PCTEST ENGINEERING LABORATORY, INC.



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MEASUREMENT REPORT FCC Part 22, 24 & 27 LTE

Applicant Name: Pantech Co Ltd Pantech Building, I-2, DMC Sangam-dong, Mapo-gu, Seoul, KOREA 121-792 Date of Testing:
February 20-29, 2012
Test Site/Location:
PCTEST Lab., Columbia, MD, USA
Test Report Serial No.:
0Y1202100187.JCY

FCC ID: JYCP8010

APPLICANT: PANTECH CO LTD

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

FCC Rule Part(s): §2; §22; §24; §27 EUT Type: Portable Handset

Model(s): P8010

Test Device Serial No.: identical prototype [S/N: EMC]

					ERP/	EIRP
LTE	Bandwidth	Tx Frequency	Modulation	Emission	Max.	Max.
Band	(MHz)	(MHz)	Wodulation	Designator	Power	Power
					(W)	(dBm)
17	5	706.5 - 713.5	QPSK	4M59G7D	0.027	14.30
17	5	706.5 - 713.5	16QAM	4M59W7D	0.019	12.80
17	10	709 - 711	QPSK	8M96G7D	0.026	14.10
17	10	709 - 711	16QAM	8M96W7D	0.020	13.10
5	5	826.5 - 846.5	QPSK	4M50G7D	0.123	20.90
5	5	826.5 - 846.5	16QAM	4M48W7D	0.102	20.10
5	10	829 - 844	QPSK	8M94G7D	0.129	21.10
5	10	829 - 844	16QAM	8M89W7D	0.100	20.00
4	5	1712.5 - 1752.5	QPSK	4M52G7D	0.307	24.86
4	5	1712.5 - 1752.5	16QAM	4M52W7D	0.273	24.36
4	10	1715 - 1750	QPSK	8M98G7D	0.259	24.13
4	10	1715 - 1750	16QAM	8M98W7D	0.201	23.03
2	5	1852.5 - 1907.5	QPSK	4M50G7D	0.302	24.79
2	5	1852.5 - 1907.5	16QAM	4M50W7D	0.257	24.09
2	10	1855 - 1905	QPSK	9M00G7D	0.281	24.49
2	10	1855 - 1905	16QAM	8M96W7D	0.208	23.19

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. 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.

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





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MEASUREMENT REPORT



FCC Part 22, 24 & 27

§2.1033 General Information

APPLICANT: Pantech Co Ltd

APPLICANT ADDRESS: Pantech Building, I-2, DMC

Sangam-dong, Mapo-gu,, Seoul, KOREA 121-792

TEST SITE: PCTEST ENGINEERING LABORATORY, INC. **TEST SITE ADDRESS**: 6660-B Dobbin Road, Columbia, MD 21045 USA

FCC RULE PART(S): §2; §22; §24; §27

BASE MODEL: P8010 FCC ID: JYCP8010

FCC CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE)

FREQUENCY TOLERANCE: ±0.00025 % (2.5 ppm)

DATE(S) OF TEST: February 20-29, 2012 **TEST REPORT S/N:** 0Y1202100187.JCY

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.

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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 and the Industry Canada Certification and Engineering Bureau.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity, the Baltimore-Washington Internt'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.

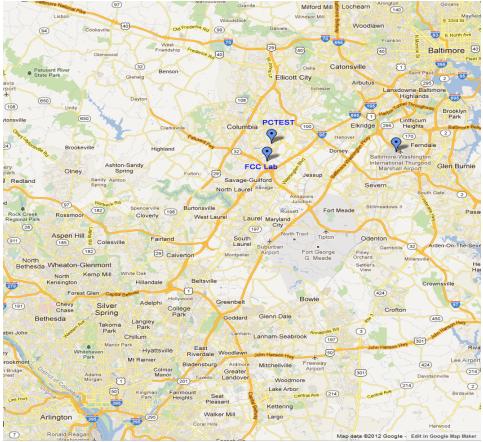


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Pantech Portable Handset FCC ID: JYCP8010**. The test data contained in this report pertains only to the emissions due to the EUT's LTE function.

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 GSM/GPRS/EDGE, 850/1900 WCDMA/HSPA, Band 2, 4, 5, 17 LTE, 802.11a/b/g/n WLAN, 802.11a/n UNII, Bluetooth (EDR)

2.3 EMI Suppression Device(s)/Modifications

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

2.4 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.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The measurement procedures described in the document titled "Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards" (ANSI/TIA-603-C-2004) was used in the measurement of the **Pantech Portable Handset** FCC ID: **JYCP8010**.

3.2 Block A Frequency Range

§27.5(c)

698-746 MHz band. The following frequencies are available for licensing pursuant to this part in the 698-746 MHz band: (1) Three paired channel blocks of 12 megahertz 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.

3.3 Cellular - Base Frequency Blocks



BLOCK 1: 869 - 880 MHz (A* Low + A)

BLOCK 3: 890 - 891.5 MHz (A* High)

BLOCK 2: 880 - 890 MHz (B)

BLOCK 4: 891.5 - 894 MHz (B*)

3.4 Cellular - Mobile Frequency Blocks

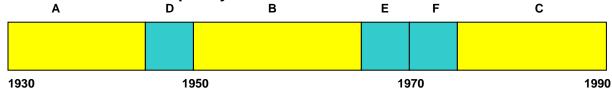


BLOCK 1: 824 – 835 MHz (A* Low + A) BLOCK 2: 835 – 845 MHz (B) BLOCK 3: 845 – 846.5 MHz (A* High) BLOCK 4: 846.5 – 849 MHz (B*)

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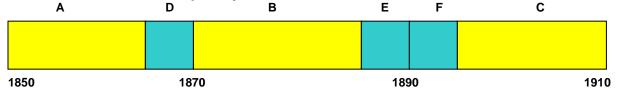






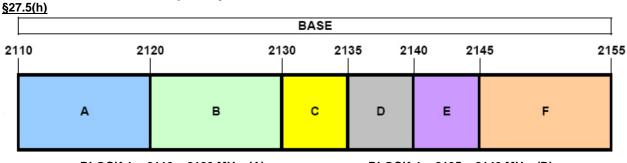
BLOCK 1: 1930 – 1945 MHz (A) BLOCK 4: 1965 – 1970 MHz (E) BLOCK 2: 1945 – 1950 MHz (D) BLOCK 5: 1970 – 1975 MHz (F) BLOCK 3: 1950 – 1965 MHz (B) BLOCK 6: 1975 – 1990 MHz (C)

3.6 PCS - Mobile Frequency Blocks



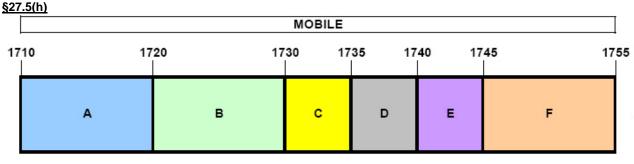
BLOCK 1: 1850 – 1865 MHz (A) BLOCK 4: 1885 – 1890 MHz (E) BLOCK 2: 1865 – 1870 MHz (D) BLOCK 5: 1890 – 1895 MHz (F) BLOCK 3: 1870 – 1885 MHz (B) BLOCK 6: 1895 – 1910 MHz (C)

3.7 AWS - Base Frequency Blocks



BLOCK 1: 2110 – 2120 MHz (A) BLOCK 4: 2135 – 2140 MHz (D) BLOCK 2: 2120 – 2130 MHz (B) BLOCK 5: 2140 – 2145 MHz (E) BLOCK 3: 2130 – 2135 MHz (C) BLOCK 6: 2145 – 2155 MHz (E)

3.8 AWS - Mobile Frequency Blocks



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)

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3.9 **Occupied Bandwidth** §2.1049, RSS-Gen (4.6.1)

The implementation of this test is performed by the spectrum analyzer's occupied bandwidth function. 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.

3.10 Spurious and Harmonic Emissions at Antenna Terminal §2.1051, 22.917(a), 24.238(a)(b); RSS-132 (4.5.1), RSS-133 (6.5.1), §27.53(g)(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.

3.11 **Peak-Average Ratio** §24.232(d), §27.50(d)(5), RSS-133 (6.4)

A peak to average ratio measurement is performed at the conducted port of the EUT. For LTE signals, 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.

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3.12 Radiated Power and Radiated Spurious Emissions

§2.1053, §22.913(a)(2), 22.917(a), 24.232(c), 24.238(a), §27.53(g)(h), 27.50(d)(4), 27.50(c)(10), RSS-132(4.5.1.2), RSS-133 (6.5.1)

Radiated spurious emissions are investigated indoors in a semi-anechoic chamber to determine the frequencies producing the worst case emissions. Final measurements for radiated power and radiated spurious emissions are performed on the 3 meter OATS per the guidelines of ANSI/TIA-603-C-2004. The measurement area is situated on an 18 meter x 20 meter galvanized 1/2" hardware cloth as the conducting ground plane. This material is sewn together in sections 4 feet wide and 60 feet long. A total of eighteen sections are required to cover the entire measurement area. Sections are laid across the width of the pad, overlapped 1" and sewn and soldered together at intervals of 3" (7.6 cm.) The terrain of the test site is reasonably flat and level. Power and cable to the test site are buried 18" deep into the ground outside the perimeter of the site. An all-weather non-metallic housing is situated on a 2 x 3 meter area adjacent to the measurement area to house the test equipment. The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Emissions are also investigated with the receive antenna horizontally and vertically polarized. The level of the maximized emission is recorded with the spectrum analyzer using a peak detector with RBW = 1MHz, VBW = 3MHz for emissions greater than 1GHz. For emissions below 1GHz, the spectrum analyzer is set to RBW = 100kHz and VBW = 300kHz.

A half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_{q [dBm]}$ – cable loss [dB].

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of 43 + $10log_{10}(Power_{[Watts]})$ specified in 22.917(a), 24.238(a), and 27.53(g)(h).

