HCT CO.,LTD.
74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA
TEL: +82-31-645-6300 FAX: +82-31-645-6401

FCC LTE REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
129, Samsung-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
January 30, 2019

Location:
HCT CO., LTD.,
74, Seoicheon-ro 578beon-gil, Majang-myeon,
Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA

Report No.: HCT-RF-1901-FC025

FCC ID:	**A3LSMM305F**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s):	SM-M305M/DS
Additional Model(s):	SM-M305F/DS, SM-M305F, SM-M305M
EUT Type:	Mobile Phone
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
LTE – Band66 (1.4)	1710.7 - 1779.3	1M09G7D	QPSK	0.099	19.97
		1M10W7D	16QAM	0.072	18.56
LTE – Band66 (3)	1711.5 - 1778.5	2M71G7D	QPSK	0.099	19.96
		2M71W7D	16QAM	0.074	18.68
LTE – Band66 (5)	1712.5 - 1777.5	4M53G7D	QPSK	0.101	20.05
		4M54W7D	16QAM	0.075	18.76
LTE – Band66 (10)	1715.0 - 1775.0	8M99G7D	QPSK	0.102	20.07
		9M01W7D	16QAM	0.075	18.75
LTE – Band66 (15)	1717.5 - 1772.5	13M5G7D	QPSK	0.101	20.04
		13M5W7D	16QAM	0.075	18.73
LTE – Band66 (20)	1720.0 - 1770.0	17M9G7D	QPSK	0.103	20.11
		17M9W7D	16QAM	0.077	18.86

The measurements shown in this report were made in accordance with the procedures specified in CFR47 section §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 : Jae Ryang Do
Engineer of Telecommunication Testing Center

Report approved by : Jong Seok Lee
Manager of Telecommunication Testing Center

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-1901-FC025	January 30, 2019	- First Approval Report

Table of Contents

MEASUREMENT REPORT

1. GENERAL INFORMATION

Applicant Name:	SAMSUNG Electronics Co., Ltd.
Address:	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
FCC ID:	A3LSMM305F
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§27, §2
EUT Type:	Mobile Phone
Model(s):	SM-M305M/DS
Additional Model(s):	SM-M305F/DS, SM-M305F, SM-M305M
Tx Frequency:	1710.7 MHz – 1779.3 MHz (LTE – Band 66/4 (1.4 MHz)) 1711.5 MHz – 1778.5 MHz (LTE – Band 66/4 (3 MHz)) 1712.5 MHz – 1777.5 MHz (LTE – Band 66/4 (5 MHz)) 1715.0 MHz – 1775.0 MHz (LTE – Band 66/4 (10 MHz)) 1717.5 MHz – 1772.5 MHz (LTE – Band 66/4 (15 MHz)) 1720.0 MHz – 1770.0 MHz (LTE – Band 66/4 (20 MHz))
Date(s) of Tests:	January 09, 2019 ~ January 25, 2019

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS and LTE.

It also supports IEEE 802.11/ a/b/g/n/ac, Bluetooth, BT LE.

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, 17383, Rep. of KOREA.

3. DESCRIPTION OF TESTS

3.1 TEST PROCEDURE

Test Description	Test Procedure Used
Occupied Bandwidth	- KDB 971168 D01 v03r01 – Section 4.3 - ANSI C63.26-2015 – Section 5.4.4
Band Edge	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Spurious and Harmonic Emissions at Antenna Terminal	- KDB 971168 D01 v03r01 – Section 6.0 - ANSI C63.26-2015 – Section 5.7
Conducted Output Power	- N/A (See SAR Report)
Peak- to- Average Ratio	- KDB 971168 D01 v03r01 – Section 5.7 - ANSI C63.26-2015 – Section 5.2.3.4 - ANSI C63.26-2015 – Section 5.2.6(only GSM)
Frequency stability	- ANSI C63.26-2015 – Section 5.6
Effective Radiated Power/ Effective Isotropic Radiated Power	- KDB 971168 D01 v03r01 – Section 5.2 & 5.8 - ANSI C63.26-2015 – Section 5.2 - ANSI/TIA-603-E-2016 – Section 2.2.17
Radiated Spurious and Harmonic Emissions	- KDB 971168 D01 v03r01 – Section 6.2 - ANSI/TIA-603-E-2016 – Section 2.2.12

3.2 RADIATED POWER

Test Overview

Radiated tests 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-E-2016 Clause 2.2.17.

Test Settings

1. Radiated power measurements are performed using the signal analyzer's "channel power" measurement capability for signals with continuous operation.
2. RBW = 1 – 5% of the expected OBW, not to exceed 1MHz
3. VBW ≥ 3 x RBW
4. Span = 1.5 times the OBW
5. No. of sweep points > 2 x span / RBW
6. Detector = RMS
7. Trigger is set to "free run" for signals with continuous operation with the sweep times set to "auto".
8. The integration bandwidth was roughly set equal to the measured OBW of the signal for signals with continuous operation.
9. Trace mode = trace averaging (RMS) over 100 sweeps
10. The trace was allowed to stabilize

Test Note

1. The turntable is rotated through 360 degrees, and the receiving antenna scans in order to determine the level of the maximized emission.
2. 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.
3. The maximum value 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
4. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
5. All measurements are performed as RMS average measurements while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

3.3 RADIATED SPURIOUS EMISSIONS

Test Overview

Radiated tests are performed in the Fully-anechoic chamber.

Radiated Spurious Emission Measurements at 3 meters by Substitution Method according to ANSI/TIA-603-E-2016.

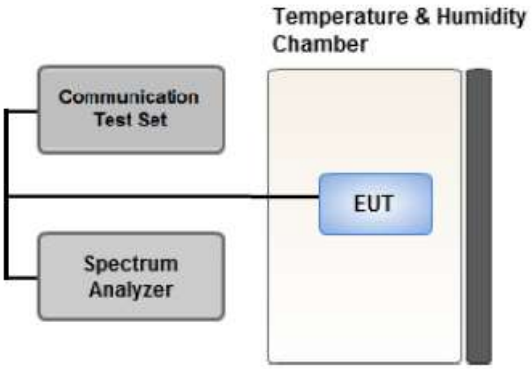
Test Settings

1. RBW = 100kHz for emissions below 1GHz and 1MHz for emissions above 1GHz
2. VBW ≥ 3 x RBW
3. Span = 1.5 times the OBW
4. No. of sweep points > 2 x span / RBW
5. Detector = Peak
6. Trace mode = Max Hold
7. The trace was allowed to stabilize
8. Test channel : Low/ Middle/ High
9. Frequency range : We are performed all frequency to 10^{th} harmonics from 9 kHz.

Test Note

1. Measurements value show only up to 3 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
2. The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
   The worst case emissions are reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data

3.4 PEAK- TO- AVERAGE RATIO



Test setup

① **CCDF Procedure for PAPR**

Test Settings

1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Set the measurement interval as follows:
   .- for continuous transmissions, set to 1 ms,
   .- or 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.
4. Record the maximum PAPR level associated with a probability of 0.1%.

② Alternate Procedure for PAPR

Use one of the procedures presented in 5.2(ANSI C63.26-2015) to measure the total peak power and record as P_{Pk}.

Use one of the applicable procedures presented 5.2(ANSI C63.26-2015) to measure the total average power and record as P_{Avg}. Determine the P.A.R. from:

$$P.A.R_{(dB)} = P_{Pk\ (dBm)} - P_{Avg\ (dBm)}\ (P_{Avg} = \text{Average Power} + \text{Duty cycle Factor})$$

Test Settings(Peak Power)

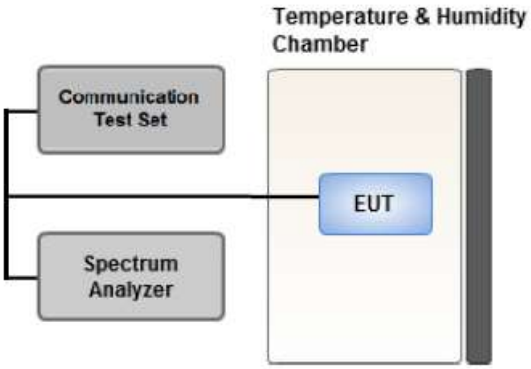
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

1. Set the RBW ≥ OBW.
2. Set VBW ≥ 3 × RBW.
3. Set span ≥ 2 × OBW.
4. Sweep time ≥ 10 × (number of points in sweep) × (transmission symbol period).
5. Detector = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the peak amplitude level.

Test Settings(Average Power)

1. Set span to 2 × to 3 × the OBW.
2. Set RBW ≥ OBW.
3. Set VBW ≥ 3 × RBW.
4. Set number of measurement points in sweep ≥ 2 × span / RBW.
5. Sweep time:
   Set ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. The transmission period is the (on + off) time.
6. Detector = power averaging (rms).
7. Set sweep trigger to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. (To accurately determine the average power over the on and off period of the transmitter, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.)
9. Use the peak marker function to determine the maximum amplitude level.
10. Add [10 log (1/duty cycle)] to the measured maximum power level to compute the average power during continuous transmission. For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is a constant 25%.

3.5 OCCUPIED BANDWIDTH.



Test setup

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.

The EUT makes a call to the communication simulator.

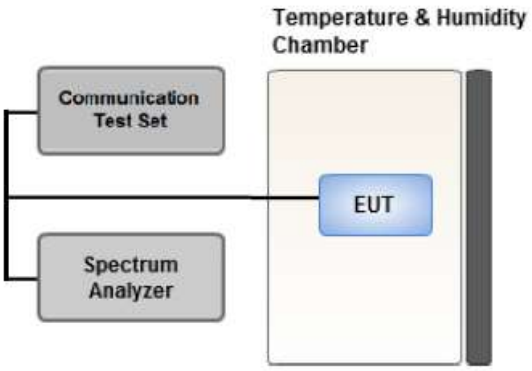
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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

Test Settings

1. The signal analyzer's automatic bandwidth measurement capability was used to perform the 99% occupied bandwidth and the 26dB bandwidth. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.
2. RBW = 1 – 5% of the expected OBW
3. VBW ≥ 3 x RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep = auto couple
7. The trace was allowed to stabilize
8. If necessary, steps 2 – 7 were repeated after changing the RBW such that it would be within 1 – 5% of the 99% occupied bandwidth observed in Step 7

3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL



Test setup

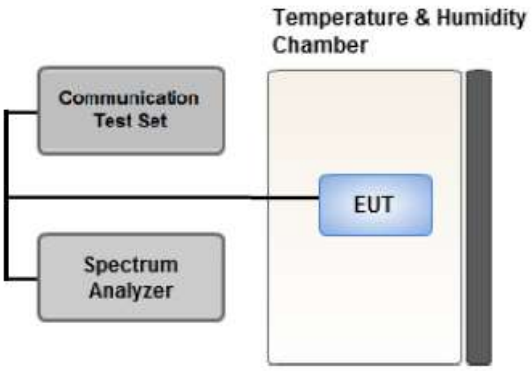
Test Overview

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. All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

1. RBW = 1 MHz
2. VBW ≥ 3 MHz
3. Detector = Peak
4. Trace Mode = max hold
5. Sweep time = auto
6. Number of points in sweep ≥ 2 * Span / RBW

3.7 BAND EDGE



Test setup

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

Test Settings

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. RBW > 1% of the emission bandwidth
4. VBW > 3 x RBW
5. Detector = RMS
6. Number of sweep points ≥ 2 x Span/RBW
7. Trace mode = trace average
8. Sweep time = auto couple
9. The trace was allowed to stabilize

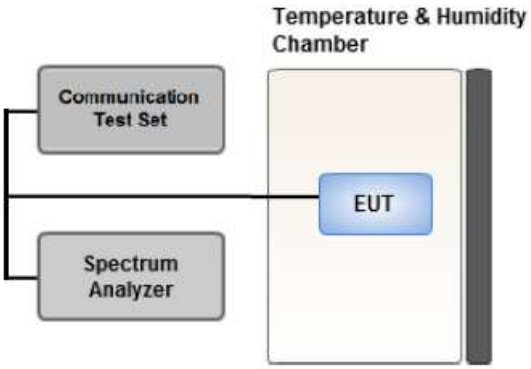
Test Notes

According to FCC 22.917, 24.238, 27.53 specified that power of any emission outside of The authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. 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.

All measurements were done at 2 channels(low and high operational frequency range.)

The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE



Test setup

Test Overview

Frequency stability testing is performed in accordance with the guidelines of ANSI C63.26-2015.

The frequency stability of the transmitter is measured by:

1. Temperature:

   The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.

2. Primary Supply Voltage:

   .- Unless otherwise specified, vary primary supply voltage from 85% to 115% of the nominal value for other than hand carried battery equipment.

   .- For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the battery operating end point, which shall be specified by the manufacturer.

Test Settings

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 fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

3.8 WORST CASE(RADIATED TEST)

- The EUT was tested in three orthogonal planes(X, Y, Z) and in all possible test configurations and positioning.
- All modes of operation were investigated and the worst case configuration results are reported.
- The worst case is reported with the EUT positioning, modulations, RB sizes and offsets, and channel bandwidth configurations shown in the test data.
- Please refer to the table below.

[Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	QPSK, 16QAM	1	0	X
Radiated Spurious and Harmonic Emissions	QPSK	1	0	Y

Note:

- SM-M305M/DS & additional models were tested and the worst case results are reported.

(Worst case : SM-M305M/DS)

3.9 WORST CASE(CONDUCTED TEST)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	QPSK, 16QAM	1.4, 3, 5, 10, 15, 20	Low, Mid, High	Full RB	0
Band Edge	* QPSK	1.4	Low	1	0
			High	1	5
		3	Low	1	0
			High	1	14
		5	Low	1	0
			High	1	24
		10	Low	1	0
			High	1	49
		15	Low	1	0
			High	1	74
		20	Low	1	0
			High	1	99
		1.4, 3, 5, 10, 15, 20	Low, High	Full RB	0
Channel Edge	* QPSK	1.4, 3, 5, 10, 15, 20	Low, Mid, High	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	* QPSK	1.4, 3, 5, 10, 15, 20	Low, Mid, High	1	0

* Worst case : Of all modulation, We have tested modulation of the high Conducted Output Power.
Conducted Output Power value can be confirmed on the SAR report.

Note:

- SM-M305M/DS & additional models were tested and the worst case results are reported.
(Worst case : SM-M305M/DS)

4. LIST OF TEST EQUIPMENT

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
REOHDE & SCHWARZ	SCU 18 / AMPLIFIER	10094	04/17/2018	Annual	04/17/2019
Wainwright	WHK1.2/15G-10EF/H.P.F	4	04/04/2018	Annual	04/04/2019
Wainwright	WHK3.3/18G-10EF/H.P.F	2	04/04/2018	Annual	04/04/2019
Hewlett Packard	11667B / Power Splitter(DC~26.5 GHz)	5001	06/07/2018	Annual	06/07/2019
Agilent	E3632A/DC Power Supply	KR75303243	05/09/2018	Annual	05/09/2019
Schwarzbeck	UHAP/ Dipole Antenna	557	03/31/2017	Biennial	03/31/2019
Schwarzbeck	UHAP/ Dipole Antenna	558	03/31/2017	Biennial	03/31/2019
ESPEC	SU-642 / Chamber	93000718	08/07/2018	Annual	08/07/2019
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	147	09/14/2018	Annual	09/14/2019
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	9120D-1298	10/04/2018	Annual	10/04/2019
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	BBHA9170342	04/25/2017	Biennial	04/25/2019
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	BBHA9170124	04/25/2017	Biennial	04/25/2019
Agilent	N9020A/Signal Analyzer(10Hz~26.5GHz)	MY52090906	06/08/2018	Annual	06/08/2019
Hewlett Packard	8493C/ATTENUATOR(20dB)	17280	06/21/2018	Annual	06/21/2019
REOHDE & SCHWARZ	FSV40/Spectrum Analyzer(10Hz~40GHz)	100931	10/22/2018	Annual	10/22/2019
Agilent	8960 (E5515C)/ Base Station	MY48360800	09/27/2018	Annual	09/27/2019
Schwarzbeck	FMZB1513/ Loop Antenna(9kHz~30MHz)	1513-175	08/23/2018	Biennial	08/23/2020
Schwarzbeck	VULB9160/ Bilog Antenna	9160-3368	08/09/2018	Biennial	08/09/2020
Schwarzbeck	VULB9160/ Hybrid Antenna	760	04/06/2017	Biennial	04/06/2019
Anritsu Corp.	MT8821C/Wideband Radio Communication Tester	6201502997	08/13/2018	Annual	08/13/2019
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	6201026545	02/08/2018	Annual	02/08/2019
REOHDE & SCHWARZ	SMB100A/ SIGNAL GENERATOR (100kHz~40GHz)	177633	07/19/2018	Annual	07/19/2019
REOHDE & SCHWARZ	ESU40 / EMI TEST RECEIVER	100524	07/27/2018	Annual	07/27/2019
HCT CO., LTD.,	FCC LTE Mobile Conducted RF Automation Test Software	-	-	-	-

Note:

1. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

5. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4:2014.

All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.82
Radiated Disturbance (9 kHz ~ 30 MHz)	3.40
Radiated Disturbance (30 MHz ~ 1 GHz)	4.80
Radiated Disturbance (1 GHz ~ 18 GHz)	5.70
Radiated Disturbance (18 GHz ~ 40 GHz)	5.71

6. SUMMARY OF TEST RESULTS

6.1 Test Condition : Conducted Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Occupied Bandwidth	§2.1049	N/A	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §27.53(h)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§2.1046	N/A	**See Note1**
Peak- to- Average Ratio	27.50(d)(5)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§2.1055, § 27.54	Emission must remain in band	PASS

Note:

1. See SAR Report

6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	27.50(d)(4)	< 1 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §27.53(h)	< 43 + 10log10 (P[Watts]) for all out-of band emissions	PASS

7. SAMPLE CALCULATION

7.1 ERP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBd)	C.L	Pol.	ERP	
channel	Freq.(MHz)						W	dBm
128	824.20	-21.37	38.40	-10.61	0.95	H	0.483	26.84

ERP = Substitute LEVEL(dBm) + Ant. Gain – CL(Cable Loss)

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test , the turn table is rotated 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.

7.2 EIRP Sample Calculation

Ch./ Freq.		Measured Level(dBm)	Substitute Level(dBm)	Ant. Gain (dBi)	C.L	Pol.	EIRP	
channel	Freq.(MHz)						W	dBm
132322	1,732.50	-15.75	18.45	9.90	1.76	H	0.456	26.59

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

1) The EUT mounted on a non-conductive turntable is 2.5 meter above test site ground level.
2) During the test , the turn table is rotated 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 equivalent isotropic radiated power.

7.3. Emission Designator

GSM Emission Designator

Emission Designator = 249KGXW

GSM BW = 249 kHz

G = Phase Modulation

X = Cases not otherwise covered

W = Combination (Audio/Data)

EDGE Emission Designator

Emission Designator = 249KG7W

GSM BW = 249 kHz

G = Phase Modulation

7 = Quantized/Digital Info

W = Combination (Audio/Data)

WCDMA Emission Designator

Emission Designator = 4M17F9W

WCDMA BW = 4.17 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

QPSK Modulation

Emission Designator = 4M48G7D

LTE BW = 4.48 MHz

G = Phase Modulation

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

16QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

8. TEST DATA

8.1 EQUIVALENT ISOTROPIC RADIATED POWER

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1710.7	LTE B66/ B4 1.4 MHz	QPSK	-21.53	10.26	9.92	1.29	H	< 1.00	0.077	18.89
		16-QAM	-22.70	9.09	9.92	1.29	H		0.059	17.72
1745.0		QPSK	-20.64	11.19	10.08	1.29	H		0.099	19.97
		16-QAM	-22.05	9.78	10.08	1.29	H		0.072	18.56
1779.3		QPSK	-21.06	10.70	10.16	1.31	H		0.090	19.55
		16-QAM	-22.48	9.28	10.16	1.31	H		0.065	18.13

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1711.5	LTE B66/ B4 3 MHz	QPSK	-21.45	10.34	9.92	1.29	H	< 1.00	0.079	18.97
		16-QAM	-22.75	9.04	9.92	1.29	H		0.059	17.67
1745.0		QPSK	-20.65	11.18	10.08	1.29	H		0.099	19.96
		16-QAM	-21.93	9.90	10.08	1.29	H		0.074	18.68
1778.5		QPSK	-21.00	10.76	10.16	1.31	H		0.091	19.61
		16-QAM	-22.24	9.52	10.16	1.31	H		0.069	18.37

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1712.5	LTE B66/ B4 5 MHz	QPSK	-21.41	10.38	9.92	1.29	H	< 1.00	0.080	19.01
		16-QAM	-22.80	8.99	9.92	1.29	H		0.058	17.62
1745.0		QPSK	-20.56	11.27	10.08	1.29	H		0.101	20.05
		16-QAM	-21.85	9.98	10.08	1.29	H		0.075	18.76
1777.5		QPSK	-20.80	10.96	10.16	1.31	H		0.096	19.81
		16-QAM	-22.07	9.69	10.16	1.31	H		0.071	18.54

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1715.0	LTE B66/ B4 10 MHz	QPSK	-21.53	10.25	9.93	1.29	H	< 1.00	0.078	18.89
		16-QAM	-22.74	9.04	9.93	1.29	H		0.059	17.68
1745.0		QPSK	-20.54	11.29	10.08	1.29	H		0.102	20.07
		16-QAM	-21.86	9.97	10.08	1.29	H		0.075	18.75
1775.0		QPSK	-20.77	11.01	10.15	1.31	H		0.097	19.85
		16-QAM	-22.03	9.75	10.15	1.31	H		0.072	18.59

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1717.5	LTE B66/ B4 15 MHz	QPSK	-21.57	10.20	9.94	1.28	H	< 1.00	0.077	18.86
		16-QAM	-22.92	8.85	9.94	1.28	H		0.056	17.51
1745.0		QPSK	-20.57	11.26	10.08	1.29	H		0.101	20.04
		16-QAM	-21.91	9.92	10.08	1.29	H		0.074	18.70
1772.5		QPSK	-20.63	11.17	10.13	1.30	H		0.100	20.00
		16-QAM	-21.90	9.90	10.13	1.30	H		0.075	18.73

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1720.0	LTE B66/ B4 20 MHz	QPSK	-21.55	10.22	9.94	1.28	H	< 1.00	0.077	18.88
		16-QAM	-22.91	8.86	9.94	1.28	H		0.056	17.52
1745.0		QPSK	-20.55	11.28	10.08	1.29	H		0.101	20.06
		16-QAM	-21.75	10.08	10.08	1.29	H		0.077	18.86
1770.0		QPSK	-20.52	11.28	10.13	1.30	H		0.103	20.11
		16-QAM	-21.83	9.97	10.13	1.30	H		0.076	18.80

8.2 RADIATED SPURIOUS EMISSIONS

▣ OPERATING FREQUENTY: 1710.70 MHz

▣ MEASURED OUTPUT POWER: 19.97 dBm = 0.099 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 1.4 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log_{10} (W) = 32.97 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
131979 (1710.7)	3,421.40	-56.61	12.70	-64.48	1.91	V	-53.69	73.66
	5,132.10	-54.34	12.68	-55.92	2.52	V	-45.76	65.73
	6,842.80	-55.30	12.58	-52.64	2.84	H	-42.90	62.88
132322 (1745.0)	3,490.00	-57.58	12.50	-64.85	1.91	H	-54.26	74.23
	5,235.00	-54.59	13.36	-57.15	2.61	V	-46.40	66.37
	6,980.00	-56.85	12.25	-52.87	2.85	H	-43.47	63.44
132665 (1779.3)	3,558.60	-58.03	12.31	-65.22	1.91	H	-54.82	74.79
	5,337.90	-55.91	13.54	-58.47	2.62	V	-47.55	67.52
	7,117.20	-57.74	11.58	-53.19	2.83	H	-44.44	64.41

▣ OPERATING FREQUENTY: 1711.50 MHz

▣ MEASURED OUTPUT POWER: 19.96 dBm = 0.0.099 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 3 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 lo_{g10} (W) = 32.96 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
131987 (1711.5)	3,423.00	-56.93	12.70	-64.80	1.91	V	-54.01	73.97
	5,134.50	-53.84	12.72	-55.48	2.52	V	-45.29	65.25
	6,846.00	-56.39	12.55	-53.68	2.83	V	-43.96	63.92
132322 (1745.0)	3,490.00	-57.31	12.50	-64.58	1.91	V	-53.99	73.95
	5,235.00	-54.47	13.36	-57.03	2.61	V	-46.28	66.24
	6,980.00	-57.67	12.25	-53.69	2.85	V	-44.29	64.25
132657 (1778.5)	3,557.00	-57.56	12.31	-64.75	1.91	V	-54.35	74.31
	5,335.50	-55.81	13.55	-58.41	2.63	V	-47.49	67.45
	7,114.00	-57.61	11.60	-53.15	2.83	V	-44.39	64.35

▣ OPERATING FREQUENTY: 1712.50 MHz

▣ MEASURED OUTPUT POWER: 20.05 dBm = 0.101 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 5 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 lo_{g10} (W) = 33.05 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
131997 (1712.5)	3,425.00	-57.62	12.69	-65.62	1.90	V	-54.83	74.88
	5,137.50	-53.11	12.75	-54.82	2.52	V	-44.59	64.64
	6,850.00	-56.26	12.52	-53.50	2.81	V	-43.79	63.84
132322 (1745.0)	3,490.00	-57.40	12.50	-64.67	1.91	V	-54.08	74.13
	5,235.00	-55.13	13.36	-57.69	2.61	V	-46.94	66.99
	6,980.00	-57.03	12.25	-53.05	2.85	V	-43.65	63.70
132647 (1777.5)	3,555.00	-58.20	12.31	-65.32	1.93	V	-54.94	74.99
	5,332.50	-54.97	13.55	-57.61	2.63	V	-46.69	66.74
	7,110.00	-57.74	11.61	-53.37	2.83	V	-44.59	64.65

▣ OPERATING FREQUENTY: 1715.00 MHz

▣ MEASURED OUTPUT POWER: 20.07 dBm = 0.102 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 lo_{g10} (W) = 33.07 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
132022 (1715.0)	3,430.00	-56.85	12.68	-64.98	1.88	V	-54.18	74.25
	5,145.00	-53.33	12.79	-54.88	2.54	V	-44.62	64.69
	6,860.00	-56.09	12.54	-53.11	2.86	V	-43.43	63.51
132322 (1745.0)	3,490.00	-56.00	12.50	-63.27	1.91	V	-52.68	72.75
	5,235.00	-55.90	13.36	-58.46	2.61	V	-47.71	67.78
	6,980.00	-56.64	12.25	-52.66	2.85	V	-43.26	63.33
132622 (1775.0)	3,550.00	-56.95	12.30	-64.00	1.95	V	-53.65	73.72
	5,325.00	-54.20	13.56	-56.89	2.63	V	-45.96	66.03
	7,100.00	-57.20	11.64	-53.20	2.84	V	-44.40	64.47

▣ OPERATING FREQUENTY: 1717.50 MHz

▣ MEASURED OUTPUT POWER: 20.04 dBm = 0.101 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 15 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 lo_{g10} (W) = 33.04 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
132047 (1717.5)	3,435.00	-57.15	12.67	-65.12	1.89	V	-54.35	74.39
	5,152.50	-53.26	12.83	-54.64	2.55	V	-44.36	64.40
	6,870.00	-54.80	12.56	-52.16	2.82	V	-42.42	62.46
132322 (1745.0)	3,490.00	-56.45	12.50	-63.72	1.91	V	-53.13	73.17
	5,235.00	-55.22	13.36	-57.78	2.61	V	-47.03	67.07
	6,980.00	-56.10	12.25	-52.12	2.85	V	-42.72	62.76
132597 (1772.5)	3,545.00	-56.61	12.32	-63.80	1.96	V	-53.44	73.48
	5,317.50	-54.02	13.57	-56.77	2.63	V	-45.83	65.87
	7,090.00	-56.30	11.68	-52.51	2.77	V	-43.60	63.64

▣ OPERATING FREQUENTY: 1720.00 MHz

▣ MEASURED OUTPUT POWER: 20.11 dBm = 0.103 W

▣ MODE: LTE B66 / B4

▣ MODULATION SIGNAL: 20 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 lo_{g10} (W) = 33.11 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
132072 (1720.0)	3,440.00	-56.70	12.65	-64.51	1.90	V	-53.76	73.87
	5,160.00	-52.79	12.87	-54.63	2.58	V	-44.34	64.46
	6,880.00	-55.67	12.60	-52.98	2.79	V	-43.17	63.28
132322 (1745.0)	3,490.00	-57.56	12.50	-64.83	1.91	V	-54.24	74.35
	5,235.00	-55.11	13.36	-57.67	2.61	V	-46.92	67.03
	6,980.00	-56.16	12.25	-52.18	2.85	V	-42.78	62.89
132572 (1770.0)	3,540.00	-57.24	12.34	-64.58	1.97	V	-54.21	74.32
	5,310.00	-52.62	13.57	-55.32	2.64	V	-44.39	64.50
	7,080.00	-58.04	11.73	-53.97	2.83	V	-45.07	65.18

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
66/4	1.4 MHz	1745.0	QPSK	6	0	6.18
			16-QAM	6		6.87
	3 MHz		QPSK	15		6.09
			16-QAM	15		6.76
	5 MHz		QPSK	25		5.97
			16-QAM	25		6.76
	10 MHz		QPSK	50		6.03
			16-QAM	50		6.65
	15 MHz		QPSK	75		5.95
			16-QAM	75		6.65
	20 MHz		QPSK	100		5.92
			16-QAM	100		6.67

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 65 ~ 76.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
66/4	1.4 MHz	1745.0	QPSK	6	0	1.0868
			16-QAM	6		1.0953
	3 MHz		QPSK	15		2.7073
			16-QAM	15		2.7130
	5 MHz		QPSK	25		4.5276
			16-QAM	25		4.5360
	10 MHz		QPSK	50		8.9934
			16-QAM	50		9.0049
	15 MHz		QPSK	75		13.507
			16-QAM	75		13.479
	20 MHz		QPSK	100		17.871
			16-QAM	100		17.932

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 53 ~ 64.

