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REPORT

FCC Class II Permissive Change

Applicant Name:
Franklin Technology Inc.

Address:
906 JEI Platz, 459-11, Gasan-dong, Gumcheon-gu, Seoul, 152-803 South Korea

Date of Issue:
September 29, 2014

Location:
HCT CO., LTD., 105-1, Jangam-ri, Majang-Myeon, Icheon-si, Kyunggi-Do, Korea

Test Report No.: HCT-R-1409-F006-2

HCT FRN: 0005866421

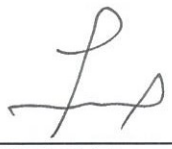
FCC ID:	**RB2-U770**
APPLICANT:	**Franklin Technology Inc.**

FCC Model(s):	U770	
EUT Type:	CDMA /LTE/WiMax USB Dongle	
FCC Classification:	PCS Licensed Transmitter (PCB)	
FCC Rule Part(s):	§2 , §24	
Tx Frequency:	1 851.5 MHz – 1 913.5 MHz (LTE – Band25 (3 MHz)) 1 855.0 MHz – 1 910.0 MHz (LTE – Band25 (10 MHz))	
Max. RF Output Power:	Band 25 (3 MHz) :	0.321 W EIRP (QPSK) (25.07 dBm) 0.356 W EIRP (16-QAM) (25.51 dBm)
	Band 25 (10 MHz) :	0.352 W EIRP (QPSK) (25.47 dBm) 0.337 W EIRP (16-QAM) (25.28 dBm)
Emission Designator(s):	Band 25 (3 MHz) :	2M69G7D (QPSK) / 2M69W7D (16-QAM)
	Band 25 (10 MHz) :	8M96G7D (QPSK) / 8M94W7D (16-QAM)

The measurements shown in this report were made in accordance with the procedures specified in §2.947. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them.

HCT CO., LTD. Certifies that no party to this application has subject to a denial of Federal benefits that includes FCC benefits pursuant to section 5301 of the Anti-Drug Abuse Act of 1998,21 U.S. C.853(a)

Report prepared by
: Jong Seok Lee
Test engineer of RF Team



Approved by
: Chang Seok Choi
Manager of RF Team

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-R-1409-F006	September 23, 2014	- First Approval Report
HCT-R-1409-F006-1	September 26, 2014	- Retest EIRP and RSE
HCT-R-1409-F006-2	September 29, 2014	-insert worst case of RB for EIRP

Table of Contents

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	Franklin Technology Inc.	
Address:	906 JEI Platz, 459-11, Gasan-dong, Gumcheon-gu, Seoul, 152-803 South Korea	
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	Band 25 (10 MHz) :	8M96G7D (QPSK) / 8M94W7D (16-QAM)
Date(s) of Tests:	September 17, 2014 ~ September 26, 2014	
Antenna Specification	Manufacturer: KWANG HYUN AIRTECH Antenna type: Monopole Antenna Peak Gain: -1.36 dBi	

2. INTRODUCTION

2.1. EUT DESCRIPTION

The U770 CDMA / LTE / WIMAX USB Dongle consists of LTE25.

2.2. MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

2.3. TEST FACILITY

The Fully-anechoic chamber and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Korea**.**

3. DESCRIPTION OF TESTS

3.1 ERP/EIRP RADIATED POWER AND RADIATED SPURIOUS EMISSIONS

Note: ERP(Effective Radiated Power), EIRP(Effective Isotropic Radiated Power)

Test Procedure

Radiated emission measurements are performed in the Fully-anechoic chamber. The equipment under test is placed on a non-conductive table 3-meters away from the receive antenna in accordance with ANSI/TIA-603-C-2004 Clause 2.2.17. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission. The level and position of the maximized emission is recorded with the spectrum analyzer using a positive peak detector.
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 and the previously recorded signal was duplicated.
The power is calculated by the following formula;

$$P_{d(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dB)}$$

Where: P_d is the dipole equivalent power and P_g is the generator output power into the substitution antenna.

The maximum EIRP is calculated by adding the forward power to the calibrated source plus its appropriate gain value. These steps are repeated with the receiving antenna in both vertical and horizontal polarization. the difference between the gain of the horn and an isotropic antenna are taken into consideration

Radiated spurious emissions

: Frequency Range : 30 MHz ~ 10^{th} Harmonics of highest channel fundamental frequency.

3.2 PEAK-AVERAGE RATIO.

Test Procedure

Peak to Average Power Ratio is tested in accordance with KDB971168 D01 Power Meas License Digital Systems v02r01, June 7, 2013, Section 5.7.

- Section 5.7.1 CCDF Procedure

a) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
b) Set the number of counts to a value that stabilizes the measured CCDF curve;
c) Set the measurement interval as follows:
   1) for continuous transmissions, set to 1 ms,
   2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.
d) Record the maximum PAPR level associated with a probability of 0.1%.

- Section 5.7.2 Alternate Procedure

Use one of the procedures presented in 5.1 to measure the total peak power and record as P_{Pk}. Use one of the applicable procedures presented 5.2 to measure the total average power and record as P_{Avg}. Determine the P.A.R. from: $P.A.R_{(dB)} = P_{Pk\ (dBm)} - P_{Avg\ (dBm)}$ (P_{Avg} = Average Power + Duty cycle Factor)

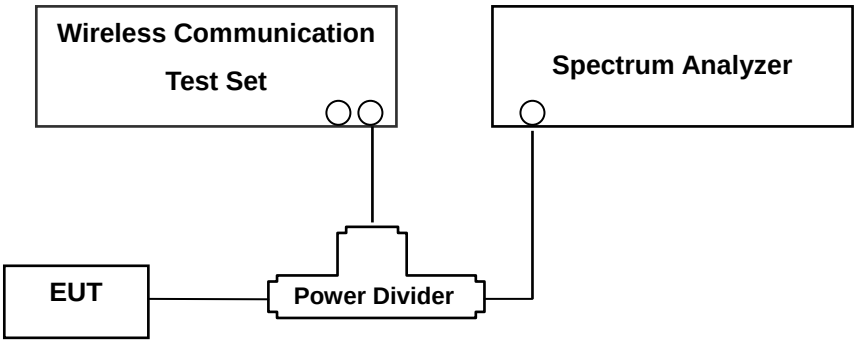
5.1.1 Peak power measurements with a spectrum/signal analyzer or EMI receiver

The following procedure can be used to determine the total peak output power.

a) Set the RBW ≥ OBW.
b) Set VBW ≥ 3 × RBW.
c) Set span ≥ 2 x RBW
d) Sweep time = auto couple.
e) Detector = peak.
f) Ensure that the number of measurement points ≥ span/RBW.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the peak amplitude level.

3.3 OCCUPIED BANDWIDTH.

Test set-up



(Configuration of conducted Emission measurement)

The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

Test Procedure

OBW is tested in accordance with KDB971168 D01 Power Meas License Digital Systems v02r01, June 7, 2013, Section 4.2..

The EUT makes a call to the communication simulator. The power was measured with R&S Spectrum Analyzer. All measurements were done at 3 channels(low, middle and high operational range.)

The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth

3.4 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL.

Test Procedure

Spurious and harmonic emissions at antenna terminal is tested in accordance with KDB971168 D01 Power Meas License Digital Systems v02r01, June 7, 2013, Section 6.0.

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer.

The EUT was setup to maximum output power at its lowest channel. The Resolution BW of the analyzer is set to 1 % of the emission bandwidth to show compliance with the -13 dBm limit, in the 1 MHz bands immediately outside and adjacent to the edge of the frequency block. The 1 MHz RBW was used to scan from 30 MHz to 26.5 GHz. A display line was placed at -13 dBm to show compliance. The high, lowest and a middle channel were tested for out of band measurements.

- Band Edge Requirement : In the 1MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

NOTES: The analyzer plot offsets were determined by below conditions.

- For LTE Band 25, total offset 26.8 dBm = 20 dBm attenuator + 6 dBm Divider + 0.8 dBm RF cables.

3.5 FREQUENCY RANGE (1850 MHz ~ 1910 MHz)

Subpart E—Broadband PCS

§ 24.229

(a) The following frequency blocks are available for assignment on an MTA basis:

Block A: 1850–1865 MHz paired with 1930–1945 MHz;

Block B: 1870–1885 MHz paired with 1950–1965 MHz.

(b) The following frequency blocks are available for assignment on a BTA basis:

Block C: 1895–1910 MHz paired with 1975–1990 MHz;

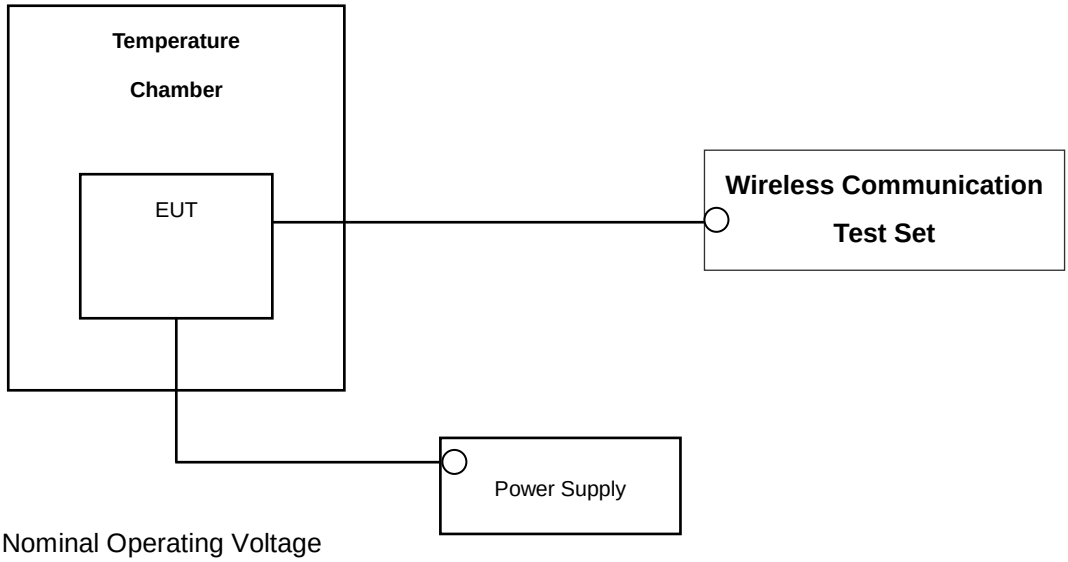
Block D: 1865–1870 MHz paired with 1945–1950 MHz;

Block E: 1885–1890 MHz paired with 1965–1970 MHz;

Block F: 1890–1895 MHz paired with 1970–1975 MHz;

3.6 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

Test Set-up



* Nominal Operating Voltage

Test Procedure

Frequency stability is tested in accordance with ANSI/TIA-603-C-2004 section 2.2.2

The frequency stability of the transmitter is measured by:
a.) **Temperature:** The temperature is varied from - 30 °C to + 50 °C using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from the end point to 115 % of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

Specification **—** the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block(LTE Band25).

Time Period and Procedure:

The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
1. 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.

2. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

4. LIST OF TEST EQUIPMENT

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
Agilent	N1921A/ Power Sensor	MY45241059	07/09/2014	Annual	07/09/2015
Agilent	N1911A/ Power Meter	MY45100523	01/24/2014	Annual	01/24/2015
MITEQ	AMF-6D-001180-35-20P/AMP	1081666	09/04/2014	Annual	09/04/2015
Wainwright	WHK1.2/15G-10EF/H.P.F	4	06/17/2014	Annual	06/17/2015
Wainwright	WHK3.3/18G-10EF/H.P.F	2	06/17/2014	Annual	06/17/2015
Hewlett Packard	11667B / Power Splitter	10545	02/22/2014	Annual	02/22/2015
Digital	EP-3010/ Power Supply	3110117	10/29/2013	Annual	10/29/2014
Schwarzbeck	UHAP/ Dipole Antenna	557	03/05/2013	Biennial	03/05/2015
Schwarzbeck	UHAP/ Dipole Antenna	558	05/03/2013	Biennial	05/03/2015
Korea Engineering	KR-1005L / Chamber	KRAB05063-3CH	10/30/2013	Annual	10/30/2014
Schwarzbeck	BBHA 9120D/ Horn Antenna	1191	12/03/2013	Biennial	12/03/2015
Schwarzbeck	BBHA 9120D/ Horn Antenna	1151	10/05/2013	Biennial	10/05/2015
Agilent	E4440A/Spectrum Analyzer	US45303008	04/09/2014	Annual	04/09/2015
WEINSCHEL	ATTENUATOR	BR0592	10/28/2013	Annual	10/28/2014
REOHDE&SCHWARZ	FSV40/Spectrum Analyzer	1307.9002K40-100931-NK	06/09/2014	Annual	06/09/2015
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	6200863156	04/01/2014	Annual	04/01/2015

5. SUMMARY OF TEST RESULTS

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result
2.1049, 24.238(a)	Occupied Bandwidth	N/A	CONDUCTED	PASS
2.1051, 24.238(a)	Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions		PASS
* 2.1046	Conducted Output Power	N/A		PASS
24.232(d)	Peak- to- Average Ratio	< 13 dB		
2.1055, 24.235	Frequency stability / variation of ambient temperature	< 2.5 ppm		PASS
24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP	RADIATED	PASS
2.1053, 24.238(a)	Radiated Spurious and Harmonic Emissions	< 43 + 10log10 (P[Watts]) for all out-of band emissions		PASS

*: See SAR Report

6. SAMPLE CALCULATION

A. EIRP Sample Calculation

Mode	Ch./ Freq.		Measured Level(dBm)	Substitude LEVEL(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
	channel	Freq.(MHz)						W	dBm
LTE	26065	1852.5	-16.48	17.23	10.40	2.83	H	0.301	24.79

EIRP = SubstitudeLEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a wooden tripod is 0.8 meter above test site ground level.
2) During the test , the turn table is rotated and the antenna height is also varied from 1 to 4 meters until the maximum signal is found.
3) Record the field strength meter's level.
4) Replace the EUT with dipole/Horn antenna that is connected to a calibrated signal generator.
5) Increase the signal generator output till the field strength meter's level is equal to the item (3).
6) The signal generator output level with Ant. Gain and cable loss are the rating of effective radiated power (**EIRP**).

