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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:
August 25, 2020

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

Report No.: HCT-RF-2008-FC041

FCC ID:	**A3LSMG781V**
APPLICANT:	**SAMSUNG Electronics Co., Ltd.**

Model(s): SM-G781V
EUT Type: Mobile Phone
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s): §24, §2

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	EIRP	
				Max. Power (W)	Max. Power (dBm)
LTE – Band25/2 (1.4)	1850.7 - 1914.3	1M09G7D	QPSK	0.153	21.85
		1M09W7D	16QAM	0.128	21.08
		1M09W7D	64QAM	0.104	20.16
LTE – Band25/2 (3)	1851.5 - 1913.5	2M71G7D	QPSK	0.155	21.90
		2M70W7D	16QAM	0.133	21.23
		2M70W7D	64QAM	0.105	20.23
LTE – Band25/2 (5)	1852.5 - 1912.5	4M51G7D	QPSK	0.150	21.75
		4M50W7D	16QAM	0.129	21.12
		4M50W7D	64QAM	0.102	20.09
LTE – Band25/2 (10)	1855.0 - 1910.0	8M95G7D	QPSK	0.144	21.57
		8M95W7D	16QAM	0.125	20.98
		8M98W7D	64QAM	0.094	19.71
LTE – Band25/2 (15)	1857.5 - 1907.5	13M5G7D	QPSK	0.144	21.57
		13M4W7D	16QAM	0.123	20.90
		13M5W7D	64QAM	0.096	19.81
LTE – Band25/2 (20)	1860.0 - 1905.0	17M9G7D	QPSK	0.139	21.42
		17M9W7D	16QAM	0.119	20.74
		17M9W7D	64QAM	0.092	19.64

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)

REVIEWED BY

Report prepared by : Jae Ryang Do
Engineer of Telecommunication Testing Center

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

This test results were applied only to the test methods required by the standard.

This laboratory is not accredited for the test results marked *.
The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2008-FC041	August 25, 2020	- First Approval Report

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.

Table of Contents

REVIEWED BY 2
1. GENERAL INFORMATION 5
2. INTRODUCTION 6
2.1. DESCRIPTION OF EUT 6
2.2. MEASURING INSTRUMENT CALIBRATION 6
2.3. TEST FACILITY 6
3. DESCRIPTION OF TESTS 7
3.1 TEST PROCEDURE 7
3.2 RADIATED POWER 8
3.3 RADIATED SPURIOUS EMISSIONS 9
3.4 PEAK- TO- AVERAGE RATIO 10
3.5 OCCUPIED BANDWIDTH. 12
3.6 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL 13
3.7 BAND EDGE 14
3.8 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE 15
3.9 WORST CASE(RADIATED TEST) 16
3.10 WORST CASE(CONDUCTED TEST) 17
4. LIST OF TEST EQUIPMENT 18
5. MEASUREMENT UNCERTAINTY 20
6. SUMMARY OF TEST RESULTS 21
7. SAMPLE CALCULATION 22
8. TEST DATA 24
8.1 EQUIVALENT ISOTROPIC RADIATED POWER 24
8.2 RADIATED SPURIOUS EMISSIONS 27
8.3 PEAK-TO-AVERAGE RATIO 33
8.4 OCCUPIED BANDWIDTH 34
8.5 CONDUCTED SPURIOUS EMISSIONS 35
8.6 BAND EDGE 35
8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE 36
9. TEST PLOTS 54
10. APPENDIX A_ TEST SETUP PHOTO 163

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:	A3LSMG781V
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§24, §2
EUT Type:	Mobile Phone
Model(s):	SM-G781V
Tx Frequency:	1850.7 MHz – 1914.3 MHz (LTE – Band25/2 (1.4 MHz)) 1851.5 MHz – 1913.5 MHz (LTE – Band25/2 (3 MHz)) 1852.5 MHz – 1912.5 MHz (LTE – Band25/2 (5 MHz)) 1855.0 MHz – 1910.0 MHz (LTE – Band25/2 (10 MHz)) 1857.5 MHz – 1907.5 MHz (LTE – Band25/2 (15 MHz)) 1860.0 MHz – 1905.0 MHz (LTE – Band25/2 (20 MHz))
Date(s) of Tests:	July 06, 2020 ~ August 12, 2020

2. INTRODUCTION

2.1. DESCRIPTION OF EUT

The EUT was a Mobile Phone with GSM/GPRS/EGPRS/UMTS, CDMA(BC0, 1, 10) and LTE, Sub6.

It also supports IEEE 802.11 a/b/g/n/ac/ax (HT20/40/80), Bluetooth, BT LE, NFC, WPT, mmWave(n260/261).

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/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. For spurious 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 spurious emissions is calculated by the following formula;

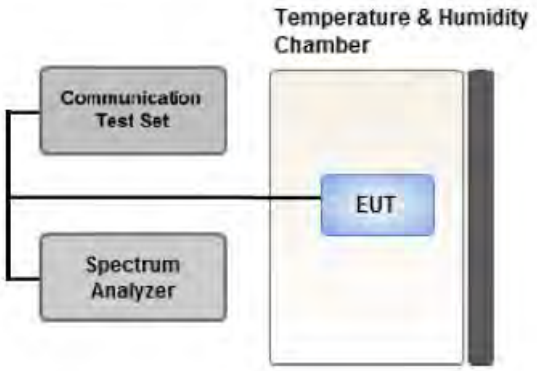
$$Result_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   Where: $P_g$is the generator output power into the substitution antenna.

   If the fundalmatal frequency is below 1GHz, RF output power has been converted to EIRP.

$$EIRP_{(dBm)} = ERP_{(dBm)} + 2.15$$

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)

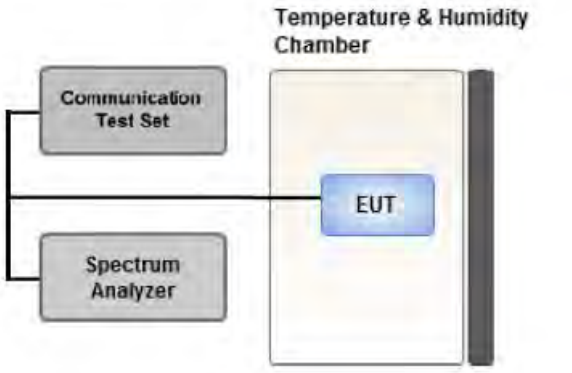
The measurement instrument must have a RBW that is greater than or equal to the OBW of the signal to be measured and a VBW ≥ 3 × RBW.

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

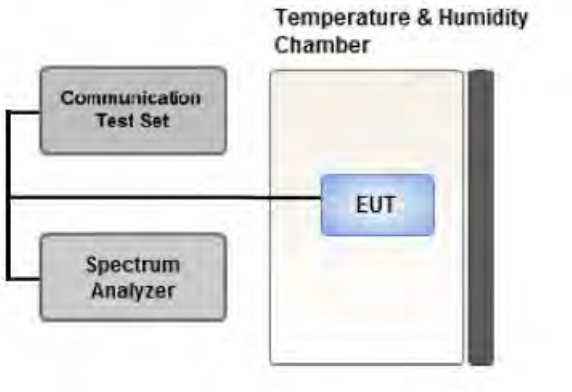
The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 % of the total mean power of a given emission.

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

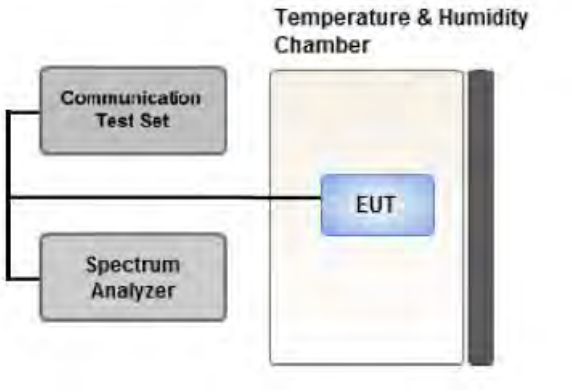
Test Overview

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 = RMS
4. Trace Mode = Average
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

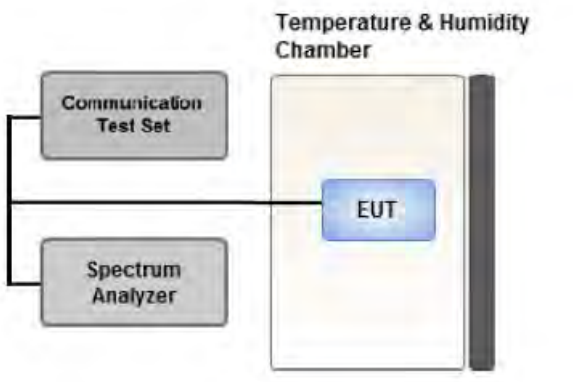
Test Notes

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.

3.9 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, and paging service configurations shown in the test data.
- Please refer to the table below.
- LTE BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of LTE BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers BAND 2 as well as BAND 25.

[Worst case]

Test Description	Modulation	RB size	RB offset	Axis
Effective Isotropic Radiated Power	QPSK, 16QAM, 64QAM	1	0	Z
Radiated Spurious and Harmonic Emissions	QPSK	1	0	Y

3.10 WORST CASE(CONDUCTED TEST)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	QPSK, 16QAM, 64QAM	1.4, 3, 5, 10, 15, 20	Mid	Full RB	0
Peak-To-Average Ratio	QPSK, 16QAM, 64QAM	1.4, 3, 5, 10, 15, 20	Mid	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
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.

- All modes of operation were investigated and the worst case configuration results are reported.

- LTE BAND 25 (1850 – 1915 MHz) overlaps the entire frequency range of LTE BAND 2 (1850 - 1910 MHz) and they have the same Tune-up power.

Therefore, test data provided in this report covers BAND 2 as well as BAND 25.

4. LIST OF TEST EQUIPMENT

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
T&M SYSTEM	FBSR-02B(WHK1.2/15G-10EF)/H.P.F	-	03/09/2020	Annual	03/09/2021
T&M SYSTEM	FBSR-02B(WHK3.3/18G-10EF)/H.P.F	-	03/09/2020	Annual	03/09/2021
WAINWRIGHT INSTRUMENT	WHNX6.0/26.5G-6SS/H.P.F	1	03/19/2020	Annual	03/19/2021
Hewlett Packard	11667B / Power Splitter(DC~26.5 GHz)	11275	04/27/2020	Annual	04/27/2021
Hewlett Packard	E3632A/DC Power Supply	MY4004427	09/27/2019	Annual	09/27/2020
Schwarzbeck	UHAP/ Dipole Antenna	557	03/29/2019	Biennial	03/29/2021
Schwarzbeck	UHAP/ Dipole Antenna	558	03/29/2019	Biennial	03/29/2021
ESPEC	SU-642 / Chamber	93008124	03/18/2020	Annual	03/18/2021
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	147	08/29/2019	Biennial	08/29/2021
Schwarzbeck	BBHA 9120D/ Horn Antenna(1~18GHz)	9120D-1298	09/25/2019	Biennial	09/25/2021
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	BBHA9170342	04/29/2019	Biennial	04/29/2021
Schwarzbeck	BBHA 9170/ Horn Antenna(15~40GHz)	BBHA9170124	02/11/2020	Biennial	02/11/2022
Agilent	N9020A/Signal Analyzer(10Hz~26.5GHz)	MY51110063	04/27/2020	Annual	04/27/2021
Hewlett Packard	8493C/ATTENUATOR(20dB)	17280	06/04/2020	Annual	06/04/2021
REOHDE & SCHWARZ	FSV40/Spectrum Analyzer(10Hz~40GHz)	100931	10/14/2019	Annual	10/14/2020
Agilent	8960 (E5515C)/ Base Station	MY48360800	08/27/2019	Annual	08/27/2020
Schwarzbeck	FMZB1513/ Loop Antenna(9kHz~30MHz)	1513-175	04/26/2019	Biennial	04/26/2021
Schwarzbeck	VULB9160/ Bilog Antenna	3150	03/12/2019	Biennial	03/12/2021
Schwarzbeck	VULB9160/ Hybrid Antenna	760	03/22/2019	Biennial	03/22/2021
Anritsu Corp.	MT8821C/Wideband Radio Communication Tester	6262116770	07/22/2020	Annual	07/22/2021
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	6201026545	01/22/2020	Annual	01/22/2021
REOHDE & SCHWARZ	SMB100A/ SIGNAL GENERATOR (100kHz~40GHz)	177633	07/13/2020	Annual	07/13/2021
KEYSIGHT	E7515B / 5G Wireless Tester	MY58300756	01/07/2020	Annual	01/07/2021
KEYSIGHT	N9030B / Signal Analyzer(5Hz~40.0GHz)	MY55480167	06/04/2020	Annual	06/04/2021
Mini-Circuits	ZC4PD-K1844+ / 4-Way Divider	942907	09/05/2019	Annual	09/05/2020
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.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

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)	5.05

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, §24.238(a)	< 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	§24.232(d)	< 13 dB	PASS
Frequency stability / variation of ambient temperature	§24.235	Emission must remain in band	PASS

Note:

1. See SAR Report
2. The same samples were used for SAR and EMC

6.2 Test Condition : Radiated Test

Test Description	FCC Part Section(s)	Test Limit	Test Result
Equivalent Isotropic Radiated Power	§24.232(c)	< 2 Watts max. EIRP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §24.238(a)	< 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
20175	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

QAM 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
1850.7	LTE B25/B2/ 1.4 MHz	QPSK	-20.91	13.17	10.10	2.11	V	< 2.00	0.131	21.16
		16-QAM	-21.55	12.53	10.10	2.11	V		0.113	20.52
		64-QAM	-22.68	11.40	10.10	2.11	V		0.087	19.39
1882.5		QPSK	-21.29	13.26	10.15	2.15	V		0.134	21.26
		16-QAM	-21.88	12.67	10.15	2.15	V		0.117	20.67
		64-QAM	-23.05	11.50	10.15	2.15	V		0.089	19.50
1914.3		QPSK	-20.89	13.76	10.24	2.16	V		0.153	21.85
		16-QAM	-21.66	12.99	10.24	2.16	V		0.128	21.08
		64-QAM	-22.58	12.07	10.24	2.16	V		0.104	20.16

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1851.5	LTE B25/B2/ 3 MHz	QPSK	-20.85	13.23	10.10	2.11	V	< 2.00	0.132	21.22
		16-QAM	-21.53	12.55	10.10	2.11	V		0.113	20.54
		64-QAM	-22.60	11.48	10.10	2.11	V		0.089	19.47
1882.5		QPSK	-21.32	13.23	10.15	2.15	V		0.133	21.23
		16-QAM	-21.98	12.57	10.15	2.15	V		0.114	20.57
		64-QAM	-23.14	11.41	10.15	2.15	V		0.087	19.41
1913.5		QPSK	-20.72	13.82	10.23	2.15	V		0.155	21.90
		16-QAM	-21.39	13.15	10.23	2.15	V		0.133	21.23
		64-QAM	-22.39	12.15	10.23	2.15	V		0.105	20.23

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1852.5	LTE B25/B2/ 5 MHz	QPSK	-20.90	13.18	10.10	2.11	V	< 2.00	0.131	21.17
		16-QAM	-21.55	12.53	10.10	2.11	V		0.113	20.52
		64-QAM	-22.68	11.40	10.10	2.11	V		0.087	19.39
1882.5		QPSK	-21.46	13.09	10.15	2.15	V		0.129	21.09
		16-QAM	-22.13	12.42	10.15	2.15	V		0.110	20.42
		64-QAM	-23.30	11.25	10.15	2.15	V		0.084	19.25
1912.5		QPSK	-20.87	13.67	10.23	2.15	V		0.150	21.75
		16-QAM	-21.50	13.04	10.23	2.15	V		0.129	21.12
		64-QAM	-22.53	12.01	10.23	2.15	V		0.102	20.09