8.5 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
66/4	1.4	1710.7	3.4213	27.976	-74.062	-46.086	-13.00
		1745.0	3.4896	27.976	-68.257	-40.281	
		1779.3	3.5604	27.976	-70.863	-42.887	
	3	1711.5	3.4213	27.976	-74.390	-46.414	
		1745.0	3.4881	27.976	-68.377	-40.401	
		1778.5	3.5604	27.976	-70.789	-42.813	
	5	1712.5	5.1316	28.591	-74.014	-45.423	
		1745.0	3.4861	27.976	-68.857	-40.881	
		1777.5	3.5599	27.976	-70.892	-42.916	
	10	1715.0	5.1321	28.591	-74.396	-45.805	
		1745.0	3.4816	27.976	-68.675	-40.699	
		1775.0	3.5594	27.976	-71.162	-43.186	
	15	1717.5	5.1331	28.591	-74.613	-46.022	
		1745.0	3.4771	27.976	-68.486	-40.510	
		1772.5	3.5589	27.976	-70.327	-42.351	
	20	1720.0	5.1336	28.591	-74.821	-46.230	
		1745.0	3.4726	27.976	-68.530	-40.554	
		1770.0	3.5584	27.976	-71.158	-43.182	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 113 ~ 148.
2. Conducted Spurious Emissions was Tested QPSK Modulation, Resource Block Size 1 and Resource Block Offset 0
3. Result (dBm) = Measurement Maximum Data (dBm) + Factor (dB)
4. Factor(dB) = Cable Loss + Attenuator + Power Splitter

Frequency Range (GHz)	Factor [dB]
0.03 – 1	25.270
1 – 5	27.976
5 – 10	28.591
10 – 15	29.116
15 – 20	29.489
Above 20	30.131

8.6 BAND EDGE

- Plots of the EUT's Band Edge are shown Page 77 ~ 112.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ MODE: LTE 66/4

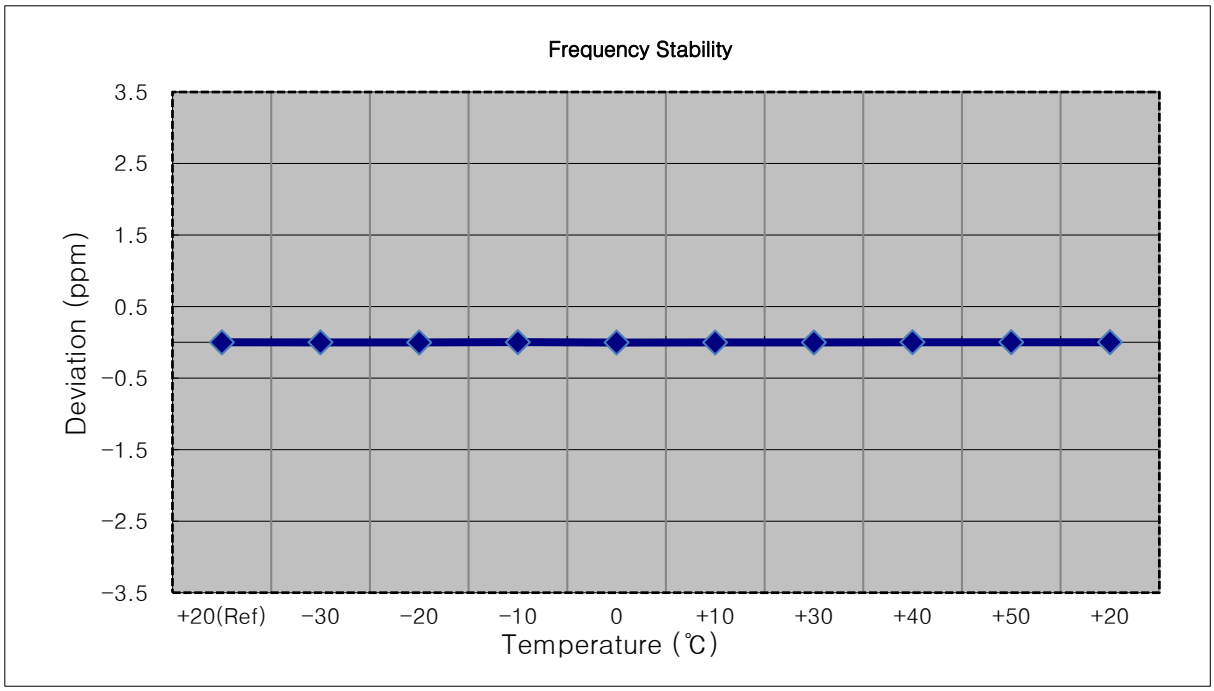
▣ OPERATING FREQUENCY: 1710,700,000 Hz

▣ CHANNEL: 131979 (1.4 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1710 700 006	0.0	0.000 000	0.000
100%		-30	1710 700 004	-1.8	0.000 000	-0.001
100%		-20	1710 700 004	-2.6	0.000 000	-0.002
100%		-10	1710 700 011	4.6	0.000 000	0.003
100%		0	1710 700 002	-4.3	0.000 000	-0.003
100%		+10	1710 700 003	-3.0	0.000 000	-0.002
100%		+30	1710 700 003	-3.1	0.000 000	-0.002
100%		+40	1710 700 010	3.5	0.000 000	0.002
100%		+50	1710 700 009	2.9	0.000 000	0.002
Batt. Endpoint	3.40	+20	1710 700 009	2.4	0.000 000	0.001



▣ MODE: LTE 66/4

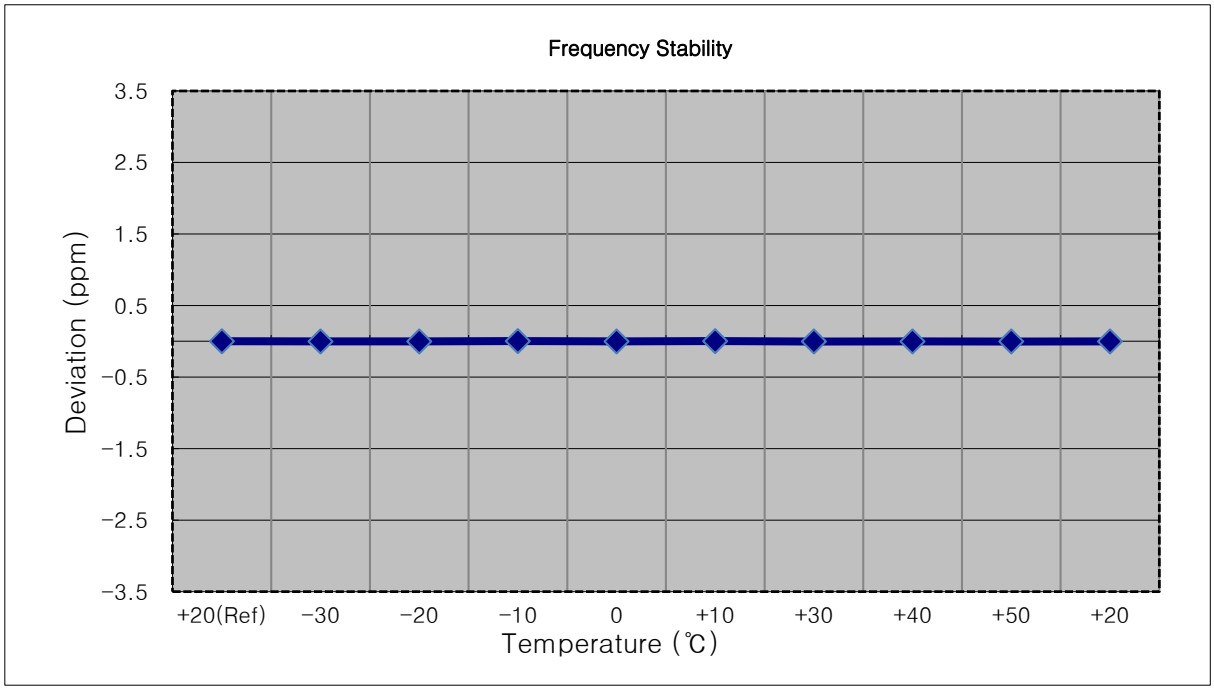
▣ OPERATING FREQUENCY: 1711,500,000 Hz

▣ CHANNEL: 131987 (3 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1711 499 997	0.0	0.000 000	0.000
100%		-30	1711 499 993	-3.4	0.000 000	-0.002
100%		-20	1711 499 993	-3.8	0.000 000	-0.002
100%		-10	1711 500 001	3.8	0.000 000	0.002
100%		0	1711 499 994	-3.0	0.000 000	-0.002
100%		+10	1711 500 001	3.9	0.000 000	0.002
100%		+30	1711 499 992	-4.3	0.000 000	-0.003
100%		+40	1711 499 995	-2.0	0.000 000	-0.001
100%		+50	1711 499 992	-4.5	0.000 000	-0.003
Batt. Endpoint	3.40	+20	1711 499 994	-3.1	0.000 000	-0.002



▣ MODE: LTE 66/4

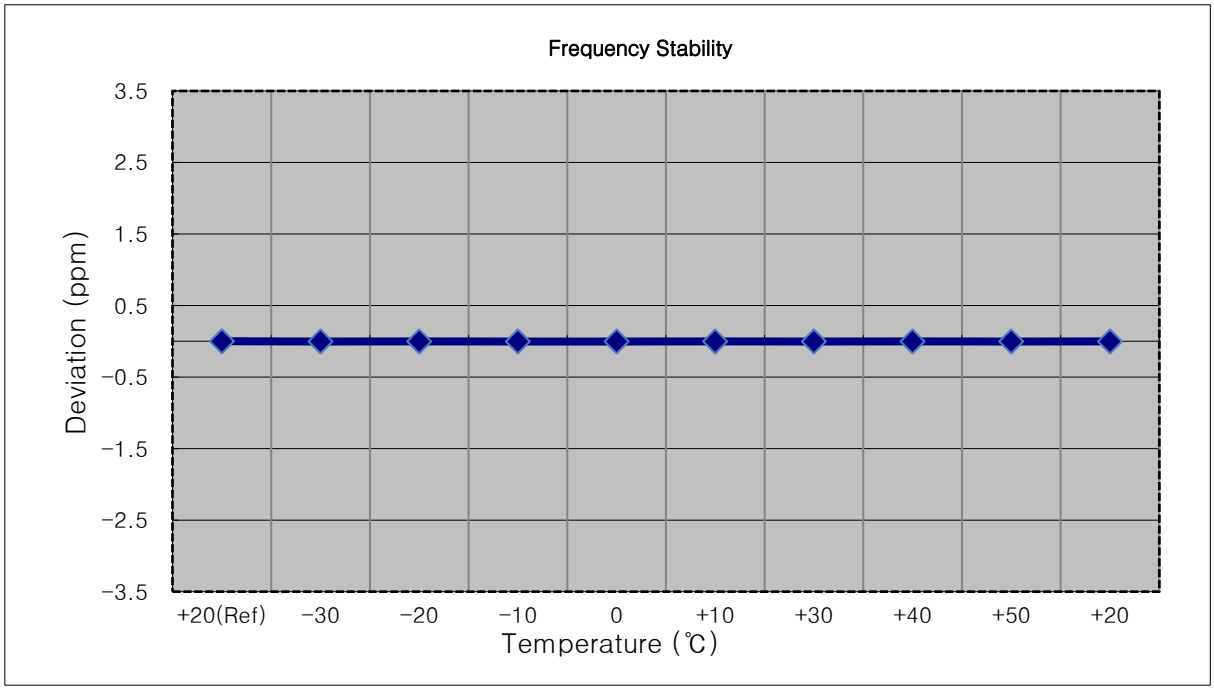
▣ OPERATING FREQUENCY: 1712,500,000 Hz

▣ CHANNEL: 131997 (5 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1712 499 996	0.0	0.000 000	0.000
100%		-30	1712 499 992	-3.9	0.000 000	-0.002
100%		-20	1712 499 993	-2.8	0.000 000	-0.002
100%		-10	1712 499 991	-4.3	0.000 000	-0.003
100%		0	1712 499 991	-4.3	0.000 000	-0.003
100%		+10	1712 499 992	-3.4	0.000 000	-0.002
100%		+30	1712 499 990	-5.2	0.000 000	-0.003
100%		+40	1712 499 992	-3.8	0.000 000	-0.002
100%		+50	1712 499 991	-4.2	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1712 499 993	-2.5	0.000 000	-0.001



▣ MODE: LTE 66/4

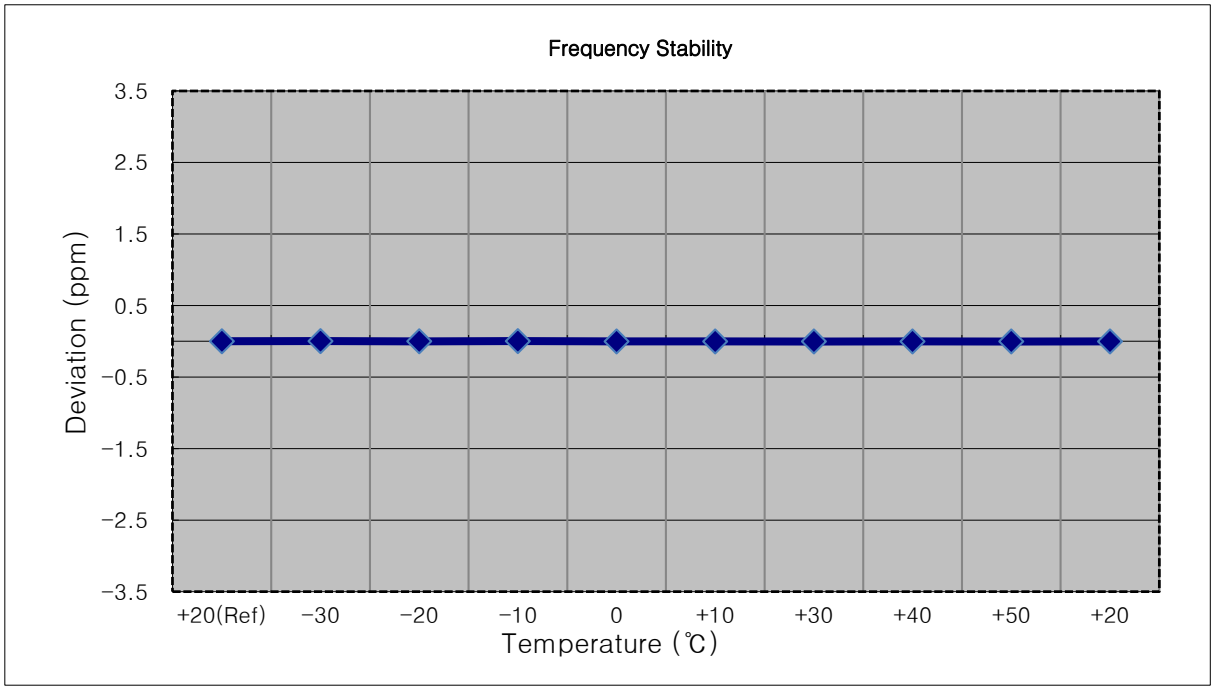
▣ OPERATING FREQUENCY: 1715,000,000 Hz

▣ CHANNEL: 132022 (10 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1714 999 997	0.0	0.000 000	0.000
100%		-30	1715 000 001	4.3	0.000 000	0.003
100%		-20	1714 999 995	-1.9	0.000 000	-0.001
100%		-10	1715 000 001	4.4	0.000 000	0.003
100%		0	1714 999 993	-3.1	0.000 000	-0.002
100%		+10	1714 999 993	-3.6	0.000 000	-0.002
100%		+30	1714 999 992	-4.4	0.000 000	-0.003
100%		+40	1714 999 993	-3.4	0.000 000	-0.002
100%		+50	1714 999 992	-4.2	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1714 999 993	-3.2	0.000 000	-0.002



▣ MODE: LTE 66/4

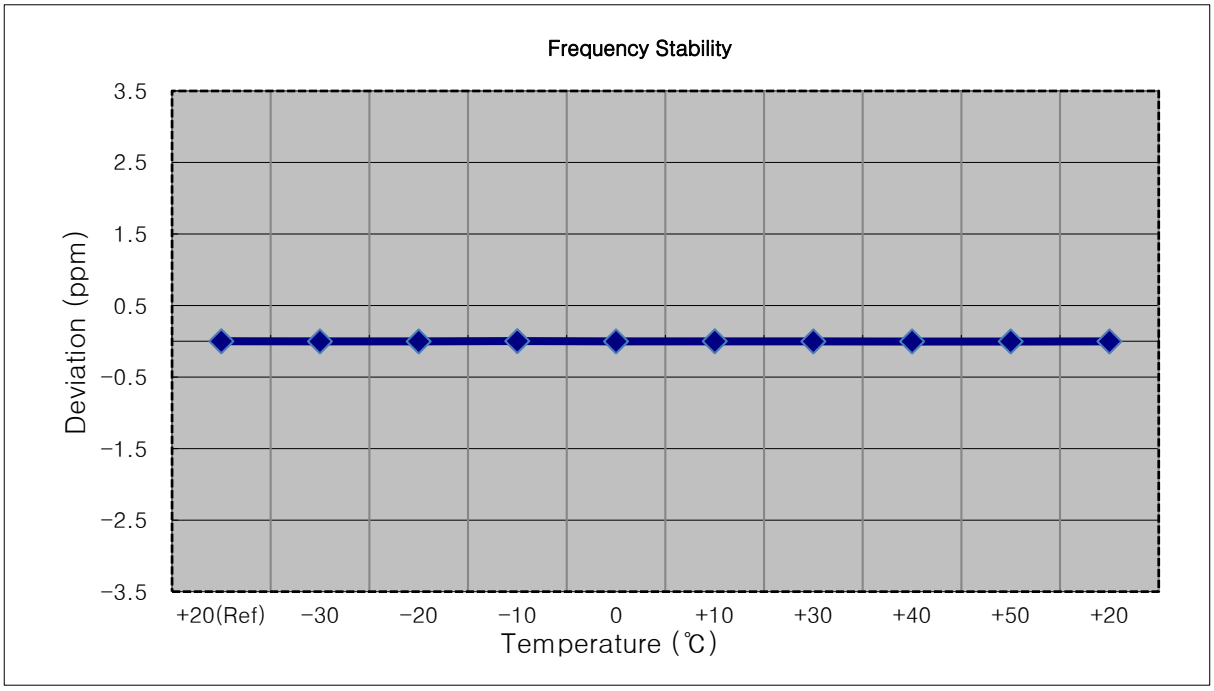
▣ OPERATING FREQUENCY: 1717,500,000 Hz

▣ CHANNEL: 132047 (15 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1717 499 997	0.0	0.000 000	0.000
100%		-30	1717 499 994	-3.8	0.000 000	-0.002
100%		-20	1717 499 995	-2.6	0.000 000	-0.002
100%		-10	1717 500 001	4.1	0.000 000	0.002
100%		0	1717 499 995	-2.8	0.000 000	-0.002
100%		+10	1717 499 996	-1.7	0.000 000	-0.001
100%		+30	1717 499 994	-3.4	0.000 000	-0.002
100%		+40	1717 499 993	-4.7	0.000 000	-0.003
100%		+50	1717 499 993	-4.2	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1717 499 994	-3.1	0.000 000	-0.002



▣ MODE: LTE 66/4

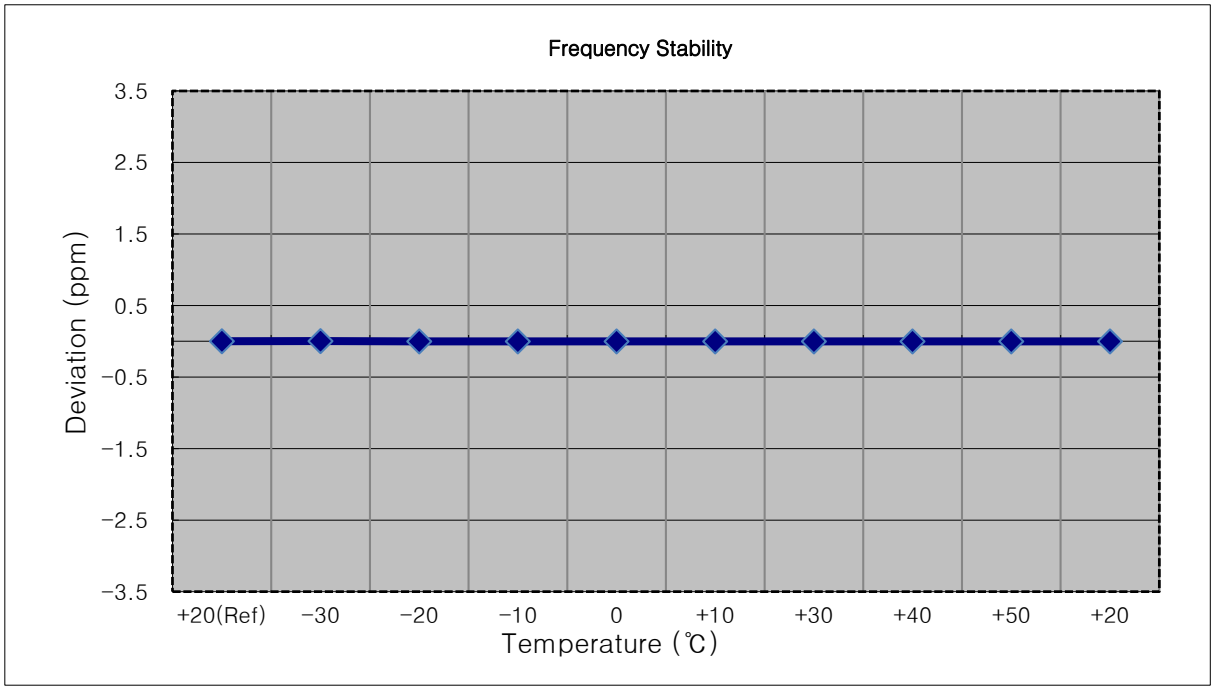
▣ OPERATING FREQUENCY: 1720,000,000 Hz

▣ CHANNEL: 132072 (20 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1719 999 998	0.0	0.000 000	0.000
100%		-30	1720 000 002	3.8	0.000 000	0.002
100%		-20	1719 999 995	-2.8	0.000 000	-0.002
100%		-10	1719 999 996	-2.4	0.000 000	-0.001
100%		0	1719 999 994	-3.7	0.000 000	-0.002
100%		+10	1719 999 995	-3.0	0.000 000	-0.002
100%		+30	1719 999 995	-3.4	0.000 000	-0.002
100%		+40	1719 999 995	-3.1	0.000 000	-0.002
100%		+50	1719 999 996	-2.2	0.000 000	-0.001
Batt. Endpoint	3.40	+20	1719 999 995	-2.5	0.000 000	-0.001



▣ MODE: LTE 66/4

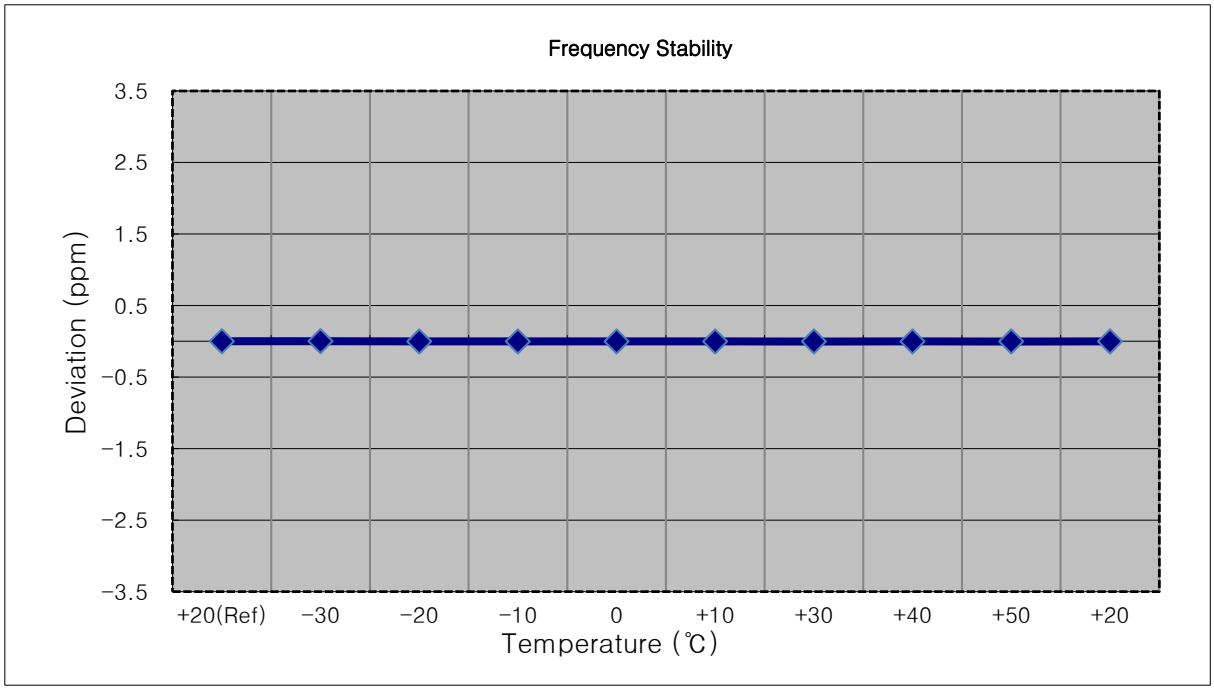
▣ OPERATING FREQUENCY: 1745.000,000 Hz

▣ CHANNEL: 132322 (1.4 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1744 999 995	0.0	0.000 000	0.000
100%		-30	1744 999 999	3.4	0.000 000	0.002
100%		-20	1744 999 991	-3.8	0.000 000	-0.002
100%		-10	1744 999 992	-3.6	0.000 000	-0.002
100%		0	1744 999 993	-2.5	0.000 000	-0.001
100%		+10	1744 999 993	-2.4	0.000 000	-0.001
100%		+30	1744 999 990	-5.1	0.000 000	-0.003
100%		+40	1744 999 992	-2.7	0.000 000	-0.002
100%		+50	1744 999 990	-5.0	0.000 000	-0.003
Batt. Endpoint	3.40	+20	1744 999 992	-2.9	0.000 000	-0.002



▣ MODE: LTE 66/4

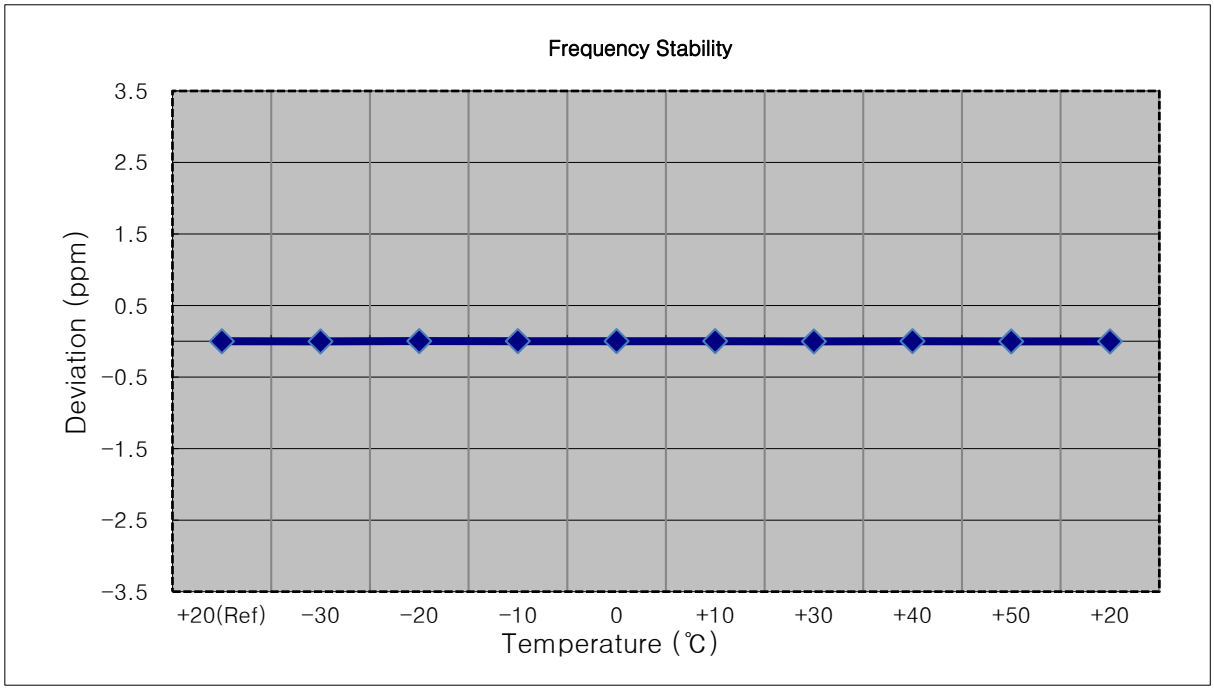
▣ OPERATING FREQUENCY: 1745,500,000 Hz

▣ CHANNEL: 132322 (3 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.850	+20(Ref)	1745 000 004	0.0	0.000 000	0.000
100%		-30	1745 000 001	-2.8	0.000 000	-0.002
100%		-20	1745 000 009	4.6	0.000 000	0.003
100%		-10	1745 000 007	2.8	0.000 000	0.002
100%		0	1745 000 008	3.6	0.000 000	0.002
100%		+10	1745 000 006	2.4	0.000 000	0.001
100%		+30	1745 000 002	-2.4	0.000 000	-0.001
100%		+40	1745 000 007	2.8	0.000 000	0.002
100%		+50	1745 000 001	-3.1	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1745 000 002	-2.1	0.000 000	-0.001



▣ MODE: LTE 66/4

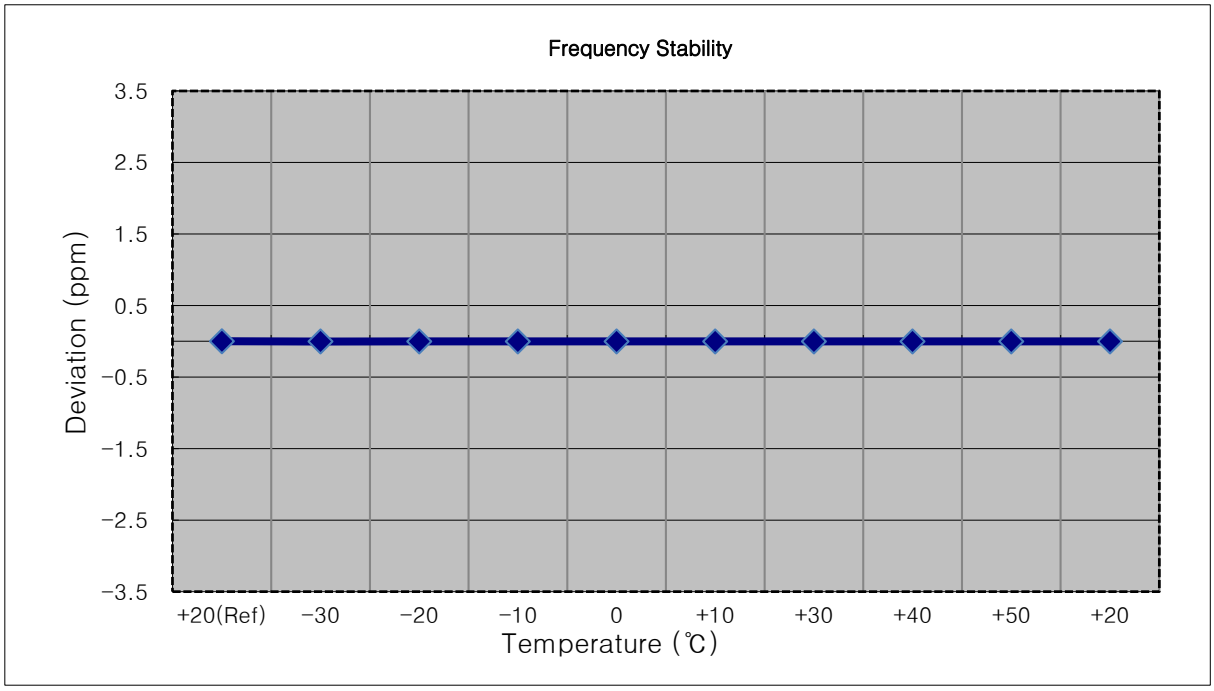
▣ OPERATING FREQUENCY: 1745.000,000 Hz

▣ CHANNEL: 132322 (5 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1744 999 998	0.0	0.000 000	0.000
100%		-30	1744 999 992	-5.9	0.000 000	-0.003
100%		-20	1744 999 994	-3.1	0.000 000	-0.002
100%		-10	1744 999 994	-3.5	0.000 000	-0.002
100%		0	1744 999 995	-2.6	0.000 000	-0.001
100%		+10	1744 999 995	-2.9	0.000 000	-0.002
100%		+30	1744 999 995	-2.6	0.000 000	-0.001
100%		+40	1744 999 995	-2.8	0.000 000	-0.002
100%		+50	1744 999 994	-3.3	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1744 999 995	-2.3	0.000 000	-0.001



▣ MODE: LTE 66/4

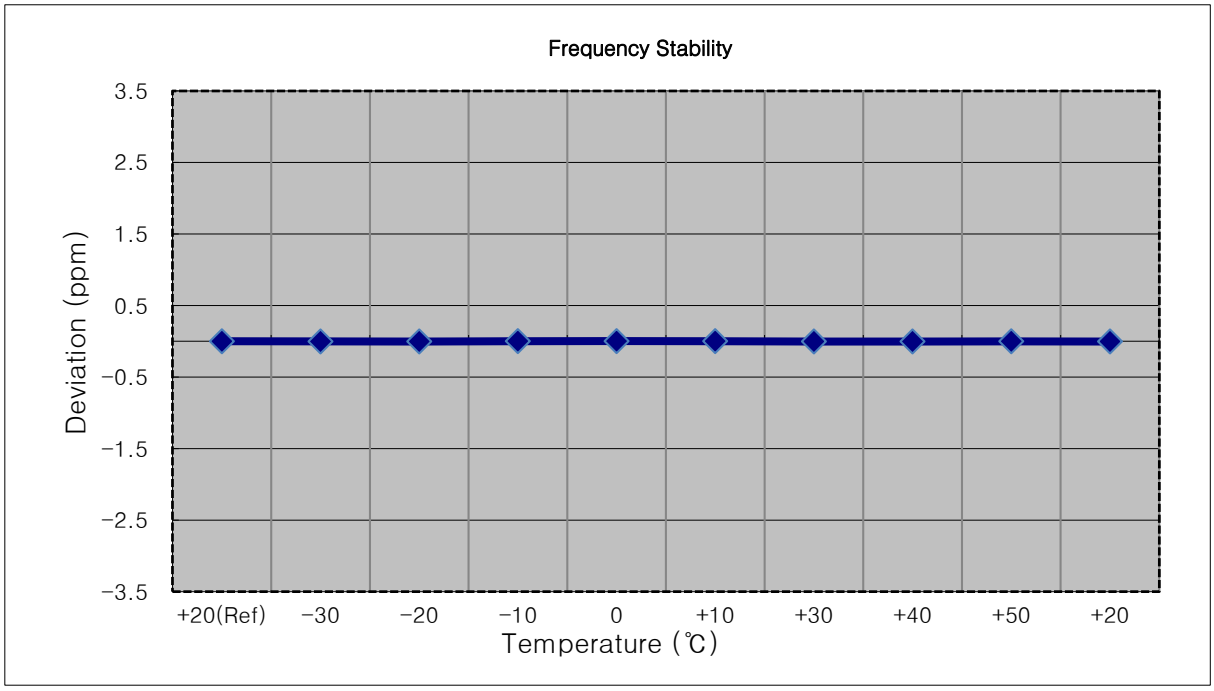
▣ OPERATING FREQUENCY: 1745.000,000 Hz

▣ CHANNEL: 132322 (10 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1744 999 998	0.0	0.000 000	0.000
100%		-30	1744 999 995	-3.2	0.000 000	-0.002
100%		-20	1744 999 994	-4.7	0.000 000	-0.003
100%		-10	1745 000 002	3.5	0.000 000	0.002
100%		0	1745 000 003	4.8	0.000 000	0.003
100%		+10	1745 000 001	2.9	0.000 000	0.002
100%		+30	1744 999 993	-5.1	0.000 000	-0.003
100%		+40	1744 999 993	-5.0	0.000 000	-0.003
100%		+50	1744 999 997	-1.7	0.000 000	-0.001
Batt. Endpoint	3.40	+20	1744 999 993	-5.1	0.000 000	-0.003



▣ MODE: LTE 66/4

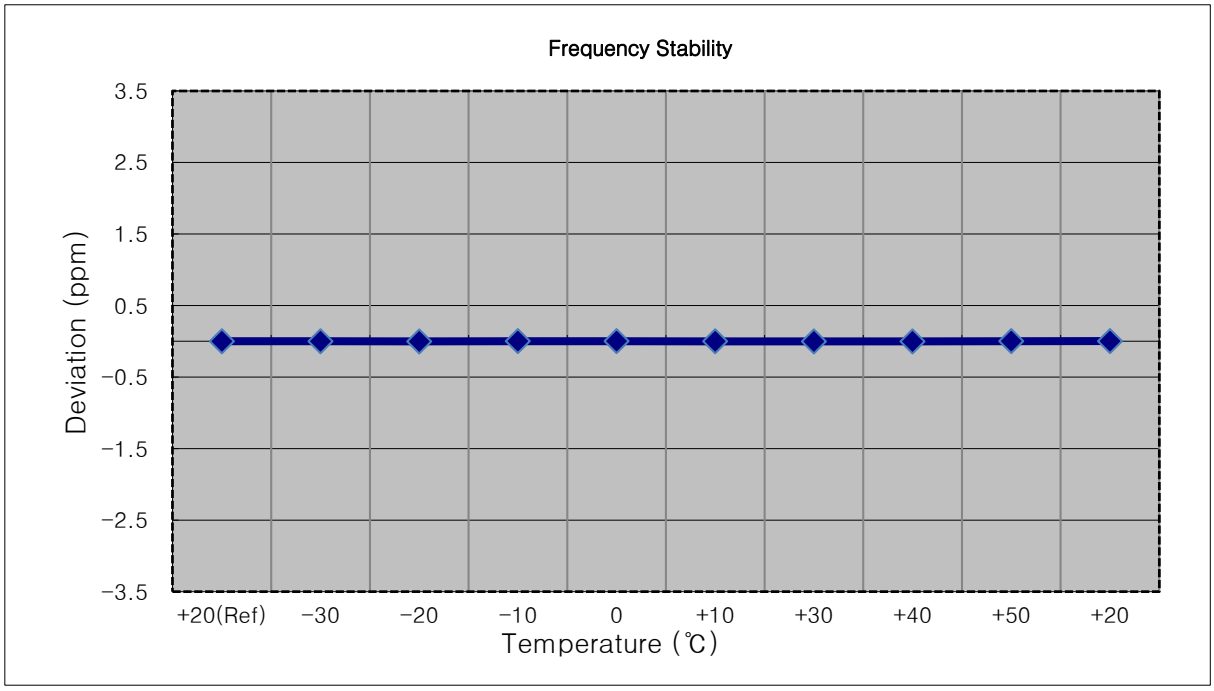
▣ OPERATING FREQUENCY: 1745.000,000 Hz

▣ CHANNEL: 132322 (15 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1745 000 005	0.0	0.000 000	0.000
100%		-30	1745 000 006	1.6	0.000 000	0.001
100%		-20	1745 000 002	-3.2	0.000 000	-0.002
100%		-10	1745 000 008	3.6	0.000 000	0.002
100%		0	1745 000 007	2.6	0.000 000	0.001
100%		+10	1745 000 004	-1.3	0.000 000	-0.001
100%		+30	1745 000 003	-2.3	0.000 000	-0.001
100%		+40	1745 000 001	-3.7	0.000 000	-0.002
100%		+50	1745 000 008	2.9	0.000 000	0.002
Batt. Endpoint	3.40	+20	1745 000 009	4.0	0.000 000	0.002



