



MEASUREMENT REPORT
FCC Part 27

Applicant Name:
LG Electronics USA
1000 Sylvan Avenue
Englewood Cliffs, NJ 07632
United States

Date of Testing:
July 16-23, 2010
Test Site/Location:
PCTEST Lab., Columbia, MD, USA
Test Report Serial No.:
0Y1007071154.BEJ

FCC ID: BEJAD600
APPLICANT: LG ELECTRONICS USA

Application Type: Certification
FCC Classification: PCS Licensed Transmitter (PCB)
FCC Rule Part(s): §2; §27
EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem
Model(s): AD600
Tx Frequency Range: 710 MHz (LTE - Band 17), 1712.5 – 1752.5 MHz (LTE – Band 4)
Max. RF Output Power:
Band 17, 10MHz: 0.064 W ERP (QPSK) (18.04 dBm)
0.085 W ERP (16QAM) (19.30 dBm)
Band 17, 5MHz: 0.102 W ERP (QPSK) (20.10 dBm)
0.095 W ERP (16QAM) (19.80 dBm)
Band 4, 10MHz: 0.166 W EIRP (QPSK) (22.20 dBm)
0.186 W EIRP (16QAM) (22.7 dBm)
Band 4, 5MHz: 0.105 W EIRP (QPSK) (20.2 dBm)
0.123 W EIRP (16QAM) (20.9 dBm)
Emission Designator(s): Band 17, 10MHz: 9M04G7D (QPSK) / 9M04W7D (16QAM)
Band 17, 5MHz: 4M63G7D (QPSK) / 4M63W7D (16QAM)
Band 4, 10MHz: 9M01G7D (QPSK) / 9M07W7D (16QAM)
Band 4, 5MHz: 4M63G7D (QPSK) / 4M63W7D (16QAM)
Test Device Serial No.: identical prototype [S/N: RFI]

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Grant Conditions: Power output listed is ERP and EIRP for Part 27.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.


Randy Ortanez
President

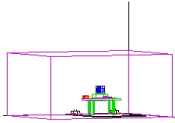


FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 1 of 59

TABLE OF CONTENTS

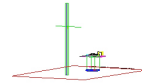
FCC PART 27 MEASUREMENT REPORT	3
1.0 INTRODUCTION	4
1.1 SCOPE	4
1.2 TESTING FACILITY	4
2.0 PRODUCT INFORMATION	5
2.1 EQUIPMENT DESCRIPTION	5
2.2 EMI SUPPRESSION DEVICE(S)/MODIFICATIONS	5
2.3 LABELING REQUIREMENTS	5
3.0 DESCRIPTION OF TESTS	6
3.1 MEASUREMENT PROCEDURE	6
3.2 OCCUPIED BANDWIDTH EMISSION LIMITS	6
3.3 AWS - BASE FREQUENCY BLOCKS	6
3.4 AWS - MOBILE FREQUENCY BLOCKS	7
3.5 BLOCK B FREQUENCY RANGE (704–710 AND 734–740 MHZ)	7
3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL	7
3.7 RADIATED POWER AND RADIATED SPURIOUS EMISSIONS	8
3.8 PEAK-AVERAGE RATIO	8
3.9 FREQUENCY STABILITY / TEMPERATURE VARIATION	8
4.0 TEST EQUIPMENT CALIBRATION DATA	9
5.0 SAMPLE CALCULATIONS	10
6.0 TEST RESULTS	11
6.1 SUMMARY	11
6.2 TRANSMITTER CONDUCTED OUTPUT POWER	12
6.3 EFFECTIVE RADIATED POWER DATA	17
6.4 EQUIVALENT ISOTROPIC RADIATED POWER DATA	18
6.5 BAND 17 LTE RADIATED SPURIOUS MEASUREMENTS	19
6.6 BAND 4 LTE RADIATED SPURIOUS MEASUREMENTS	21
6.7 BAND 17 LTE FREQUENCY STABILITY MEASUREMENTS	27
6.8 BAND 4 LTE FREQUENCY STABILITY MEASUREMENTS	29
7.0 PLOTS OF EMISSIONS – BAND 17 LTE	31
8.0 PLOTS OF EMISSIONS –BAND 4 LTE	41
9.0 CONCLUSION	59

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 2 of 59



MEASUREMENT REPORT

FCC Part 27

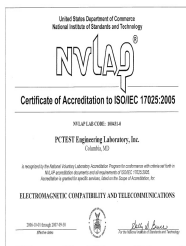
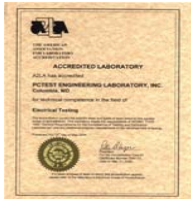


§2.1033 General Information

APPLICANT: LG Electronics USA
APPLICANT ADDRESS: 1000 Sylvan Avenue
 Englewood Cliffs, NJ 07632, United States
TEST SITE: PCTEST ENGINEERING LABORATORY, INC.
TEST SITE ADDRESS: 6660-B Dobbin Road, Columbia, MD 21045 USA
FCC RULE PART(S): §2, §27
BASE MODEL: AD600
FCC ID: BEJAD600
FCC CLASSIFICATION: PCS Licensed Transmitter (PCB)
Emission Designator(s): Band 17, 10MHz: 9M04G7D (QPSK) / 9M04D7W (16QAM)
 Band 17, 5MHz: 4M63G7D (QPSK) / 4M63D7W (16QAM)
 Band 4, 10MHz: 9M01G7D (QPSK) / 9M07D7W (16QAM)
 Band 4, 5MHz: 4M63G7D (QPSK) / 4M63D7W (16QAM)
Test Device Serial No.: RFI ☐ Production ☒ Pre-Production ☐ Engineering
DATE(S) OF TEST: July 16-23, 2010
TEST REPORT S/N: 0Y1007071154.BEJ

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab. located in Columbia, MD 21045, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (2451A-1).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (2451A-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSMA and 700/1700 LTE USB Modem		Page 3 of 59

1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity area, the Baltimore-Washington Intern't'l (BWI) airport, the city of Baltimore and the Washington, DC area. (See Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 28, 2009.

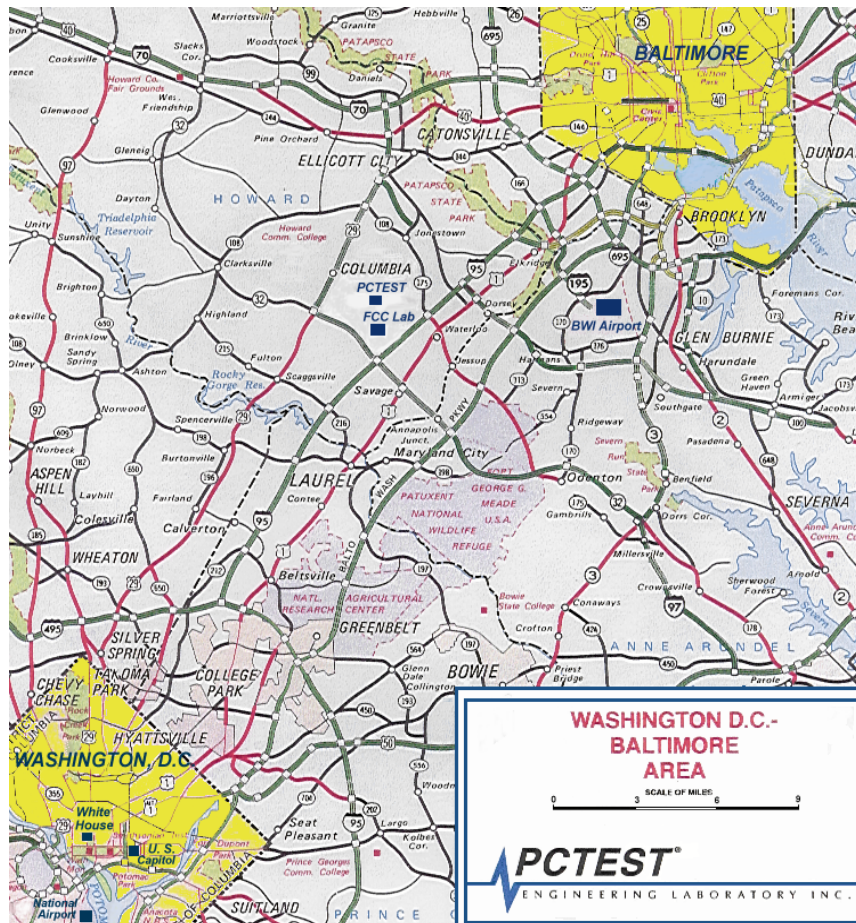


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 4 of 59

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **LGE 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem FCC ID: BEJAD600**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
LGE / Model: AD600	BEJAD600	850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem

Table 2-1. EUT Equipment Description

2.2 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

2.3 Labeling Requirements

Per 2.925

The FCC identifier shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase..

Per 15.19; Docket 95-19

In addition to this requirement, a device subject to certification shall be labeled as follows:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(b)(2).

Please see attachment for FCC ID label and label location.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 5 of 59

3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (See Figure 3-1). The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This power level was recorded using a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded with the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

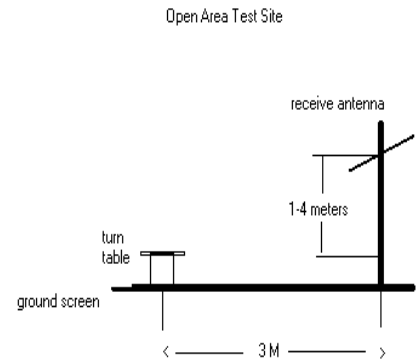


Figure 3-1. Diagram of 3-meter outdoor test range

Deviation from Measurement Procedure.....None

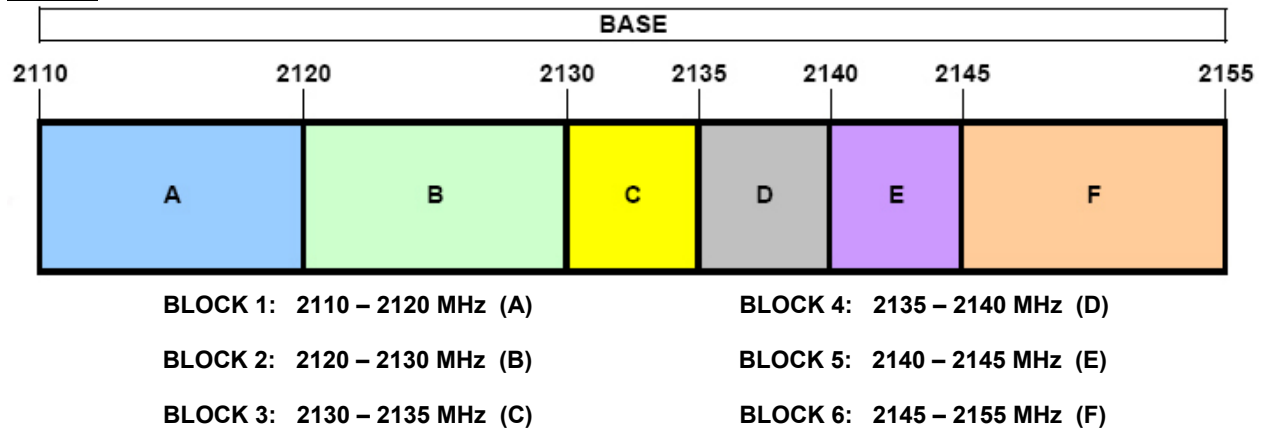
3.2 Occupied Bandwidth Emission Limits

§2.1049, §27.53(h)(1)

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

3.3 AWS - Base Frequency Blocks

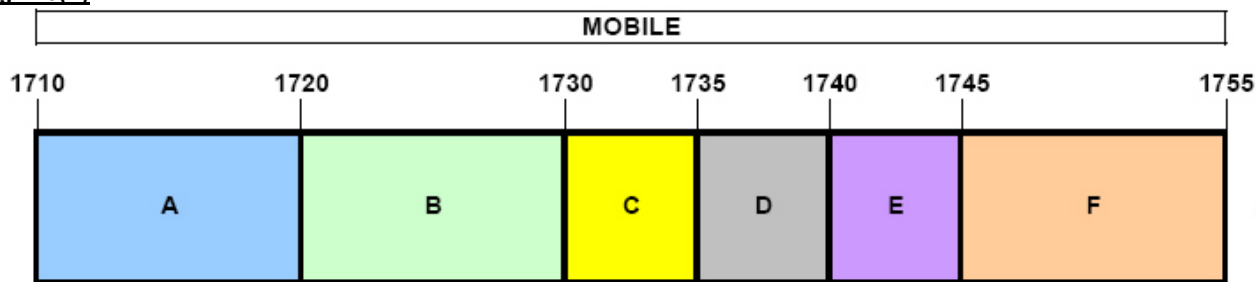
§27.5(h)



FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 6 of 59

3.4 AWS - Mobile Frequency Blocks

§27.5(h)



BLOCK 1: 1710 – 1720 MHz (A)

BLOCK 4: 1735 – 1740 MHz (D)

BLOCK 2: 1720 – 1730 MHz (B)

BLOCK 5: 1740 – 1745 MHz (E)

BLOCK 3: 1730 – 1735 MHz (C)

BLOCK 6: 1745 – 1755 MHz (F)

3.5 Block B Frequency Range (704–710 and 734–740 MHz)

§27.5(c)

Three paired channel blocks of 12 MHz each are available for assignment as follows: Block A: 698-704 MHz and 728-734 MHz; Block B: 704-710 MHz and 734-740 MHz; and Block C: 710-716 MHz and 740-746 MHz. Two unpaired channel blocks of 6 MHz each are available for assignment as follows: Block D: 716-722 MHz; and Block E: 722-728 MHz.

3.6 Spurious and Harmonic Emissions at Antenna Terminal

§2.1051, §27.53(h)

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 7 of 59

3.7 Radiated Power and Radiated Spurious Emissions

§2.1053, §27.53(h)

Radiated power and radiated spurious emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This level is then measured with a broadband average power meter. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive average power meter reading. This spurious level is recorded with the power meter. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration. This device was tested in three orthogonal planes under all configurations and the worst case is reported with 16QAM modulation.