B. Emission Designator

QPSK Modulation

Emission Designator = 8M95G7D

LTE BW = 8.95 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Amplitude/Angle Modulated

16QAM Modulation

Emission Designator = 8M94W7D

LTE BW = 8.94 MHz

D = Amplitude/Angle Modulated

7 = Quantized/Digital Info

W = Combination (Audio/Data)

7. TEST DATA

7.1 EQUIVALENT ISOTROPIC RADIATED POWER OUTPUT

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitude Level (dBm)	Ant. Gain(dBi)	C.L	Pol	ERP	
								W	dBm
1,851.50	3 MHz	QPSK	-17.87	16.78	10.04	1.83	y-v	0.316	24.99
		16-QAM	-17.84	16.81	10.04	1.83	y-v	0.318	25.02
1,882.50		QPSK	-18.09	16.88	10.04	1.85	y-v	0.321	25.07
		16-QAM	-17.65	17.32	10.04	1.85	y-v	0.356	25.51
1,913.50		QPSK	-21.38	13.64	10.06	1.89	y-v	0.152	21.81
		16-QAM	-21.62	13.40	10.06	1.89	y-v	0.144	21.57

Equivalent Isotropic Radiated Power Output Data (Band 25_3 MHz)

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitude Level (dBm)	Ant. Gain(dBi)	C.L	Pol	ERP	
								W	dBm
1,855.00	10 MHz	QPSK	-17.47	17.26	10.04	1.83	y-v	0.352	25.47
		16-QAM	-17.66	17.07	10.04	1.83	z-v	0.337	25.28
1,882.50		QPSK	-18.94	16.03	10.04	1.85	y-v	0.264	24.22
		16-QAM	-18.58	16.39	10.04	1.85	y-v	0.287	24.58
1,910.00		QPSK	-19.54	15.49	10.05	1.89	z-v	0.232	23.65
		16-QAM	-19.30	15.73	10.05	1.89	z-v	0.245	23.89

Equivalent Isotropic Radiated Power Output Data (Band 25_10 MHz)

NOTES:

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

The EUT was placed on a non-conductive styrofoam resin table 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For 1 MHz BW signals, a peak detector is used, with RBW = VBW = 1 MHz. For 10 MHz BW signals, a peak detector is used, with RBW = VBW = 10 MHz. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. The conducted power at the terminals of the Horn antenna is measured. The difference between the gain of the horn and an isotropic antenna is taken into consideration and the EIRP is recorded.

Also, we have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna. The worst case of the EUT is y plane in LTE 3 MHz and 10 MHz (QPSK: z plane Freq. 1910.0 MHz / 16-QAM: z plane Freq. 1855.0 MHz, 1910.0 MHz) mode. Also worst case of detecting Antenna is vertical polarization and in LTE 3 MHz and 10 MHz mode.

Worst case is 1 resource block.

7.2 RADIATED SPURIOUS EMISSIONS (LTE Band 25)

7.2.1 RADIATED SPURIOUS EMISSIONS

▣ MEASURED OUTPUT POWER: 25.51 dBm = 0.356 W

▣ MODULATION SIGNAL: 3 MHz 16-QAM

▣ DISTANCE: 3 meters

▣ LIMIT: - (43 + 10 log10 (W)) = 38.51 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitude Level (dBm)	C.L	Pol	ERP (dBm)	dBc
26055 (1851.5)	3,703.0	-42.18	12.32	-43.96	2.64	H	-34.28	59.79
	5,554.5	-37.61	13.03	-34.07	3.40	H	-24.44	49.95
	7,406.0	-35.33	11.05	-23.32	4.13	H	-16.40	41.91
26365 (1882.5)	3,765.0	-43.45	12.29	-45.06	2.68	H	-35.45	60.96
	5,647.5	-38.66	13.13	-35.24	3.51	H	-25.62	51.13
	7,530.0	-35.21	11.12	-23.54	4.29	H	-16.71	42.22
26675 (1913.5)	3,827.0	-45.35	12.27	-46.71	2.64	H	-37.08	62.59
	5,740.5	-46.48	13.03	-42.83	3.52	H	-33.32	58.83
	7,654.0	-36.82	11.40	-24.80	3.99	H	-17.39	42.90

NOTES:

1. Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:
2. The magnitude of spurious emissions attenuated more than 20dB below the limit above 5th Harmonic for all channel.
3. we have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. Worst case is 1 resource block.

7.2.2 RADIATED SPURIOUS EMISSIONS

▣ MEASURED OUTPUT POWER: 25.47 dBm = 0.352 W

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: - (43 + 10 log10 (W)) = 38.47 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitude Level (dBm)	C.L	Pol	ERP (dBm)	dBc
26090 (1855.0)	3,710.0	-42.39	12.31	-44.12	2.70	H	-34.51	59.98
	5,565.0	-40.91	13.05	-37.55	3.42	H	-27.92	53.39
	7,420.0	-36.04	11.05	-23.92	4.17	H	-17.04	42.51
26365 (1882.5)	3,765.0	-45.33	12.29	-46.84	2.69	H	-37.24	62.71
	5,647.5	-47.32	13.13	-43.89	3.52	H	-34.28	59.75
	7,530.0	-34.95	11.12	-23.28	4.29	H	-16.45	41.92
26640 (1910.0)	3,820.0	-50.82	12.28	-51.89	2.72	H	-42.33	67.80
	5,730.0	-39.34	13.06	-35.73	3.56	H	-26.23	51.70
	7,640.0	-35.55	11.38	-23.67	4.00	H	-16.29	41.76

NOTES:

1. Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:
2. The magnitude of spurious emissions attenuated more than 20dB below the limit above 5th Harmonic for all channel.
3. we have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
4. Worst case is 1 resource block.

7.3 PEAK-TO-AVERAGE RATIO

Band	Channel	Frequency(MHz)	Bandwidth	Modulation	P A R
LTE BAND 25	26365	1882.5	3 MHz	QPSK	5.49
				16-QAM	6.24
			10 MHz	QPSK	5.46
				16-QAM	6.13

- Plots of the EUT's Peak- to- Average Ratio are shown Page 25 ~ 26.

7.4 OCCUPIED BANDWIDTH

Band	Channel	Frequency(MHz)	Bandwidth	Modulation	Data (LTE : MHz)
LTE BAND 25	26365	1882.5	3 MHz	QPSK	2.6862
				16-QAM	2.6909
			10 MHz	QPSK	8.9565
				16-QAM	8.9372

- Plots of the EUT's Occupied Bandwidth are shown Page 23 ~ 24.

7.5 CONDUCTED SPURIOUS EMISSIONS

Band	Channel	Frequency of Maximum Harmonic (GHz)	Maximum Data (dBm)
LTE BAND 25 3 MHz	26055	6.360200	-26.51
	26365	6.923510	-26.30
	26675	6.976850	-26.29
LTE BAND 25 10 MHz	26055	6.982330	-26.86
	26365	6.807360	-26.81
	26675	8.829770	-26.92

- Plots of the EUT's Conducted Spurious Emissions are shown Page 27 ~ 32.

7.5.1 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 33 ~ 38.

7.6 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

7.6.1 FREQUENCY STABILITY (LTE Band 25) 3 MHz

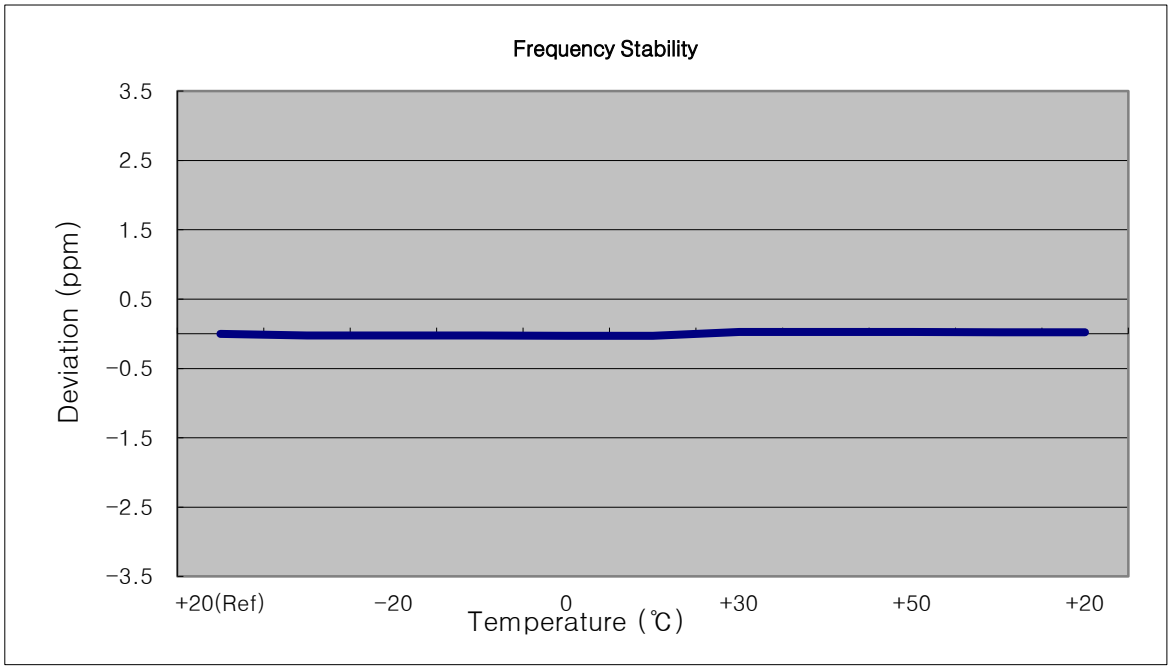
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365

▣ REFERENCE VOLTAGE: 5 VDC

▣ DEVIATION LIMIT: -

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	5.0	+20(Ref)	1 882 499 959	0	0.000 000	0.000
100%		-30	1 882 499 915	-43.7	-0.000 002	-0.023
100%		-20	1 882 499 915	-43.9	-0.000 002	-0.023
100%		-10	1 882 499 914	-44.7	-0.000 002	-0.024
100%		0	1 882 499 906	-52.4	-0.000 003	-0.028
100%		+10	1 882 499 906	-52.3	-0.000 003	-0.028
100%		+30	1 882 500 008	49.5	0.000 003	0.026
100%		+40	1 882 500 007	48.9	0.000 003	0.026
100%		+50	1 882 500 006	47.3	0.000 003	0.025
115%	5.75	+20	1 882 500 004	45.0	0.000 002	0.024
Batt. Endpoint	4.25	+20	1 882 500 000	41.6	0.000 002	0.022



7.6.2 FREQUENCY STABILITY (LTE Band 25) 10 MHz

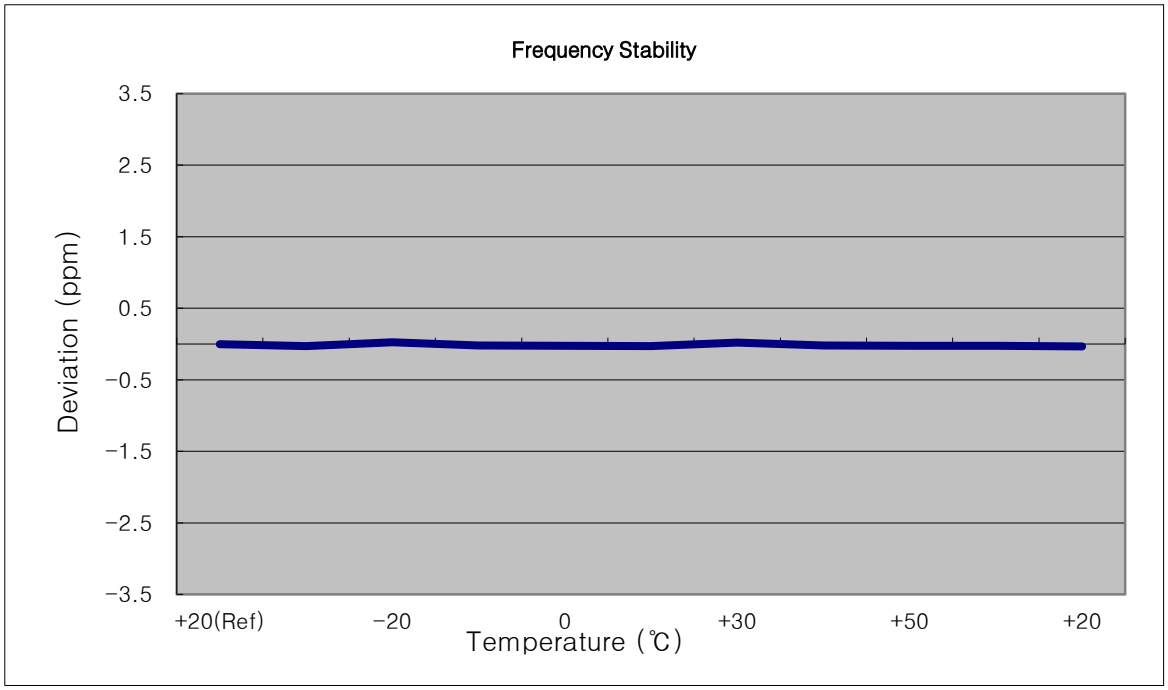
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365