▣ MODE: LTE 66/4

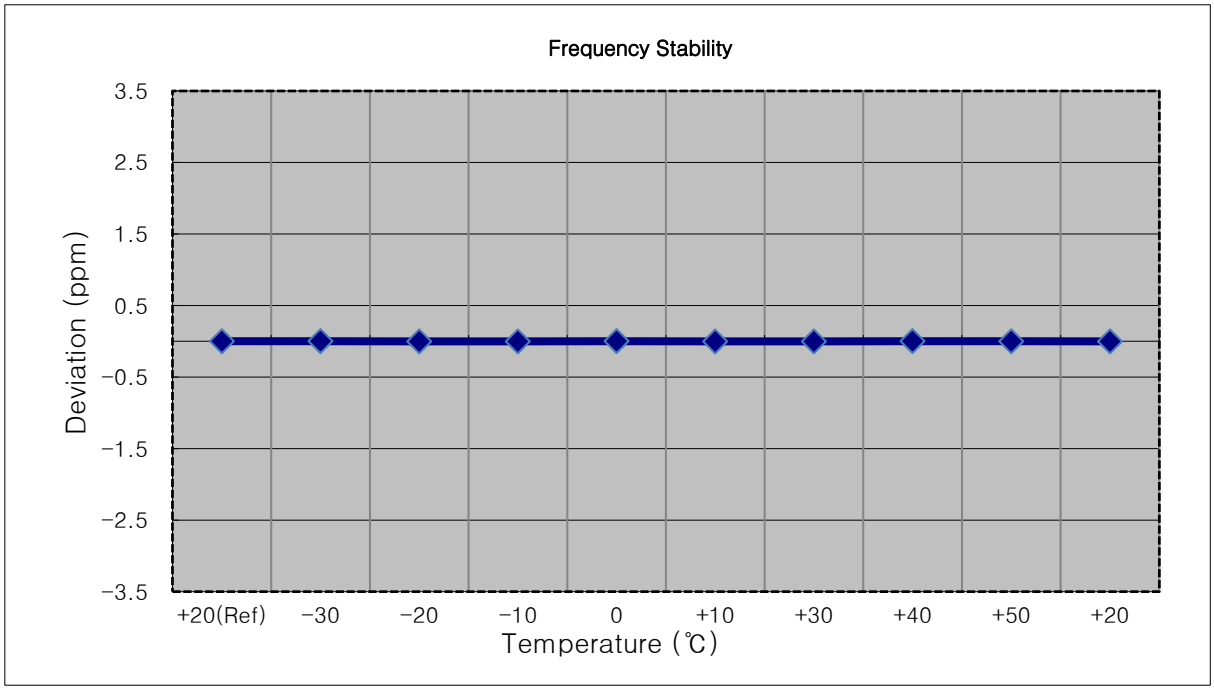
▣ OPERATING FREQUENCY: 1745.000,000 Hz

▣ CHANNEL: 132322 (20 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1744 999 997	0.0	0.000 000	0.000
100%		-30	1745 000 001	3.8	0.000 000	0.002
100%		-20	1744 999 993	-3.8	0.000 000	-0.002
100%		-10	1744 999 994	-2.8	0.000 000	-0.002
100%		0	1744 999 999	2.2	0.000 000	0.001
100%		+10	1744 999 993	-3.7	0.000 000	-0.002
100%		+30	1744 999 993	-3.7	0.000 000	-0.002
100%		+40	1745 000 000	2.7	0.000 000	0.002
100%		+50	1744 999 998	1.5	0.000 000	0.001
Batt. Endpoint	3.40	+20	1744 999 994	-2.7	0.000 000	-0.002



▣ MODE: LTE 66/4

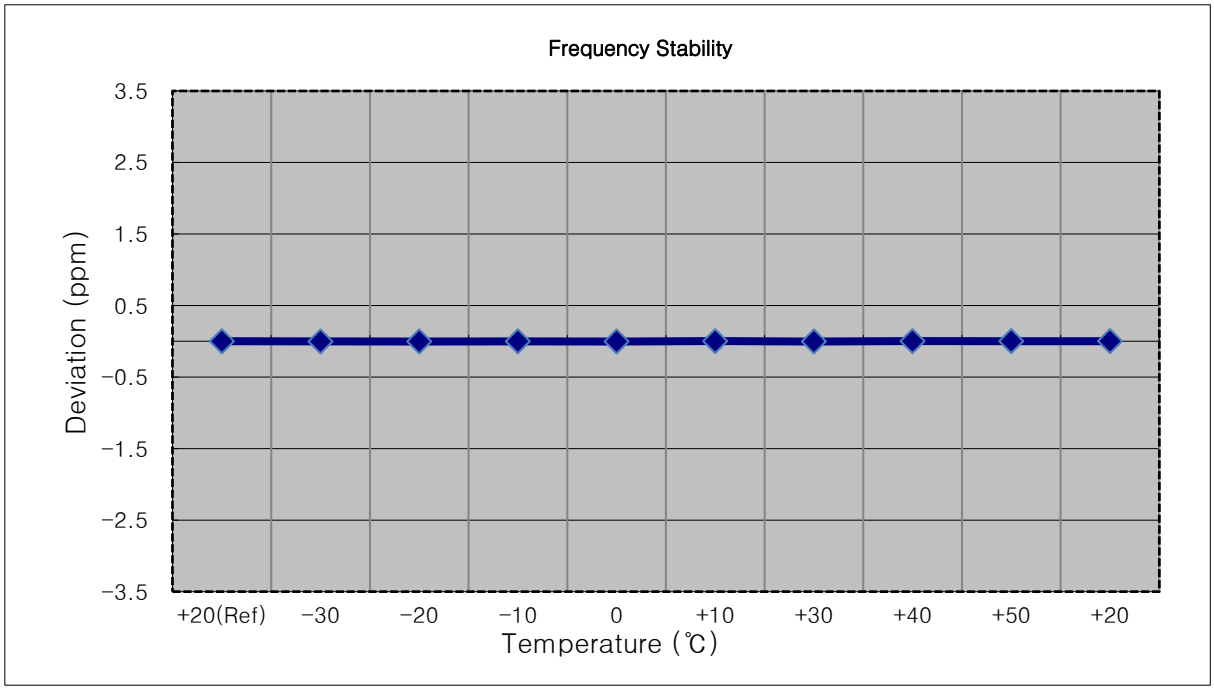
▣ OPERATING FREQUENCY: 1779,300,000 Hz

▣ CHANNEL: 132665 (1.4 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.850	+20(Ref)	1779 299 996	0.0	0.000 000	0.000
100%		-30	1779 299 993	-3.2	0.000 000	-0.002
100%		-20	1779 299 991	-4.8	0.000 000	-0.003
100%		-10	1779 299 994	-2.0	0.000 000	-0.001
100%		0	1779 299 991	-4.8	0.000 000	-0.003
100%		+10	1779 300 001	4.9	0.000 000	0.003
100%		+30	1779 299 990	-5.8	0.000 000	-0.003
100%		+40	1779 300 000	4.1	0.000 000	0.002
100%		+50	1779 300 000	3.6	0.000 000	0.002
Batt. Endpoint	3.400	+20	1779 299 999	2.6	0.000 000	0.001



▣ MODE: LTE 66/4

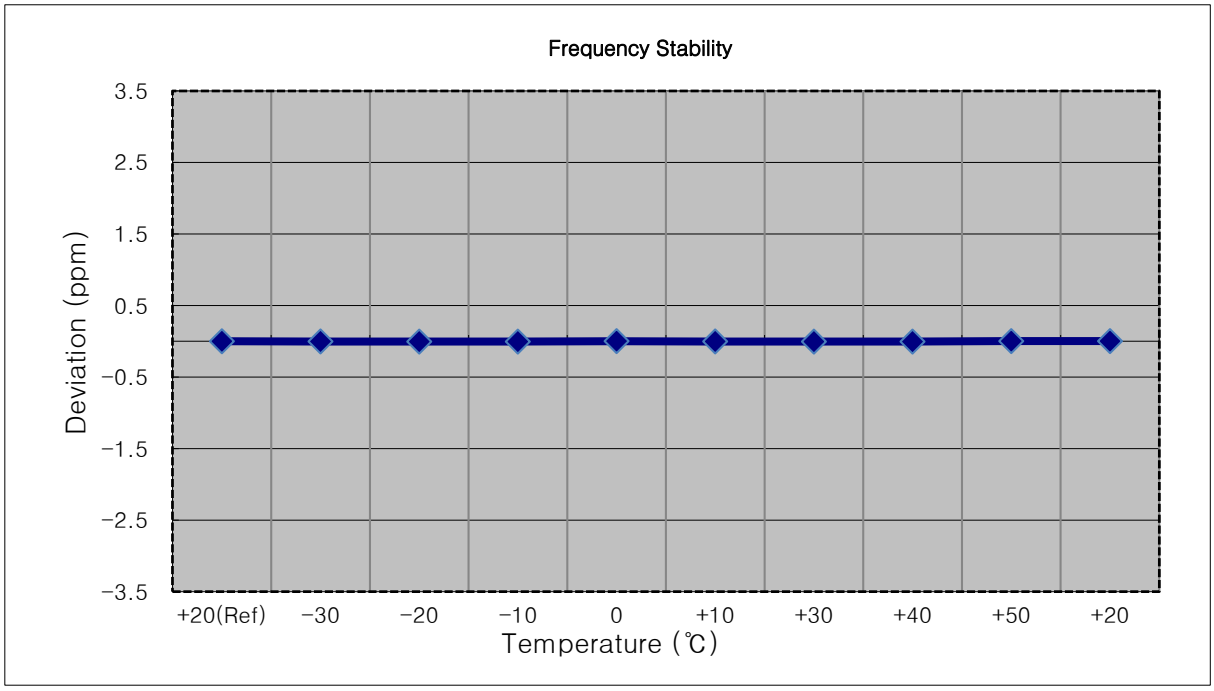
▣ OPERATING FREQUENCY: 1778,500,000 Hz

▣ CHANNEL: 132657 (3 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1778 499 993	0.0	0.000 000	0.000
100%		-30	1778 499 987	-5.8	0.000 000	-0.003
100%		-20	1778 499 985	-7.6	0.000 000	-0.004
100%		-10	1778 499 986	-6.6	0.000 000	-0.004
100%		0	1778 499 996	2.8	0.000 000	0.002
100%		+10	1778 499 988	-4.7	0.000 000	-0.003
100%		+30	1778 499 987	-6.3	0.000 000	-0.004
100%		+40	1778 499 987	-6.4	0.000 000	-0.004
100%		+50	1778 499 998	4.5	0.000 000	0.003
Batt. Endpoint	3.40	+20	1778 499 998	5.2	0.000 000	0.003



▣ MODE: LTE 66/4

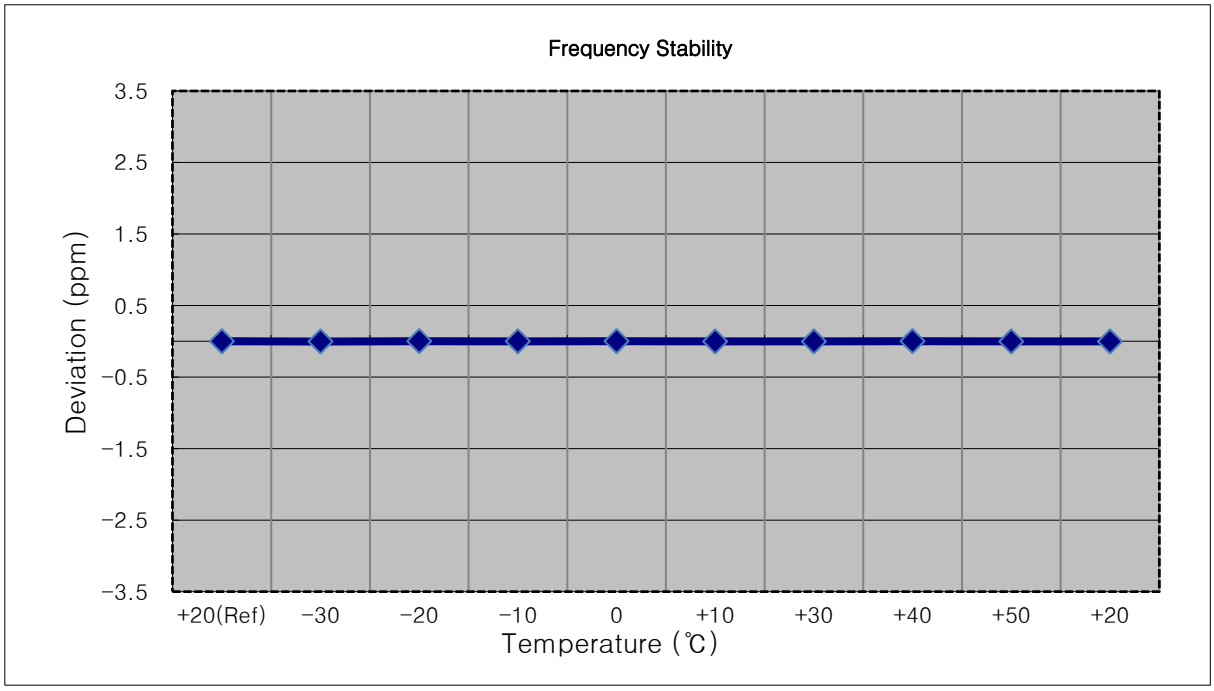
▣ OPERATING FREQUENCY: 1777,500,000 Hz

▣ CHANNEL: 132647 (5 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1777 499 997	0.0	0.000 000	0.000
100%		-30	1777 499 993	-4.4	0.000 000	-0.002
100%		-20	1777 500 000	2.8	0.000 000	0.002
100%		-10	1777 499 995	-2.0	0.000 000	-0.001
100%		0	1777 500 000	3.0	0.000 000	0.002
100%		+10	1777 499 994	-2.5	0.000 000	-0.001
100%		+30	1777 499 995	-2.2	0.000 000	-0.001
100%		+40	1777 499 999	2.1	0.000 000	0.001
100%		+50	1777 499 994	-3.0	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1777 499 993	-3.8	0.000 000	-0.002



▣ MODE: LTE 66/4

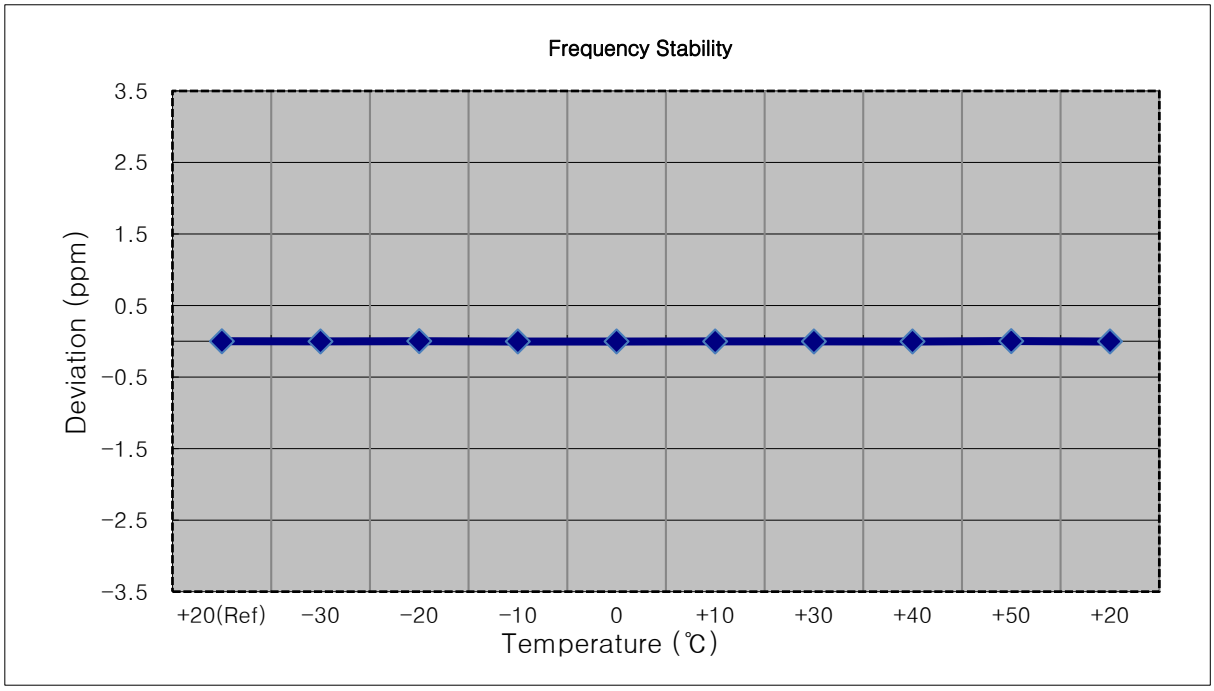
▣ OPERATING FREQUENCY: 1775,000,000 Hz

▣ CHANNEL: 132622 (10 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1774 999 995	0.0	0.000 000	0.000
100%		-30	1774 999 992	-3.8	0.000 000	-0.002
100%		-20	1774 999 999	3.6	0.000 000	0.002
100%		-10	1774 999 990	-5.2	0.000 000	-0.003
100%		0	1774 999 990	-5.2	0.000 000	-0.003
100%		+10	1774 999 992	-3.1	0.000 000	-0.002
100%		+30	1774 999 992	-3.2	0.000 000	-0.002
100%		+40	1774 999 991	-4.5	0.000 000	-0.003
100%		+50	1775 000 000	4.2	0.000 000	0.002
Batt. Endpoint	3.40	+20	1774 999 991	-4.9	0.000 000	-0.003



▣ MODE: LTE 66/4

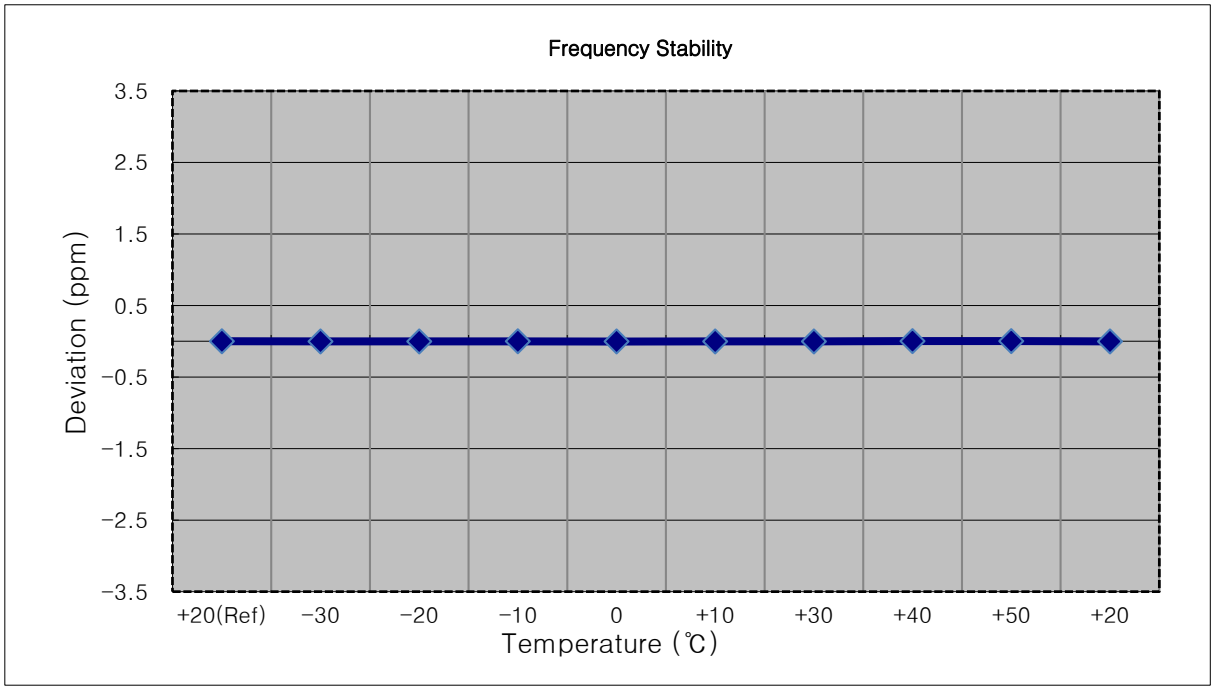
▣ OPERATING FREQUENCY: 1772,500,000 Hz

▣ CHANNEL: 132597 (15 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1772 499 997	0.0	0.000 000	0.000
100%		-30	1772 499 994	-2.3	0.000 000	-0.001
100%		-20	1772 499 994	-2.6	0.000 000	-0.001
100%		-10	1772 499 995	-1.8	0.000 000	-0.001
100%		0	1772 499 992	-4.4	0.000 000	-0.002
100%		+10	1772 499 994	-2.4	0.000 000	-0.001
100%		+30	1772 499 994	-2.2	0.000 000	-0.001
100%		+40	1772 500 001	4.1	0.000 000	0.002
100%		+50	1772 500 002	5.5	0.000 000	0.003
Batt. Endpoint	3.40	+20	1772 499 993	-3.4	0.000 000	-0.002



▣ MODE: LTE 66/4

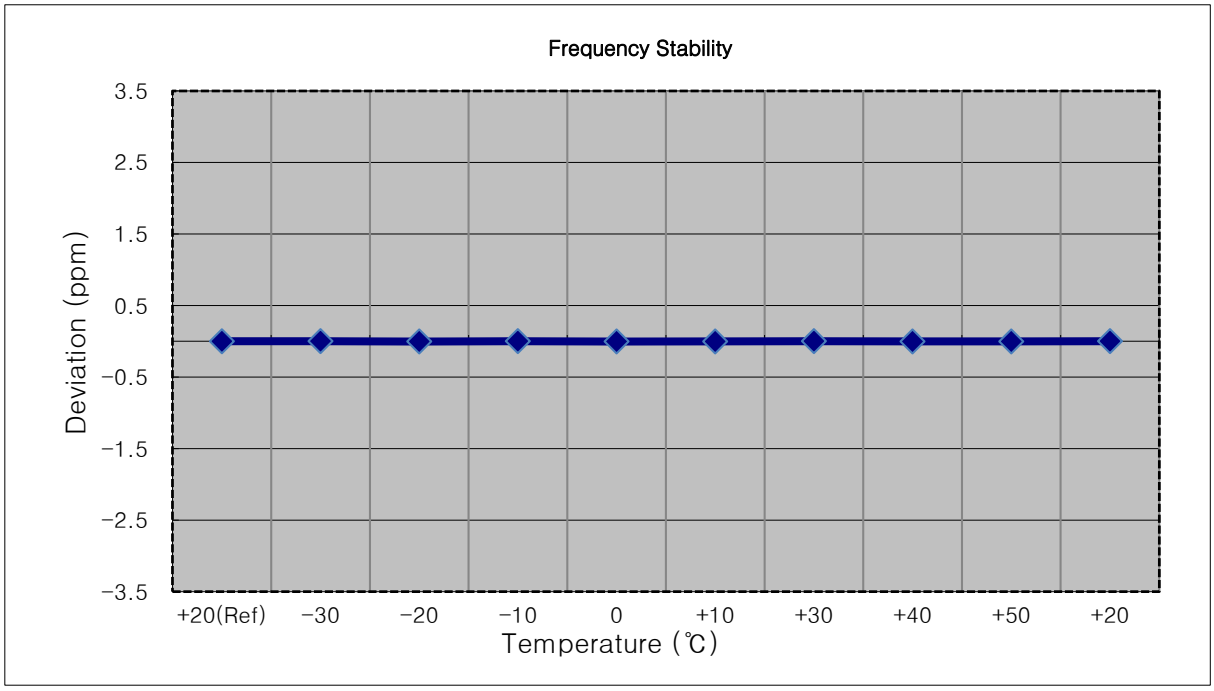
▣ OPERATING FREQUENCY: 1770,000,000 Hz

▣ CHANNEL: 132572 (20 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.85	+20(Ref)	1769 999 996	0.0	0.000 000	0.000
100%		-30	1769 999 999	3.3	0.000 000	0.002
100%		-20	1769 999 991	-4.9	0.000 000	-0.003
100%		-10	1769 999 998	2.3	0.000 000	0.001
100%		0	1769 999 992	-4.3	0.000 000	-0.002
100%		+10	1769 999 993	-3.4	0.000 000	-0.002
100%		+30	1770 000 000	3.4	0.000 000	0.002
100%		+40	1769 999 993	-3.4	0.000 000	-0.002
100%		+50	1769 999 993	-2.8	0.000 000	-0.002
Batt. Endpoint	3.40	+20	1769 999 999	2.5	0.000 000	0.001



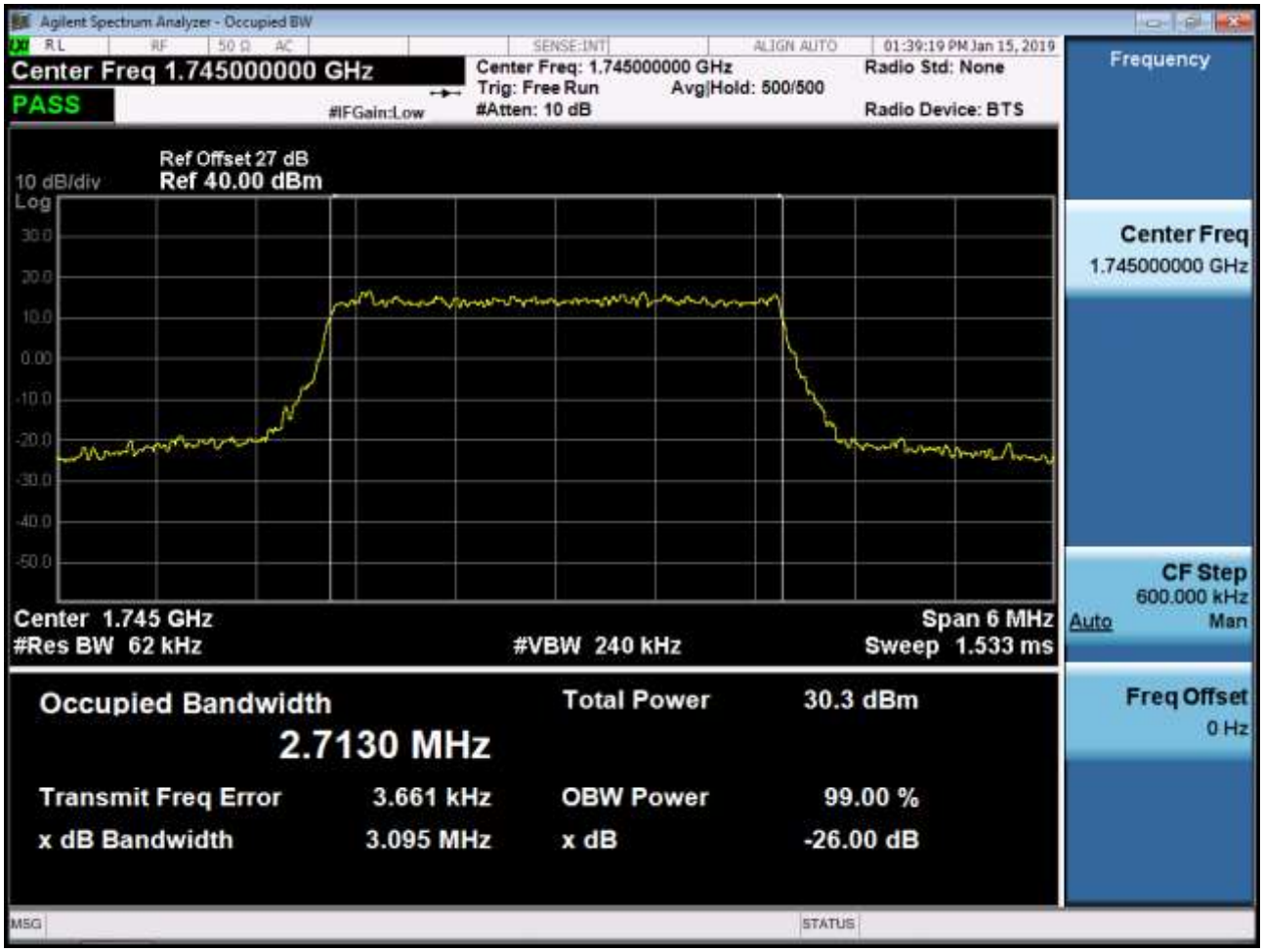
9. TEST PLOTS

BAND 66/4. Occupied Bandwidth Plot (1.4M BW Ch.132322 QPSK RB 6)

BAND 66/4. Occupied Bandwidth Plot (1.4M BW Ch.132322 16QAM RB 6)

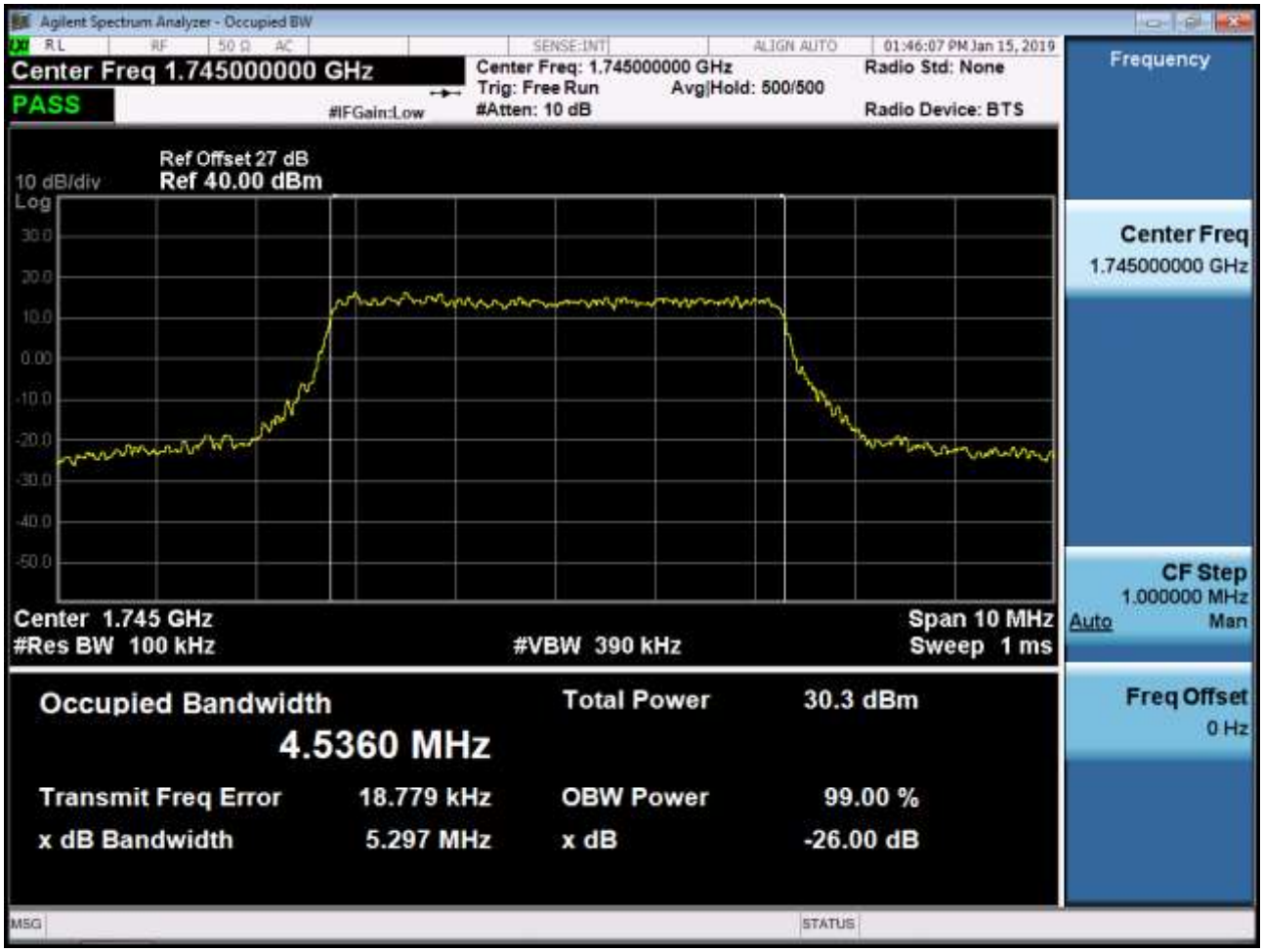
BAND 66/4. Occupied Bandwidth Plot (3M BW Ch.132322 QPSK RB 15)

BAND 66/4. Occupied Bandwidth Plot (3M BW Ch.132322 16QAM RB 15)



BAND 66/4. Occupied Bandwidth Plot (5M BW Ch.132322 QPSK RB 25)

BAND 66/4. Occupied Bandwidth Plot (5M BW Ch.132322 16QAM RB 25)

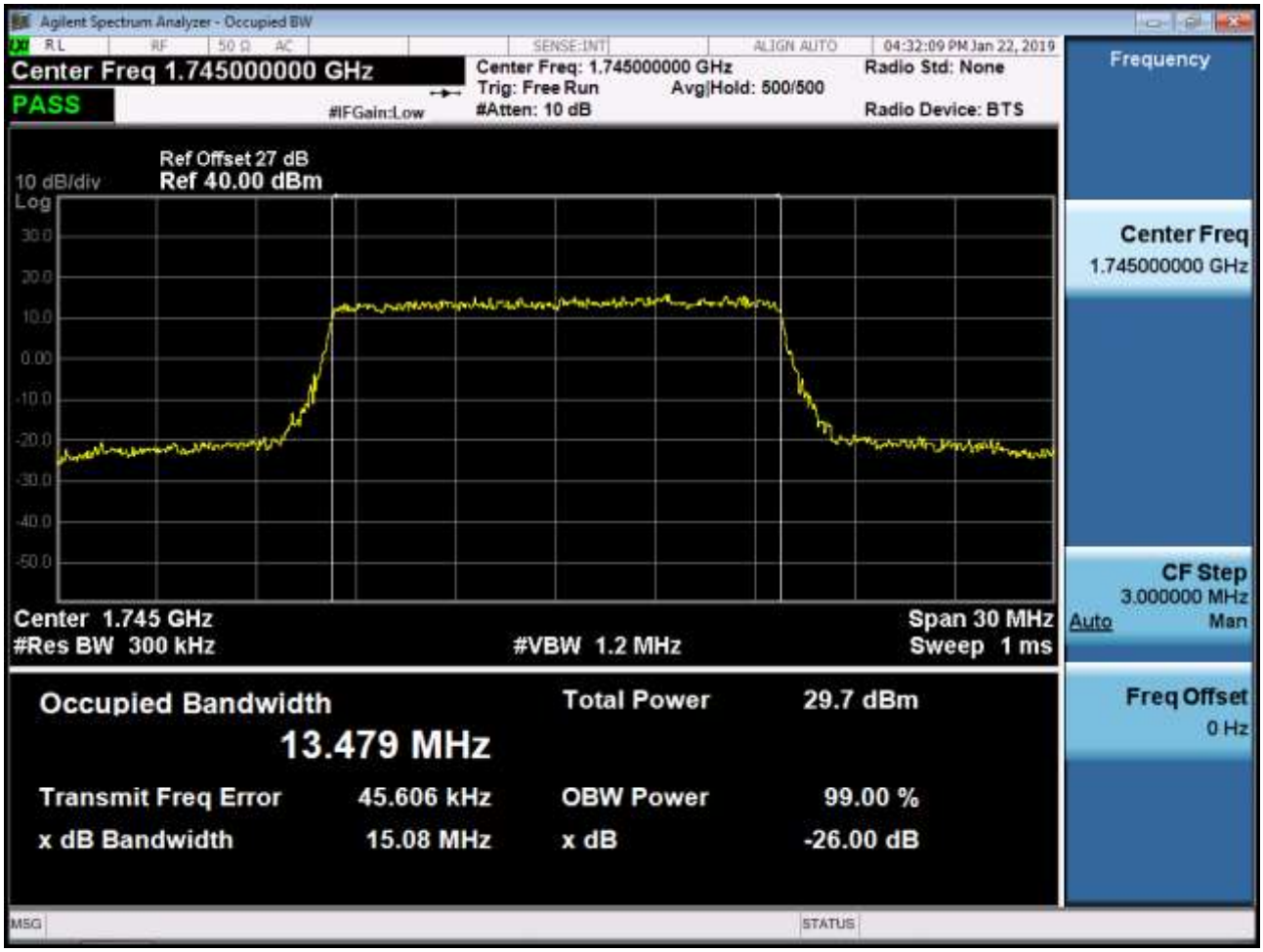


BAND 66/4. Occupied Bandwidth Plot (10M BW Ch.132322 QPSK RB 50)

