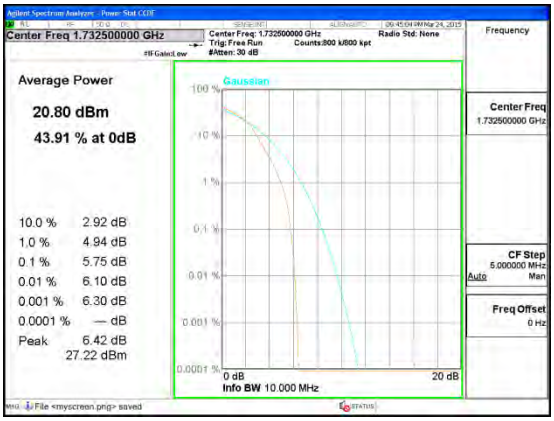
Band LTE4 10MHz 16QAM	 Band LTE4 10MHz 16QAM Mid channel	 Band LTE4 10MHz QPSK Mid channel

Band LTE4 5MHz 16QAM	 Band LTE4 5MHz 16QAM Mid channel	 Band LTE4 5MHz QPSK Mid channel

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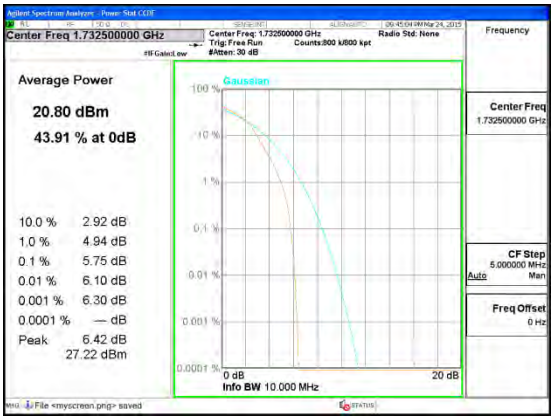
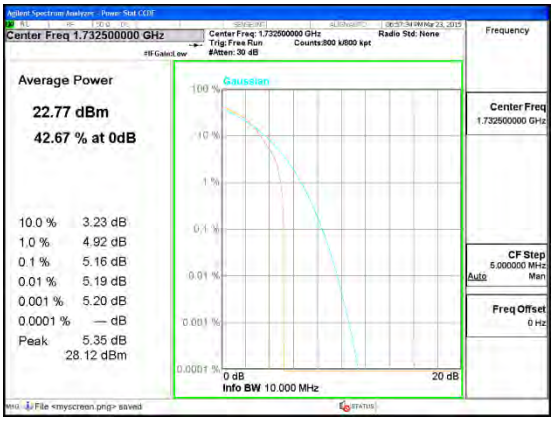
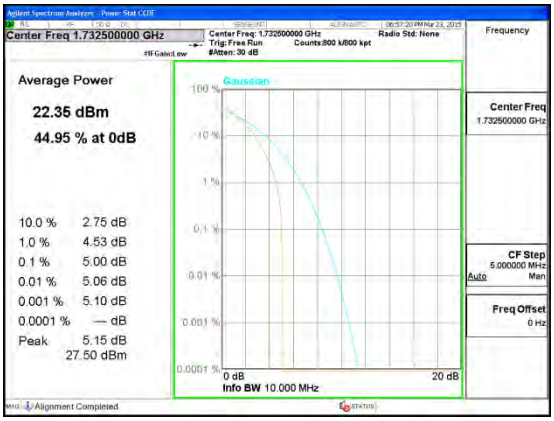
Band LTE4 3MHz 16QAM	 Band LTE4 3MHz 16QAM Mid channel	 Band LTE4 3MHz QPSK Mid channel

Band LTE4 1.4MHz 16QAM	 Band LTE4 1.4MHz 16QAM Mid channel	 Band LTE4 1.4MHz QPSK Mid channel

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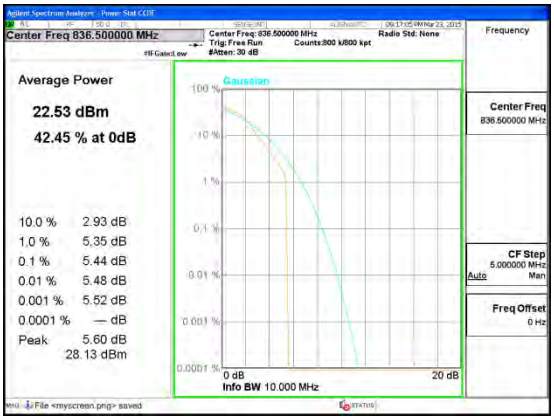
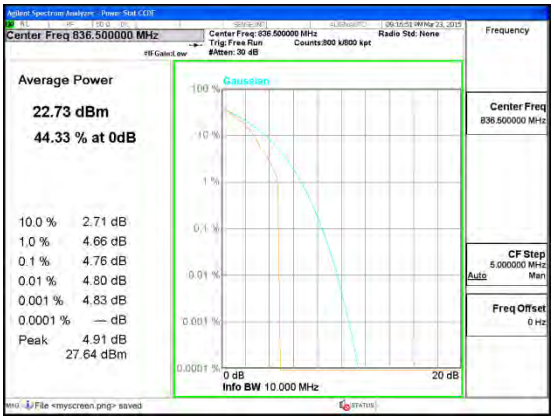
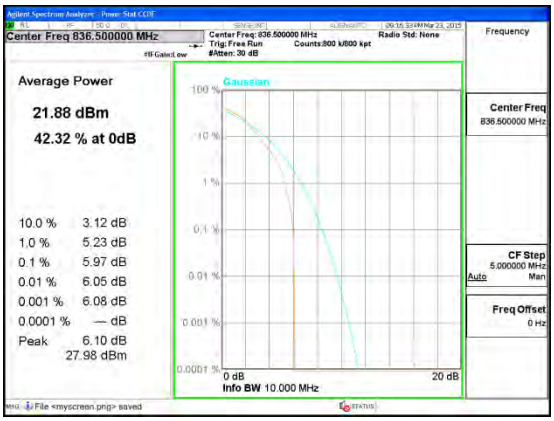
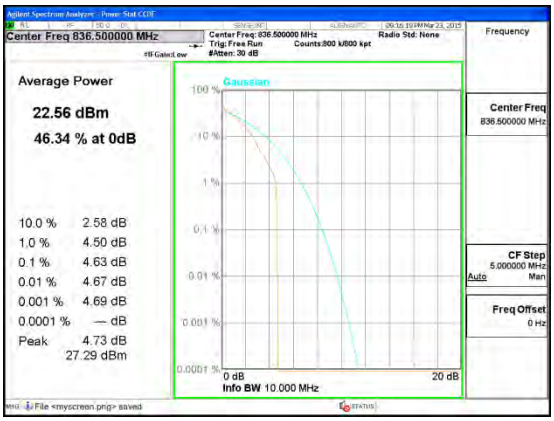
LTE Band 5

Band LTE5 10MHz 16QAM	 Band LTE5 10MHz 16QAM Mid channel	 Band LTE5 10MHz QPSK Mid channel

Band LTE5 5MHz 16QAM	 Band LTE5 5MHz 16QAM Mid channel	 Band LTE5 5MHz QPSK Mid channel

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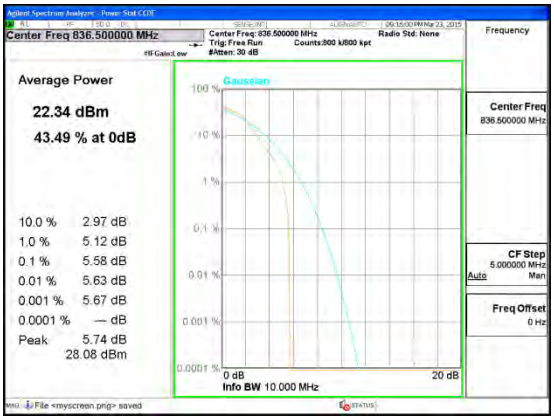
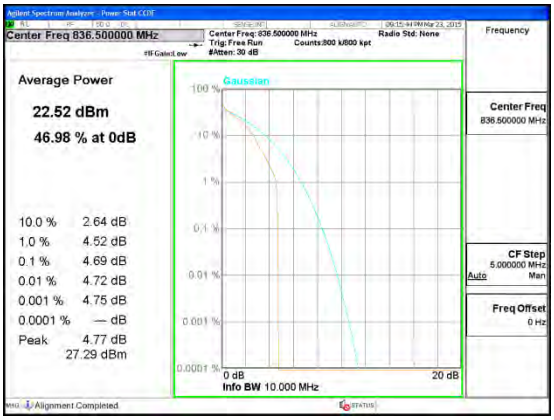
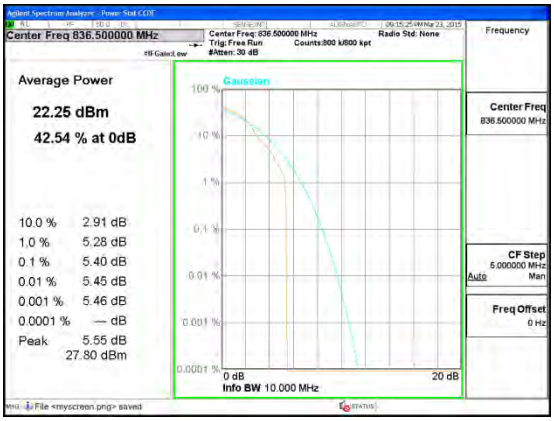
Band LTE5 3MHz 16QAM	 Band LTE5 3MHz 16QAM Mid channel	 Band LTE5 3MHz QPSK Mid channel
Band LTE5 1.4MHz 16QAM	 Band LTE5 1.4MHz 16QAM Mid channel	 Band LTE5 1.4MHz QPSK Mid channel

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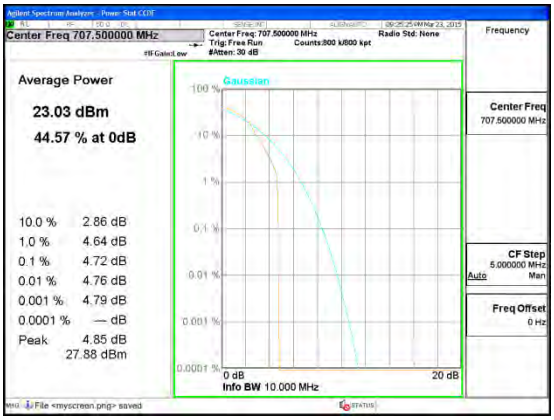
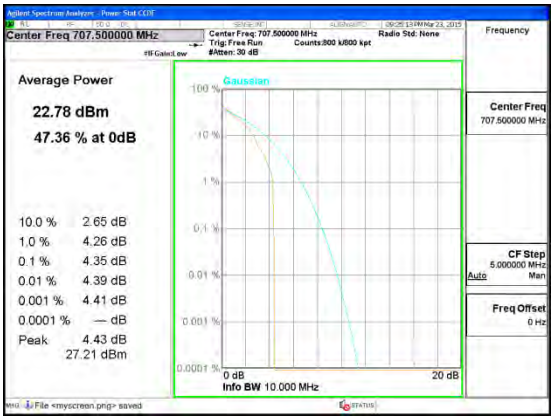
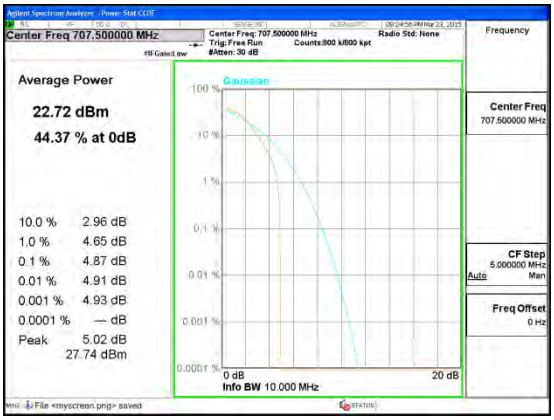
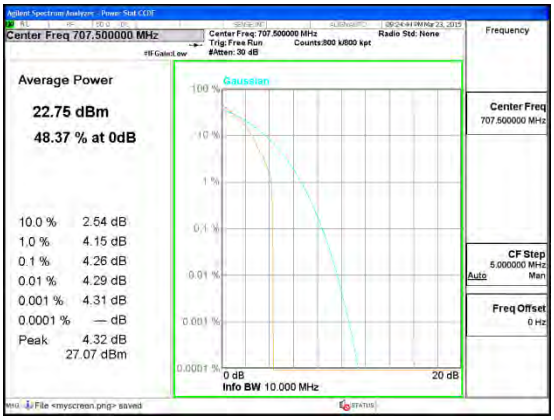
LTE Band 12

Band LTE12 10MHz 16QAM	 Band LTE12 10MHz 16QAM Mid channel	 Band LTE12 10MHz QPSK Mid channel

Band LTE12 5MHz 16QAM	 Band LTE12 5MHz 16QAM Mid channel	 Band LTE12 5MHz QPSK Mid channel

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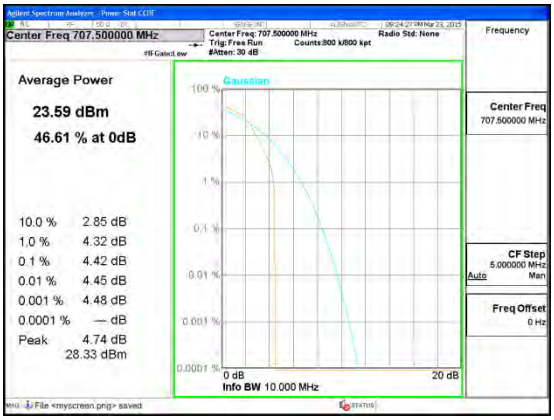
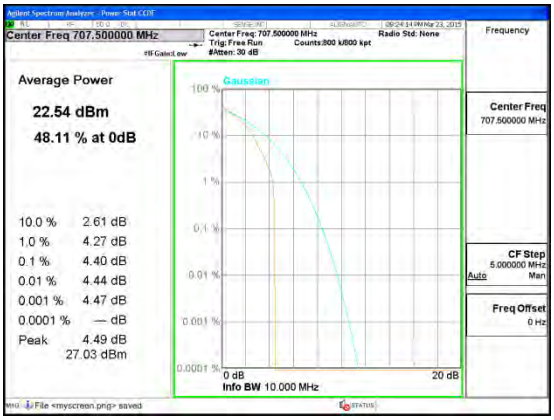
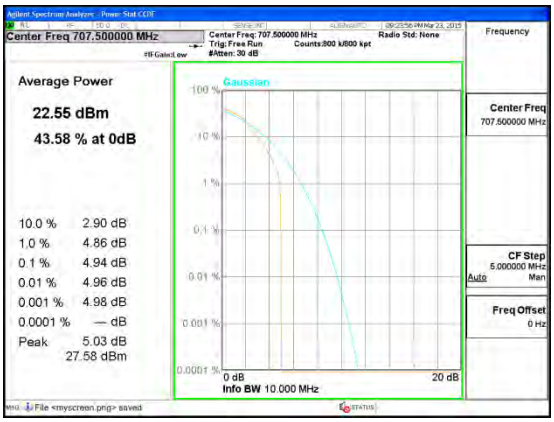
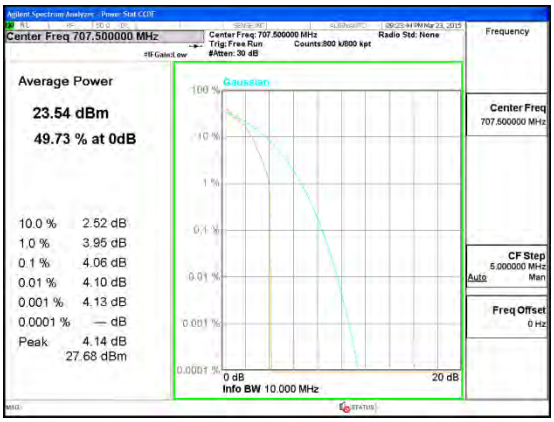
Band LTE12 3MHz 16QAM	 Band LTE12 3MHz 16QAM Mid channel	 Band LTE12 3MHz QPSK Mid channel
Band LTE12 1.4MHz 16QAM	 Band LTE12 1.4MHz 16QAM Mid channel	 Band LTE12 1.4MHz QPSK Mid channel

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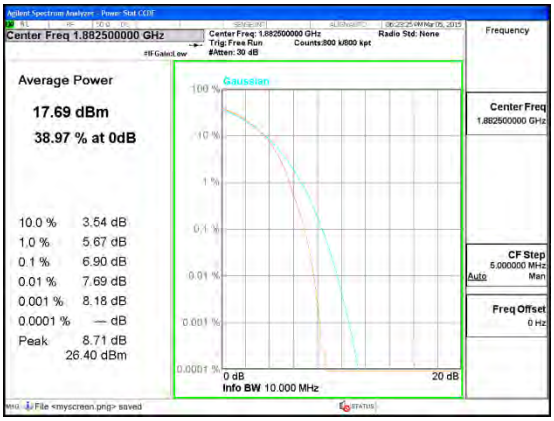
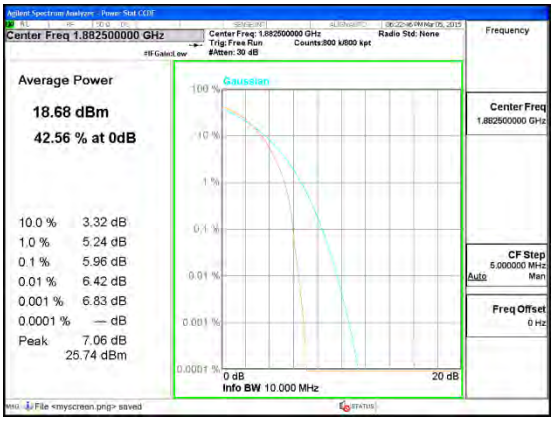
LTE Band 25