Open Area Test Site

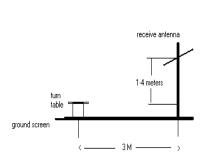


Figure 3-1. Diagram of 3-meter outdoor test range

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3.13 Frequency Stability / Temperature Variation §2.1055, 22.355, 24.235, §27.54, RSS-132 (4.3), RSS-133 (6.3)

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 $\pm 0.00025\%$ (± 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 sufficient stabilization period at each temperature shall be used prior to each frequency requirement.

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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
-	LTx1	Licensed Transmitter Cable Set	1/25/2012	Annual	1/25/2013	N/A
-	RE1	Radiated Emissions Cable Set (UHF/EHF)	6/7/2011	Annual	6/7/2012	N/A
-	RE2	Radiated Emissions Cable Set (VHF/UHF)	2/13/2012	Annual	2/13/2013	N/A
Agilent	8447D	Broadband Amplifier	3/17/2011	Annual	3/17/2012	1937A03348
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	2/15/2012	Annual	2/15/2013	3008A00985
Agilent	E4448A	PSA (3Hz-50GHz) Spectrum Analyzer	2/15/2012	Annual	2/15/2013	US42510244
Agilent	E8257D	(250kHz-20GHz) Signal Generator	4/8/2011	Annual	4/8/2012	MY45470194
Agilent	N9020A	MXA Signal Analyzer	10/10/2011	Annual	10/10/2012	US46470561
Agilent	N9038A	MXE EMI Receiver	8/5/2011	Annual	8/5/2012	MY51210133
Emco	3115	Horn Antenna (1-18GHz)	4/8/2010	Biennial	4/8/2012	9205-3874
Espec	ESX-2CA	Environmental Chamber	4/21/2011	Annual	4/21/2012	17620
ETS Lindgren	3117	1-18 GHz DRG Horn (Medium)	7/22/2011	Annual	7/22/2012	125518
ETS Lindgren	3160-09	18-26.5 GHz Standard Gain Horn	5/31/2011	Annual	5/31/2012	135427
ETS Lindgren	3164-08	Quad Ridge Horn Antenna	10/1/2010	Biennial	10/1/2012	128337
Mini-Circuits	VHF-1300+	High Pass Filter	2/7/2012	Annual	2/7/2013	30716
Mini-Circuits	VHF-1200+	High Pass Filter	1/15/2012	Annual	1/15/2013	30923
Mini-Circuits	VHF-3100+	High Pass Filter	1/15/2012	Annual	1/15/2013	30841
Pasternack	PE2208-6	Bidirectional Coupler	6/3/2011	Annual	6/3/2012	N/A
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	8/5/2011	Annual	8/5/2012	112347
Rohde & Schwarz	RS-PR18	1-18 GHz Pre-Amplifier	6/9/2011	Annual	6/9/2012	100071
Rohde & Schwarz	RS-PR26	18-26.5 GHz Pre-Amplifier	6/9/2011	Annual	6/9/2012	100040
Rohde & Schwarz	ESU26	EMI Test Receiver	4/27/2011	Annual	4/27/2012	100342
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Rx	11/14/2011	Biennial	11/14/2013	9105-2404
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Tx	11/14/2011	Biennial	11/14/2013	9105-2403
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	1/26/2012	Biennial	1/26/2014	A051107
Sunol	DRH-118	Horn Antenna (1-18 GHz)	6/17/2011	Biennial	6/17/2013	A042511

Table 4-1. Test Equipment

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5.0 SAMPLE CALCULATIONS

Emission Designator

QPSK Modulation

Emission Designator = 8M62G7D

LTE BW = 8.62 MHz
G = Phase Modulation
7 = Quantized/Digital Info
D = Amplitude/Angle Modulated

16QAM Modulation

Emission Designator = 8M45W7D

LTE BW = 8.45 MHz W = Amplitude/Angle Modulated 7 = Quantized/Digital Info D = Combination (Audio/Data)

<u>Spurious Radiated Emission – LTE Band</u>

Example: Middle Channel LTE Mode 2nd Harmonic (1564 MHz)

The average spectrum analyzer 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 terminals is adjusted to produce a reading of -81.0 dBm on the spectrum analyzer. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 1564 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).

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6.0 TEST RESULTS

6.1 Summary

Company Name: Pantech Co Ltd FCC ID: Pantech Co Ltd

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): LTE

FCC Part Section(s)	RSS Section(s)	Test Description	Test Limit	Test Condition	Result	Reference
TRANSMITTER MOD	E (TX)					
2.1049	RSS-Gen (4.6.1) RSS-133 (2.3)	Occupied Bandwidth	N/A		PASS	Section 7.0, 8.0, 9.0, 10.0
2.1051, 22.917(a), 24.238(a), 27.53(g)(h)	RSS-133 (6.5.1)	Band Edge / Conducted Spurious Emissions	< 43 + 10log ₁₀ (P[Watts]) at Band Edge and for all out-of-band emissions	CONDUCTED	PASS	Section 7.0, 8.0, 9.0, 10.0
24.232(d), 27.50(d)(5)	RSS-133 (6.4)	Peak-Average Ratio	< 13 dB		PASS	Section 9.0, 10.0
2.1046	RSS-132 (4.4) RSS-133 (4.1)	Transmitter Conducted Output Power	N/A		PASS	See RF Exposure Report
22.913(a)(2)	RSS-132 (4.4) [SRSP- 503(5.1.3)]	Effective Radiated Power (Band 5)	< 7 Watts max. ERP		PASS	Section 6.2
27.50(c)(10)		Effective Radiated Power (Band 17)	< 3 Watts max. ERP		PASS	Section 6.2
24.232(c)	RSS-133 (6.4) [SRSP-510 (5.1.2)]	Equivalent Isotropic Radiated Power (Band 2)	< 2 Watts max. EIRP	RADIATED	PASS	Section 6.3
27.50(d)(4)		Equivalent Isotropic Radiated Power (Band 4)	< 1 Watts max. EIRP	RADIATED	PASS	Section 6.3
2.1053, 27.53(g)(h), 22.917(a), 24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	Undesirable Emissions	< 43 + 10log ₁₀ (P[Watts]) for all out-of-band emissions		PASS	Section 6.4, 6.5, 6.6, 6.7
2.1055, 27.54, 22.355, 24.235	RSS-132 (4.3) RSS-133 (6.3)	Frequency Stability	< 2.5 ppm		PASS	Section 6.8, 6.9, 6.10, 6.11

Table 6-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in Sections 7, 8, 9, and 10 were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

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6.2 Effective Radiated Power (ERP) §22.913(a)(2), §27.50(c)(10)

	Freq [MHz]	BW [MHz]	Mod.	RB Size / Offset	Battery	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
	706.50	5	QPSK	1/0	Standard	-22.30	14.30	0.00	Н	14.30	0.027	34.77	-20.47
	710.00	5	QPSK	1/0	Standard	-22.70	13.90	0.00	H	13.90	0.025	34.77	-20.87
	713.50	5	QPSK	1/0	Standard	-23.80	12.80	0.00	Н	12.80	0.019	34.77	-21.97
ш	706.50	5	16-QAM	1/0	Standard	-23.80	12.80	0.00	Н	12.80	0.019	34.77	-21.97
5	710.00	5	16-QAM	1/0	Standard	-24.00	12.60	0.00	H	12.60	0.018	34.77	-22.17
17	713.50	5	16-QAM	1/0	Standard	-24.90	11.70	0.00	Н	11.70	0.015	34.77	-23.07
	709.00	10	QPSK	1/0	Standard	-22.50	14.10	0.00	H	14.10	0.026	34.77	-20.67
and	710.00	10	QPSK	1/0	Standard	-22.70	13.90	0.00	Н	13.90	0.025	34.77	-20.87
æ	711.00	10	QPSK	1/0	Standard	-23.50	13.10	0.00	Н	13.10	0.020	34.77	-21.67
	709.00	10	16-QAM	1/0	Standard	-23.50	13.10	0.00	Н	13.10	0.020	34.77	-21.67
	710.00	10	16-QAM	1/0	Standard	-23.80	12.80	0.00	Н	12.80	0.019	34.77	-21.97
	711.00	10	16-QAM	1/0	Standard	-24.60	12.00	0.00	Н	12.00	0.016	34.77	-22.77

Table 6-2. ERP Data (Band 17)

	Freq [MHz]	BW [MHz]	Mod.	RB Size / Offset	Battery	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
	826.50	5	QPSK	1 / 24	Standard	-18.80	18.60	0.00	Н	18.60	0.072	38.45	-19.85
	836.50	5	QPSK	1 / 24	Standard	-16.70	20.70	0.00	Н	20.70	0.117	38.45	-17.75
	846.50	5	QPSK	1 / 24	Standard	-16.50	20.90	0.00	Η	20.90	0.123	38.45	-17.55
ш	826.50	5	16-QAM	1 / 24	Standard	-19.90	17.50	0.00	Н	17.50	0.056	38.45	-20.95
F	836.50	5	16-QAM	1 / 24	Standard	-17.80	19.60	0.00	Η	19.60	0.091	38.45	-18.85
2 1	846.50	5	16-QAM	1 / 24	Standard	-17.30	20.10	0.00	Н	20.10	0.102	38.45	-18.35
þ	829.00	10	QPSK	1 / 49	Standard	-17.70	19.70	0.00	Н	19.70	0.093	38.45	-18.75
Band	836.50	10	QPSK	1 / 49	Standard	-16.30	21.10	0.00	Η	21.10	0.129	38.45	-17.35
ш	844.00	10	QPSK	1 / 49	Standard	-16.60	20.80	0.00	Н	20.80	0.120	38.45	-17.65
	829.00	10	16-QAM	1 / 49	Standard	-19.30	18.10	0.00	Н	18.10	0.065	38.45	-20.35
	836.50	10	16-QAM	1 / 49	Standard	-17.40	20.00	0.00	Н	20.00	0.100	38.45	-18.45
	844.00	10	16-QAM	1 / 49	Standard	-17.90	19.50	0.00	Н	19.50	0.089	38.45	-18.95

Table 6-3. ERP Data (Band 5)