3.8 Peak-Average Ratio

§27.50(d)(5)

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

3.9 Frequency Stability / Temperature Variation

§2.1055, §27.54

The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 8 of 59

4.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	263-10dB	(DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
-	No. 166	(1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No. 167	(100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A
Agilent	11713A	Attenuation/Switch Driver	12/2/2009	Annual	12/2/2010	3439A02645
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	12/2/2009	Annual	12/2/2010	3008A00985
Agilent	85650A	Quasi-Peak Adapter	12/2/2009	Annual	12/2/2010	3303A01872
Agilent	85650A	Quasi-Peak Adapter	3/30/2010	Annual	3/30/2011	2043A00301
Agilent	8566B	(100Hz-22GHz) Spectrum Analyzer	12/2/2009	Annual	12/2/2010	3638A08713
Agilent	8648D	(9kHz-4GHz) Signal Generator	9/19/2009	Biennial	9/19/2011	3613A00315
Agilent	E4407B	ESA Spectrum Analyzer	3/30/2010	Annual	3/30/2011	US39210313
Agilent	E4432B	ESG-D Series Signal Generator	9/10/2009	Annual	9/10/2010	US40053896
Agilent	E4448A	PSA (3Hz-50GHz) Spectrum Analyzer	10/1/2009	Annual	10/1/2010	US42510244
Agilent	E5515C	Wireless Communications Test Set	9/10/2009	Annual	9/10/2010	GB46110872
Agilent	E5515C	Wireless Communications Test Set	9/11/2009	Annual	9/11/2010	GB46310798
Agilent	E5515C	Wireless Communications Test Set	8/25/2009	Annual	8/25/2010	GB41450275
Agilent	E8257D	(250kHz-20GHz) Signal Generator	3/30/2010	Annual	3/30/2011	MY45470194
Agilent	E8267C	Vector Signal Generator	9/29/2009	Biennial	9/29/2011	US42340152
Agilent	N9020A	MXA Signal Analyzer	10/22/2009	Annual	10/22/2010	US46470561
Anritsu	ML2495A	Power Meter	10/12/2009	Annual	10/12/2010	941001
Compliance Design	Roberts	Dipole Set	4/7/2010	Biennial	4/7/2012	146
Compliance Design	Roberts	Dipole Set	4/7/2010	Biennial	4/7/2012	147
Emco	3115	Horn Antenna (1-18GHz)	10/14/2009	Biennial	10/14/2011	9704-5182
Emco	3115	Horn Antenna (1-18GHz)	4/8/2010	Biennial	4/8/2012	9205-3874
Espec	ESX-2CA	Environmental Chamber	4/1/2010	Annual	4/1/2011	17620
Gigatronics	80701A	(0.05-18GHz) Power Sensor	9/9/2009	Annual	9/9/2010	1833460
Gigatronics	8651A	Universal Power Meter	9/9/2009	Annual	9/9/2010	8650319
K & L	11SH10	Band Pass Filter	N/A	Annual	N/A	1300/4000
K & L	11SH10	Band Pass Filter	N/A	Annual	N/A	4000/12000
MiniCircuits	VHF-1300+	High Pass Filter	N/A		N/A	30716
MiniCircuits	VHF-3100+	High Pass Filter	N/A		N/A	30721
Pasternack	PE2208-6	Bidirectional Coupler	N/A		N/A	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	9/11/2009	Annual	9/11/2010	836371/0079
Rohde & Schwarz	CMU200	Base Station Simulator	9/4/2009	Annual	9/4/2010	109892
Rohde & Schwarz	CMU200	Base Station Simulator	3/4/2010	Annual	3/4/2011	836536/0005
Rohde & Schwarz	FSQ 26	Spectrum Analyzer	9/19/2009	Annual	9/19/2010	200452
Rohde & Schwarz	CMW500	LTE Base Station Simulator	8/25/2009	Annual	8/25/2010	100976
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Rx	7/17/2009	Biennial	7/17/2011	9105-2404
Schwarzbeck	UHA9105	Dipole Antenna (400 - 1GHz) Tx	7/17/2009	Biennial	7/17/2011	9105-2403
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	5/14/2009	Biennial	5/14/2011	A050307
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	7/17/2009	Biennial	7/17/2011	A051107

Table 4-1. Test Equipment

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 9 of 59

5.0 SAMPLE CALCULATIONS

Emission Designator

Emission Designator = 4M25G7D

QPSK BW = 4.25 MHz

G = Phase Modulation

7 = Two or more channels containing quantized or digital information

D = Data transmission, telemetry, telecommand

Emission Designator = 3M35D7W

16-QAM BW = 3.35 MHz

D = Quadrature Amplitude Modulation

7 = Two or more channels containing quantized or digital information

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

Spurious Radiated Emission – AWS Band

Example: Channel 20150 AWS Mode 2nd Harmonic (3460.0 MHz)

The average receive power meter reading at 3 meters with the EUT on the turntable was –81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminal is adjusted to produce a reading of –81.0 dBm on the power meter. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3460.0 MHz. So 6.1 dB is added to the signal generator reading of –30.9 dBm yielding –24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm – (–24.80) = 50.3 dBc.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 10 of 59

6.0 TEST RESULTS

6.1 Summary

Company Name: LG Electronics USA
 FCC ID: BEJAD600
 FCC Classification: PCS Licensed Transmitter (PCB)
 Mode(s): LTE

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)					
2.1049, 27.53(h)(1)	Occupied Bandwidth	N/A	CONDUCTED	PASS	Sections 7.0, 8.0
2.1051, 27.53(h)	Band Edge / Conducted Spurious Emissions	$< 43 + 10\log_{10}(P[\text{Watts}])$ at Band Edge and for all out-of-band emissions		PASS	Sections 7.0, 8.0
27.50(d)(5)	Peak-Average Ratio	$< 13 \text{ dB}$		PASS	Sections 7.0, 8.0
2.1046	Transmitter Conducted Output Power	N/A		PASS	Section 6.2
27.50(c)(10)	Effective Radiated Power (Band17)	$< 3 \text{ Watts max. ERP}$	RADIATED	PASS	Section 6.3
27.50(d)(4)	Equivalent Isotropic Radiated Power (AWS)	$< 1 \text{ Watts max. EIRP}$		PASS	Section 6.4
2.1053, 27.53(h), 27.53(g)	Undesirable Emissions	$< 43 + 10\log_{10}(P[\text{Watts}])$ for all out-of-band emissions		PASS	Section 6.5, 6.6
2.1055, 27.54	Frequency Stability	$< 2.5 \text{ ppm}$		PASS	Section 6.7, 6.8

Table 6-1. Summary of Test Results

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem			Page 11 of 59

6.2 Transmitter Conducted Output Power

§2.1046

The **LGE 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem FCC ID: BEJAD600** was connected to a Rohde & Schwarz SMU200 vector signal generator and measured using the Rohde & Schwarz FSQ26 spectrum analyzer. The vector signal generator was used to generate a downlink signal for use with the EUT. Once the waveform was generated, the EUT uplink power was measured using the channel power function of the spectrum analyzer. The modulation of the uplink waveform was determined by software installed on a laptop computer and the conducted powers were measured for different combinations of resource block sizes, resource block offsets, and MCS indices. The EUT was configured to transmit continuously using different resource block configurations for 5MHz, and 10MHz channel bandwidths with QPSK and 16-QAM modulations. All of the 10MHz conducted powers are listed first for band 17 and 4, followed by the 5MHz conducted powers for band 17 and 4. See tables below.



Figure 6-1. Test Setup Diagram

Freq. (Mhz)	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
710	QPSK	10 MHz	1	0	23.01
710	16QAM	10 MHz	1	0	23.37
710	QPSK	10 MHz	1	49	22.38
710	16QAM	10 MHz	1	49	22.77
710	QPSK	10 MHz	25	12	22.97
710	16QAM	10 MHz	25	12	22.89
710	QPSK	10 MHz	50	0	22.86
710	16QAM	10 MHz	50	0	22.88

Table 6-2. Maximum Conducted Output Power (10MHz Band 17 LTE)

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem			Page 12 of 59

Transmitter Conducted Output Power (Cont'd)

§2.1046

Freq. (MHz)	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1715	QPSK	10 MHz	1	0	22.69
1715	16QAM	10 MHz	1	0	22.55
1715	QPSK	10 MHz	1	49	23.19
1715	16QAM	10 MHz	1	49	23.43
1715	QPSK	10 MHz	25	12	22.90
1715	16QAM	10 MHz	25	12	22.71
1715	QPSK	10 MHz	50	0	22.84
1715	16QAM	10 MHz	50	0	22.75

Table 6-3. Maximum Conducted Output Power (10MHz Band 4 LTE – Low Channel)

Freq. (MHz)	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1730	QPSK	10 MHz	1	0	23.21
1730	16QAM	10 MHz	1	0	23.44
1730	QPSK	10 MHz	1	49	23.01
1730	16QAM	10 MHz	1	49	22.91
1730	QPSK	10 MHz	25	12	22.86
1730	16QAM	10 MHz	25	12	22.90
1730	QPSK	10 MHz	50	0	22.88
1730	16QAM	10 MHz	50	0	22.90

Table 6-4. Maximum Conducted Output Power (10MHz Band 4 LTE – Mid Channel)

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)				Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem				Page 13 of 59

Transmitter Conducted Output Power (Cont'd)

§2.1046

Freq. (MHz)	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1750	QPSK	10 MHz	1	0	23.23
1750	16QAM	10 MHz	1	0	23.52
1750	QPSK	10 MHz	1	49	22.65
1750	16QAM	10 MHz	1	49	22.87
1750	QPSK	10 MHz	25	12	23.18
1750	16QAM	10 MHz	25	12	23.01
1750	QPSK	10 MHz	50	0	23.18
1750	16QAM	10 MHz	50	0	23.18

Table 6-5. Maximum Conducted Output Power (10MHz Band 4 LTE – High Channel)

Freq. (MHz)	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
710	QPSK	5 MHz	1	0	22.35
710	16QAM	5 MHz	1	0	22.01
710	QSPK	5 MHz	1	24	22.13
710	16QAM	5 MHz	1	24	21.78
710	QPSK	5 MHz	12	6	21.97
710	16QAM	5 MHz	12	6	21.86
710	QSPK	5 MHz	25	0	21.83
710	16QAM	5 MHz	25	0	21.78

Table 6-6. Maximum Conducted Output Power (5MHz Band 17 LTE)

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem			Page 14 of 59

Transmitter Conducted Output Power (Cont'd)

§2.1046

UL Freq. (MHz)	UL Channel	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1712.5	19975	QPSK	5 MHz	1	0	22.14
1712.5	19975	16QAM	5 MHz	1	0	21.94
1712.5	19975	QSPK	5 MHz	1	24	22.41
1712.5	19975	16QAM	5 MHz	1	24	22.23
1712.5	19975	QPSK	5 MHz	12	6	21.92
1712.5	19975	16QAM	5 MHz	12	6	21.89
1712.5	19975	QSPK	5 MHz	25	0	21.89
1712.5	19975	16QAM	5 MHz	25	0	22.00

Table 6-7. Maximum Conducted Output Power (5MHz Band 4 LTE – Low Channel)

UL Freq. (MHz)	UL Channel	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1730	20150	QPSK	5 MHz	1	0	22.61
1730	20150	16QAM	5 MHz	1	0	22.51
1730	20150	QPSK	5 MHz	1	24	22.45
1730	20150	16QAM	5 MHz	1	24	22.25
1730	20150	QPSK	5 MHz	12	6	22.10
1730	20150	16QAM	5 MHz	12	6	21.99
1730	20150	QPSK	5 MHz	25	0	21.91
1730	20150	16QAM	5 MHz	25	0	22.06

Table 6-8. Maximum Conducted Output Power (5MHz Band 4 LTE – Mid Channel)

Transmitter Conducted Output Power (Cont'd)

§2.1046

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 15 of 59

UL Freq. (MHz)	UL Channel	Modulation	Bandwidth	RB Size	Resource Block Offset	Maximum Average Power [dBm]
1752.5	20375	QPSK	5 MHz	1	0	22.40
1752.5	20375	16QAM	5 MHz	1	0	22.18
1752.5	20375	QPSK	5 MHz	1	24	22.02
1752.5	20375	16QAM	5 MHz	1	24	21.78
1752.5	20375	QPSK	5 MHz	12	6	21.91
1752.5	20375	16QAM	5 MHz	12	6	22.02
1752.5	20375	QPSK	5 MHz	25	0	21.98
1752.5	20375	16QAM	5 MHz	25	0	21.79

Table 6-9. Maximum Conducted Output Power (5MHz Band 4 LTE – High Channel)

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 16 of 59

6.3 Effective Radiated Power Data

§27.50(c)(10)

Frequency [MHz]	Bandwidth	Modulation	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	Power Source
710.00	10MHz	QPSK	-19.760	18.04	0.00	H	18.04	0.064	Laptop
710.00	10MHz	16-QAM	-18.500	19.30	0.00	H	19.30	0.085	Laptop
710.00	5MHz	QPSK	-17.700	20.10	0.00	H	20.10	0.102	Laptop
710.00	5MHz	16-QAM	-18.000	19.80	0.00	H	19.80	0.095	Laptop

Table 6-10. Effective Radiated Power Data (Band 17)

NOTES:

Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

This device was tested in three orthogonal planes under all configurations and the worst case is reported with QPSK modulation, maximum number of RB's, and RB offset =0 for 5MHz BW, and 16QAM modulation, maximum number of RB's, and RB offset = 0 for 10MHz. This unit was tested while powered by a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 17 of 59

6.4 Equivalent Isotropic Radiated Power Data

§27.50(d)(2)

Frequency [MHz]	Bandwidth	Modulation	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Power Source
1715.00	10 MHz	16QAM	-22.30	13.40	8.00	H	21.40	0.138	Laptop
1730.00	10 MHz	16QAM	-21.00	14.70	8.00	H	22.70	0.186	Laptop
1750.00	10 MHz	16QAM	-21.40	14.30	8.00	H	22.30	0.170	Laptop
1730.00	10 MHz	QPSK	-21.50	14.20	8.00	H	22.20	0.166	Laptop

Table 6-11. Equivalent Isotropic Radiated Power Output Data (Band 4 – 10MHz)

Frequency [MHz]	Bandwidth	Modulation	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Power Source
1712.50	5 MHz	16QAM	-23.90	11.80	8.00	H	19.80	0.095	Laptop
1730.00	5 MHz	16QAM	-23.30	12.40	8.00	H	20.40	0.110	Laptop
1752.50	5 MHz	16QAM	-22.80	12.90	8.00	H	20.90	0.123	Laptop
1752.50	5 MHz	QPSK	-23.50	12.20	8.00	H	20.20	0.105	Laptop

Table 6-12. Equivalent Isotropic Radiated Power Output Data (Band 4 – 5MHz)

NOTES:

Equivalent Isotropic Radiated Power Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the Horn antenna is measured. The difference between the gain of the horn and an isotropic antenna is taken into consideration and the EIRP is recorded.