Band LTE25 20MHz 16QAM	 Band LTE25 20MHz 16QAM Mid channel	 Band LTE25 20MHz QPSK Mid channel

Band LTE25 15MHz 16QAM	 Band LTE25 15MHz 16QAM Mid channel	 Band LTE25 15MHz QPSK Mid channel

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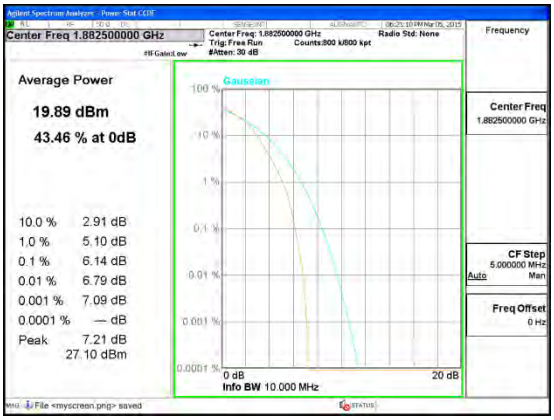
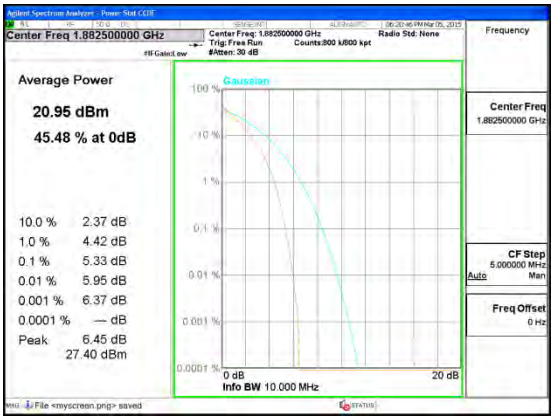
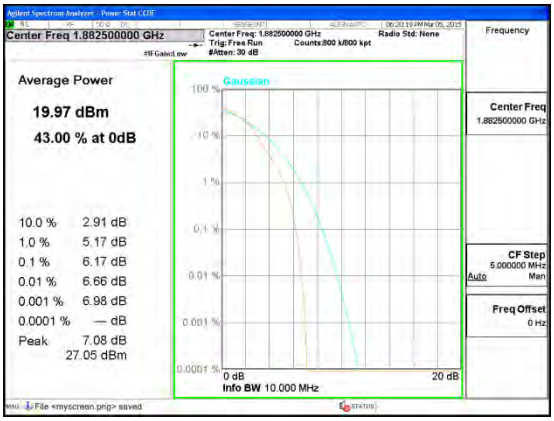
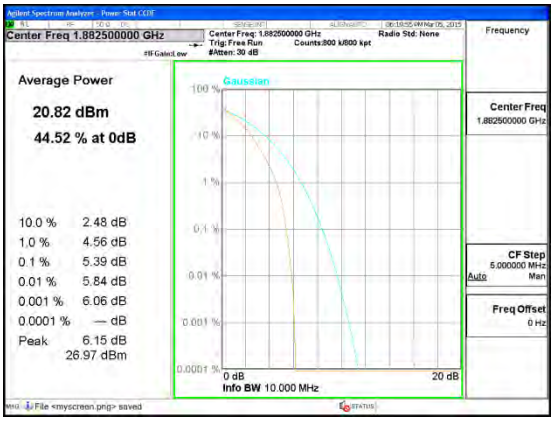
Band LTE25 10MHz 16QAM	 Band LTE25 10MHz 16QAM Mid channel	 Band LTE25 10MHz QPSK Mid channel
Band LTE25 5MHz 16QAM	 Band LTE25 5MHz 16QAM Mid channel	 Band LTE25 5MHz QPSK Mid channel

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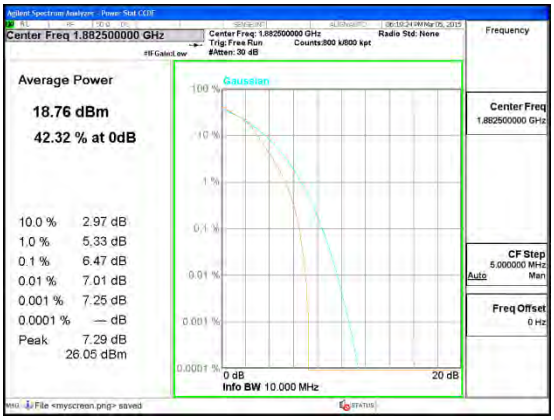
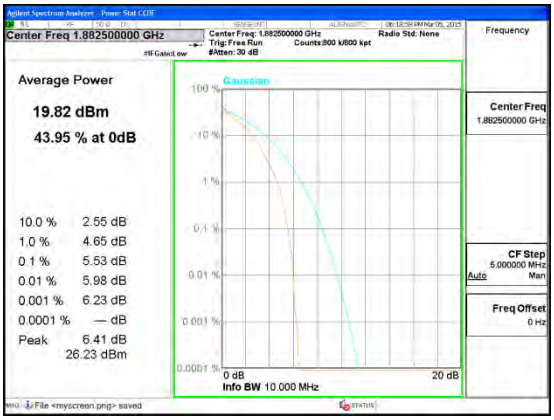
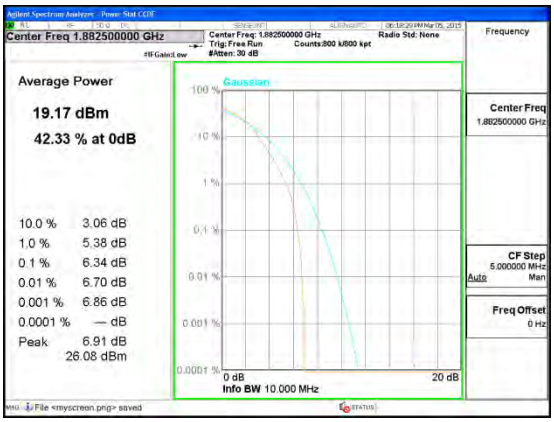
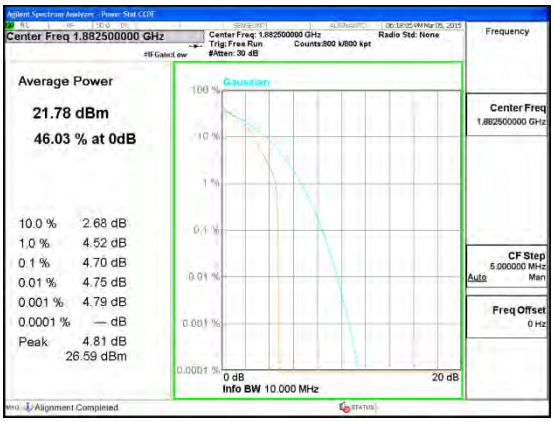
Band LTE25 3MHz 16QAM	 Band LTE25 3MHz 16QAM Mid channel	 Band LTE25 3MHz QPSK Mid channel

Band LTE25 1.4MHz 16QAM	 Band LTE25 1.4MHz 16QAM Mid channel	 Band LTE25 1.4MHz QPSK Mid channel

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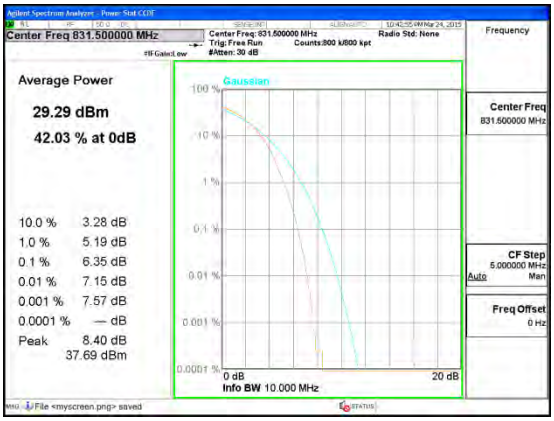
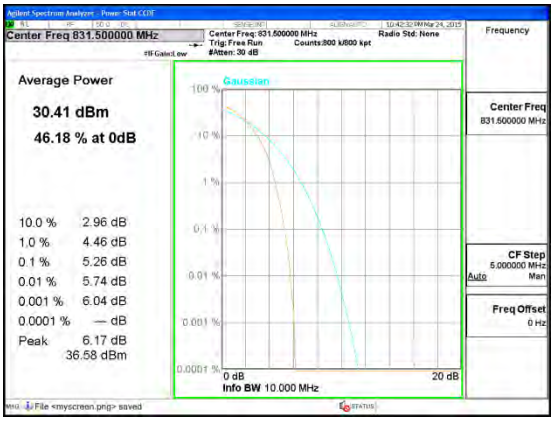
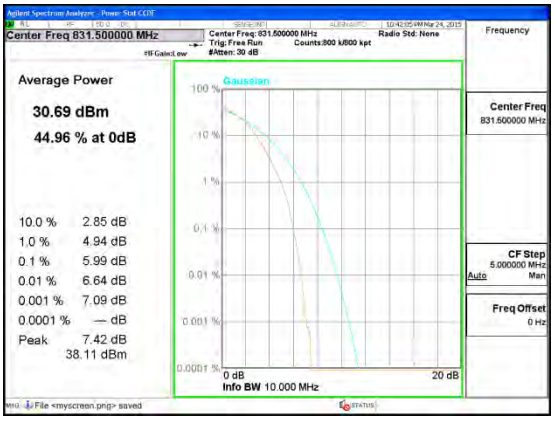
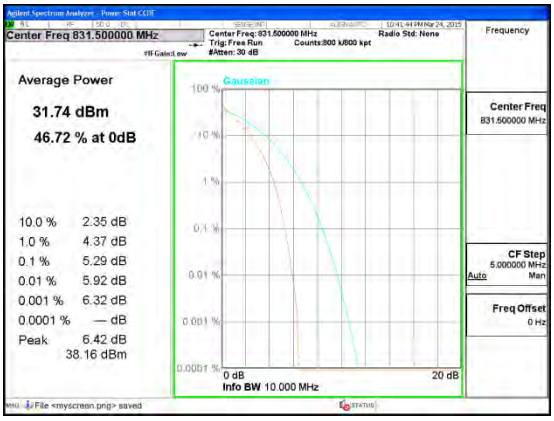
LTE Band 26

Band LTE26 15MHz 16QAM	 Band LTE26 15MHz 16QAM Mid channel	 Band LTE26 15MHz QPSK Mid channel
Band LTE26 10MHz 16QAM	 Band LTE26 10MHz 16QAM Mid channel	 Band LTE26 10MHz QPSK Mid channel

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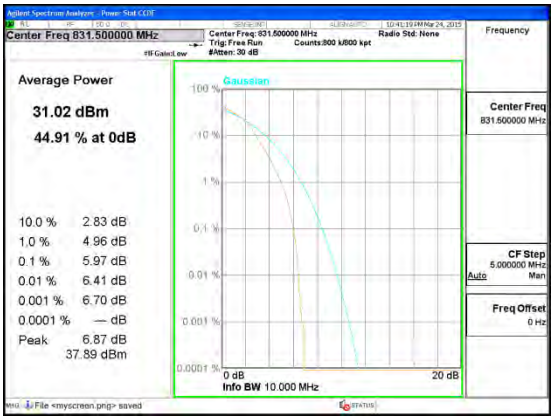
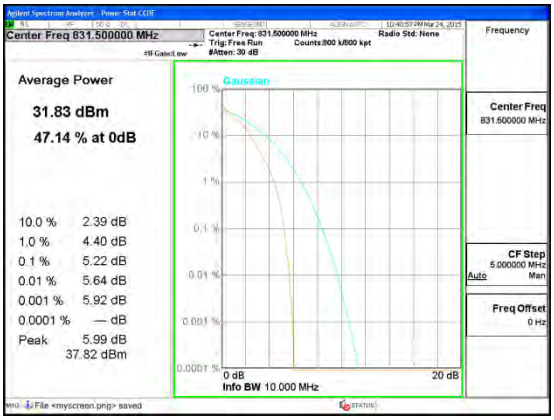
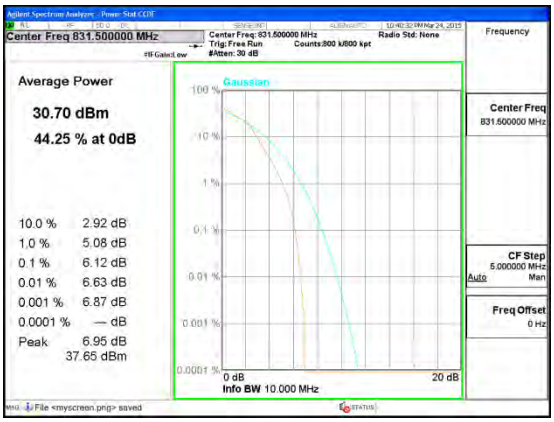
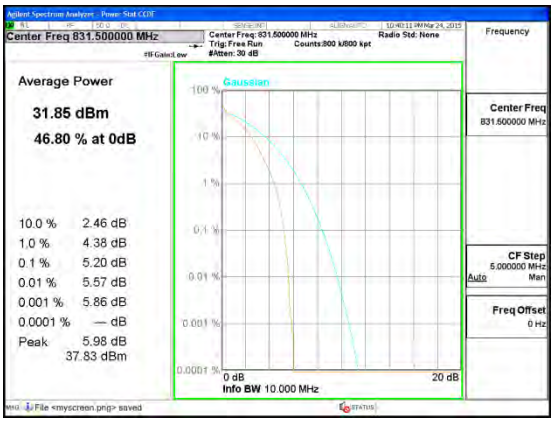
Band LTE26 5MHz 16QAM		
	Band LTE26 5MHz 16QAM Mid channel	Band LTE26 5MHz QPSK Mid channel

Band LTE26 3MHz 16QAM		
	Band LTE26 3MHz 16QAM Mid channel	Band LTE26 3MHz QPSK Mid channel

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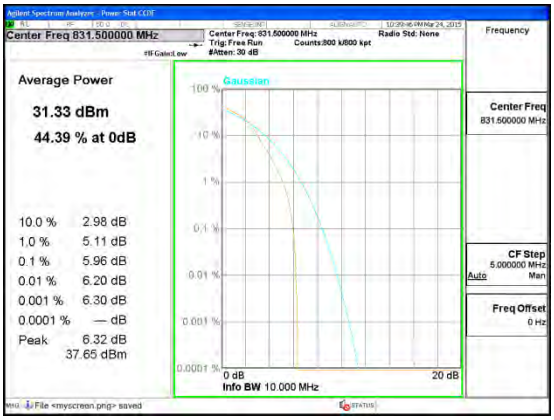
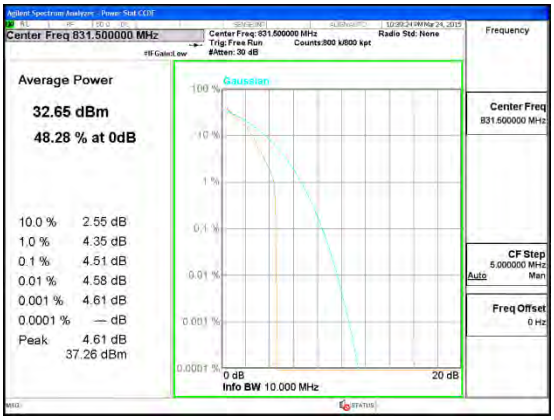
Band LTE26 1.4MHz 16QAM	 Band LTE26 1.4MHz 16QAM Mid channel	 Band LTE26 1.4MHz QPSK Mid channel

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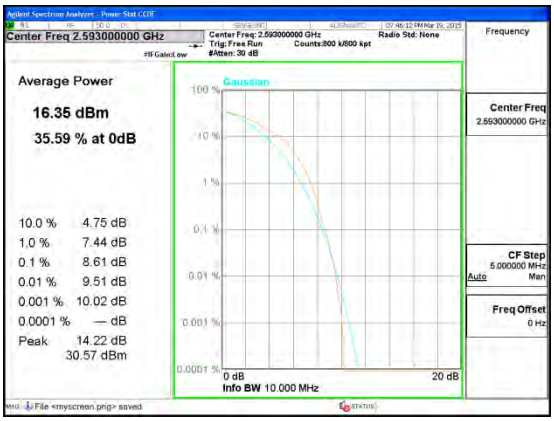
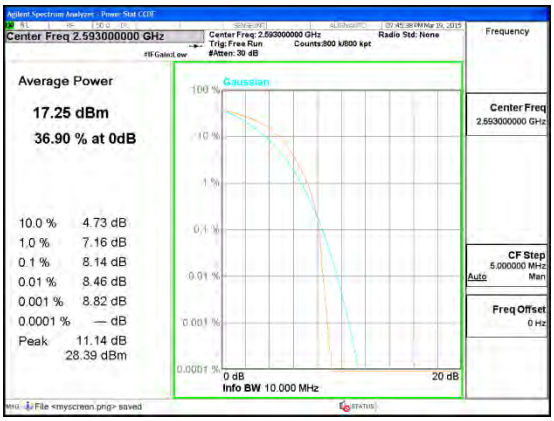
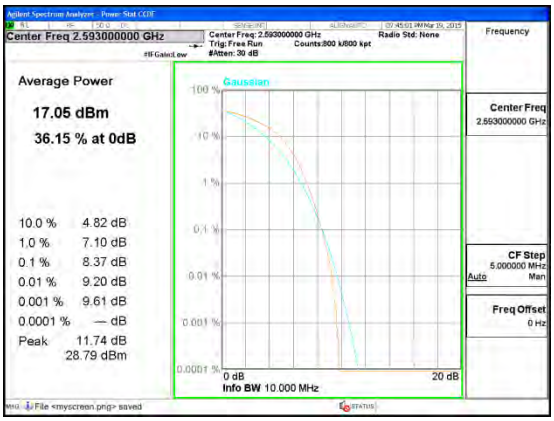
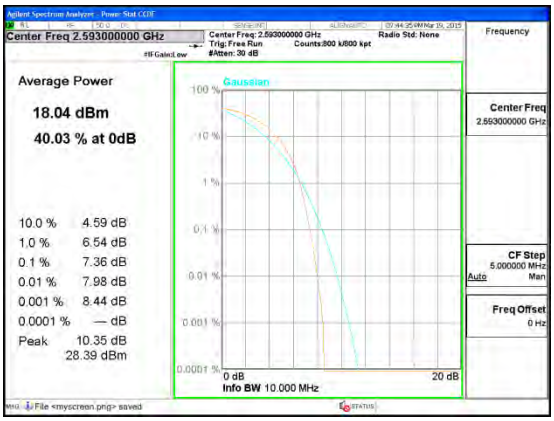
LTE Band 41