- 1. This device was tested under all bandwidths, and RB configurations, and modulations. In Band 17 LTE, the highest power was found in QPSK modulation with RB size = 1 and RB offset = 0. In Band 5 LTE, the highest power was found in QPSK modulation with RB size = 1 and RB offset equal to the maximum allowed.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.3 Equivalent Isotropic Radiated Power (EIRP) §27.50(d)(4), §24.232(c)

		Freq [MHz]	BW [MHz]	Mod.	RB Size / Offset	Battery	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
		1712.50	5	QPSK	1/0	Standard	-17.70	14.40	8.81	I	23.21	0.209	30.00	-6.79
		1732.50	5	QPSK	1/0	Standard	-16.00	16.10	8.76	Ι	24.86	0.307	30.00	-5.14
		1752.50	5	QPSK	1/0	Standard	-16.70	15.40	8.72	Н	24.12	0.258	30.00	-5.88
	ш	1712.50	5	16-QAM	1/0	Standard	-18.40	13.70	8.81	Н	22.51	0.178	30.00	-7.49
	F, I	1732.50	5	16-QAM	1/0	Standard	-16.50	15.60	8.76	Τ	24.36	0.273	30.00	-5.64
	4	1752.50	5	16-QAM	1/0	Standard	-17.90	14.20	8.72	Н	22.92	0.196	30.00	-7.08
•	פַ	1715.00	10	QPSK	1/0	Standard	-21.40	10.70	8.80	H	19.50	0.089	30.00	-10.50
	Band	1732.50	10	QPSK	1/0	Standard	-20.20	11.90	8.76	Н	20.66	0.117	30.00	-9.34
'	ш	1750.00	10	QPSK	1/0	Standard	-16.70	15.40	8.73	Н	24.13	0.259	30.00	-5.87
		1715.00	10	16-QAM	1/0	Standard	-21.20	10.90	8.80	Н	19.70	0.093	30.00	-10.30
		1732.50	10	16-QAM	1/0	Standard	-20.90	11.20	8.76	Н	19.96	0.099	30.00	-10.04
		1750.00	10	16-QAM	1/0	Standard	-17.80	14.30	8.73	Н	23.03	0.201	30.00	-6.97

Table 6-4. EIRP Data (Band 4)

	Freq [MHz]	BW [MHz]	Mod.	RB Size / Offset	Battery	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
	1852.50	5	QPSK	1/0	Standard	-16.30	16.20	8.59	Н	24.79	0.302	33.01	-8.22
	1880.00	5	QPSK	1/0	Standard	-16.90	15.60	8.58	Н	24.18	0.262	33.01	-8.83
	1907.50	5	QPSK	1/0	Standard	-17.60	14.90	8.60	Н	23.50	0.224	33.01	-9.51
ш	1852.50	5	16-QAM	1/0	Standard	-17.00	15.50	8.59	Н	24.09	0.257	33.01	-8.92
I -	1880.00	5	16-QAM	1/0	Standard	-17.90	14.60	8.58	Н	23.18	0.208	33.01	-9.83
2 L	1907.50	5	16-QAM	1/0	Standard	-18.00	14.50	8.60	Н	23.10	0.204	33.01	-9.91
Þ	1855.00	10	QPSK	1/0	Standard	-16.90	15.60	8.59	H	24.19	0.263	33.01	-8.82
Band	1880.00	10	QPSK	1/0	Standard	-16.80	15.70	8.58	Н	24.28	0.268	33.01	-8.73
ш.	1905.00	10	QPSK	1/0	Standard	-16.60	15.90	8.59	Н	24.49	0.281	33.01	-8.52
	1855.00	10	16-QAM	1/0	Standard	-18.00	14.50	8.59	Н	23.09	0.204	33.01	-9.92
	1880.00	10	16-QAM	1/0	Standard	-17.90	14.60	8.58	Н	23.18	0.208	33.01	-9.83
	1905.00	10	16-QAM	1/0	Standard	-17.90	14.60	8.59	Н	23.19	0.208	33.01	-9.82

Table 6-5. EIRP Data (Band 2)

- 1. This device was tested under all bandwidths, and RB configurations, and modulations. In Band 4 LTE, the highest power was found in QPSK modulation with RB size = 1 and RB offset = 0. In Band 5 LTE, the highest power was also found in QPSK modulation with RB size = 1 and RB offset = 0.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.4 Band 17 Radiated Spurious Emissions §2.1053, §27.53(g)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 706.50 MHz

MEASURED OUTPUT POWER: 14.30 dBm = 0.027 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 27.30$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1413.00	-54.18	3.63	-50.55	Н	64.9
2119.50	-63.79	3.90	-59.89	Н	74.2
2826.00	-92.55	5.01	-87.54	Н	101.8
3532.50	-92.41	6.25	-86.16	Н	100.5
4239.00	-91.64	7.23	-84.40	Н	98.7
4945.50	-90.61	7.86	-82.74	Н	97.0

Table 6-6. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 710.00 MHz

MEASURED OUTPUT POWER: 13.90 dBm = 0.025 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz

DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 26.90$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1420.00	-65.62	3.68	-61.94	Н	75.8
2130.00	-63.29	3.92	-59.37	Н	73.3
2840.00	-92.54	5.02	-87.52	Н	101.4
3550.00	-92.34	6.25	-86.09	Н	100.0
4260.00	-91.61	7.25	-84.36	Н	98.3
4970.00	-90.59	7.90	-82.69	Н	96.6

Table 6-7. Radiated Spurious Data- 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 713.50 MHz

MEASURED OUTPUT POWER: 12.80 dBm = 0.019 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

TANCE: $\frac{3}{43 + 10 \log_{10}(W)} = \frac{3}{25.80}$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1427.00	-64.26	3.73	-60.53	Н	73.3
2140.50	-62.89	3.94	-58.95	Н	71.7
2854.00	-92.52	5.04	-87.49	Н	100.3
3567.50	-92.26	6.25	-86.01	Н	98.8
4281.00	-91.56	7.25	-84.31	Н	97.1
4994.50	-90.61	7.94	-82.67	Н	95.5

Table 6-8. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 709.00 MHz

MEASURED OUTPUT POWER: 14.10 dBm = 0.026 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 27.10$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1418.00	-63.28	3.63	-59.65	Н	73.8
2127.00	-62.49	3.90	-58.59	Н	72.7
2836.00	-92.55	5.01	-87.54	Н	101.6
3545.00	-92.41	6.25	-86.16	Н	100.3
4254.00	-91.64	7.23	-84.40	Н	98.5
4963.00	-90.61	7.86	-82.74	Н	96.8

Table 6-9. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 710.00 MHz

MEASURED OUTPUT POWER: 13.90 dBm = 0.025 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz

DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 26.90$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1420.00	-67.92	3.68	-64.24	Н	78.1
2130.00	-62.59	3.92	-58.67	Н	72.6
2840.00	-92.54	5.02	-87.52	Н	101.4
3550.00	-92.34	6.25	-86.09	Н	100.0
4260.00	-91.61	7.25	-84.36	Н	98.3
4970.00	-90.59	7.90	-82.69	Н	96.6

Table 6-10. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 711.00 MHz MEASURED OUTPUT POWER: 13.10 dBm0.020 W **QPSK**

MODULATION SIGNAL:

BANDWIDTH: 10 MHz DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) =$ 26.10 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1422.00	-66.66	3.73	-62.93	Н	76.0
2133.00	-62.19	3.94	-58.25	Н	71.3
2844.00	-92.52	5.04	-87.49	Н	100.6
3555.00	-92.26	6.25	-86.01	Н	99.1
4266.00	-91.56	7.25	-84.31	Н	97.4
4977.00	-90.61	7.94	-82.67	Н	95.8

Table 6-11. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.5 Band 5 Radiated Spurious Emissions

§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 826.50 MHz

MEASURED OUTPUT POWER: 18.60 dBm = 0.072 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 31.60$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1653.00	-42.33	2.55	-39.78	Н	58.4
2479.50	-54.22	2.86	-51.36	Н	70.0
3306.00	-91.78	5.48	-86.30	Н	104.9
4132.50	-91.58	7.07	-84.51	Н	103.1
4959.00	-90.60	7.89	-82.71	Н	101.3
5785.50	-89.04	8.52	-80.52	Н	99.1

Table 6-12. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 24) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 5 Radiated Spurious Measurements (continued) §2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.50 MHz
MEASURED OUTPUT POWER: 20.70 dBm = 0.117 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 33.70$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.00	-43.79	2.34	-41.45	Н	62.1
2509.50	-33.29	2.84	-30.46	Н	51.2
3346.00	-91.94	5.64	-86.30	Н	107.0
4182.50	-91.62	7.14	-84.48	Н	105.2
5019.00	-90.59	7.97	-82.62	Н	103.3
5855.50	-88.73	8.46	-80.26	Н	101.0

Table 6-13. Radiated Spurious Data- 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 24) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 5 Radiated Spurious Measurements (continued)

§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 846.50 MHz

MEASURED OUTPUT POWER: 20.90 dBm = 0.123 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 33.90$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1693.00	-33.26	2.13	-31.13	Н	52.0
2539.50	-35.47	3.11	-32.36	Н	53.3
3386.00	-61.92	5.80	-56.12	Н	77.0
4232.50	-91.64	7.22	-84.41	Н	105.3
5079.00	-90.46	8.01	-82.44	Н	103.3
5925.50	-88.37	8.41	-79.97	Н	100.9

Table 6-14. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 24) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 5 Radiated Spurious Measurements (continued) §2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 829.00 MHz

MEASURED OUTPUT POWER: 19.70 dBm = 0.093 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 32.70$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1658.00	-43.73	2.55	-41.18	Н	60.9
2487.00	-44.02	2.86	-41.16	Н	60.9
3316.00	-91.78	5.48	-86.30	Н	106.0
4145.00	-91.58	7.07	-84.51	Н	104.2
4974.00	-90.60	7.89	-82.71	Н	102.4
5803.00	-89.04	8.52	-80.52	H	100.2

Table 6-15. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 49) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 5 Radiated Spurious Measurements (continued)