This device was tested under all configurations and the worse case was with 16QAM modulation with maximum RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning with the worse case test configuration in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 18 of 59

6.5 Band 17 LTE Radiated Spurious Measurements

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 710.00 MHz
 MEASURED OUTPUT POWER: 19.300 dBm = 0.085 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 32.29 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1420.00	-60.33	5.77	-54.55	H	73.9
2130.00	-59.43	6.26	-53.17	H	72.5
2840.00	-95.45	6.69	-88.76	H	108.1
3550.00	-93.62	6.93	-86.69	H	106.0
4260.00	-92.88	7.69	-85.19	H	104.5

Table 6-13. Radiated Spurious Data (10MHz BW, 16QAM, Band 17)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, maximum number of RB's, and RB offset =0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 19 of 59

Band 17 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 710.00 MHz
 MEASURED OUTPUT POWER: 20.100 dBm = 0.102 W
 BW / MODULATION SIGNAL: 5MHz QPSK
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 33.09 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1420.00	-57.83	5.79	-52.04	H	72.1
2130.00	-58.21	6.27	-51.95	H	72.0
2840.00	-95.43	6.69	-88.74	H	108.8
3550.00	-93.59	6.93	-86.66	H	106.8
4260.00	-92.95	7.73	-85.21	H	105.3

Table 6-14. Radiated Spurious Data (5MHz BW, QPSK, Band 17)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested in three orthogonal planes under all configurations and the worst case is reported with 16QAM modulation. The maximum number of RB's were used, with RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 20 of 59

6.6 Band 4 LTE Radiated Spurious Measurements

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1715.00 MHz
 MEASURED OUTPUT POWER: 22.700 dBm = 0.186 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3430.00	-58.77	9.70	-49.07	H	71.8
5145.00	-58.98	11.00	-47.98	H	70.7
6860.00	-92.27	11.18	-81.10	H	103.8
8575.00	-90.18	11.63	-78.54	H	101.2
10290.00	-90.02	12.74	-77.27	H	100.0

Table 6-15. Radiated Spurious Data (10MHz BW, 16QAM, Band 4 Low Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 21 of 59

Band 4 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1730.00 MHz
 MEASURED OUTPUT POWER: 22.700 dBm = 0.186 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3460.00	-59.89	9.70	-50.19	H	72.9
5230.00	-58.63	10.93	-47.71	H	70.4
6960.00	-92.00	11.09	-80.90	H	103.6
8690.00	-90.16	11.74	-78.42	H	101.1
10420.00	-90.01	12.82	-77.19	H	99.9

Table 6-16. Radiated Spurious Data (10MHz BW, 16QAM, Band 4 Mid Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 22 of 59

Band 4 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1750.00 MHz
 MEASURED OUTPUT POWER: 22.700 dBm = 0.186 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W)$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3500.00	-59.79	9.70	-50.09	H	72.8
5250.00	-58.91	10.84	-48.07	H	70.8
6980.00	-91.74	11.00	-80.74	H	103.4
8710.00	-90.17	11.86	-78.31	H	101.0
10440.00	-90.02	12.90	-77.12	H	99.8

Table 6-17. Radiated Spurious Data (10MHz BW, 16QAM, Band 4 High Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 23 of 59

Band 4 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1712.50 MHz
 MEASURED OUTPUT POWER: 22.700 dBm = 0.186 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3425.00	-58.77	9.70	-49.07	H	71.8
5137.50	-58.98	11.00	-47.98	H	70.7
6850.00	-92.27	11.18	-81.10	H	103.8
8562.50	-90.18	11.63	-78.54	H	101.2
10275.00	-90.02	12.74	-77.27	H	100.0

Table 6-18. Radiated Spurious Data (5MHz BW, 16QAM, Band 4 Low Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 24 of 59

Band 4 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1730.00 MHz
 MEASURED OUTPUT POWER: 20.900 dBm = 0.123 W
 BW / MODULATION SIGNAL: 5MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 33.90 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3460.00	-56.89	9.70	-47.19	H	68.1
5190.00	-55.32	10.92	-44.40	H	65.3
6920.00	-91.98	11.08	-80.90	H	101.8
8650.00	-90.18	11.76	-78.42	H	99.3
10380.00	-90.02	12.83	-77.19	H	98.1

Table 6-19. Radiated Spurious Data (5MHz BW, 16QAM, Band 4 Mid Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 25 of 59

Band 4 LTE Radiated Spurious Measurements (Cont'd)

§2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1752.50 MHz
 MEASURED OUTPUT POWER: 22.700 dBm = 0.186 W
 BW / MODULATION SIGNAL: 10MHz 16QAM
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W)$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3505.00	-59.79	9.70	-50.09	H	72.8
5257.50	-58.91	10.84	-48.07	H	70.8
6987.50	-91.74	11.00	-80.74	H	103.4
8717.50	-90.17	11.86	-78.31	H	101.0
10447.50	-90.02	12.90	-77.12	H	99.8

Table 6-20. Radiated Spurious Data (5MHz BW, 16QAM, Band 4 High Channel)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

The device was tested in all configurations and the worse case was found with 16QAM modulation, with maximum number of RB's and RB offset = 0. This unit was tested while powered by connection to a laptop. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning, with the worse case occurring in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 26 of 59

6.7 Band 17 LTE Frequency Stability Measurements

§2.1055, §27.54

OPERATING FREQUENCY: 710,000,000 Hz

REFERENCE VOLTAGE: 5 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	5.00	+ 20 (Ref)	710,000,025	25	0.000003
100 %		- 30	710,000,037	37	0.000005
100 %		- 20	709,999,962	-38	-0.000005
100 %		- 10	710,000,022	22	0.000003
100 %		0	709,999,961	-39	-0.000006
100 %		+ 10	710,000,026	26	0.000004
100 %		+ 20	710,000,039	39	0.000006
100 %		+ 30	710,000,002	2	0.000000
100 %		+ 40	709,999,986	-14	-0.000002
100 %		+ 50	710,000,004	4	0.000001
115 %	5.75	+ 20	710,000,038	38	0.000005
BATT. ENDPOINT	4.46	+ 20	709,999,960	-40	-0.000006

Table 6-21. Frequency Stability Data (10MHz BW, 16QAM, Band 17)

Note:

The frequency deviation was measured to ensure that the channel emissions remained within the authorized band with varying temperature and voltage.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 27 of 59

Band 17 LTE Frequency Stability Measurements (Cont'd) **§2.1055, §27.54**

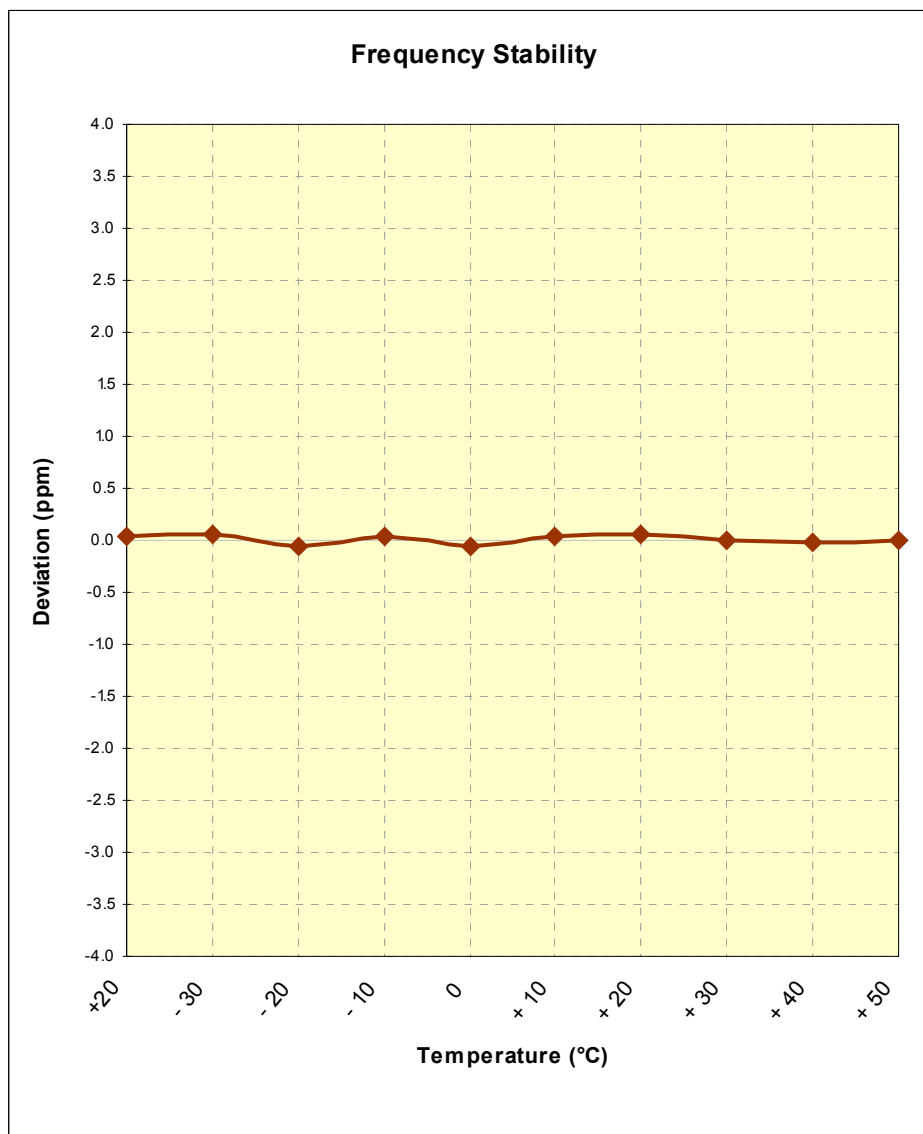


Figure 6-2. Frequency Stability Graph (10MHz BW, 16QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 28 of 59

6.8 Band 4 LTE Frequency Stability Measurements

\$2.1055, \$27.54

OPERATING FREQUENCY: 1,730,000,000 Hz

REFERENCE VOLTAGE: 5 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	5.00	+ 20 (Ref)	1,730,000,008	8	0.000000
100 %		- 30	1,729,999,992	-8	0.000000
100 %		- 20	1,729,999,995	-5	0.000000
100 %		- 10	1,730,000,036	36	0.000002
100 %		0	1,730,000,019	19	0.000001
100 %		+ 10	1,729,999,980	-20	-0.000001
100 %		+ 20	1,729,999,979	-21	-0.000001
100 %		+ 30	1,729,999,972	-28	-0.000002
100 %		+ 40	1,729,999,992	-8	0.000000
100 %		+ 50	1,729,999,977	-23	-0.000001
115 %	5.75	+ 20	1,730,000,014	14	0.000001
BATT. ENDPOINT	4.47	+ 20	1,729,999,982	-18	-0.000001

Table 6-22. Frequency Stability Data (10MHz BW, 16QAM, Band 4)

Note:

The frequency deviation was measured to ensure that the channel emissions remained within the authorized band with varying temperature and voltage.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)			Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem			Page 29 of 59

Band 4 LTE Frequency Stability Measurements (Cont'd)
§2.1055, §27.54

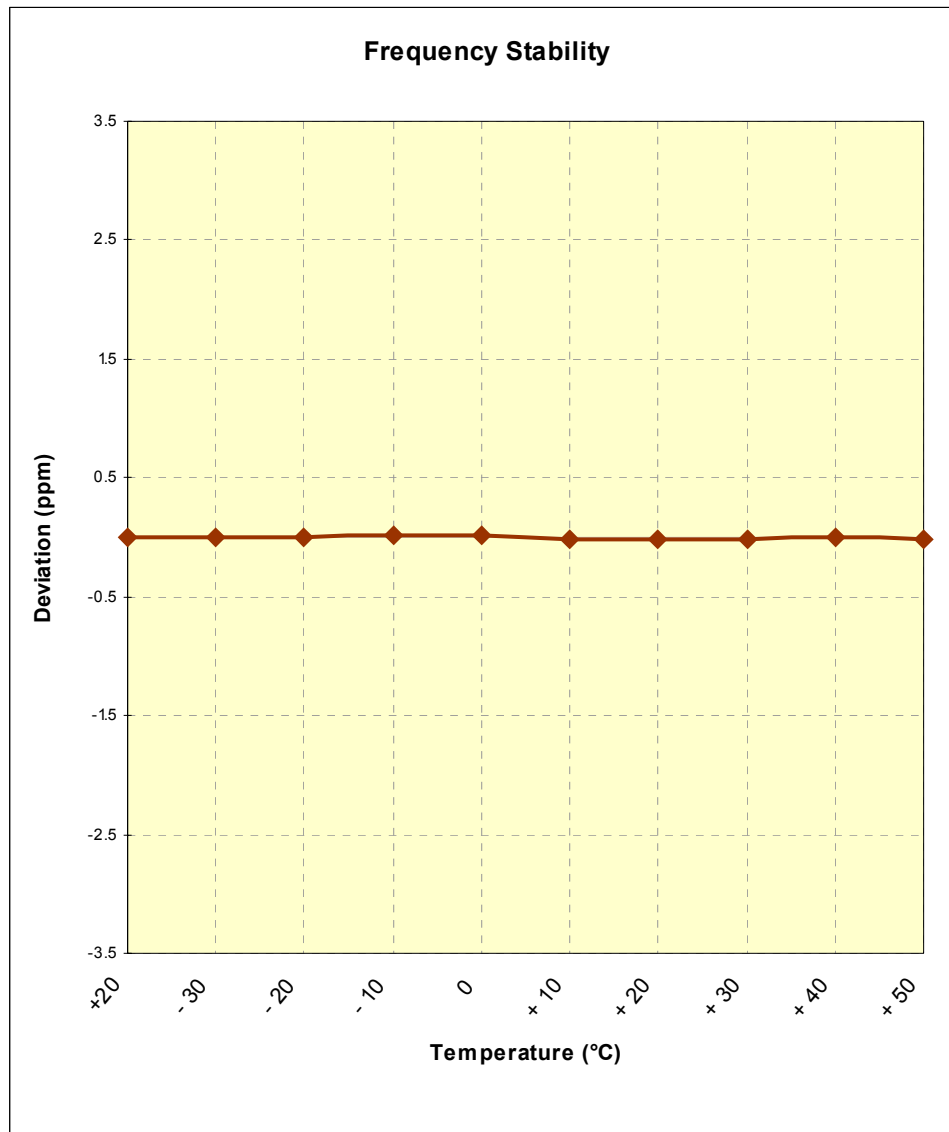
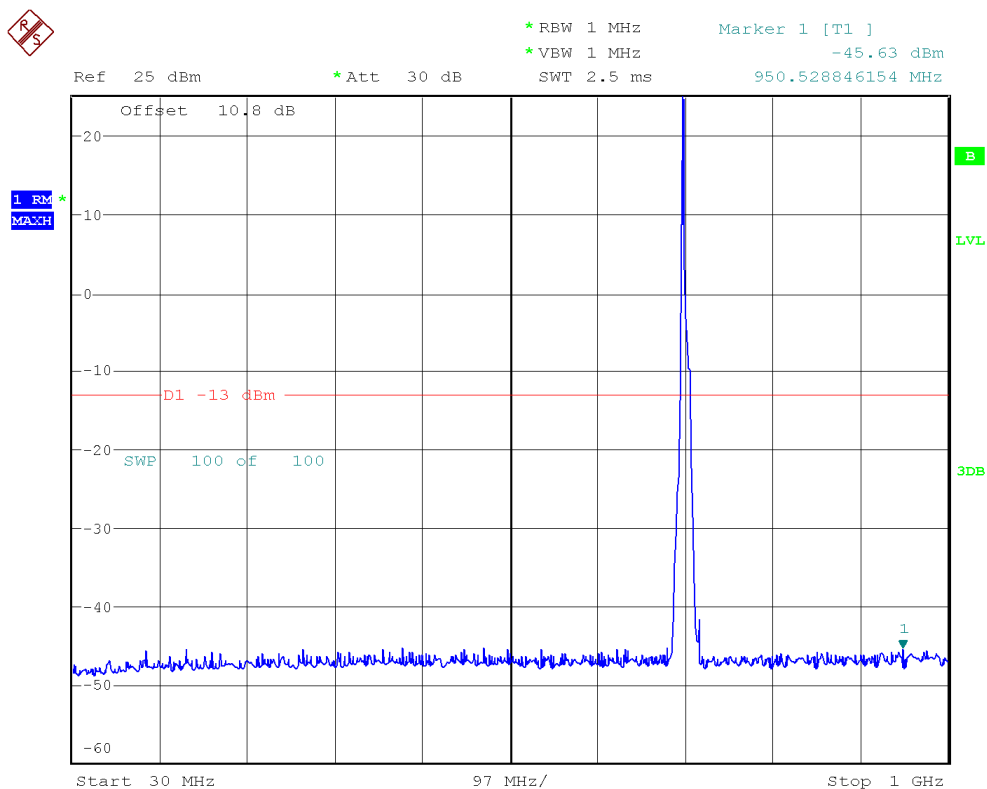