Band LTE41 20MHz 16QAM	 Band LTE41 20MHz 16QAM Mid channel	 Band LTE41 20MHz QPSK Mid channel
Band LTE41 15MHz 16QAM	 Band LTE41 15MHz 16QAM Mid channel	 Band LTE41 15MHz QPSK Mid channel

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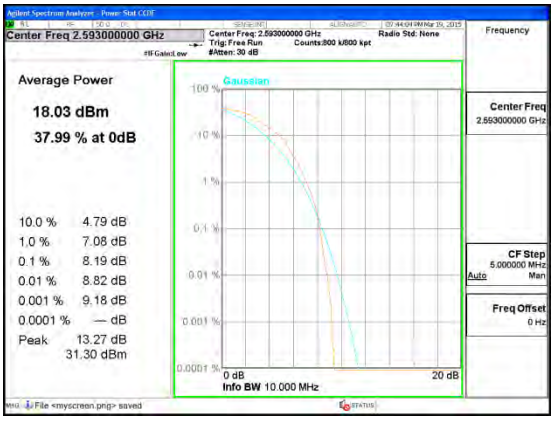
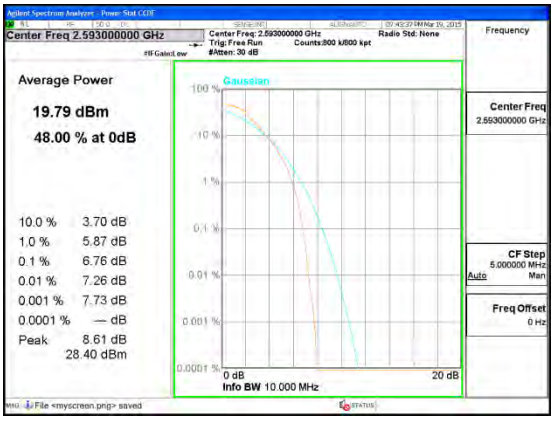
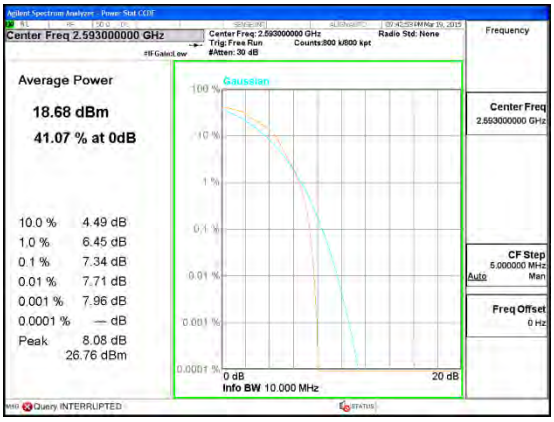
Band LTE41 10MHz 16QAM	 Band LTE41 10MHz 16QAM Mid channel	 Band LTE41 10MHz QPSK Mid channel
Band LTE41 5MHz 16QAM	 Band LTE41 5MHz 16QAM Mid channel	 Band LTE41 5MHz QPSK Mid channel

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11. LIMITS AND CONDUCTED RESULTS

11.1. OCCUPIED BANDWIDTH

RULE PART(S)

FCC: §2.1049

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 and LTE

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11.1.1. OCCUPIED BANDWIDTH RESULTS

Band	Mode	Channel	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
BC0	1xRTT	1013	824.7	1.276	1.432
		384	836.52	1.274	1.430
		777	848.31	1.271	1.431
	EVDO REL. 0	1013	824.7	1.272	1.430
		384	836.52	1.274	1.429
		777	848.31	1.276	1.432
BC1	1xRTT	25	1851.25	1.265	1.421
		600	1880	1.266	1.404
		1175	1908.75	1.271	1.412
	EVDO REL. 0	25	1851.25	1.271	1.418
		600	1880	1.268	1.416
		1175	1908.75	1.271	1.430
BC10	1xRTT	476	817.9	1.281	1.447
		580	820.5	1.280	1.432
		684	823.1	1.276	1.432
	EVDO REL. 0	476	817.9	1.274	1.431
		580	820.5	1.276	1.438
		684	823.1	1.272	1.428

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11.1.2. 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	17.880	19.416
			100/0	1880	17.893	19.267
			100/0	1900	17.967	19.366
		16QAM	100/0	1860	17.839	19.288
			100/0	1880	17.915	19.361
			100/0	1900	17.952	19.425
	15	QPSK	75/0	1857.5	13.417	14.571
			75/0	1880	13.451	14.603
			75/0	1902.5	13.462	14.646
		16QAM	75/0	1857.5	13.423	14.639
			75/0	1880	13.447	14.571
			75/0	1902.5	13.447	14.560
	10	QPSK	50/0	1855	8.973	9.831
			50/0	1880	8.994	9.848
			50/0	1905	8.958	9.827
		16QAM	50/0	1855	8.996	9.820
			50/0	1880	8.961	9.762
			50/0	1905	8.970	9.803
	5	QPSK	25/0	1852.5	4.512	5.009
			25/0	1880	4.508	4.978
			25/0	1907.5	4.487	4.935
		16QAM	25/0	1852.5	4.510	4.994
			25/0	1880	4.498	4.985
			25/0	1907.5	4.487	4.947

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Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE2	3	QPSK	15/0	1851.5	2.697	2.997
			15/0	1880	2.700	2.982
			15/0	1908.5	2.702	2.987
		16QAM	15/0	1851.5	2.705	2.991
			15/0	1880	2.697	2.980
			15/0	1908.5	2.694	3.006
	1.4	QPSK	6/0	1850.7	1.092	1.312
			6/0	1880	1.084	1.289
			6/0	1909.3	1.090	1.303
		16QAM	6/0	1850.7	1.090	1.335
			6/0	1880	1.091	1.308
			6/0	1909.3	1.098	1.329

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LTE Band 4

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26 dB (MHz)
LTE4	20	QPSK	100/0	1720	17.890	19.18
			100/0	1732.5	17.949	19.37
			100/0	1745	17.968	19.50
		16QAM	100/0	1720	17.895	19.29
			100/0	1732.5	17.920	19.38
			100/0	1745	17.944	19.43
	15	QPSK	75/0	1717.5	13.444	14.65
			75/0	1732.5	13.463	14.63
			75/0	1747.5	13.479	14.61
		16QAM	75/0	1717.5	13.452	14.61
			75/0	1732.5	13.440	14.60
			75/0	1747.5	13.454	14.52
	10	QPSK	50/0	1715	9.004	9.839
			50/0	1732.5	8.993	9.861
			50/0	1750	8.983	9.834
		16QAM	50/0	1715	8.984	9.855
			50/0	1732.5	8.983	9.795
			50/0	1750	9.011	9.870
	5	QPSK	25/0	1712.5	4.520	5.026
			25/0	1732.5	4.502	4.992
			25/0	1752.5	4.495	4.959
		16QAM	25/0	1712.5	4.509	5.023
			25/0	1732.5	4.501	4.971
			25/0	1752.5	4.494	4.950

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Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26 dB (MHz)
LTE4	3	QPSK	15/0	1711.5	2.6994	2.978
			15/0	1732.5	2.6966	2.966
			15/0	1753.5	2.7022	2.993
		16QAM	15/0	1711.5	2.7067	2.978
			15/0	1732.5	2.6992	2.983
			15/0	1753.5	2.6956	2.986
	1.4	QPSK	6/0	1710.7	1.0917	1.295
			6/0	1732.5	1.0903	1.275
			6/0	1754.3	1.0916	1.279
		16QAM	6/0	1710.7	1.0902	1.294
			6/0	1732.5	1.0991	1.301
			6/0	1754.3	1.0886	1.281

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LTE Band 5

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE5	10	QPSK	50/0	829	9.0230	9.892
			50/0	836.5	8.9814	9.804
			50/0	844	8.9891	9.832
		16QAM	50/0	829	9.0025	9.938
			50/0	836.5	8.9549	9.840
			50/0	844	9.0098	9.862
	5	QPSK	25/0	826.5	4.5158	5.012
			25/0	836.5	4.4919	4.960
			25/0	846.5	4.5102	5.015
		16QAM	25/0	826.5	4.5069	4.992
			25/0	836.5	4.4874	4.930
			25/0	846.5	4.5030	5.023
	3	QPSK	15/0	825.5	2.7002	2.969
			15/0	836.5	2.6988	2.977
			15/0	847.5	2.6960	2.970
		16QAM	15/0	825.5	2.7032	2.981
			15/0	836.5	2.6934	2.984
			15/0	847.5	2.6999	2.989
	1.4	QPSK	6/0	824.7	1.0886	1.270
			6/0	836.5	1.0902	1.290
			6/0	848.3	1.0833	1.271
		16QAM	6/0	824.7	1.0977	1.298
			6/0	836.5	1.0886	1.281
			6/0	848.3	1.0889	1.283

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LTE Band 12

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW(MHz)
LTE12	10	QPSK	50/0	704	8.965	9.873
			50/0	707.5	8.979	9.863
			50/0	711	9.003	9.851
		16QAM	50/0	704	8.992	9.784
			50/0	707.5	8.973	9.885
			50/0	711	8.989	9.907
	5	QPSK	25/0	701.5	4.512	5.018
			25/0	707.5	4.501	5.008
			25/0	713.5	4.509	4.997
		16QAM	25/0	701.5	4.510	5.020
			25/0	707.5	4.491	4.971
			25/0	713.5	4.508	5.012
	3	QPSK	15/0	700.5	2.700	2.988
			15/0	707.5	2.698	2.982
			15/0	714.5	2.703	2.987
		16QAM	15/0	700.5	2.704	2.990
			15/0	707.5	2.696	2.980
			15/0	714.5	2.695	2.996
	1.4	QPSK	6/0	699.7	1.089	1.280
			6/0	707.5	1.090	1.294
			6/0	715.3	1.083	1.275
		16QAM	6/0	699.7	1.095	1.293
			6/0	707.5	1.088	1.286
			6/0	715.3	1.089	1.283

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LTE Band 25

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW(MHz)
LTE25	20	QPSK	100/0	1860	17.860	19.201
			100/0	1882.5	17.918	19.290
			100/0	1905	17.885	19.313
		16QAM	100/0	1860	17.834	19.290
			100/0	1882.5	17.864	19.293
			100/0	1905	17.860	19.355
	15	QPSK	75/0	1857.5	13.414	14.623
			75/0	1882.5	13.449	14.572
			75/0	1907.5	13.418	14.558
		16QAM	75/0	1857.5	13.436	14.595
			75/0	1882.5	13.432	14.614
			75/0	1907.5	13.390	14.579
	10	QPSK	50/0	1855	8.990	9.838
			50/0	1882.5	8.994	9.818
			50/0	1910	8.977	9.802
		16QAM	50/0	1855	9.001	9.862
			50/0	1882.5	8.956	9.823
			50/0	1910	8.992	9.784
	5	QPSK	25/0	1852.5	4.516	5.003
			25/0	1882.5	4.500	4.997
			25/0	1912.5	4.495	4.983
		16QAM	25/0	1852.5	4.509	5.028
			25/0	1882.5	4.496	4.963
			25/0	1912.5	4.497	4.981

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Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW(MHz)
LTE25	3	QPSK	15/0	1851.5	2.697	2.980
			15/0	1882.5	2.700	2.978
			15/0	1913.5	2.707	2.981
		16QAM	15/0	1851.5	2.705	2.994
			15/0	1882.5	2.699	2.984
			15/0	1913.5	2.699	3.001
	1.4	QPSK	6/0	1850.7	1.090	1.292
			6/0	1882.5	1.091	1.286
			6/0	1914.3	1.085	1.311
		16QAM	6/0	1850.7	1.095	1.324
			6/0	1882.5	1.088	1.293
			6/0	1914.3	1.091	1.303

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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	13.429	14.55
			75/0	831.5	13.461	14.64
			75/0	841.5	13.449	14.77
		16QAM	75/0	821.5	13.420	14.63
			75/0	831.5	13.451	14.61
			75/0	841.5	13.460	14.60
	10	QPSK	50/0	819	8.988	9.895
			50/0	831.5	9.004	9.967
			50/0	844	8.988	9.899
		16QAM	50/0	819	8.994	9.852
			50/0	831.5	9.004	9.905
			50/0	844	8.987	9.802
	5	QPSK	25/0	816.5	4.508	4.977
			25/0	831.5	4.499	4.975
			25/0	846.5	4.494	4.990
		16QAM	25/0	816.5	4.505	4.984
			25/0	831.5	4.508	4.970
			25/0	846.5	4.495	4.970
	3	QPSK	15/0	815.5	2.699	2.972
			15/0	831.5	2.698	2.977
			15/0	847.5	2.703	2.971
		16QAM	15/0	815.5	2.707	2.990
			15/0	831.5	2.705	2.994
			15/0	847.5	2.707	2.978
	1.4	QPSK	6/0	814.7	1.089	1.277
			6/0	831.5	1.088	1.284
			6/0	848.3	1.089	1.258
		16QAM	6/0	814.7	1.088	1.295
			6/0	831.5	1.091	1.280
			6/0	848.3	1.093	1.286

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LTE Band 41

Band	BW(MHz)	Mode	RB/RB Size	f (MHz)	99% BW (MHz)	-26dB BW (MHz)
LTE41	20	QPSK	100/0	2506	17.959	20.088
			100/0	2593	17.939	19.656
			100/0	2680	17.909	19.404
		16QAM	100/0	2506	17.936	19.712
			100/0	2593	17.912	19.829
			100/0	2680	17.901	19.359
	15	QPSK	75/0	2503.5	13.432	14.645
			75/0	2593	13.461	14.626
			75/0	2682.5	13.450	14.898
		16QAM	75/0	2503.5	13.465	15.287
			75/0	2593	13.457	14.646
			75/0	2682.5	13.428	14.628
	10	QPSK	50/0	2501	8.978	9.764
			50/0	2593	9.008	9.819
			50/0	2685	8.979	9.832
		16QAM	50/0	2501	9.001	9.823
			50/0	2593	8.988	9.869
			50/0	2685	9.002	9.889
	5	QPSK	25/0	2498.5	4.504	5.110
			25/0	2593	4.492	4.966
			25/0	2687.5	4.502	4.992
		16QAM	25/0	2498.5	4.500	4.967
			25/0	2593	4.490	4.936
			25/0	2687.5	4.508	4.970

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11.1.1. OCCUPIED BANDWIDTH PLOTS

CDMA

Band BC0 EVDO REL. 0	Band BC0 EVDO Rel. 0 OBW Mid channel	Band BC0 1xRTT OBW Mid channel
Band BC1 EVDO REL. 0	Band BC1 EVDO Rel. 0 OBW Mid channel	Band BC1 1xRTT OBW Mid channel

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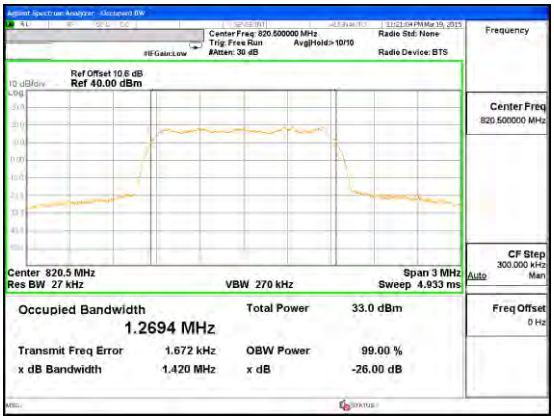
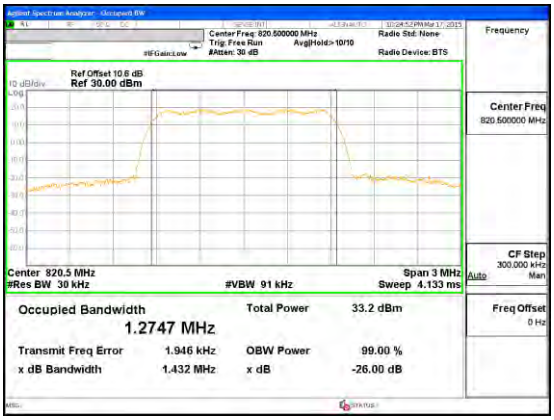
Band BC10 EVDO REL. 0	 Band BC10 EVDO Rel. 0 OBW Mid channel	 Band BC10 1xRTT OBW Mid channel