§2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.50 MHz

MEASURED OUTPUT POWER: 21.10 dBm = 0.129 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 34.10$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.00	-45.69	2.34	-43.35	Н	64.4
2509.50	-43.09	2.84	-40.26	Н	61.4
3346.00	-91.94	5.64	-86.30	Н	107.4
4182.50	-91.62	7.14	-84.48	Н	105.6
5019.00	-90.59	7.97	-82.62	Н	103.7
5855.50	-88.73	8.46	-80.26	Н	101.4

Table 6-16. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 49) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 5 Radiated Spurious Measurements (continued) §2.1053, 22.917(a); RSS-132 (4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 844.00 MHz

MEASURED OUTPUT POWER: 20.80 dBm = 0.120 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 33.80$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1688.00	-31.56	2.13	-29.43	Н	50.2
2532.00	-37.17	3.11	-34.06	Н	54.9
3376.00	-92.12	5.80	-86.31	Н	107.1
4220.00	-91.64	7.22	-84.41	Н	105.2
5064.00	-90.46	8.01	-82.44	Н	103.2
5908.00	-88.37	8.41	-79.97	H	100.8

Table 6-17. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 49) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.6 Band 4 Radiated Spurious Emissions §2.1053, §27.53(h)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1712.50 MHz

MEASURED OUTPUT POWER: 23.21 dBm = 0.209 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 36.21$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3425.00	-53.26	9.35	-43.91	Н	67.1
5137.50	-53.39	10.96	-42.44	Н	65.6
6850.00	-85.66	10.52	-75.14	Н	98.3
8562.50	-83.05	11.07	-71.98	Н	95.2
10275.00	-82.38	12.47	-69.90	Н	93.1
11987.50	-78.35	12.42	-65.93	Н	89.1

Table 6-18. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1732.50 MHz

MEASURED OUTPUT POWER: 24.86 dBm = 0.307 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.86$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3465.00	-51.92	9.47	-42.45	Н	67.3
5197.50	-51.32	10.87	-40.45	Н	65.3
6930.00	-85.81	10.68	-75.13	Н	100.0
8662.50	-83.01	11.25	-71.77	Н	96.6
10395.00	-82.36	12.52	-69.83	Н	94.7
12127.50	-77.70	12.28	-65.42	Н	90.3

Table 6-19. Radiated Spurious Data- 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1752.50 MHz

MEASURED OUTPUT POWER: 24.12 dBm = 0.258 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.12$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3505.00	-53.87	9.58	-44.29	Н	68.4
5257.50	-53.15	10.57	-42.57	Н	66.7
7010.00	-85.99	10.86	-75.13	Н	99.3
8762.50	-83.15	11.50	-71.65	Н	95.8
10515.00	-82.27	12.55	-69.72	Н	93.8
12267.50	-77.56	12.38	-65.18	Н	89.3

Table 6-20. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1715.00 MHz

MEASURED OUTPUT POWER: 19.50 dBm = 0.089 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $43 + 10 \log_{10} (W) = 32.50$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3430.00	-52.66	9.35	-43.31	Н	62.8
5145.00	-52.19	10.96	-41.24	Н	60.7
6860.00	-85.66	10.52	-75.14	Н	94.6
8575.00	-83.05	11.07	-71.98	Н	91.5
10290.00	-82.38	12.47	-69.90	Н	89.4
12005.00	-78.35	12.42	-65.93	Н	85.4

Table 6-21. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1732.50 MHz

MEASURED OUTPUT POWER: 20.66 dBm = 0.117 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz

DISTANCE: 3 meters LIMIT: $43 + 10 \log_{10} (W) = 33.66$ dBc

LEVEL @ **SPURIOUS** SUBSTITUTE **FREQUENCY EMISSION POL ANTENNA ANTENNA GAIN** (dBc) (MHz) **TERMINALS LEVEL** (H/V) (dBi) (dBm) (dBm) Н 3465.00 -53.52 9.47 -44.05 64.7 5197.50 -53.32 10.87 -42.45 Η 63.1 -75.13 6930.00 -85.81 Н 95.8 10.68 8662.50 -83.01 -71.77 92.4 11.25 Η 10395.00 -82.36 12.52 -69.83 Н 90.5 12127.50 -77.70 12.28 -65.42 Н 86.1

Table 6-22. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1750.00 MHz

MEASURED OUTPUT POWER: 24.13 dBm = 0.259 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.13$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3500.00	-53.37	9.58	-43.79	Н	67.9
5250.00	-53.75	10.57	-43.17	Н	67.3
7000.00	-85.99	10.86	-75.13	Н	99.3
8750.00	-83.15	11.50	-71.65	Н	95.8
10500.00	-82.27	12.55	-69.72	Н	93.8
12250.00	-77.56	12.38	-65.18	Н	89.3

Table 6-23. Radiated Spurious Data - 10MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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6.7 Band 2 Radiated Spurious Emissions

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1852.50 MHz

MEASURED OUTPUT POWER: 24.79 dBm = 0.302 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.79$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3705.00	-48.87	9.62	-39.26	Н	64.0
5557.50	-52.32	10.61	-41.71	Н	66.5
7410.00	-85.10	10.84	-74.25	Н	99.0
9262.50	-83.60	12.20	-71.41	Н	96.2
11115.00	-81.26	12.86	-68.40	Н	93.2
12967.50	-76.15	12.69	-63.45	Н	88.2

Table 6-24. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 2 Radiated Spurious Measurements (continued)

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

MEASURED OUTPUT POWER: 24.18 dBm = 0.262 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.18$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-50.05	9.30	-40.75	Н	64.9
5640.00	-52.25	10.89	-41.37	Н	65.5
7520.00	-84.86	10.85	-74.01	Н	98.2
9400.00	-83.40	12.17	-71.23	Н	95.4
11280.00	-81.58	13.05	-68.53	Н	92.7
13160.00	-75.84	12.70	-63.14	Н	87.3

Table 6-25. Radiated Spurious Data- 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 2 Radiated Spurious Measurements (continued)

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1907.50 MHz

MEASURED OUTPUT POWER: 23.50 dBm = 0.224 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 5 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 36.50$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3815.00	-46.64	9.05	-37.59	Н	61.1
5722.50	-52.51	11.07	-41.44	Н	64.9
7630.00	-85.20	11.11	-74.09	Н	97.6
9537.50	-83.54	12.35	-71.19	Н	94.7
11445.00	-81.54	13.22	-68.31	Н	91.8
13352.50	-75.91	12.97	-62.94	Н	86.4

Table 6-26. Radiated Spurious Data - 5MHz Bandwidth

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

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Band 2 Radiated Spurious Measurements (continued)

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1855.00 MHz

MEASURED OUTPUT POWER: 24.19 dBm = 0.263 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.19$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3710.00	-50.97	9.62	-41.36	Н	65.5
5565.00	-50.12	10.61	-39.51	Н	63.7
7420.00	-85.10	10.84	-74.25	Н	98.4
9275.00	-83.60	12.20	-71.41	Н	95.6
11130.00	-81.26	12.86	-68.40	Н	92.6
12985.00	-76.15	12.69	-63.45	Н	87.6

Table 6-27. Radiated Spurious Data - 10MHz Bandwidth

NOTES:

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 2 Radiated Spurious Measurements (continued)

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz

MEASURED OUTPUT POWER: 24.28 dBm = 0.268 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.28$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-49.85	9.30	-40.55	Н	64.8
5640.00	-50.15	10.89	-39.27	Н	63.5
7520.00	-84.86	10.85	-74.01	Н	98.3
9400.00	-83.40	12.17	-71.23	Н	95.5
11280.00	-81.58	13.05	-68.53	Н	92.8
13160.00	-75.84	12.70	-63.14	H	87.4

Table 6-28. Radiated Spurious Data - 10MHz Bandwidth

NOTES:

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 2 Radiated Spurious Measurements (continued)

§2.1053, 24.238(a); RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1905.00 MHz

MEASURED OUTPUT POWER: 24.49 dBm = 0.281 W

MODULATION SIGNAL: QPSK

BANDWIDTH: 10 MHz
DISTANCE: 3 meters

LIMIT: $\overline{43 + 10 \log_{10} (W)} = 37.49$ dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3810.00	-45.71	9.05	-36.66	Н	61.1
5715.00	-51.41	11.07	-40.34	Н	64.8
7620.00	-85.20	11.11	-74.09	Н	98.6
9525.00	-83.54	12.35	-71.19	Н	95.7
11430.00	-81.54	13.22	-68.31	Н	92.8
13335.00	-75.91	12.97	-62.94	Н	87.4

Table 6-29. Radiated Spurious Data - 10MHz Bandwidth

NOTES:

- 1. This device was tested under all RB configurations and modulations. The worst case emissions are reported using 1RB (with offset 0) and QPSK modulation.
- 2. This unit was tested with its standard battery.
- 3. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the horizontal setup. The data reported in the table above was measured in this test setup.