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1855.0	LTE B25/B2/ 10 MHz	QPSK	-21.12	13.03	10.12	2.12	V	< 2.00	0.127	21.03
		16-QAM	-21.80	12.35	10.12	2.12	V		0.108	20.35
		64-QAM	-22.95	11.20	10.12	2.12	V		0.083	19.20
1882.5		QPSK	-21.69	12.86	10.15	2.15	V		0.122	20.86
		16-QAM	-22.45	12.10	10.15	2.15	V		0.102	20.10
		64-QAM	-23.64	10.91	10.15	2.15	V		0.078	18.91
1910.0		QPSK	-21.05	13.49	10.23	2.15	V		0.144	21.57
		16-QAM	-21.64	12.90	10.23	2.15	V		0.125	20.98
		64-QAM	-22.91	11.63	10.23	2.15	V		0.094	19.71

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1857.5	LTE B25/B2/ 15 MHz	QPSK	-21.44	12.77	10.13	2.12	V	< 2.00	0.120	20.78
		16-QAM	-22.24	11.97	10.13	2.12	V		0.100	19.98
		64-QAM	-23.57	10.64	10.13	2.12	V		0.073	18.65
1882.5		QPSK	-20.98	13.57	10.15	2.15	V		0.144	21.57
		16-QAM	-21.65	12.90	10.15	2.15	V		0.123	20.90
		64-QAM	-22.74	11.81	10.15	2.15	V		0.096	19.81
1907.5		QPSK	-21.51	13.03	10.23	2.15	V		0.129	21.11
		16-QAM	-22.10	12.44	10.23	2.15	V		0.113	20.52
		64-QAM	-23.23	11.31	10.23	2.15	V		0.087	19.39

Freq (MHz)	Mod/ Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBi)	C.L	Pol	Limit	EIRP	
								W	W	dBm
1860.0	LTE B25/B2/ 20 MHz	QPSK	-20.97	13.24	10.13	2.12	V	< 2.00	0.133	21.25
		16-QAM	-21.55	12.66	10.13	2.12	V		0.117	20.67
		64-QAM	-22.66	11.55	10.13	2.12	V		0.090	19.56
1882.5		QPSK	-21.13	13.42	10.15	2.15	V		0.139	21.42
		16-QAM	-21.81	12.74	10.15	2.15	V		0.119	20.74
		64-QAM	-22.91	11.64	10.15	2.15	V		0.092	19.64
1905.0		QPSK	-21.75	13.01	10.12	2.15	V		0.125	20.98
		16-QAM	-22.11	12.65	10.12	2.15	V		0.115	20.62
		64-QAM	-23.41	11.35	10.12	2.15	V		0.085	19.32

8.2 RADIATED SPURIOUS EMISSIONS

▣ OPERATING FREQUENCY: 1914.3 MHz

▣ MEASURED OUTPUT POWER: 21.85 dBm = 0.153 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 1.4 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.85 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26047 (1850.7)	3,701.40	-50.95	12.40	-55.02	3.08	H	-45.70	67.54
	5,552.10	-52.87	13.10	-50.84	3.81	H	-41.55	63.40
	7,402.80	-57.88	11.10	-47.92	4.44	V	-41.26	63.11
26365 (1882.5)	3,765.00	-50.90	12.47	-54.93	3.10	H	-45.56	67.41
	5,647.50	-52.80	13.30	-50.74	3.87	H	-41.31	63.15
	7,530.00	-57.60	11.30	-47.17	4.45	V	-40.32	62.16
26683 (1914.3)	3,828.60	-51.04	12.40	-55.27	3.14	H	-46.01	67.86
	5,742.90	-53.13	13.33	-50.26	3.87	H	-40.80	62.65
	7,657.20	-57.57	11.70	-47.01	4.47	V	-39.78	61.63

▣ OPERATING FREQUENCY: 1913.5 MHz

▣ MEASURED OUTPUT POWER: 21.90 dBm = 0.155 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 3 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.90 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26055 (1851.5)	3,703.00	-50.63	12.40	-54.70	3.08	H	-45.38	67.28
	5,554.50	-53.24	13.13	-51.32	3.82	H	-42.01	63.91
	7,406.00	-57.91	11.12	-47.84	4.45	H	-41.17	63.07
26365 (1882.5)	3,765.00	-50.85	12.47	-54.88	3.10	H	-45.51	67.41
	5,647.50	-53.05	13.30	-50.99	3.87	H	-41.56	63.46
	7,530.00	-57.80	11.30	-47.37	4.45	H	-40.52	62.42
26675 (1913.5)	3,827.00	-50.62	12.40	-54.85	3.14	H	-45.59	67.49
	5,740.50	-52.78	13.33	-49.91	3.87	H	-40.45	62.35
	7,654.00	-57.51	11.70	-46.90	4.47	V	-39.66	61.57

▣ OPERATING FREQUENCY: 1912.5 MHz

▣ MEASURED OUTPUT POWER: 21.75 dBm = 0.150 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 5 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.75 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26065 (1852.5)	3,705.00	-50.92	12.42	-55.07	3.08	H	-45.73	67.48
	5,557.50	-53.13	13.15	-51.32	3.82	H	-41.99	63.74
	7,410.00	-57.61	11.13	-47.43	4.45	V	-40.75	62.50
26365 (1882.5)	3,765.00	-50.91	12.47	-54.94	3.10	H	-45.57	67.32
	5,647.50	-53.20	13.30	-51.14	3.87	H	-41.71	63.46
	7,530.00	-57.82	11.30	-47.39	4.45	H	-40.54	62.29
26665 (1912.5)	3,825.00	-50.65	12.40	-54.98	3.14	H	-45.72	67.47
	5,737.50	-53.21	13.33	-50.34	3.87	H	-40.88	62.63
	7,650.00	-57.87	11.70	-47.21	4.46	V	-39.97	61.72

▣ OPERATING FREQUENCY: 1910.0 MHz

▣ MEASURED OUTPUT POWER: 21.57 dBm = 0.144 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.57 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26090 (1855.0)	3,710.00	-51.01	12.43	-55.24	3.08	H	-45.89	67.46
	5,565.00	-53.21	13.18	-51.31	3.83	H	-41.96	63.54
	7,420.00	-57.58	11.15	-47.04	4.43	V	-40.32	61.89
26365 (1882.5)	3,765.00	-50.94	12.47	-54.97	3.10	H	-45.60	67.17
	5,647.50	-52.97	13.30	-50.91	3.87	H	-41.48	63.05
	7,530.00	-57.77	11.30	-47.34	4.45	V	-40.49	62.06
26640 (1910.0)	3,820.00	-51.11	12.40	-55.54	3.14	H	-46.28	67.85
	5,730.00	-52.97	13.35	-50.31	3.87	H	-40.83	62.40
	7,640.00	-57.76	11.65	-47.23	4.47	V	-40.05	61.62

▣ OPERATING FREQUENCY: 1882.5 MHz

▣ MEASURED OUTPUT POWER: 21.57 dBm = 0.144 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 15 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.57 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26115 (1857.5)	3,715.00	-50.89	12.44	-55.14	3.09	H	-45.79	67.36
	5,572.50	-53.09	13.20	-51.11	3.83	H	-41.74	63.31
	7,430.00	-57.68	11.15	-47.16	4.41	V	-40.42	61.99
26365 (1882.5)	3,765.00	-50.73	12.47	-54.76	3.10	H	-45.39	66.96
	5,647.50	-52.89	13.30	-50.83	3.87	H	-41.40	62.97
	7,530.00	-57.92	11.30	-47.49	4.45	V	-40.64	62.21
26615 (1907.5)	3,815.00	-50.92	12.40	-55.31	3.14	H	-46.04	67.61
	5,722.50	-53.07	13.35	-50.10	3.88	H	-40.63	62.20
	7,630.00	-57.63	11.60	-47.30	4.48	V	-40.18	61.75

▣ OPERATING FREQUENCY: 1882.5 MHz

▣ MEASURED OUTPUT POWER: 21.42 dBm = 0.139 W

▣ MOD: LTE B25/B2

▣ MODULATION SIGNAL: 20 MHz QPSK

▣ DISTANCE: 3 meters

▣ LIMIT: 43 + 10 log10 (W) = 34.42 dBc

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	dBc
26140 (1860.0)	3,720.00	-50.95	12.45	-55.23	3.09	H	-45.87	67.29
	5,580.00	-53.24	13.20	-51.33	3.84	H	-41.97	63.39
	7,440.00	-57.76	11.18	-47.35	4.40	V	-40.57	61.99
26365 (1882.5)	3,765.00	-50.71	12.47	-54.74	3.10	H	-45.37	66.79
	5,647.50	-53.17	13.30	-51.11	3.87	H	-41.68	63.10
	7,530.00	-57.64	11.30	-47.21	4.45	V	-40.36	61.78
26590 (1905.0)	3,810.00	-51.01	12.40	-55.36	3.13	H	-46.09	67.51
	5,715.00	-53.10	13.37	-50.32	3.88	H	-40.84	62.26
	7,620.00	-57.95	11.60	-47.74	4.48	V	-40.62	62.04

8.3 PEAK-TO-AVERAGE RATIO

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (dB)
25/2	1.4 MHz	1882.5	QPSK	6	0	5.34
			16-QAM	6	0	6.10
			64-QAM	6	0	6.71
	3 MHz		QPSK	15	0	5.30
			16-QAM	15	0	6.04
			64-QAM	15	0	6.60
	5 MHz		QPSK	25	0	5.28
			16-QAM	25	0	6.02
			64-QAM	25	0	6.58
	10 MHz		QPSK	50	0	5.33
			16-QAM	50	0	6.04
			64-QAM	50	0	6.54
	15 MHz		QPSK	75	0	5.29
			16-QAM	75	0	5.97
			64-QAM	75	0	6.02
	20 MHz		QPSK	100	0	5.25
			16-QAM	100	0	5.99
			64-QAM	100	0	6.50

Note:

1. Plots of the EUT's Peak- to- Average Ratio are shown Page 73 ~ 90.

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
25/2	1.4 MHz	1882.5	QPSK	6	0	1.0933
			16-QAM	6	0	1.0907
			64-QAM	6	0	1.0915
	3 MHz		QPSK	15	0	2.7086
			16-QAM	15	0	2.6970
			64-QAM	15	0	2.6968
	5 MHz		QPSK	25	0	4.5070
			16-QAM	25	0	4.4949
			64-QAM	25	0	4.5017
	10 MHz		QPSK	50	0	8.9528
			16-QAM	50	0	8.9509
			64-QAM	50	0	8.9752
	15 MHz		QPSK	75	0	13.455
			16-QAM	75	0	13.441
			64-QAM	75	0	13.473
	20 MHz		QPSK	100	0	17.931
			16-QAM	100	0	17.915
			64-QAM	100	0	17.942

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 55 ~ 72.

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)
25/2	1.4	1850.7	3.7104	27.976	-77.301	-49.325	-13.00
		1882.5	3.7149	27.976	-77.176	-49.200	
		1914.3	3.7069	27.976	-77.366	-49.390	
	3	1851.5	3.6770	27.976	-77.331	-49.355	
		1882.5	3.7119	27.976	-77.186	-49.210	
		1913.5	3.6980	27.976	-77.069	-49.093	
	5	1852.5	3.7074	27.976	-77.201	-49.225	
		1882.5	3.7044	27.976	-77.014	-49.038	
		1912.5	3.7219	27.976	-77.392	-49.416	
	10	1855.0	3.6725	27.976	-77.246	-49.270	
		1882.5	3.7000	27.976	-77.497	-49.521	
		1910.0	3.7104	27.976	-77.503	-49.527	
	15	1857.5	3.7139	27.976	-77.126	-49.150	
		1882.5	3.7044	27.976	-76.935	-48.959	
		1907.5	3.7274	27.976	-77.421	-49.445	
	20	1860.0	3.7099	27.976	-77.317	-49.341	
		1882.5	3.7015	27.976	-77.492	-49.516	
		1905.0	3.7059	27.976	-76.825	-48.849	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 127 ~ 162.
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 91 ~ 126.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ MODE: LTE B25/B2

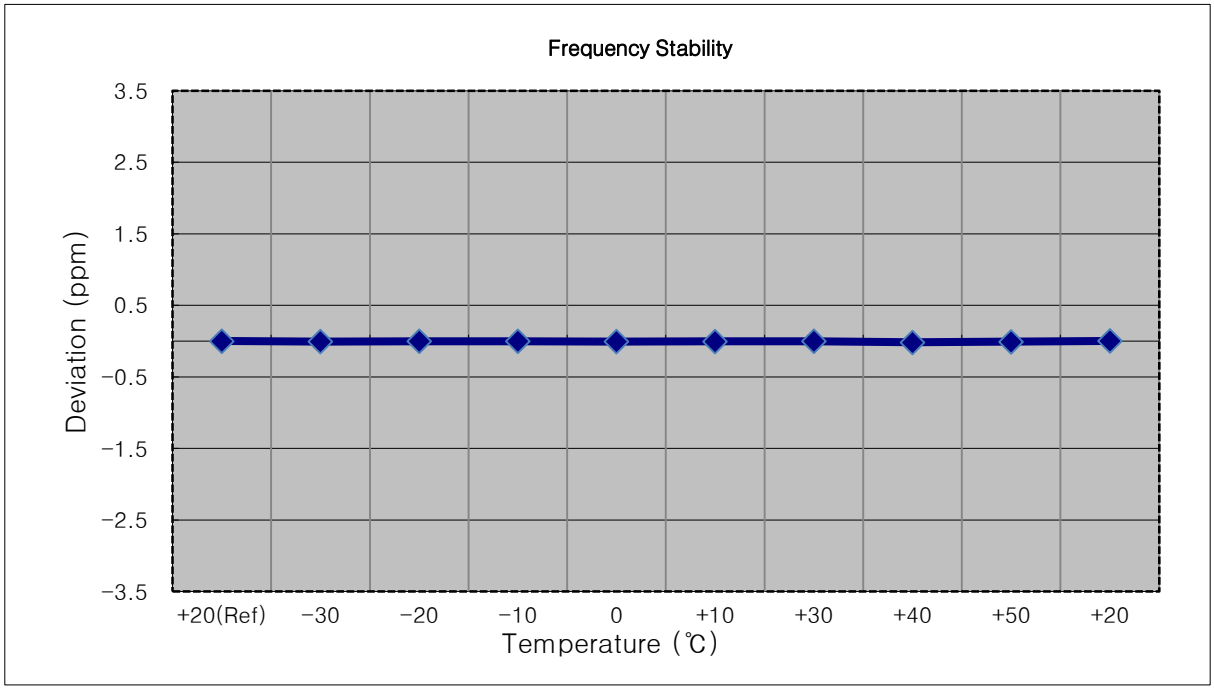
▣ OPERATING FREQUENCY: 1850,700,000 Hz

▣ CHANNEL: 26047 (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)	1850 700 003	0.0	0.000 000	0.000
100%		-30	1850 699 993	-9.9	-0.000 001	-0.005
100%		-20	1850 700 000	-3.6	0.000 000	-0.002
100%		-10	1850 699 998	-5.0	0.000 000	-0.003
100%		0	1850 699 993	-10.3	-0.000 001	-0.006
100%		+10	1850 699 997	-6.6	0.000 000	-0.004
100%		+30	1850 699 999	-3.7	0.000 000	-0.002
100%		+40	1850 699 969	-34.2	-0.000 002	-0.018
100%		+50	1850 699 989	-14.5	-0.000 001	-0.008
Batt. Endpoint	3.400	+20	1850 700 008	4.8	0.000 000	0.003