BAND 66/4. Occupied Bandwidth Plot (10M BW Ch.132322 16QAM RB 50)

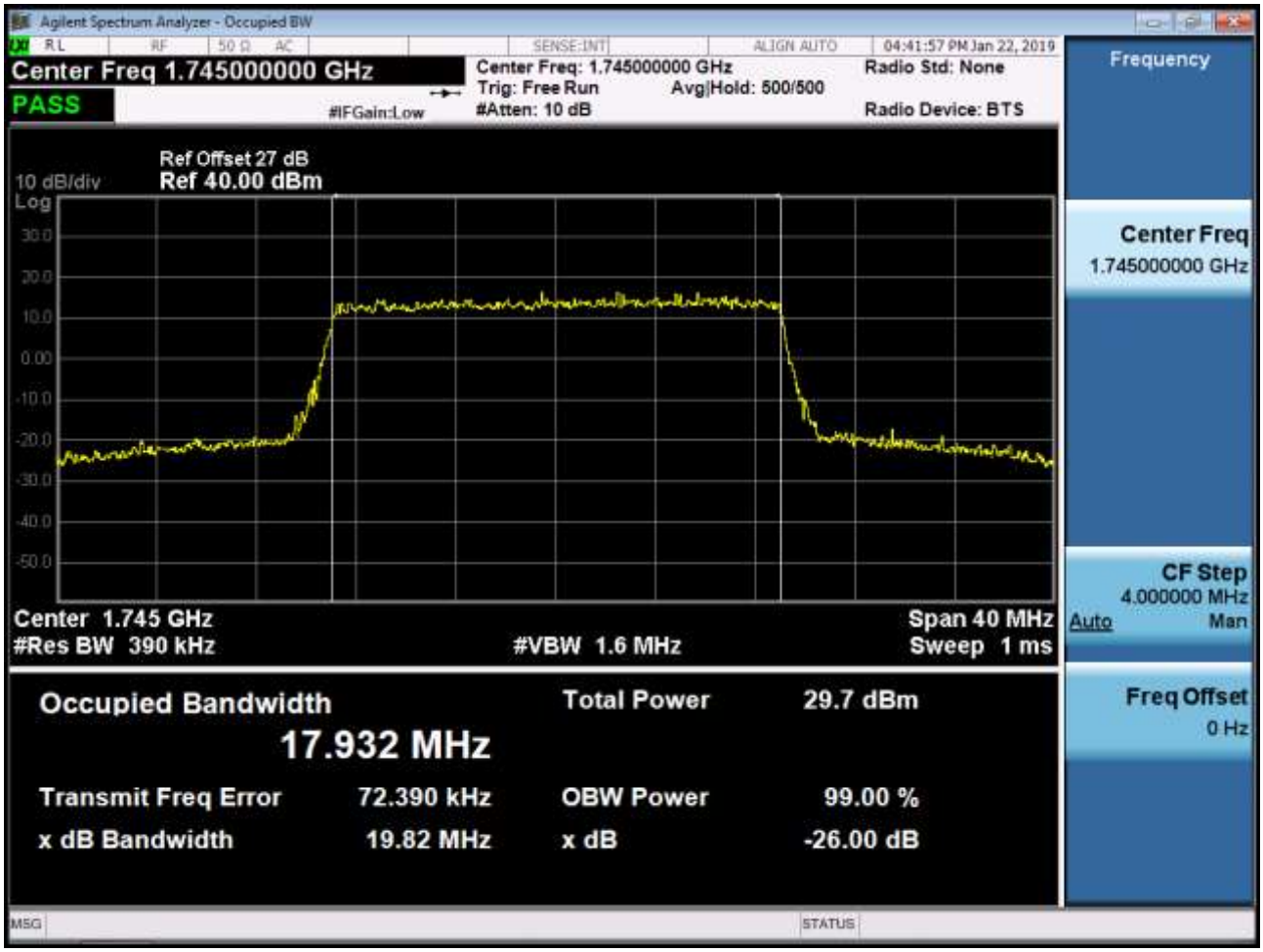
BAND 66/4. Occupied Bandwidth Plot (15M BW Ch.132322 QPSK RB 75)

BAND 66/4. Occupied Bandwidth Plot (15M BW Ch.132322 16QAM RB 75)

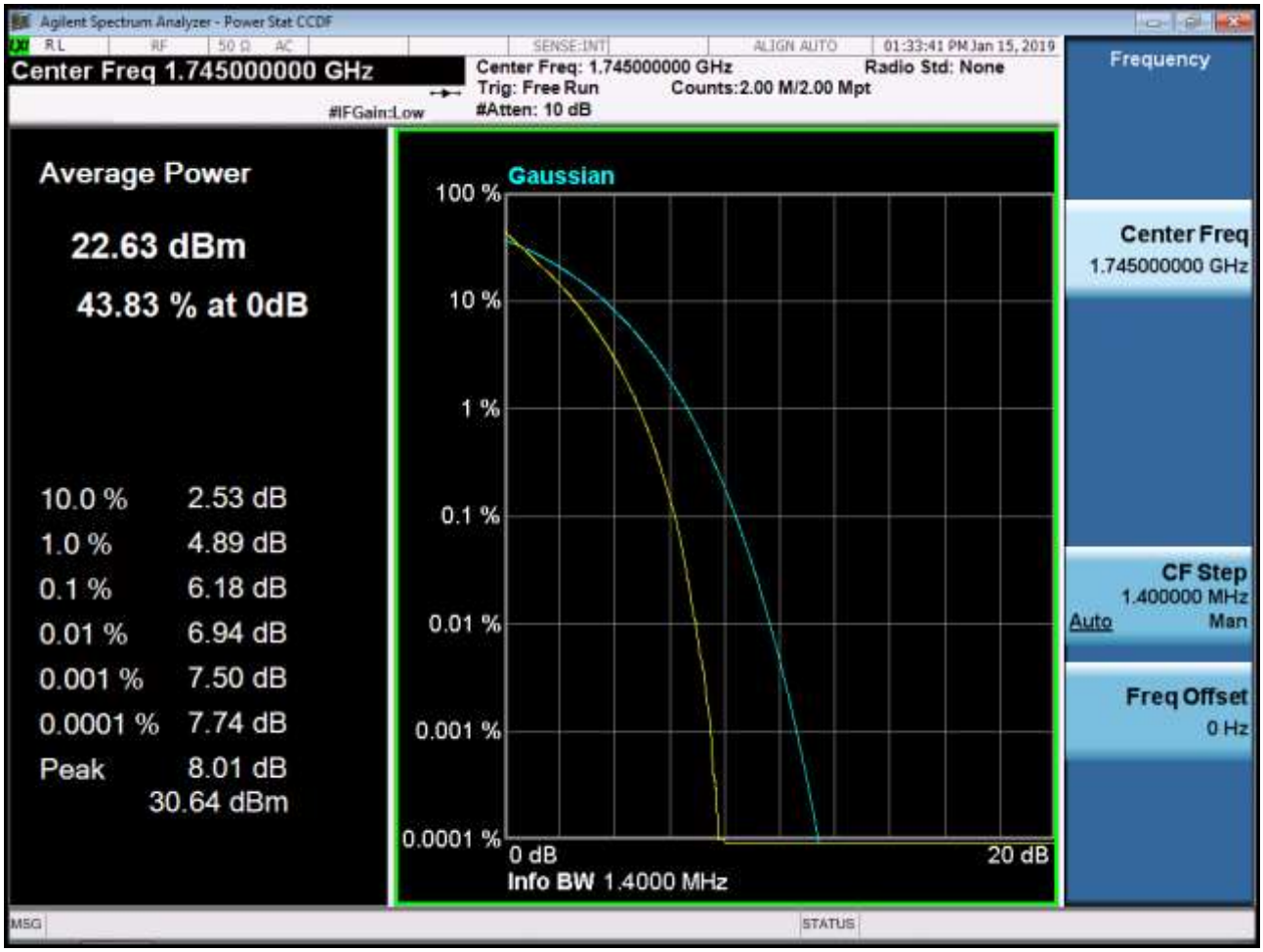


BAND 66/4. Occupied Bandwidth Plot (20M BW Ch.132322 QPSK RB 100)

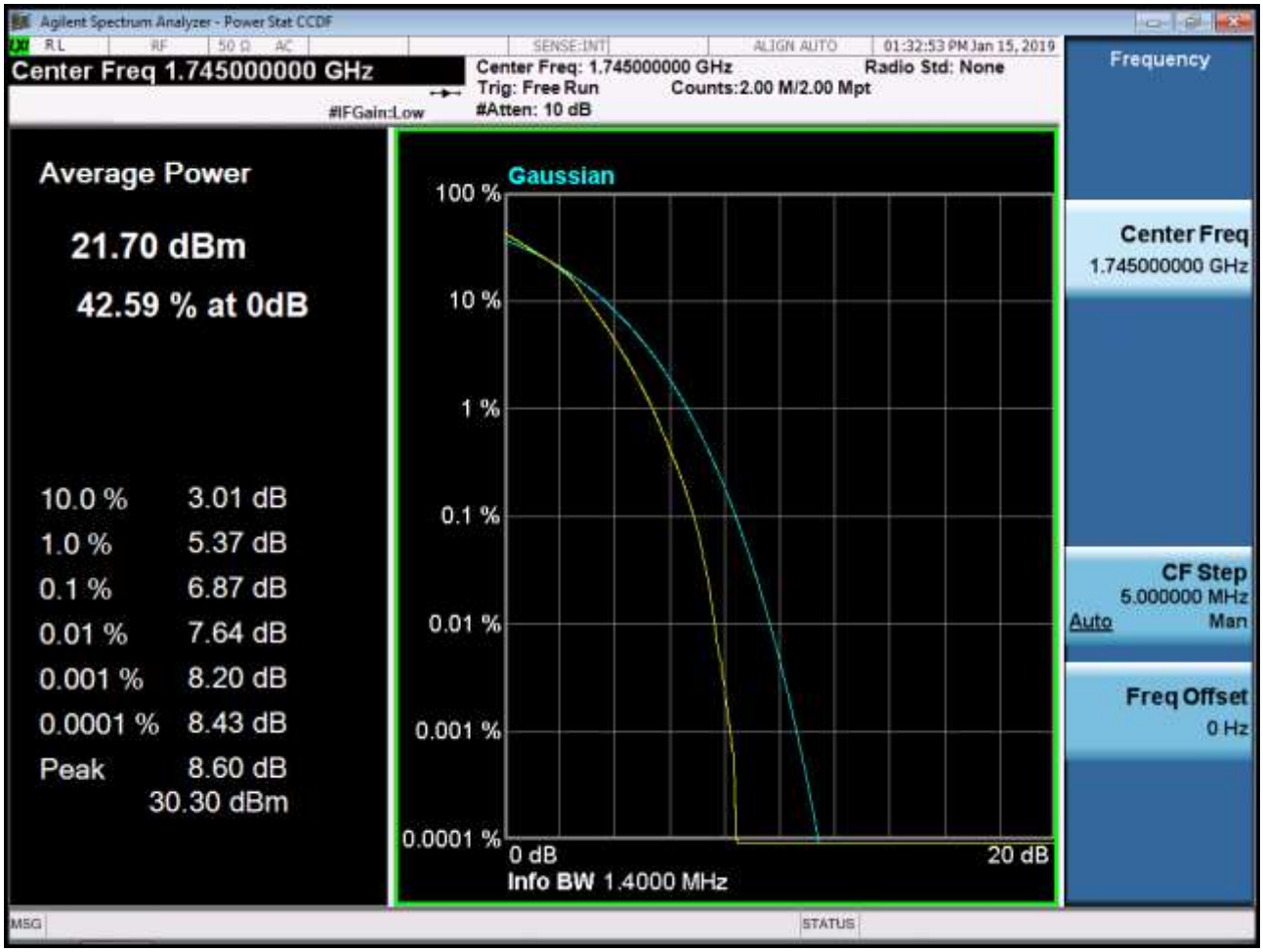
BAND 66/4. Occupied Bandwidth Plot (20M BW Ch.132322 16QAM RB 100)



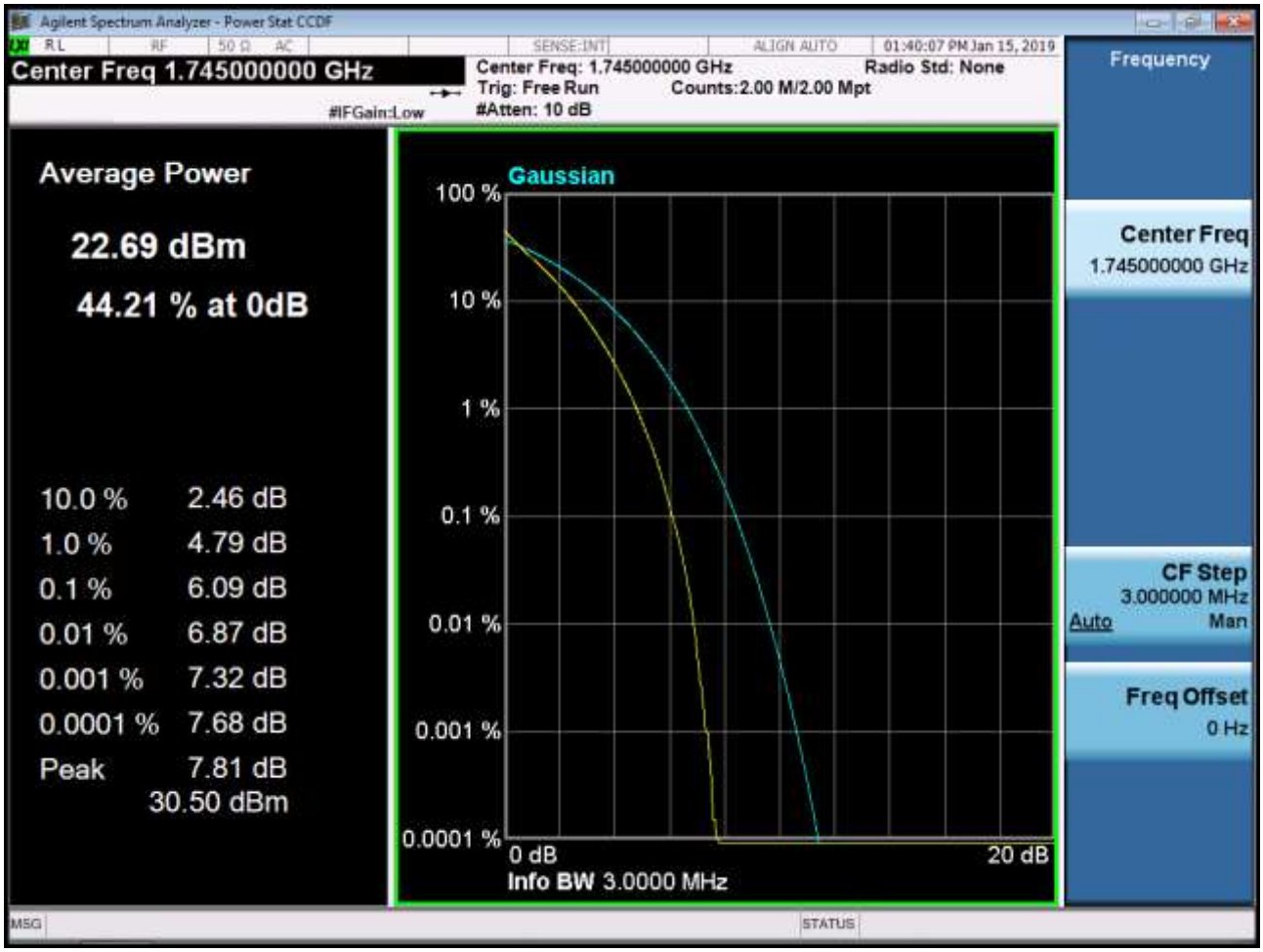
BAND 66/4. PAR Plot (1.4M BW_Ch.132322_QPSK_RB6_0)



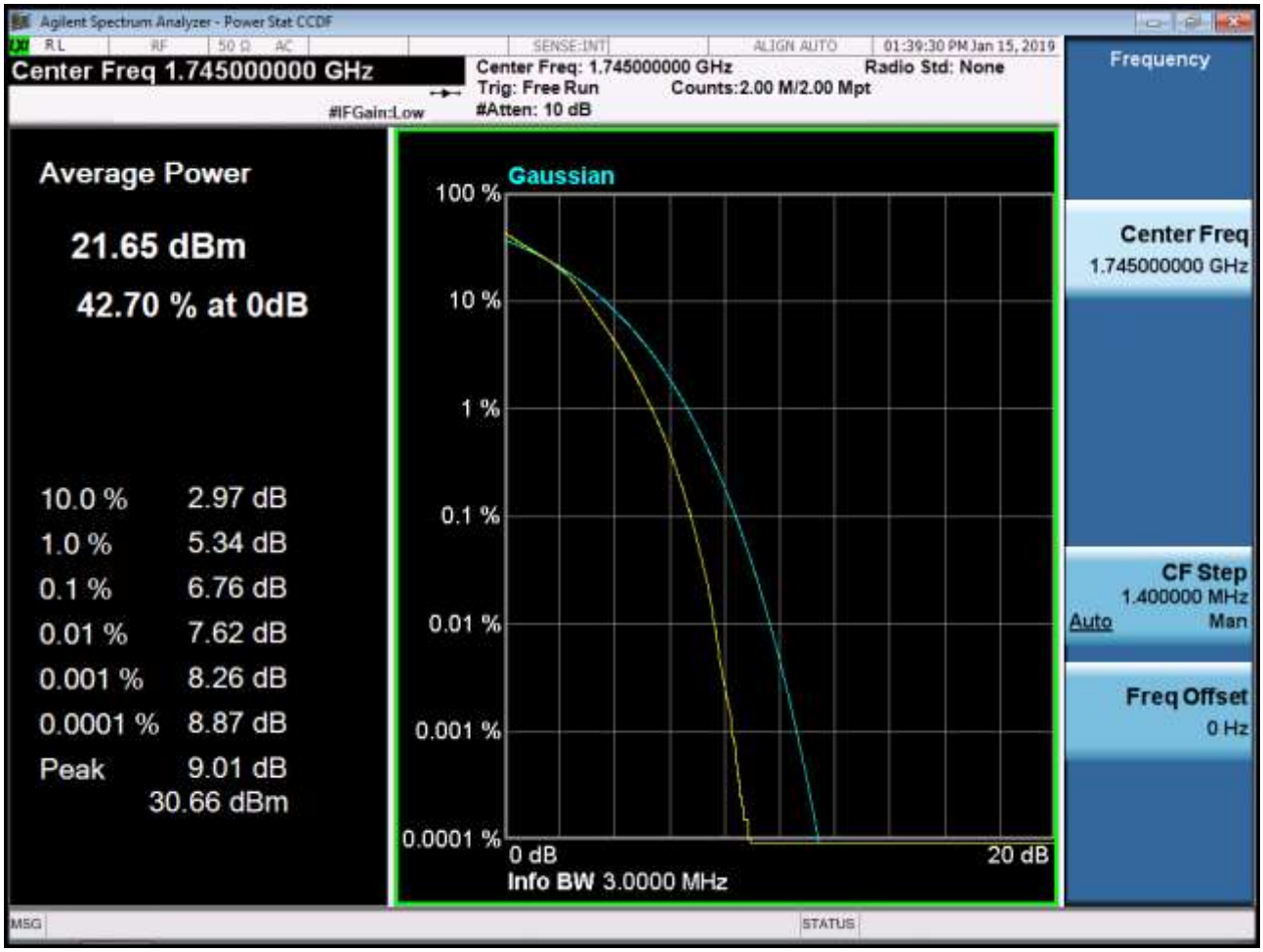
BAND 66/4. PAR Plot (1.4M BW_Ch.132322_16QAM_RB6_0)



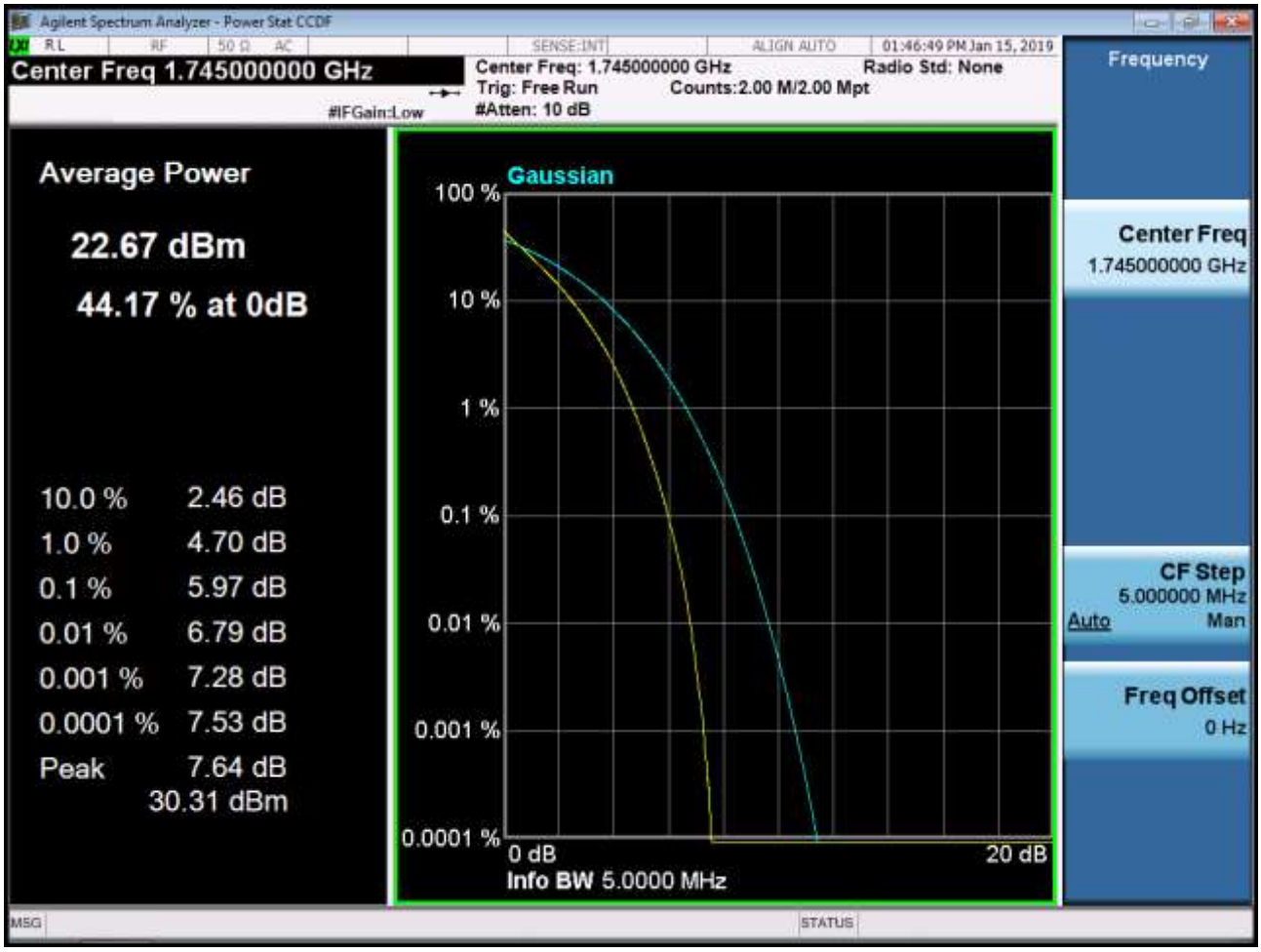
BAND 66/4. PAR Plot (3M BW_Ch.132322_QPSK_RB15_0)



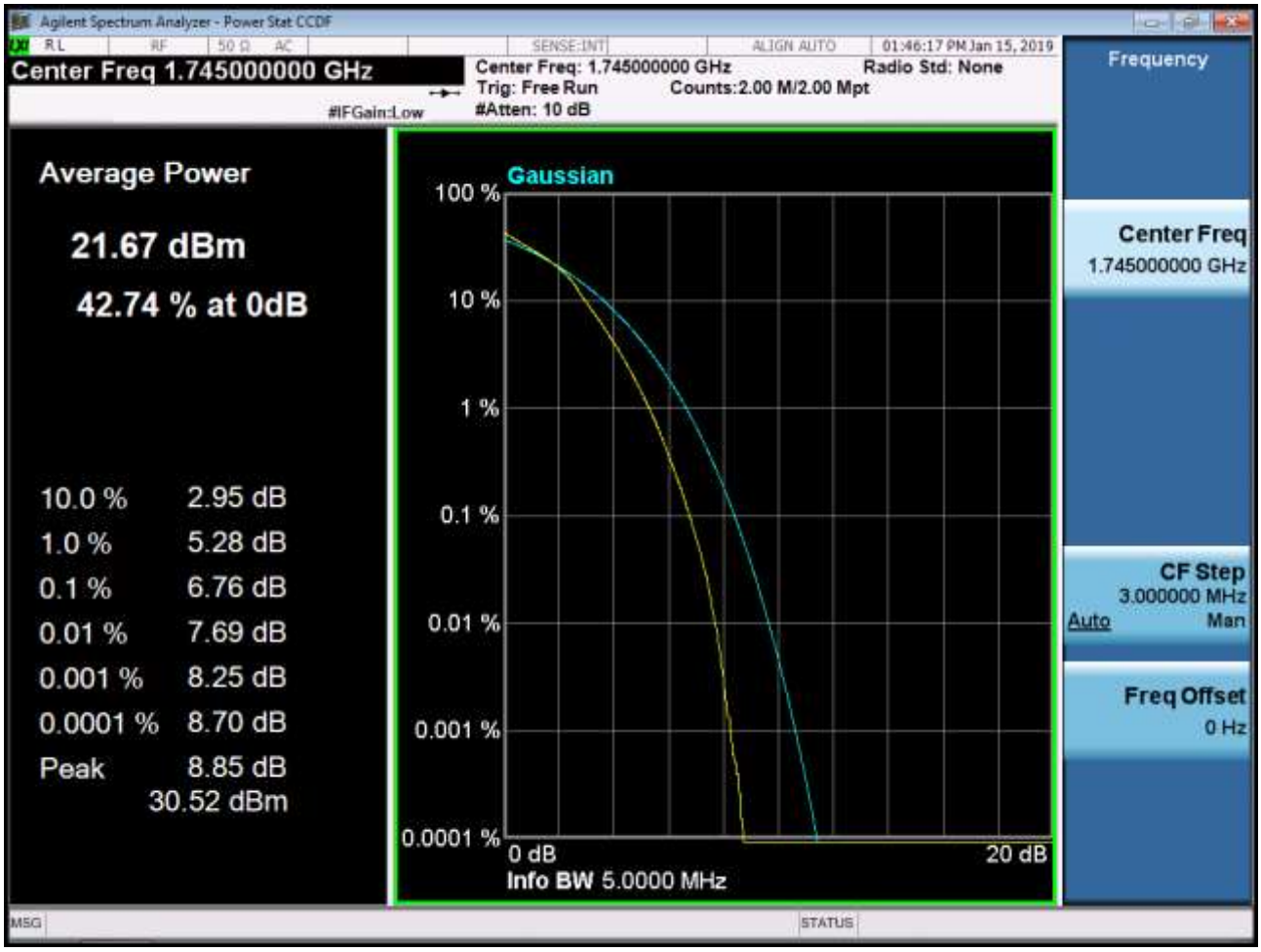
BAND 66/4. PAR Plot (3M BW_Ch.132322_16QAM_RB15_0)



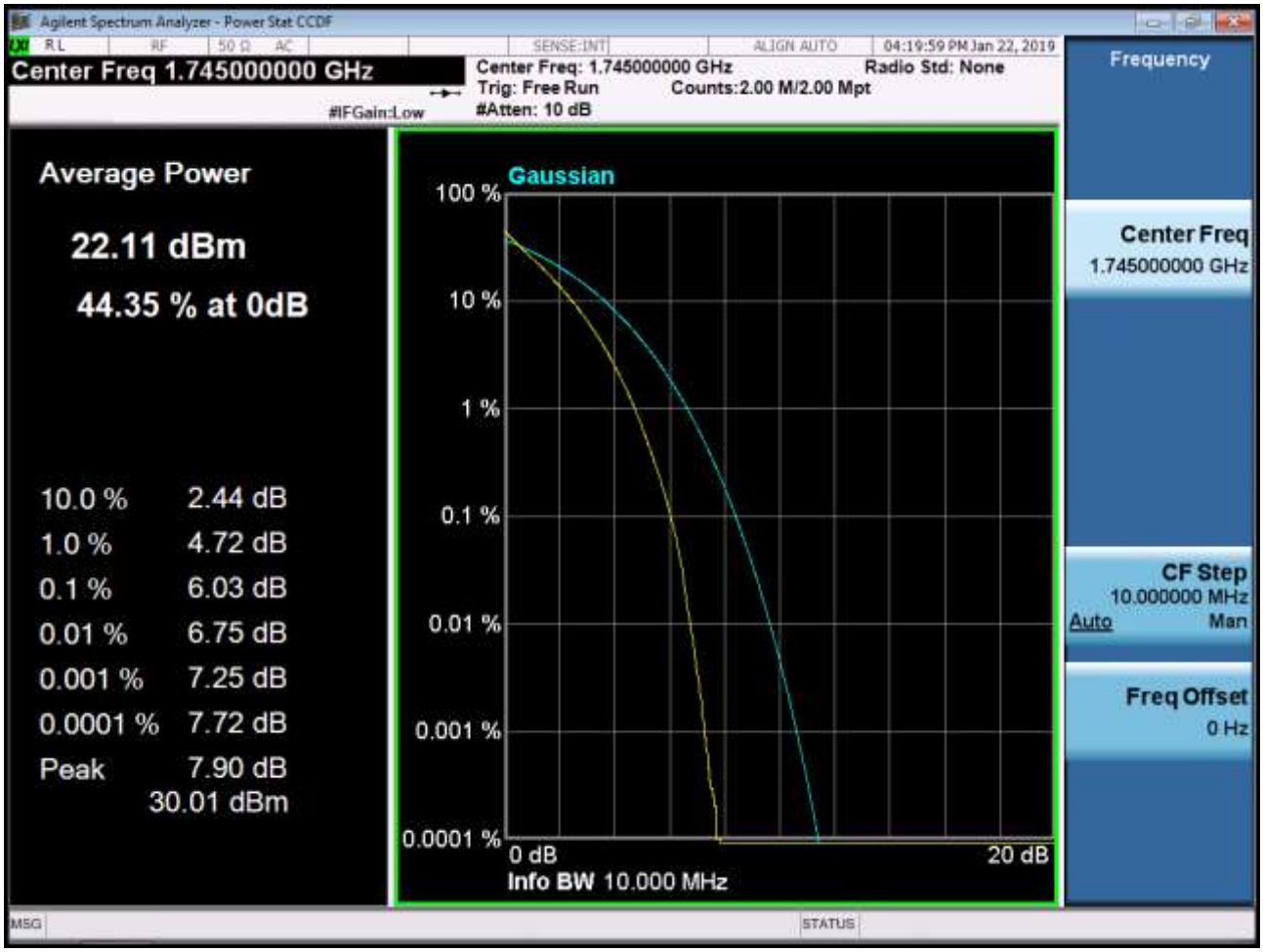
BAND 66/4. PAR Plot (5M BW_Ch.132322_QPSK_RB25_0)



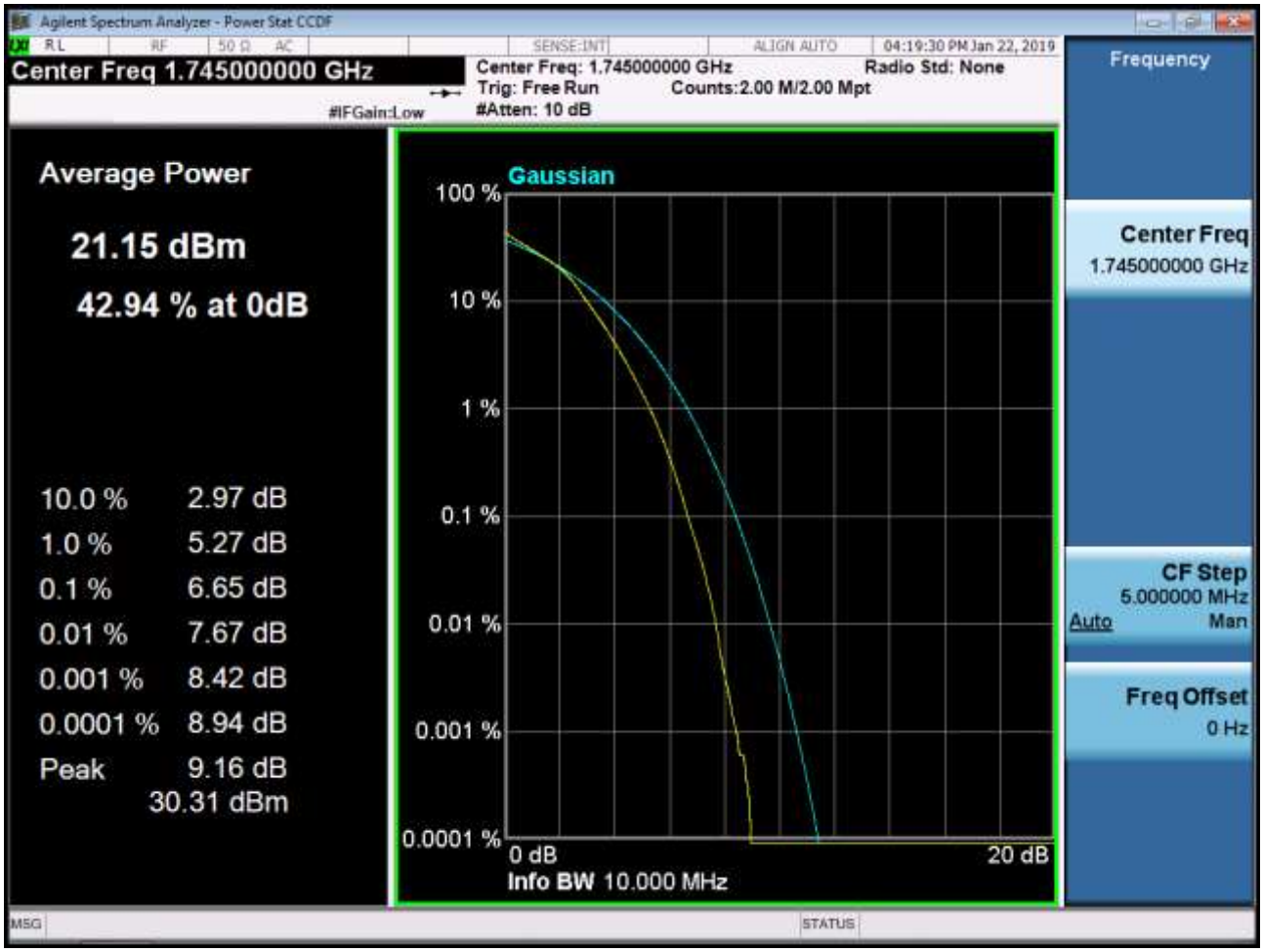
BAND 66/4. PAR Plot (5M BW_Ch.132322_16QAM_RB25_0)