FCC ID: JYCP8010	PCTEST INGINITIONS LABORATORY, IAC.	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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6.8 Band 17 Frequency Stability Measurements §2.1055, 27.54

OPERATING FREQUENCY:	710,000,000	_Hz
REFERENCE VOLTAGE:	3.8	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	710,000,007	7	0.000001
100 %		- 30	710,000,002	2	0.000000
100 %		- 20	710,000,007	7	0.000001
100 %		- 10	710,000,003	3	0.000000
100 %		0	710,000,003	3	0.000000
100 %		+ 10	710,000,011	11	0.000002
100 %		+ 20	710,000,008	8	0.000001
100 %		+ 30	710,000,008	8	0.000001
100 %		+ 40	710,000,013	13	0.000002
100 %		+ 50	710,000,004	4	0.000001
115 %	4.37	+ 20	710,000,006	6	0.000001
85 %	3.23	+ 20	710,000,002	2	0.000000

Table 6-30. Frequency Stability Data (Band 17)

FCC ID: JYCP8010	PCTEST	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 17 Frequency Stability Measurements (Cont'd) §2.1055, 27.54

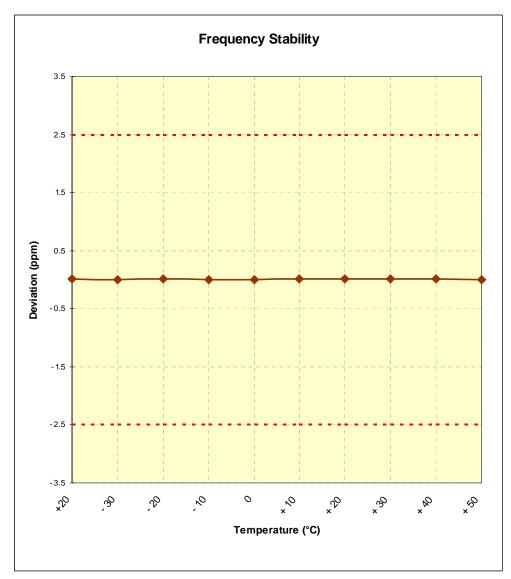


Figure 6-1. Frequency Stability Graph (Band 17)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 5 Frequency Stability Measurements §2.1055, 22.355; RSS-132 (4.3)

OPERATING FREQUENCY: 836,500,000 Hz

REFERENCE VOLTAGE: ______ 3.8 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	836,500,005	5	0.000001
100 %		- 30	836,500,004	4	0.000000
100 %		- 20	836,500,002	2	0.000000
100 %		- 10	836,500,008	8	0.000001
100 %		0	836,500,010	10	0.000001
100 %		+ 10	836,500,006	6	0.000001
100 %		+ 20	836,500,002	2	0.000000
100 %		+ 30	836,500,003	3	0.000000
100 %		+ 40	836,500,003	3	0.000000
100 %		+ 50	836,500,004	4	0.000000
115 %	4.37	+ 20	836,500,008	8	0.000001
85 %	3.23	+ 20	836,500,009	9	0.000001

Table 6-31. Frequency Stability Data (Band 5)

FCC ID: JYCP8010	PCTEST INC.	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 5 Frequency Stability Measurements (Cont'd) §2.1055, 22.355; RSS-132 (4.3)

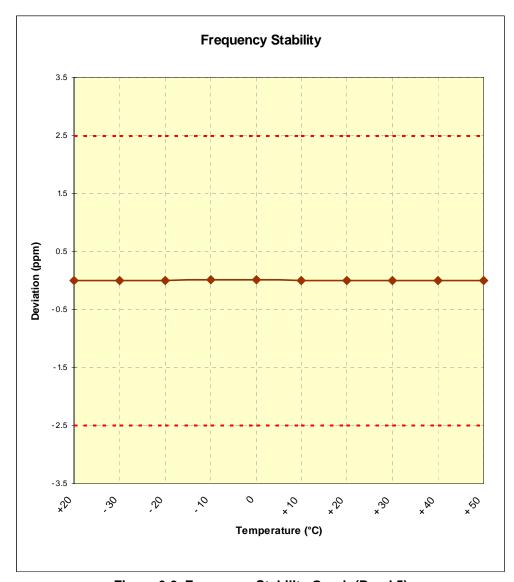


Figure 6-2. Frequency Stability Graph (Band 5)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 4 Frequency Stability Measurements §2.1055, 27.54

OPERATING FREQUENCY:	1,732,500,000	_Hz
REFERENCE VOLTAGE:	3.8	VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	1,732,500,006	6	0.000000
100 %		- 30	1,732,500,006	6	0.000000
100 %		- 20	1,732,500,002	2	0.000000
100 %		- 10	1,732,500,014	14	0.000001
100 %		0	1,732,500,008	8	0.000000
100 %		+ 10	1,732,500,009	9	0.000001
100 %		+ 20	1,732,500,011	11	0.000001
100 %		+ 30	1,732,500,013	13	0.000001
100 %		+ 40	1,732,500,006	6	0.000000
100 %		+ 50	1,732,500,010	10	0.000001
115 %	4.37	+ 20	1,732,500,004	4	0.000000
85 %	3.23	+ 20	1,732,500,011	11	0.000001

Table 6-32. Frequency Stability Data (Band 4)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 4 Frequency Stability Measurements (Cont'd) §2.1055, 27.54

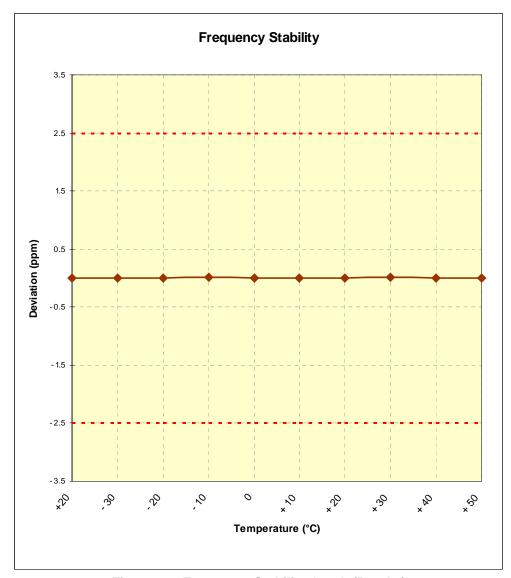


Figure 6-3. Frequency Stability Graph (Band 4)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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6.11 Band 2 Frequency Stability Measurements §2.1055, 24.235, RSS-133 (6.3)

OPERATING FREQUENCY: 1,880,000,000 Hz REFERENCE VOLTAGE: 3.8 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	1,880,000,004	4	0.000000
100 %		- 30	1,880,000,004	4	0.000000
100 %		- 20	1,880,000,010	10	0.000001
100 %		- 10	1,880,000,002	2	0.000000
100 %		0	1,880,000,006	6	0.000000
100 %		+ 10	1,880,000,003	3	0.000000
100 %		+ 20	1,880,000,002	2	0.000000
100 %		+ 30	1,880,000,002	2	0.000000
100 %		+ 40	1,880,000,005	5	0.000000
100 %		+ 50	1,880,000,004	4	0.000000
115 %	4.37	+ 20	1,880,000,009	9	0.000000
85 %	3.23	+ 20	1,880,000,007	7	0.000000

Table 6-33. Frequency Stability Data (Band 2)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Band 2 Frequency Stability Measurements (Cont'd) §2.1055, 24.235, RSS-133 (6.3)

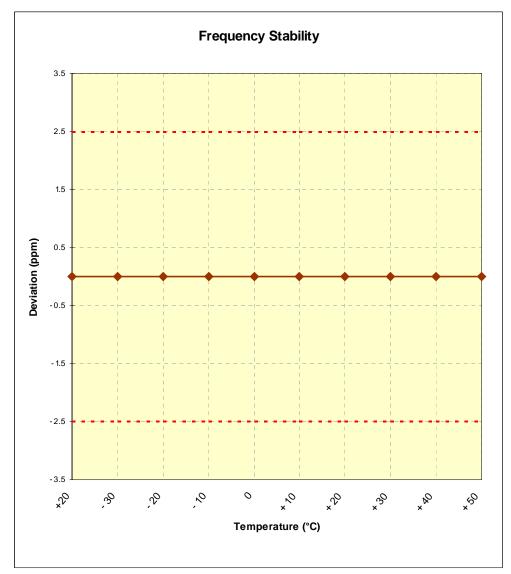


Figure 6-4. Frequency Stability Graph (Band 2)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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7.0 BAND 17 PLOTS OF EMISSIONS

Note: All bandwidths, RB configurations, and modulations were investigated. The worst case test results are reported below.



Plot 7-1. Lower Band Edge Plot (5MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-2. Lower Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



Plot 7-3. Lower Band Edge Plot (10MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-4. Lower Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



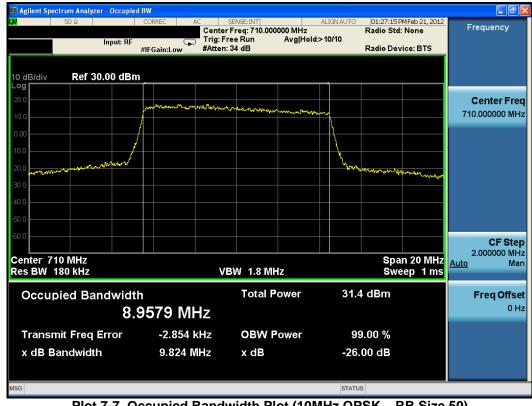
Plot 7-5. Occupied Bandwidth Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-6. Occupied Bandwidth Plot (5MHz 16-QAM - RB Size 25)



Plot 7-7. Occupied Bandwidth Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-8. Occupied Bandwidth Plot (10MHz 16-QAM - RB Size 50)



Plot 7-9. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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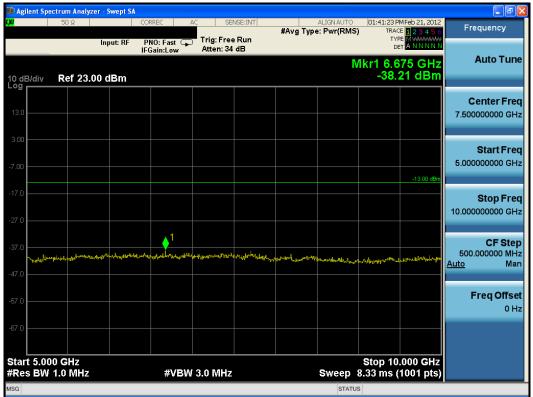
Plot 7-10. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 7-11. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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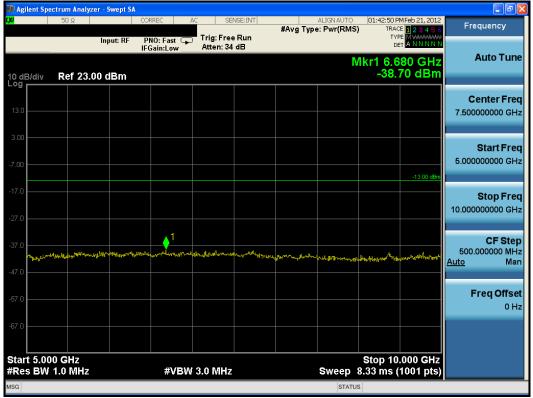
Plot 7-12. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 7-13. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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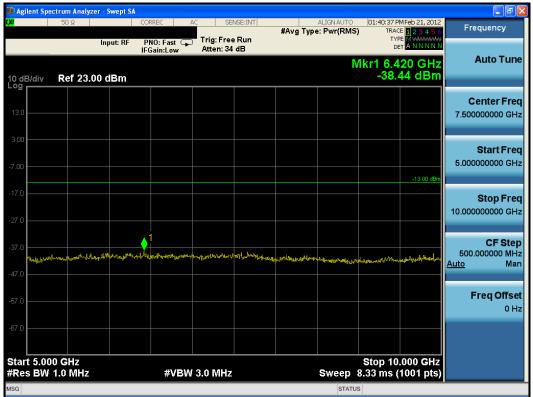
Plot 7-14. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 7-15. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-16. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