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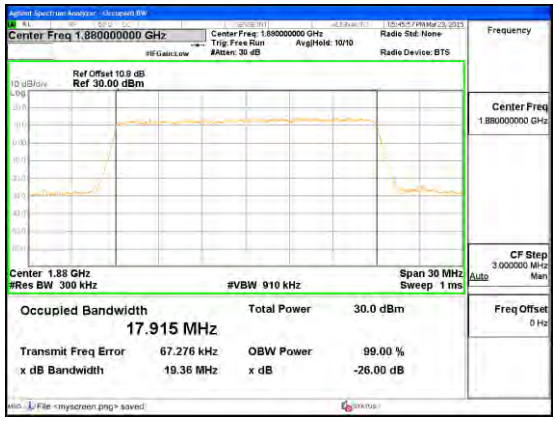
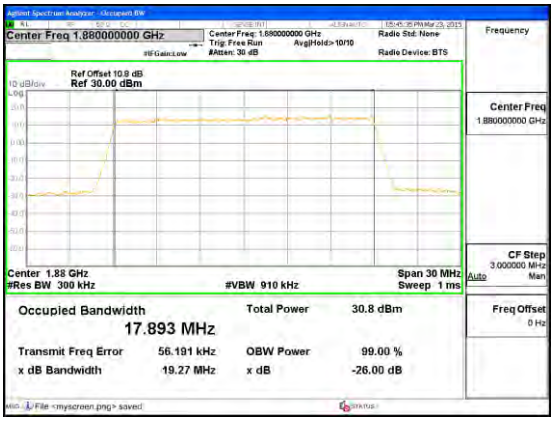
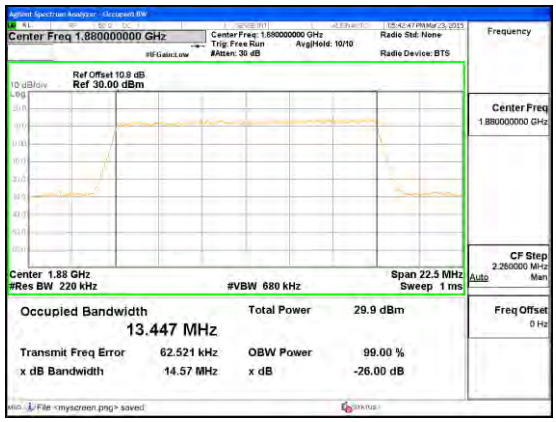
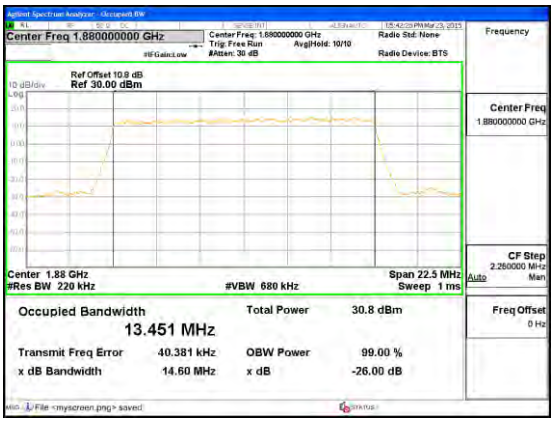
LTE Band 2

Band LTE2 20MHz 16QAM	 Band LTE2 20MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 20MHz OBW QPSK Mid Channel FRB.gif
Band LTE2 15MHz 16QAM	 Band LTE2 15MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 15MHz OBW QPSK Mid Channel FRB.gif

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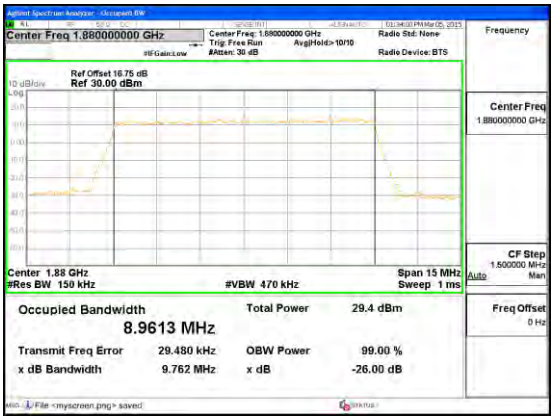
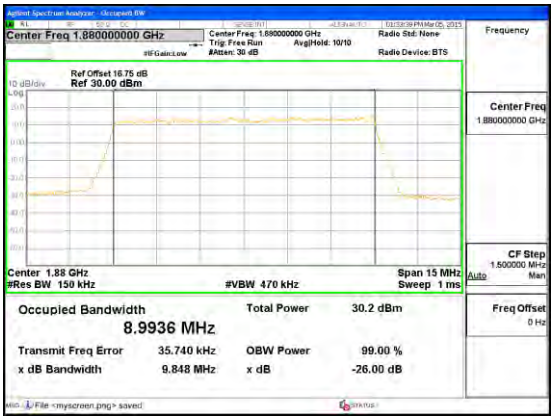
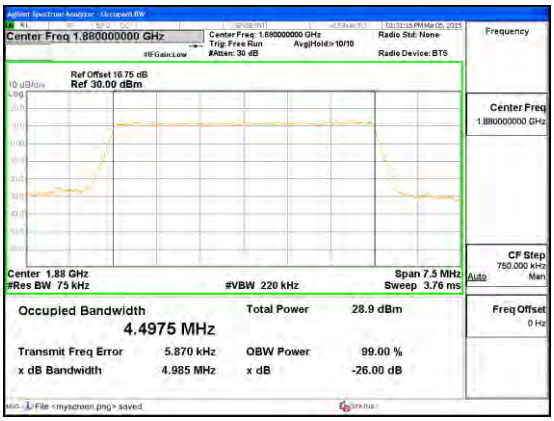
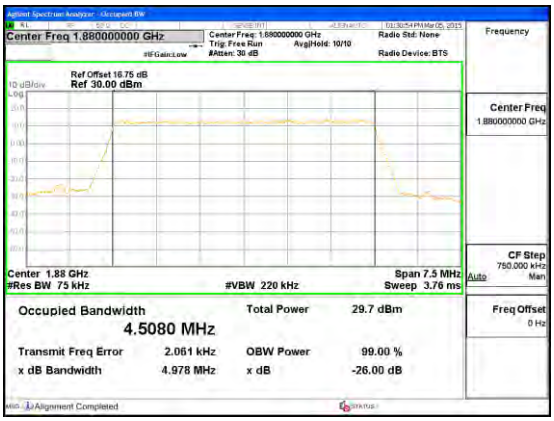
Band LTE2 10MHz 16QAM	 Band LTE2 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE2 5MHz 16QAM	 Band LTE2 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 5MHz OBW QPSK Mid Channel FRB.gif

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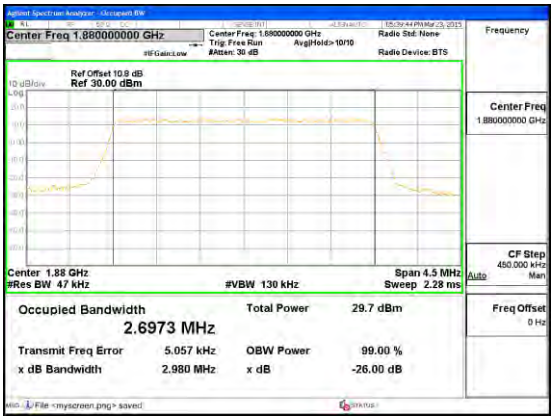
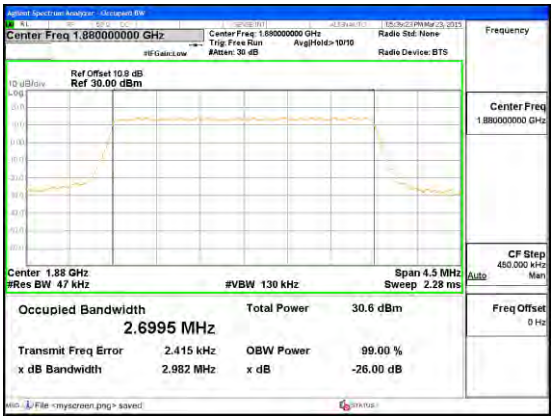
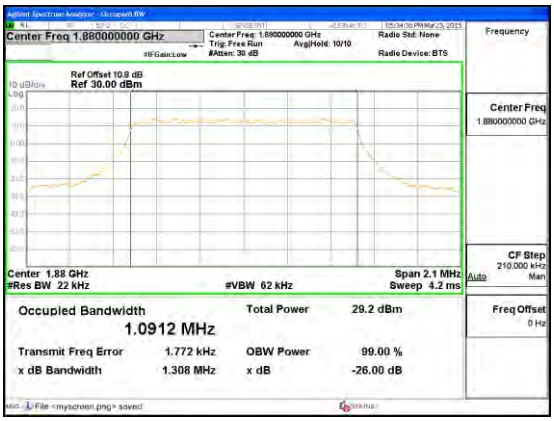
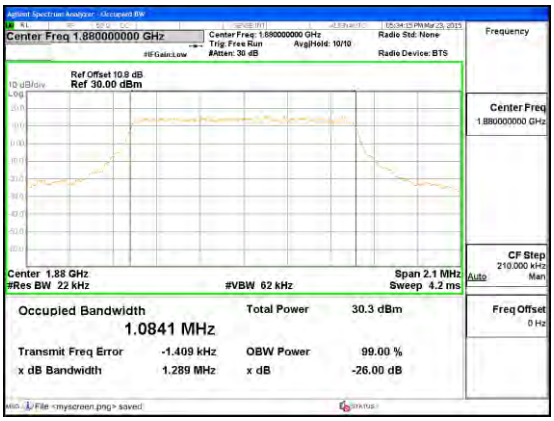
Band LTE2 3MHz 16QAM	 Band LTE2 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 3MHz OBW QPSK Mid Channel FRB.gif
Band LTE2 1.4MHz 16QAM	 Band LTE2 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE2 1.4MHz OBW QPSK Mid Channel FRB.gif

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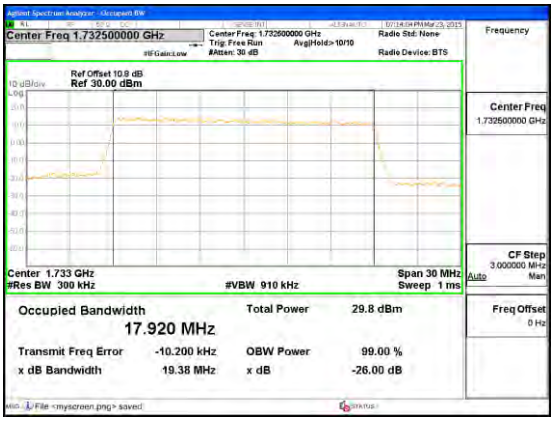
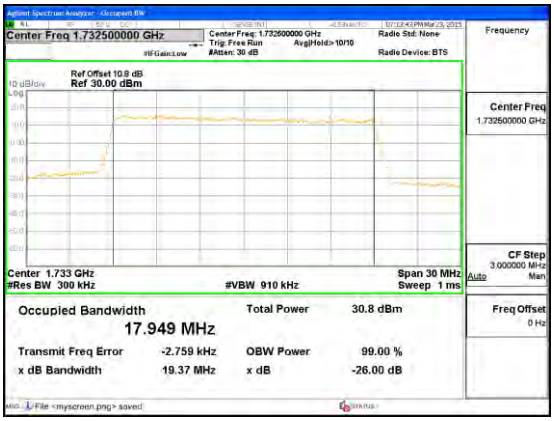
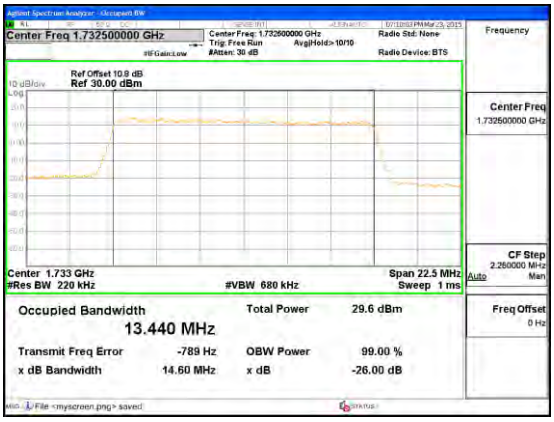
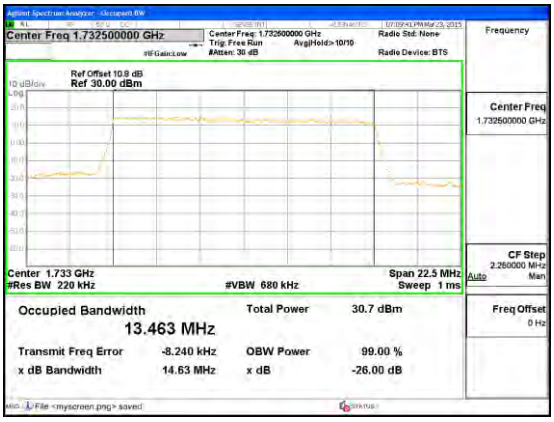
LTE Band 4

Band LTE4 20MHz 16QAM	 Band LTE4 20MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 20MHz OBW QPSK Mid Channel FRB.gif
Band LTE4 15MHz 16QAM	 Band LTE4 15MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 15MHz OBW QPSK Mid Channel FRB.gif

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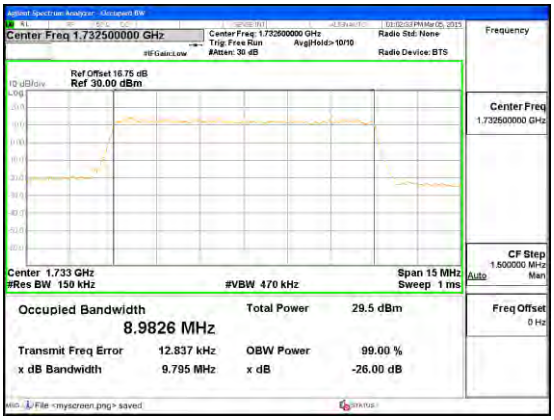
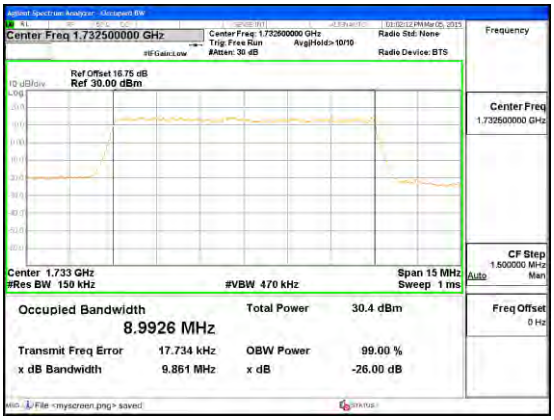
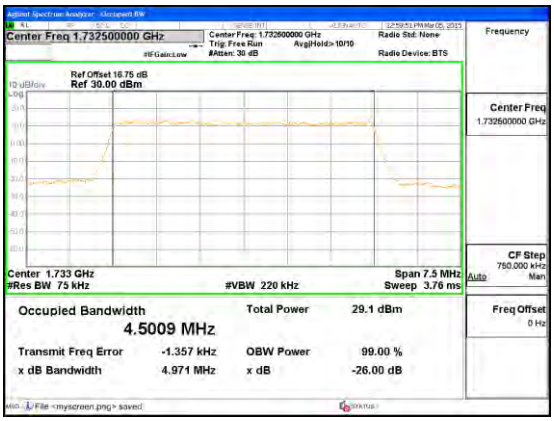
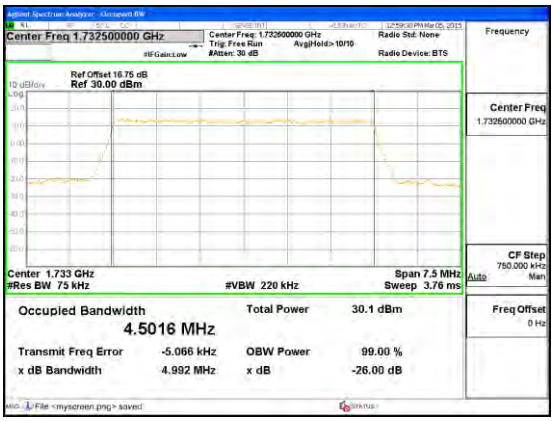
Band LTE4 10MHz 16QAM	 Band LTE4 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE4 5MHz 16QAM	 Band LTE4 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 5MHz OBW QPSK Mid Channel FRB.gif