Figure 6-3. Frequency Stability Graph (10 MHz BW, 16QAM, Band 4)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 30 of 59

7.0 PLOTS OF EMISSIONS – BAND 17 LTE



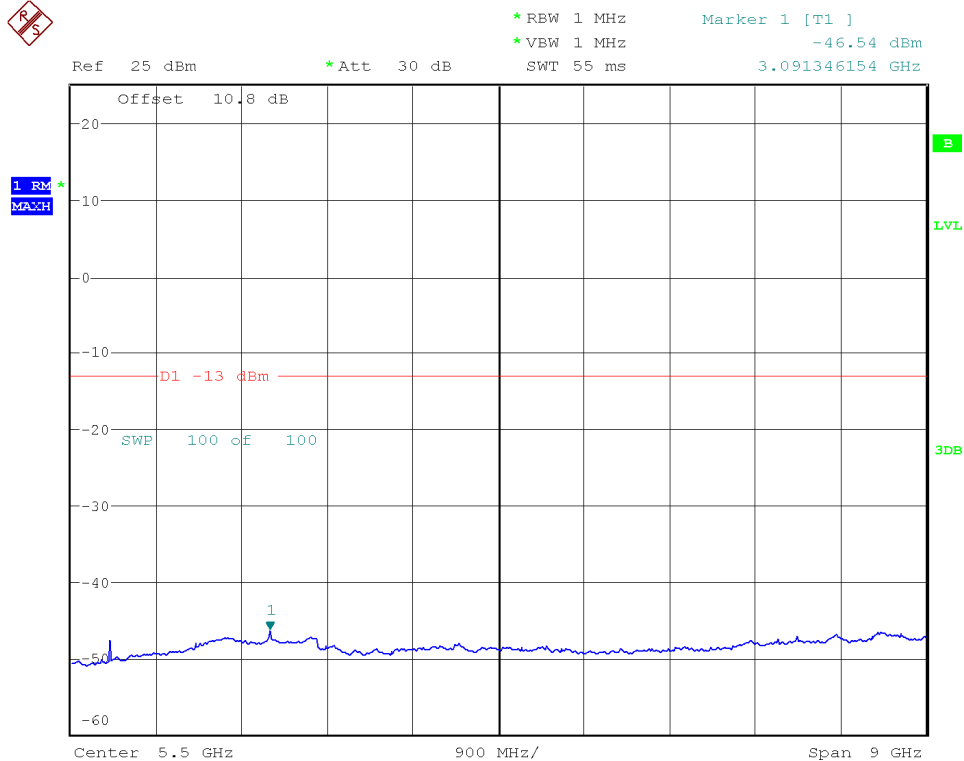
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Plot 7-1. Conducted Spurious Plot (10 MHz BW, 16QAM, Band 17- 710MHz)

Note:

For conducted spurious emissions in Band 17, all configurations, bandwidths, RB sizes, RB offsets, and MCS index were investigated. The worse case test results are reported above, using maximum number of RB's and RB offset = 0.

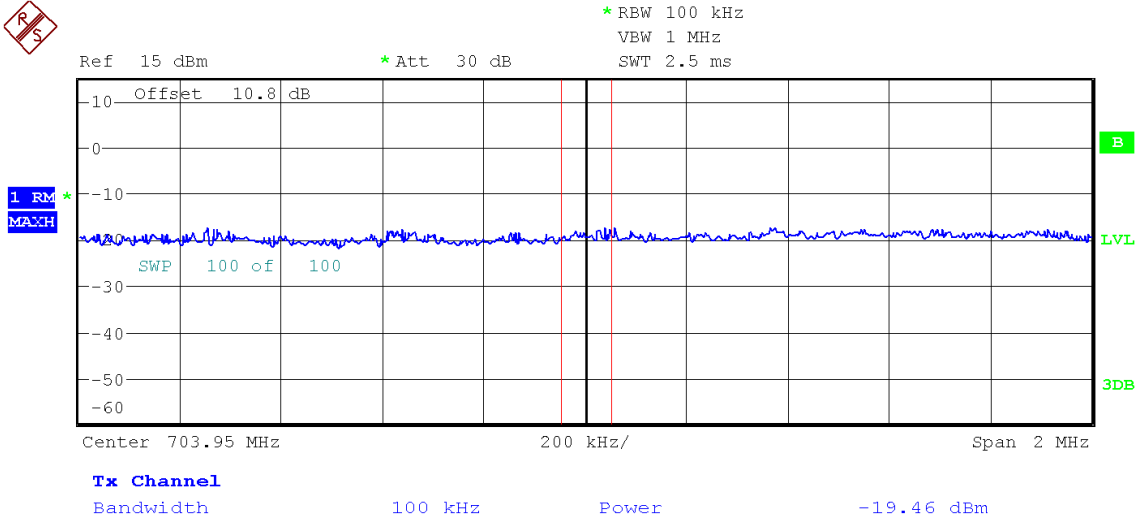
FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 31 of 59



Date: 16.JUL.2010 18:04:36

Plot 7-2. Conducted Spurious Plot (10MHz BW, 16QAM, Band 17 – 710MHz)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 32 of 59



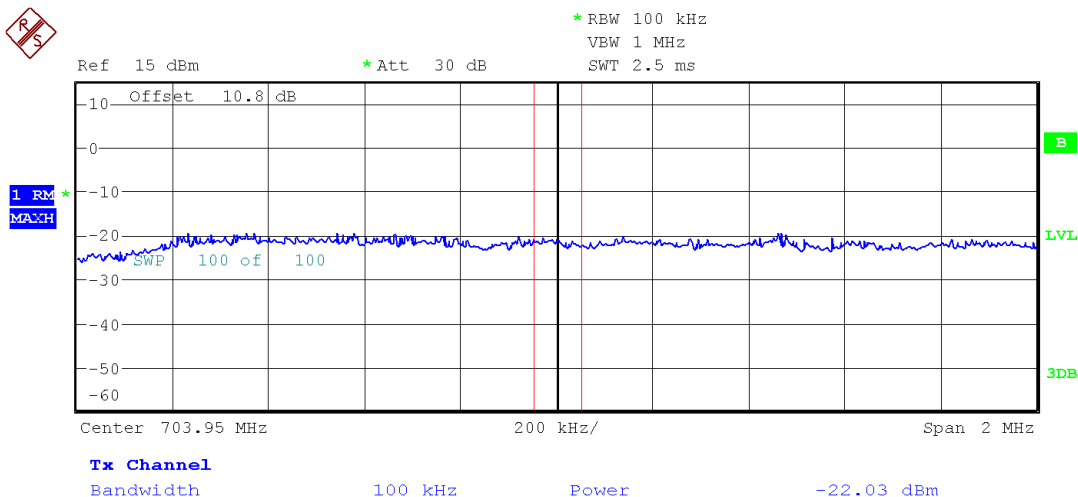
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Plot 7-3. Lower Band Edge Plot (10MHz BW, 16QAM, Band 17)

Note:

For conducted band edge emissions in Band 17, all configurations, bandwidths, RB sizes, RB offsets, and MCS index were investigated. The worse case test results are reported with maximum number of RB's and RB offset = 0.

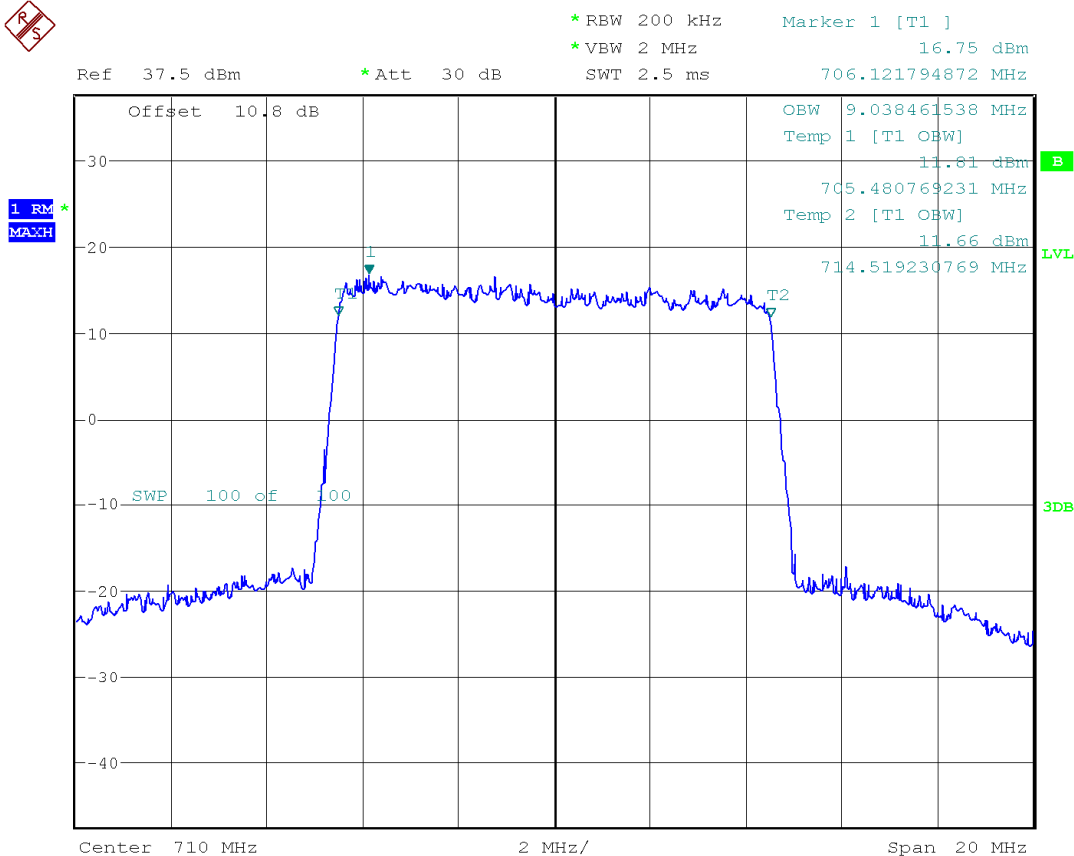
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Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 33 of 59



Date: 16.JUL.2010 17:35:45

Plot 7-4. Lower Band Edge Plot (5MHz BW, 16QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem	Page 34 of 59	



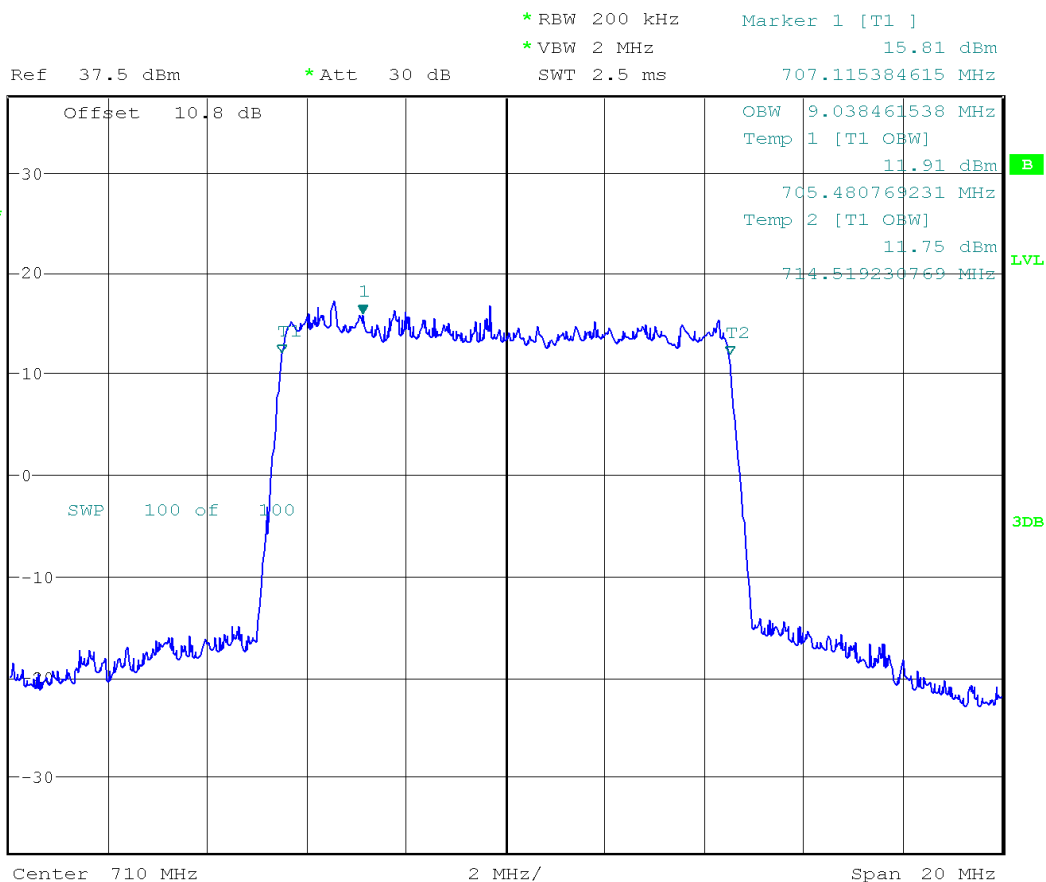
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Plot 7-5. Occupied Bandwidth Plot (10MHz BW, QPSK, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 35 of 59



1 RM
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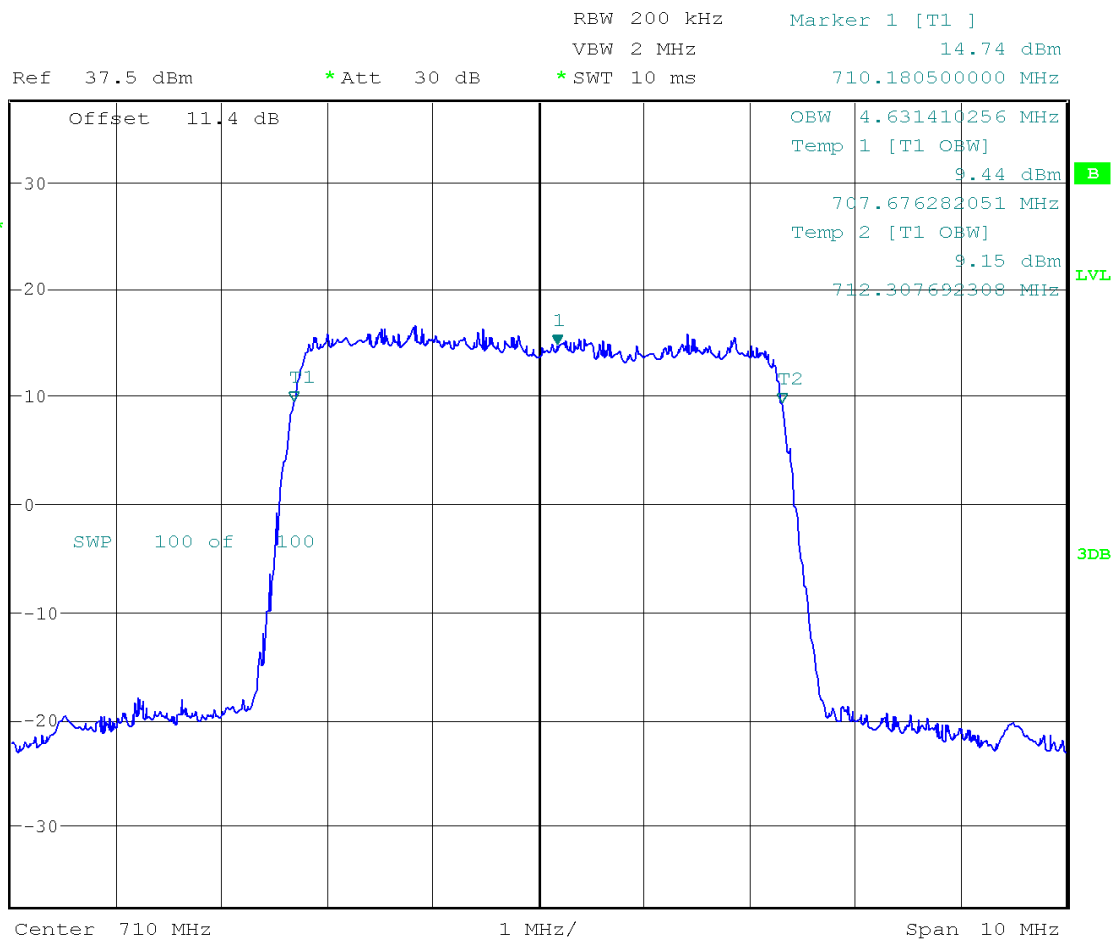
Date: 16.JUL.2010 17:48:27