▣ MODE: LTE B25/B2

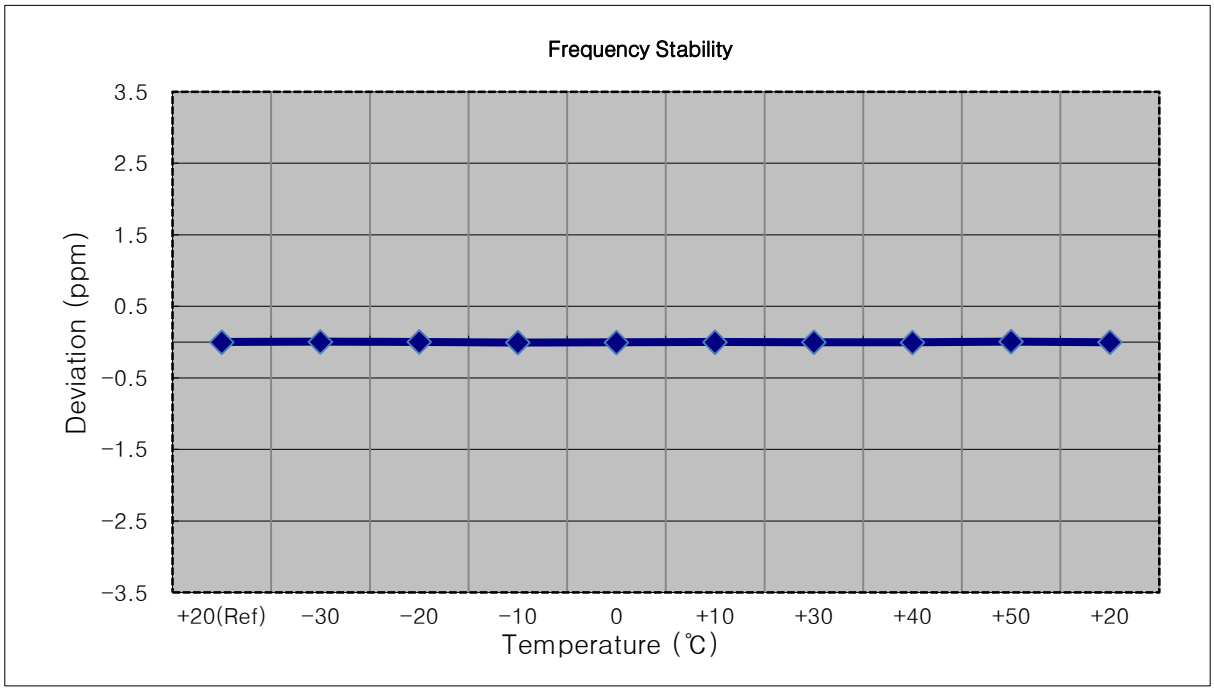
▣ OPERATING FREQUENCY: 1851,500,000 Hz

▣ CHANNEL: 26055 (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)	1851 500 003	0.0	0.000 000	0.000
100%		-30	1851 500 011	7.6	0.000 000	0.004
100%		-20	1851 500 007	3.7	0.000 000	0.002
100%		-10	1851 499 993	-10.3	-0.000 001	-0.006
100%		0	1851 499 996	-7.0	0.000 000	-0.004
100%		+10	1851 500 005	1.9	0.000 000	0.001
100%		+30	1851 500 001	-2.8	0.000 000	-0.002
100%		+40	1851 499 995	-8.3	0.000 000	-0.004
100%		+50	1851 500 016	12.9	0.000 001	0.007
Batt. Endpoint	3.400	+20	1851 500 002	-1.8	0.000 000	-0.001



▣ MODE: LTE B25/B2

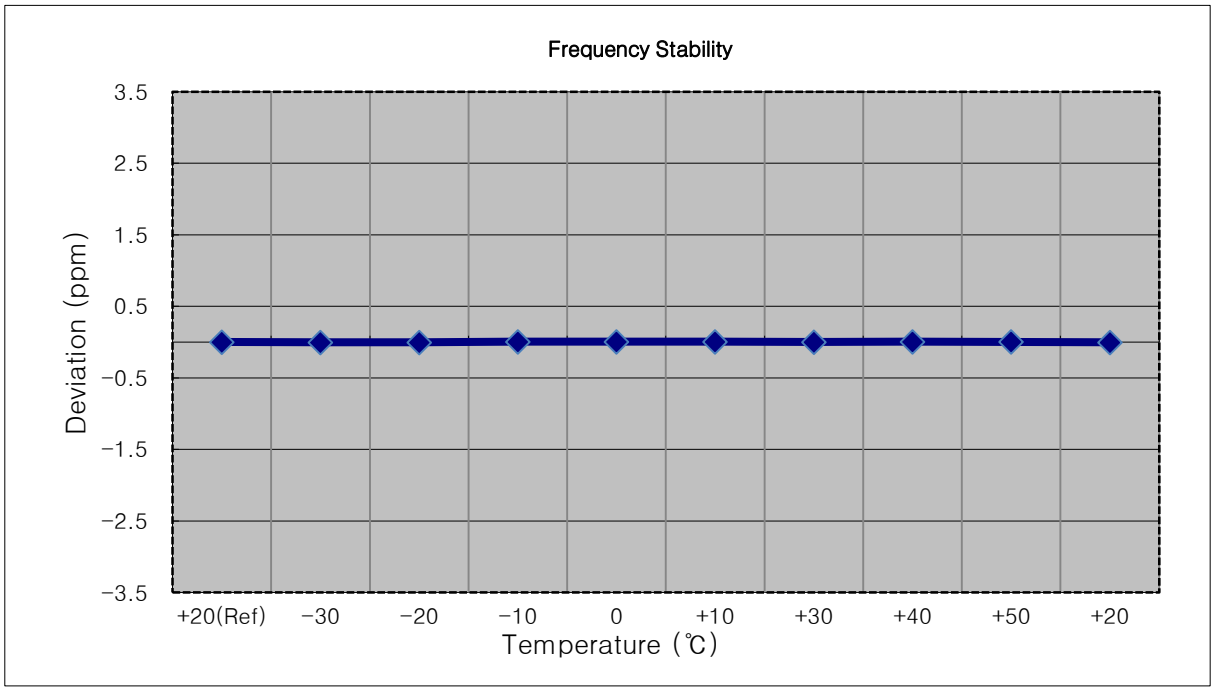
▣ OPERATING FREQUENCY: 1852,500,000 Hz

▣ CHANNEL: 26065 (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%	3.850	+20(Ref)	1852 499 994	0.0	0.000 000	0.000
100%		-30	1852 499 987	-6.9	0.000 000	-0.004
100%		-20	1852 499 985	-8.7	0.000 000	-0.005
100%		-10	1852 500 002	8.3	0.000 000	0.004
100%		0	1852 500 004	10.2	0.000 001	0.006
100%		+10	1852 500 003	9.2	0.000 000	0.005
100%		+30	1852 499 997	2.7	0.000 000	0.001
100%		+40	1852 500 002	7.7	0.000 000	0.004
100%		+50	1852 500 000	5.9	0.000 000	0.003
Batt. Endpoint	3.400	+20	1852 499 986	-8.4	0.000 000	-0.005



▣ MODE: LTE B25/B2

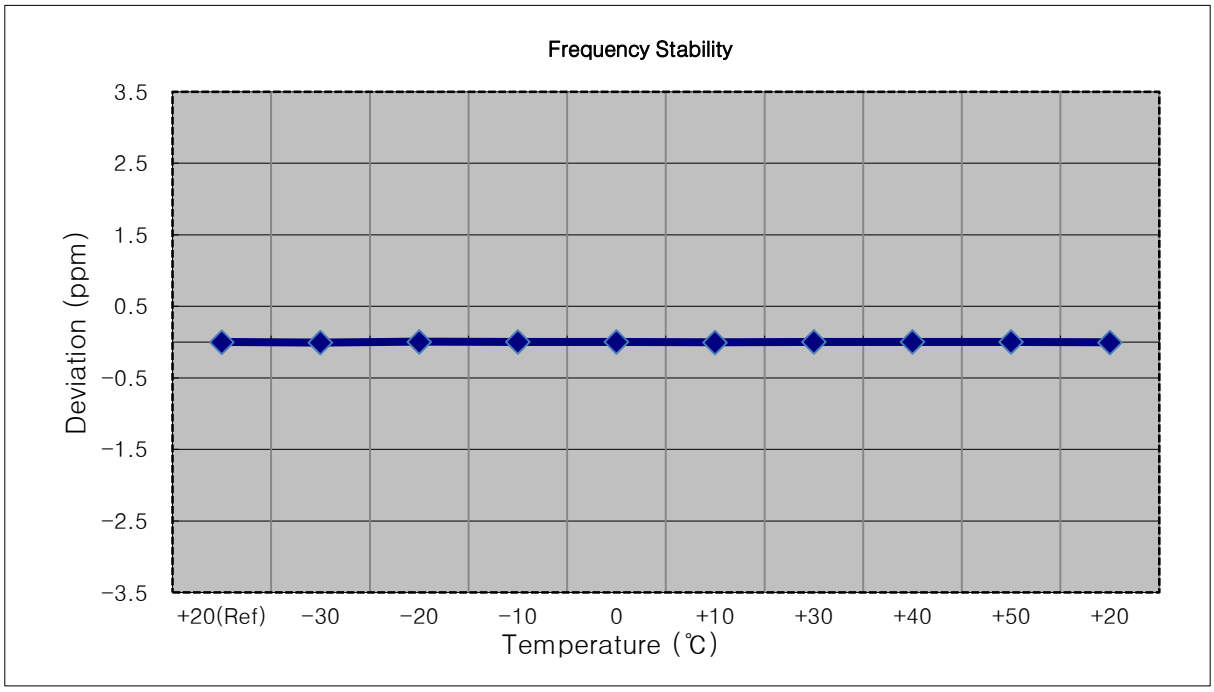
▣ OPERATING FREQUENCY: 1855,000,000 Hz

▣ CHANNEL: 26090 (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%	3.850	+20(Ref)	1855 000 007	0.0	0.000 000	0.000
100%		-30	1854 999 996	-11.2	-0.000 001	-0.006
100%		-20	1855 000 017	9.4	0.000 001	0.005
100%		-10	1855 000 012	5.0	0.000 000	0.003
100%		0	1855 000 011	3.7	0.000 000	0.002
100%		+10	1854 999 998	-8.7	0.000 000	-0.005
100%		+30	1855 000 012	4.6	0.000 000	0.002
100%		+40	1855 000 013	5.4	0.000 000	0.003
100%		+50	1855 000 013	6.2	0.000 000	0.003
Batt. Endpoint	3.400	+20	1854 999 998	-9.6	-0.000 001	-0.005



▣ MODE: LTE B25/B2

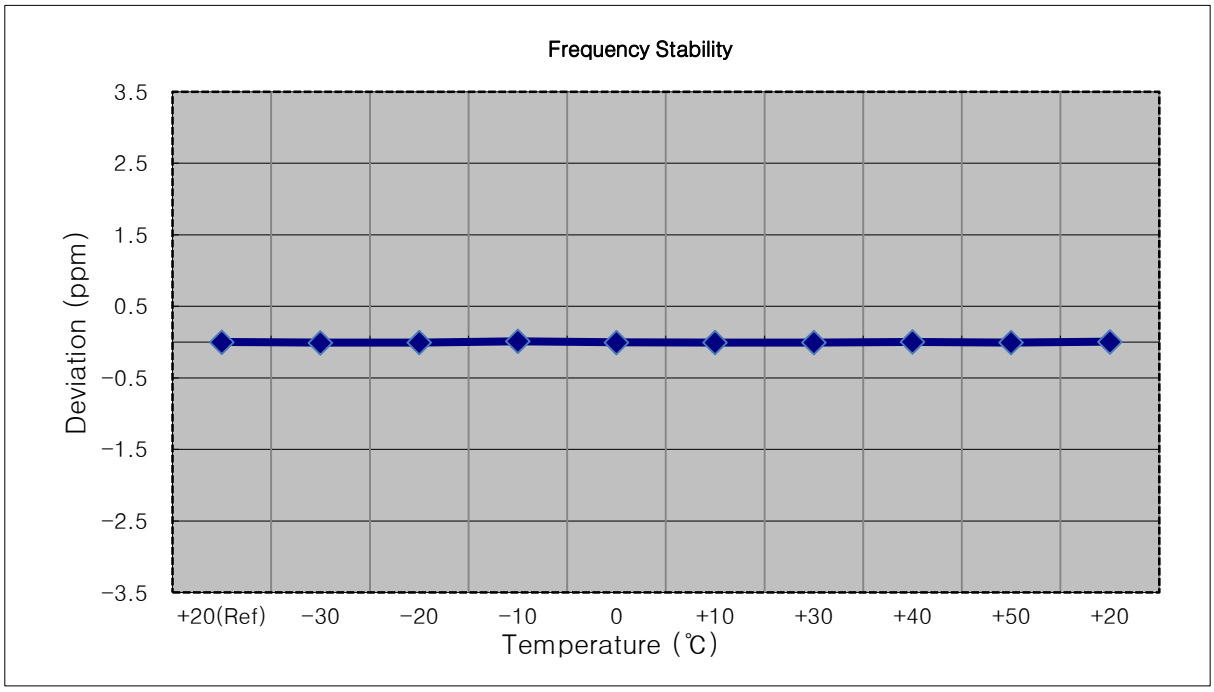
▣ OPERATING FREQUENCY: 1857,500,000 Hz

▣ CHANNEL: 26115 (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%	3.850	+20(Ref)	1857 499 998	0.0	0.000 000	0.000
100%		-30	1857 499 982	-15.4	-0.000 001	-0.008
100%		-20	1857 499 987	-10.5	-0.000 001	-0.006
100%		-10	1857 500 019	20.9	0.000 001	0.011
100%		0	1857 499 990	-7.6	0.000 000	-0.004
100%		+10	1857 499 986	-11.3	-0.000 001	-0.006
100%		+30	1857 499 984	-13.3	-0.000 001	-0.007
100%		+40	1857 500 003	5.1	0.000 000	0.003
100%		+50	1857 499 984	-13.3	-0.000 001	-0.007
Batt. Endpoint	3.400	+20	1857 500 007	9.8	0.000 001	0.005



▣ MODE: LTE B25/B2

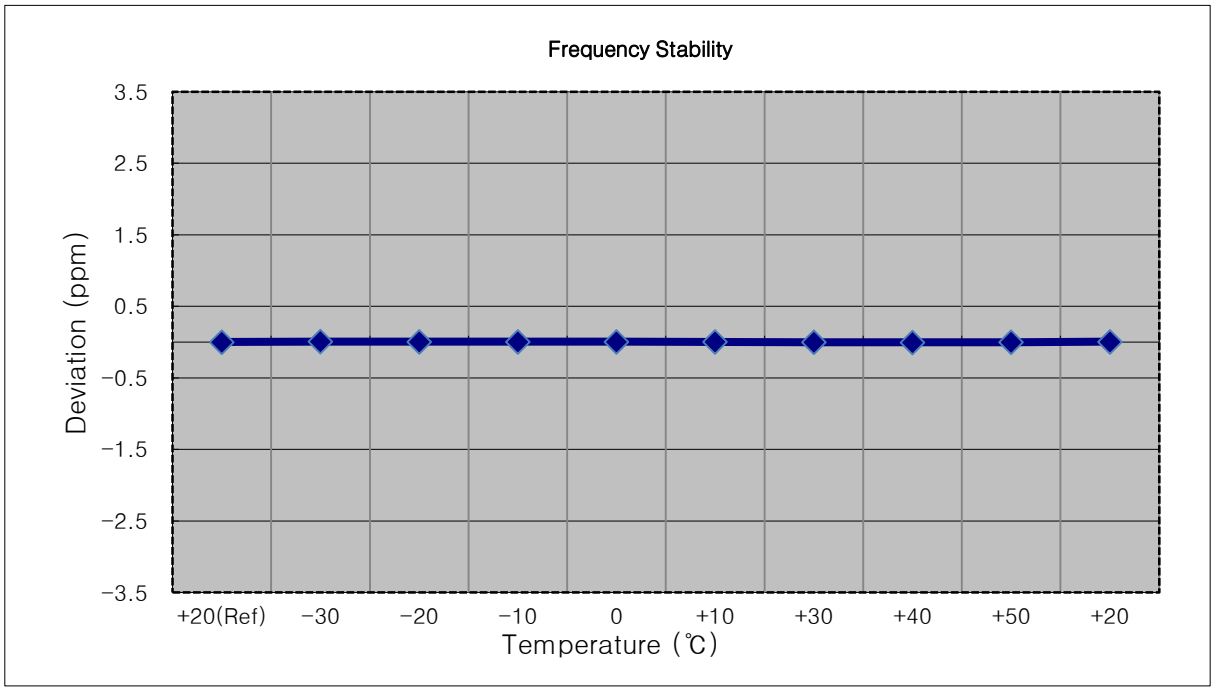
▣ OPERATING FREQUENCY: 1860,000,000 Hz

▣ CHANNEL: 26140 (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%	3.850	+20(Ref)	1860 000 032	0.0	0.000 000	0.000
100%		-30	1860 000 047	14.7	0.000 001	0.008
100%		-20	1860 000 041	9.0	0.000 000	0.005
100%		-10	1860 000 041	9.4	0.000 001	0.005
100%		0	1860 000 039	7.1	0.000 000	0.004
100%		+10	1860 000 035	3.5	0.000 000	0.002
100%		+30	1860 000 029	-3.2	0.000 000	-0.002
100%		+40	1860 000 026	-5.7	0.000 000	-0.003
100%		+50	1860 000 027	-5.1	0.000 000	-0.003
Batt. Endpoint	3.400	+20	1860 000 039	7.3	0.000 000	0.004