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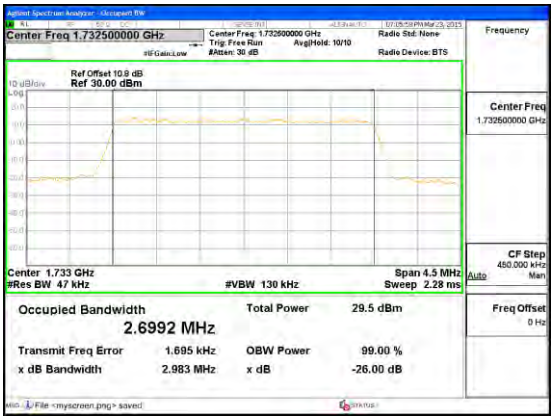
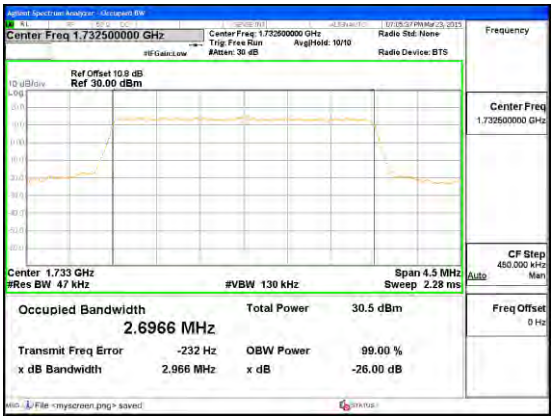
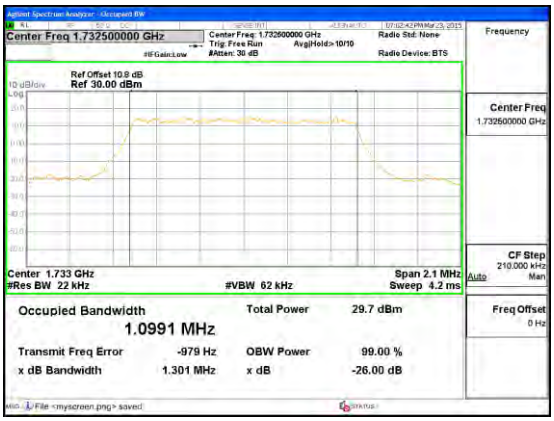
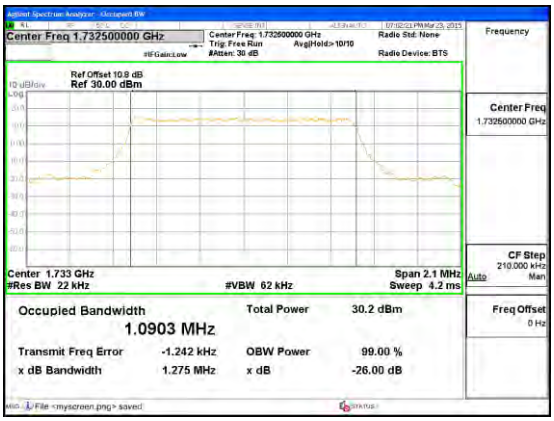
Band LTE4 3MHz 16QAM	 Band LTE4 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 3MHz OBW QPSK Mid Channel FRB.gif
Band LTE4 1.4MHz 16QAM	 Band LTE4 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE4 1.4MHz OBW QPSK Mid Channel FRB.gif

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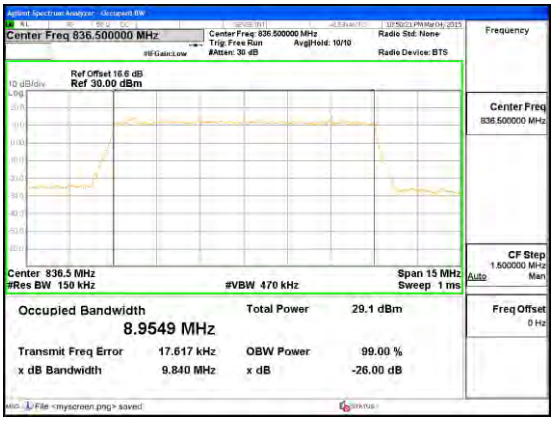
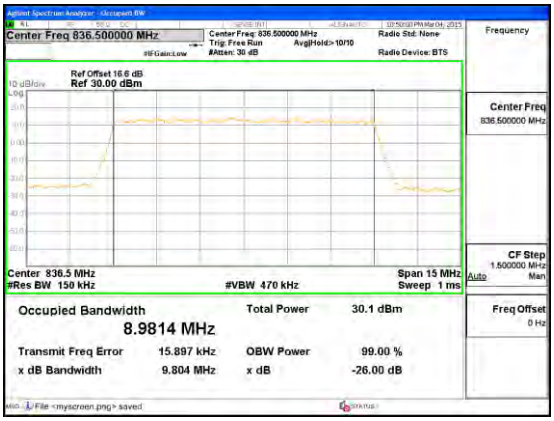
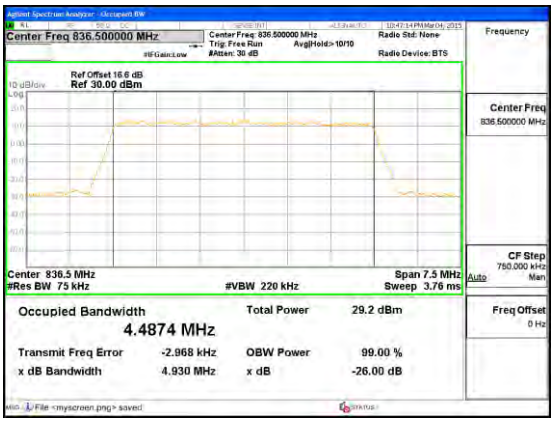
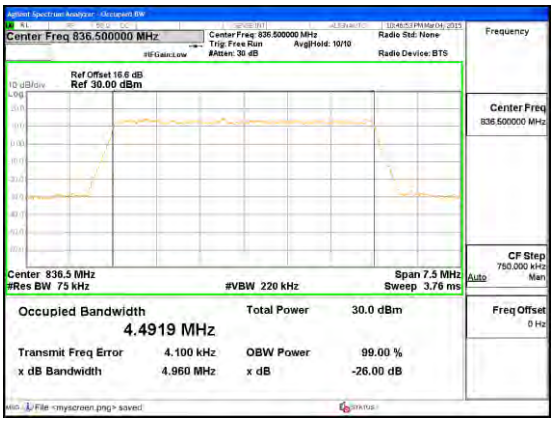
LTE Band 5

Band LTE5 10MHz 16QAM	 Band LTE5 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE5 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE5 5MHz 16QAM	 Band LTE5 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE5 5MHz OBW QPSK Mid Channel FRB.gif

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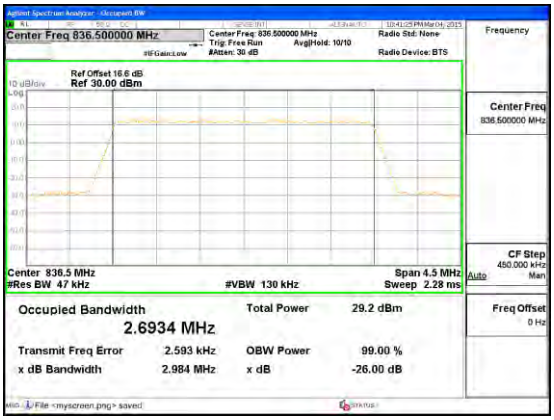
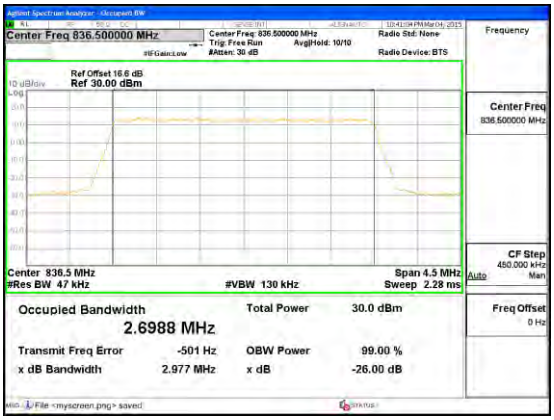
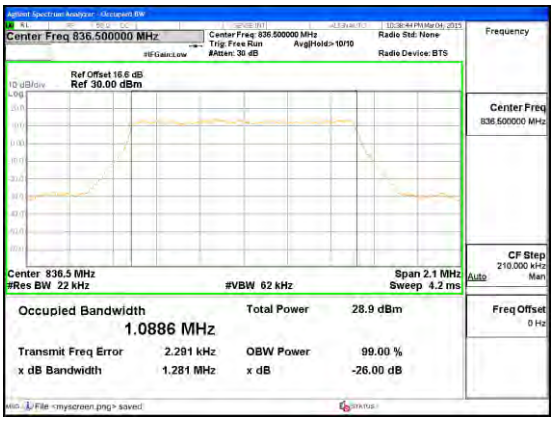
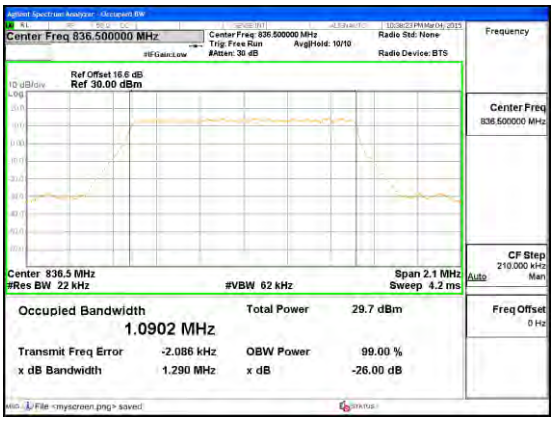
Band LTE5 3MHz 16QAM	 Band LTE5 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE5 3MHz OBW QPSK Mid Channel FRB.gif
Band LTE5 1.4MHz 16QAM	 Band LTE5 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE5 1.4MHz OBW QPSK Mid Channel FRB.gif

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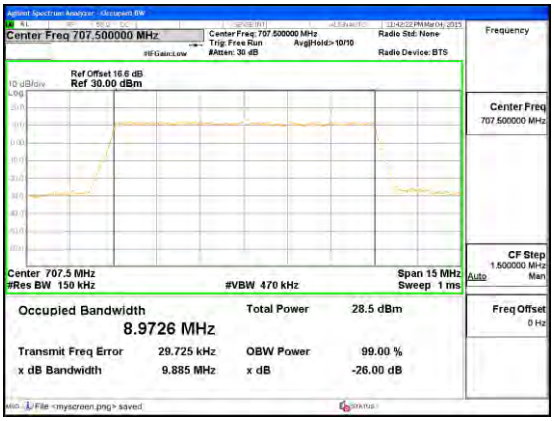
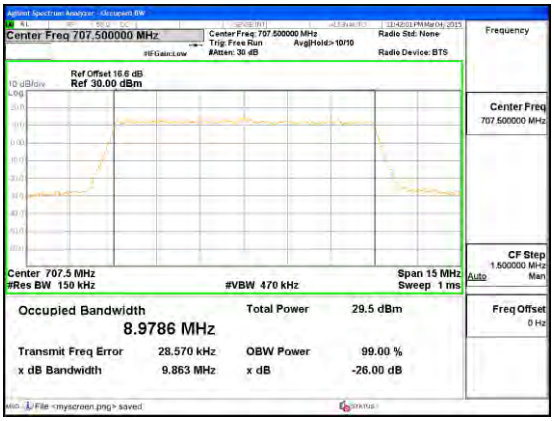
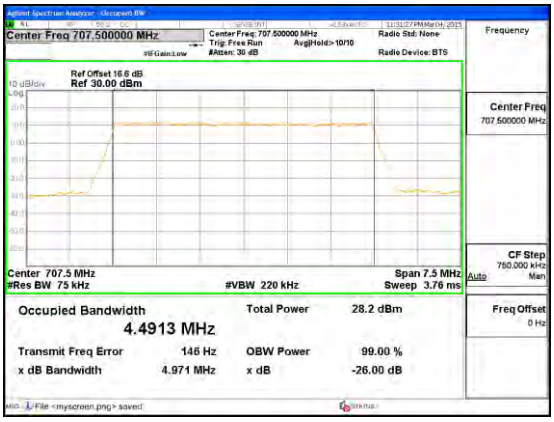
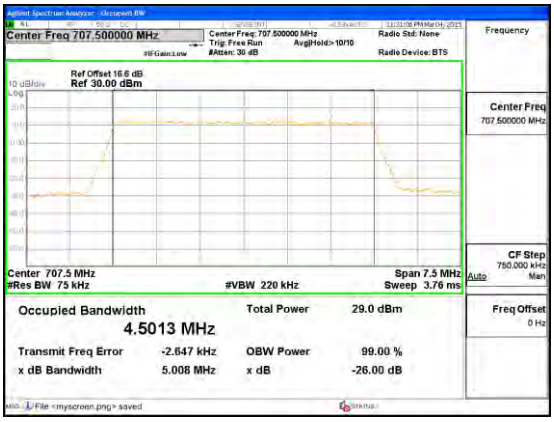
LTE Band 12

Band LTE12 10MHz 16QAM	 Band LTE12 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE12 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE12 5MHz 16QAM	 Band LTE12 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE12 5MHz OBW QPSK Mid Channel FRB.gif

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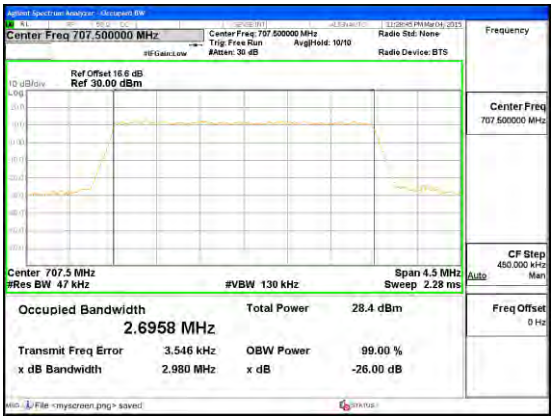
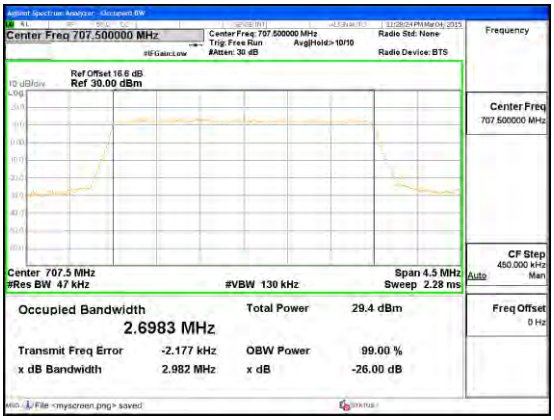
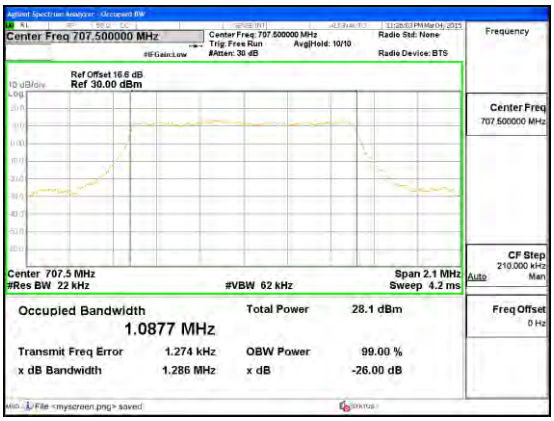
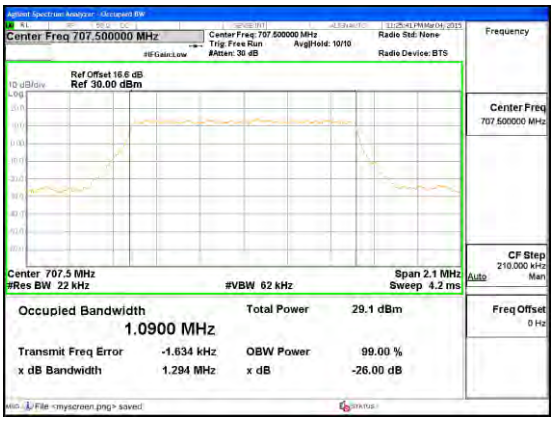
Band LTE12 3MHz 16QAM	 Band LTE12 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE12 3MHz OBW QPSK Mid Channel FRB.gif
Band LTE12 1.4MHz 16QAM	 Band LTE12 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE12 1.4MHz OBW QPSK Mid Channel FRB.gif

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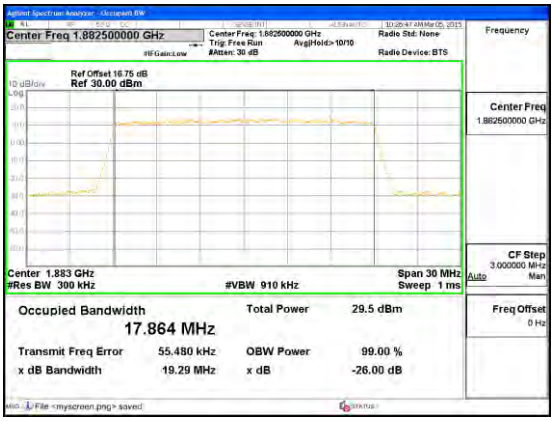
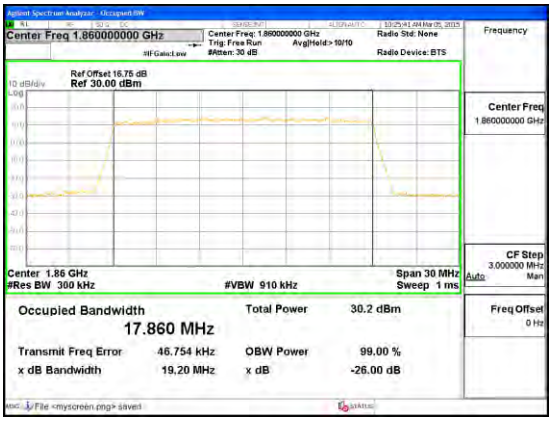
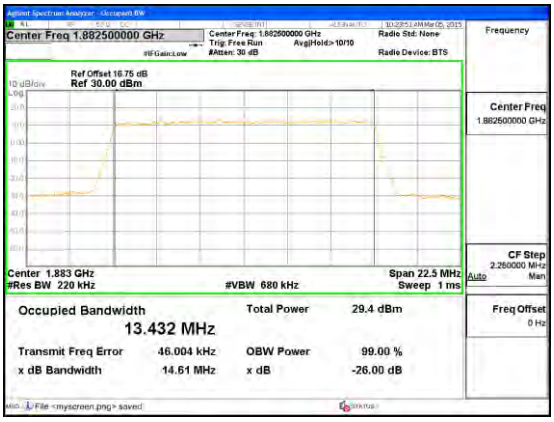
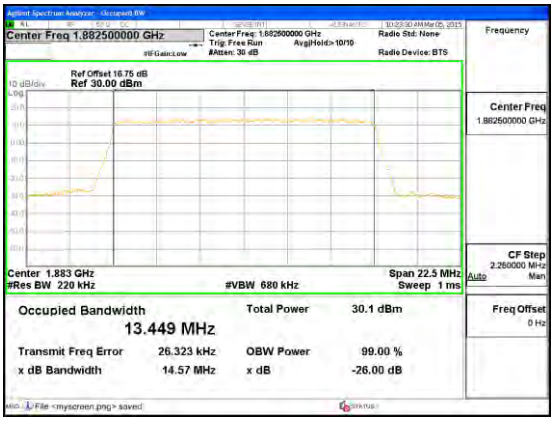
LTE Band 25