Plot 7-6. Occupied Bandwidth Plot (10MHz BW, 16-QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 36 of 59



1 RM
MAXH



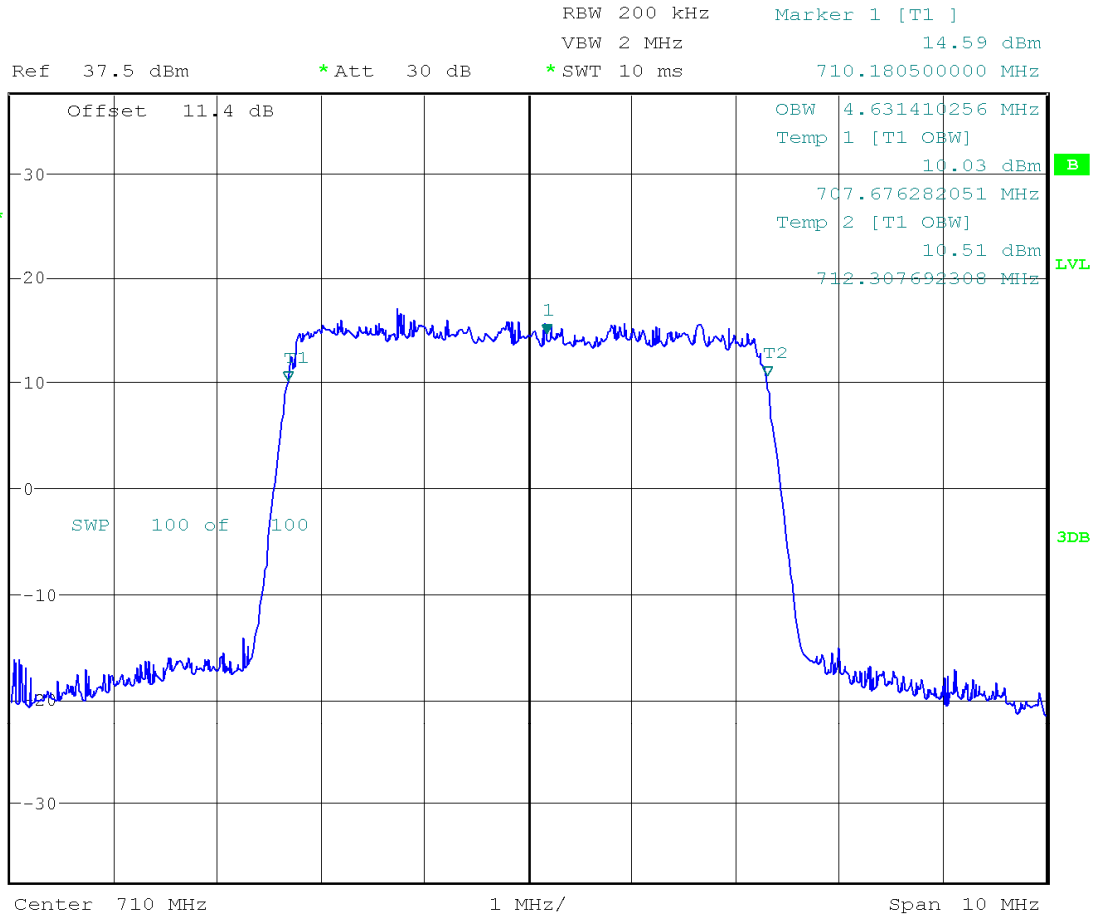
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Plot 7-7. Occupied Bandwidth Plot (5MHz BW, QPSK, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 37 of 59



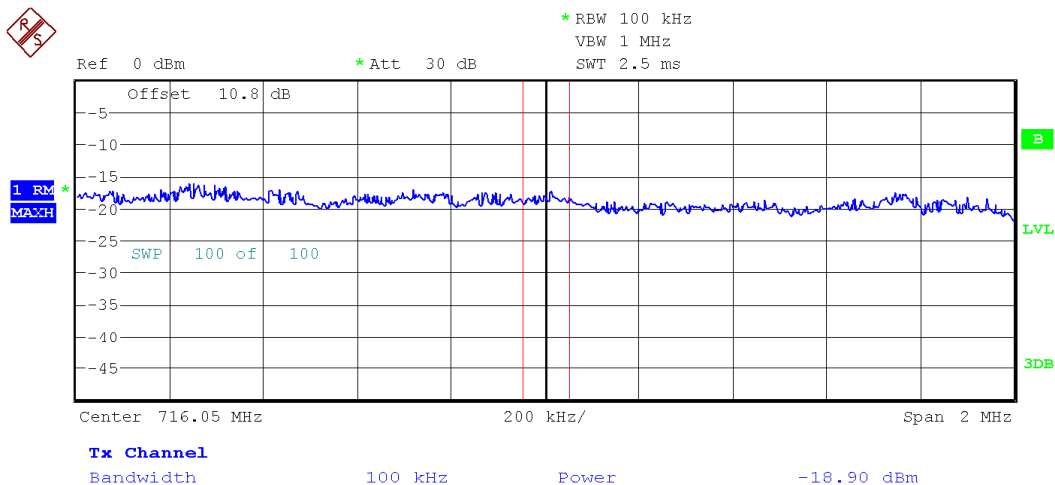
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Date: 21.JUL.2010 00:28:46

Plot 7-8. Occupied Bandwidth Plot (5MHz BW, 16QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 38 of 59



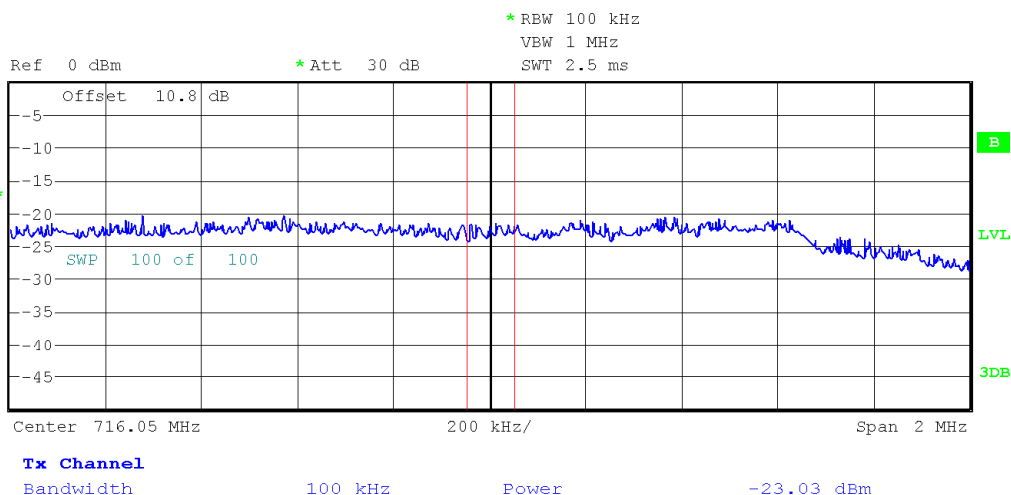
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Plot 7-9. Upper Band Edge Plot (10 MHz BW, 16QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 39 of 59



1 RM
MATCH

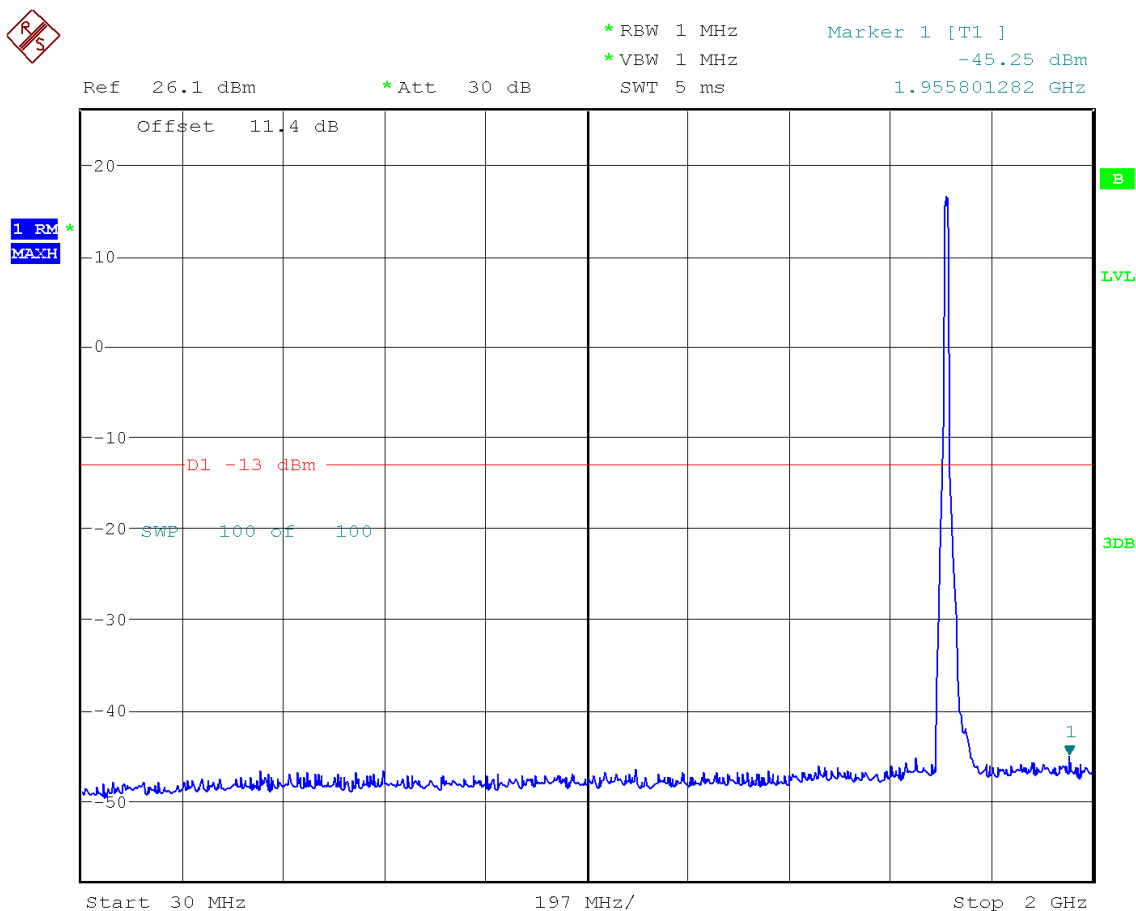


Date: 16.JUL.2010 17:23:28

Plot 7-10. Upper Band Edge Plot (5MHz BW, 16QAM, Band 17)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 40 of 59

8.0 PLOTS OF EMISSIONS –BAND 4 LTE



Date: 16.JUL.2010 20:01:22

Plot 8-1. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – Low Channel)

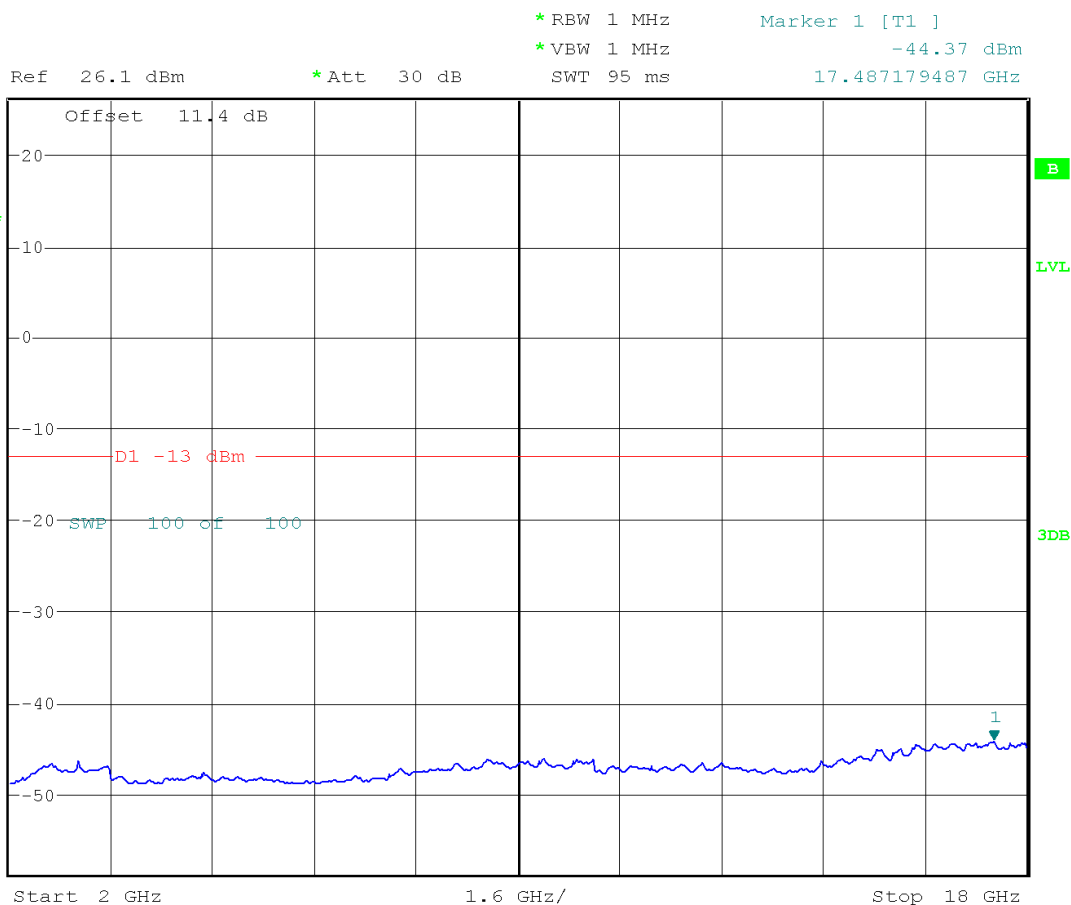
Note:

For conducted spurious emissions in Band 4, in the low, mid, and high channels, all configurations, bandwidths, RB sizes, RB offsets, and MCS index were investigated. The worse case test results for the low, mid, and high channels are reported, with maximum number of RB's and RB offset = 0.