▣ MODE: LTE B25/B2

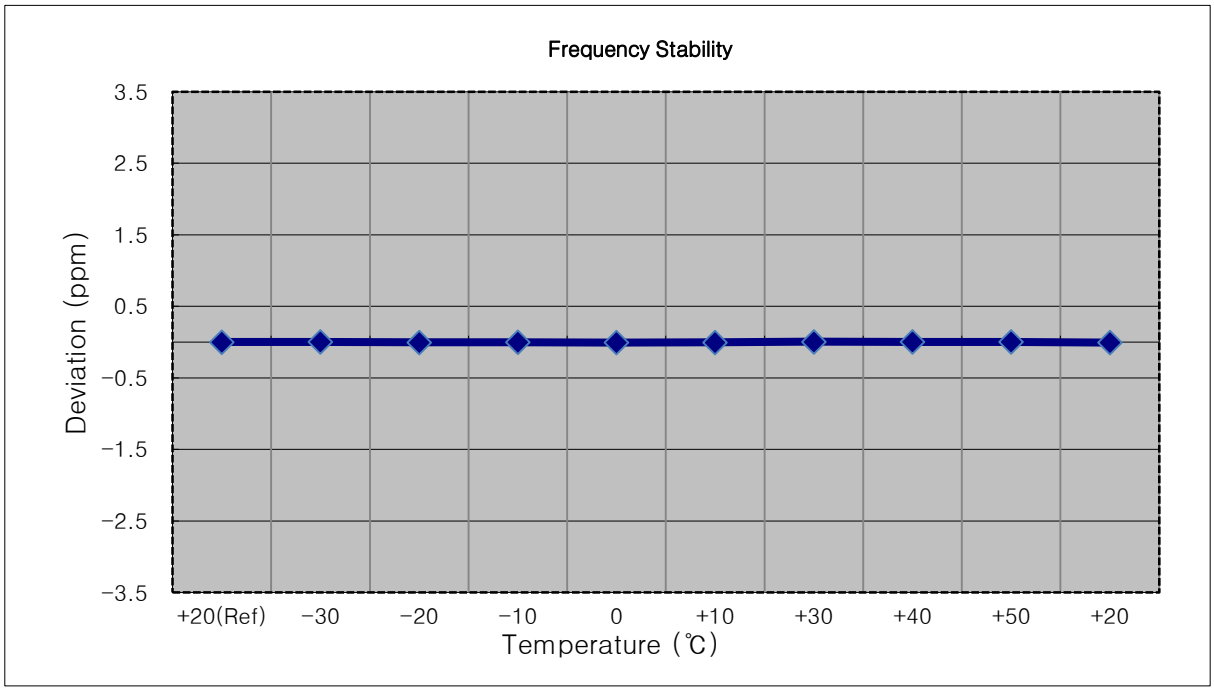
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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)	1882 499 989	0.0	0.000 000	0.000
100%		-30	1882 499 994	4.9	0.000 000	0.003
100%		-20	1882 499 981	-8.3	0.000 000	-0.004
100%		-10	1882 499 986	-2.6	0.000 000	-0.001
100%		0	1882 499 979	-10.2	-0.000 001	-0.005
100%		+10	1882 499 983	-6.3	0.000 000	-0.003
100%		+30	1882 499 996	7.1	0.000 000	0.004
100%		+40	1882 499 993	4.4	0.000 000	0.002
100%		+50	1882 499 994	5.1	0.000 000	0.003
Batt. Endpoint	3.400	+20	1882 499 978	-11.3	-0.000 001	-0.006



▣ MODE: LTE B25/B2

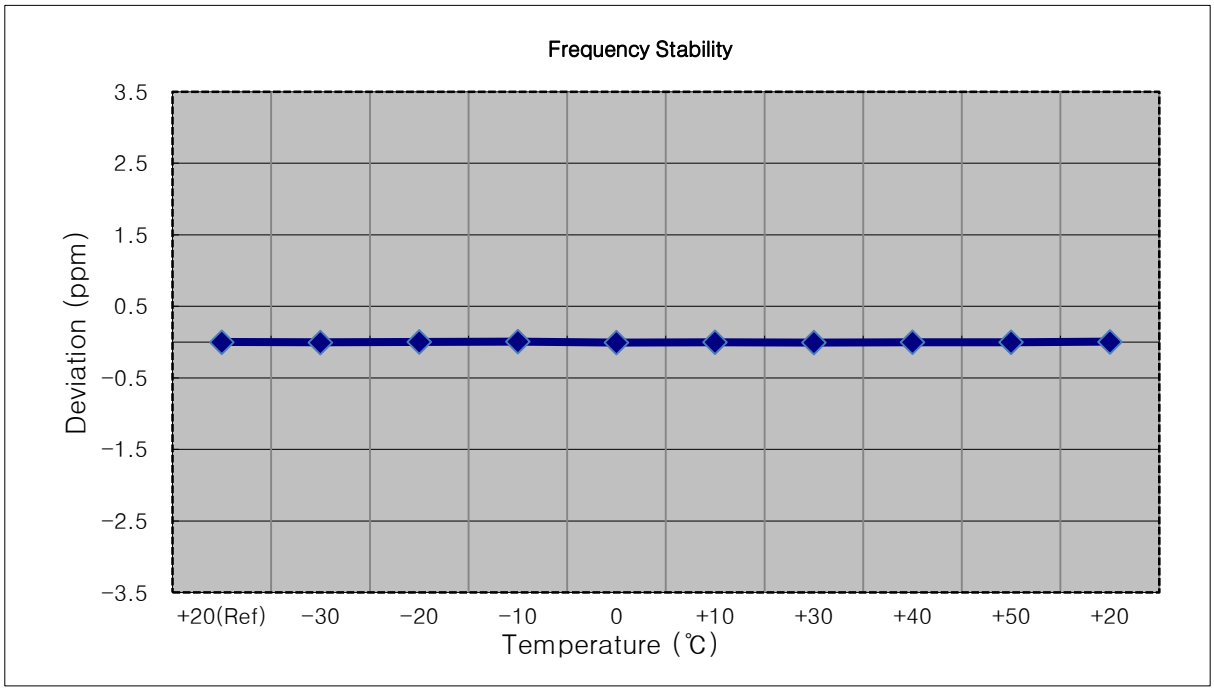
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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)	1882 499 990	0.0	0.000 000	0.000
100%		-30	1882 499 985	-5.7	0.000 000	-0.003
100%		-20	1882 499 996	5.8	0.000 000	0.003
100%		-10	1882 500 002	12.1	0.000 001	0.006
100%		0	1882 499 979	-11.0	-0.000 001	-0.006
100%		+10	1882 499 989	-1.7	0.000 000	-0.001
100%		+30	1882 499 980	-10.3	-0.000 001	-0.005
100%		+40	1882 499 985	-5.5	0.000 000	-0.003
100%		+50	1882 499 986	-4.4	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1882 499 999	8.9	0.000 000	0.005



▣ MODE: LTE B25/B2

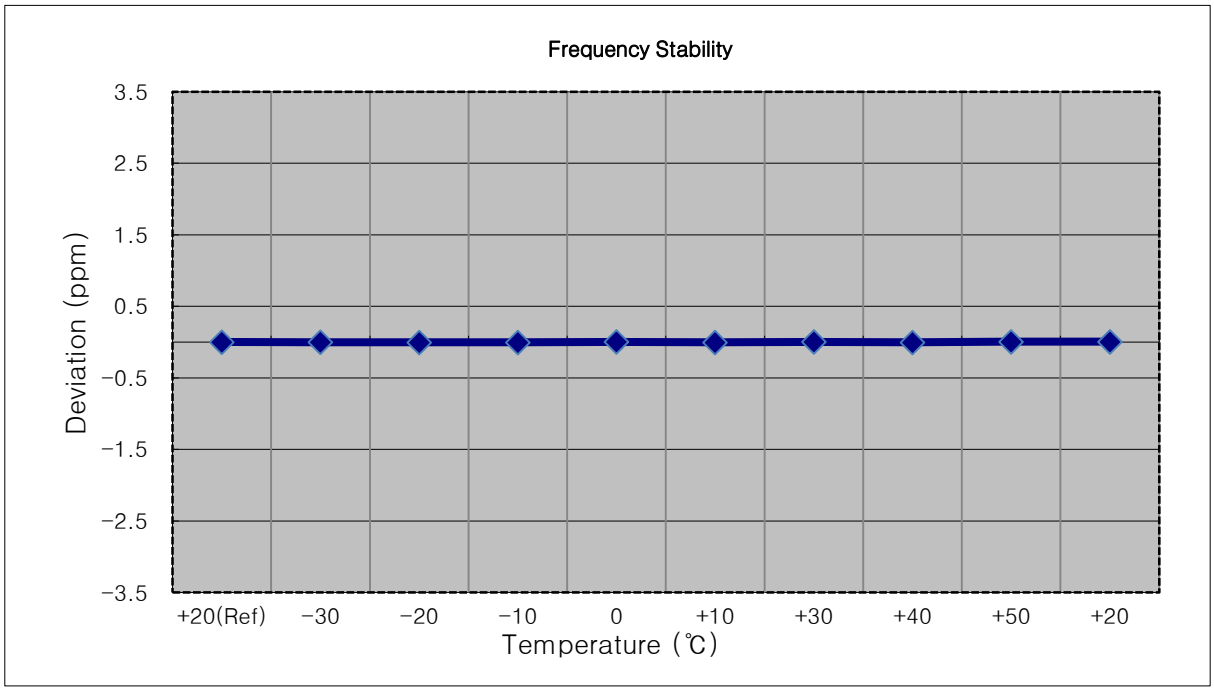
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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%	3.850	+20(Ref)	1882 500 009	0.0	0.000 000	0.000
100%		-30	1882 500 004	-4.8	0.000 000	-0.003
100%		-20	1882 500 001	-7.9	0.000 000	-0.004
100%		-10	1882 500 001	-7.8	0.000 000	-0.004
100%		0	1882 500 013	4.0	0.000 000	0.002
100%		+10	1882 500 002	-7.4	0.000 000	-0.004
100%		+30	1882 500 015	6.0	0.000 000	0.003
100%		+40	1882 500 000	-8.8	0.000 000	-0.005
100%		+50	1882 500 016	7.0	0.000 000	0.004
Batt. Endpoint	3.400	+20	1882 500 020	10.5	0.000 001	0.006



▣ MODE: LTE B25/B2

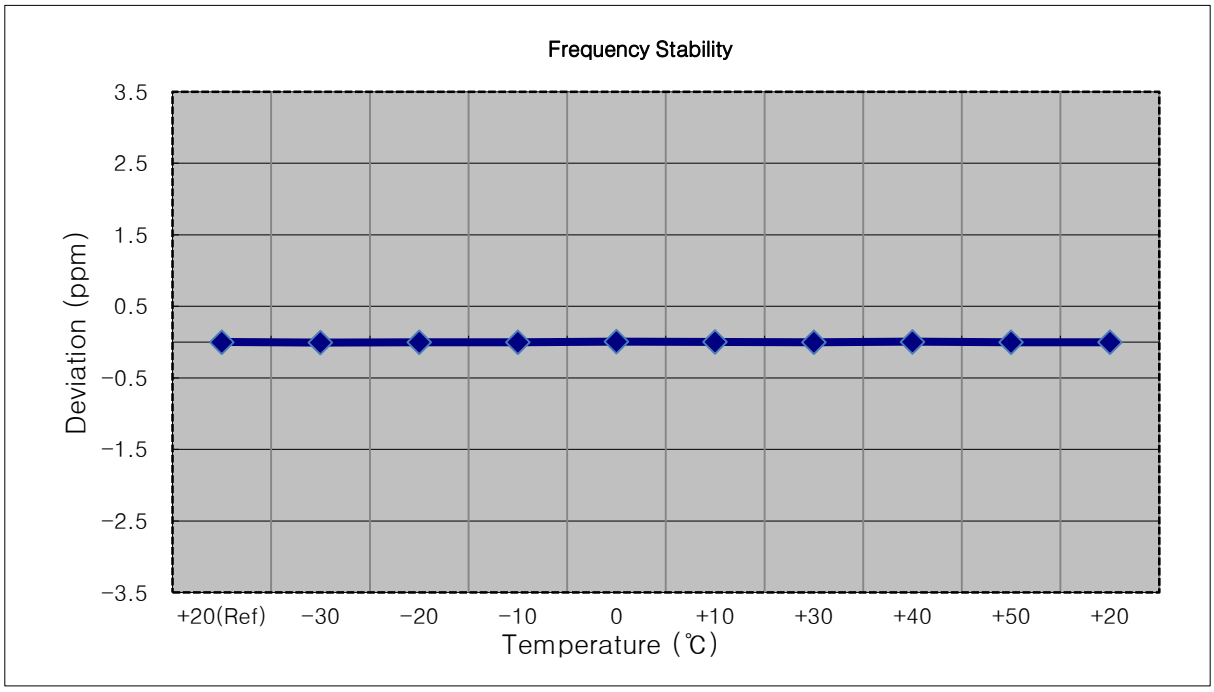
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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%	3.850	+20(Ref)	1882 500 003	0.0	0.000 000	0.000
100%		-30	1882 499 992	-11.4	-0.000 001	-0.006
100%		-20	1882 499 999	-4.3	0.000 000	-0.002
100%		-10	1882 499 999	-3.9	0.000 000	-0.002
100%		0	1882 500 017	13.6	0.000 001	0.007
100%		+10	1882 500 007	4.1	0.000 000	0.002
100%		+30	1882 499 999	-3.8	0.000 000	-0.002
100%		+40	1882 500 013	9.8	0.000 001	0.005
100%		+50	1882 500 000	-3.6	0.000 000	-0.002
Batt. Endpoint	3.400	+20	1882 500 001	-2.3	0.000 000	-0.001