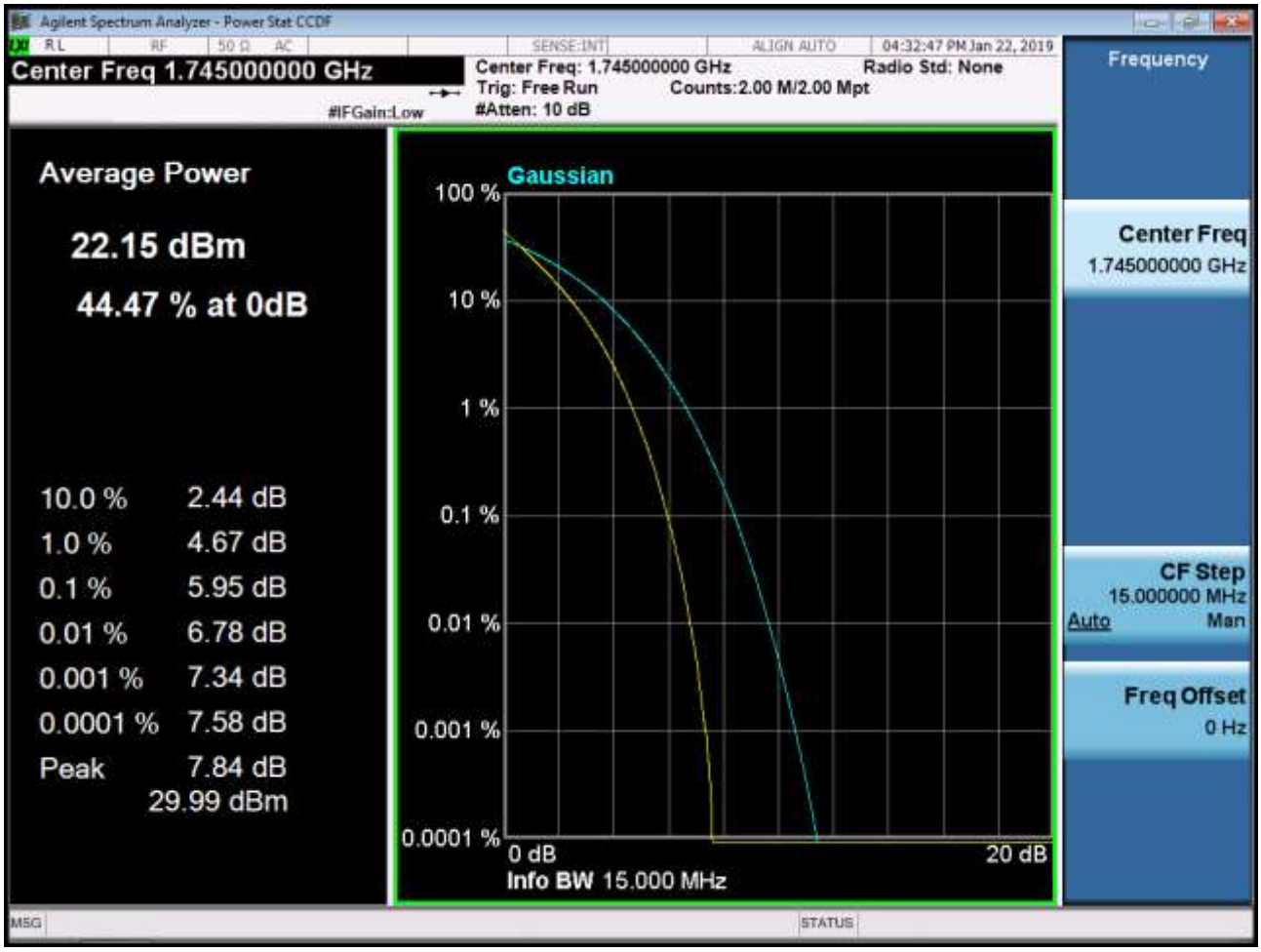
BAND 66/4. PAR Plot (10M BW_Ch.132322_QPSK_RB50_0)



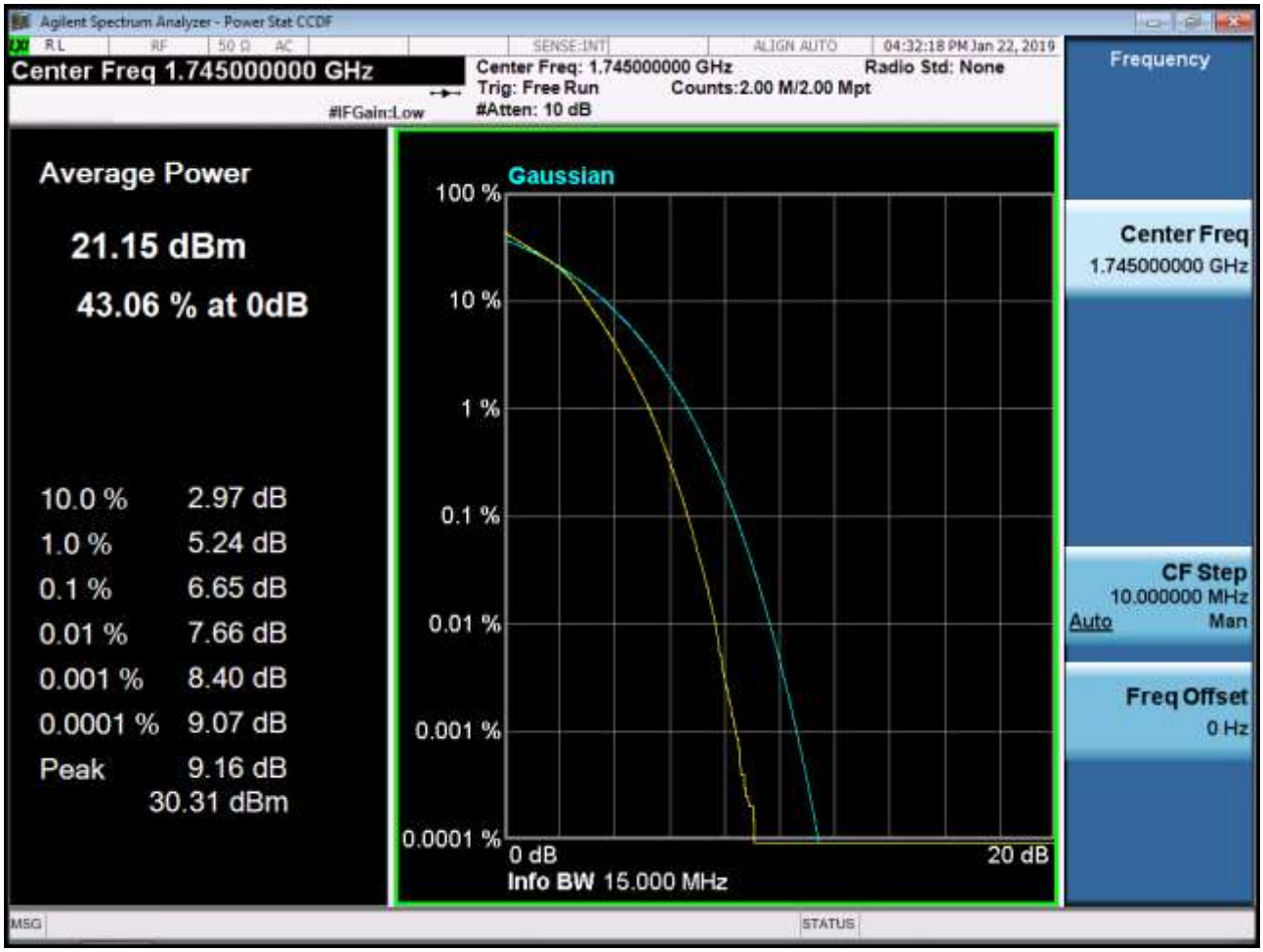
BAND 66/4. PAR Plot (10M BW_Ch.132322_16QAM_RB50_0)



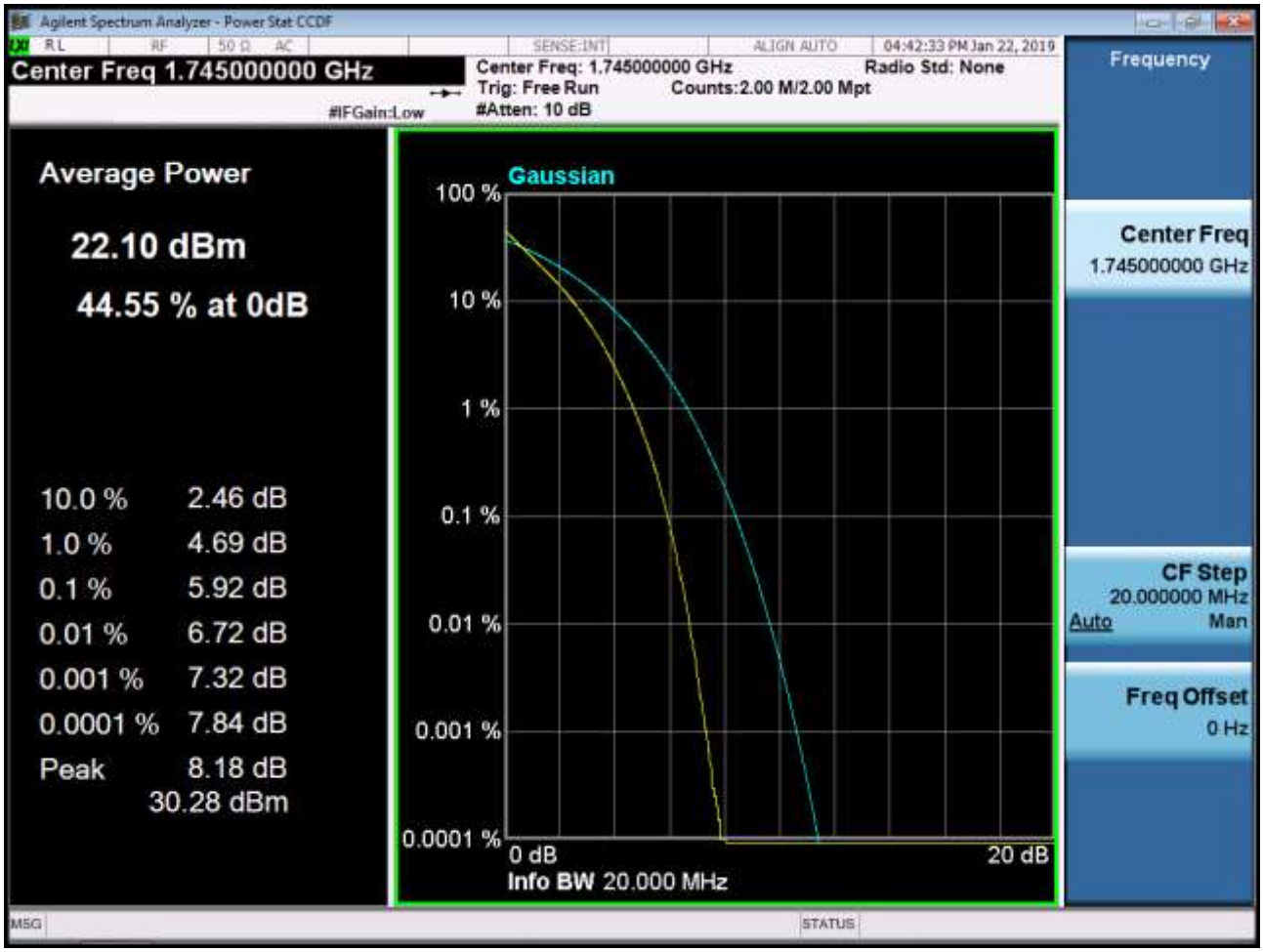
BAND 66/4. PAR Plot (15M BW_Ch.132322_QPSK_RB75_0)



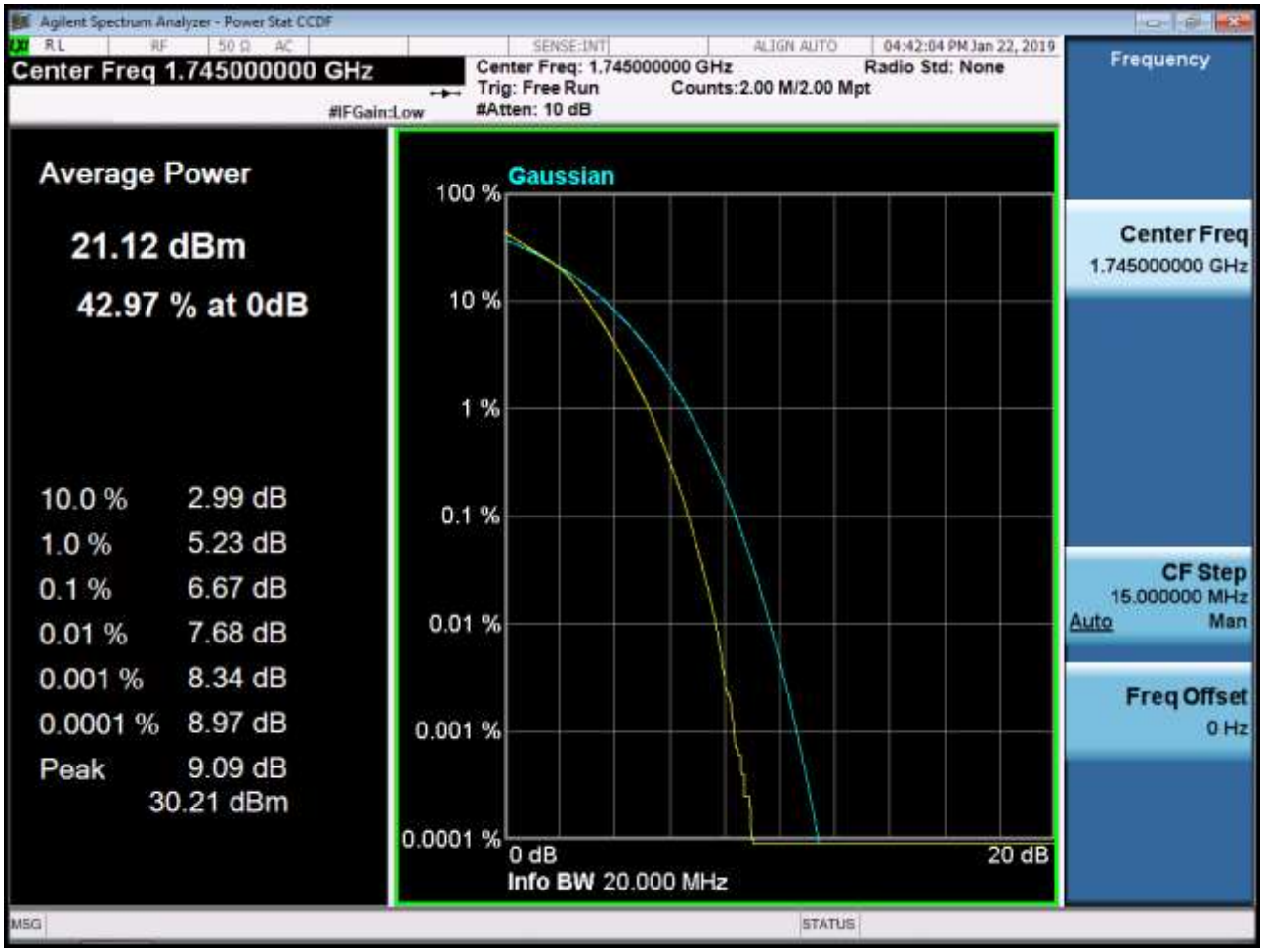
BAND 66/4. PAR Plot (15M BW_Ch.132322_16QAM_RB75_0)



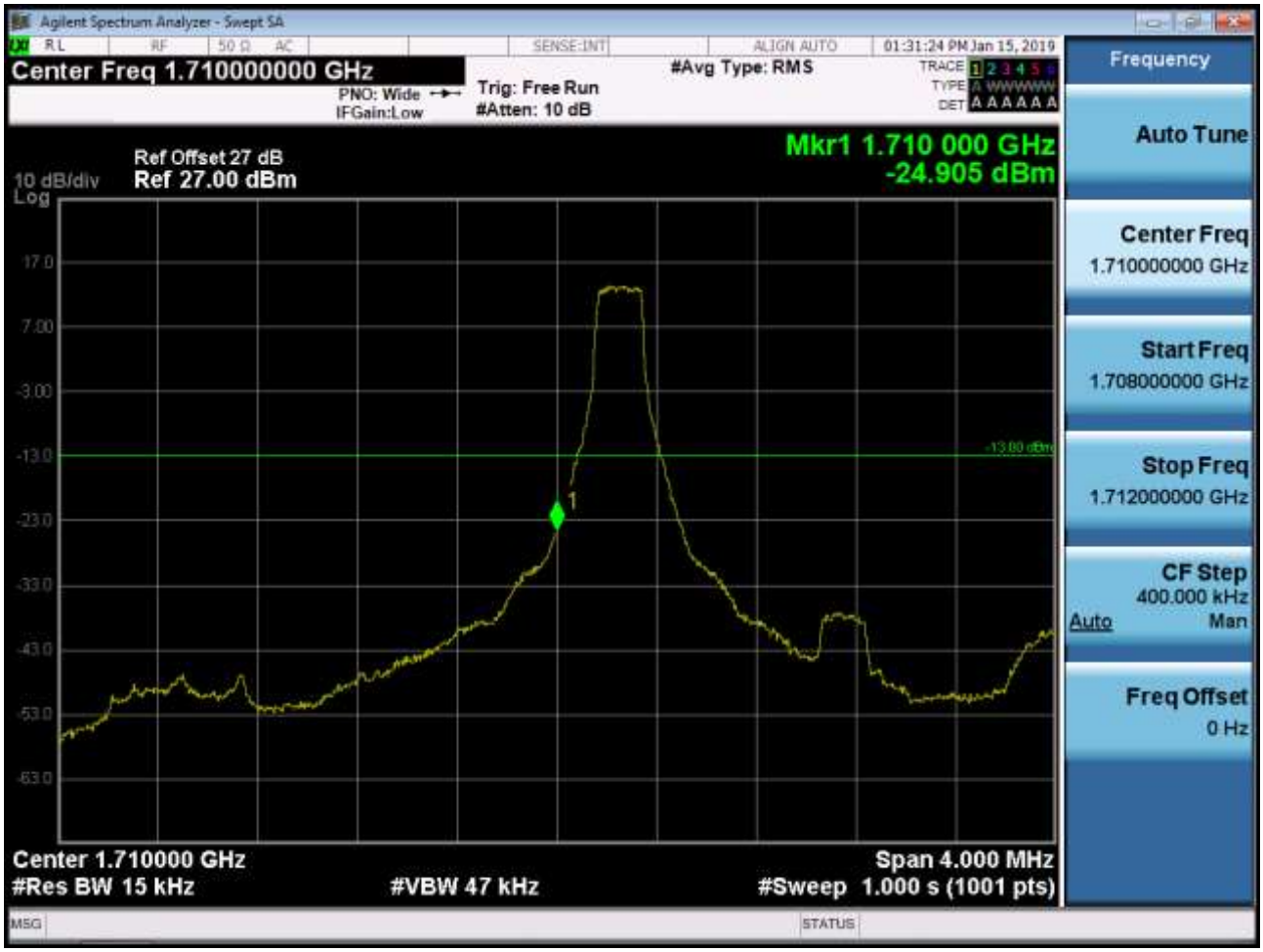
BAND 66/4. PAR Plot (20M BW_Ch.132322_QPSK_RB100_0)



BAND 66/4. PAR Plot (20M BW_Ch.132322_16QAM_RB100_0)



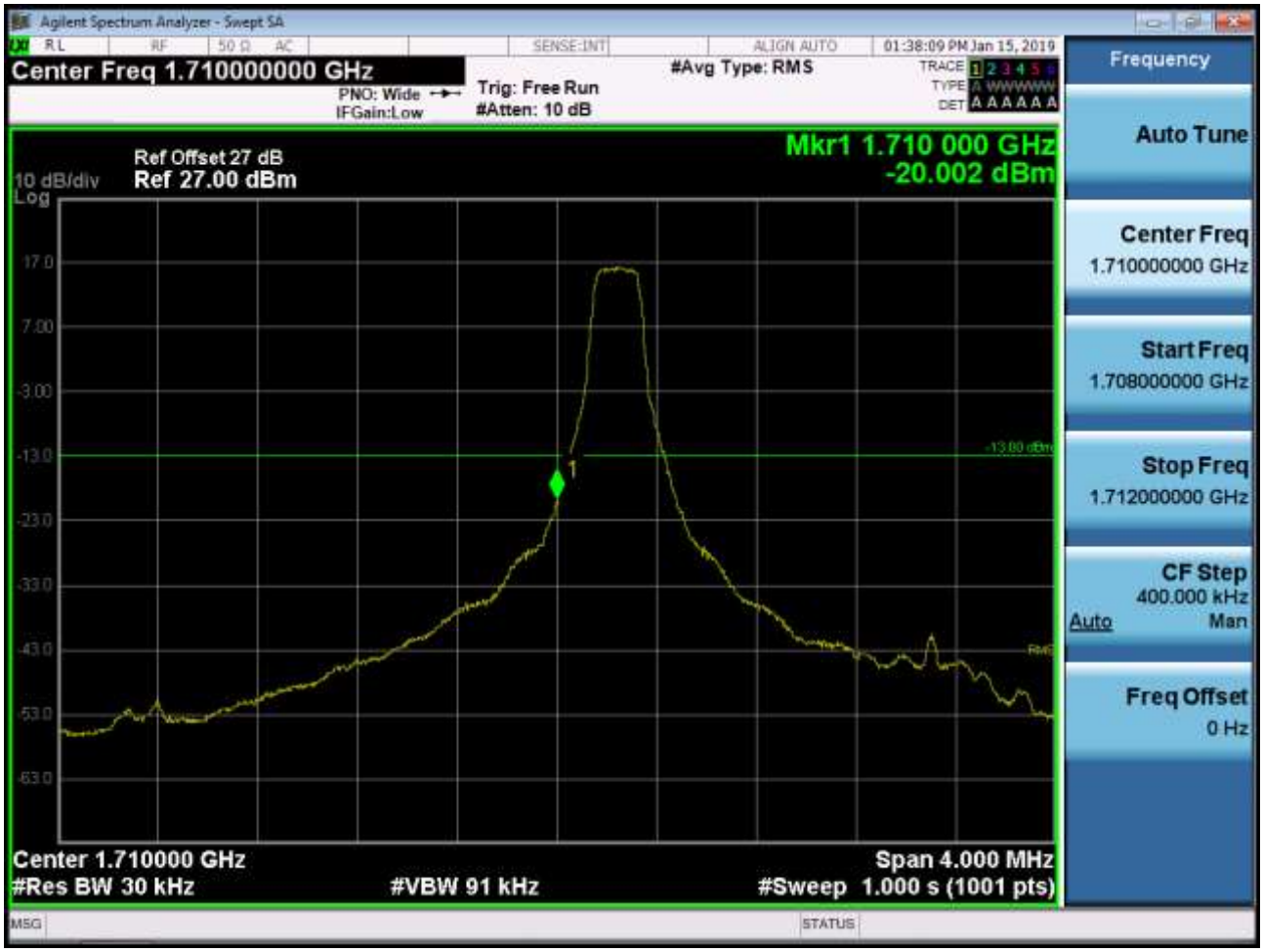
BAND 66/4. Lower Band Edge Plot (1.4M BW Ch.131979 QPSK RB 1, Offset 0) -1



BAND 66/4. Lower Band Edge Plot (1.4M BW Ch.131979 QPSK RB 6) -2

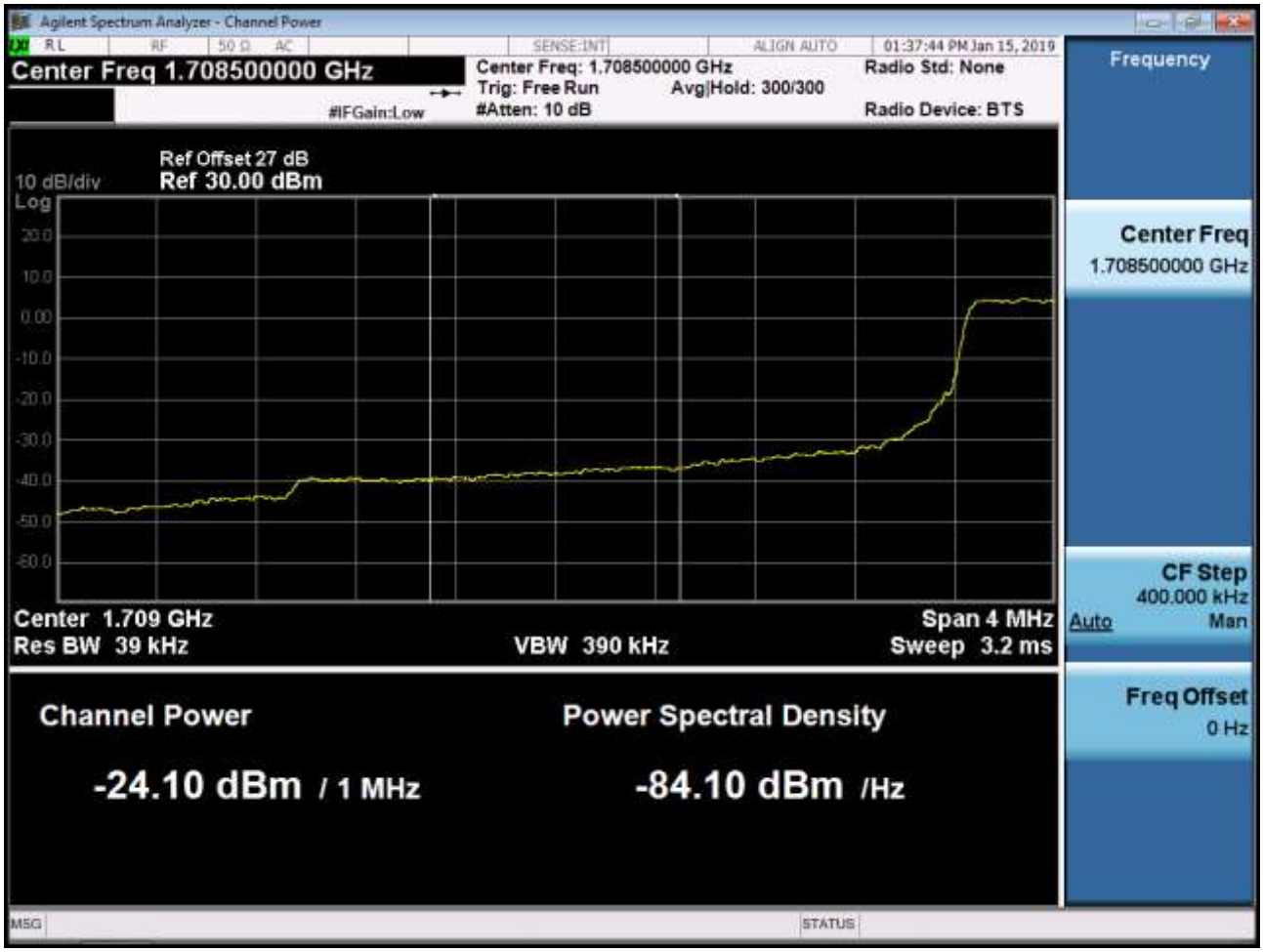
BAND 66/4. Lower Extended Band Edge Plot (1.4M BW Ch.131979 QPSK_RB6_0) -3

BAND 66/4. Lower Band Edge Plot (3M BW Ch.131987 QPSK RB 1, Offset 0) -1



BAND 66/4. Lower Band Edge Plot (3M BW Ch.131987 QPSK RB 15) -2

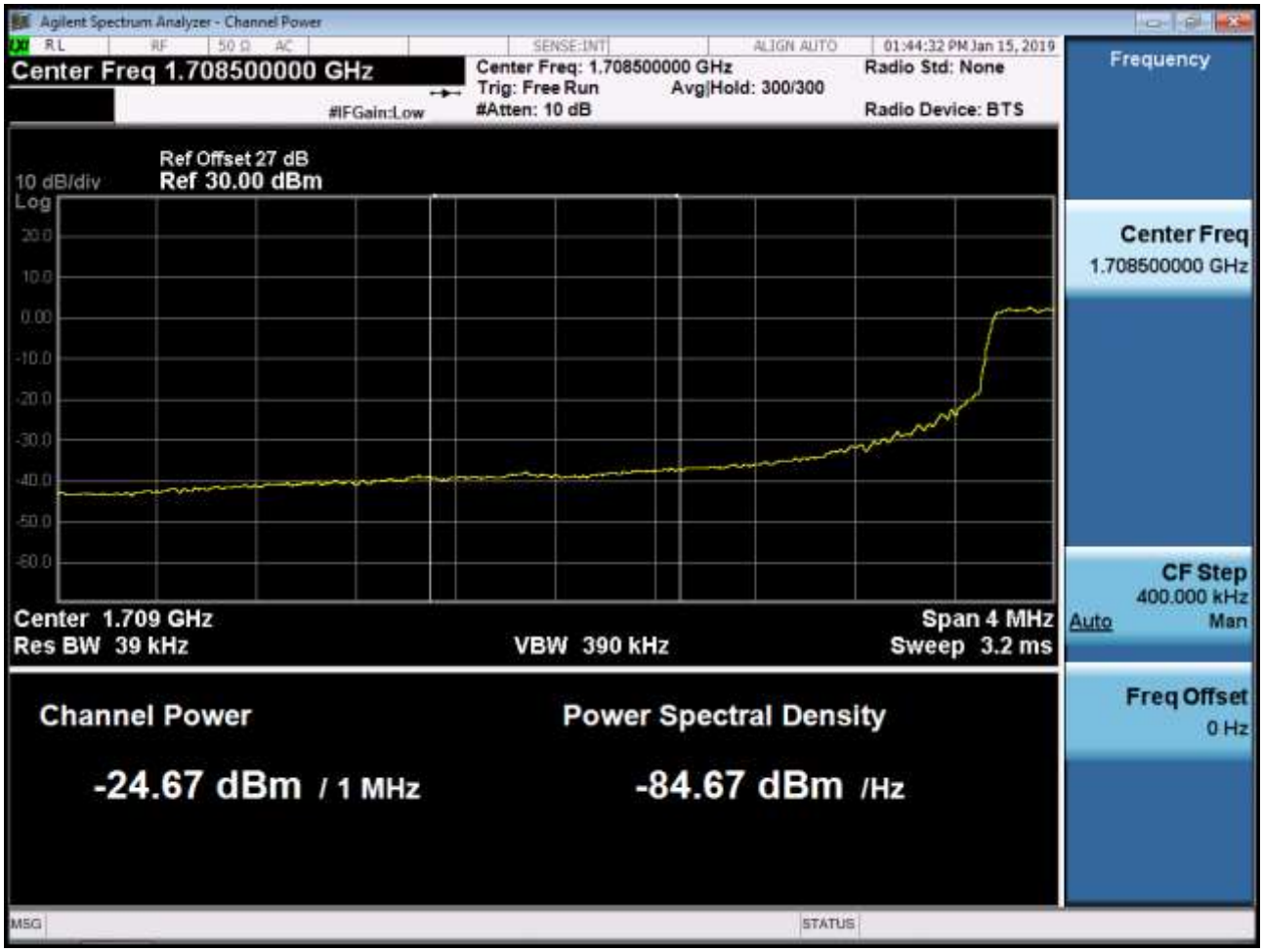
BAND 66/4. Lower Extended Band Edge Plot (3M BW Ch.131987 QPSK_RB15_0) -3



BAND 66/4. Lower Band Edge Plot (5M BW Ch.131997 QPSK RB 1, Offset 0) -1

BAND 66/4. Lower Band Edge Plot (5M BW Ch.131997 QPSK RB 25) -2

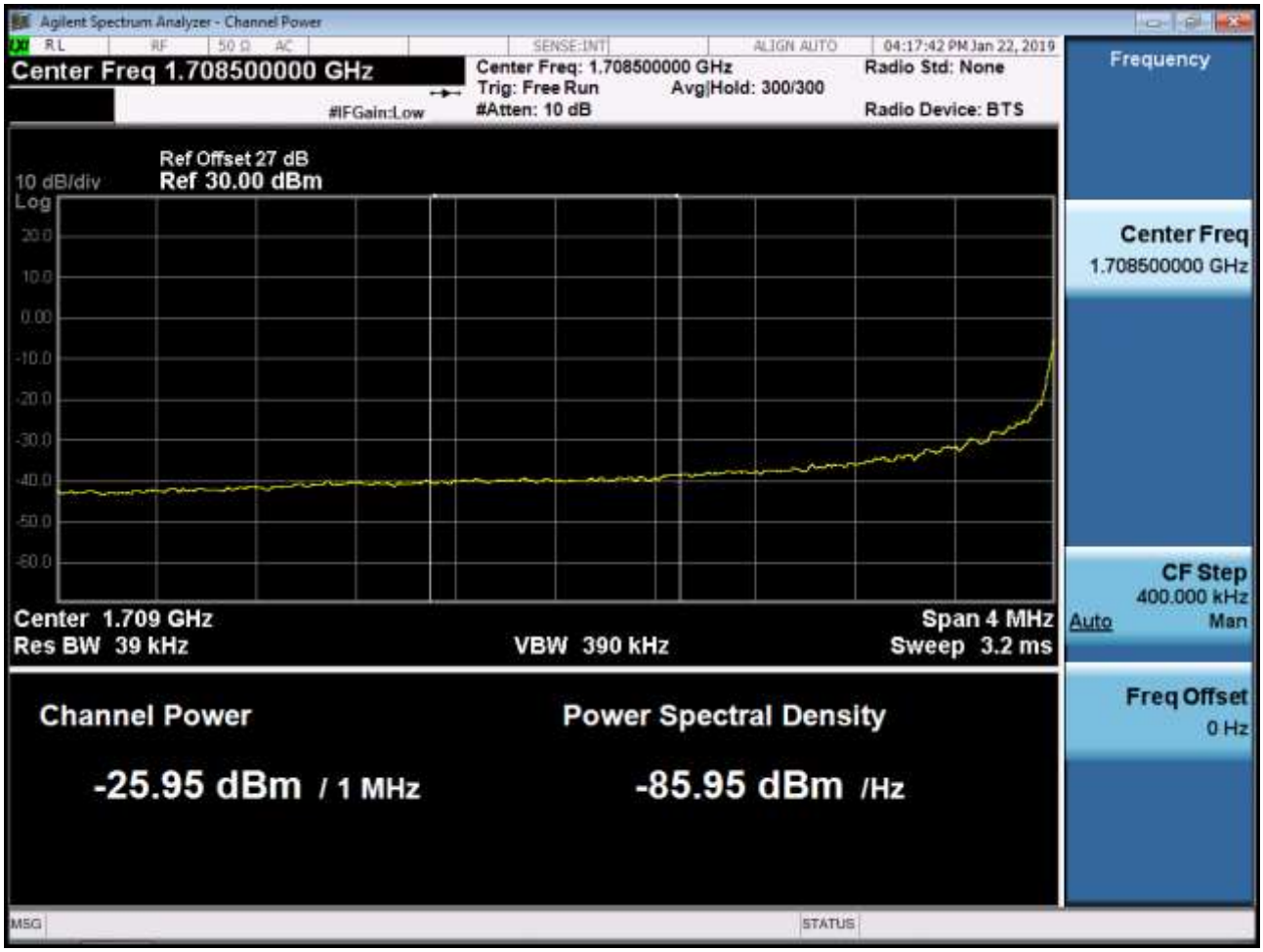
BAND 66/4. Lower Extended Band Edge Plot (5M BW Ch.131997 QPSK_RB25_0) -3