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 41 of 59



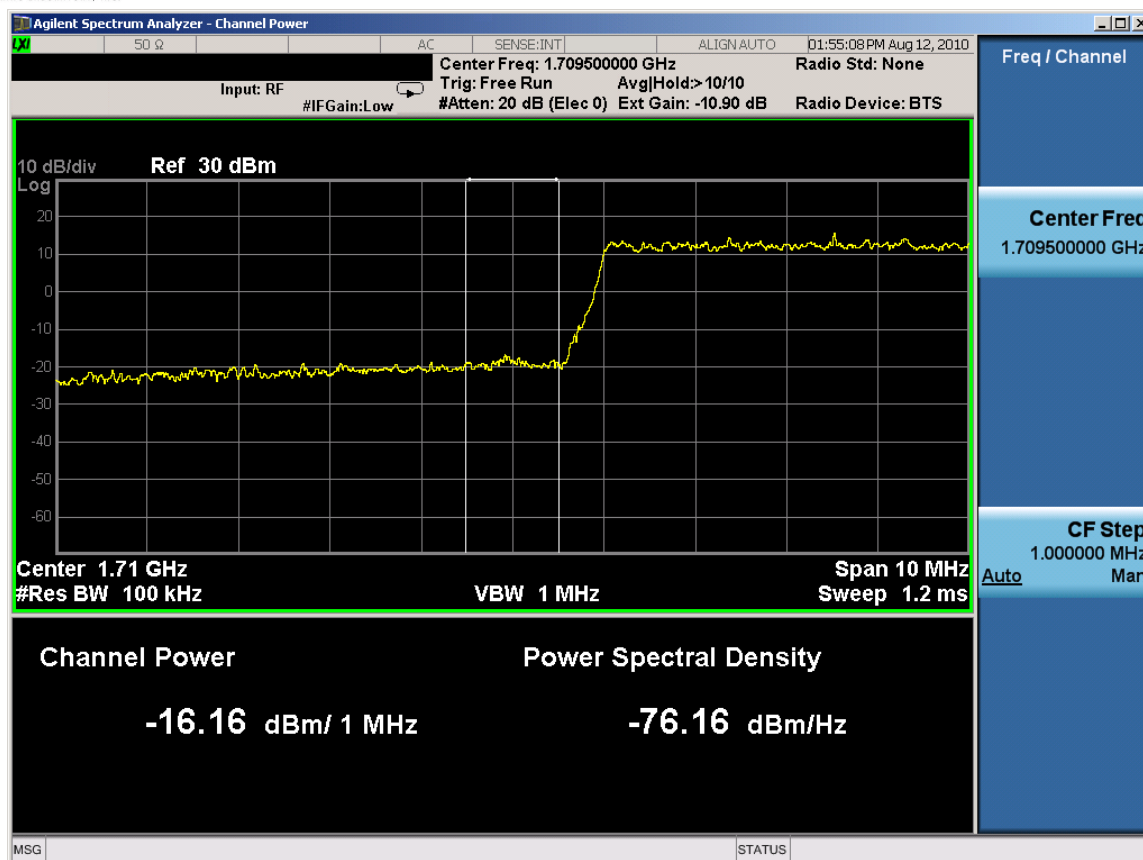
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Date: 16.JUL.2010 20:04:10

Plot 8-2. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – Low Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 42 of 59

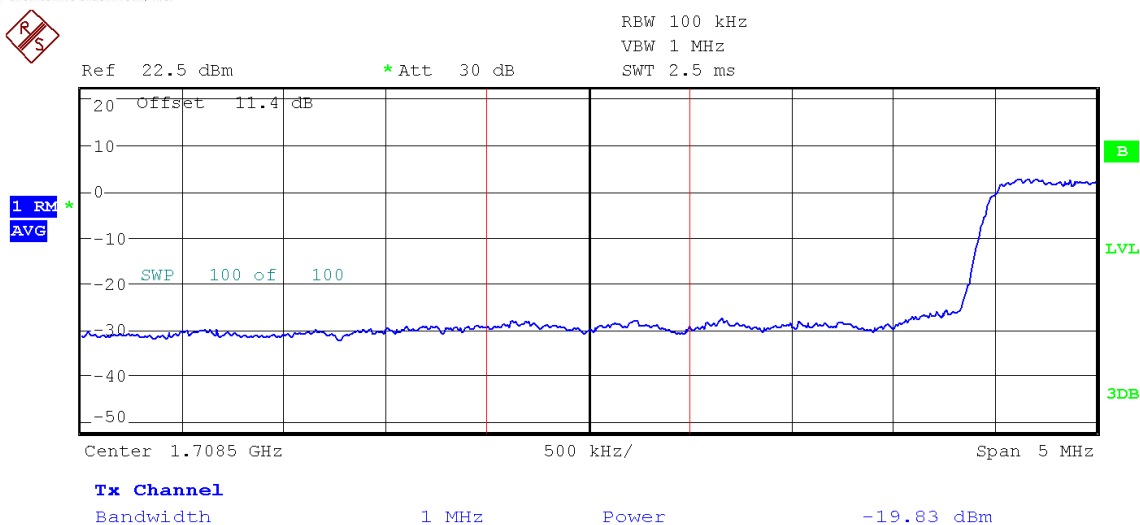


Plot 8-3. Band Edge Plot (10MHz BW, 16QAM, Band 4 – Low Channel)

Note:

In Band 4, for conducted band edge and extended band edge 1MHz removed from the channel edge, all configurations, bandwidths, RB sizes, RB offsets, and MCS index were investigated. The worse case test results are reported with maximum number of RB's and RB offset = 0.

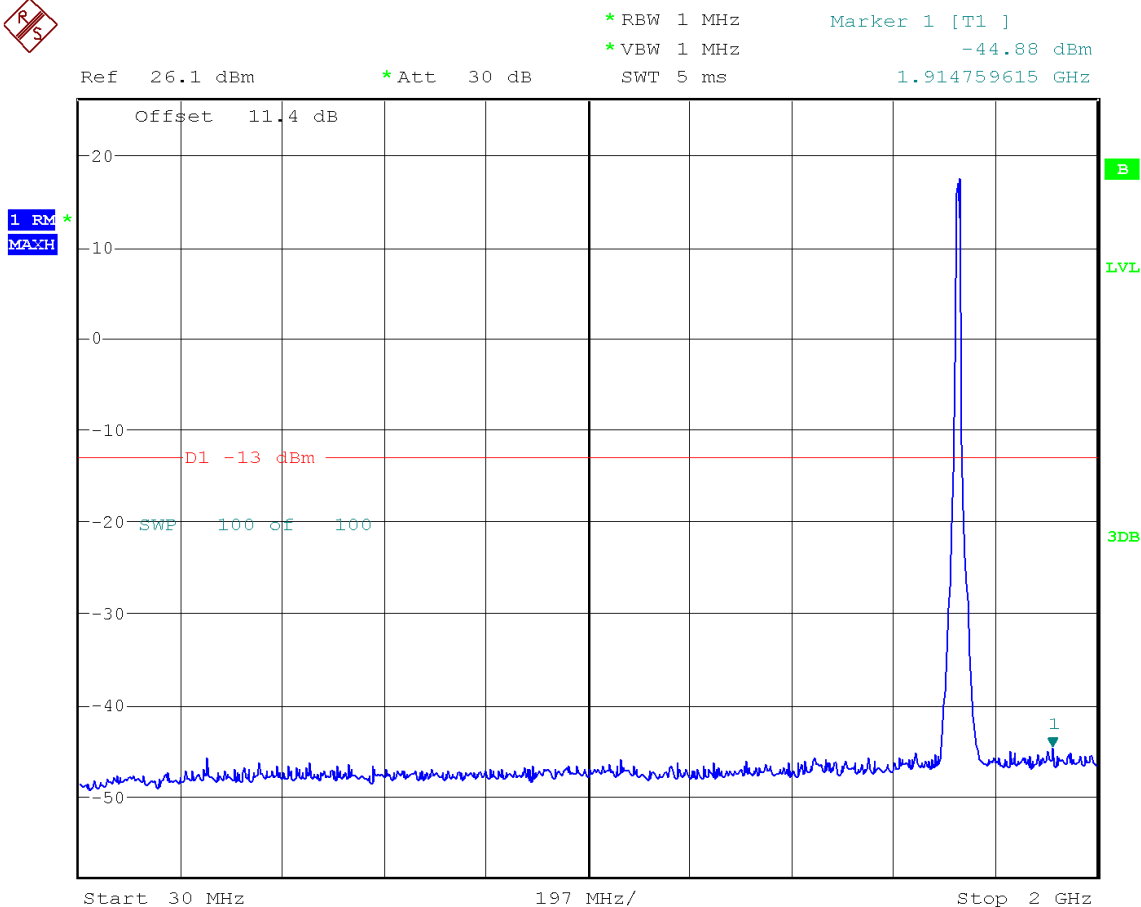
FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 43 of 59



Date: 16.JUL.2010 22:46:20

Plot 8-4. Extended Band Edge Plot (10MHz BW, 16QAM, Band 4 – Low Channel)

FCC ID: BEJAD600	 FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION) 		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem	Page 44 of 59



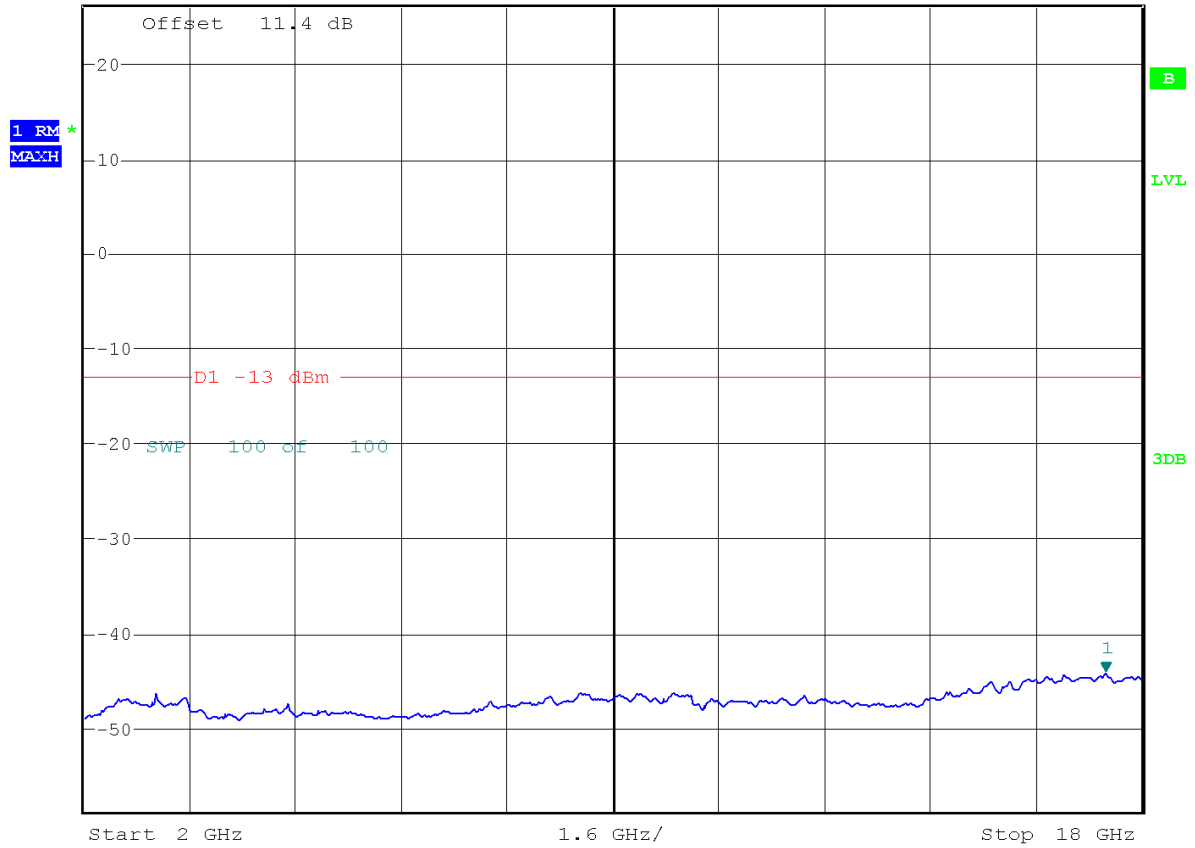
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Plot 8-5. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 45 of 59