▣ REFERENCE VOLTAGE: 5 VDC

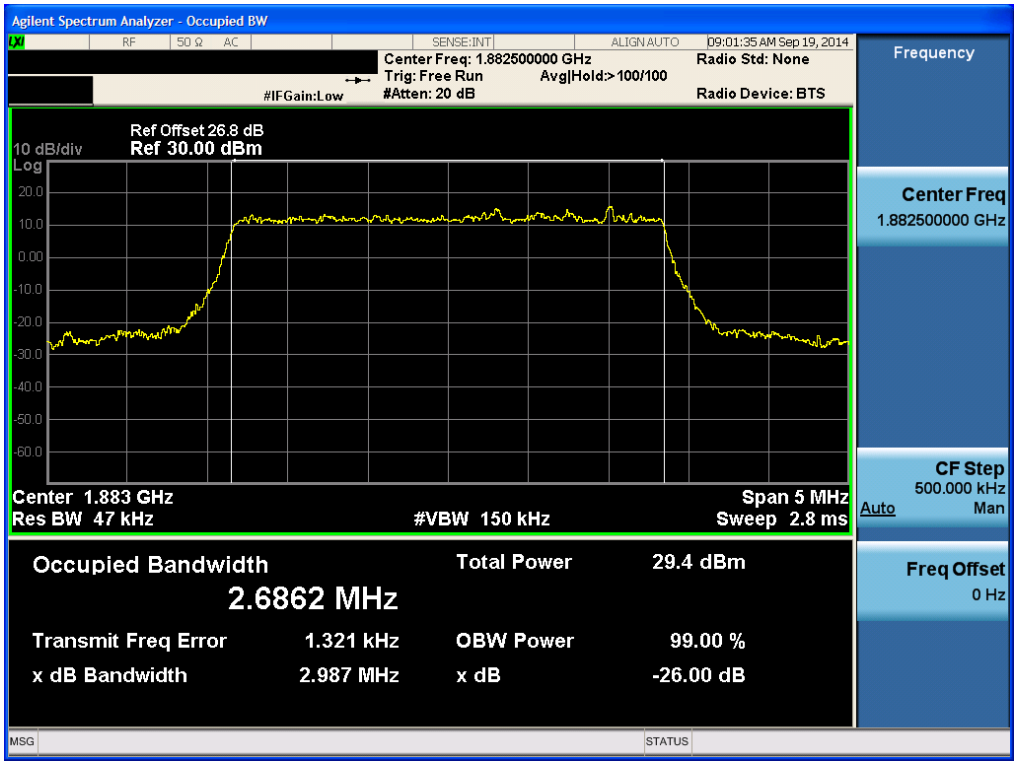
▣ DEVIATION LIMIT: -

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	5.0	+20(Ref)	1 882 500 055	0	0.000 000	0.000
100%		-30	1 882 500 004	-51.3	-0.000 003	-0.027
100%		-20	1 882 500 099	43.6	0.000 002	0.023
100%		-10	1 882 500 014	-40.8	-0.000 002	-0.022
100%		0	1 882 500 009	-46.2	-0.000 002	-0.025
100%		+10	1 882 500 001	-53.8	-0.000 003	-0.029
100%		+30	1 882 500 095	40.3	0.000 002	0.021
100%		+40	1 882 500 017	-37.7	-0.000 002	-0.020
100%		+50	1 882 500 007	-48.0	-0.000 003	-0.025
115%	5.75	+20	1 882 500 005	-49.8	-0.000 003	-0.026
Batt. Endpoint	4.25	+20	1 882 499 994	-61.0	-0.000 003	-0.032

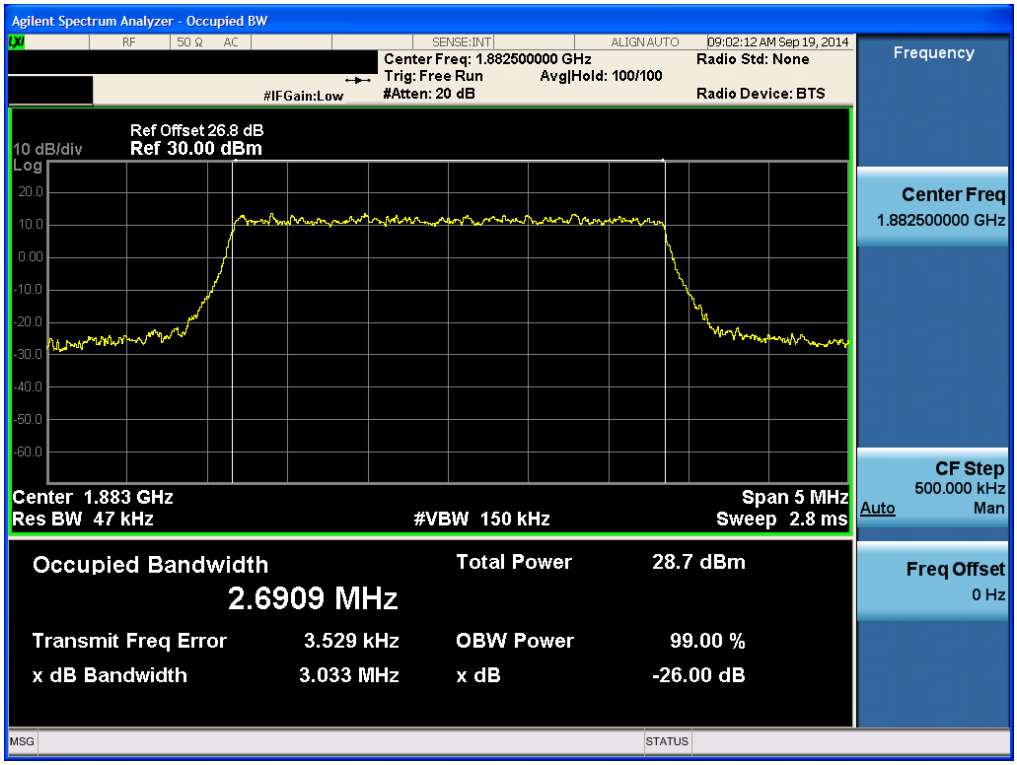


8. TEST PLOTS

Occupied Bandwidth Plot (3 MHz QPSK - RB Size 15)

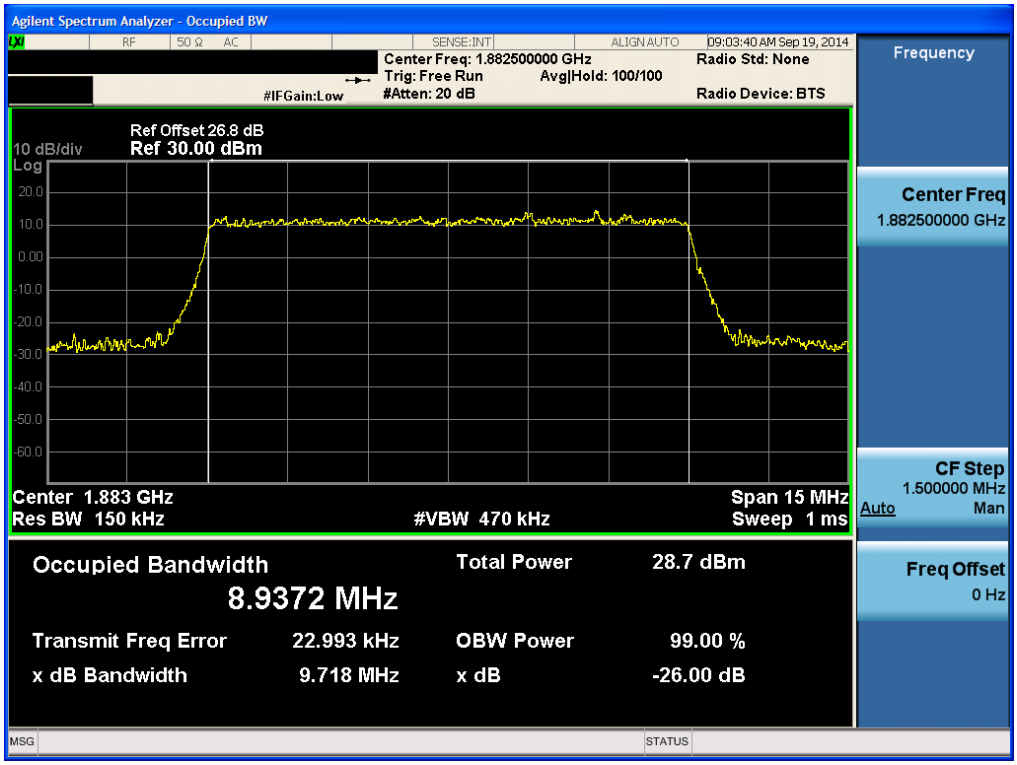


Occupied Bandwidth Plot (3 MHz 16-QAM - RB Size 15)

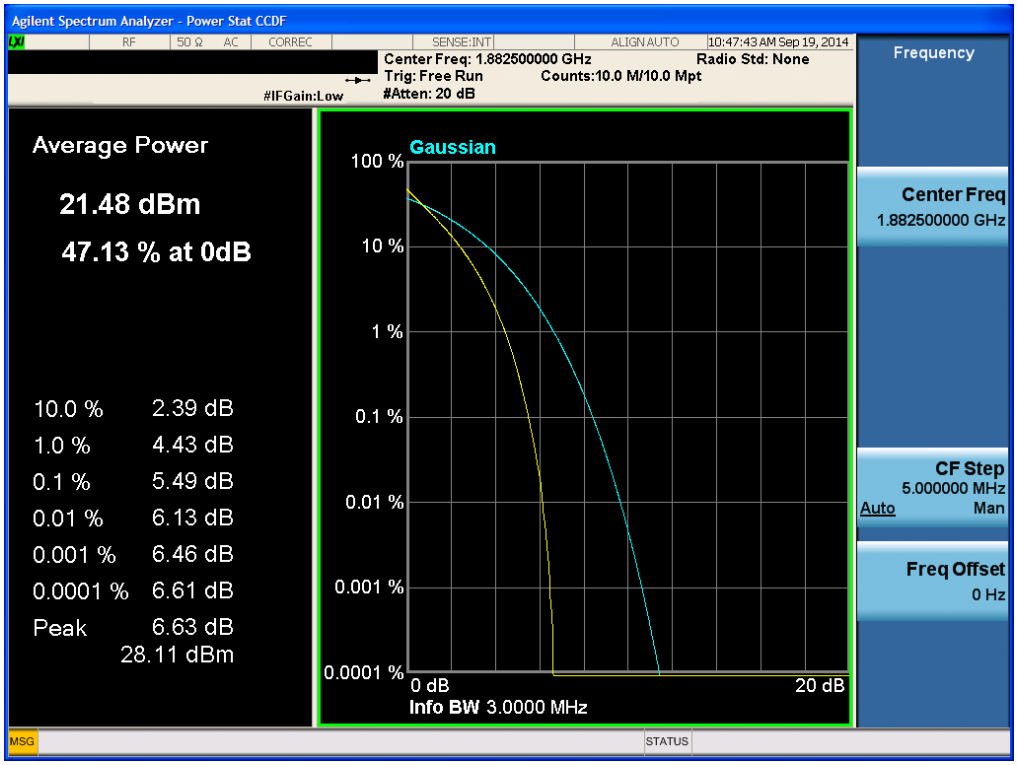


Occupied Bandwidth Plot (10 MHz QPSK - RB Size 50)