BAND 66/4. Lower Band Edge Plot (10M BW Ch.132022 QPSK RB 1, Offset 0) -1

BAND 66/4. Lower Band Edge Plot (10M BW Ch.132022 QPSK RB 50) -2

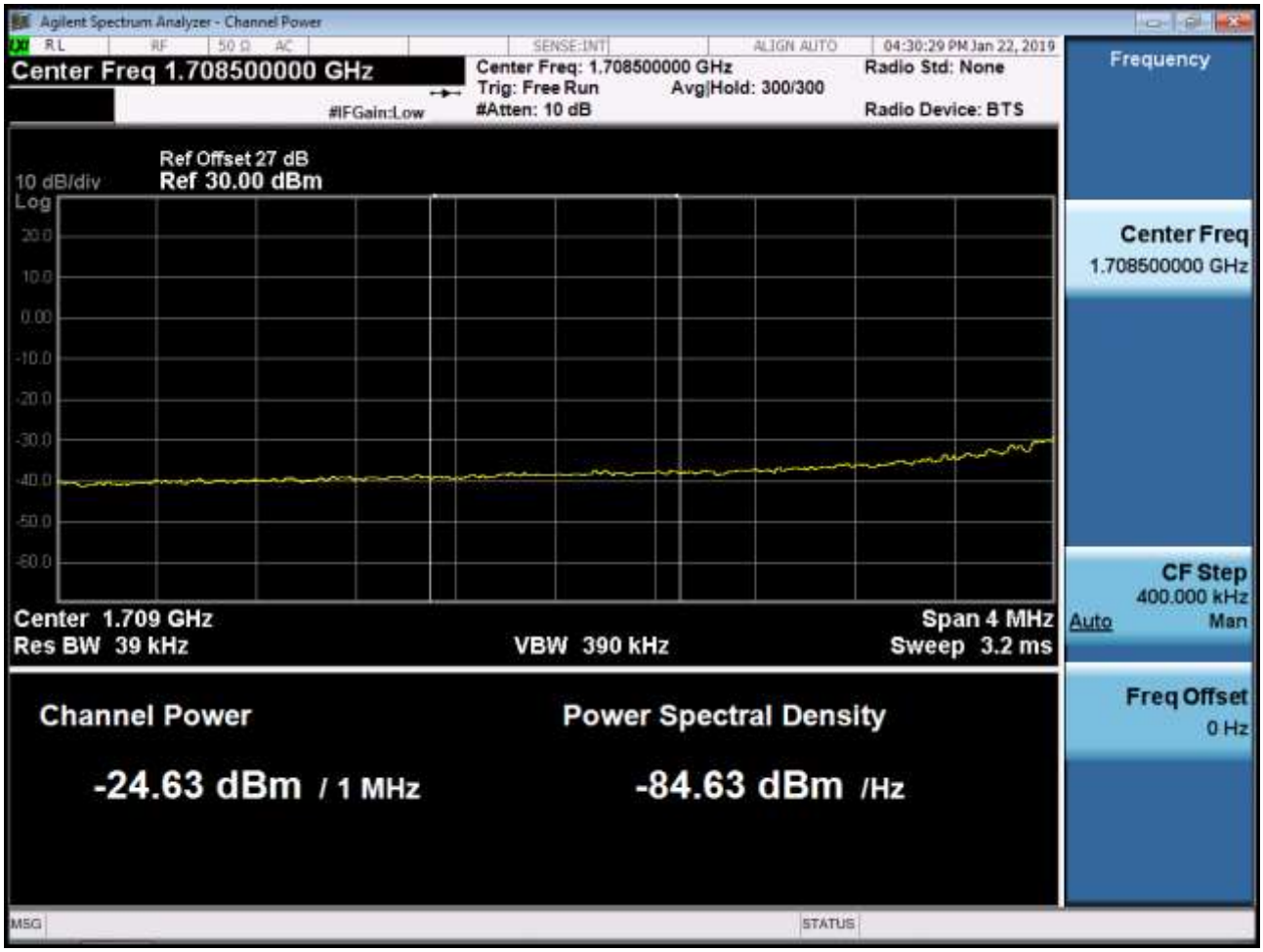
BAND 66/4. Lower Extended Band Edge Plot (10M BW Ch.132022 QPSK_RB50_0) -3



BAND 66/4. Lower Band Edge Plot (15M BW Ch.132047 QPSK RB 1, Offset 0) -1

BAND 66/4. Lower Band Edge Plot (15M BW Ch.132047 QPSK RB 75) -2

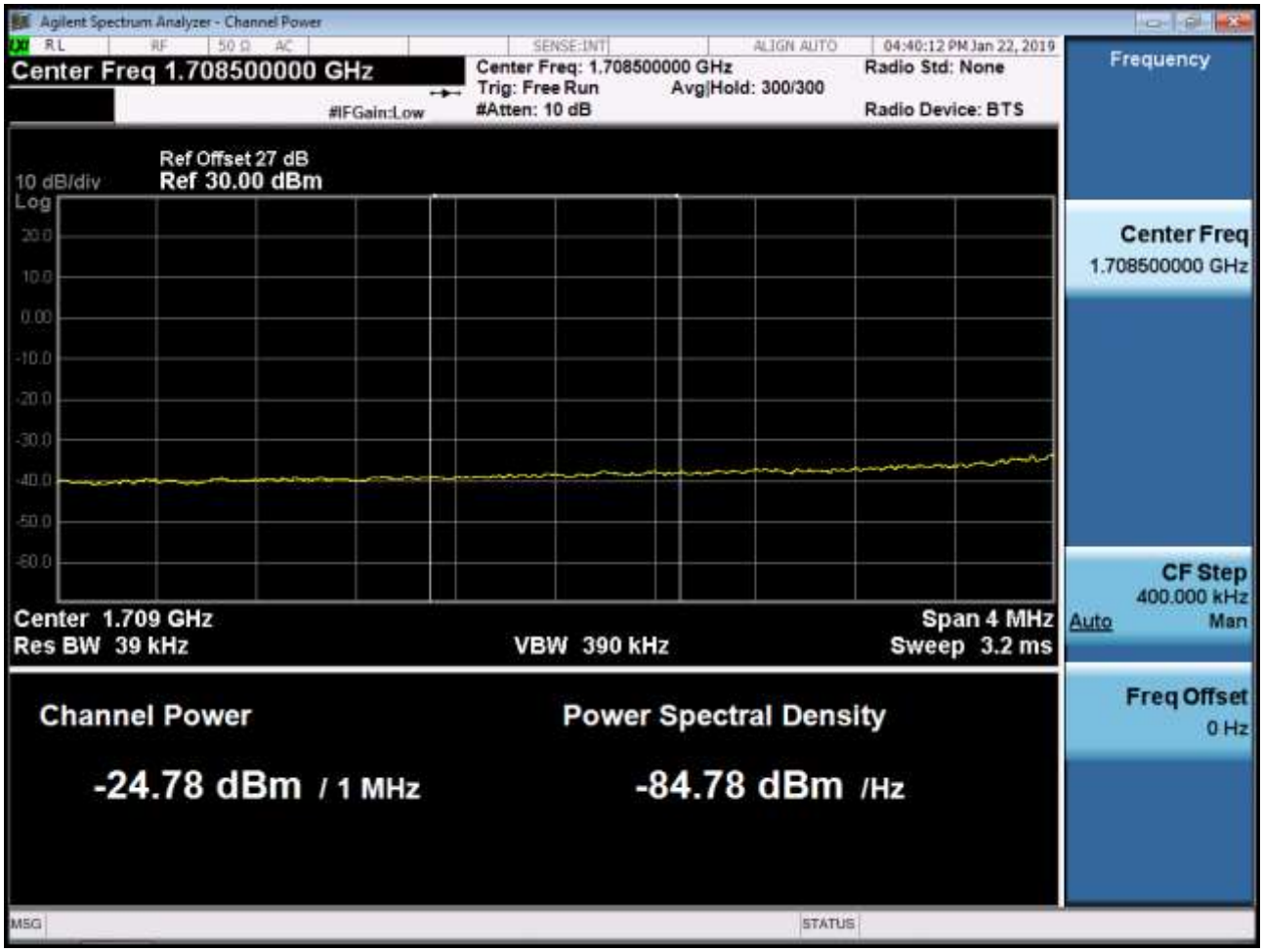
BAND 66/4. Lower Extended Band Edge Plot (15M BW Ch.132047 QPSK_RB75_0) -3



BAND 66/4. Lower Band Edge Plot (20M BW Ch.132072 QPSK RB 1, Offset 0) -1

BAND 66/4. Lower Band Edge Plot (20M BW Ch.132072 QPSK RB 100) -2

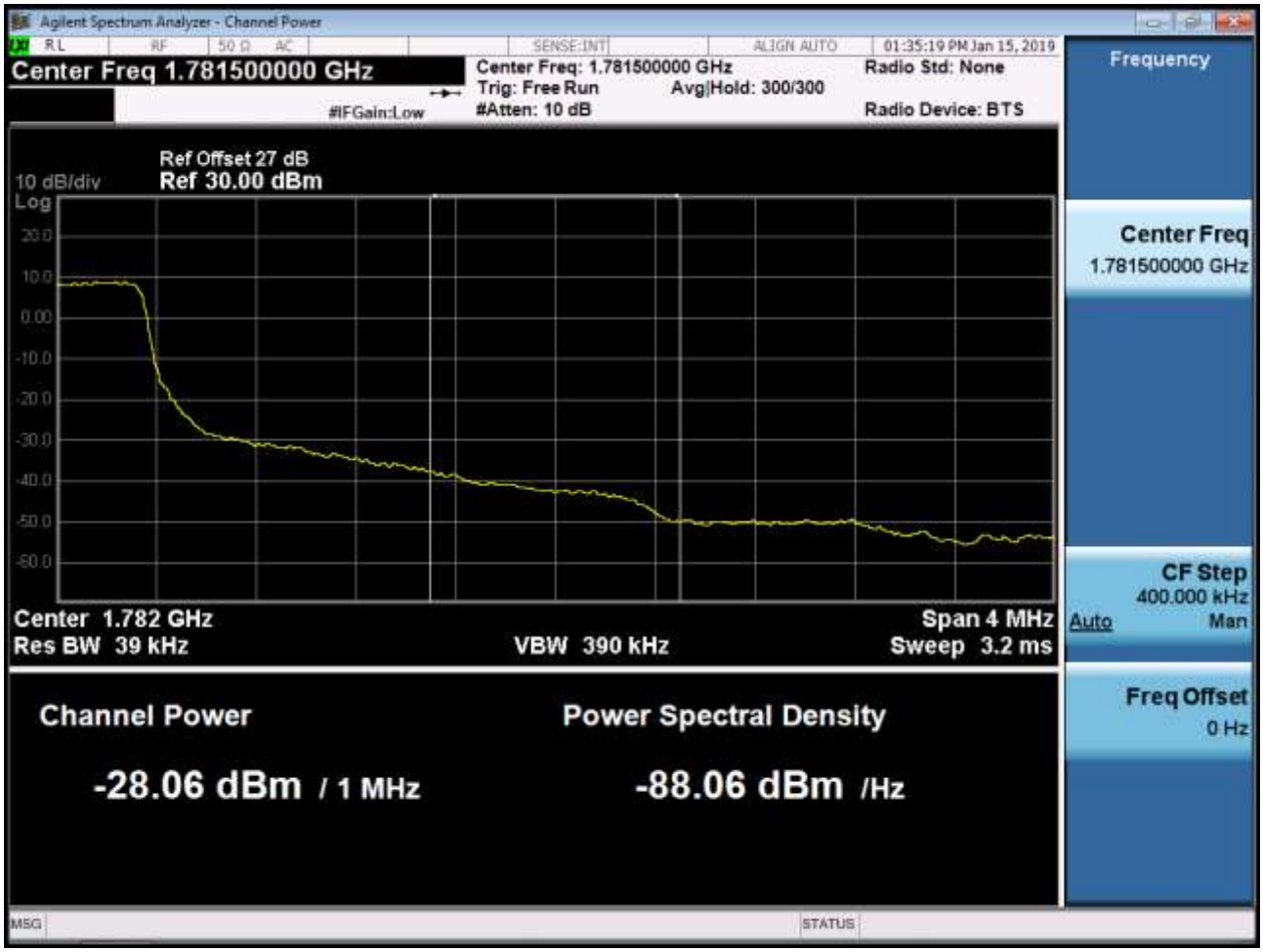
BAND 66/4. Lower Extended Band Edge Plot (20M BW Ch.132072 QPSK_RB100_0) -3



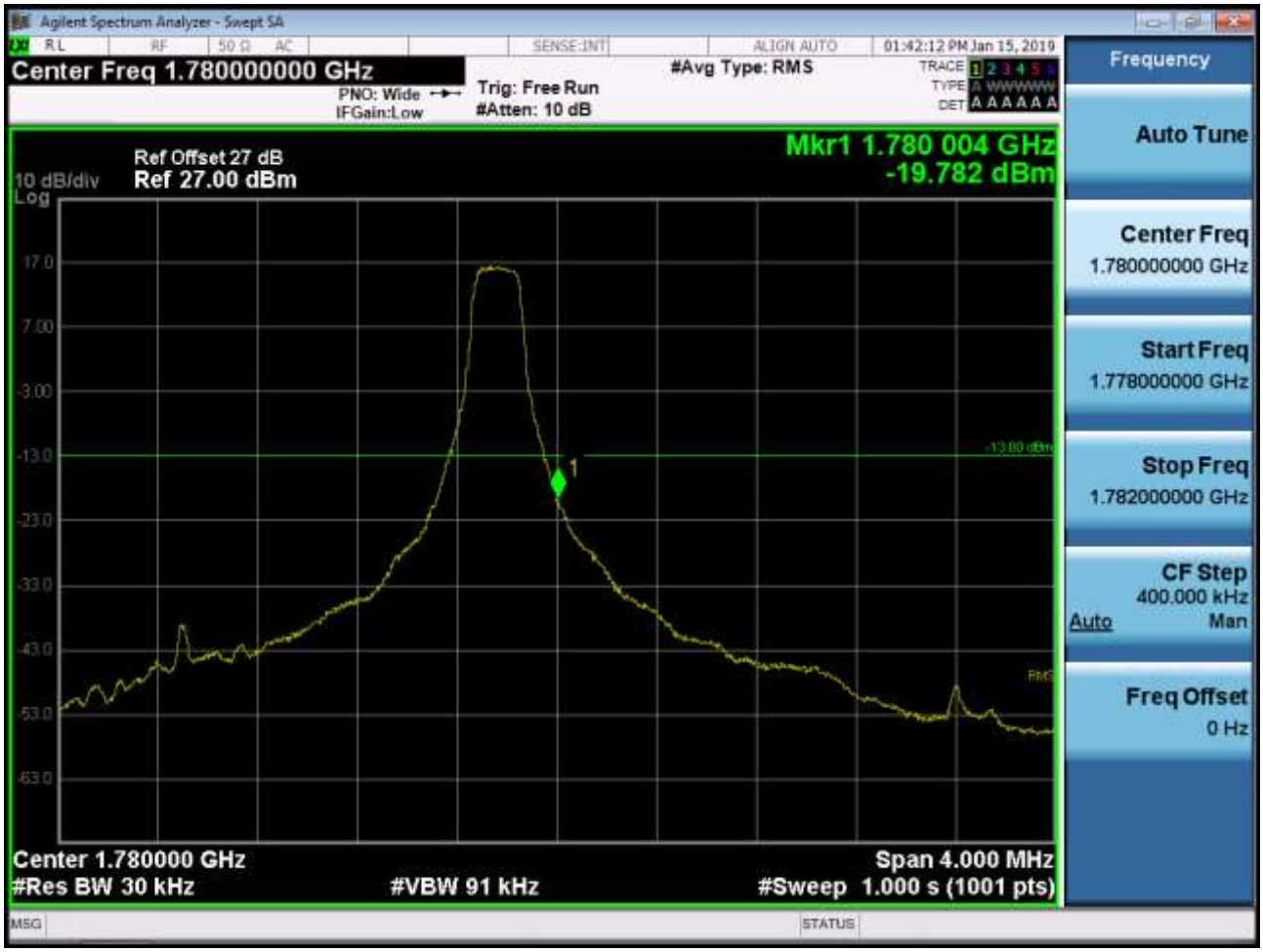
BAND 66/4. Upper Band Edge Plot (1.4M BW Ch.132665 QPSK_RB1_Offset 5) -1

BAND 66/4. Upper Band Edge Plot (1.4M BW Ch.132665 QPSK_RB6) -2

BAND 66/4. Upper Extended Band Edge Plot (1.4M BW Ch. 132665 QPSK_RB6_0) -3

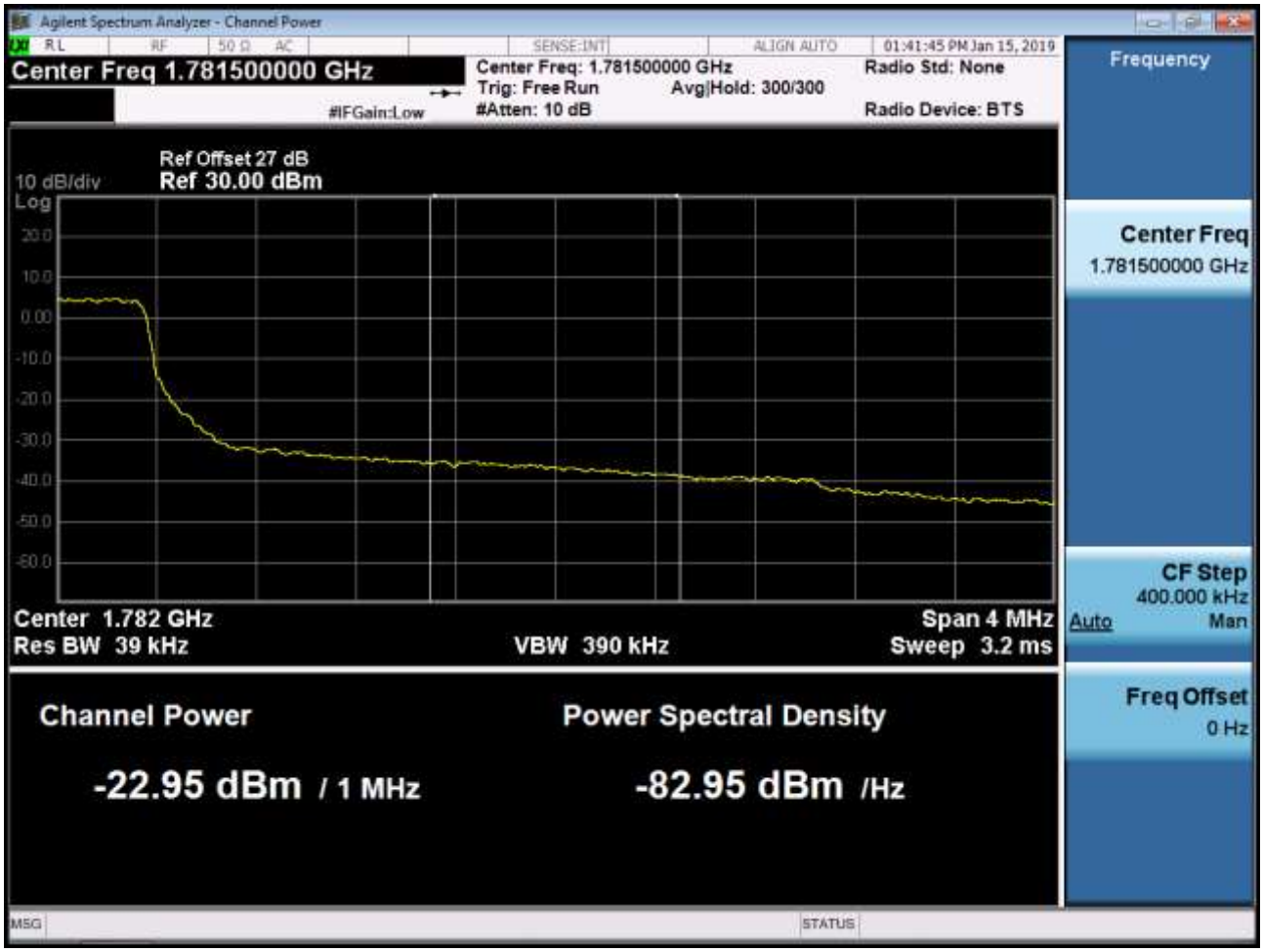


BAND 66/4. Upper Band Edge Plot (3M BW Ch.132657 QPSK_RB1_Offset 14) -1



BAND 66/4. Upper Band Edge Plot (3M BW Ch.132657 QPSK_RB15) -2

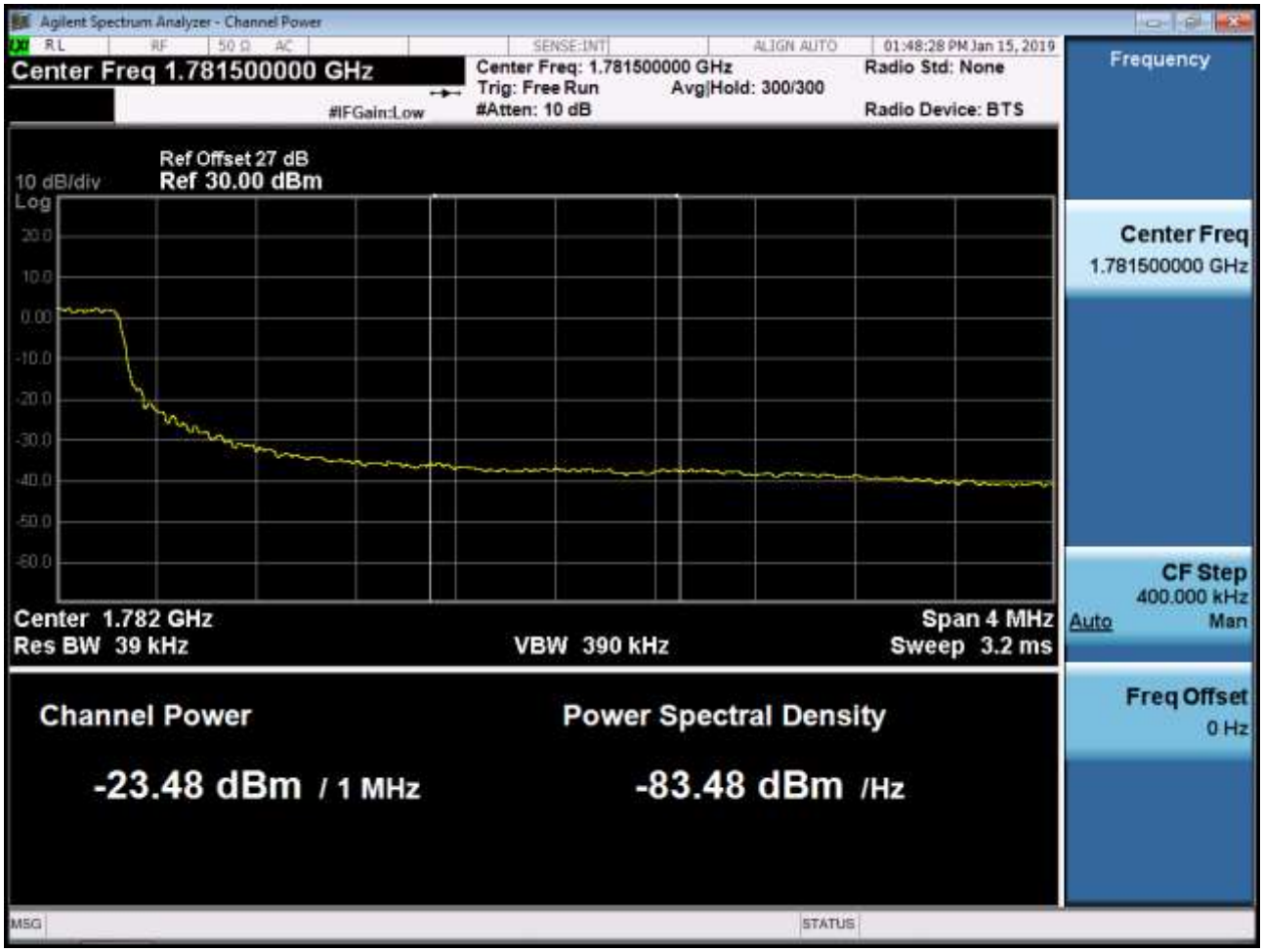
BAND 66/4. Upper Extended Band Edge Plot (3M BW Ch.132657 QPSK_RB15_0) -3



BAND 66/4. Upper Band Edge Plot (5M BW Ch.132647 QPSK_RB1_Offset 24) -1

BAND 66/4. Upper Band Edge Plot (5M BW Ch.132647 QPSK_RB25) -2

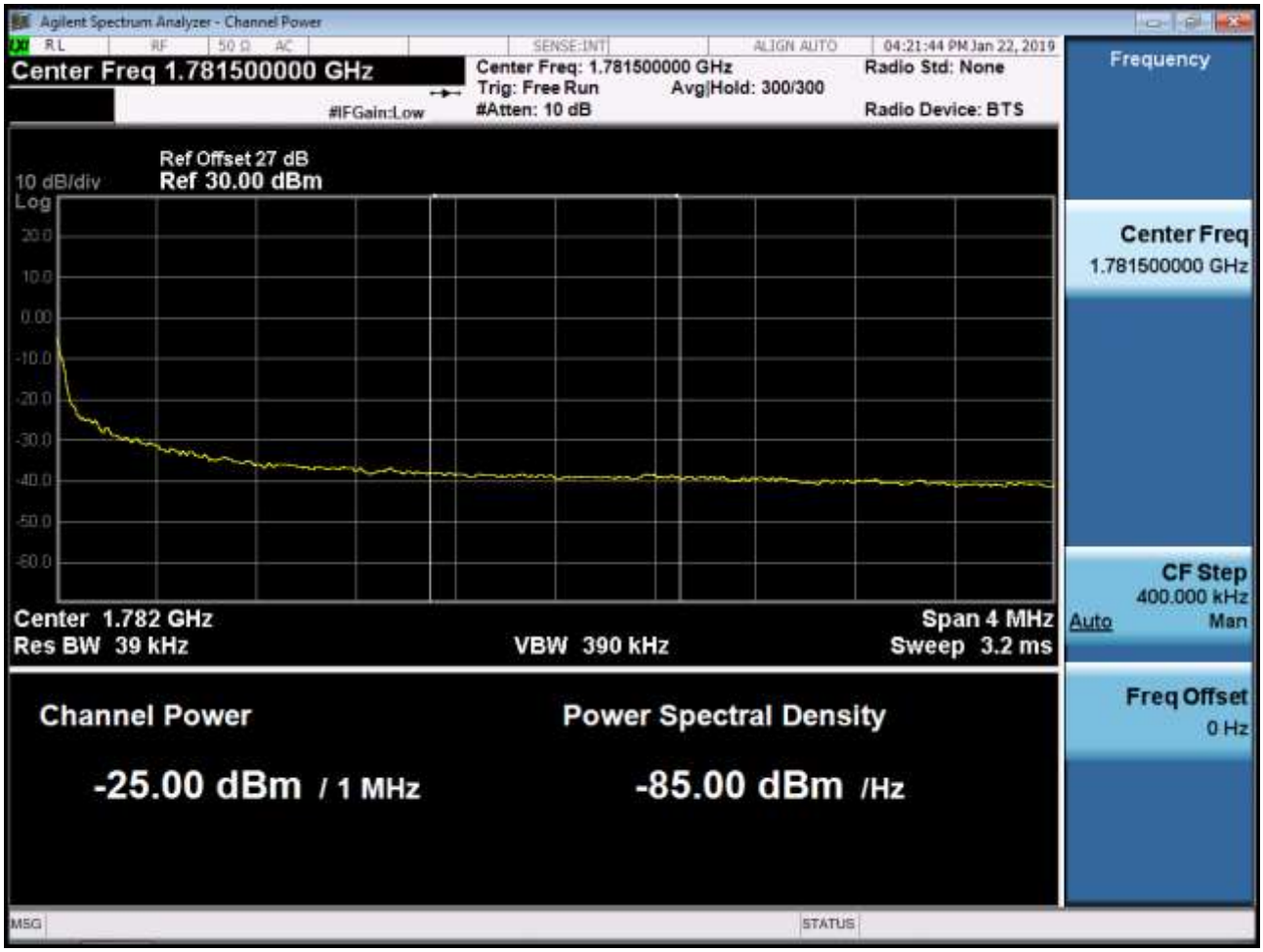
BAND 66/4. Upper Extended Band Edge Plot (5M BW Ch.132647 QPSK_RB25) -3



BAND 66/4. Upper Band Edge Plot (10M BW Ch.132622 QPSK_RB1_Offset 49) -1

BAND 66/4. Upper Band Edge Plot (10M BW Ch.132622 QPSK_RB50) -2

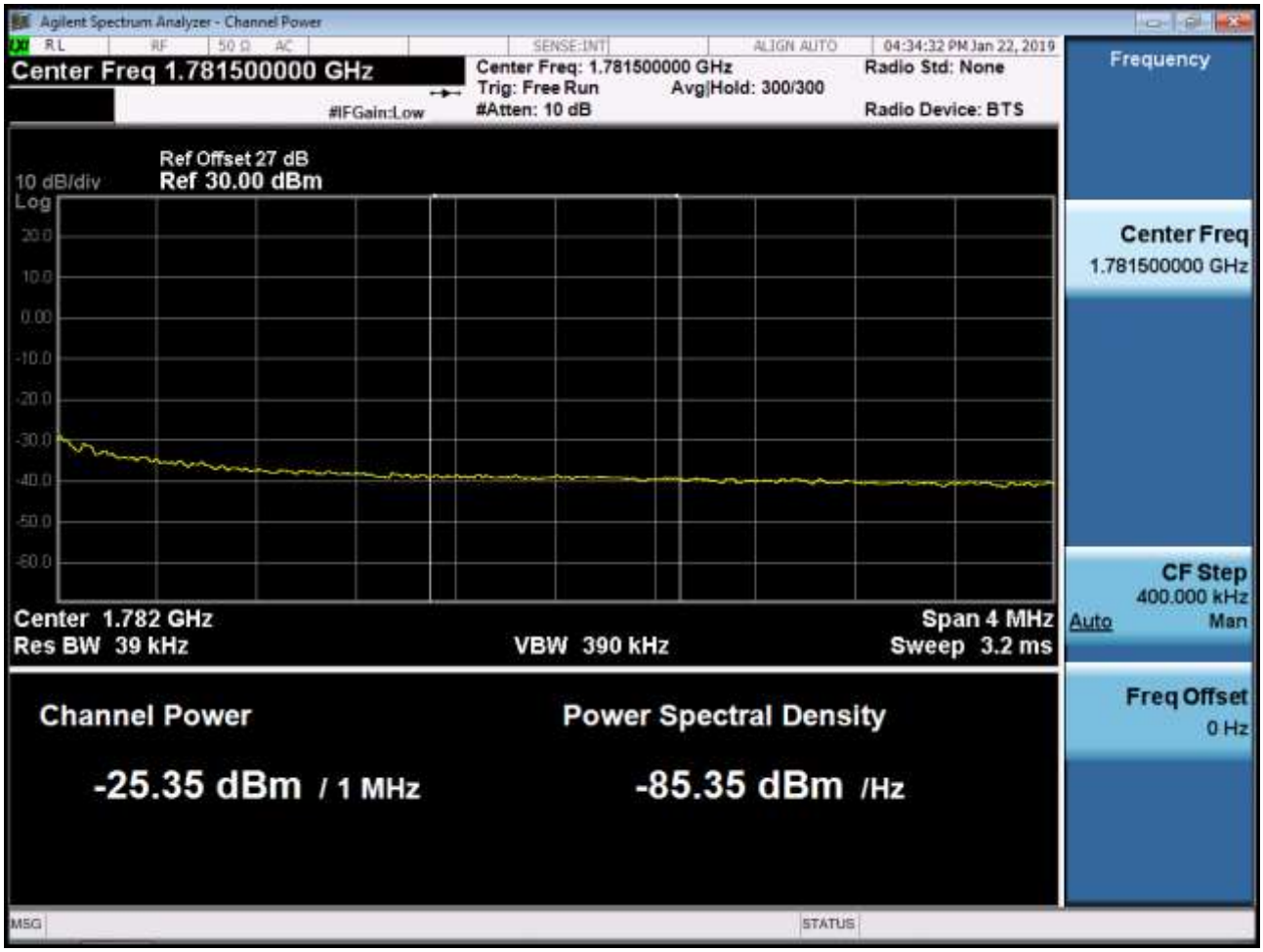
BAND 66/4. Upper Extended Band Edge Plot (10M BW Ch.132622 QPSK_RB50) -3