* RBW 1 MHz
* VBW 1 MHz
Marker 1 [T1]
-44.36 dBm
SWT 95 ms
17.461538462 GHz



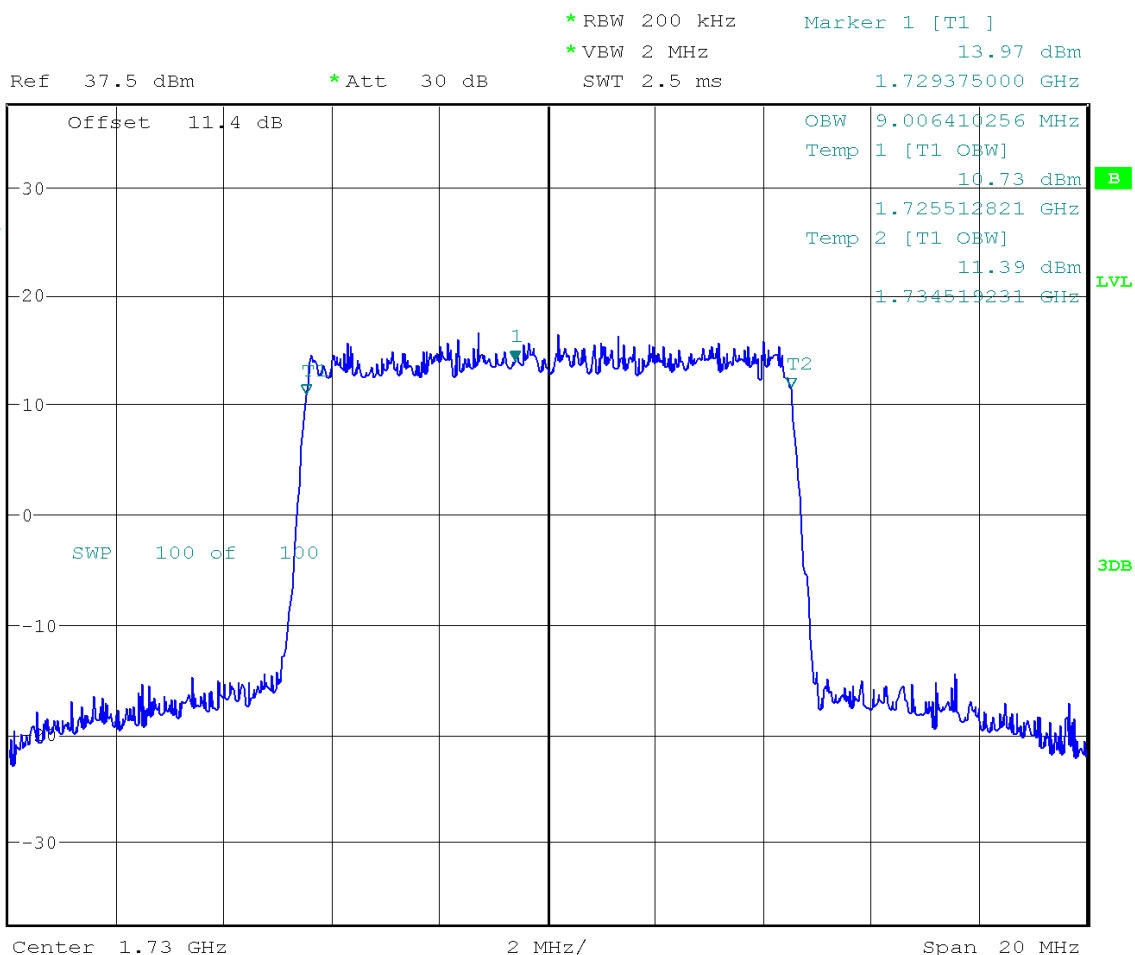
Date: 16.JUL.2010 19:55:23

Plot 8-6. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 46 of 59



1 RM*
MAXH



Date: 16.JUL.2010 21:19:22

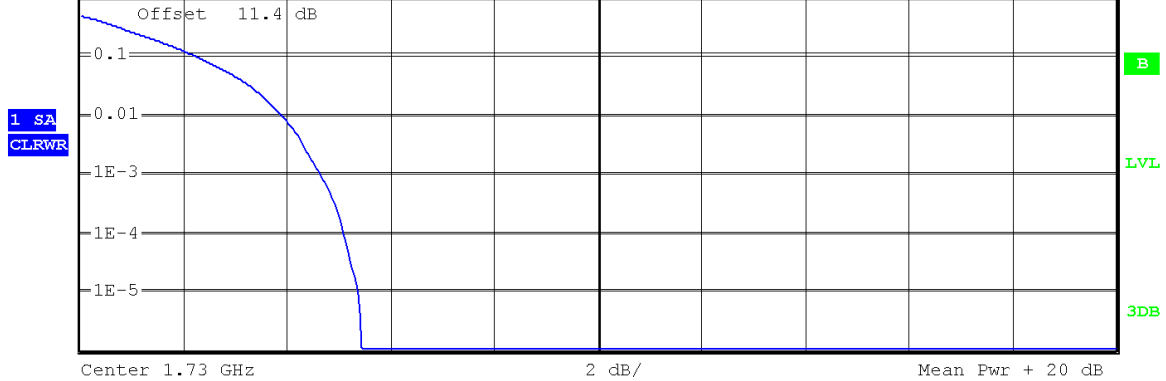
Plot 8-7. Occupied Bandwidth Plot (10MHz BW, QPSK, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 47 of 59



RBW 10 MHz

Ref 37.5 dBm * Att 30 dB AQT 6.25 ms



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1
Mean 23.06 dBm
Peak 28.50 dBm
Crest 5.44 dB

10 % 2.28 dB
1 % 3.91 dB
.1 % 4.65 dB
.01 % 5.10 dB

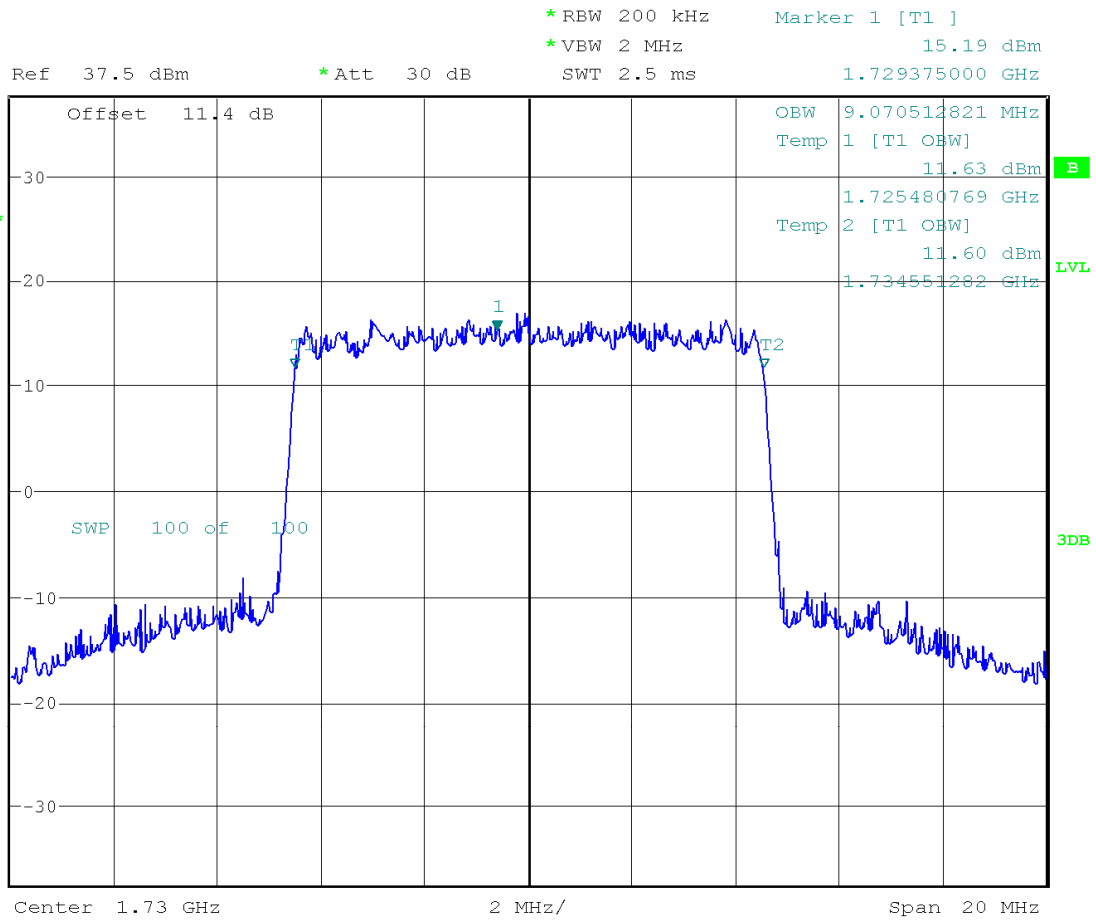
Date: 21.JUL.2010 00:35:25

Plot 8-8. Peak-Average Ratio Plot (10MHz BW, QPSK, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 48 of 59



1 RM
MAXH



Date: 16.JUL.2010 21:18:54

Plot 8-9. Occupied Bandwidth Plot (10MHz BW, 16-QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 49 of 59

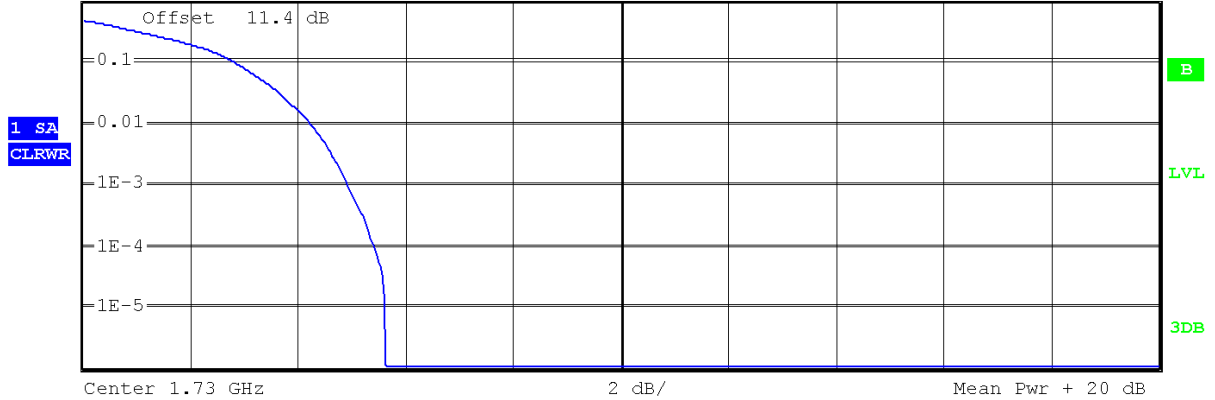


RBW 10 MHz

Ref 37.5 dBm

*Att 30 dB

AQT 6.25 ms



Complementary Cumulative Distribution Function

NOF samples: 100000, Usable BW: 11.2MHz

Trace 1

Mean	23.08 dBm
Peak	28.71 dBm
Crest	5.63 dB
10 %	2.82 dB
1 %	4.23 dB
.1 %	4.94 dB
.01 %	5.42 dB

Date: 21.JUL.2010 00:34:49

Plot 8-10. Peak-Average Ratio Plot (10MHz BW, 16-QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 50 of 59

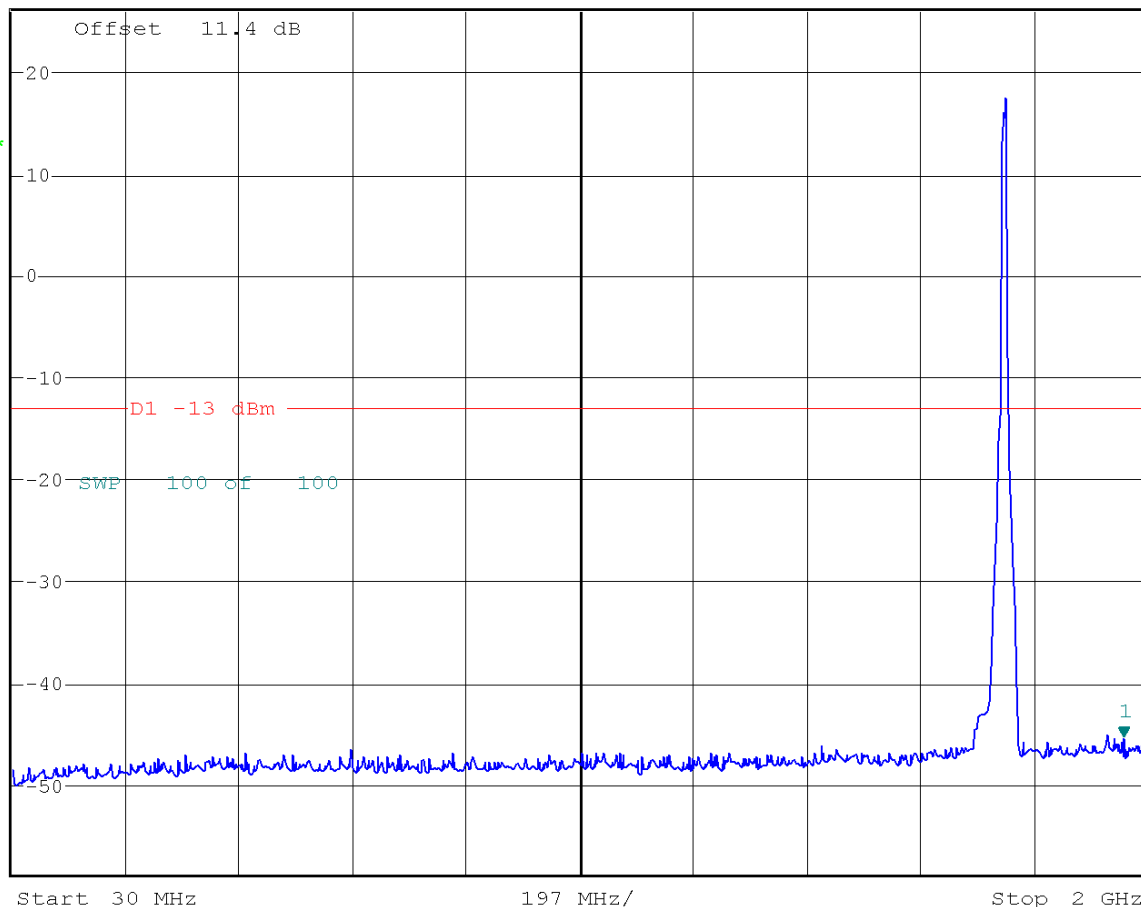


* RBW 1 MHz
* VBW 1 MHz
SWT 5 ms

Marker 1 [T1]
-45.57 dBm
1.958958333 GHz

Ref 26.1 dBm * Att 30 dB

1 RM *
MAXH



B

LVL

3DB

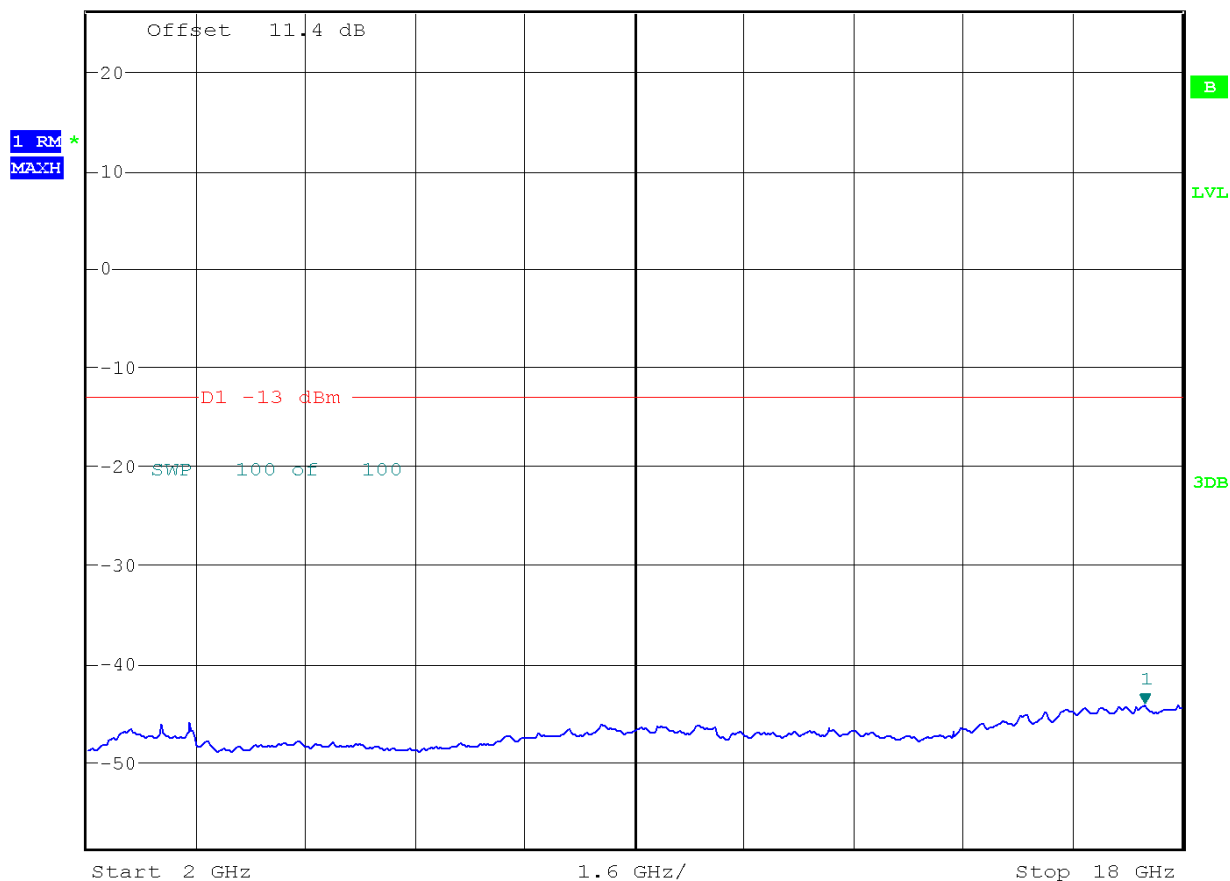
Date: 16.JUL.2010 20:08:53

Plot 8-11. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – High Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 51 of 59