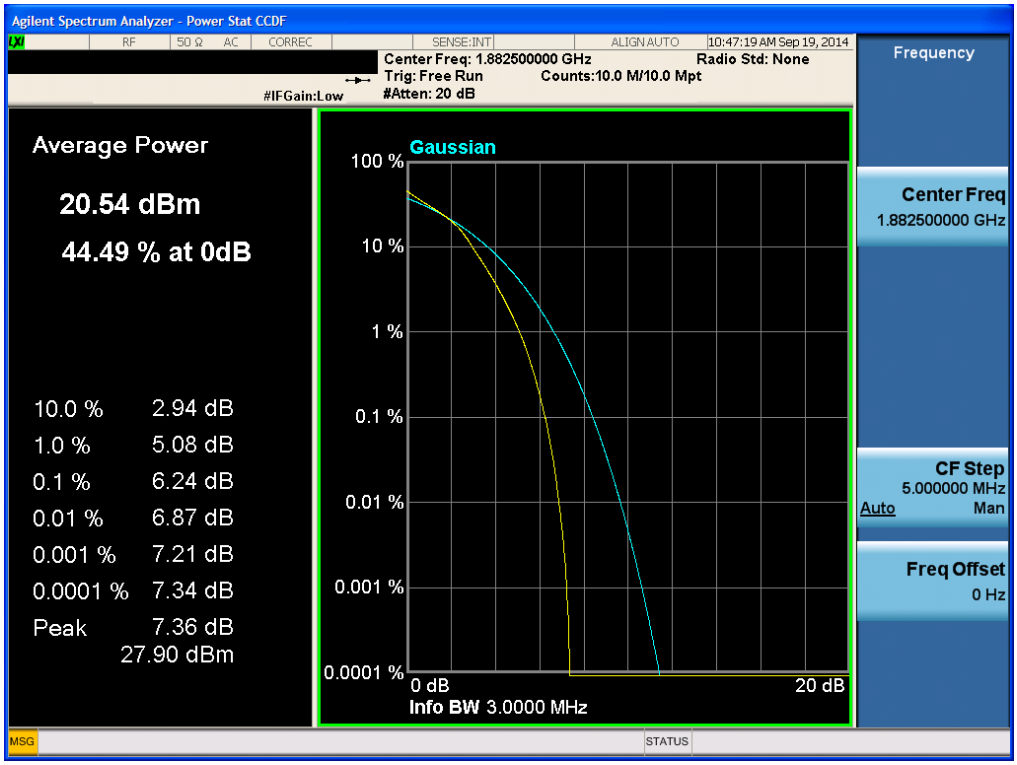
Occupied Bandwidth Plot (10 MHz 16-QAM - RB Size 50)



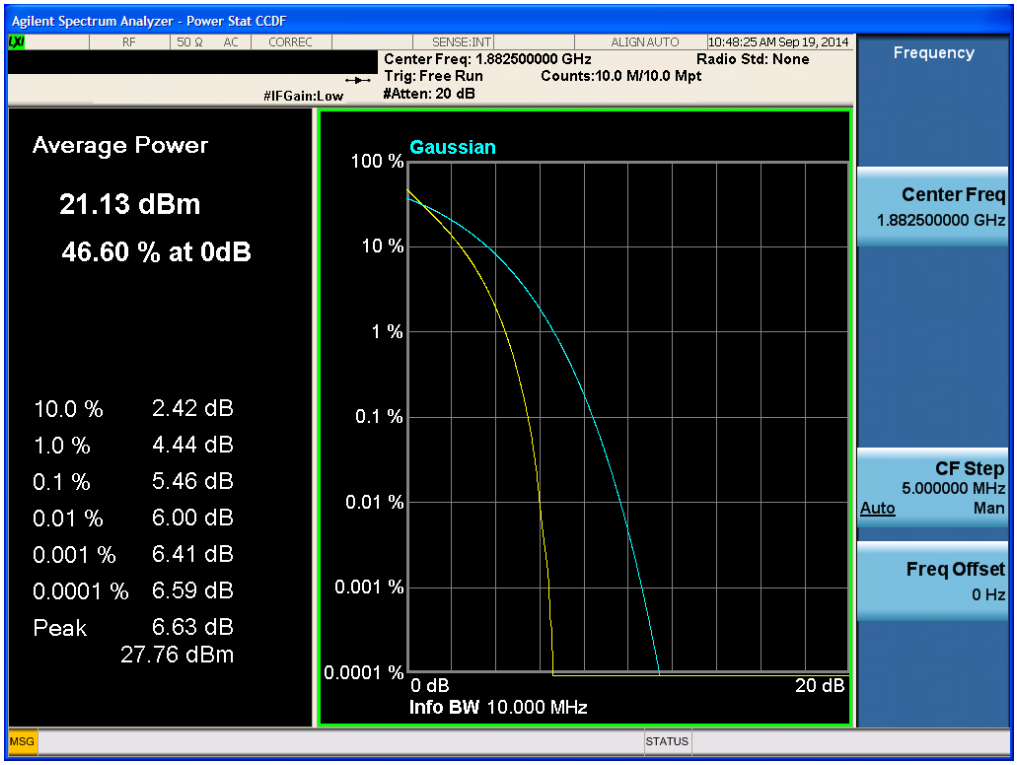
PAR Plot (3 MHz QPSK - RB Size 15)



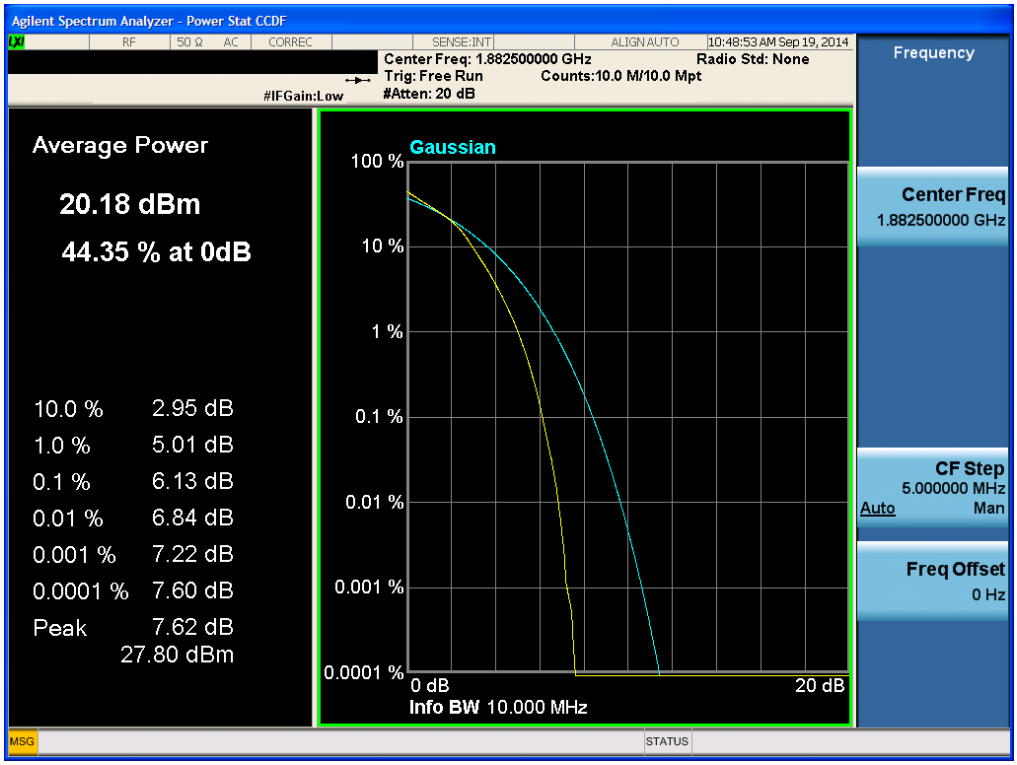
PAR Plot (3 MHz 16-QAM - RB Size 15)



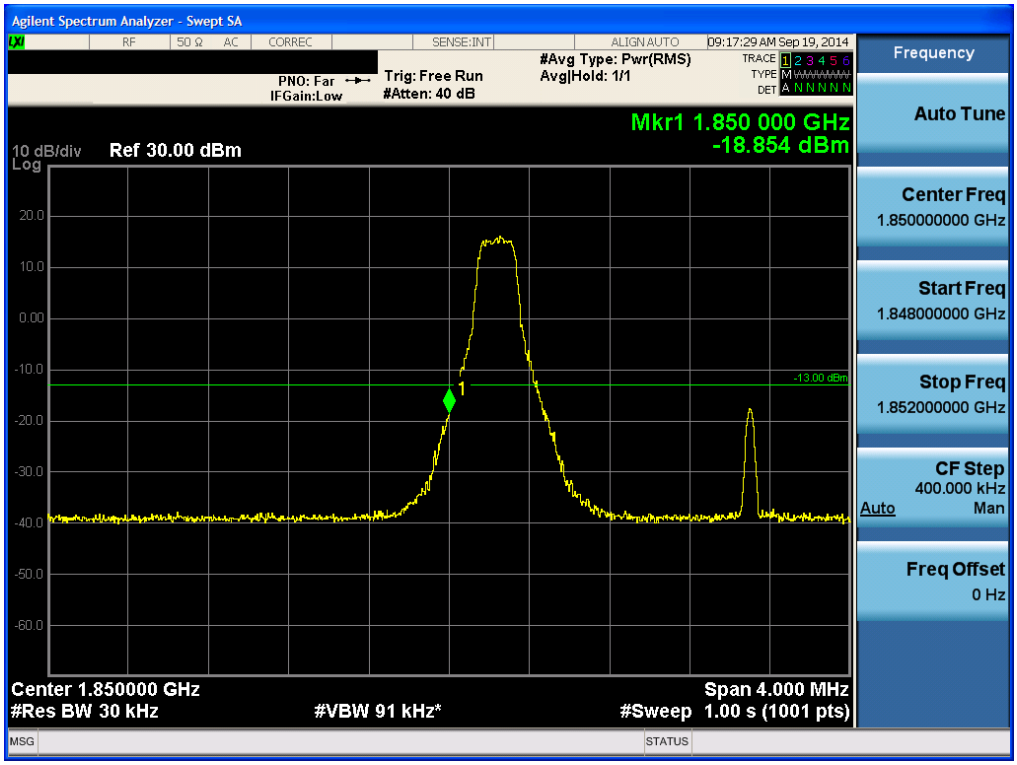
PAR Plot (10 MHz QPSK - RB Size 50)



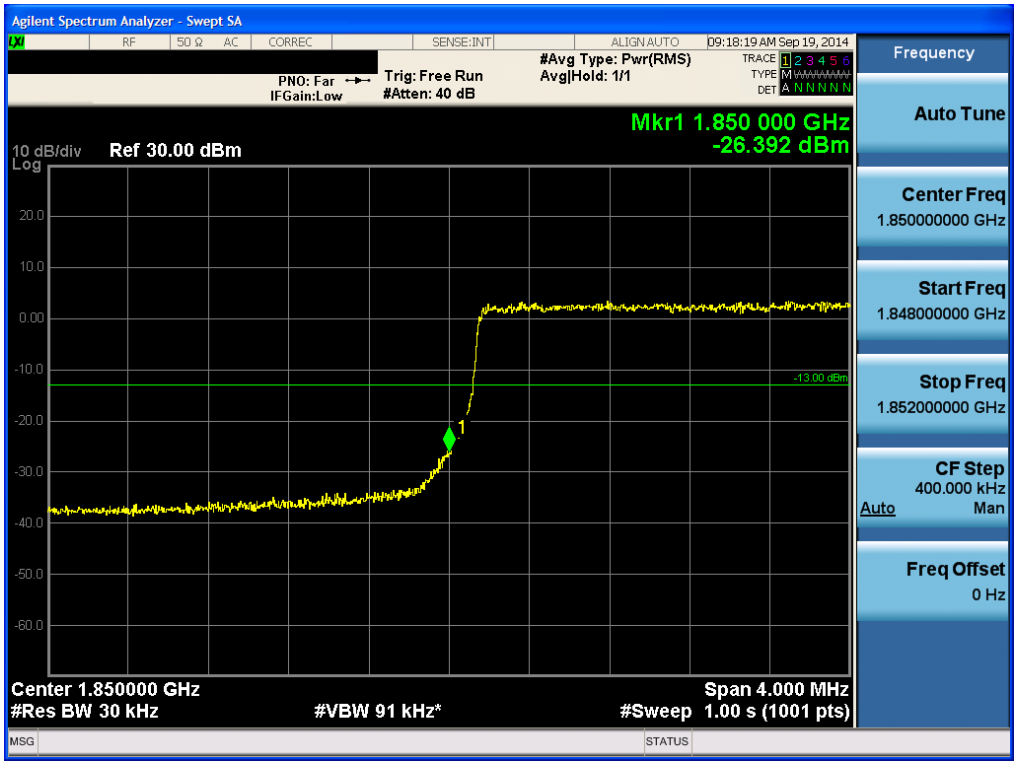
PAR Plot (10 MHz 16-QAM - RB Size 50)