▣ MODE: LTE B25/B2

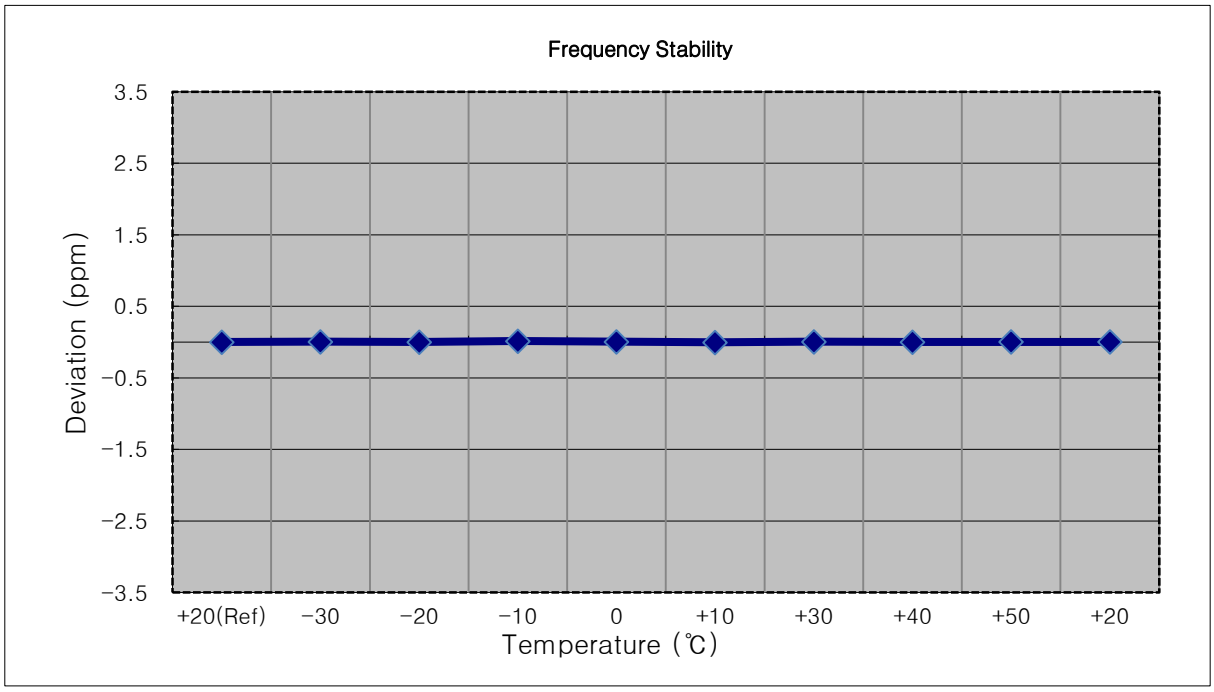
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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%	3.850	+20(Ref)	1882 500 008	0.0	0.000 000	0.000
100%		-30	1882 500 018	10.0	0.000 001	0.005
100%		-20	1882 500 009	1.5	0.000 000	0.001
100%		-10	1882 500 032	24.4	0.000 001	0.013
100%		0	1882 500 016	8.9	0.000 000	0.005
100%		+10	1882 500 001	-6.5	0.000 000	-0.003
100%		+30	1882 500 016	8.1	0.000 000	0.004
100%		+40	1882 500 010	2.6	0.000 000	0.001
100%		+50	1882 500 010	2.9	0.000 000	0.002
Batt. Endpoint	3.400	+20	1882 500 012	4.0	0.000 000	0.002



▣ MODE: LTE B25/B2

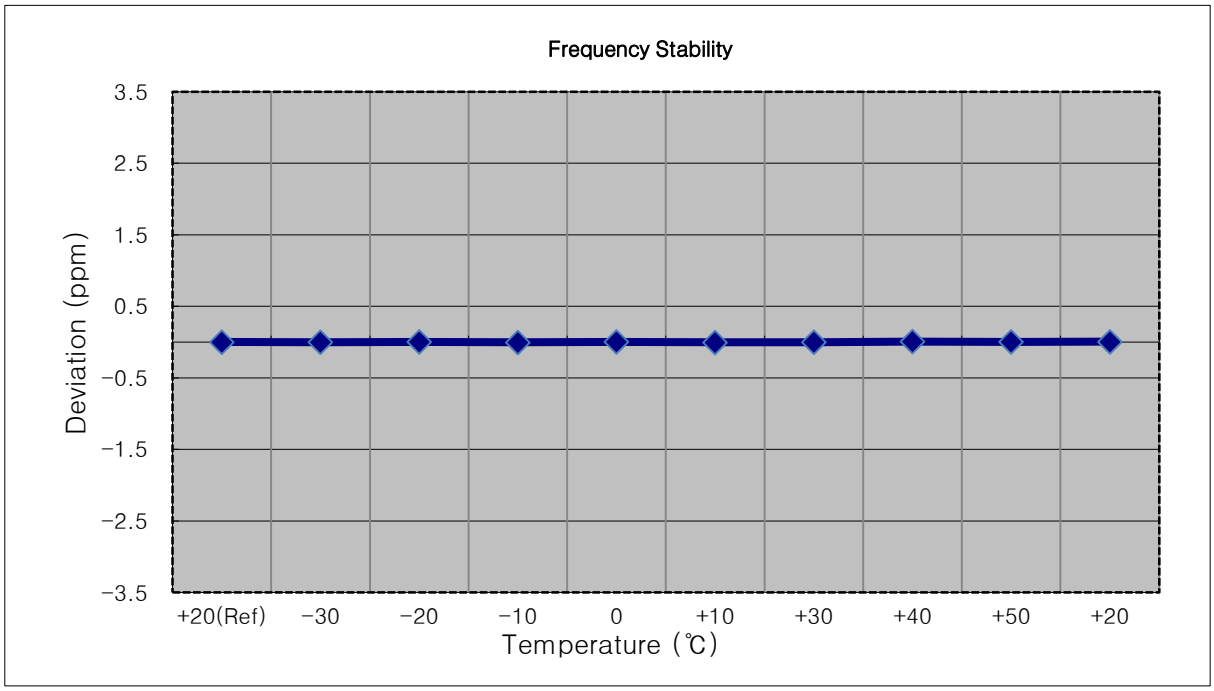
▣ OPERATING FREQUENCY: 1882,500,000 Hz

▣ CHANNEL: 26365 (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%	3.850	+20(Ref)	1882 500 004	0.0	0.000 000	0.000
100%		-30	1882 500 000	-3.5	0.000 000	-0.002
100%		-20	1882 500 009	5.0	0.000 000	0.003
100%		-10	1882 499 996	-8.4	0.000 000	-0.004
100%		0	1882 500 007	3.1	0.000 000	0.002
100%		+10	1882 499 996	-8.4	0.000 000	-0.004
100%		+30	1882 500 000	-3.5	0.000 000	-0.002
100%		+40	1882 500 019	14.7	0.000 001	0.008
100%		+50	1882 500 008	3.7	0.000 000	0.002
Batt. Endpoint	3.400	+20	1882 500 012	8.3	0.000 000	0.004



▣ MODE: LTE B25/B2

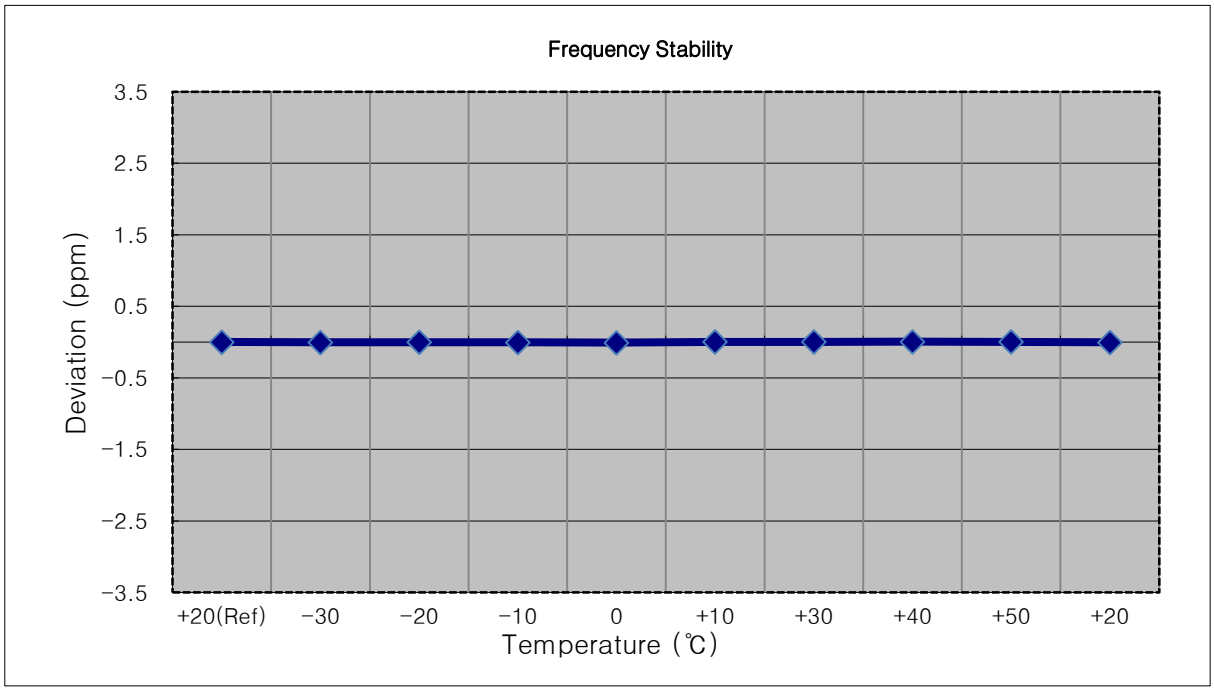
▣ OPERATING FREQUENCY: 1914,300,000 Hz

▣ CHANNEL: 26683 (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)	1914 299 992	0.0	0.000 000	0.000
100%		-30	1914 299 985	-6.5	0.000 000	-0.003
100%		-20	1914 299 987	-4.6	0.000 000	-0.002
100%		-10	1914 299 983	-8.7	0.000 000	-0.005
100%		0	1914 299 975	-16.8	-0.000 001	-0.009
100%		+10	1914 299 998	5.9	0.000 000	0.003
100%		+30	1914 299 999	7.0	0.000 000	0.004
100%		+40	1914 300 001	9.2	0.000 000	0.005
100%		+50	1914 299 998	5.7	0.000 000	0.003
Batt. Endpoint	3.400	+20	1914 299 982	-9.6	-0.000 001	-0.005



▣ MODE: LTE B25/B2

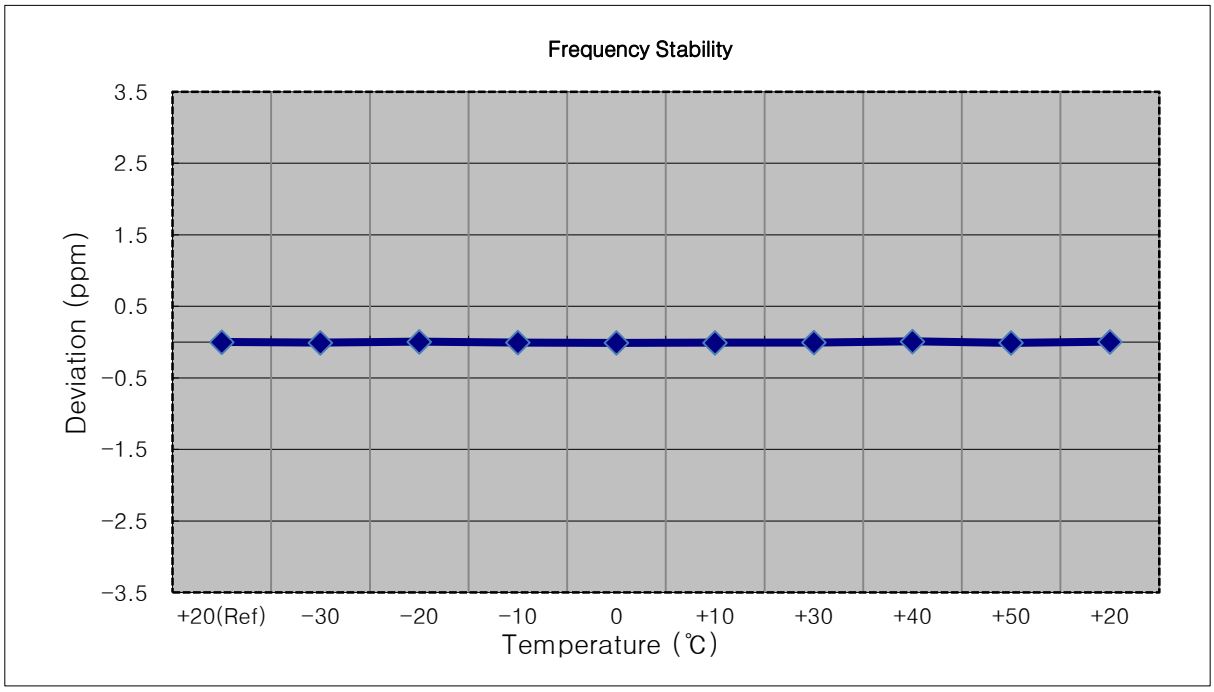
▣ OPERATING FREQUENCY: 1913,500,000 Hz

▣ CHANNEL: 26675 (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)	1913 499 988	0.0	0.000 000	0.000
100%		-30	1913 499 970	-17.5	-0.000 001	-0.009
100%		-20	1913 499 998	10.3	0.000 001	0.005
100%		-10	1913 499 976	-11.5	-0.000 001	-0.006
100%		0	1913 499 966	-21.6	-0.000 001	-0.011
100%		+10	1913 499 970	-17.4	-0.000 001	-0.009
100%		+30	1913 499 977	-10.7	-0.000 001	-0.006
100%		+40	1913 500 006	18.0	0.000 001	0.009
100%		+50	1913 499 968	-19.1	-0.000 001	-0.010
Batt. Endpoint	3.400	+20	1913 499 998	10.7	0.000 001	0.006



▣ MODE: LTE B25/B2

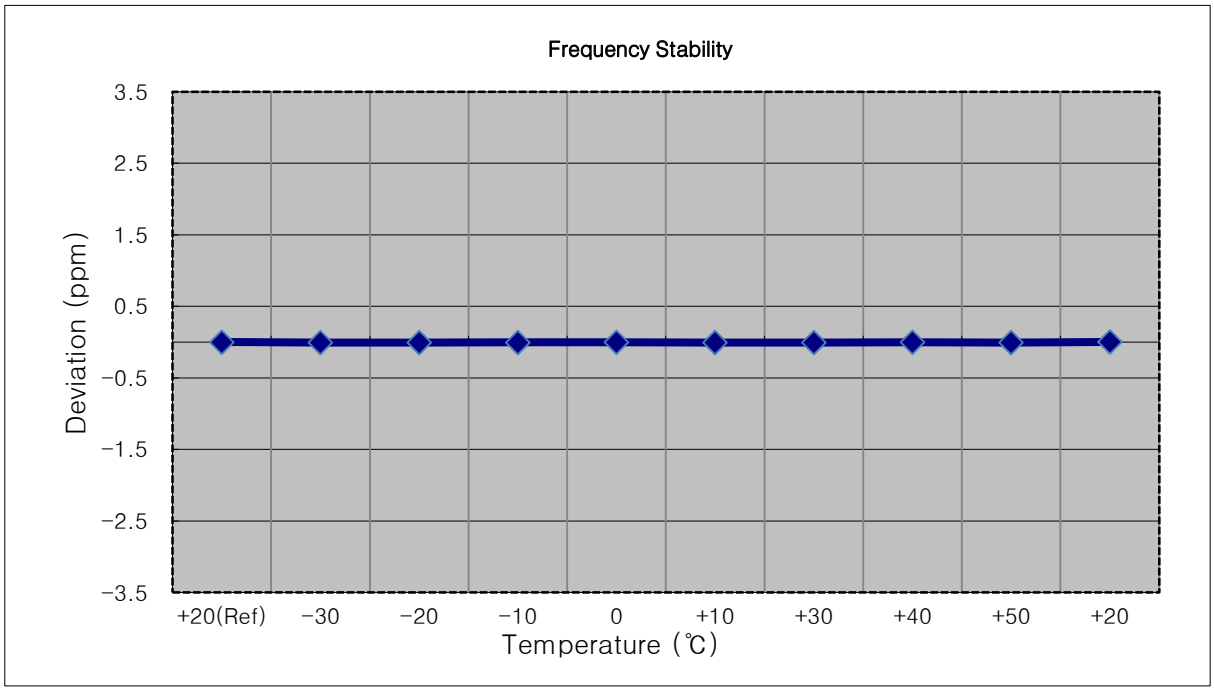
▣ OPERATING FREQUENCY: 1912,500,000 Hz

▣ CHANNEL: 26665 (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%	3.850	+20(Ref)	1912 499 981	0.0	0.000 000	0.000
100%		-30	1912 499 968	-13.5	-0.000 001	-0.007
100%		-20	1912 499 970	-11.5	-0.000 001	-0.006
100%		-10	1912 499 972	-9.8	-0.000 001	-0.005
100%		0	1912 499 979	-2.2	0.000 000	-0.001
100%		+10	1912 499 969	-12.8	-0.000 001	-0.007
100%		+30	1912 499 967	-14.1	-0.000 001	-0.007
100%		+40	1912 499 978	-3.0	0.000 000	-0.002
100%		+50	1912 499 970	-11.1	-0.000 001	-0.006
Batt. Endpoint	3.400	+20	1912 499 987	5.1	0.000 000	0.003