17.461538462 GHz

* Att 30 dB



Date: 16.JUL.2010 20:08:04

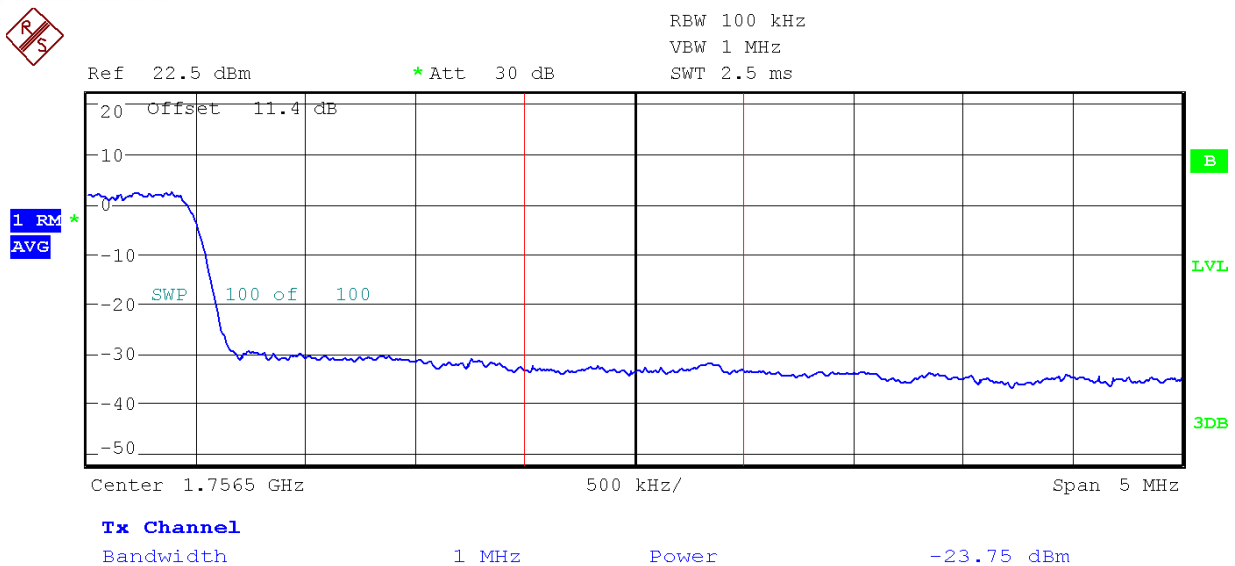
Plot 8-12. Conducted Spurious Plot (10MHz BW, 16QAM, Band 4 – High Channel)

FCC ID: BEJAD600	 FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION) 		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem	Page 52 of 59



Plot 8-13. Band Edge Plot (10MHz BW, 16QAM, Band 4 – High Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 53 of 59



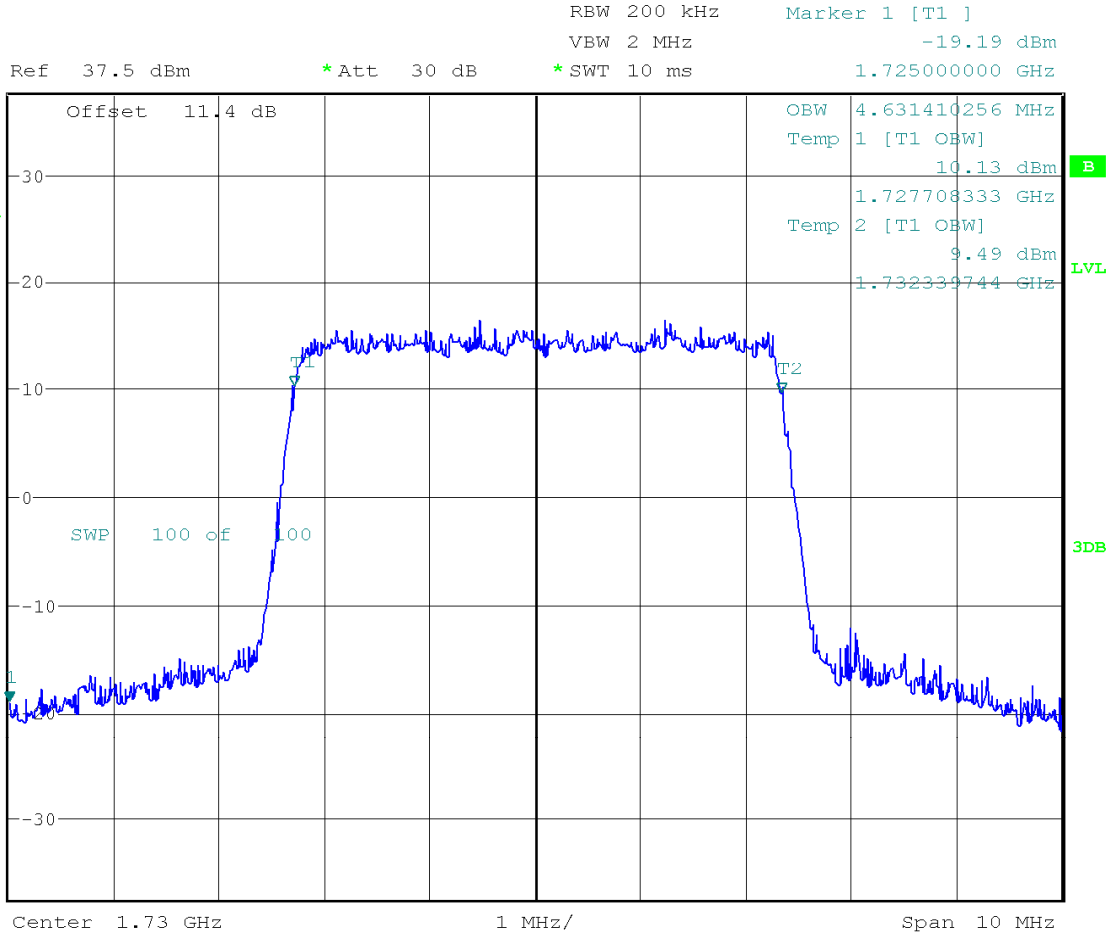
Date: 16.JUL.2010 22:37:07

Plot 8-14. Extended Band Edge Plot (10MHz BW, 16QAM, Band 4 – High Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 54 of 59



1 RM
MAXH



Date: 21.JUL.2010 00:15:23

Plot 8-15. Occupied Bandwidth Plot (5MHz BW, QPSK, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 55 of 59



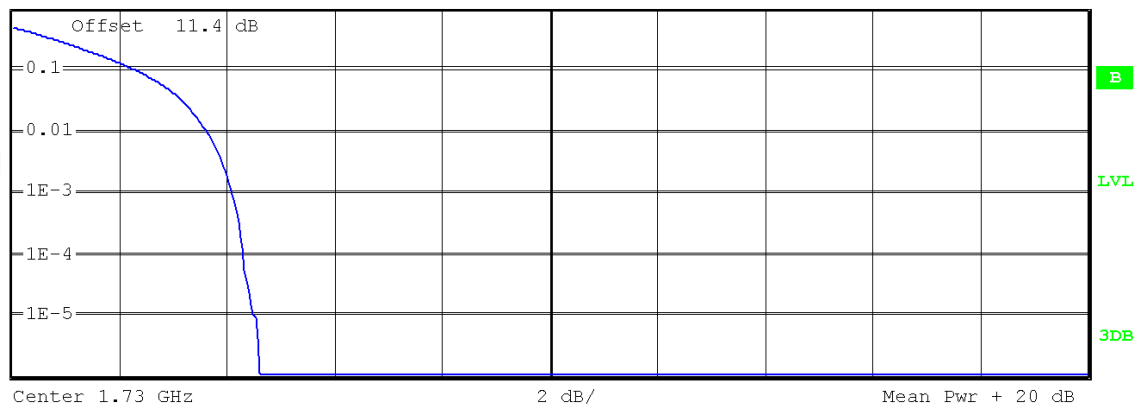
RBW 10 MHz

Ref 30 dBm

*Att 30 dB

AQT 6.25 ms

1 SA
CLRWR



Complementary Cumulative Distribution Function
NOF samples: 100000, Usable BW: 11.2MHz

Trace 1
Mean 23.16 dBm
Peak 27.77 dBm
Crest 4.60 dB

10 % 2.31 dB
1 % 3.62 dB
.1 % 4.10 dB
.01 % 4.29 dB

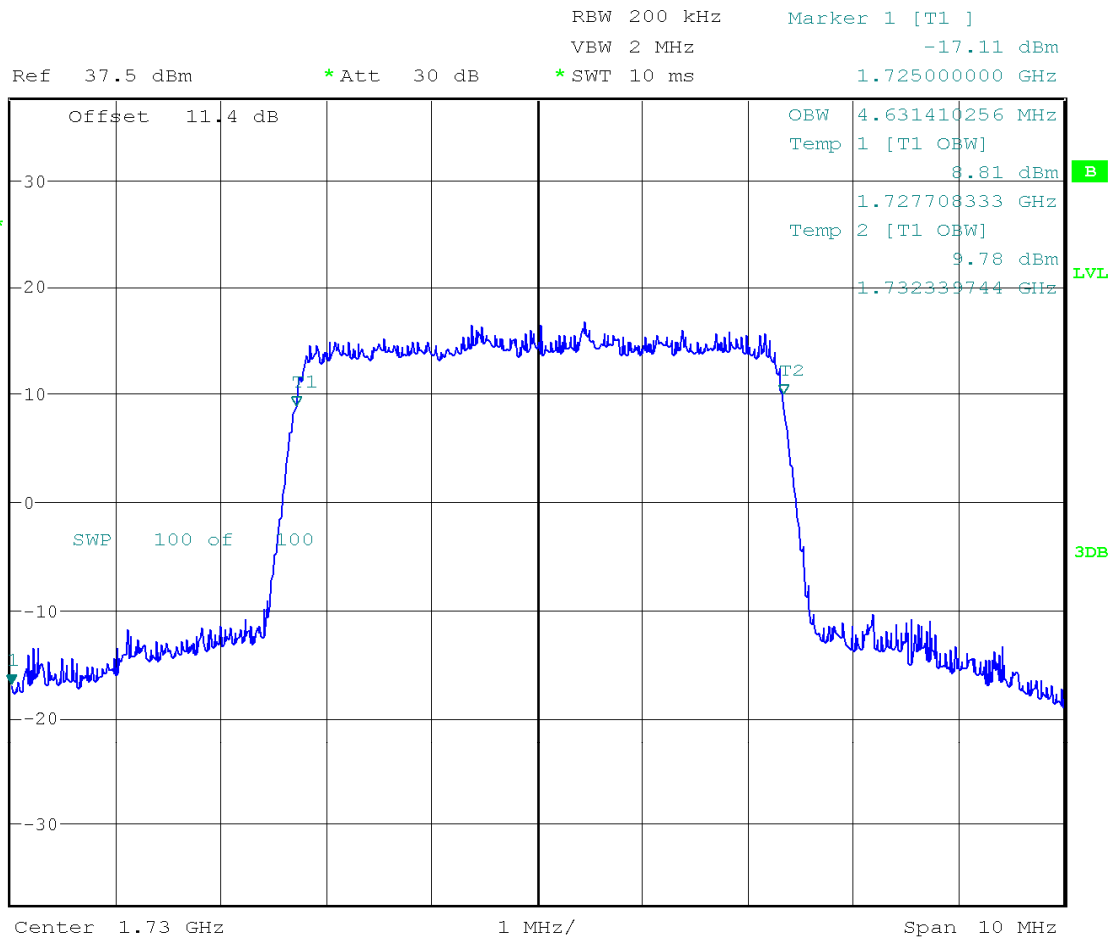
Date: 21.JUL.2010 00:07:18

Plot 8-16. Peak-Average Ratio Plot (5MHz BW, QPSK, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 56 of 59



1 RM
MAXH



Date: 21.JUL.2010 00:14:57

Plot 8-17. Occupied Bandwidth Plot (5MHz BW, 16-QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 57 of 59



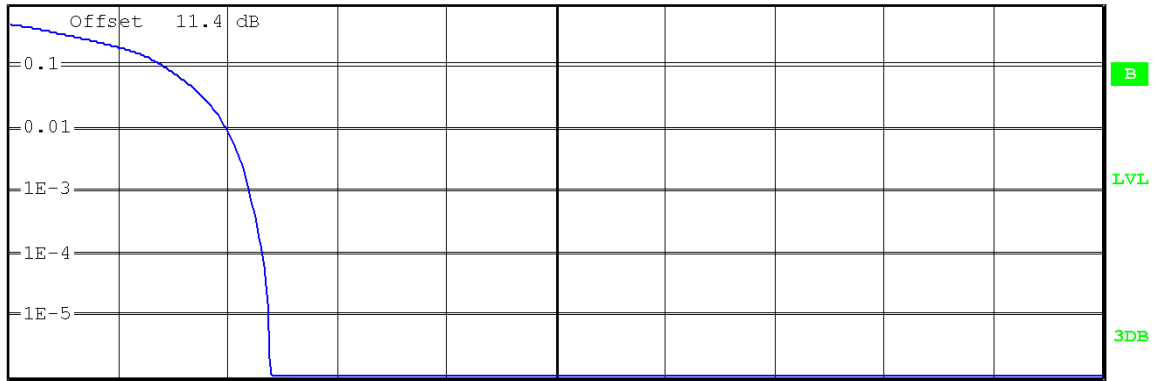
RBW 10 MHz

Ref 30 dBm

* Att 30 dB

AQT 6.25 ms

1 SA
CLRWR



Center 1.73 GHz

2 dB/

Mean Pwr + 20 dB

Complementary Cumulative Distribution Function

NOF samples: 100000, Usable BW: 11.2MHz

Trace 1
Mean 23.00 dBm
Peak 27.77 dBm
Crest 4.77 dB

10 % 2.82 dB
1 % 3.97 dB
.1 % 4.39 dB
.01 % 4.65 dB

Date: 21.JUL.2010 00:06:54

Plot 8-18. Peak-Average Ratio Plot (5MHz BW, 16-QAM, Band 4 – Mid Channel)

FCC ID: BEJAD600	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)	LG	Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 58 of 59

9.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **LGE 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem FCC ID: BEJAD600** complies with all the requirements of Parts 2, and 27 of the FCC rules.

FCC ID: BEJAD600		FCC Pt. 27 LTE MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1007071154.BEJ	Test Dates: July 16-23, 2010	EUT Type: 850/1900 GPRS/EDGE/WCDMA/HSPA and 700/1700 LTE USB Modem		Page 59 of 59