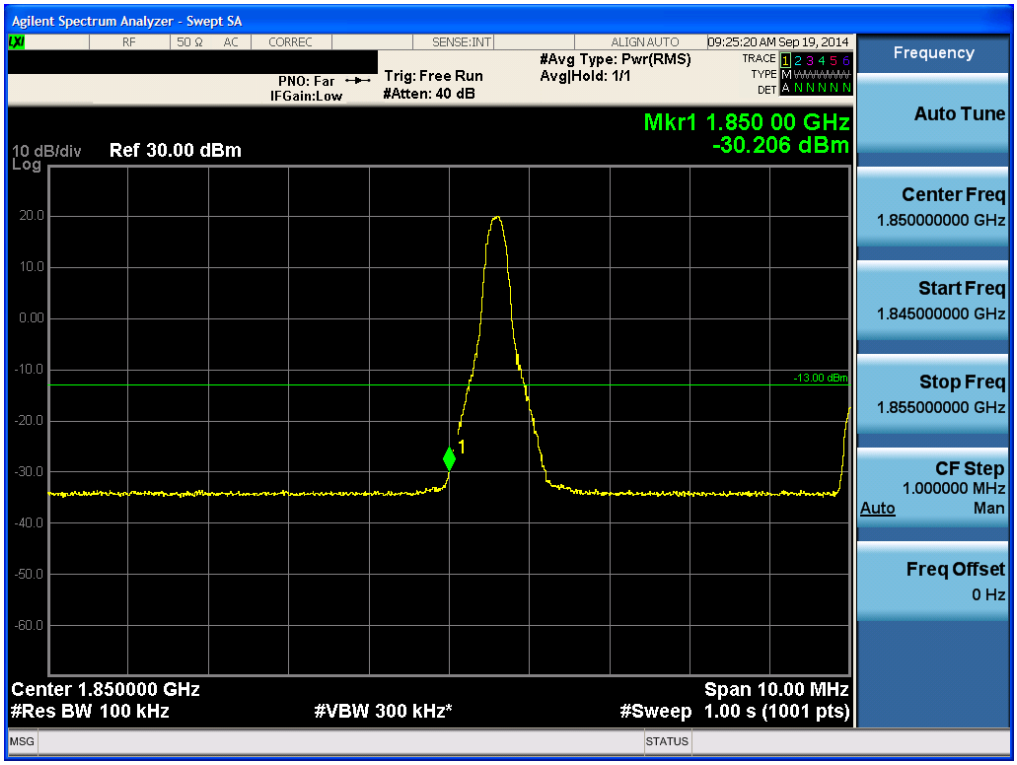
Lower Band Edge Plot (3 MHz QPSK - RB Size 1, Offset 0)



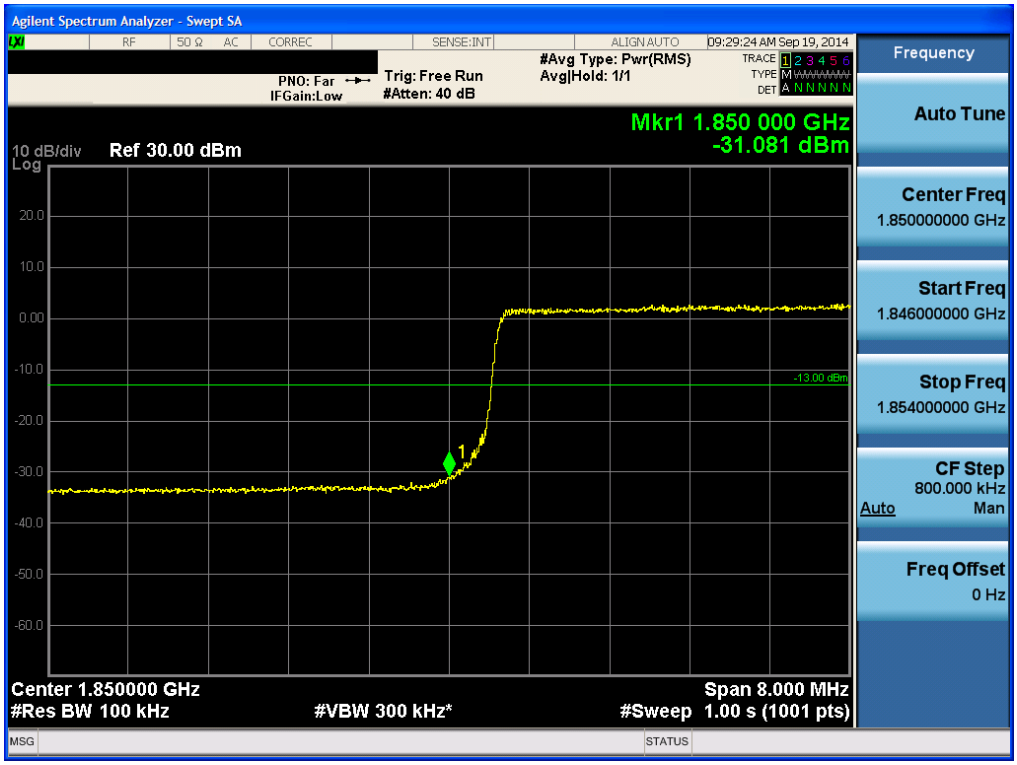
Lower Band Edge Plot (3 MHz QPSK - RB Size 15)



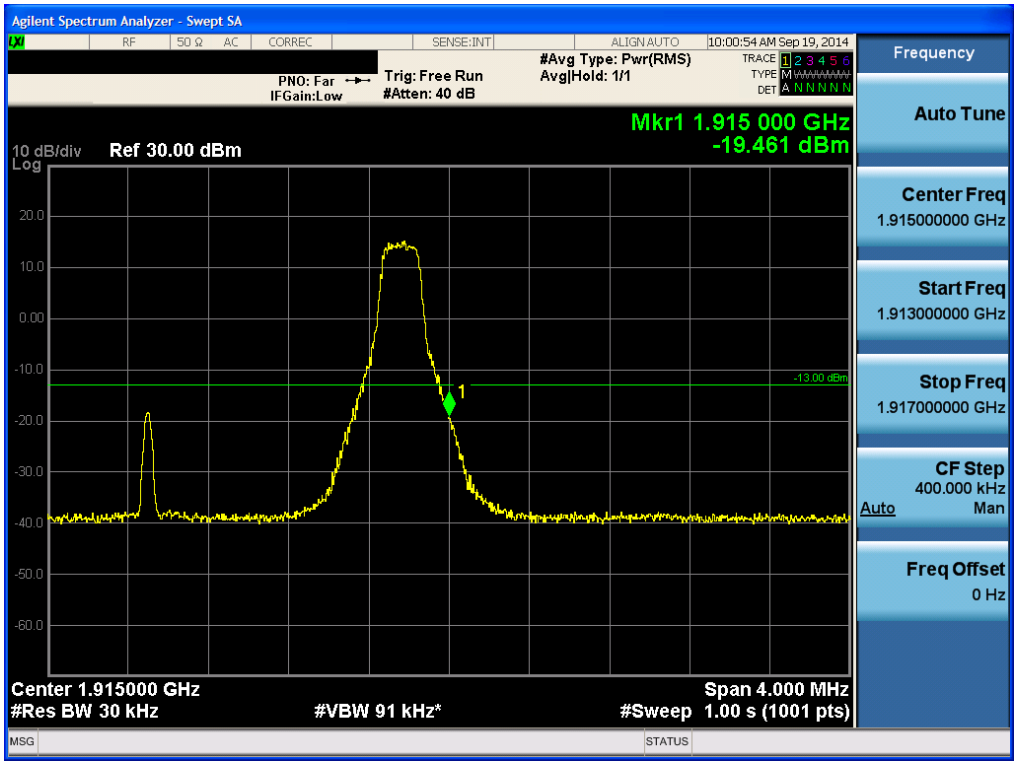
Lower Band Edge Plot (10 MHz QPSK - RB Size 1, Offset 0)



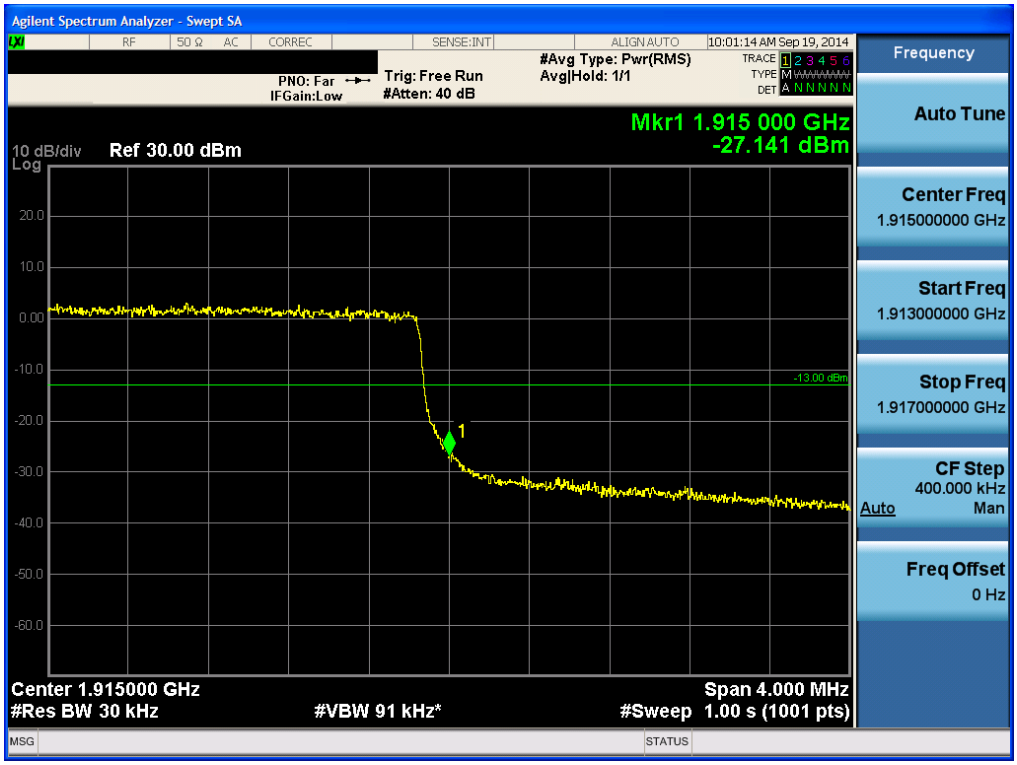
Lower Band Edge Plot (10 MHz QPSK - RB Size 50)



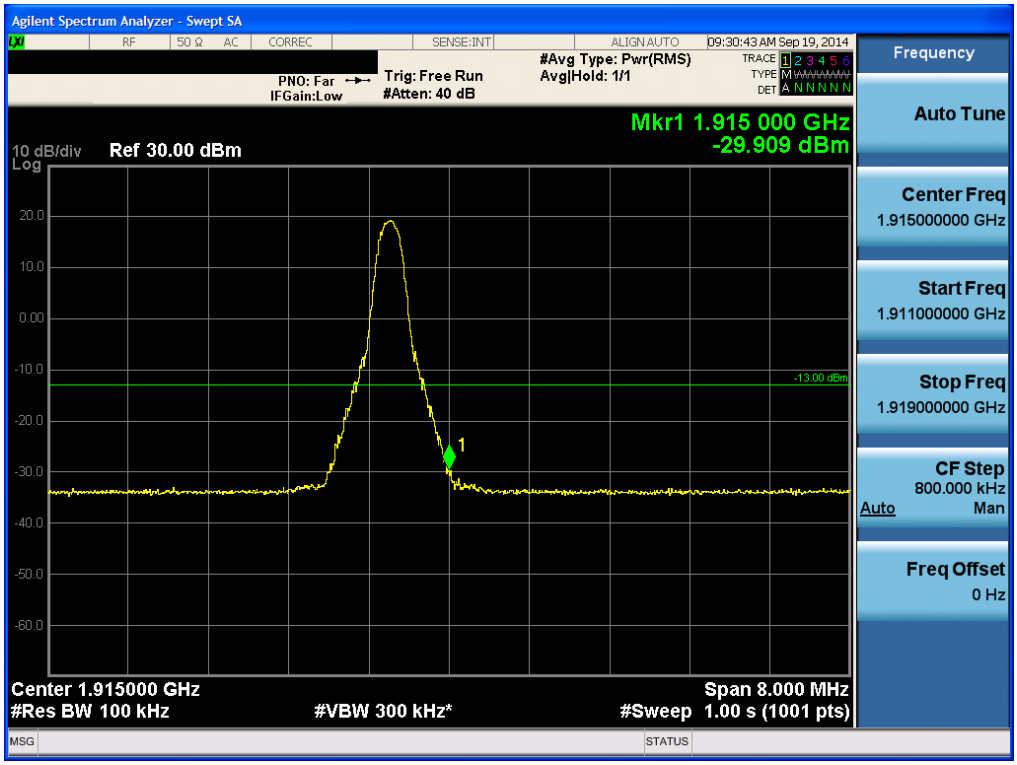
Upper Band Edge Plot (3 MHz QPSK - RB Size 1, Offset 14)