▣ MODE: LTE B25/B2

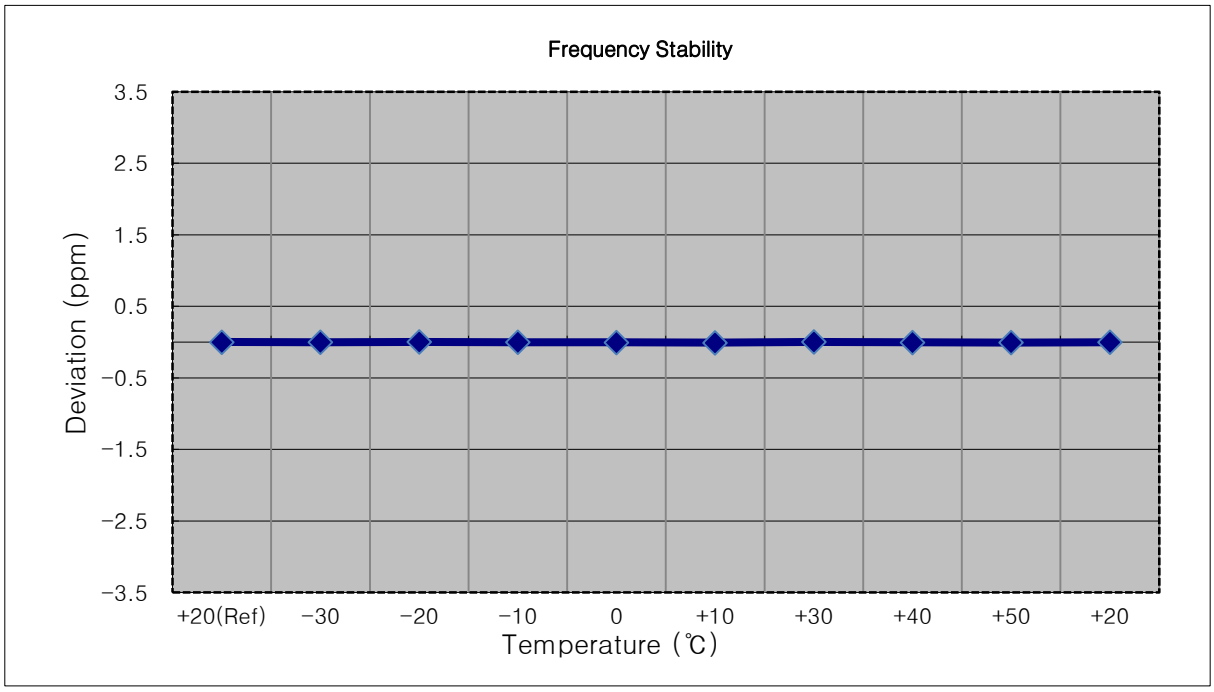
▣ OPERATING FREQUENCY: 1910,000,000 Hz

▣ CHANNEL: 26640 (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%	3.850	+20(Ref)	1909 999 988	0.0	0.000 000	0.000
100%		-30	1909 999 984	-3.3	0.000 000	-0.002
100%		-20	1909 999 995	6.9	0.000 000	0.004
100%		-10	1909 999 985	-2.7	0.000 000	-0.001
100%		0	1909 999 980	-7.8	0.000 000	-0.004
100%		+10	1909 999 970	-18.0	-0.000 001	-0.009
100%		+30	1909 999 991	3.1	0.000 000	0.002
100%		+40	1909 999 978	-9.3	0.000 000	-0.005
100%		+50	1909 999 976	-11.4	-0.000 001	-0.006
Batt. Endpoint	3.400	+20	1909 999 983	-4.9	0.000 000	-0.003



▣ MODE: LTE B25/B2

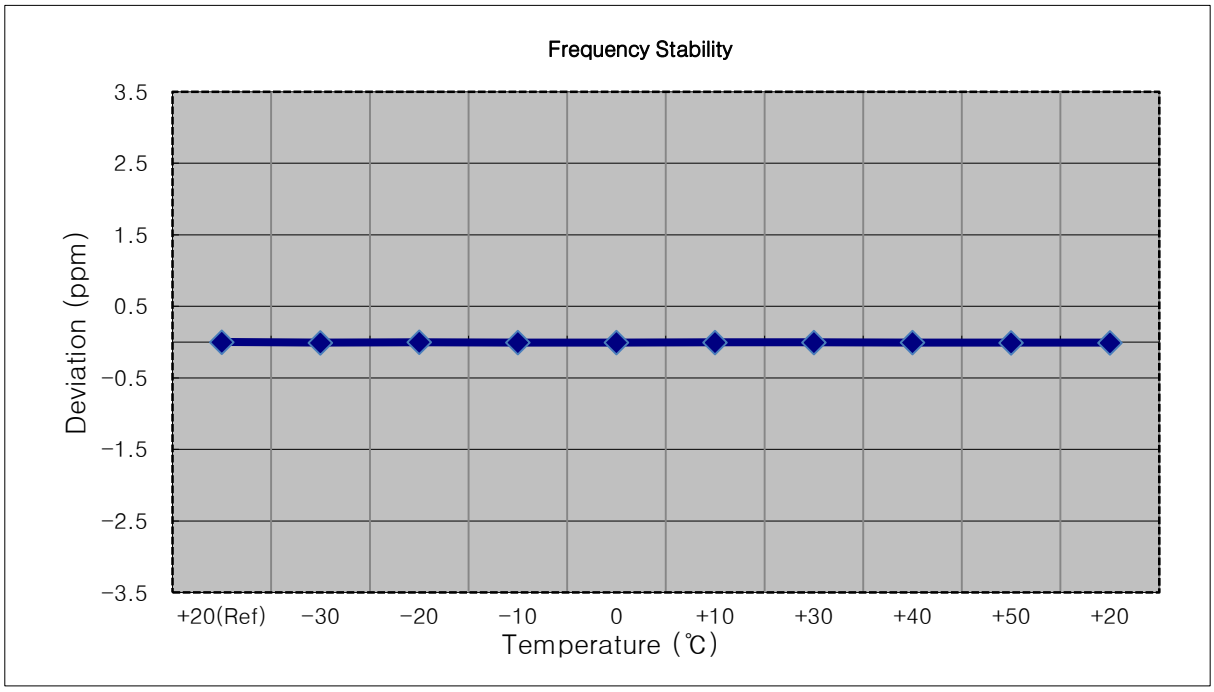
▣ OPERATING FREQUENCY: 1907,500,000 Hz

▣ CHANNEL: 26615 (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%	3.850	+20(Ref)	1907 500 016	0.0	0.000 000	0.000
100%		-30	1907 500 001	-15.1	-0.000 001	-0.008
100%		-20	1907 500 013	-3.7	0.000 000	-0.002
100%		-10	1907 500 004	-12.5	-0.000 001	-0.007
100%		0	1907 500 004	-12.5	-0.000 001	-0.007
100%		+10	1907 500 010	-6.3	0.000 000	-0.003
100%		+30	1907 500 007	-9.3	0.000 000	-0.005
100%		+40	1907 500 003	-12.8	-0.000 001	-0.007
100%		+50	1907 500 001	-15.5	-0.000 001	-0.008
Batt. Endpoint	3.400	+20	1907 500 000	-16.4	-0.000 001	-0.009



▣ MODE: LTE B25/B2

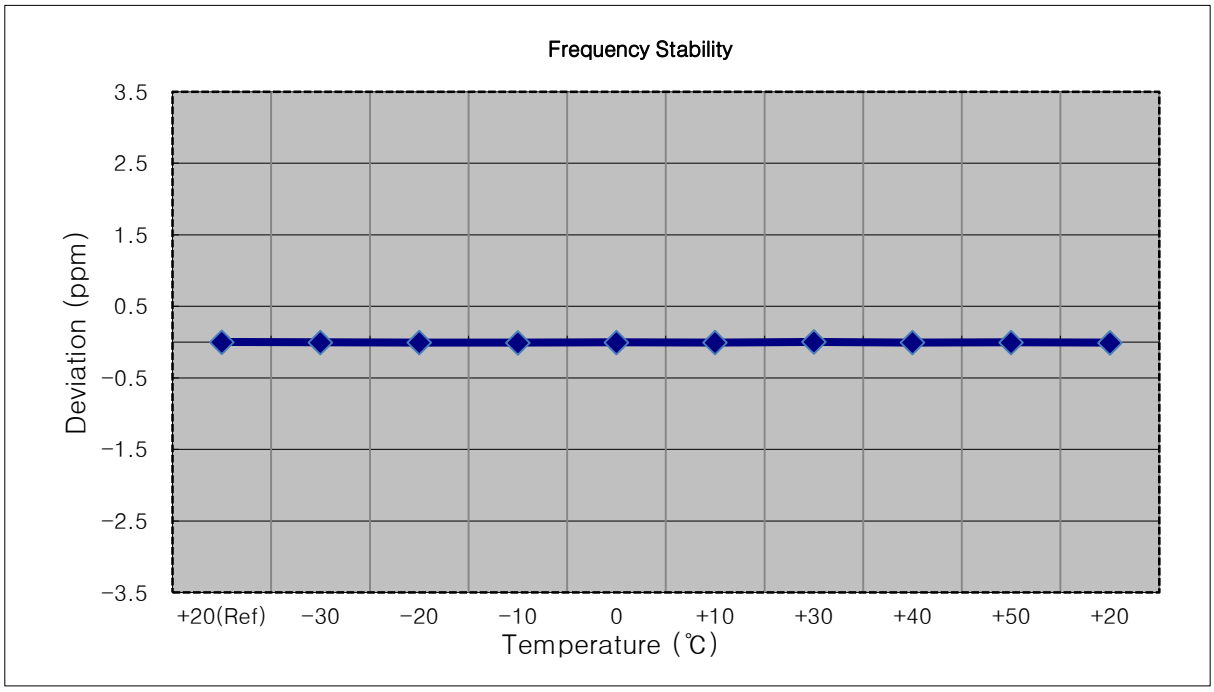
▣ OPERATING FREQUENCY: 1905,000,000 Hz

▣ CHANNEL: 26590 (20 MHz)

▣ REFERENCE VOLTAGE: 3.85 VDC

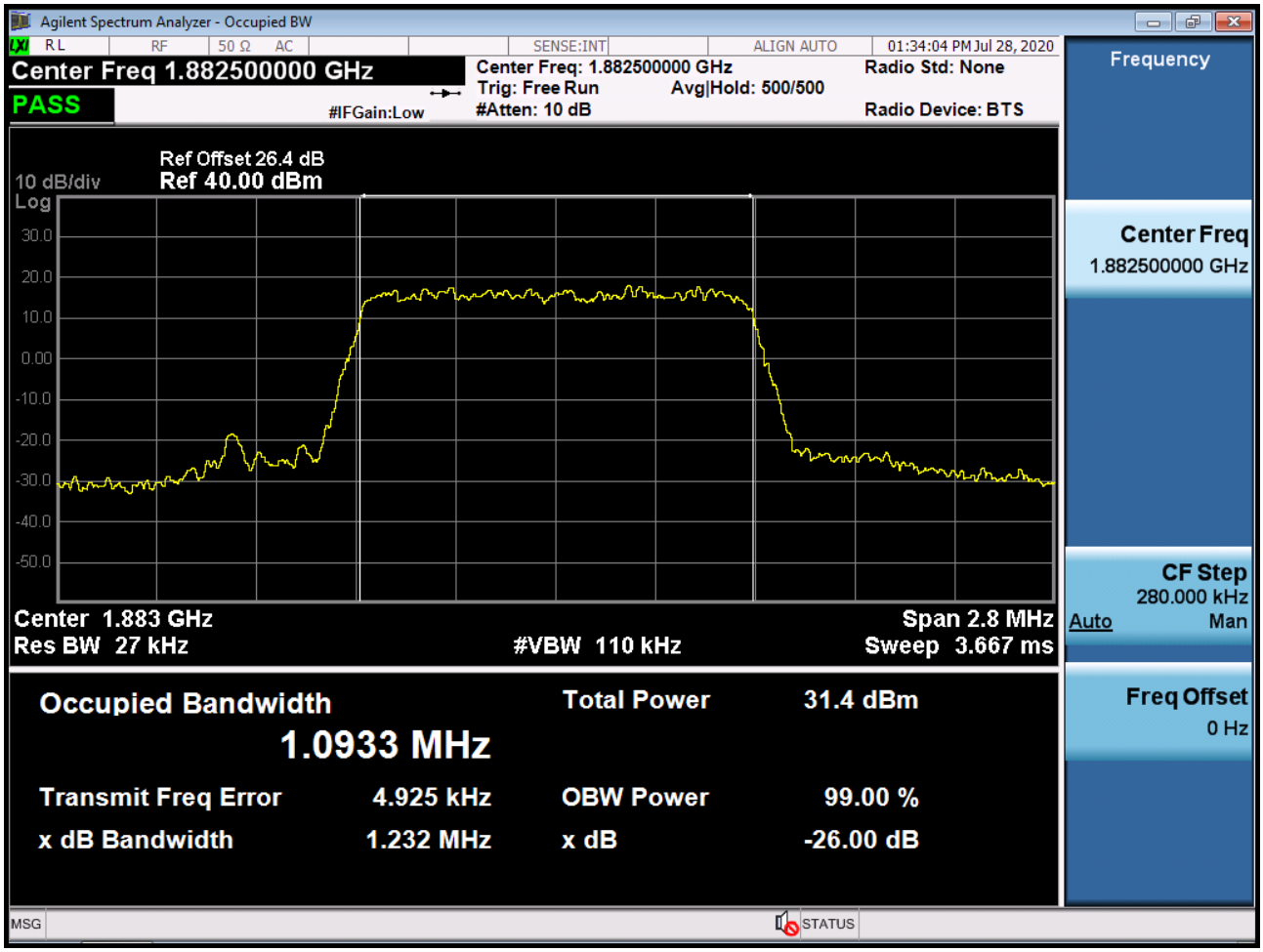
▣ DEVIATION LIMIT: Emission must remain in band

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.850	+20(Ref)	1905 000 005	0.0	0.000 000	0.000
100%		-30	1904 999 997	-7.2	0.000 000	-0.004
100%		-20	1904 999 992	-12.6	-0.000 001	-0.007
100%		-10	1904 999 987	-17.3	-0.000 001	-0.009
100%		0	1904 999 995	-9.2	0.000 000	-0.005
100%		+10	1904 999 993	-11.2	-0.000 001	-0.006
100%		+30	1905 000 010	5.6	0.000 000	0.003
100%		+40	1904 999 994	-10.4	-0.000 001	-0.005
100%		+50	1904 999 999	-5.8	0.000 000	-0.003
Batt. Endpoint	3.400	+20	1904 999 989	-15.2	-0.000 001	-0.008