BAND 66/4. Upper Band Edge Plot (15M BW Ch.132597 QPSK_RB1_Offset 74) -1

BAND 66/4. Upper Band Edge Plot (15M BW Ch.132597 QPSK_RB75) -2

BAND 66/4. Upper Extended Band Edge Plot (15M BW Ch.132597 QPSK_RB75) -3

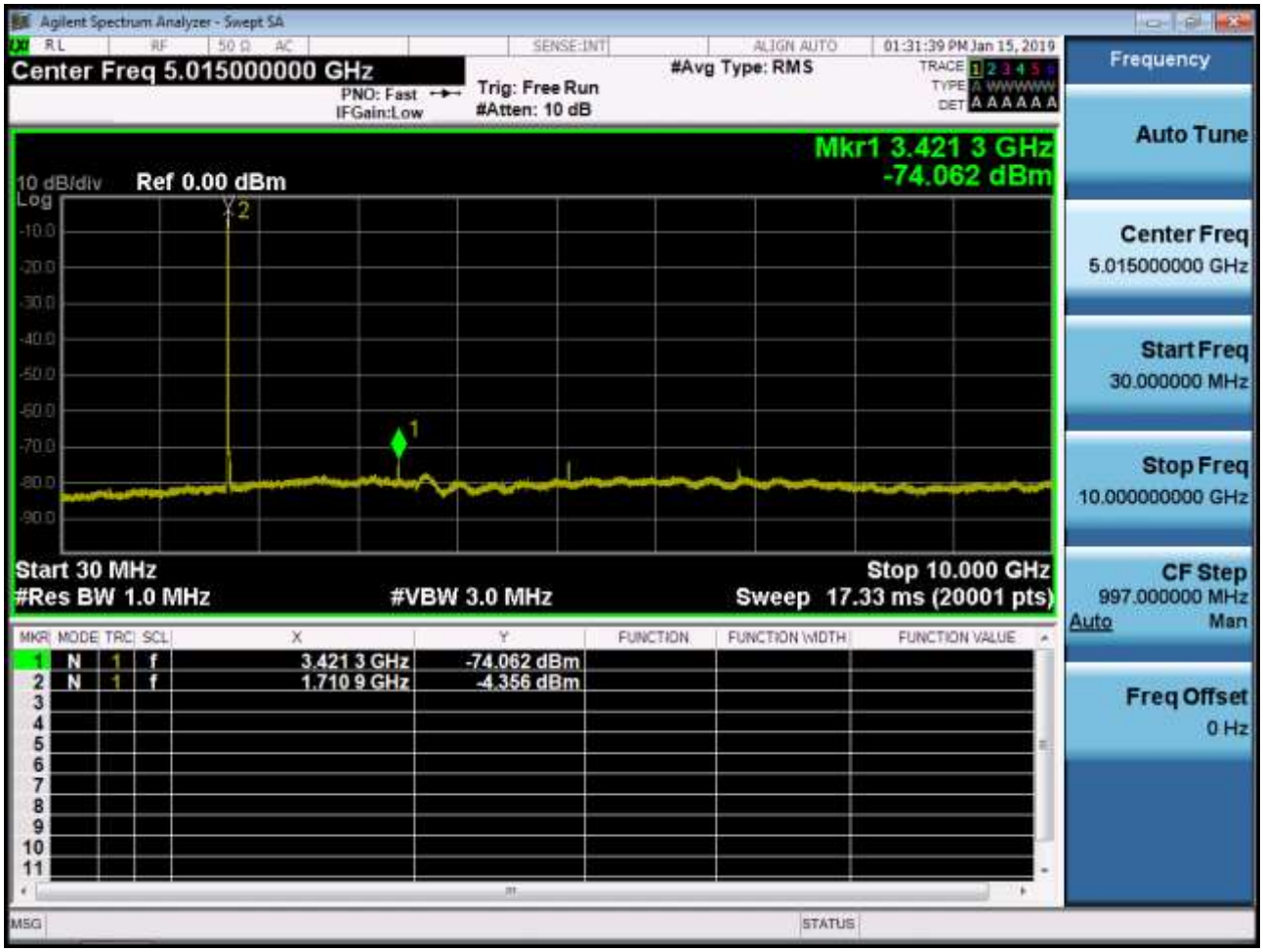


BAND 66/4. Upper Band Edge Plot (20M BW Ch.132572 QPSK_RB1_Offset 99) -1

BAND 66/4. Upper Band Edge Plot (20M BW Ch.132572 QPSK_RB100) -2

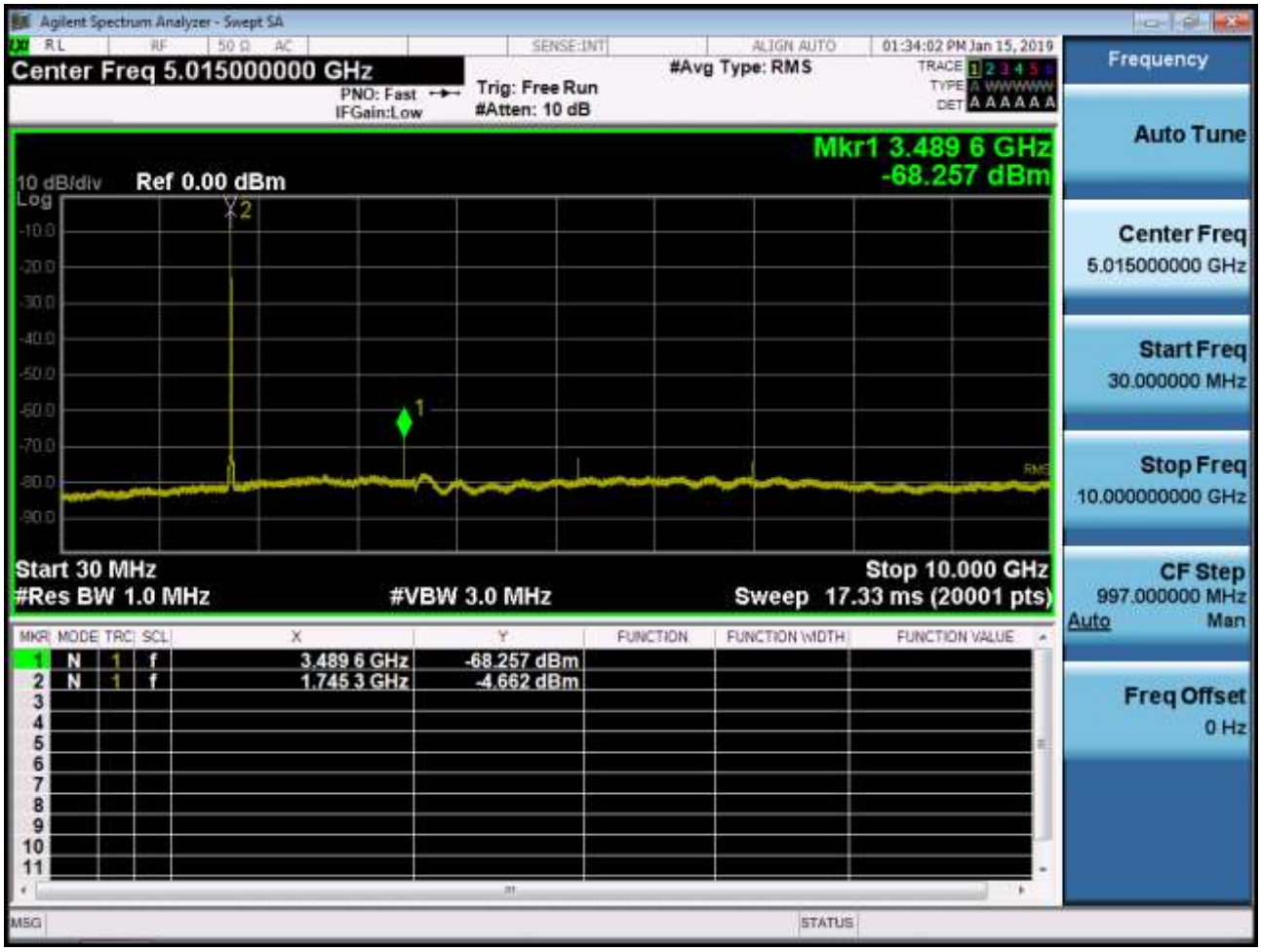
BAND 66/4. Upper Extended Band Edge Plot (20M BW Ch.132572 QPSK_RB100) -3

BAND 66/4. Conducted Spurious Plot_1 (131979ch_1.4MHz_QPSK_RB 1_0)



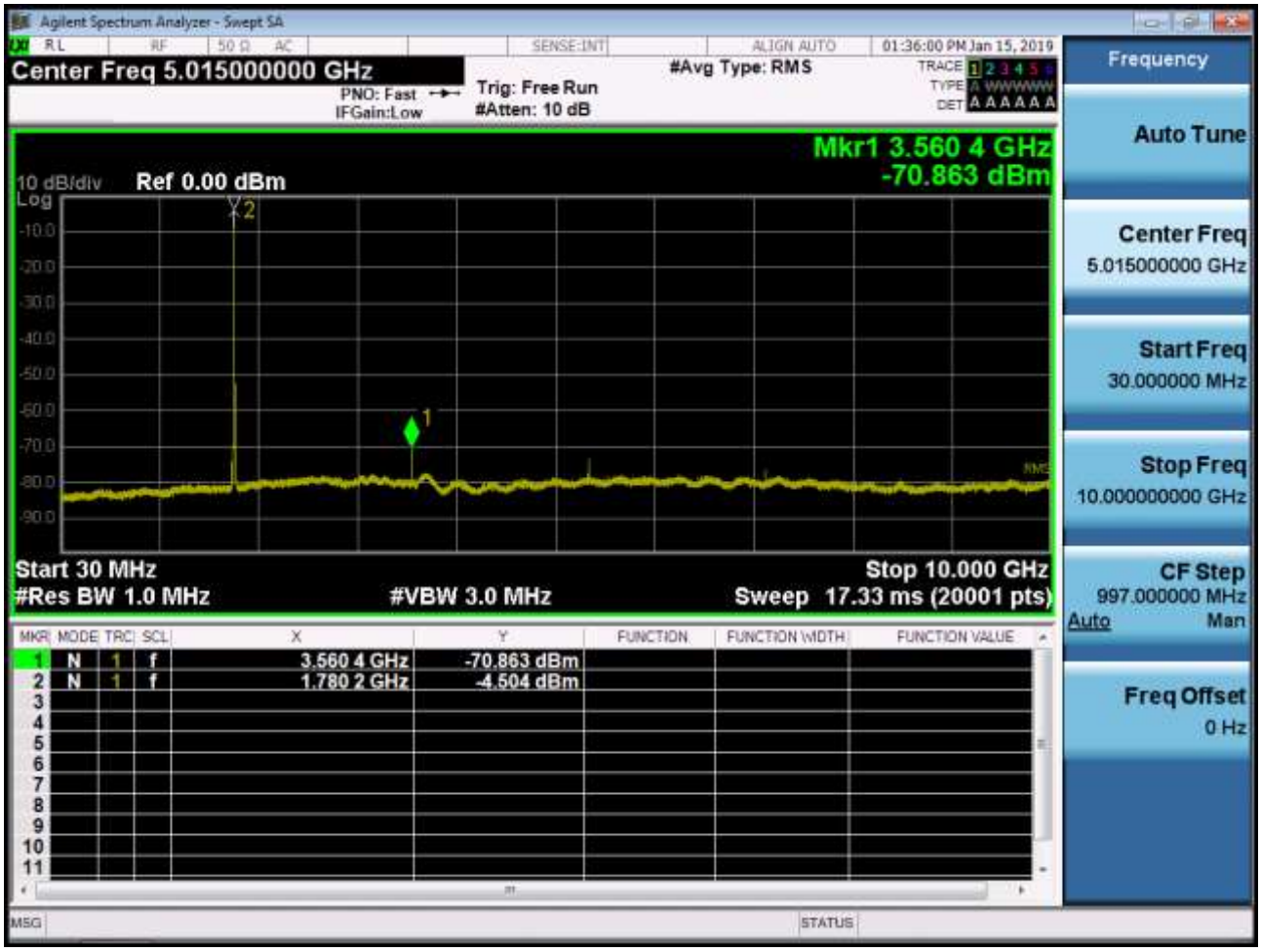
BAND 66/4. Conducted Spurious Plot_2 (131979ch_1.4MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_1.4MHz_QPSK_ RB 1_0)



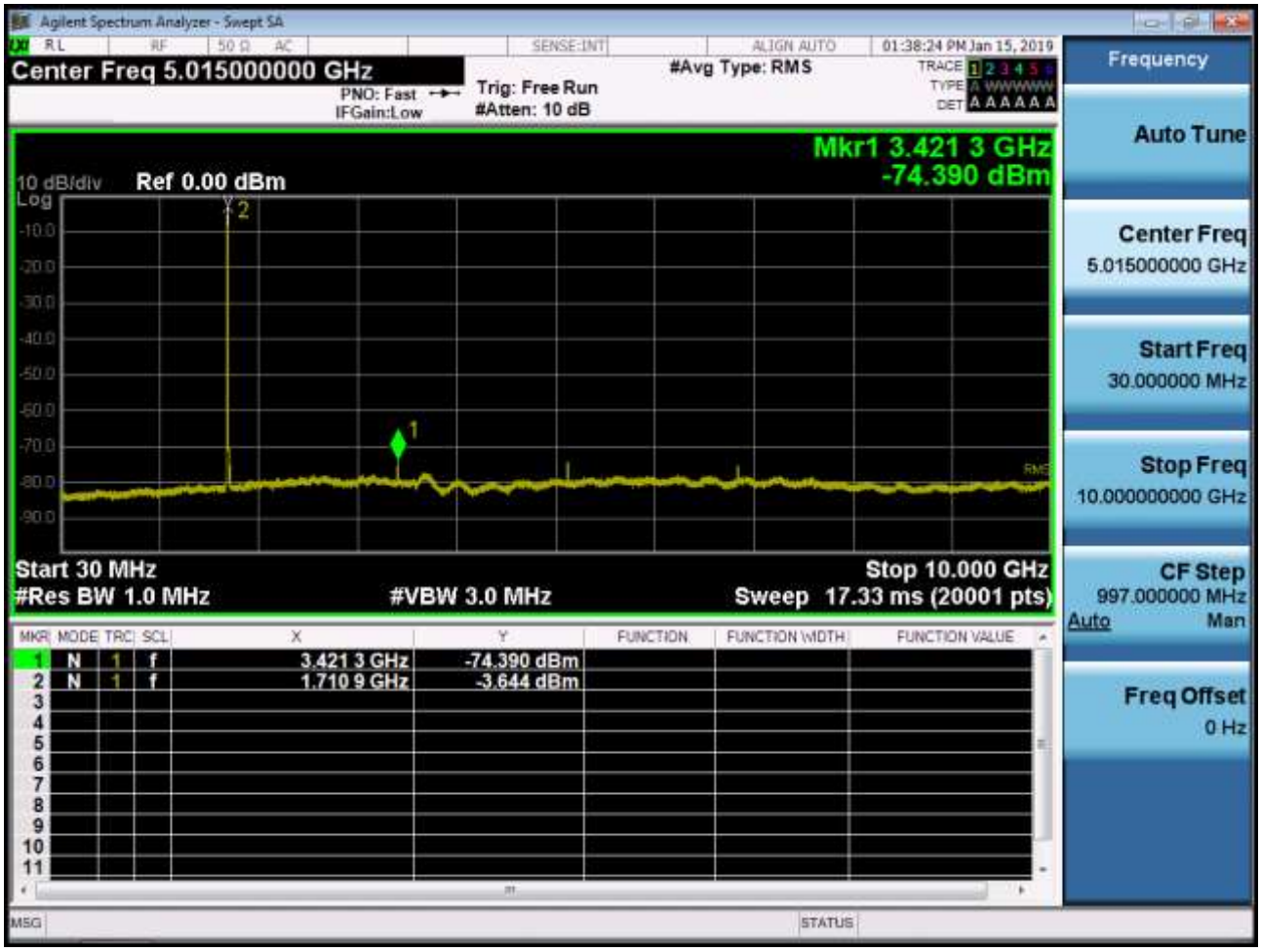
BAND 66/4. Conducted Spurious Plot_2 (132322ch_1.4MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132665ch_1.4MHz_QPSK_ RB 1_0)



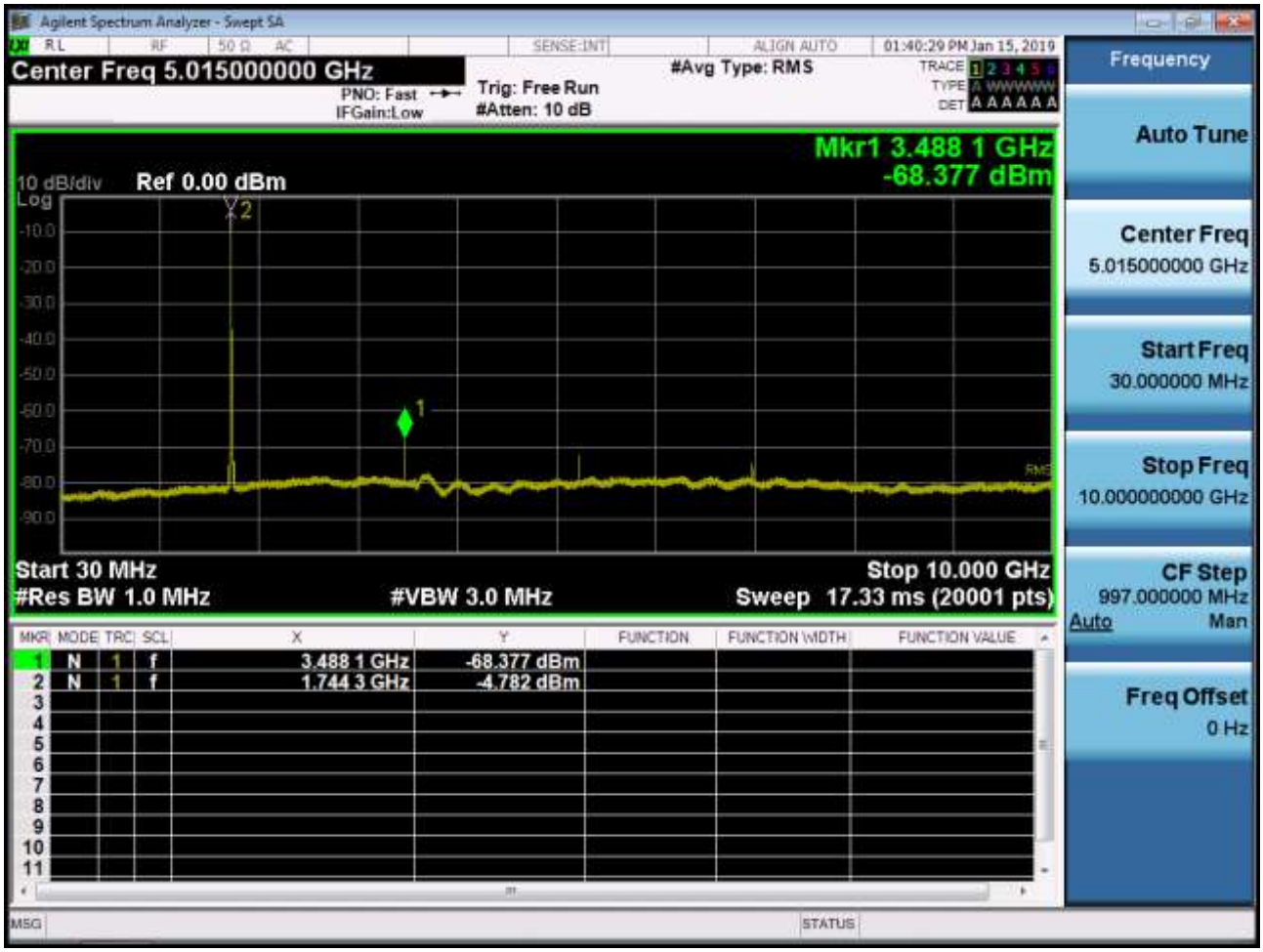
BAND 66/4. Conducted Spurious Plot_2 (132665ch_1.4MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (131987ch_3MHz_QPSK_ RB 1_0)



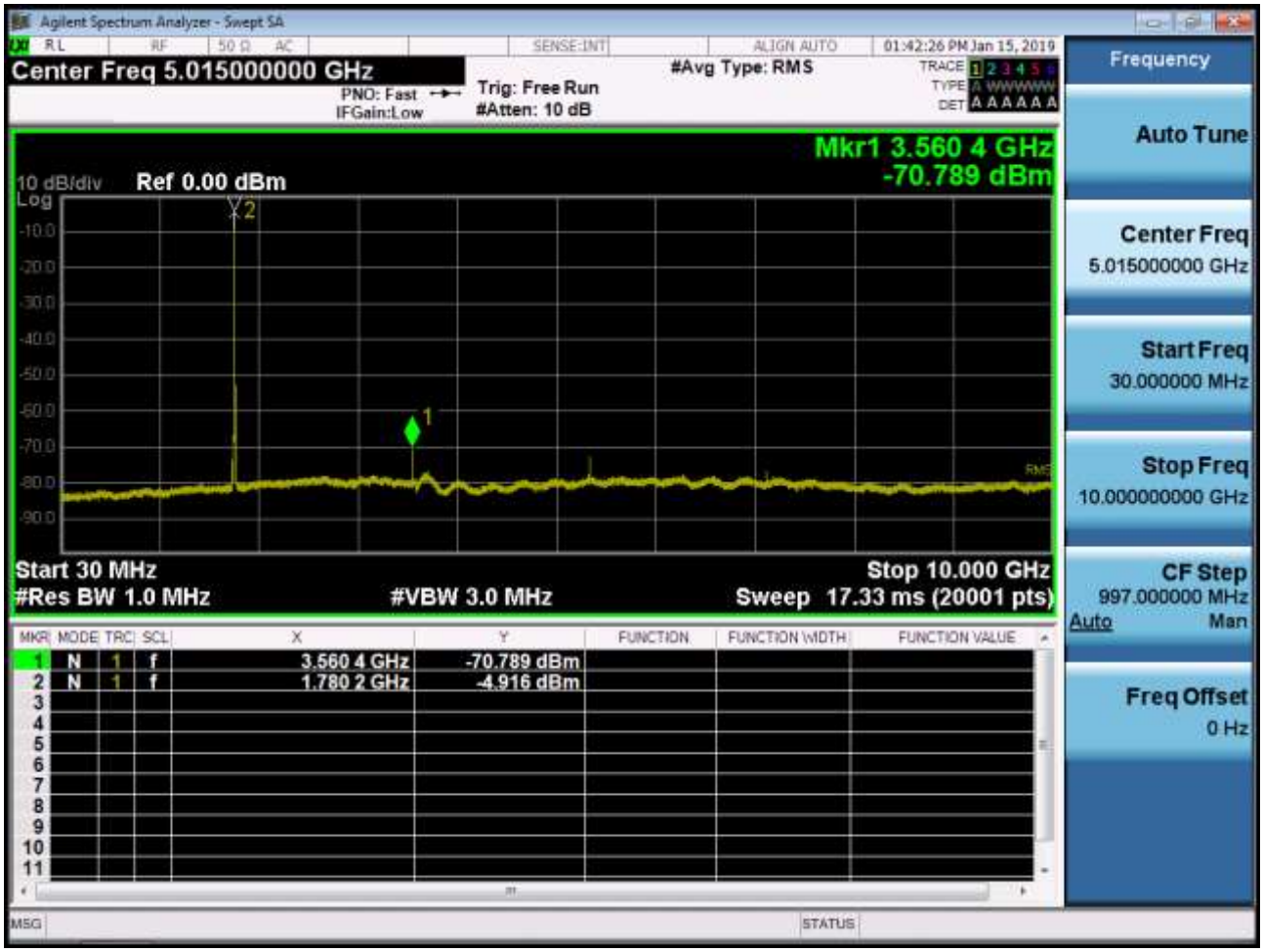
BAND 66/4. Conducted Spurious Plot_2 (131987ch_3MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_3MHz_QPSK_ RB 1_0)



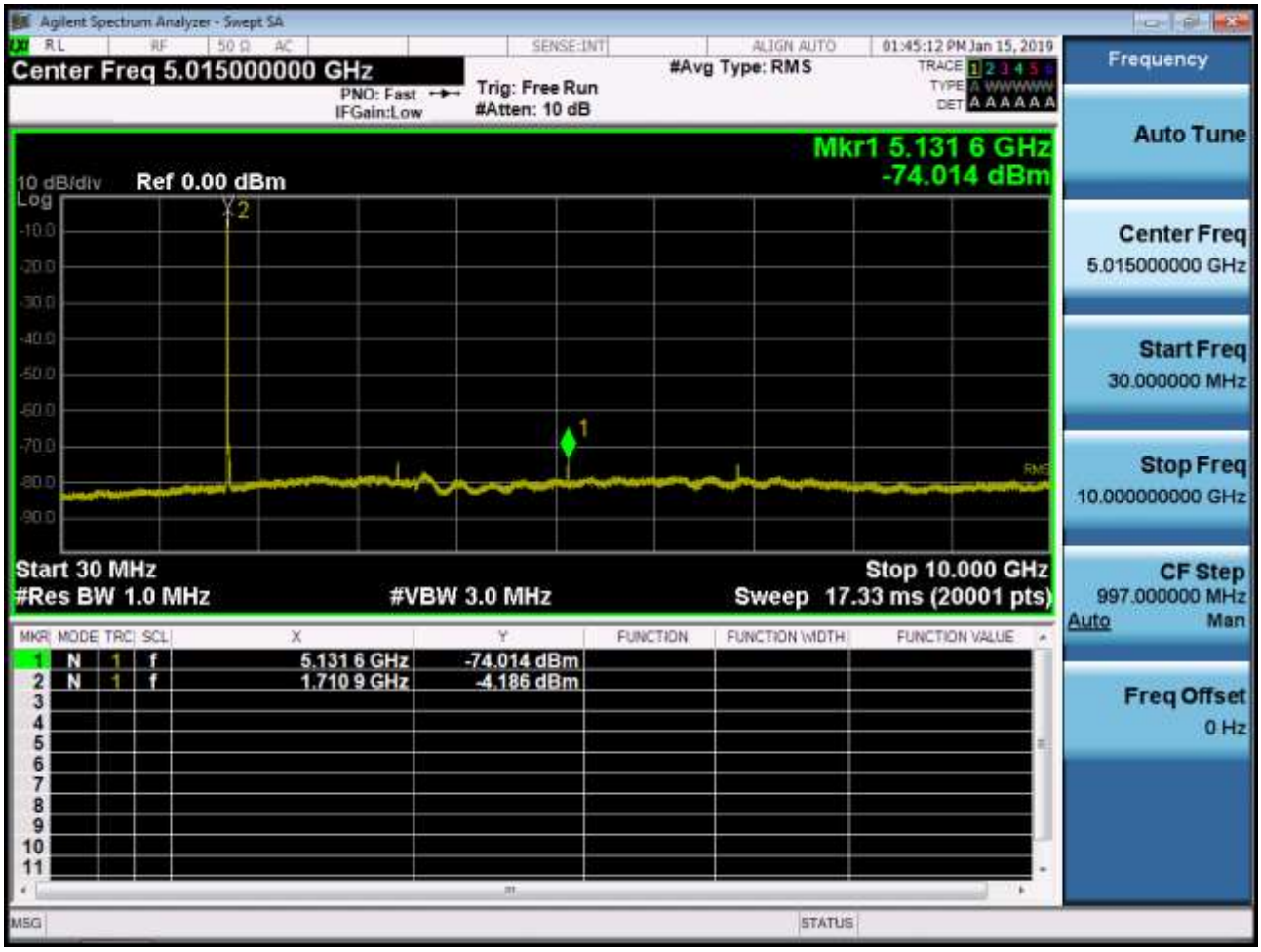
BAND 66/4. Conducted Spurious Plot_2 (132322ch_3MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132657ch_3MHz_QPSK_ RB 1_0)



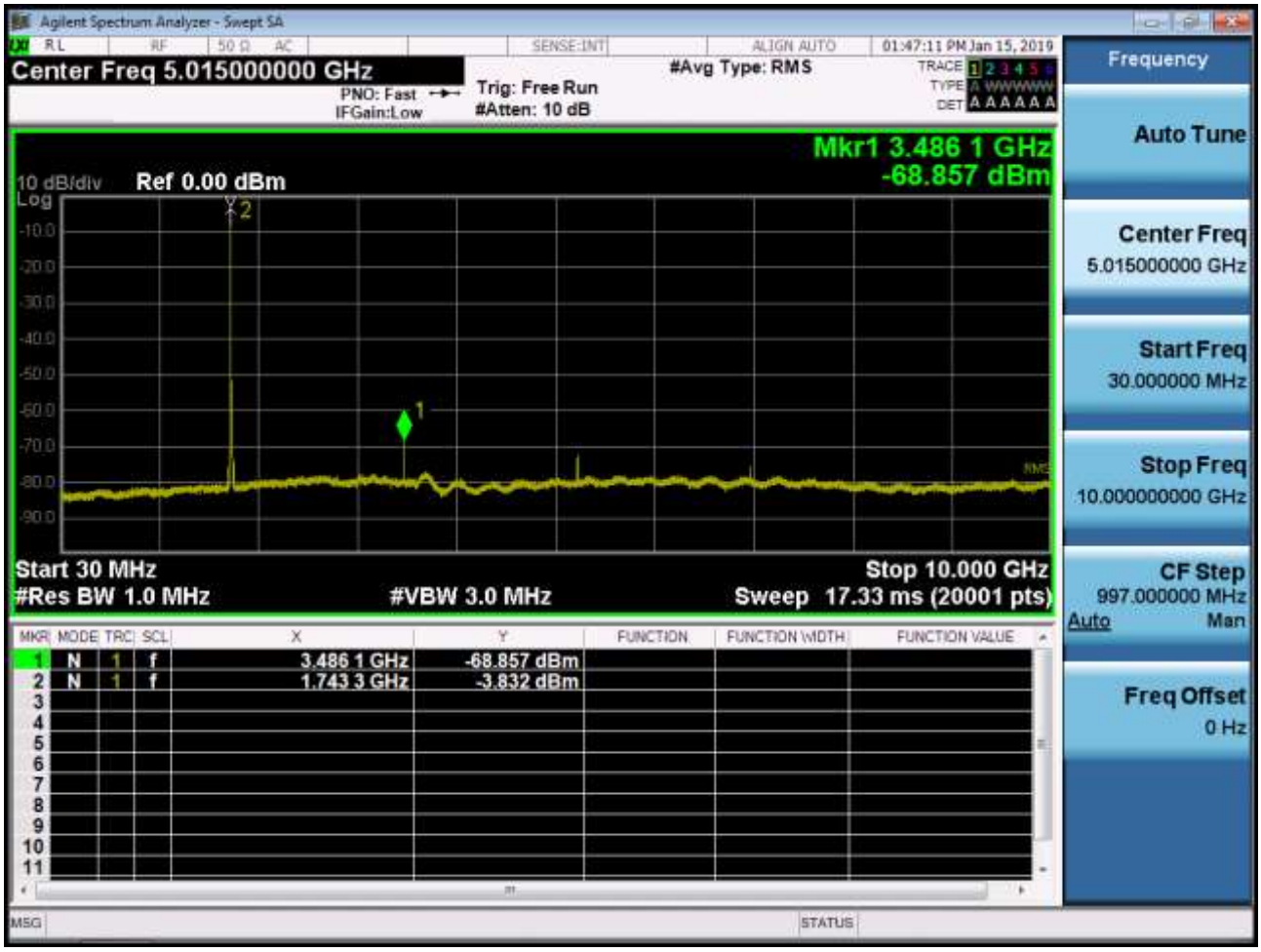
BAND 66/4. Conducted Spurious Plot_2 (132657ch_3MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (131997ch_5MHz_QPSK_ RB 1_0)



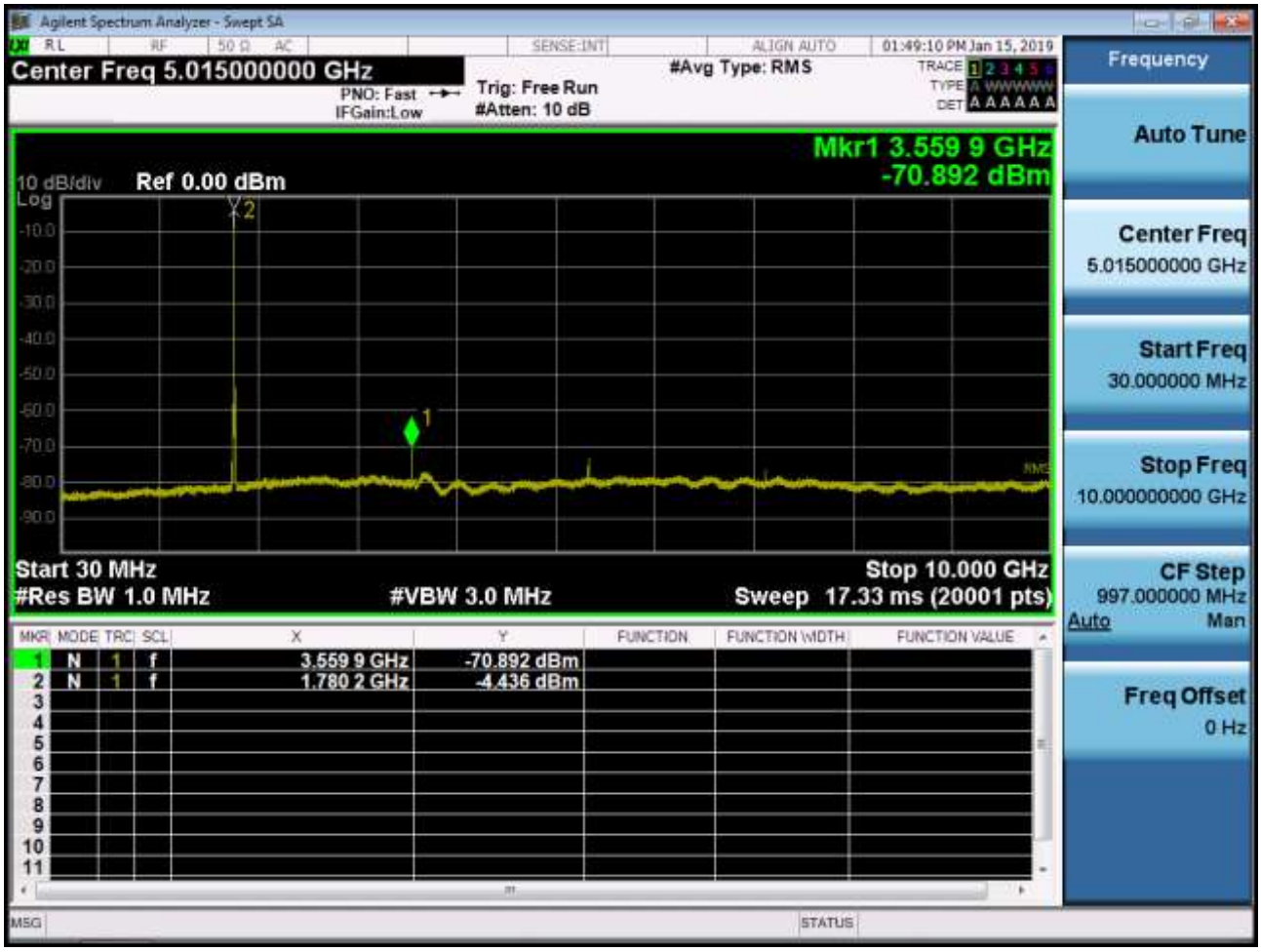
BAND 66/4. Conducted Spurious Plot_2 (131997ch_5MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_5MHz_QPSK_ RB 1_0)