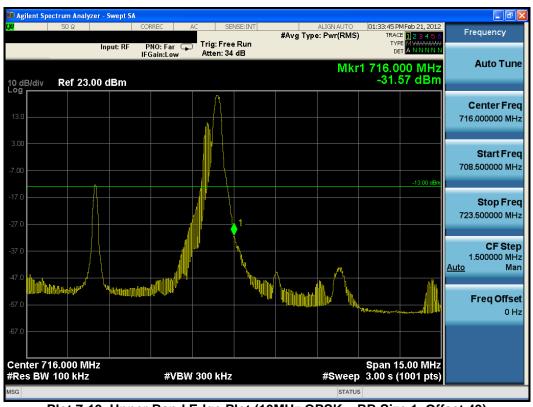
Plot 7-17. Upper Band Edge Plot (5MHz QPSK – RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 7-18. Upper Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



Plot 7-19. Upper Band Edge Plot (10MHz QPSK – RB Size 1, Offset 49)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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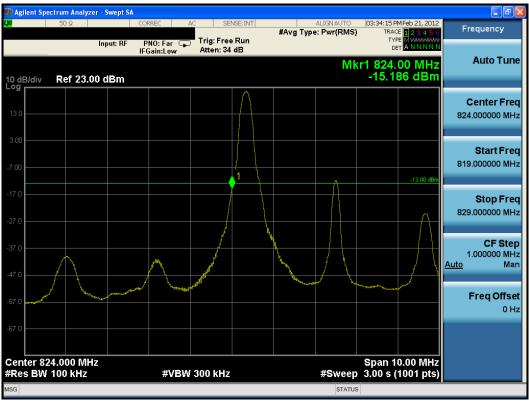
Plot 7-20. Upper Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)

FC	C ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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8.0 BAND 5 PLOTS OF EMISSIONS

Note: All bandwidths, RB configurations, and modulations were investigated. The worst case test results are reported below.



Plot 8-1. Lower Band Edge Plot (5MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-2. Lower Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



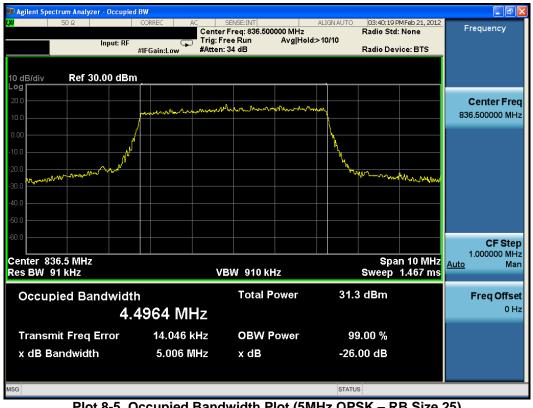
Plot 8-3. Lower Band Edge Plot (10MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-4. Lower Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



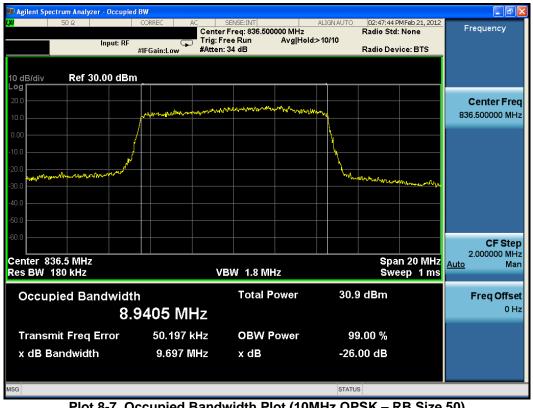
Plot 8-5. Occupied Bandwidth Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-6. Occupied Bandwidth Plot (5MHz 16-QAM - RB Size 25)



Plot 8-7. Occupied Bandwidth Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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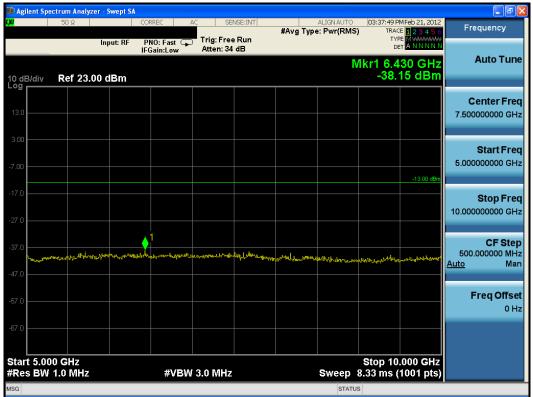
Plot 8-8. Occupied Bandwidth Plot (10MHz 16-QAM - RB Size 50)



Plot 8-9. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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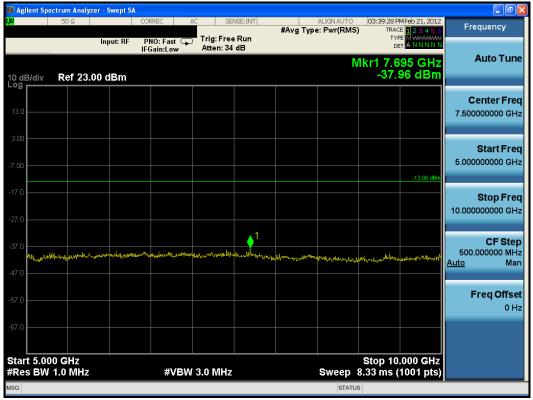
Plot 8-10. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 8-11. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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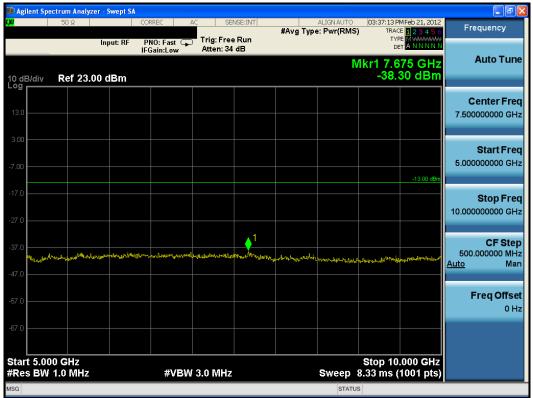
Plot 8-12. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 8-13. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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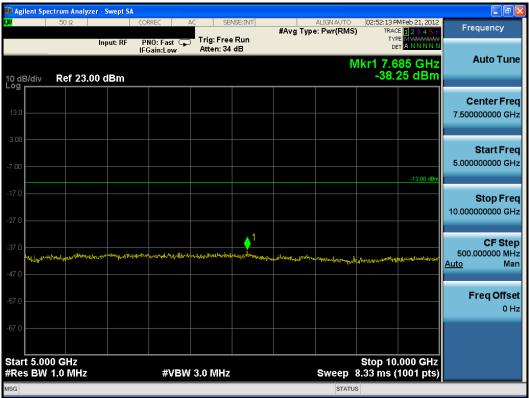
Plot 8-14. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 8-15. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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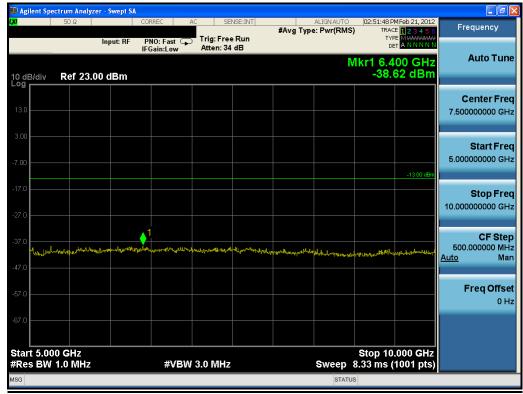
Plot 8-16. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – Low Channel)



Plot 8-17. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-18. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – Mid Channel)



Plot 8-19. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – High Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-20. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – High Channel)



Plot 8-21. Upper Band Edge Plot (5MHz QPSK - RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 8-22. Upper Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



Plot 8-23. Upper Band Edge Plot (10MHz QPSK - RB Size 1, Offset 49)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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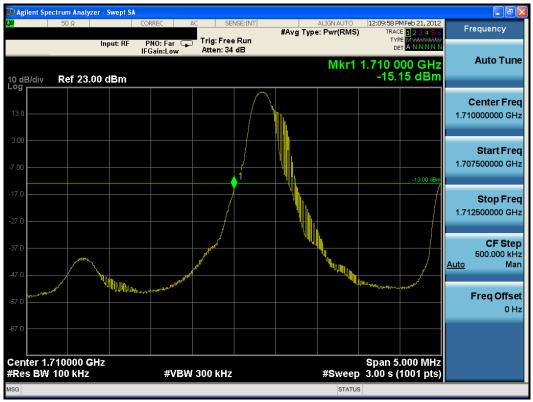
Plot 8-24. Upper Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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9.0 BAND 4 PLOTS OF EMISSIONS

Note: All bandwidths, RB configurations, and modulations were investigated. The worst case test results are reported below.