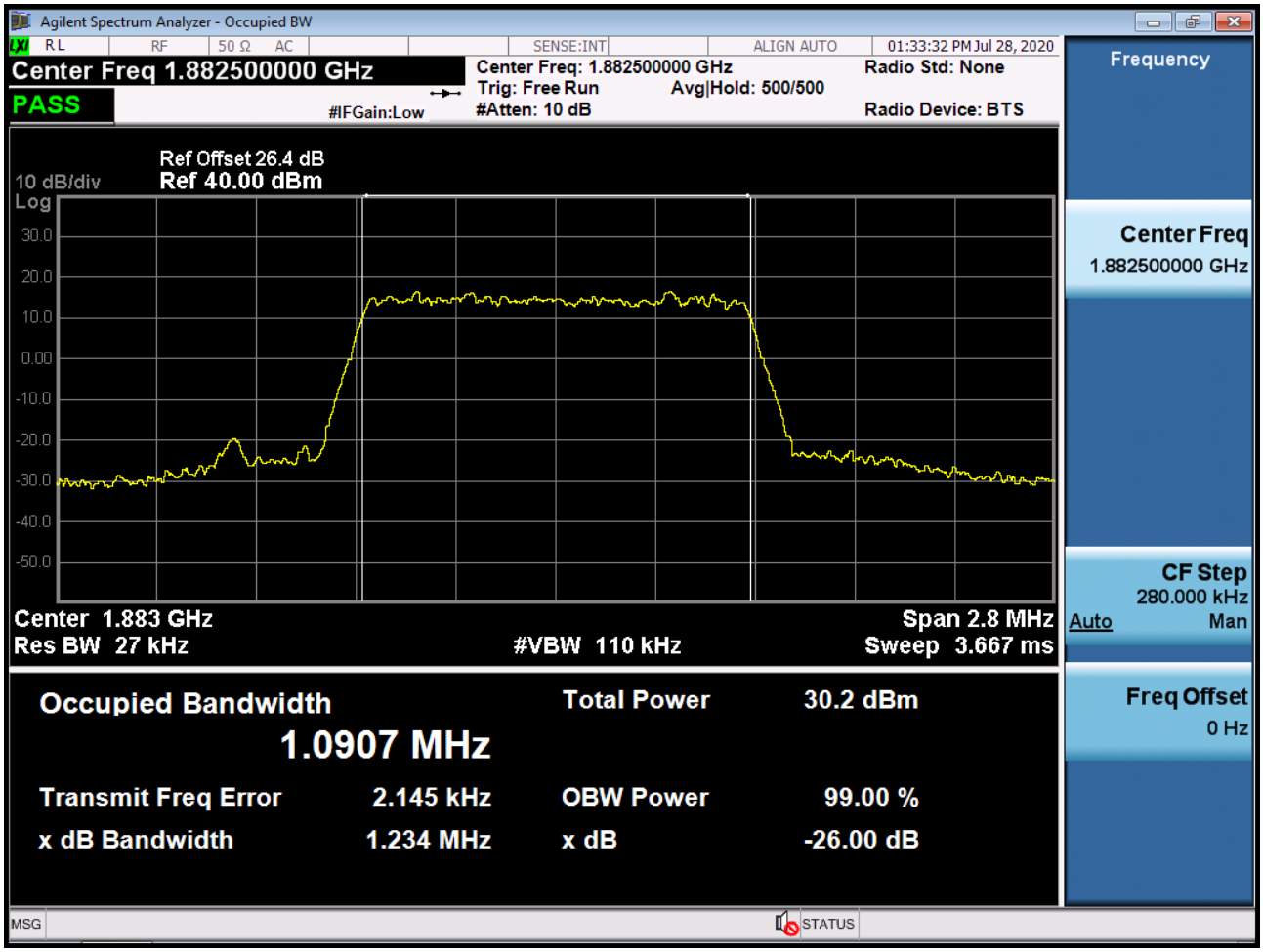


9. TEST PLOTS

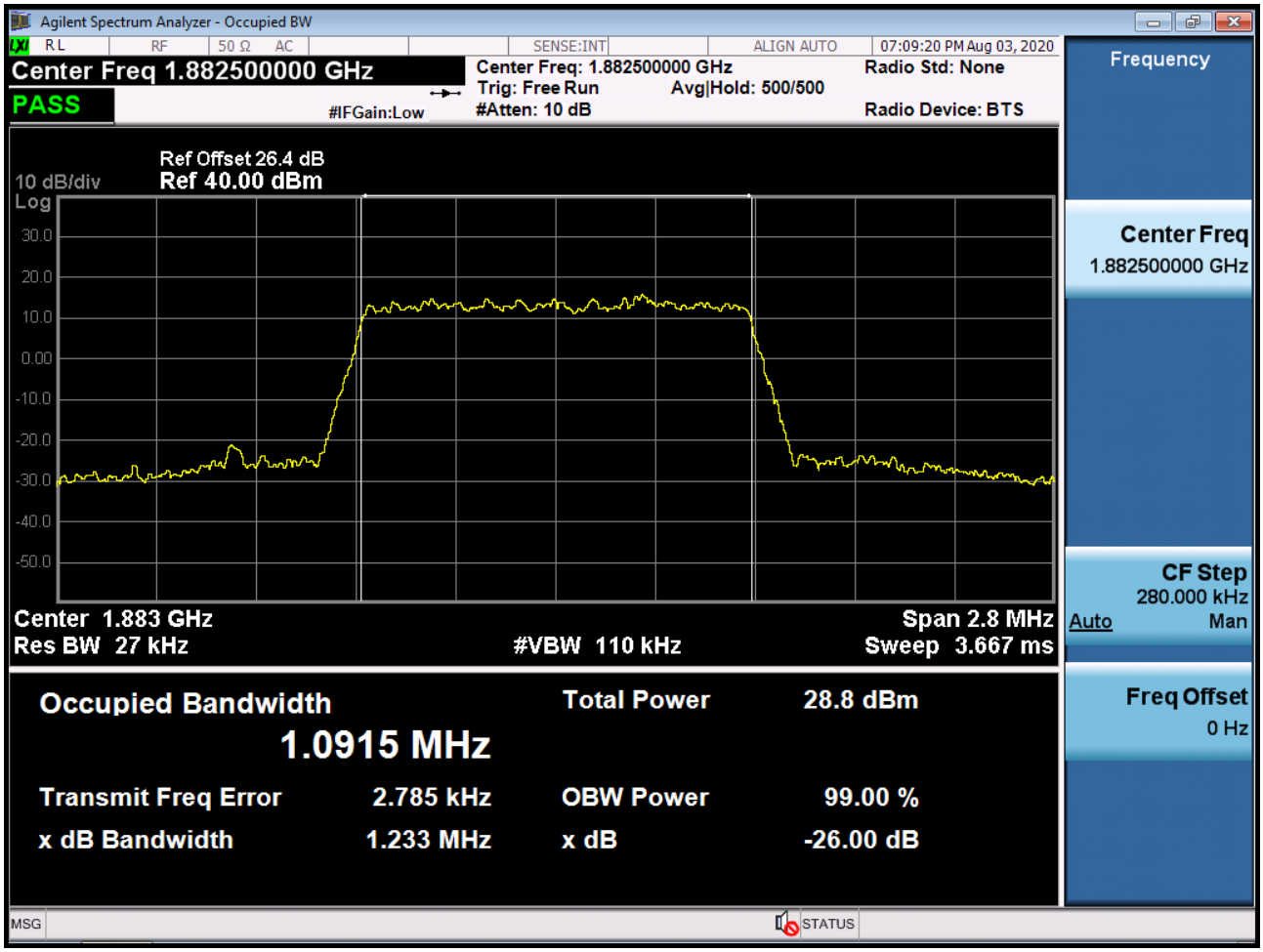
BAND 25/2. Occupied Bandwidth Plot (1.4M BW Ch.26365 QPSK RB 6_0)



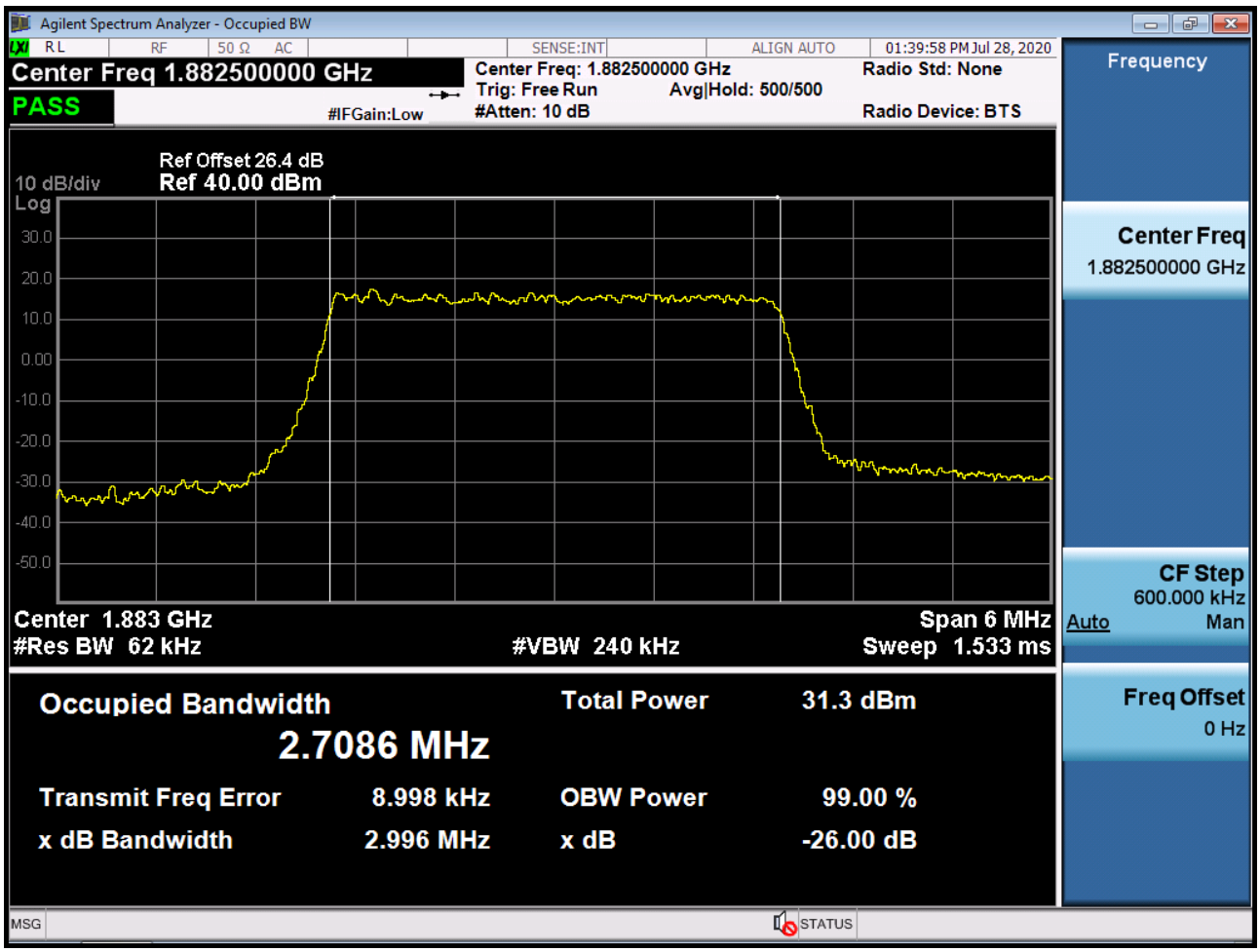
BAND 25/2. Occupied Bandwidth Plot (1.4M BW Ch.26365 16QAM RB 6_0)



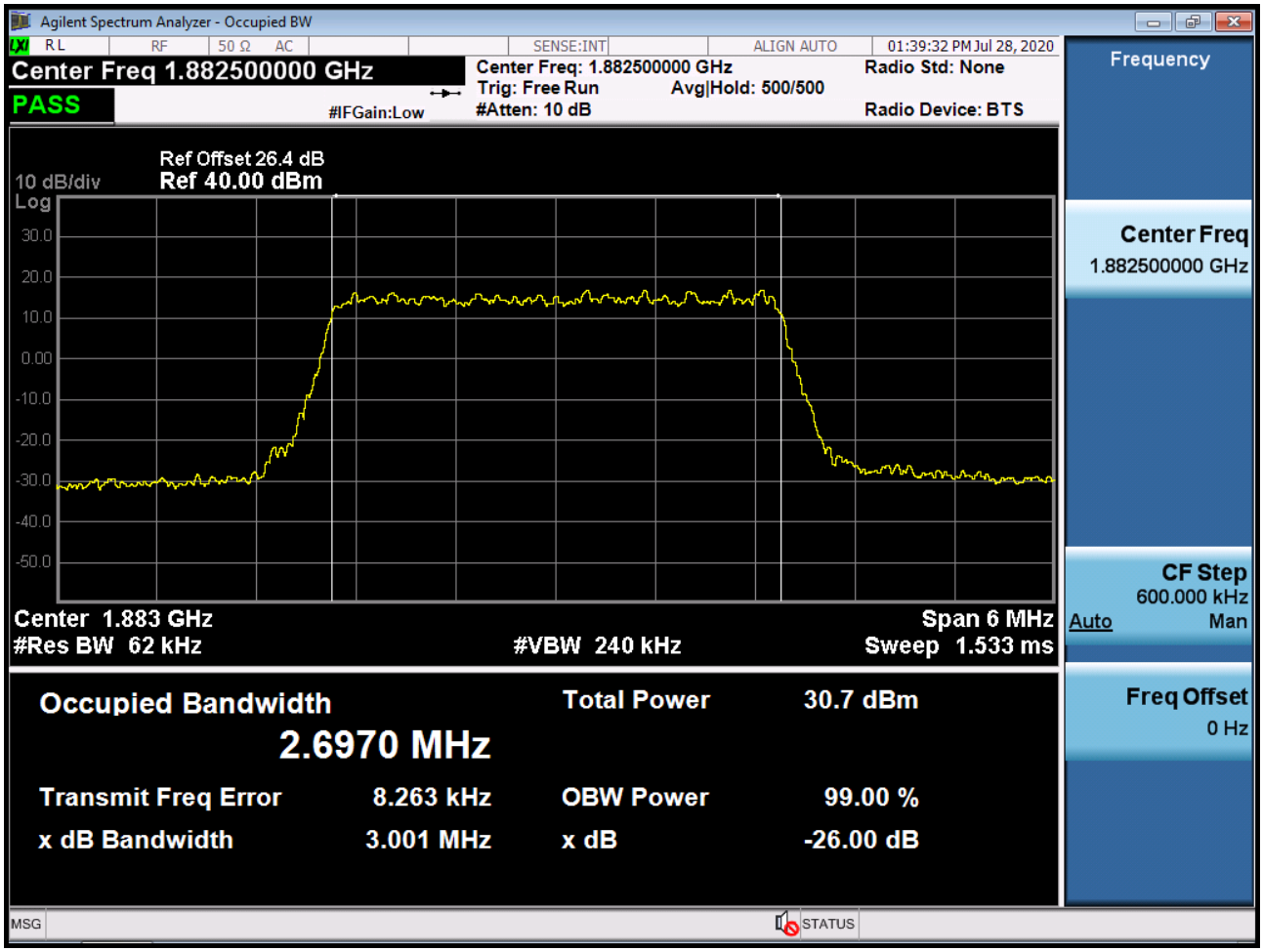
BAND 25/2. Occupied Bandwidth Plot (1.4M BW Ch.26365 64QAM RB 6_0)