Band LTE25 20MHz 16QAM	 Band LTE25 20MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 20MHz OBW QPSK Low Channel FRB.gif
Band LTE25 15MHz 16QAM	 Band LTE25 15MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 15MHz OBW QPSK Mid Channel FRB.gif

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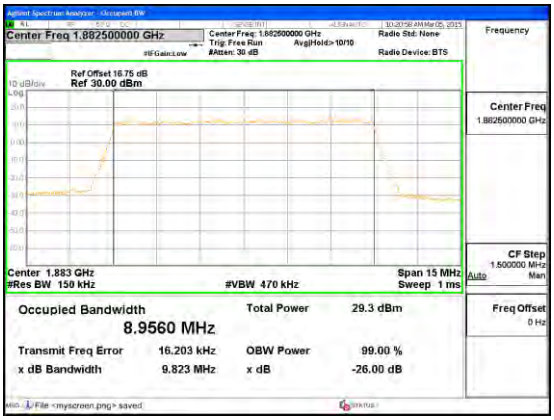
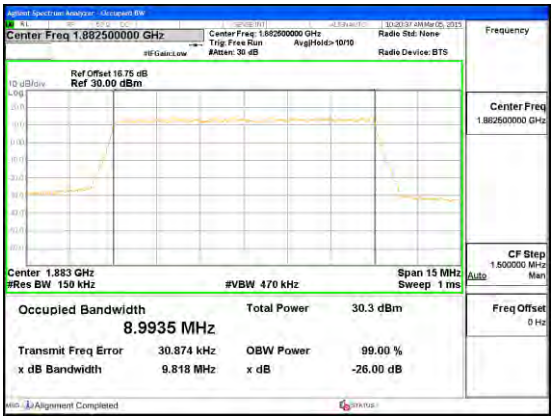
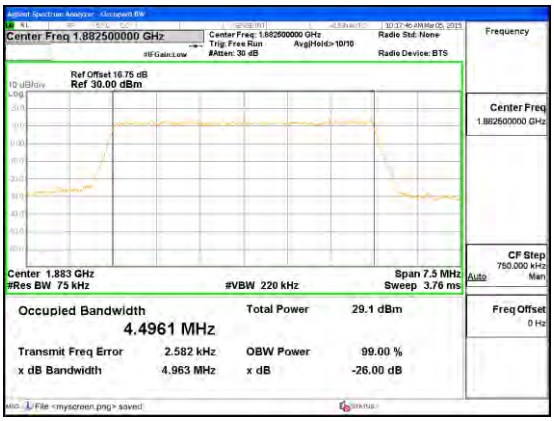
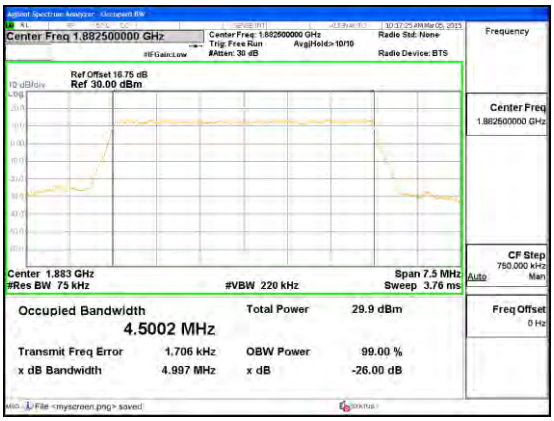
Band LTE25 10MHz 16QAM	 Band LTE25 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE25 5MHz 16QAM	 Band LTE25 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 5MHz OBW QPSK Mid Channel FRB.gif

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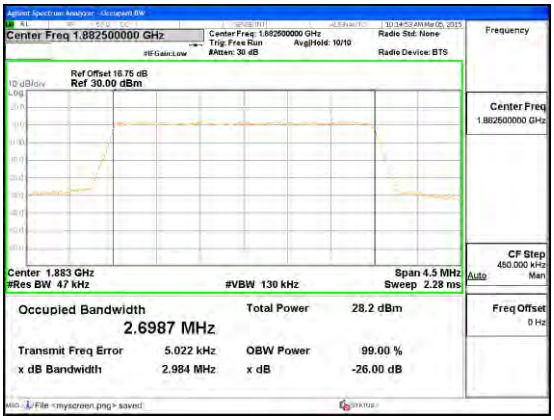
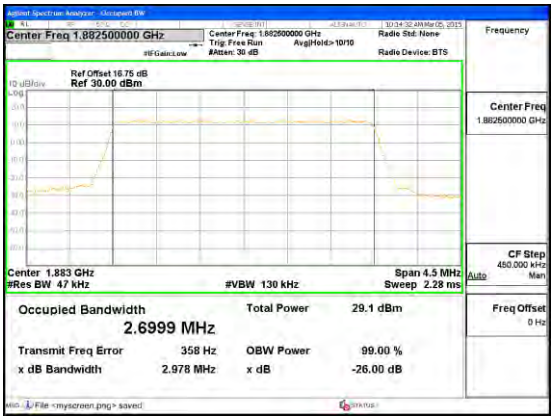
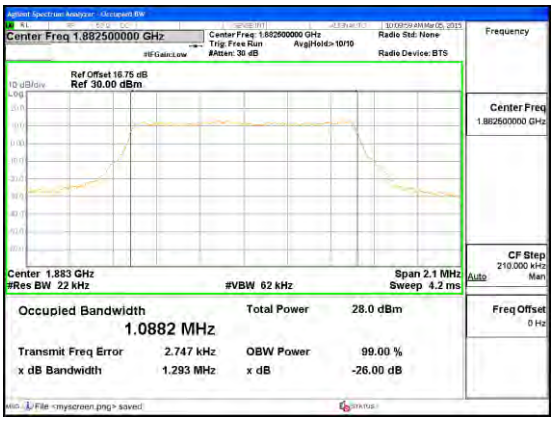
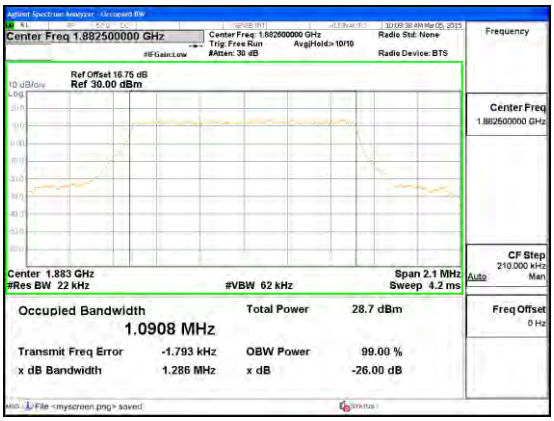
Band LTE25 3MHz 16QAM	 Band LTE25 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 3MHz OBW QPSK Mid Channel FRB.gif
Band LTE25 1.4MHz 16QAM	 Band LTE25 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE25 1.4MHz OBW QPSK Mid Channel FRB.gif

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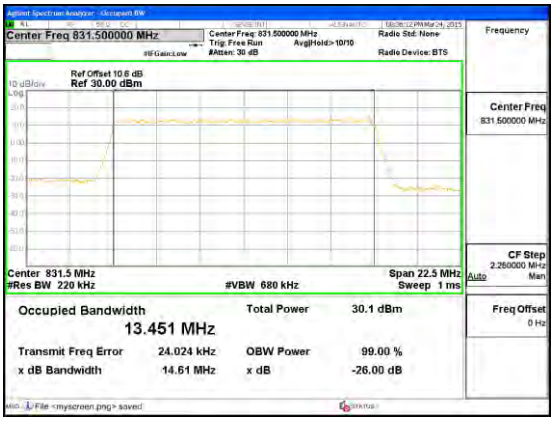
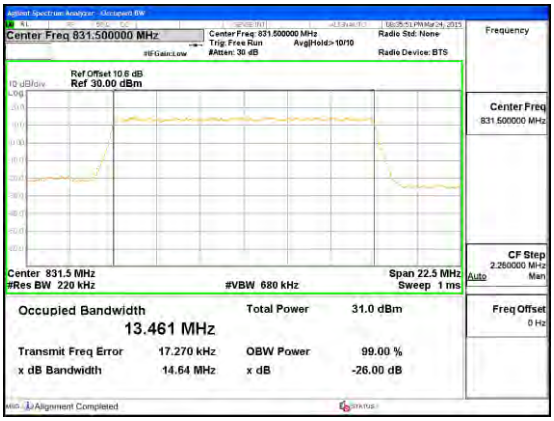
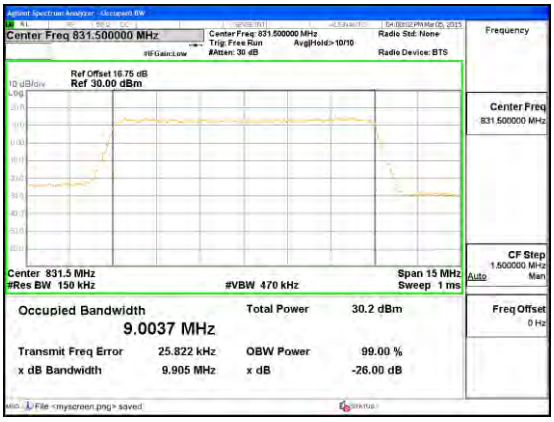
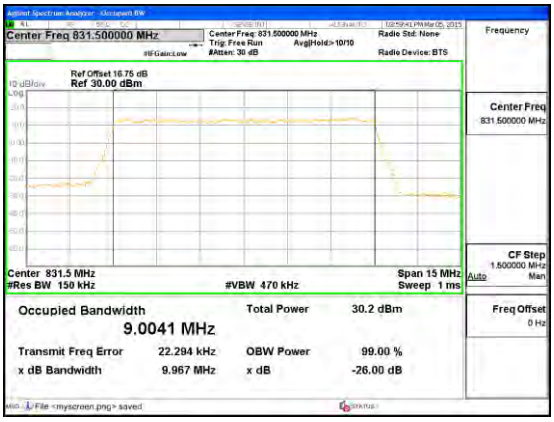
LTE Band 26

Band LTE26 15MHz 16QAM	 Band LTE26 15MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE26 15MHz OBW QPSK Mid Channel FRB.gif
Band LTE26 10MHz 16QAM	 Band LTE26 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE26 10MHz OBW QPSK Mid Channel FRB.gif

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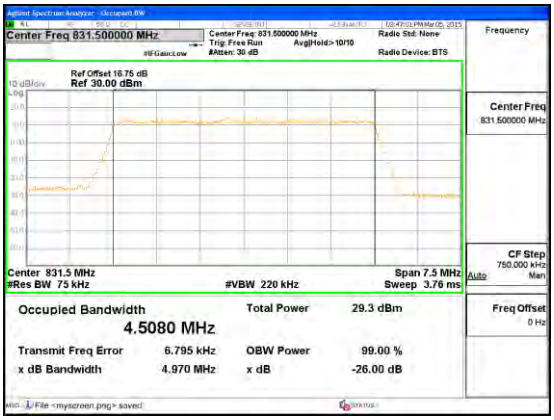
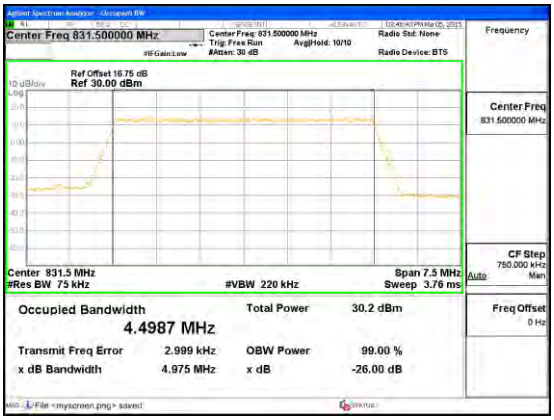
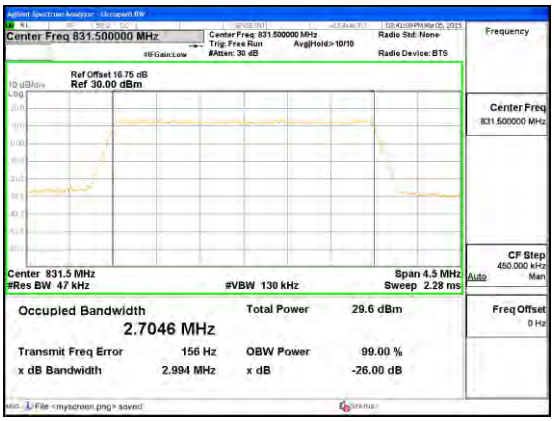
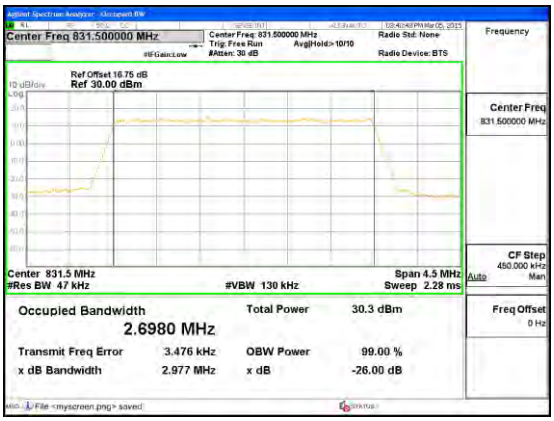
Band LTE26 5MHz 16QAM	 Band LTE26 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE26 5MHz OBW QPSK Mid Channel FRB.gif
Band LTE26 3MHz 16QAM	 Band LTE26 3MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE26 3MHz OBW QPSK Mid Channel FRB.gif

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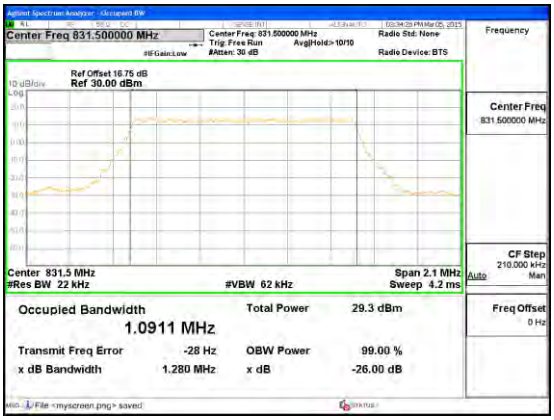
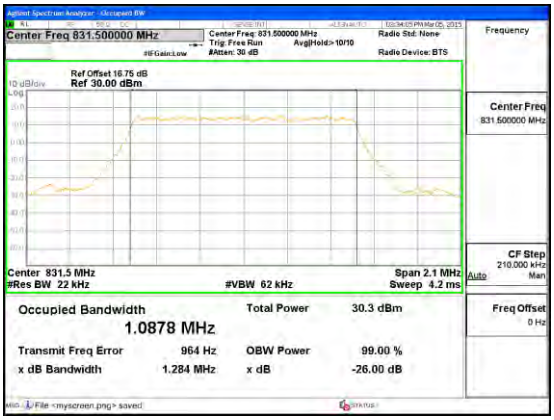
Band LTE26 1.4MHz 16QAM	 Band LTE26 1.4MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE26 1.4MHz OBW QPSK Mid Channel FRB.gif