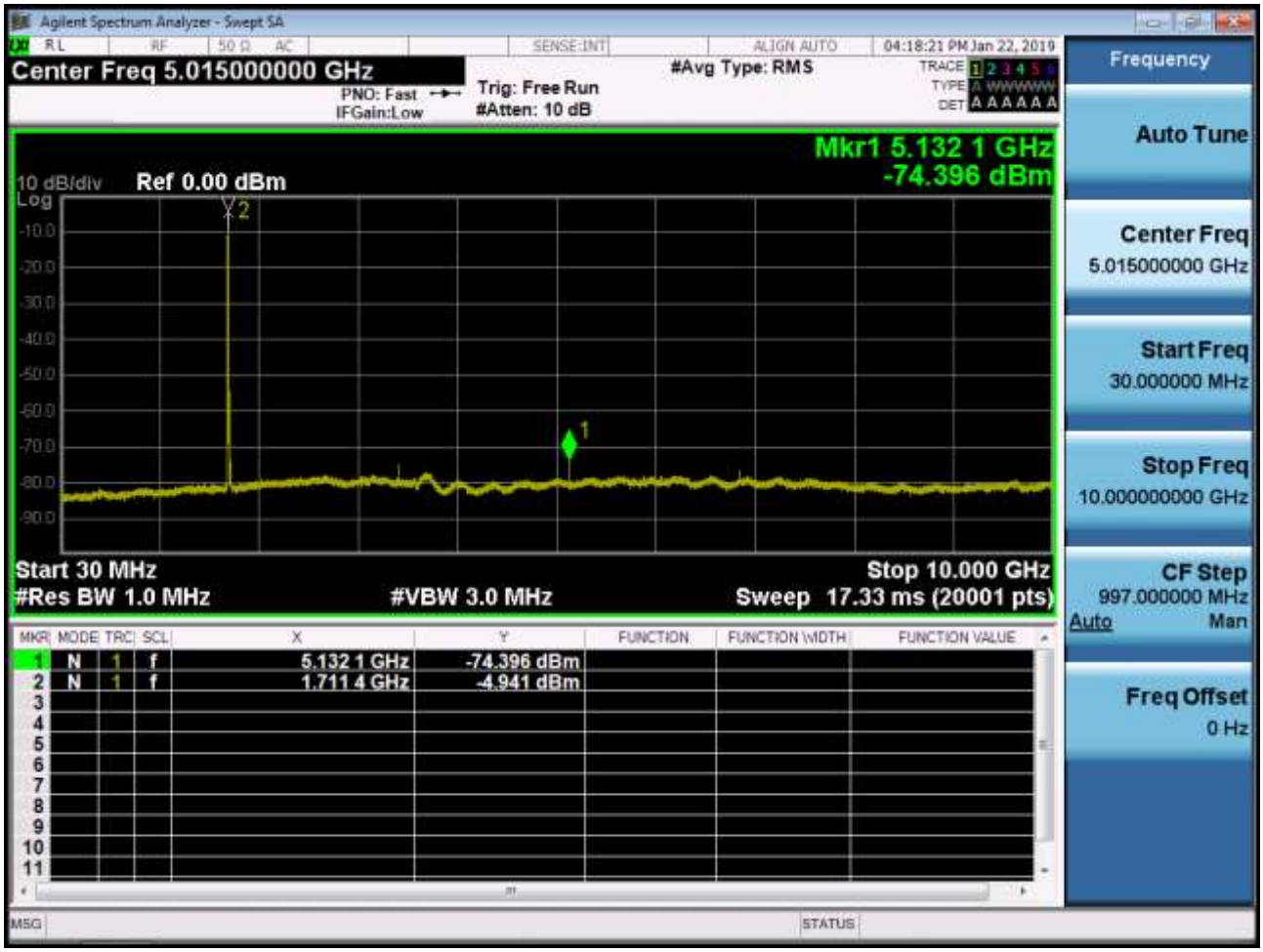
BAND 66/4. Conducted Spurious Plot_2 (132322ch_5MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132647ch_5MHz_QPSK_ RB 1_0)



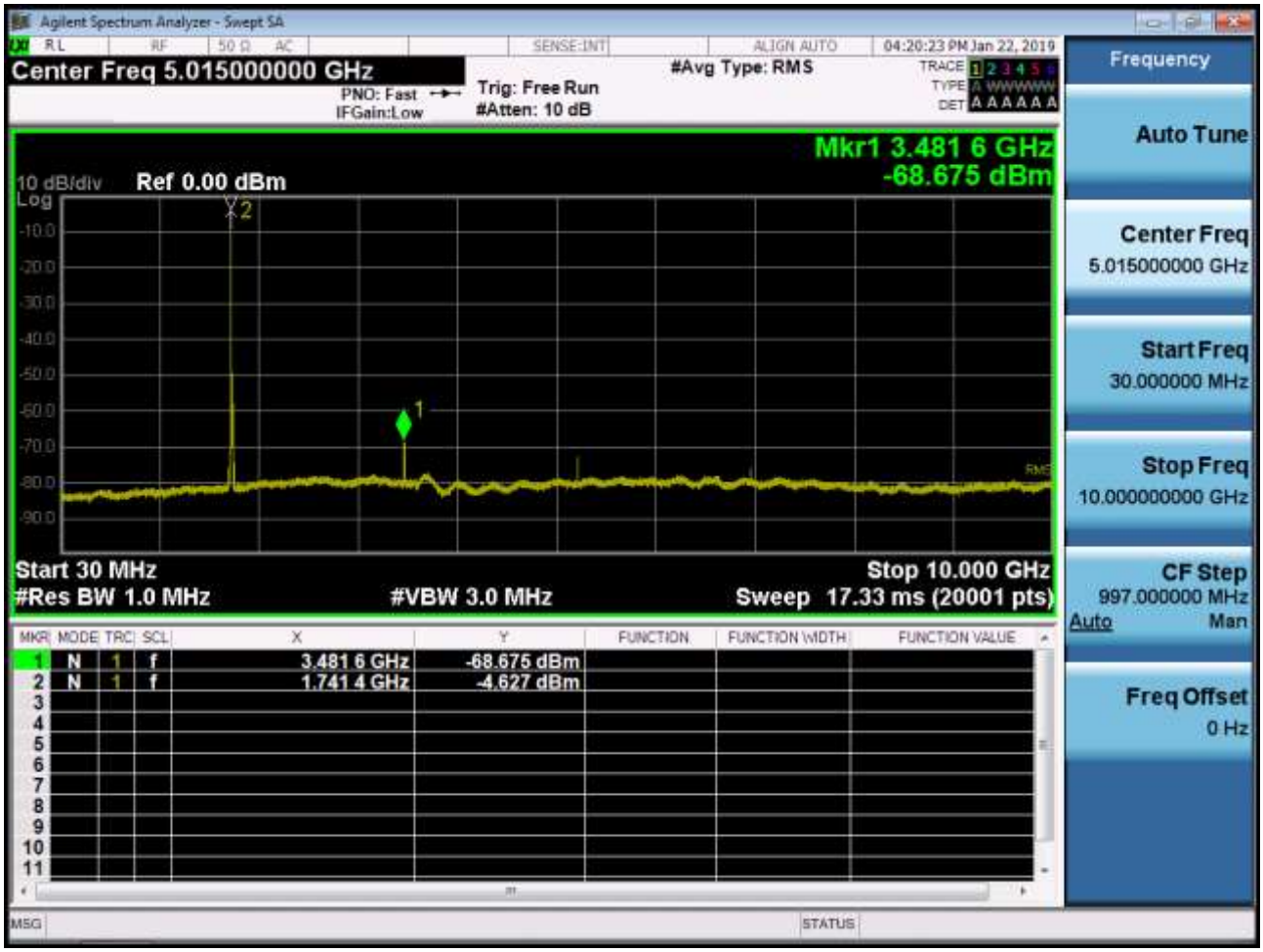
BAND 66/4. Conducted Spurious Plot_2 (132647ch_5MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132022ch_10MHz_QPSK_ RB 1_0)



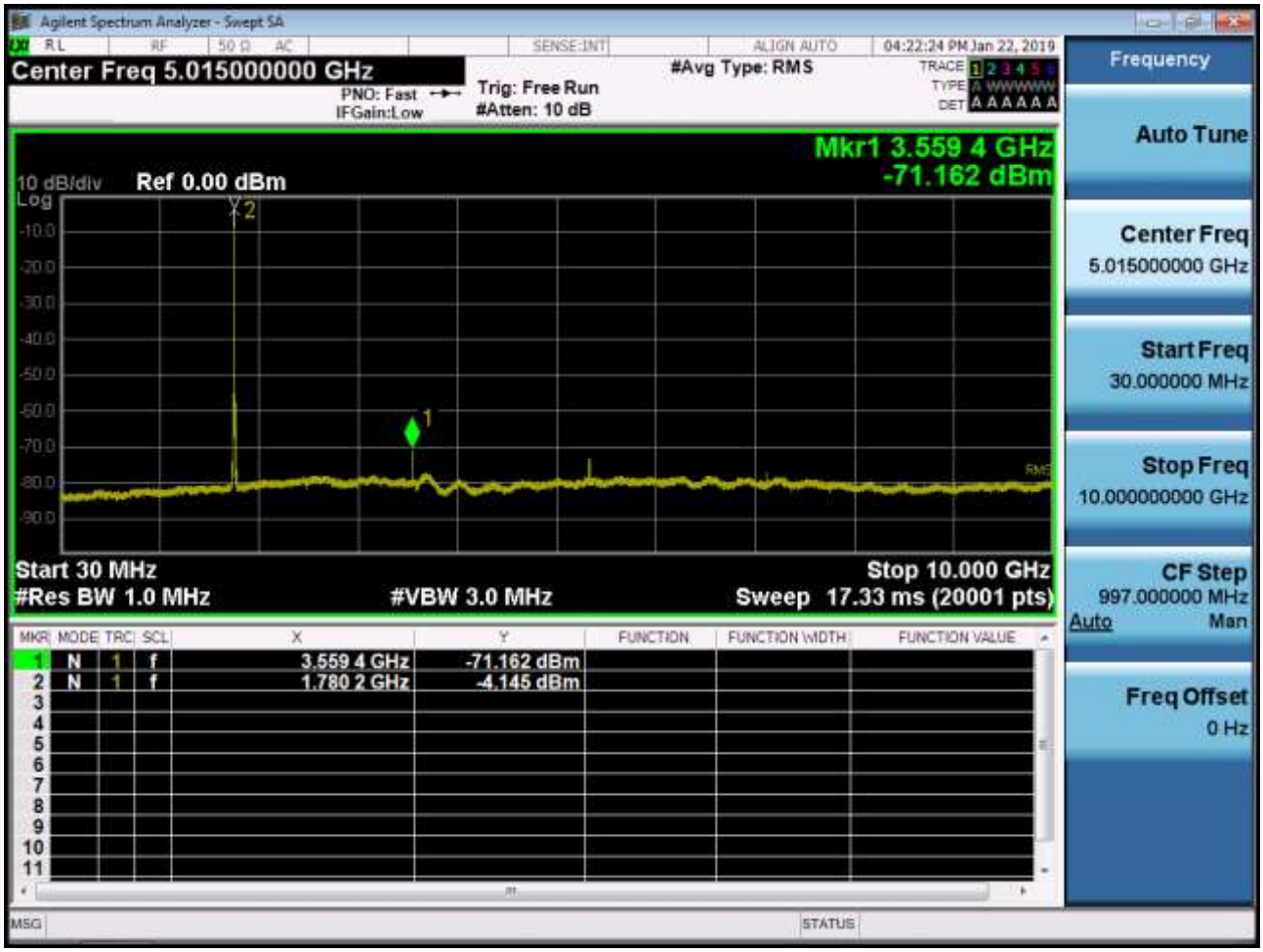
BAND 66/4. Conducted Spurious Plot_2 (132022ch_10MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_10MHz_QPSK_ RB 1_0)



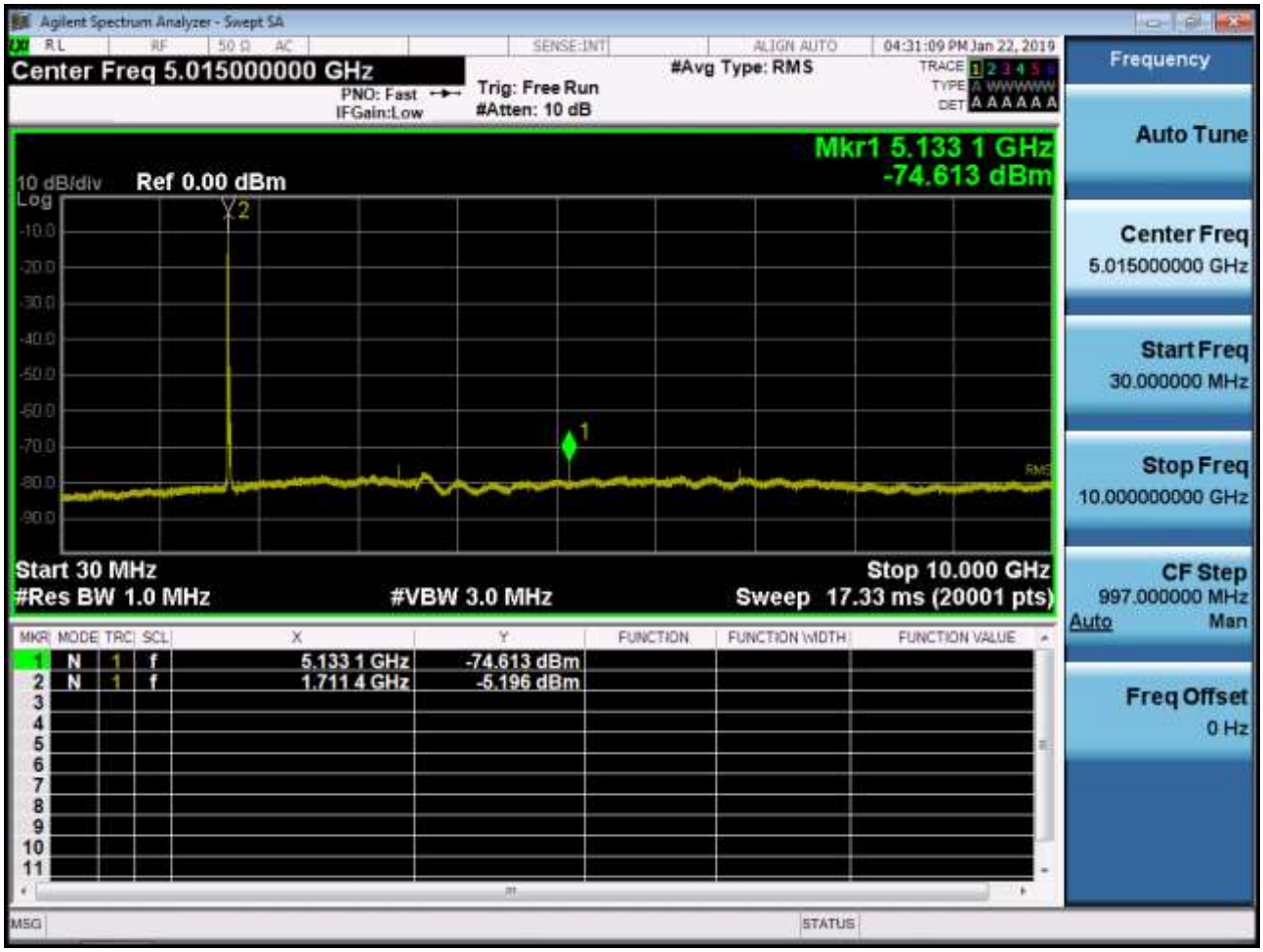
BAND 66/4. Conducted Spurious Plot_2 (132322ch_10MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132622ch_10MHz_QPSK_ RB 1_0)



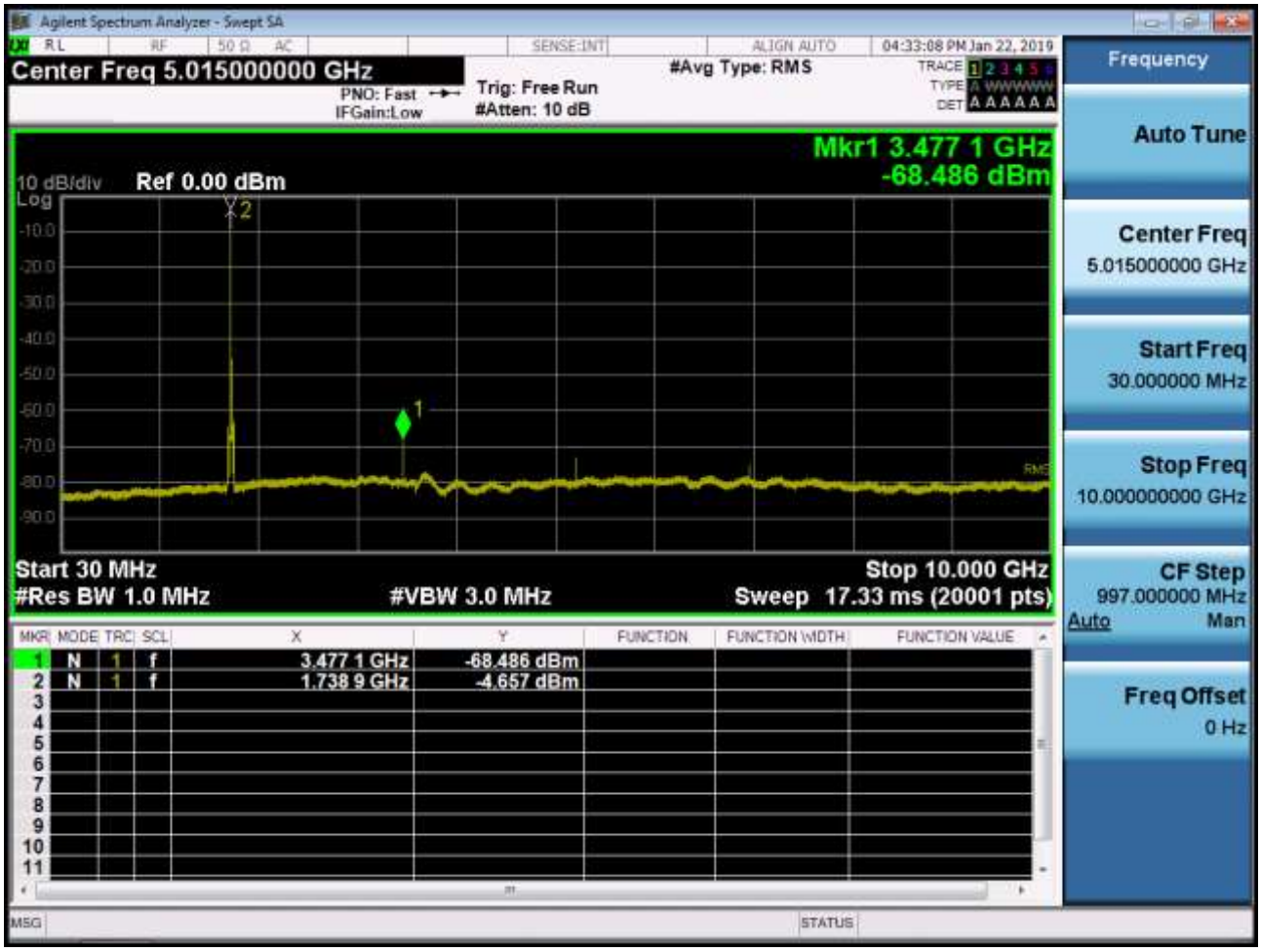
BAND 66/4. Conducted Spurious Plot_2 (132622ch_10MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132047ch_15MHz_QPSK_ RB 1_0)



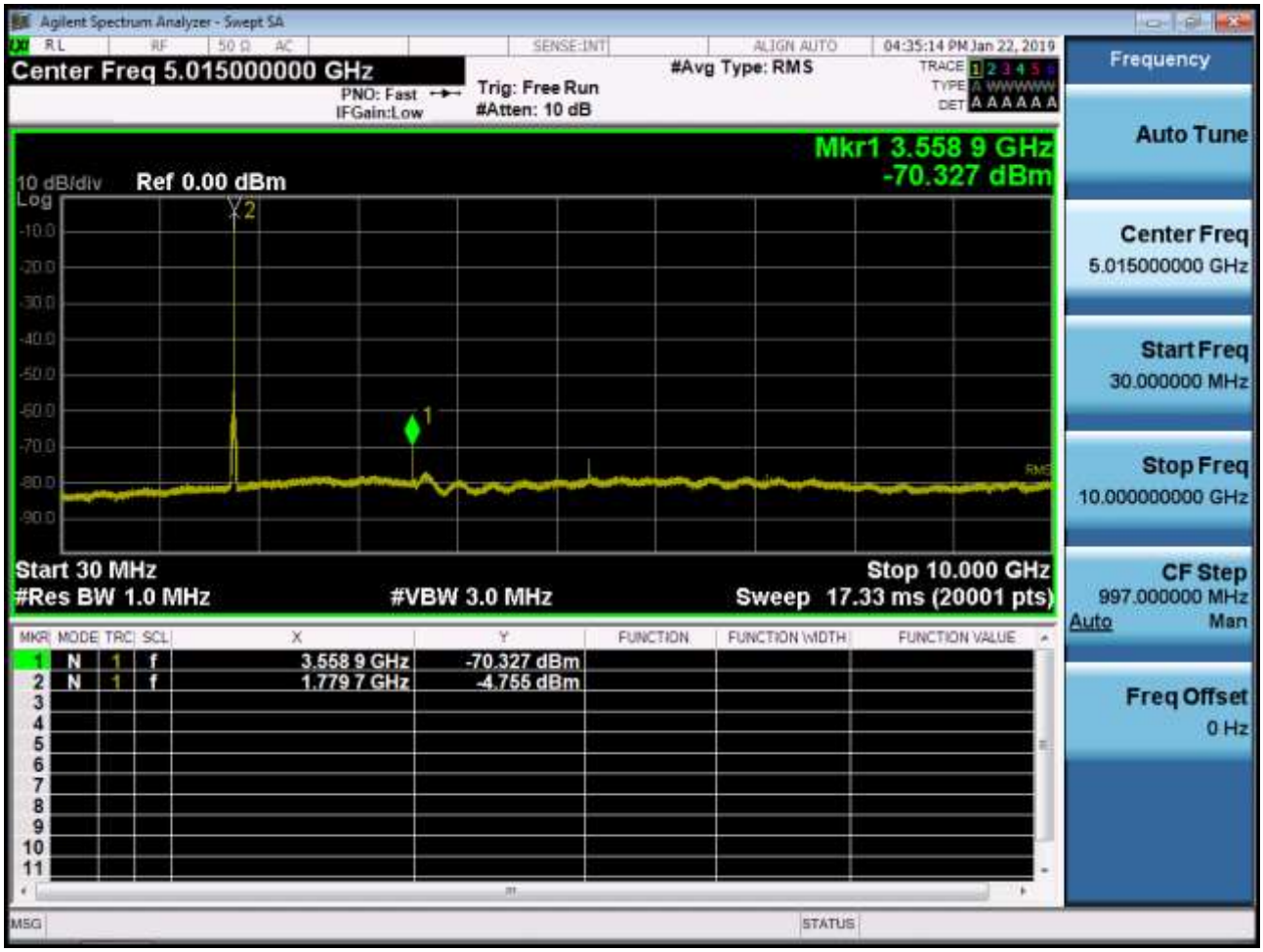
BAND 66/4. Conducted Spurious Plot_2 (132047ch_15MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_15MHz_QPSK_ RB 1_0)



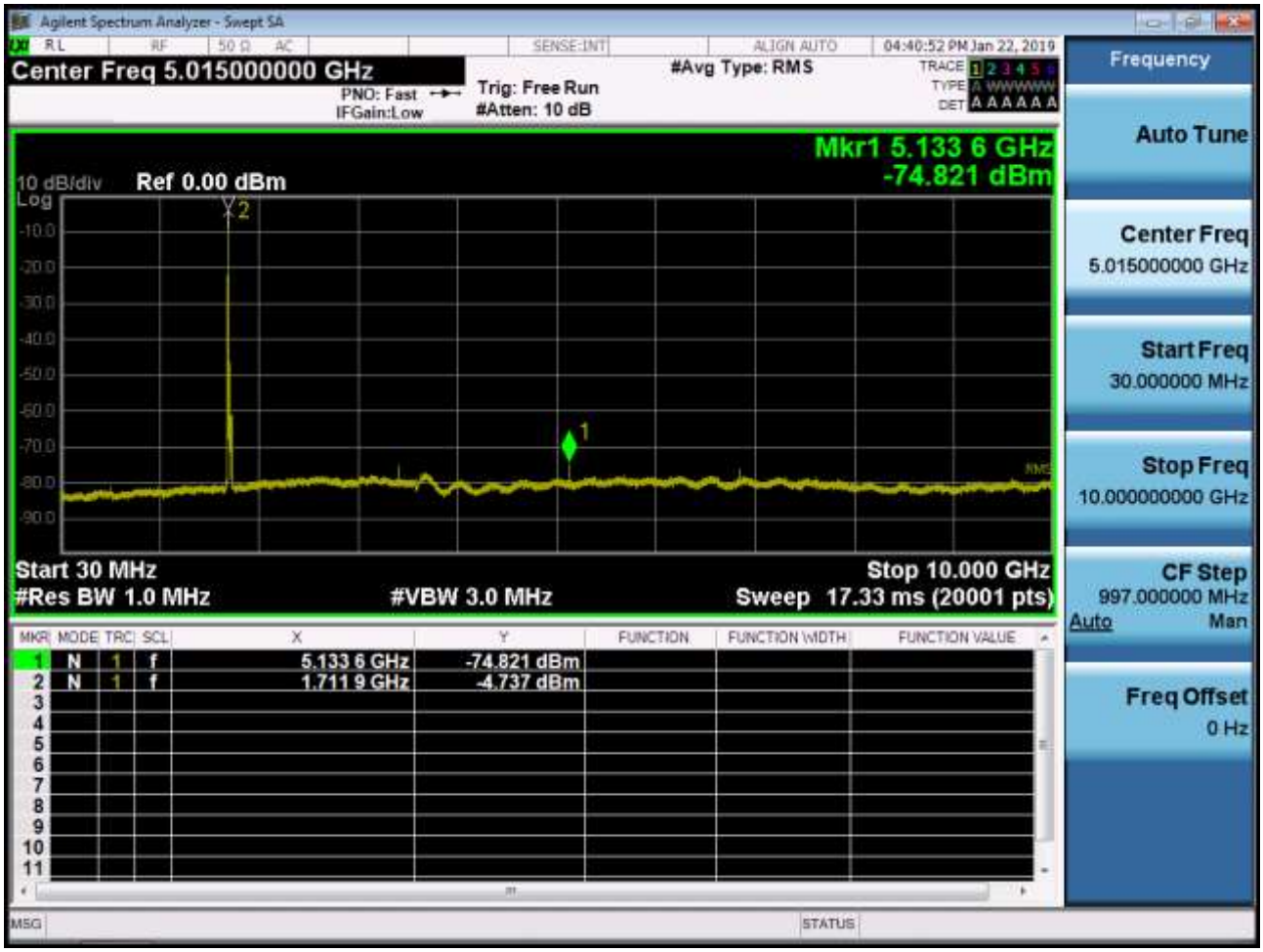
BAND 66/4. Conducted Spurious Plot_2 (132322ch_15MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132597ch_15MHz_QPSK_ RB 1_0)



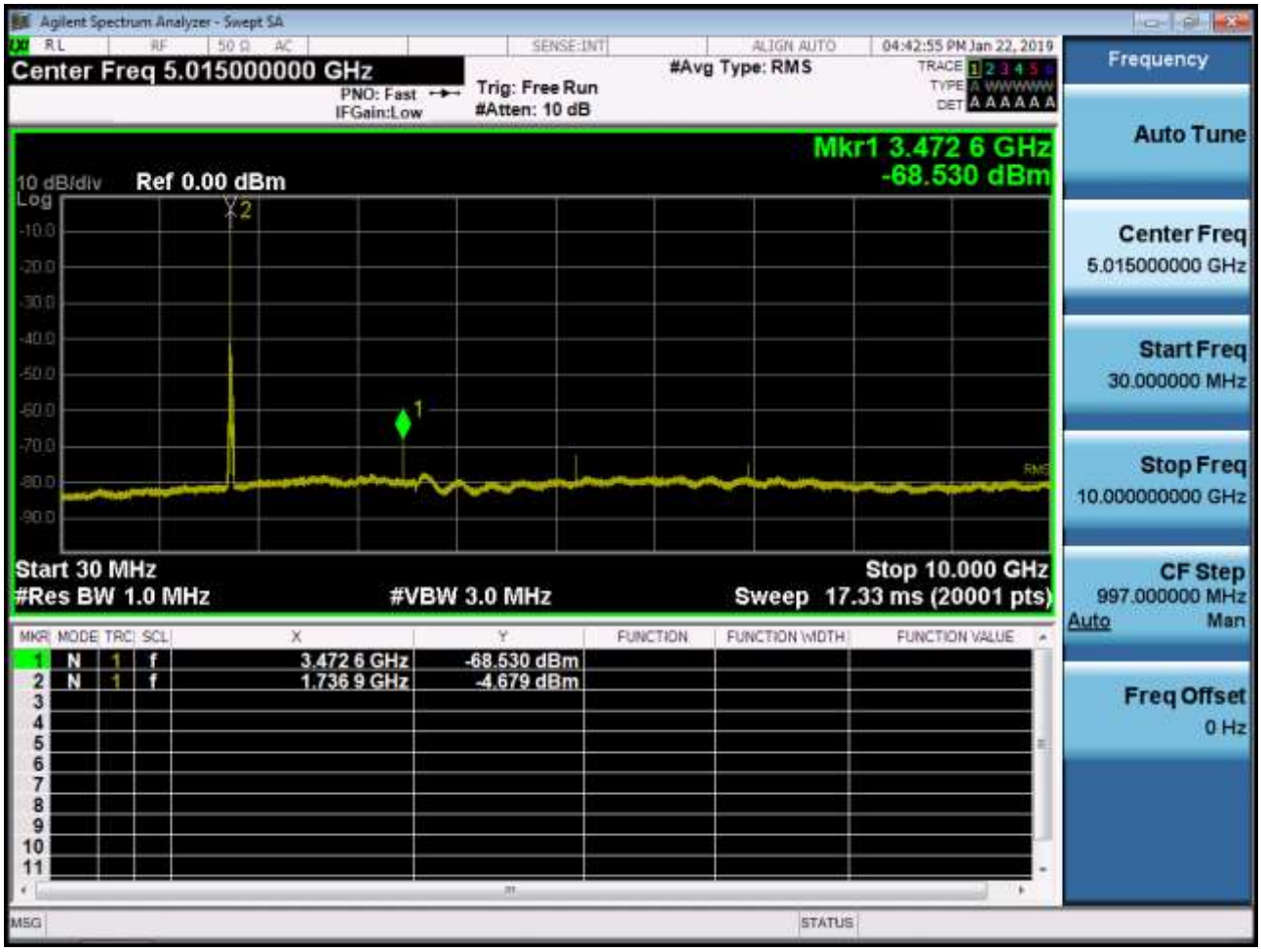
BAND 66/4. Conducted Spurious Plot_2 (132597ch_15MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132072ch_20MHz_QPSK_ RB 1_0)



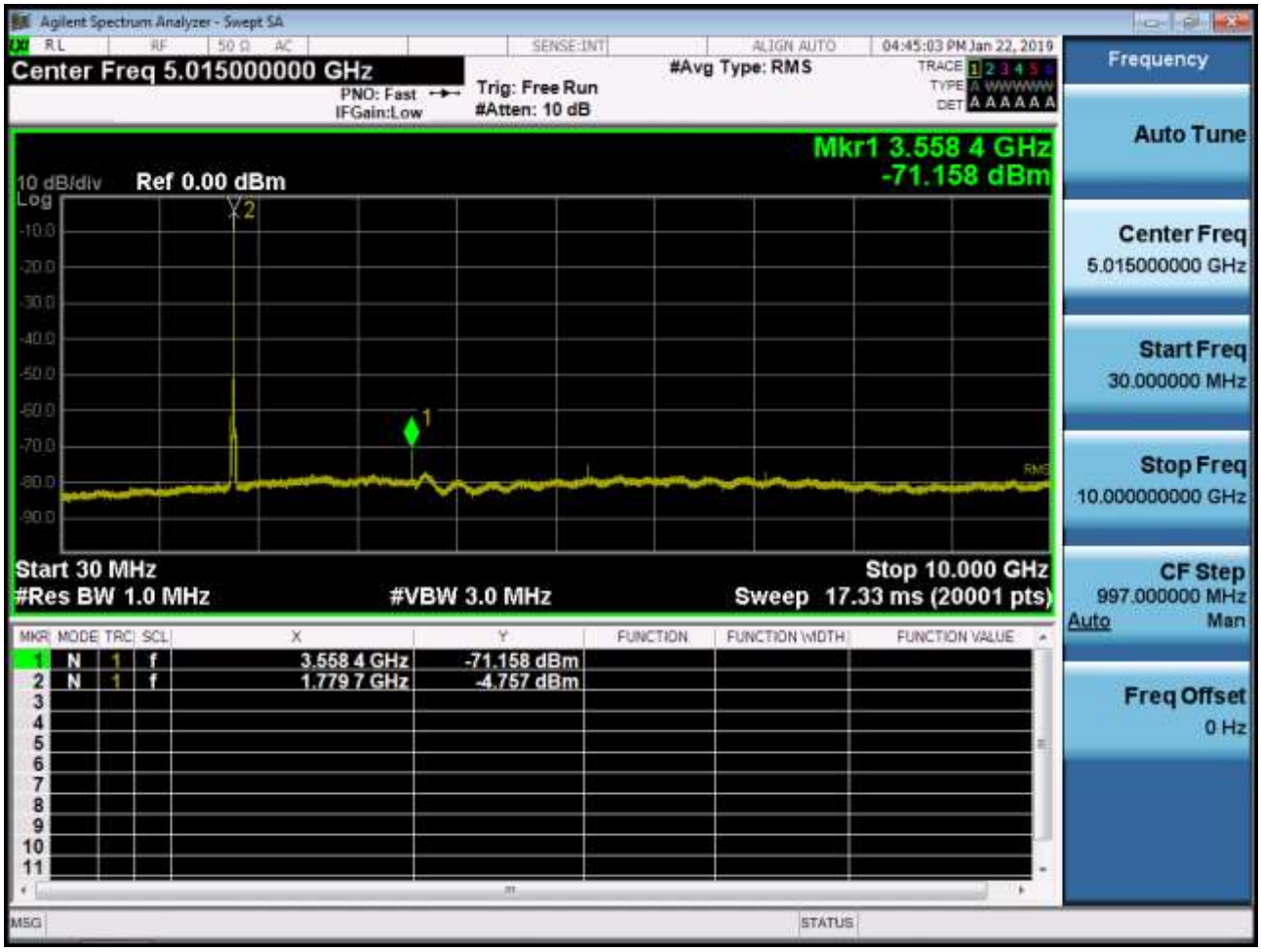
BAND 66/4. Conducted Spurious Plot_2 (132072ch_20MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132322ch_20MHz_QPSK_ RB 1_0)



BAND 66/4. Conducted Spurious Plot_2 (132322ch_20MHz_QPSK_ RB 1_0)

BAND 66/4. Conducted Spurious Plot_1 (132572ch_20MHz_QPSK_ RB 1_0)



BAND 66/4. Conducted Spurious Plot_2 (132572ch_20MHz_QPSK_ RB 1_0)

10. APPENDIX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-1901-FC020-P
2	HCT-RF-1901-FC021-P
3	HCT-RF-1901-FC022-P
4	HCT-RF-1901-FC023-P
5	HCT-RF-1901-FC024-P
6	HCT-RF-1901-FC025-P
7	HCT-RF-1901-FC026-P