Plot 9-1. Lower Band Edge Plot (5MHz QPSK – RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-2. Lower Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



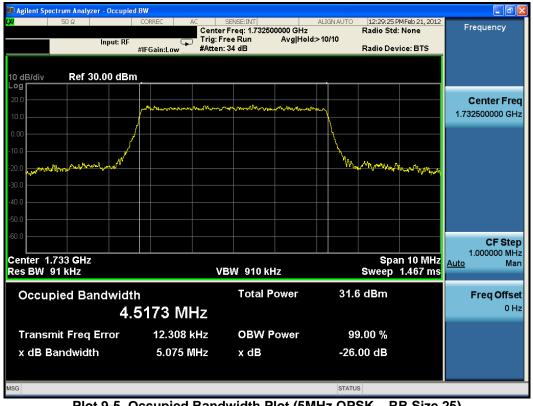
Plot 9-3. Lower Band Edge Plot (10MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-4. Lower Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



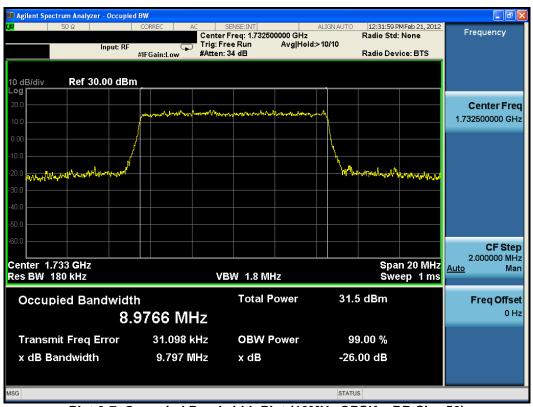
Plot 9-5. Occupied Bandwidth Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-6. Occupied Bandwidth Plot (5MHz 16-QAM - RB Size 25)



Plot 9-7. Occupied Bandwidth Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-8. Occupied Bandwidth Plot (10MHz 16-QAM - RB Size 50)



Plot 9-9. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-10. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 9-11. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-12. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 9-13. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-14. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 9-15. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-16. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 9-17. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-18. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – Mid Channel)



Plot 9-19. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-20. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



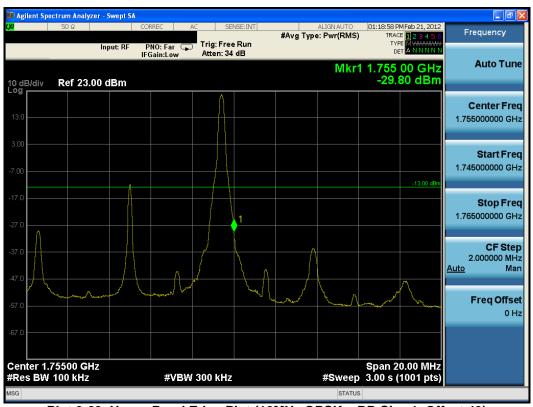
Plot 9-21. Upper Band Edge Plot (5MHz QPSK – RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-22. Upper Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



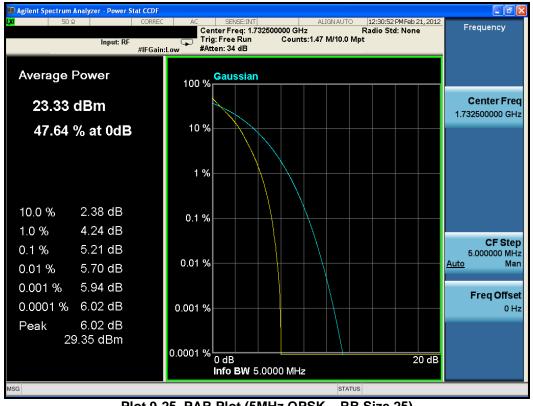
Plot 9-23. Upper Band Edge Plot (10MHz QPSK - RB Size 1, Offset 49)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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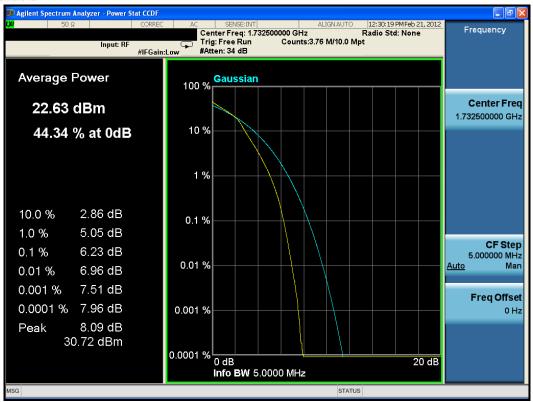
Plot 9-24. Upper Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



Plot 9-25. PAR Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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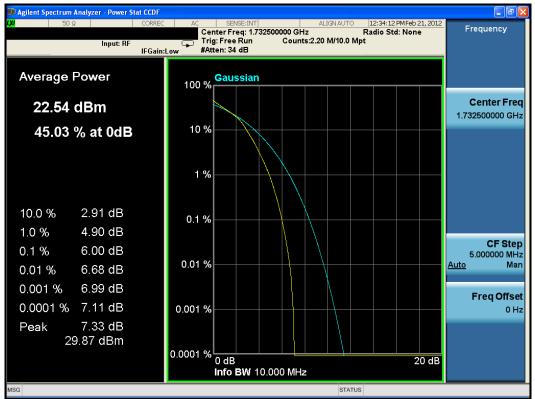
Plot 9-26. PAR Plot (5MHz 16QAM - RB Size 25)



Plot 9-27. PAR Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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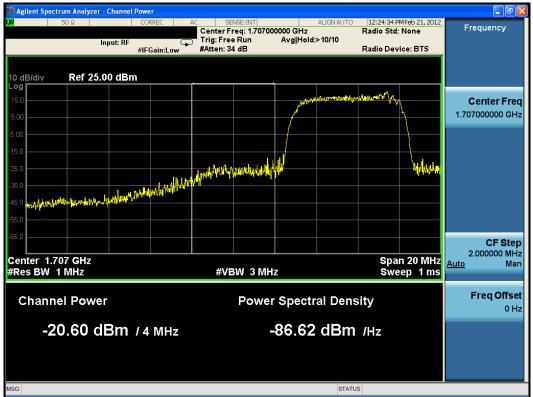
Plot 9-28. PAR Plot (10MHz 16QAM - RB Size 50)



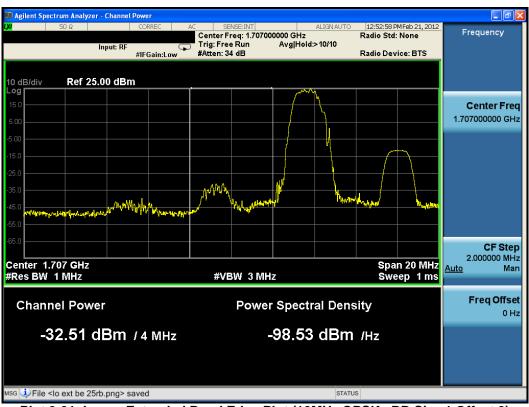
Plot 9-29. Lower Extended Band Edge Plot (5MHz QPSK- RB Size 1,Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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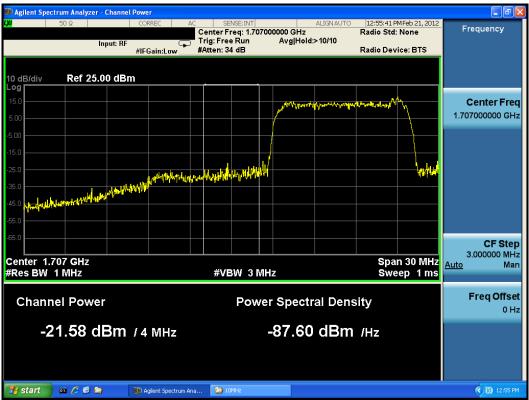
Plot 9-30. Lower Extended Band Edge Plot (5MHz QPSK-RB Size 25,Offset 0)



Plot 9-31. Lower Extended Band Edge Plot (10MHz QPSK- RB Size 1,Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-32. Lower Extended Band Edge Plot (10MHz QPSK-RB Size 50,Offset 0)



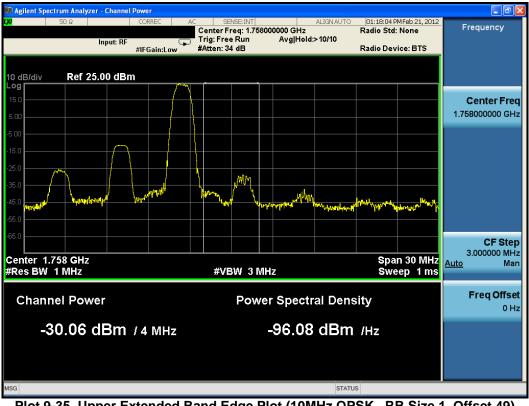
Plot 9-33. Upper Extended Band Edge Plot (5MHz QPSK- RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-34. Upper Extended Band Edge Plot (5MHz QPSK- RB Size 25, Offset 0)



Plot 9-35. Upper Extended Band Edge Plot (10MHz QPSK- RB Size 1, Offset 49)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 9-36. Upper Extended Band Edge Plot (10MHz QPSK- RB Size 50, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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BAND 2 PLOTS OF EMISSIONS 10.0

Note: All bandwidths, RB configurations, and modulations were investigated. The worst case test results are reported below.