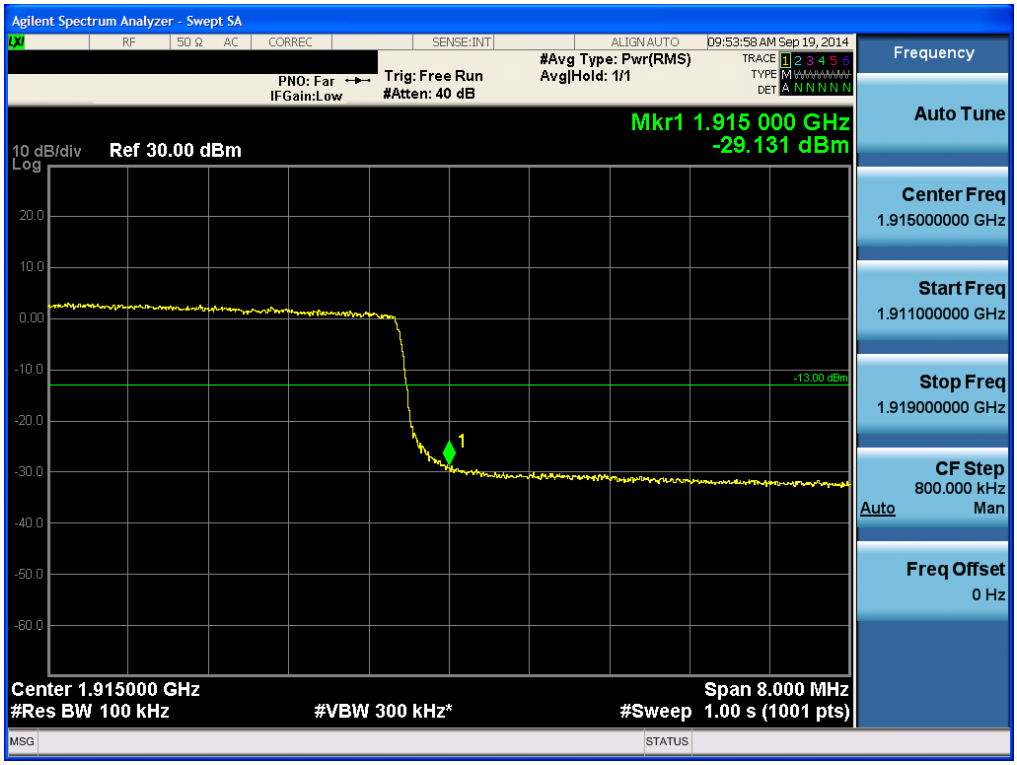
Upper Band Edge Plot (3 MHz QPSK - RB Size 15)



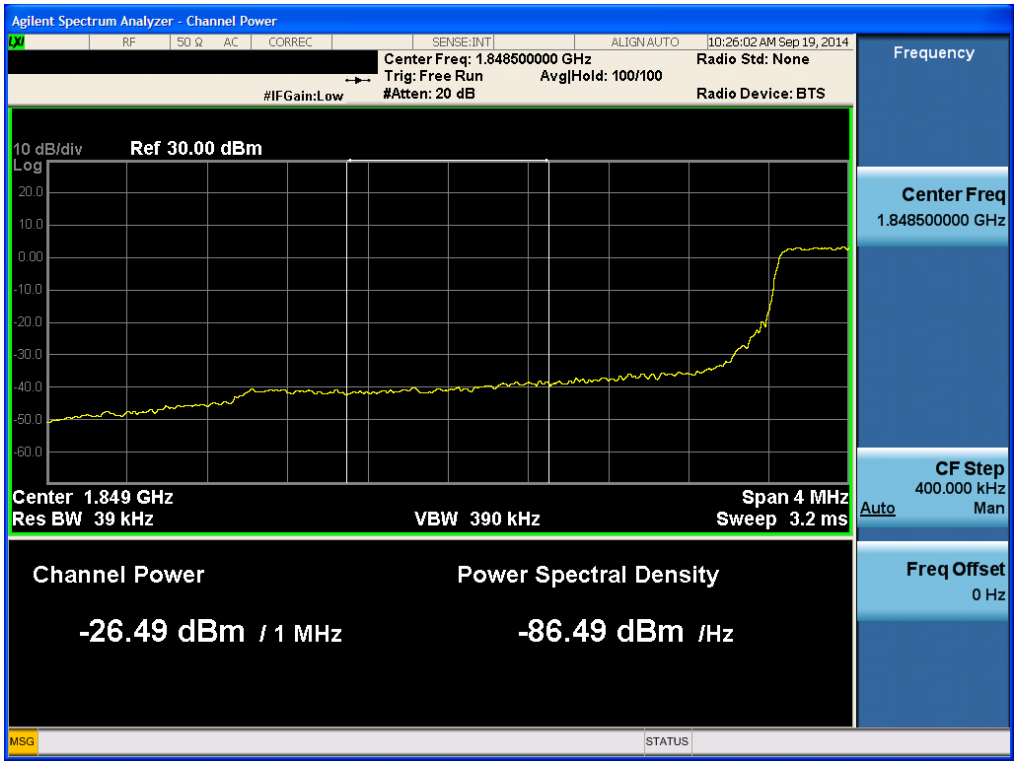
Upper Band Edge Plot (10 MHz QPSK - RB Size 1, Offset 49)



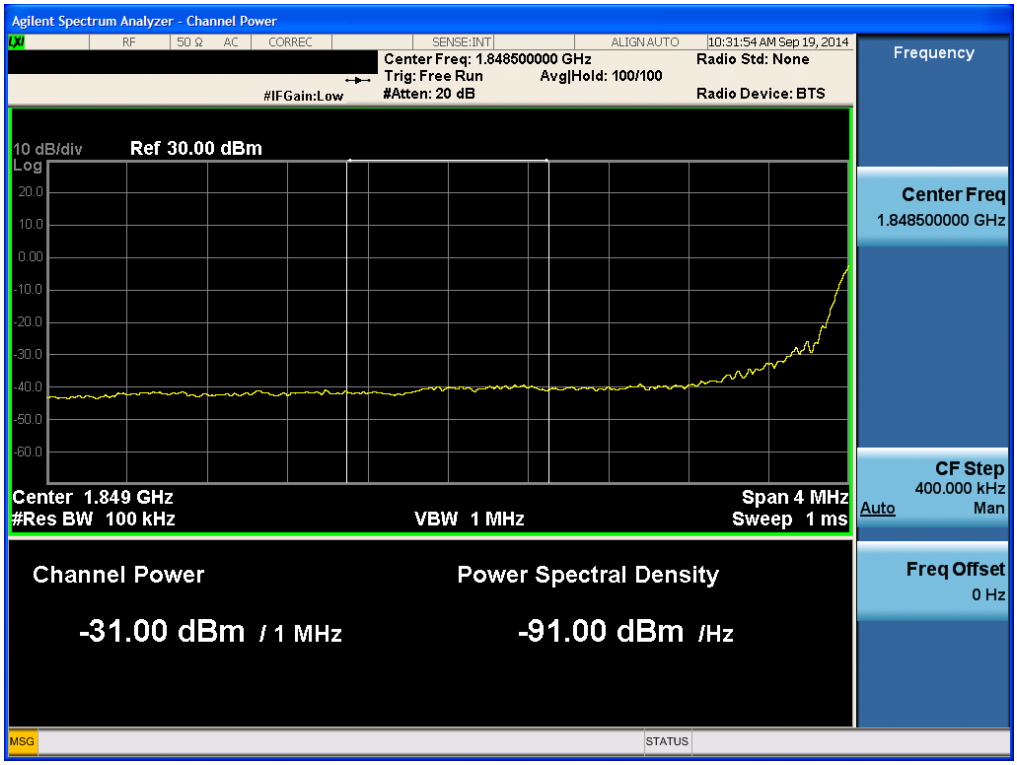
Upper Band Edge Plot (10 MHz QPSK - RB Size 50)



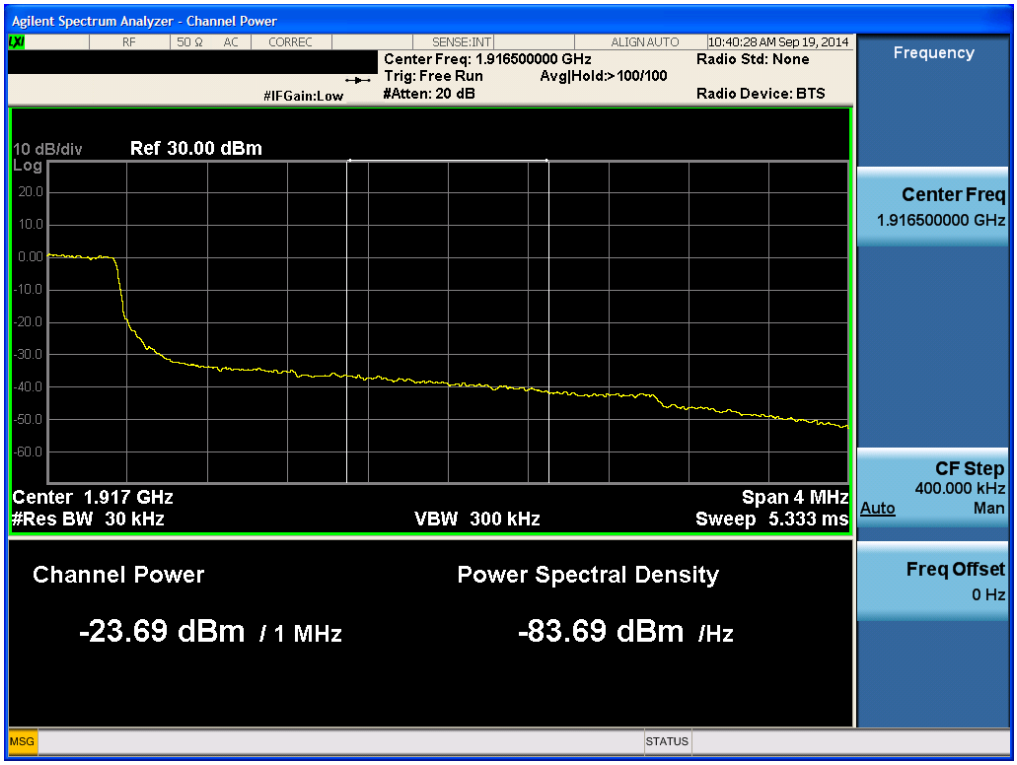
Lower Extended Band Edge Plot (3 MHz QPSK - RB Size 15)



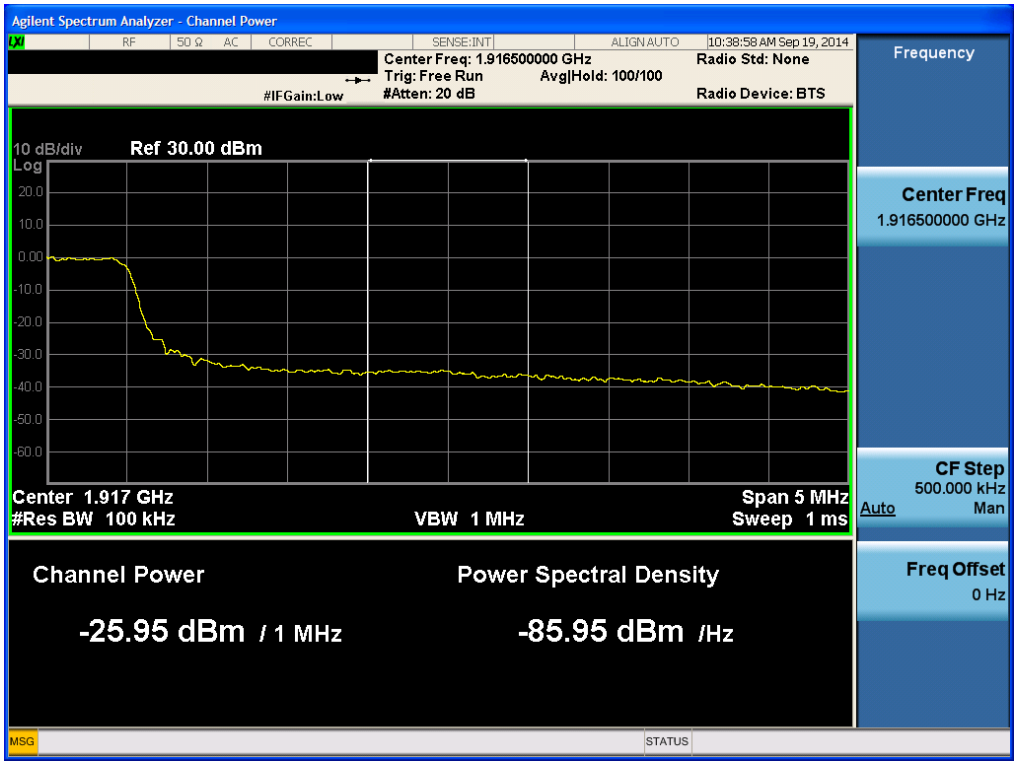
Lower Extended Band Edge Plot (10 MHz QPSK - RB Size 50)