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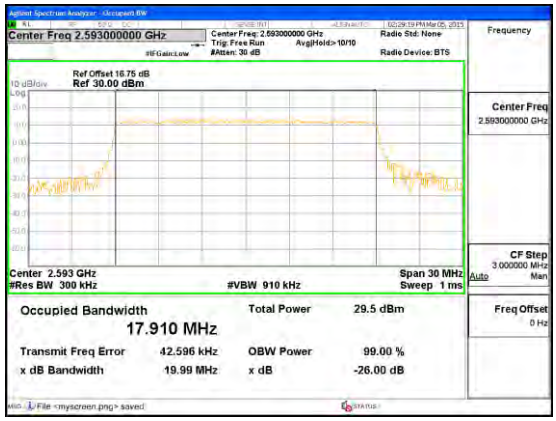
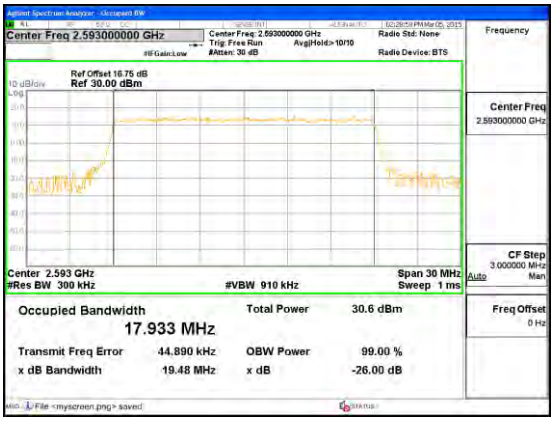
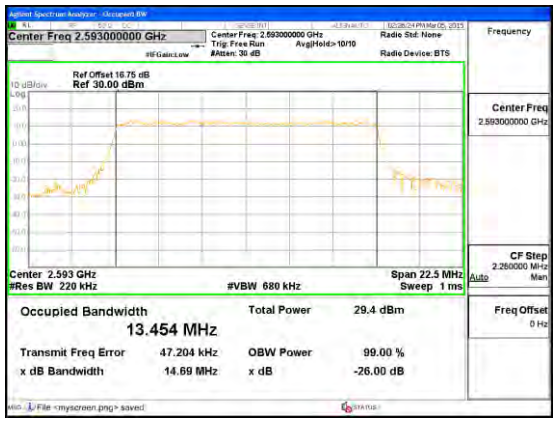
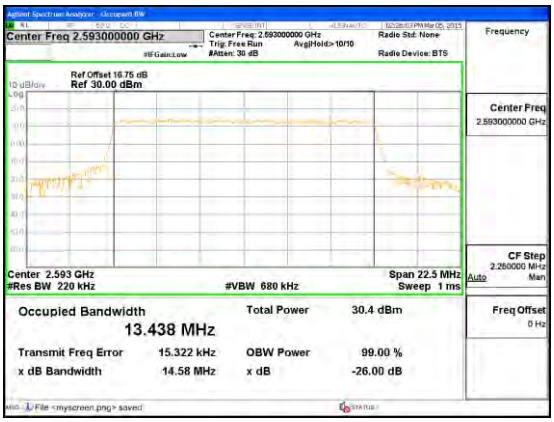
LTE Band 41

Band LTE41 20MHz 16QAM	 Band LTE41 20MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE41 20MHz OBW QPSK Mid Channel FRB.gif
Band LTE41 15MHz 16QAM	 Band LTE41 15MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE41 15MHz OBW QPSK Mid Channel FRB.gif

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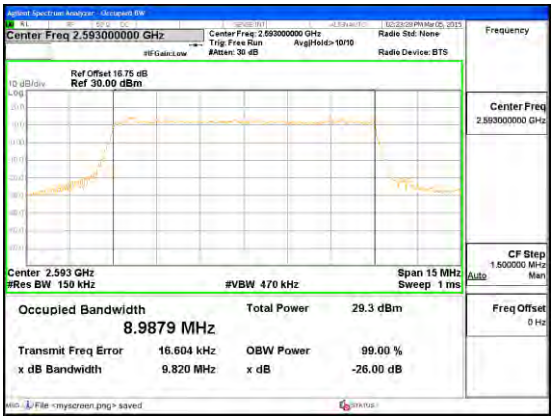
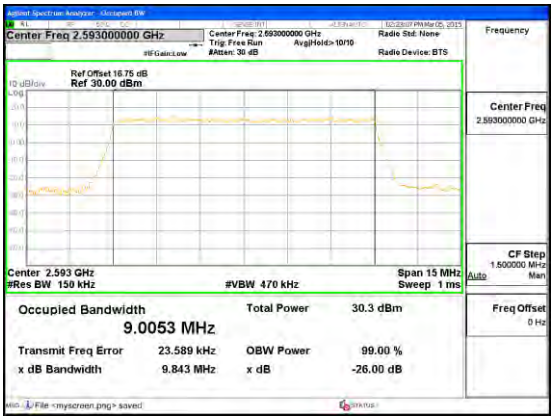
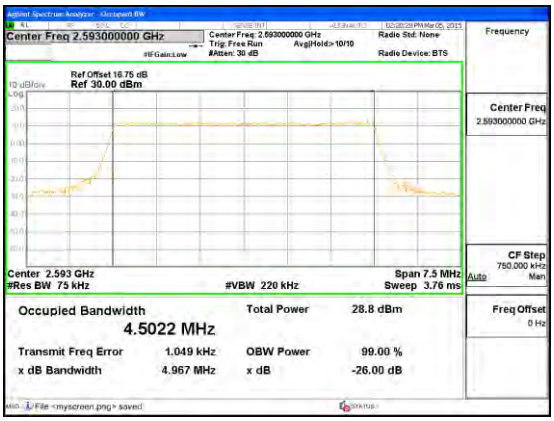
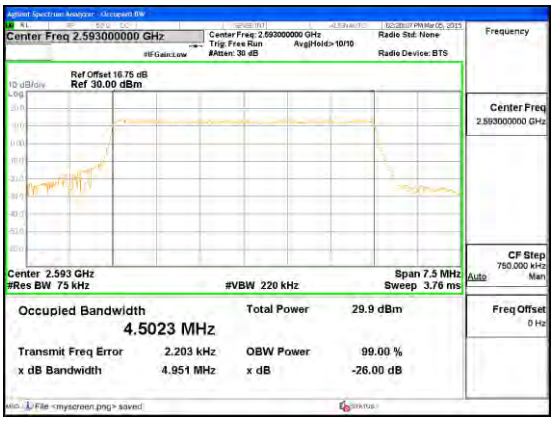
Band LTE41 10MHz 16QAM	 Band LTE41 10MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE41 10MHz OBW QPSK Mid Channel FRB.gif
Band LTE41 5MHz 16QAM	 Band LTE41 5MHz OBW 16QAM Mid Channel FRB.gif	 Band LTE41 5MHz OBW QPSK Mid Channel FRB.gif

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11.2. 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+10Log(P)dB at the channel edge and (55+10Log(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 Log10(f/6.1) decibels or 50 + 10 Log10(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 + 10Log10(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.

1. Change the center frequency as shown in the table above
2. Set the span to clearly show Lower & Upper frequencies + 1MHz
3. Open screen capture application for PXA/PSA.
4. Load emission mask file
5. Press Run.

If screen capture program is not available or unable to locate the emission mask file, please contact PM or PL right away.

MODES TESTED

CDMA and LTE

RESULTS

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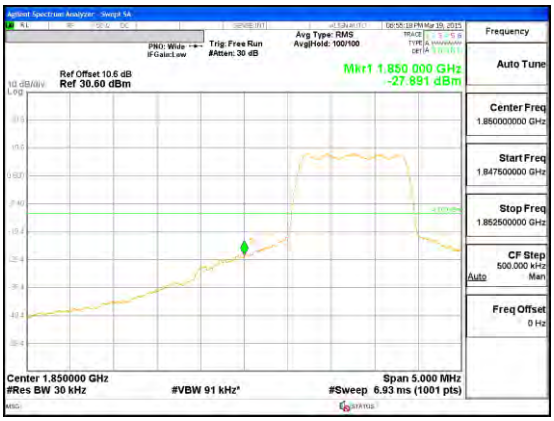
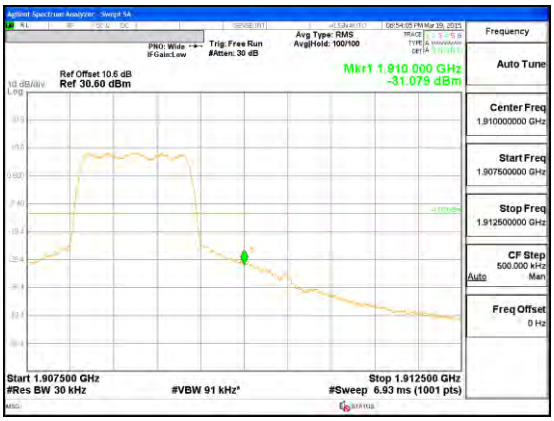
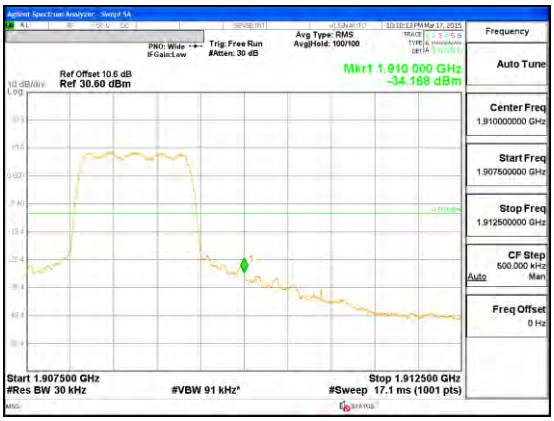
11.2.1. BAND EDGE PLOTS

CDMA

Band BC1 EVDO REL. 0	 Band BC1 EVDO Rel. 0 CBE Low channel	 Band BC1 EVDO Rel. 0 CBE High channel
Band BC1 1xRTT	 Band BC1 1xRTT CBE Low channel	 Band BC1 1xRTT CBE High channel

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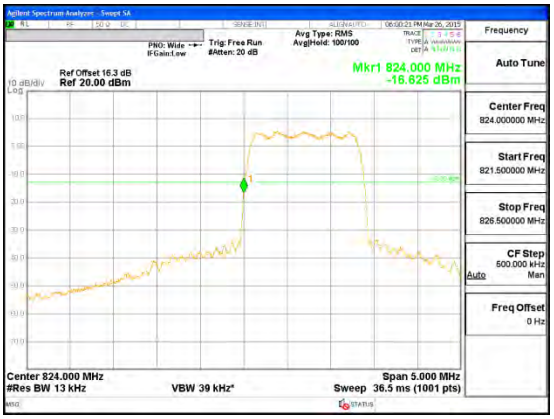
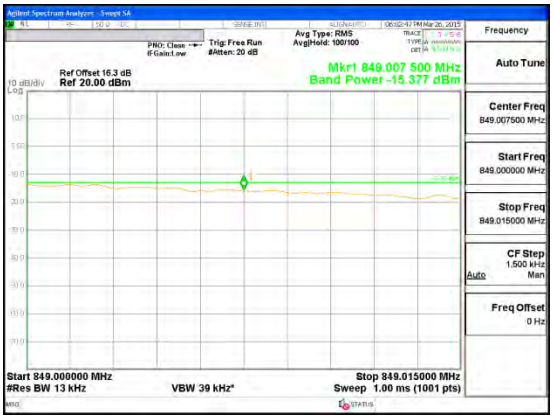
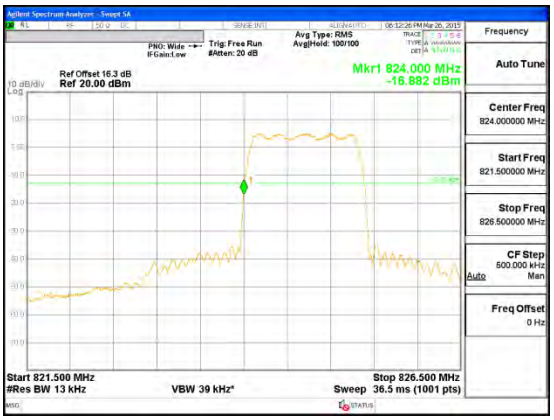
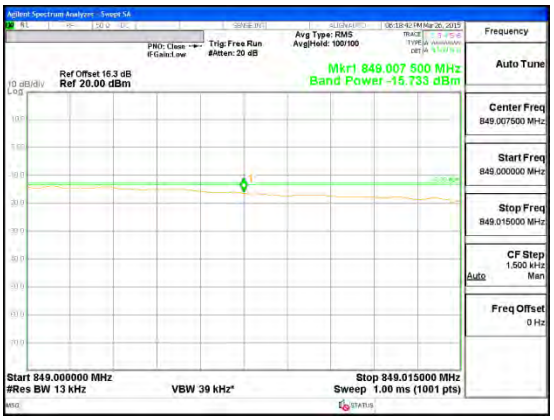
Band BC0 EVDO REL. 0	 Band BC0 EVDO Rel. 0 CBE Low channel	 Band BC0 EVDO Rel. 0 CBE High channel
Band BC0 1xRTT	 Band BC0 1xRTT CBE Low channel	 Band BC0 1xRTT CBE High channel

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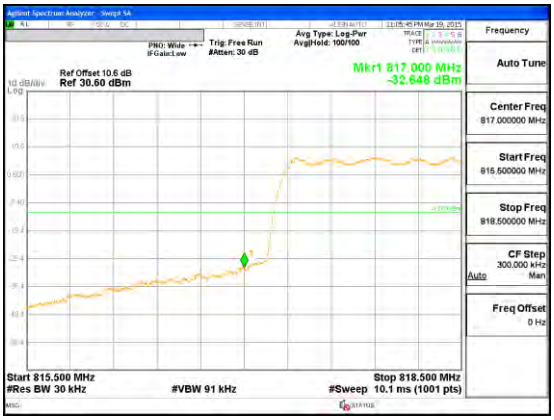
Band BC10 EVDO REL. 0	 Band BC10 EVDO Rel. 0 CBE Low channel	 Band BC10 EVDO Rel. 0 CBE High channel
Band BC10 1xRTT	 Band BC10 1xRTT CBE Low channel	 Band BC10 1xRTT CBE High channel

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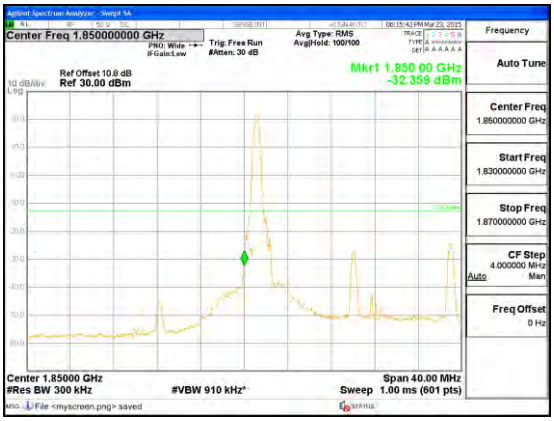
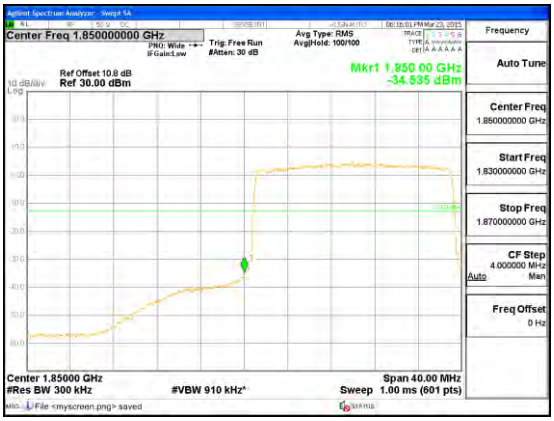
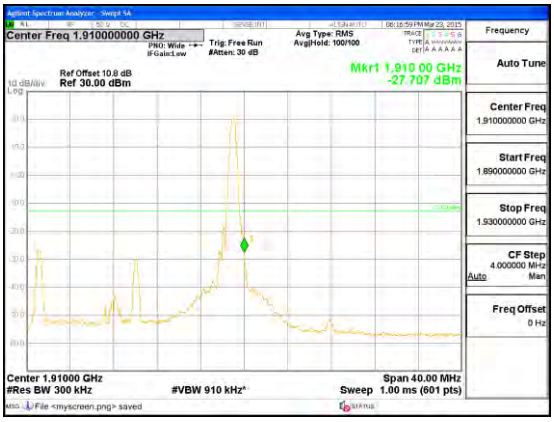
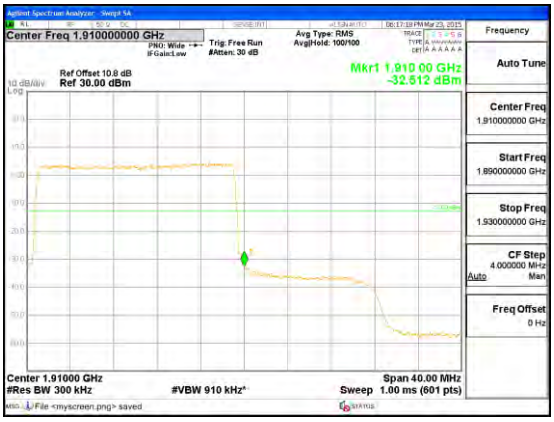
LTE Band 2

Band LTE2 20MHz 16QAM	 Band LTE2 20MHz CBE 16QAM Low Channel 1RB.gif	 Band LTE2 20MHz CBE 16QAM Low Channel FRB.gif
Band LTE2 20MHz 16QAM	 Band LTE2 20MHz CBE 16QAM High Channel 1RB.gif	 Band LTE2 20MHz CBE 16QAM High Channel FRB.gif