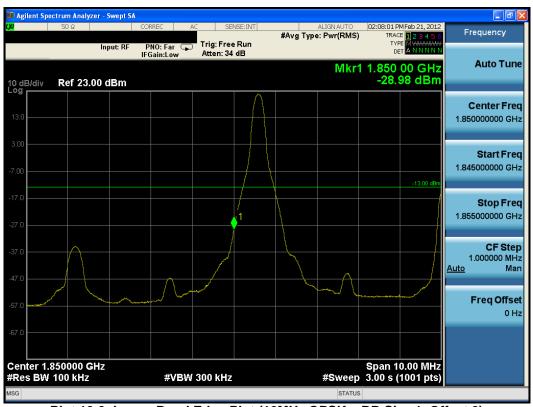
Plot 10-1. Lower Band Edge Plot (5MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST'	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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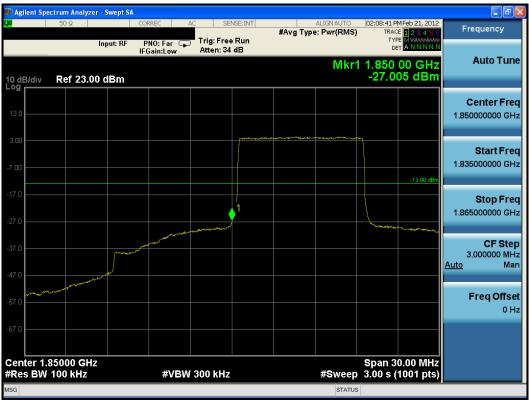
Plot 10-2. Lower Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



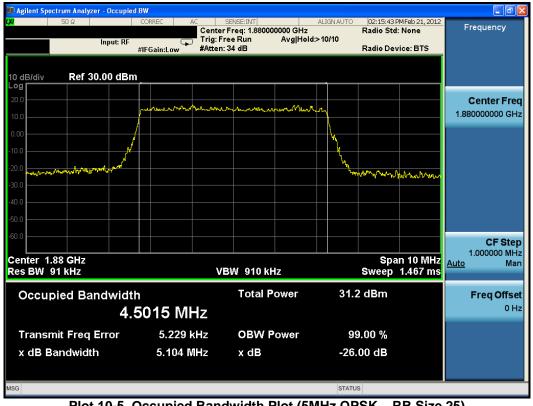
Plot 10-3. Lower Band Edge Plot (10MHz QPSK - RB Size 1, Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-4. Lower Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



Plot 10-5. Occupied Bandwidth Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-6. Occupied Bandwidth Plot (5MHz 16-QAM - RB Size 25)



Plot 10-7. Occupied Bandwidth Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-8. Occupied Bandwidth Plot (10MHz 16-QAM - RB Size 50)



Plot 10-9. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-10. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 10-11. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-12. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)



Plot 10-13. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-14. Conducted Spurious Plot (5MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 10-15. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-16. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Low Channel)



Plot 10-17. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - Mid Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-18. Conducted Spurious Plot (10MHz QPSK – RB Size 1, RB Offset 0 – Mid Channel)



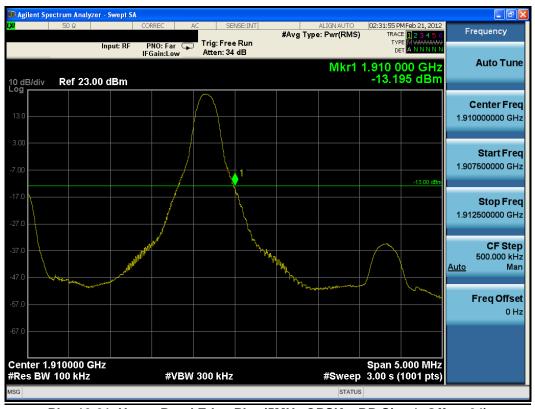
Plot 10-19. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - High Channel)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-20. Conducted Spurious Plot (10MHz QPSK - RB Size 1, RB Offset 0 - High Channel)



Plot 10-21. Upper Band Edge Plot (5MHz QPSK – RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-22. Upper Band Edge Plot (5MHz QPSK - RB Size 25, Offset 0)



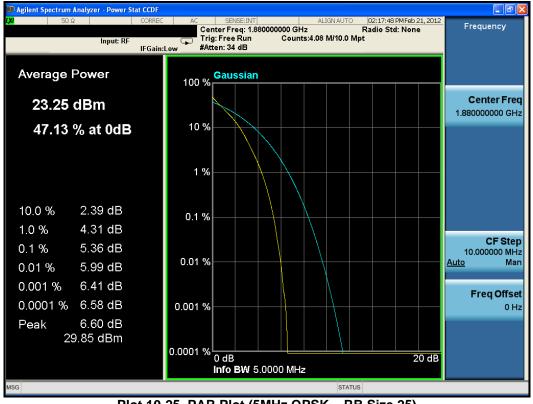
Plot 10-23. Upper Band Edge Plot (10MHz QPSK - RB Size 1, Offset 49)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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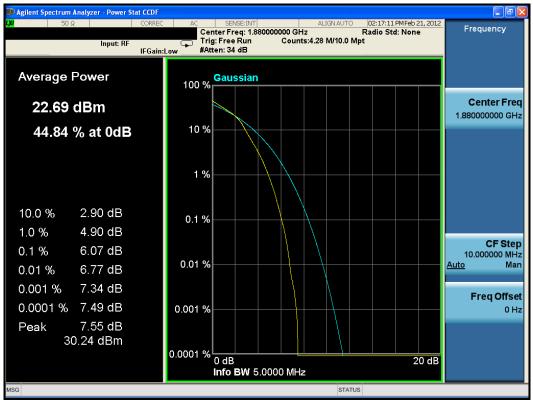
Plot 10-24. Upper Band Edge Plot (10MHz QPSK - RB Size 50, Offset 0)



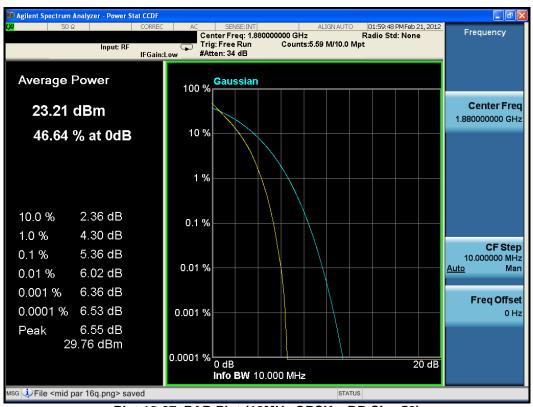
Plot 10-25. PAR Plot (5MHz QPSK - RB Size 25)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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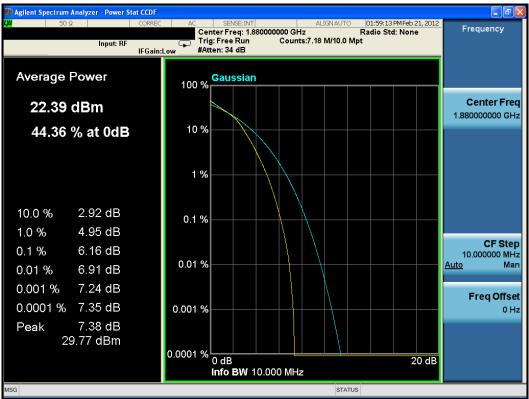
Plot 10-26. PAR Plot (5MHz 16QAM - RB Size 25)



Plot 10-27. PAR Plot (10MHz QPSK - RB Size 50)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-28. PAR Plot (10MHz 16QAM - RB Size 50)



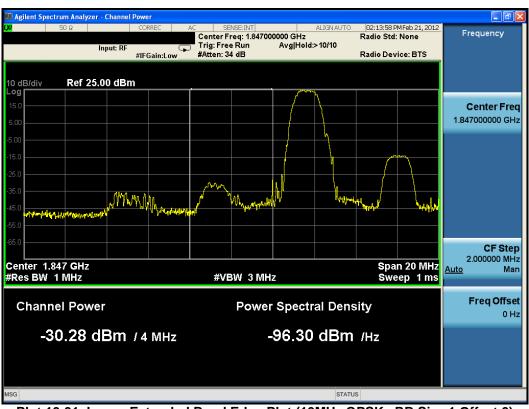
Plot 10-29. Lower Extended Band Edge Plot (5MHz QPSK- RB Size 1,Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-30. Lower Extended Band Edge Plot (5MHz QPSK-RB Size 25,Offset 0)



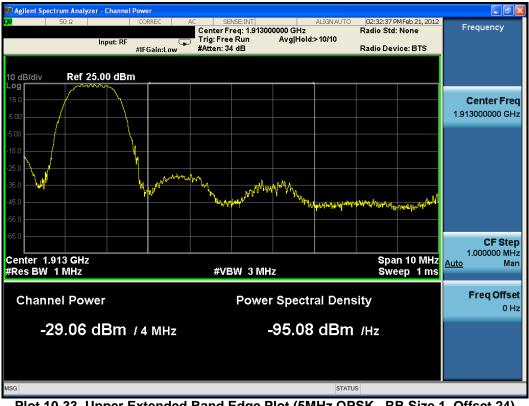
Plot 10-31. Lower Extended Band Edge Plot (10MHz QPSK-RB Size 1,Offset 0)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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Plot 10-32. Lower Extended Band Edge Plot (10MHz QPSK-RB Size 50,Offset 0)



Plot 10-33. Upper Extended Band Edge Plot (5MHz QPSK- RB Size 1, Offset 24)

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager
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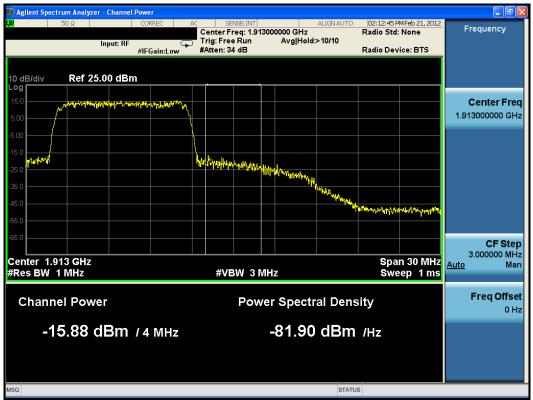
Plot 10-34. Upper Extended Band Edge Plot (5MHz QPSK- RB Size 25, Offset 0)



Plot 10-35. Upper Extended Band Edge Plot (10MHz QPSK-RB Size 1, Offset 49)

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Plot 10-36. Upper Extended Band Edge Plot (10MHz QPSK- RB Size 50, Offset 0)

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CONCLUSION 11.0

The data collected relate only to the item(s) tested and show that the Pantech Portable Handset FCC ID: JYCP8010 complies with all the requirements of Parts 2, 22, 24 and 27 of the FCC rules for LTE operation only.

FCC ID: JYCP8010	PCTEST*	FCC Pt. 22-24-27 LTE MEASUREMENT REPORT (CERTIFICATION)	PANTECH	Reviewed by: Quality Manager	
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