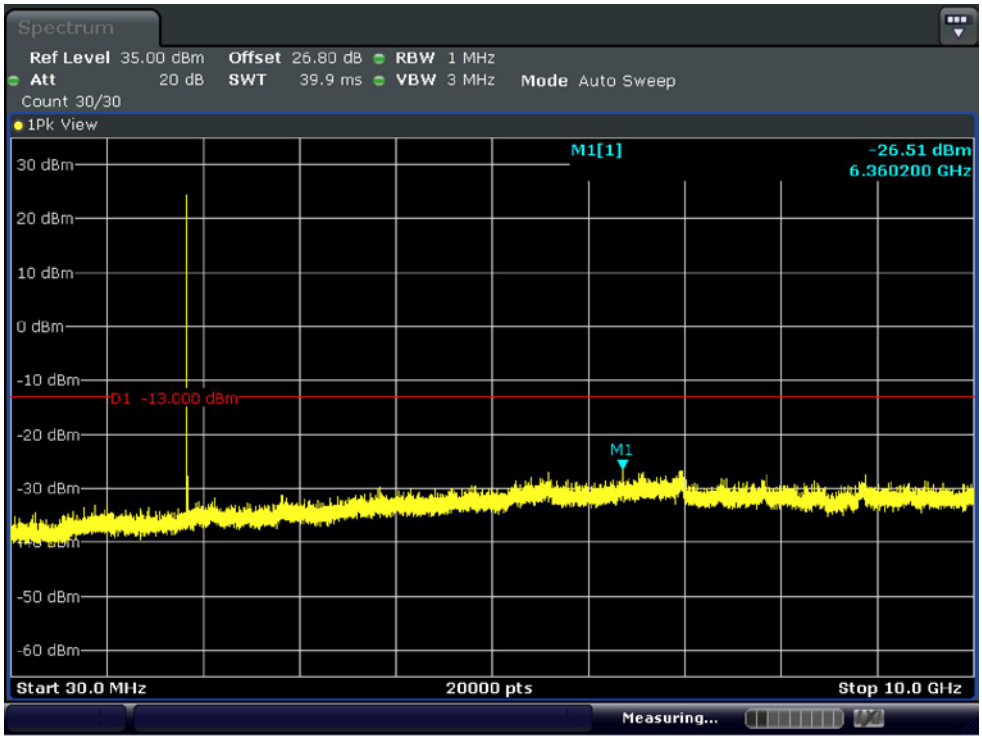
Upper Extended Band Edge Plot (3 MHz QPSK - RB Size 15)



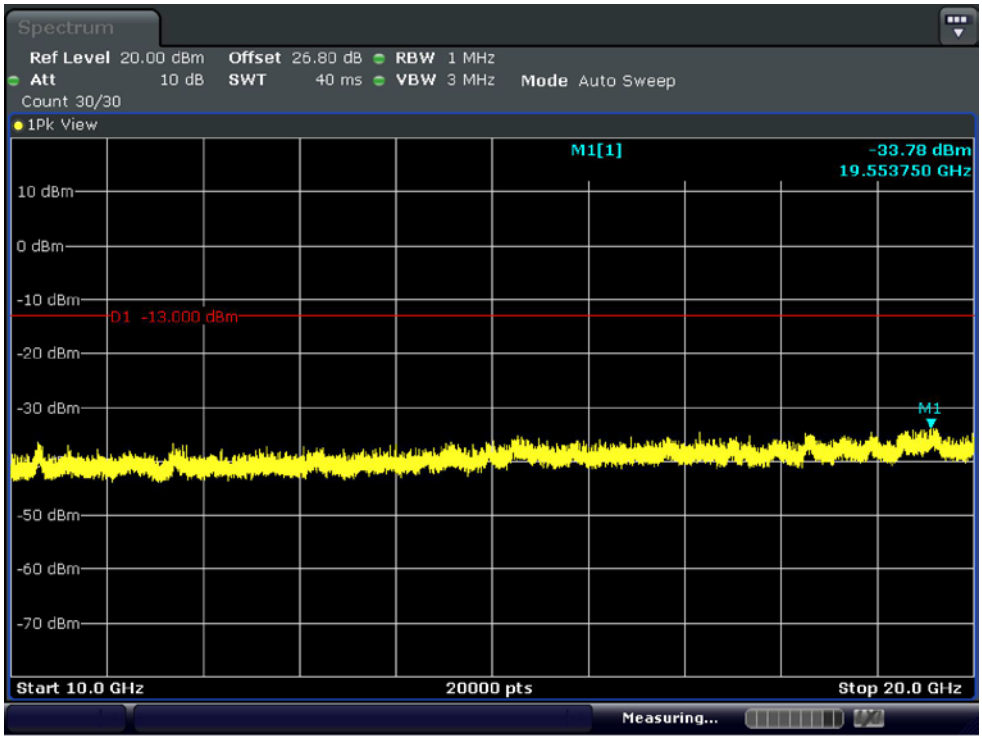
Upper Extended Band Edge Plot (10 MHz QPSK - RB Size 50)



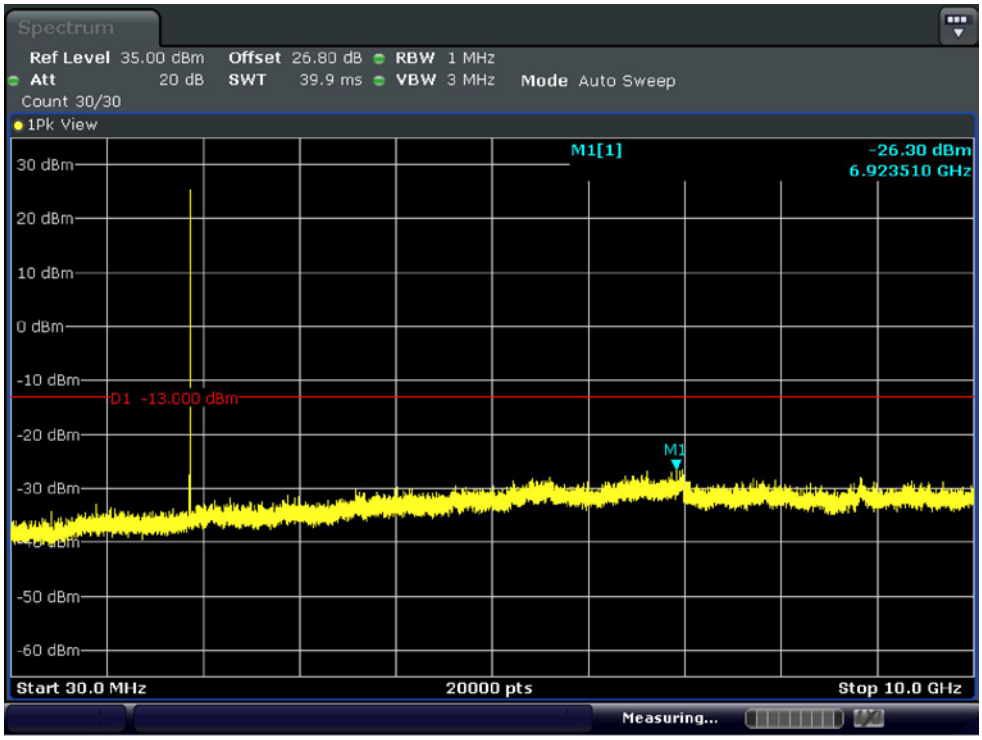
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - Low Channel)-1



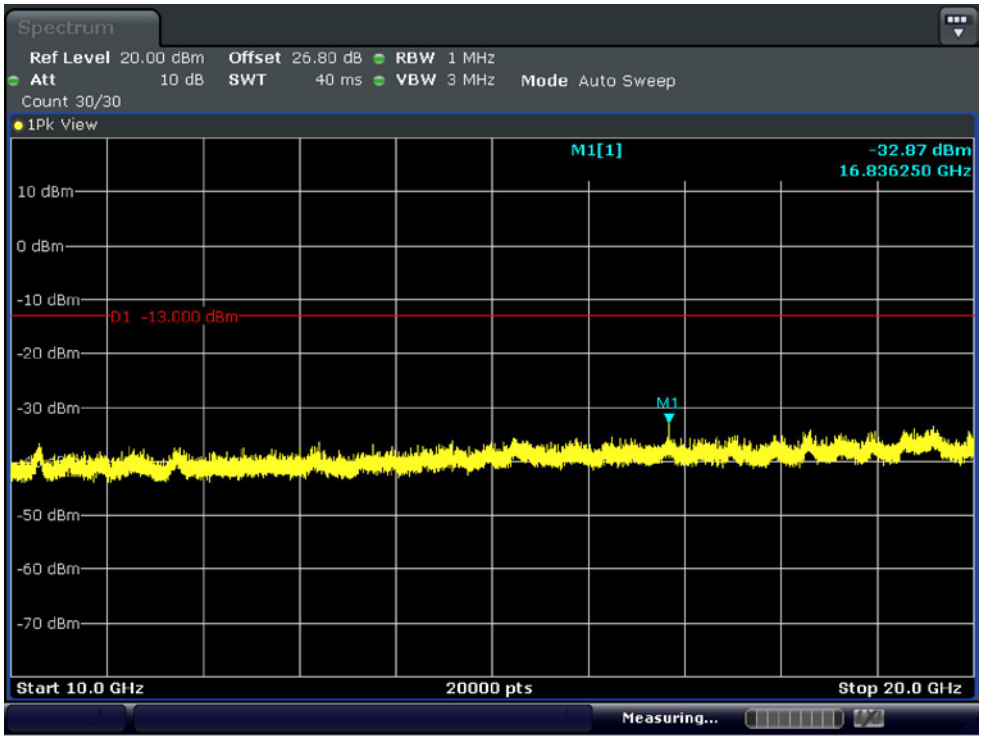
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - Low Channel)-2



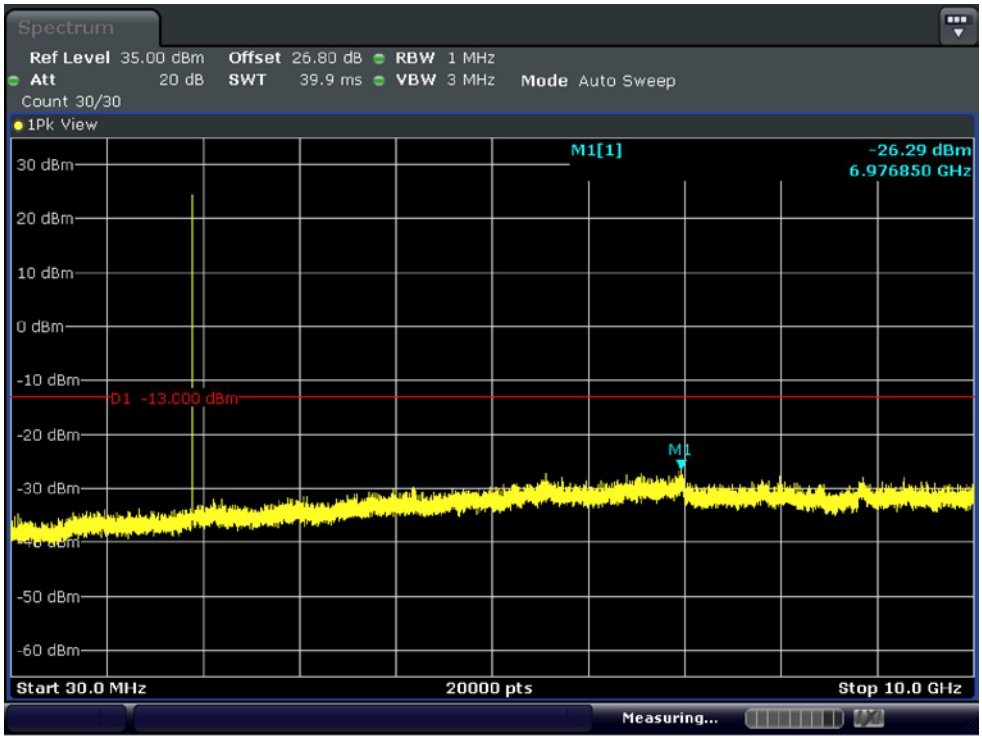
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - Mid Channel)-1



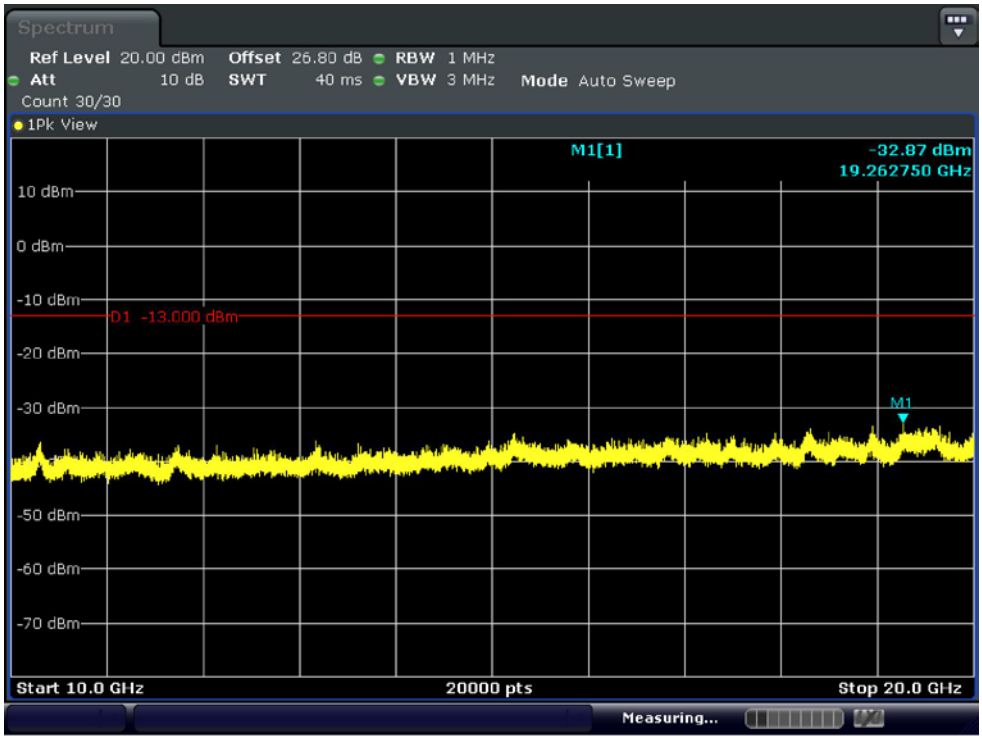
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - Mid Channel)-2