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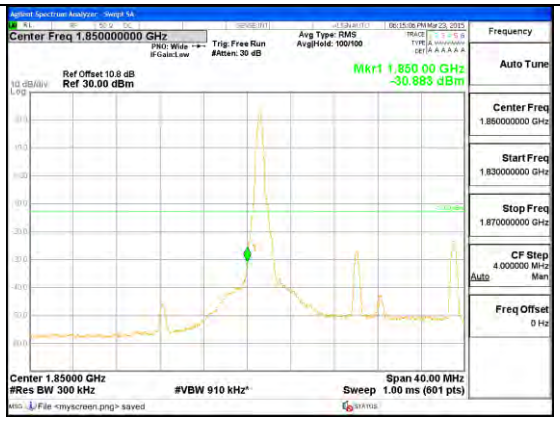
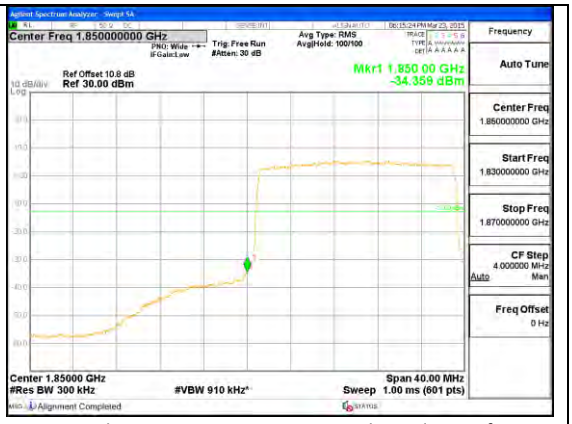
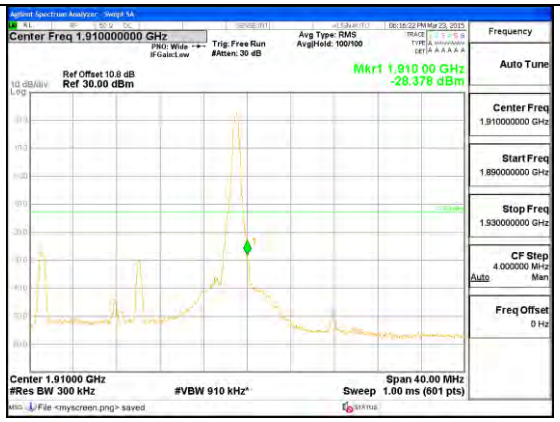
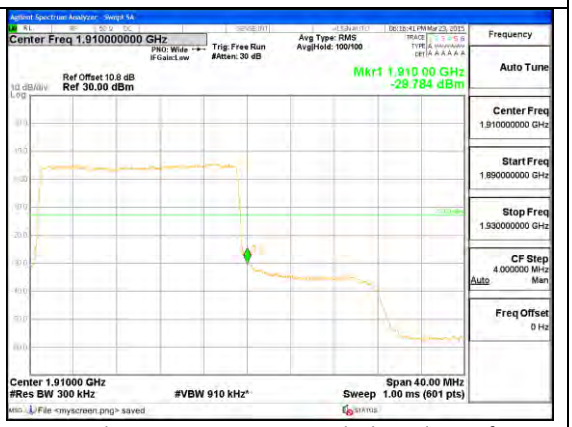
Band LTE2 20MHz QPSK	 Band LTE2 20MHz CBE QPSK Low Channel 1RB.gif	 Band LTE2 20MHz CBE QPSK Low Channel FRB.gif
Band LTE2 20MHz QPSK	 Band LTE2 20MHz CBE QPSK High Channel 1RB.gif	 Band LTE2 20MHz CBE QPSK High Channel FRB.gif

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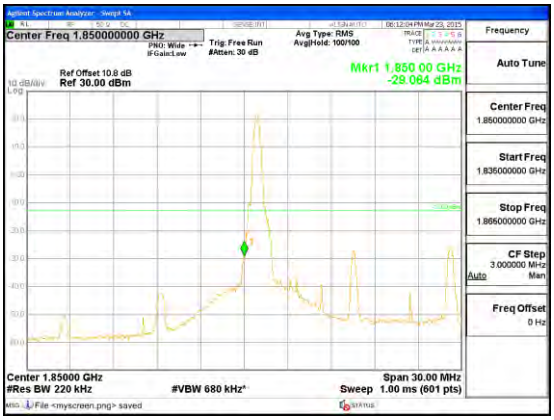
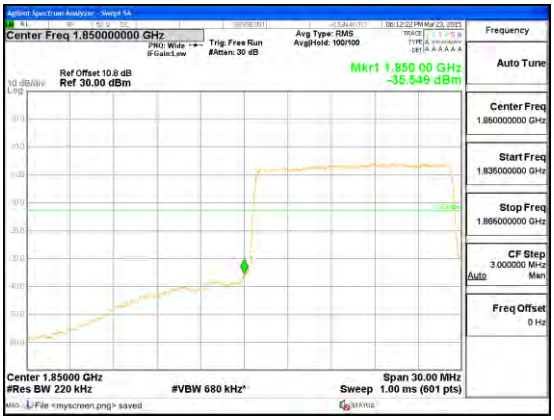
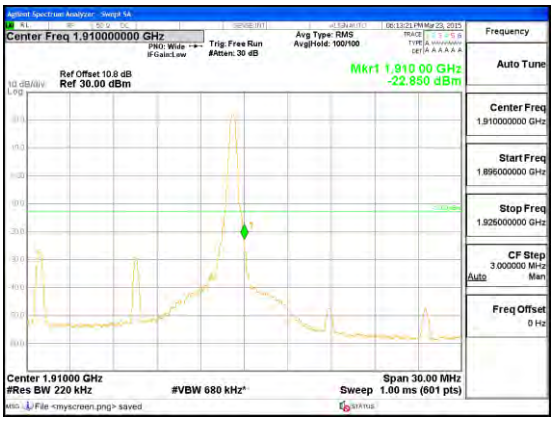
Band LTE2 15MHz 16QAM	 Band LTE2 15MHz CBE 16QAM Low Channel 1RB.gif	 Band LTE2 15MHz CBE 16QAM Low Channel FRB.gif
Band LTE2 15MHz 16QAM	 Band LTE2 15MHz CBE 16QAM High Channel 1RB.gif	 Band LTE2 15MHz CBE 16QAM High Channel FRB.gif

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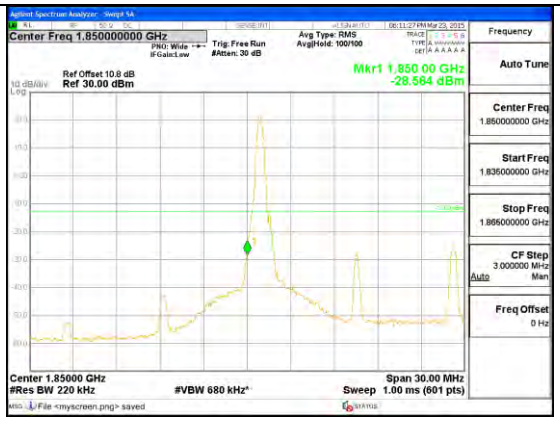
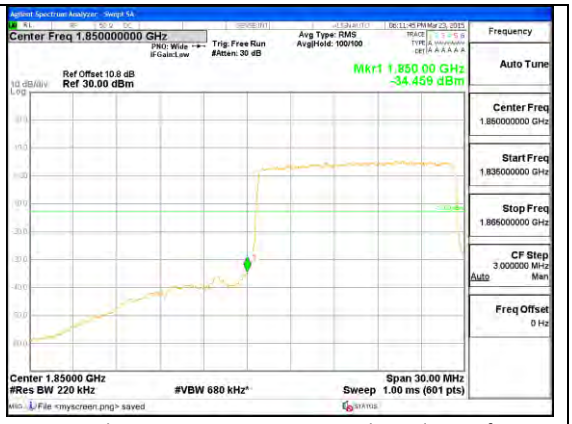
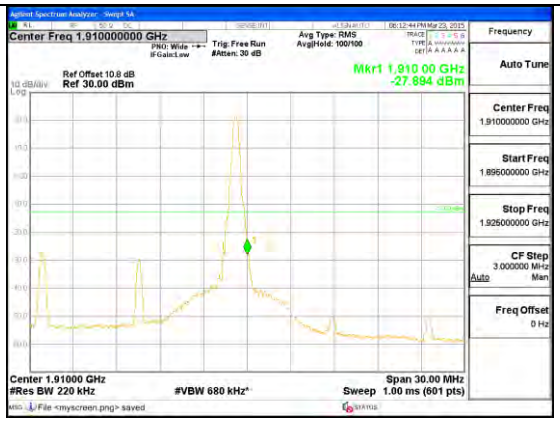
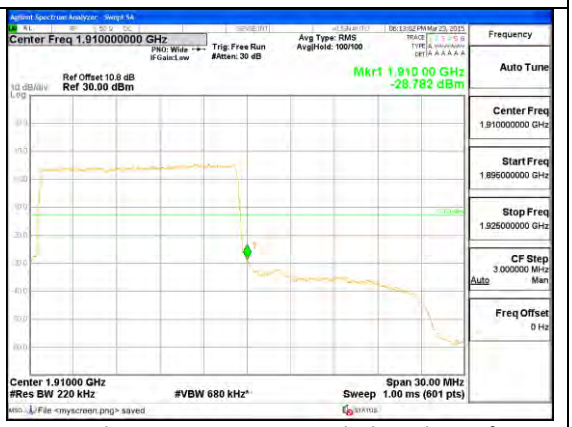
Band LTE2 15MHz QPSK	 Band LTE2 15MHz CBE QPSK Low Channel 1RB.gif	 Band LTE2 15MHz CBE QPSK Low Channel FRB.gif
Band LTE2 15MHz QPSK	 Band LTE2 15MHz CBE QPSK High Channel 1RB.gif	 Band LTE2 15MHz CBE QPSK High Channel FRB.gif

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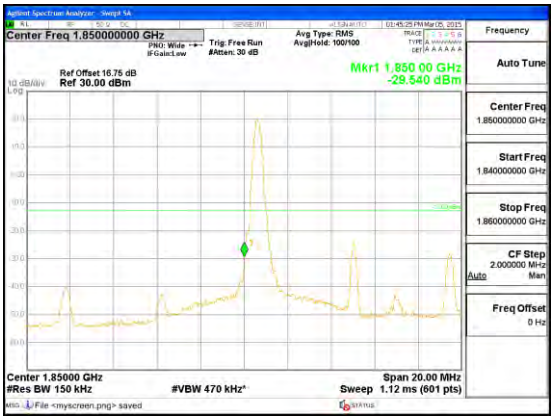
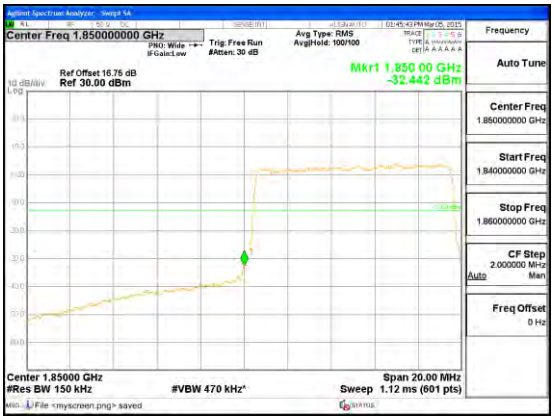
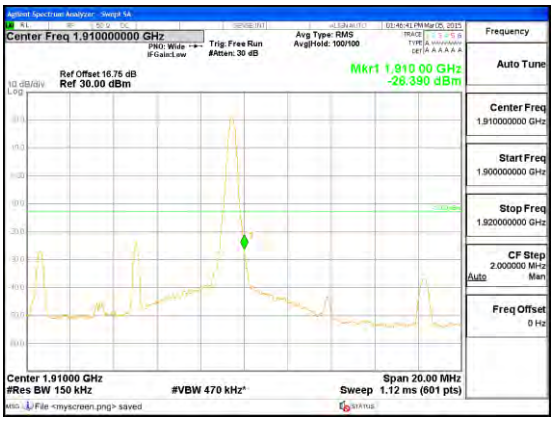
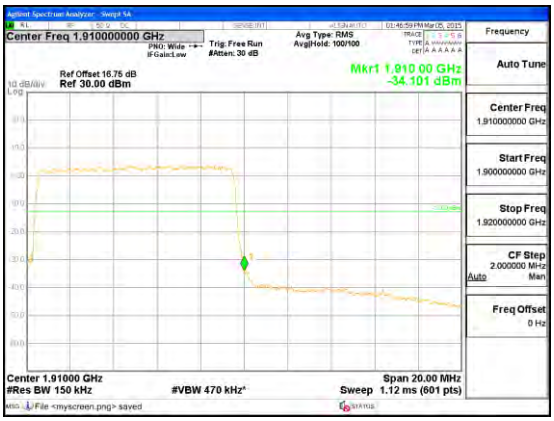
Band LTE2 10MHz 16QAM	 Band LTE2 10MHz CBE 16QAM Low Channel 1RB.gif	 Band LTE2 10MHz CBE 16QAM Low Channel FRB.gif
Band LTE2 10MHz 16QAM	 Band LTE2 10MHz CBE 16QAM High Channel 1RB.gif	 Band LTE2 10MHz CBE 16QAM High Channel FRB.gif

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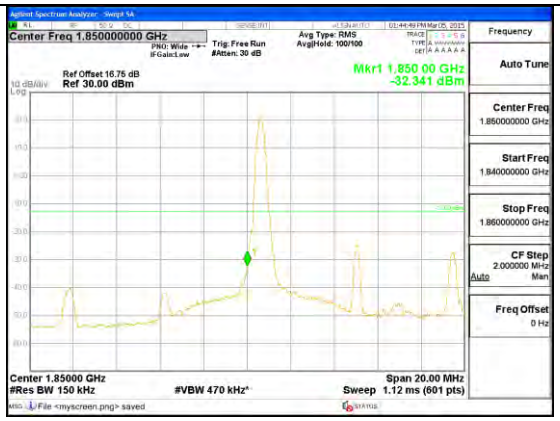
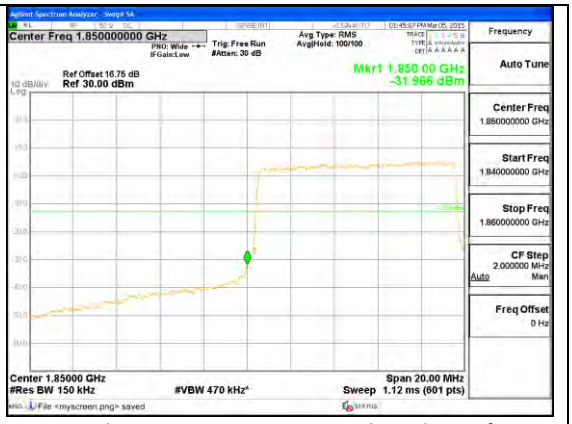
Band LTE2 10MHz QPSK	 Band LTE2 10MHz CBE QPSK Low Channel 1RB.gif	 Band LTE2 10MHz CBE QPSK Low Channel FRB.gif
Band LTE2 10MHz QPSK	 Band LTE2 10MHz CBE QPSK High Channel 1RB.gif	 Band LTE2 10MHz CBE QPSK High Channel FRB.gif

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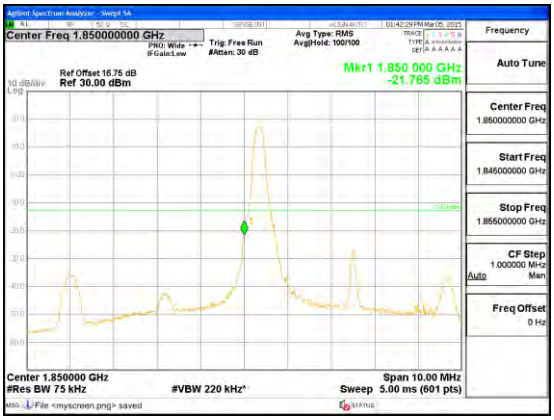
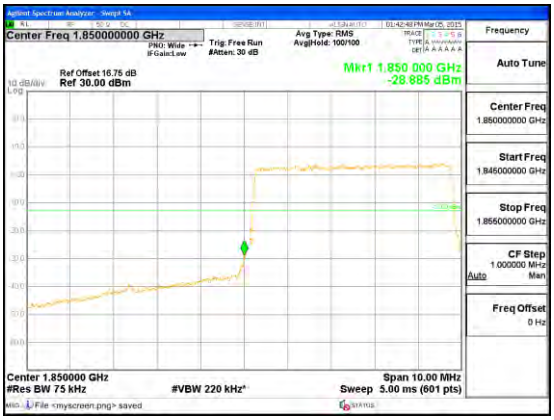
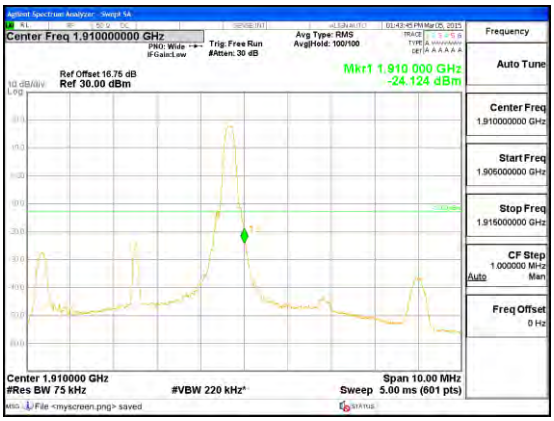
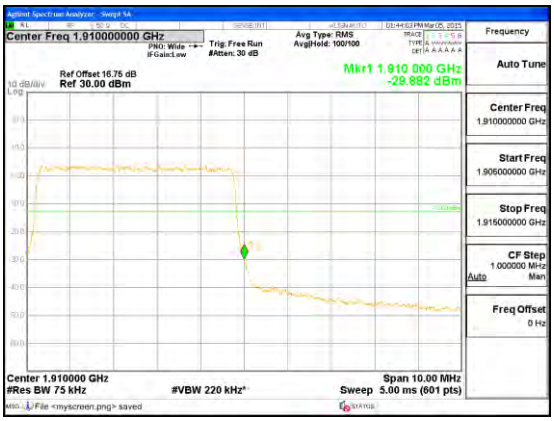
Band LTE2 5MHz 16QAM	 Band LTE2 5MHz CBE 16QAM Low Channel 1RB.gif	 Band LTE2 5MHz CBE 16QAM Low Channel FRB.gif
Band LTE2 5MHz 16QAM	 Band LTE2 5MHz CBE 16QAM High Channel 1RB.gif	 Band LTE2 5MHz CBE 16QAM High Channel FRB.gif

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