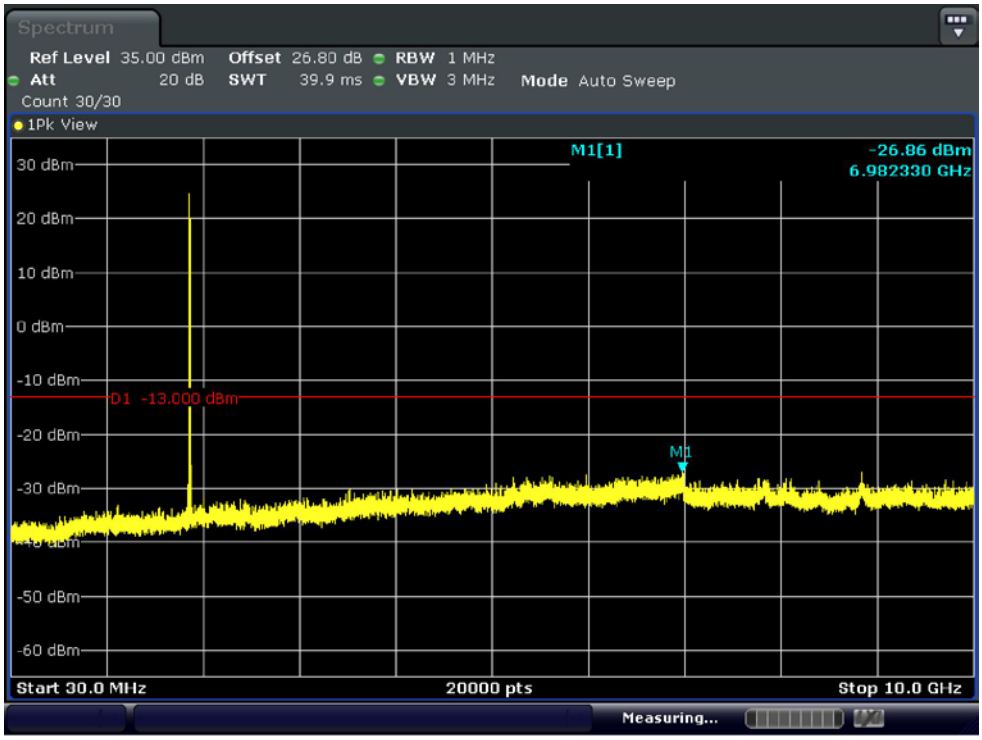
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - High Channel)-1



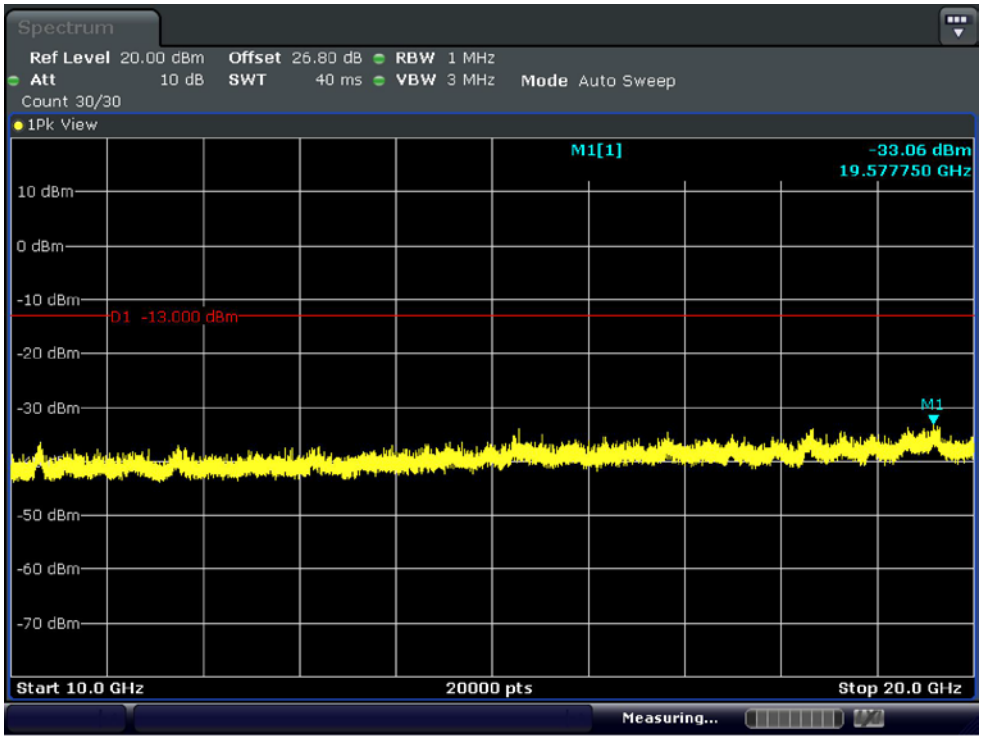
Conducted Spurious Plot (3 MHz QPSK - RB Size 1 RB Offset 0 - High Channel)-2



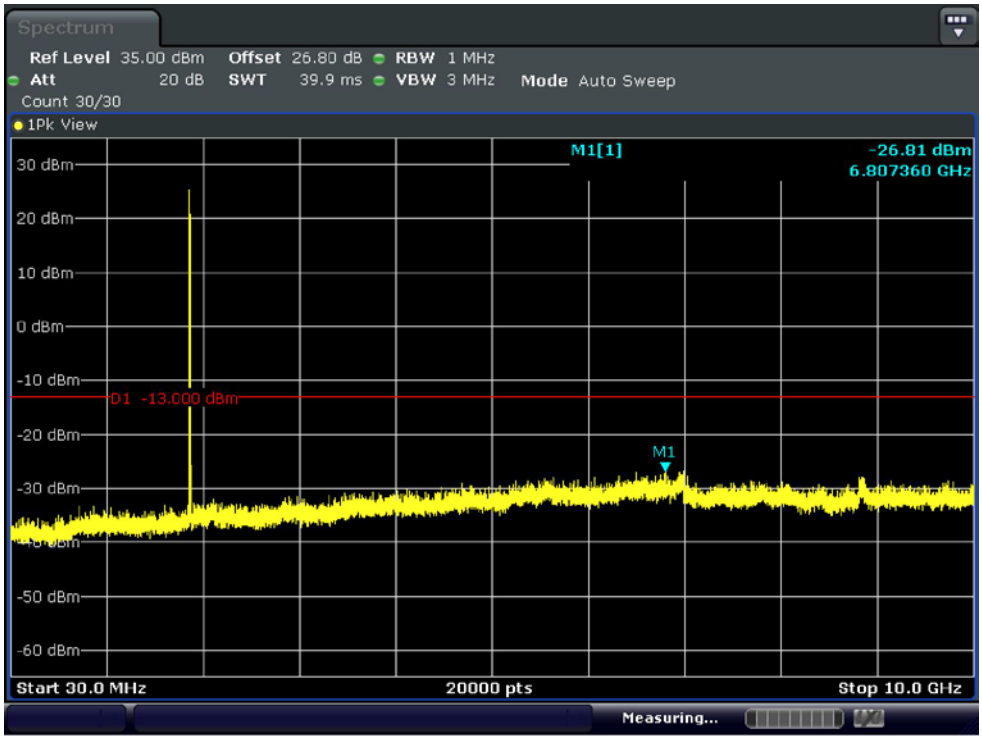
Conducted Spurious Plot (10 MHz QPSK - RB Size 1 RB Offset 0 - Low Channel)-1



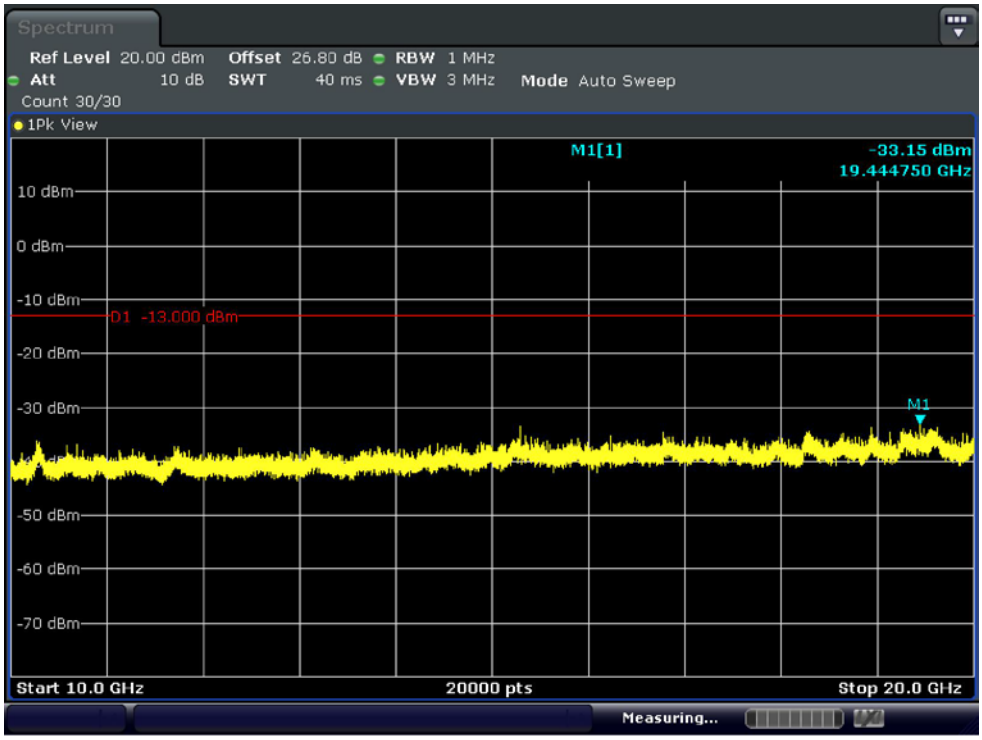
Conducted Spurious Plot (10 MHz QPSK - RB Size 1 RB Offset 0 - Low Channel)-2



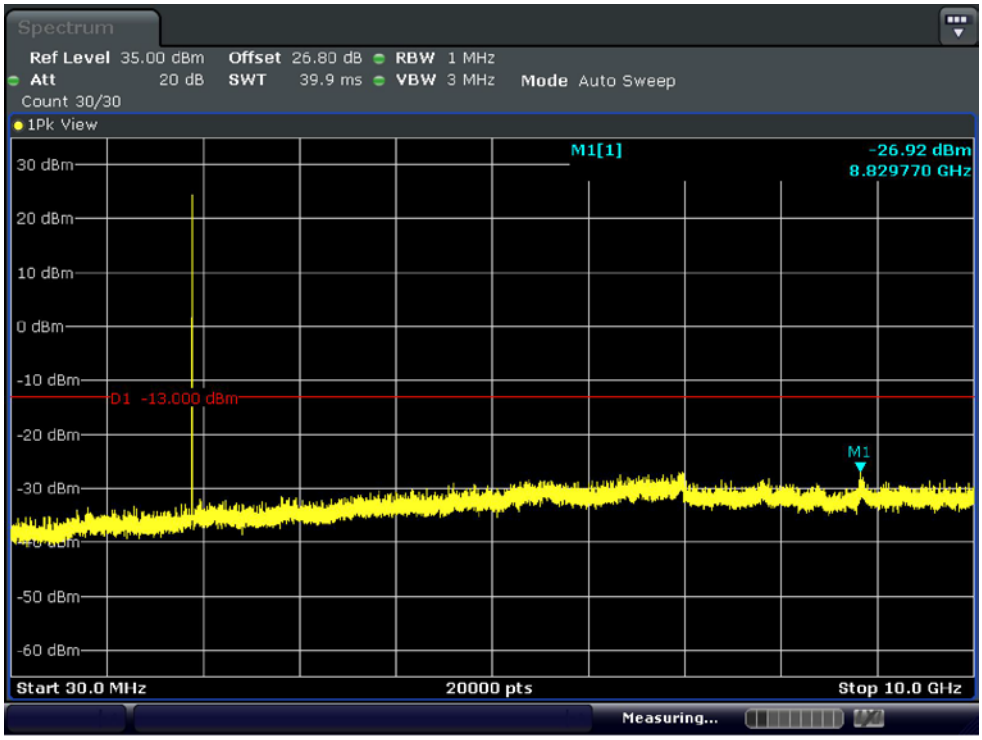
Conducted Spurious Plot (10 MHz QPSK - RB Size 1 RB Offset 0 - Mid Channel)-1



Conducted Spurious Plot (10 MHz QPSK - RB Size 1 RB Offset 0 - Mid Channel)-2



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



Conducted Spurious Plot (10 MHz QPSK - RB Size 1 RB Offset 0 - High Channel)-2