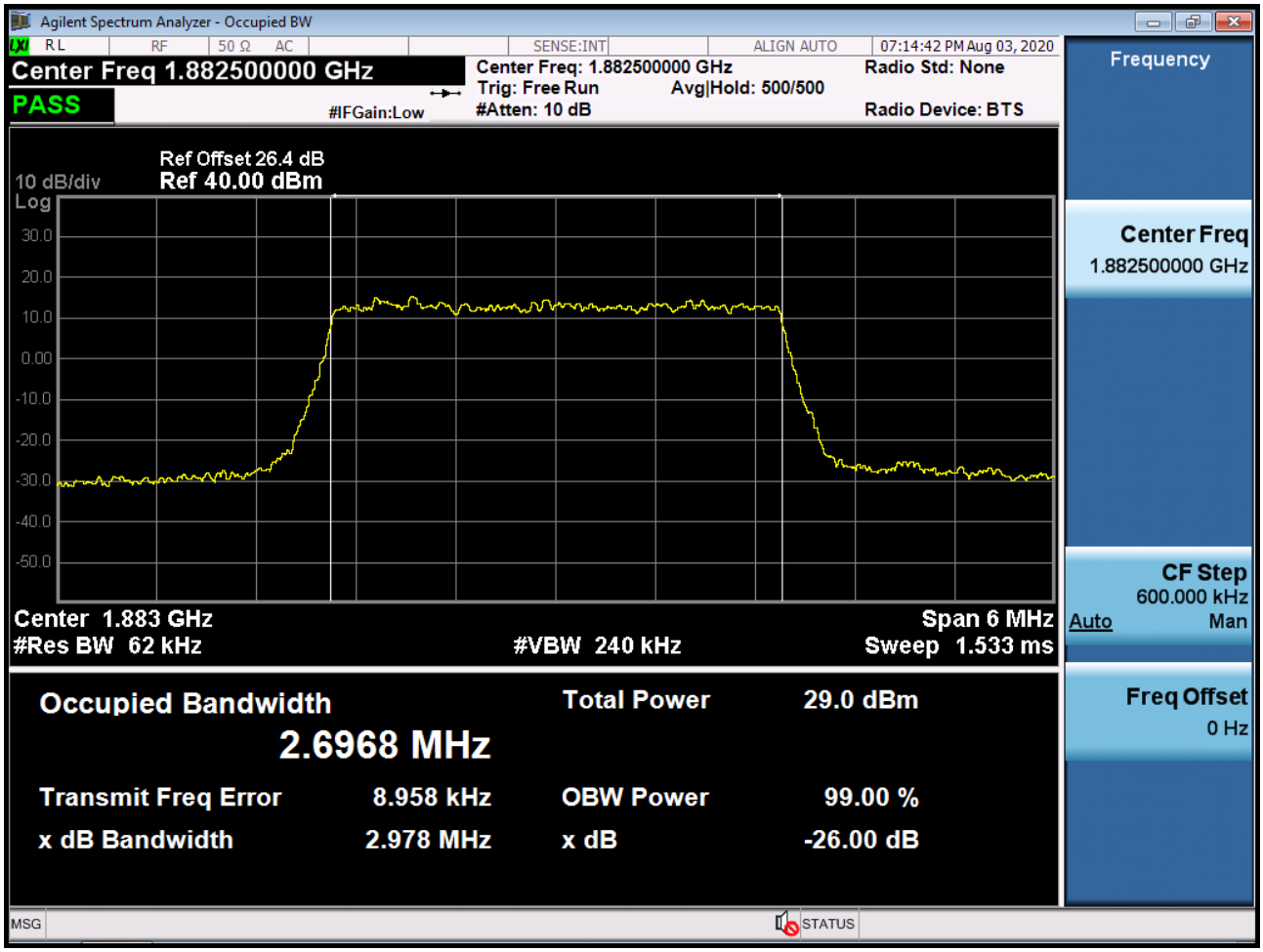
BAND 25/2. Occupied Bandwidth Plot (3M BW Ch.26365 QPSK RB 15_0)



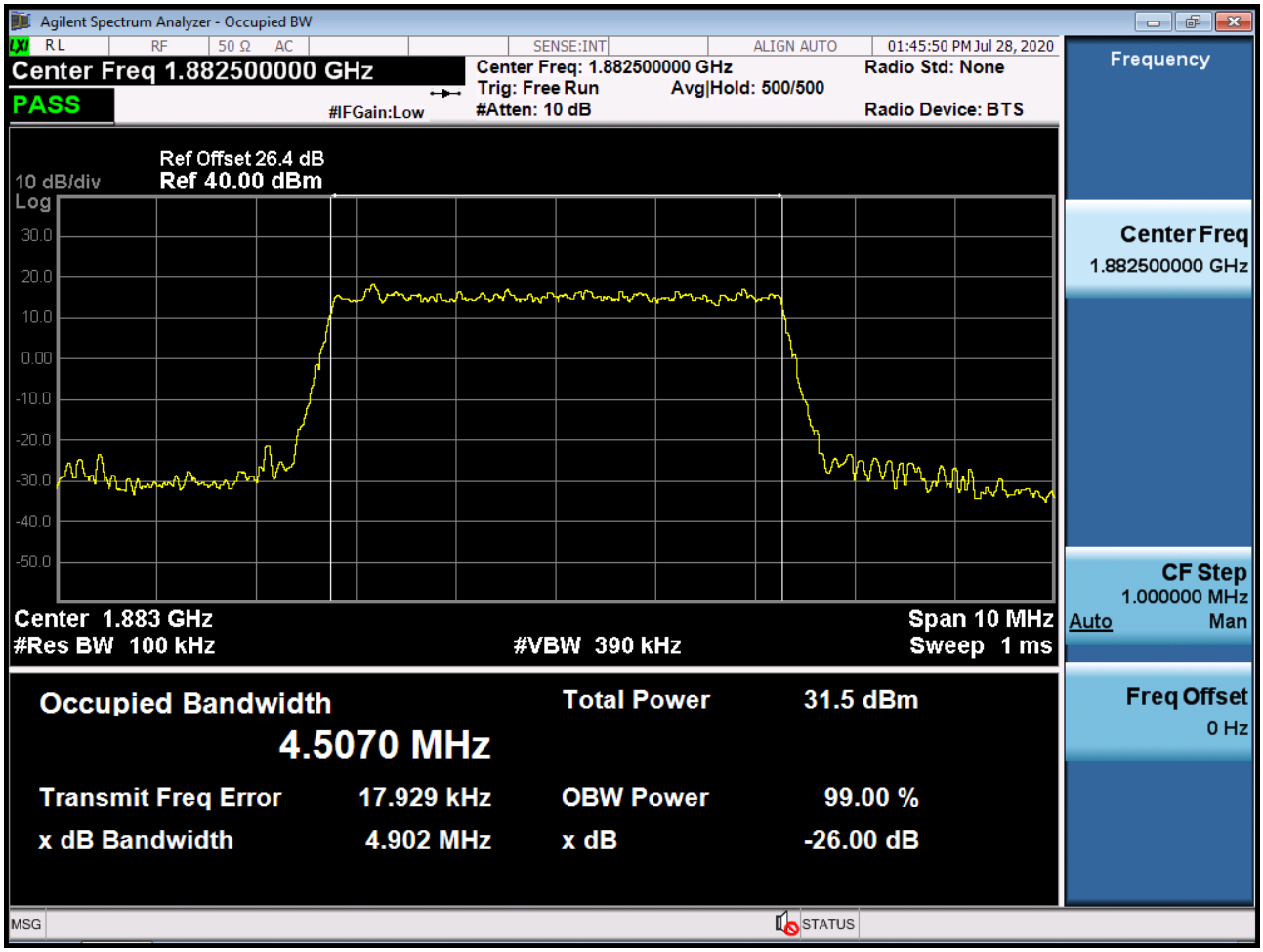
BAND 25/2. Occupied Bandwidth Plot (3M BW Ch.26365 16QAM RB 15_0)



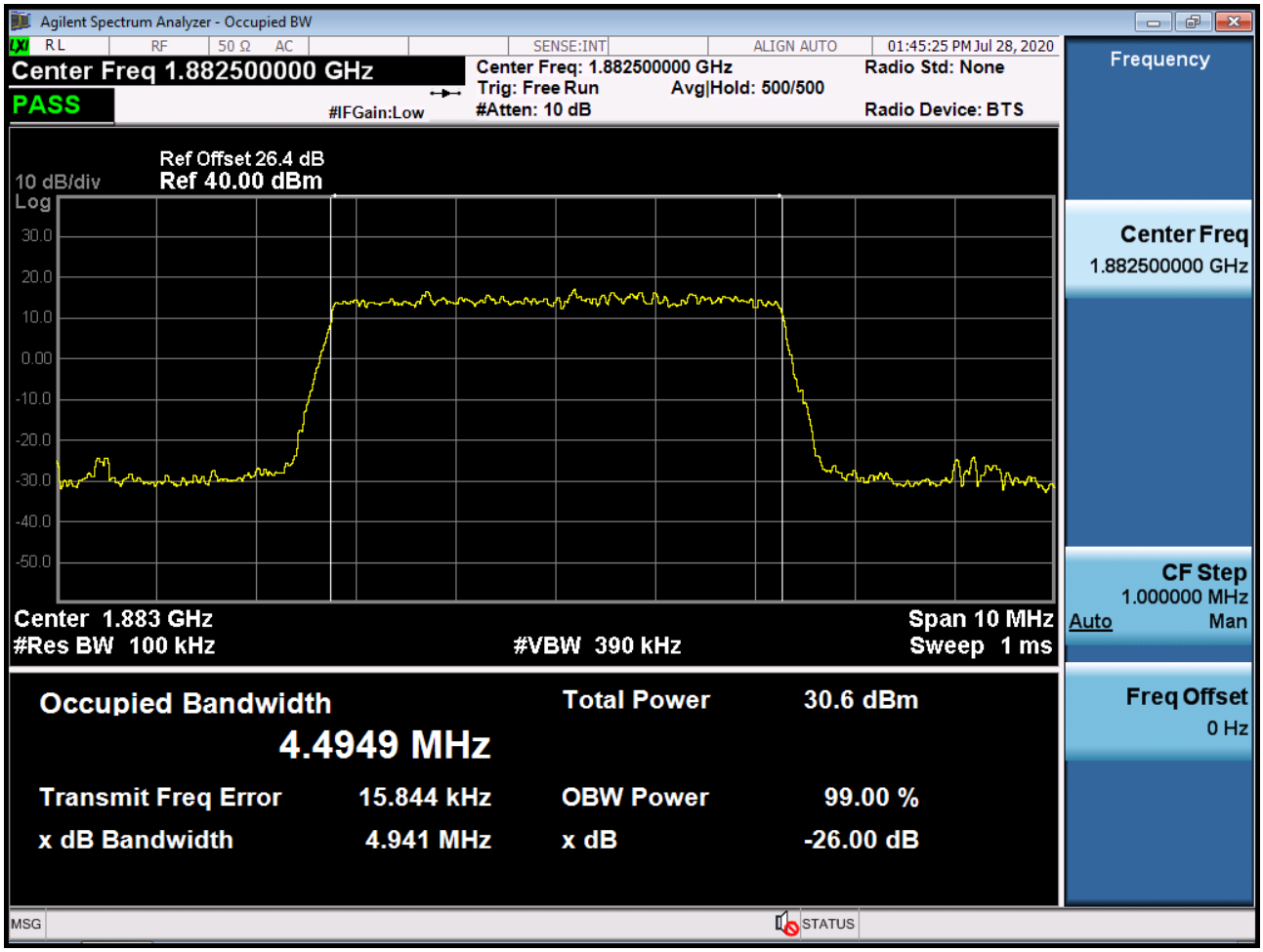
BAND 25/2. Occupied Bandwidth Plot (3M BW Ch.26365 64QAM RB 15_0)



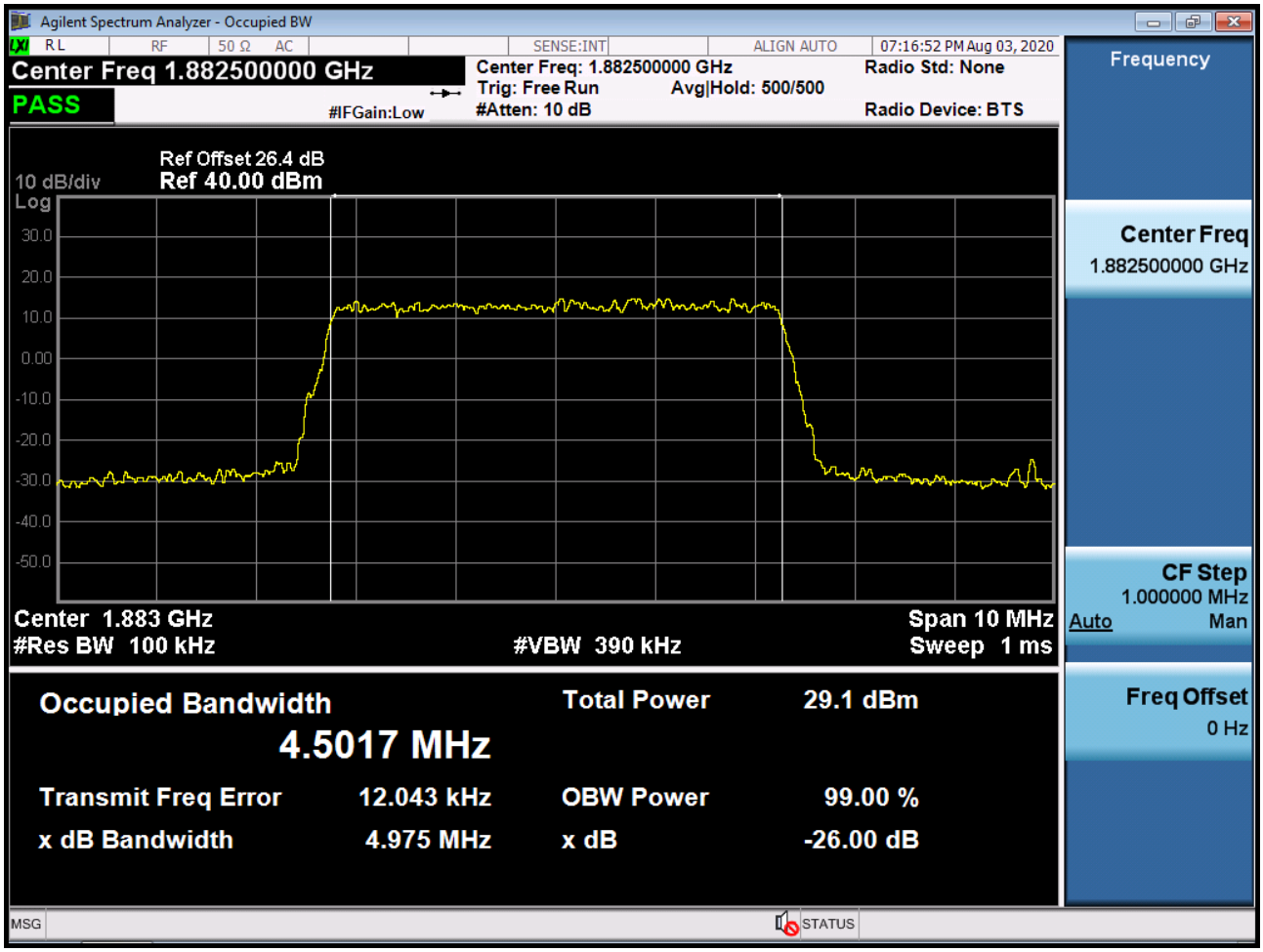
BAND 25/2. Occupied Bandwidth Plot (5M BW Ch.26365 QPSK RB 25_0)



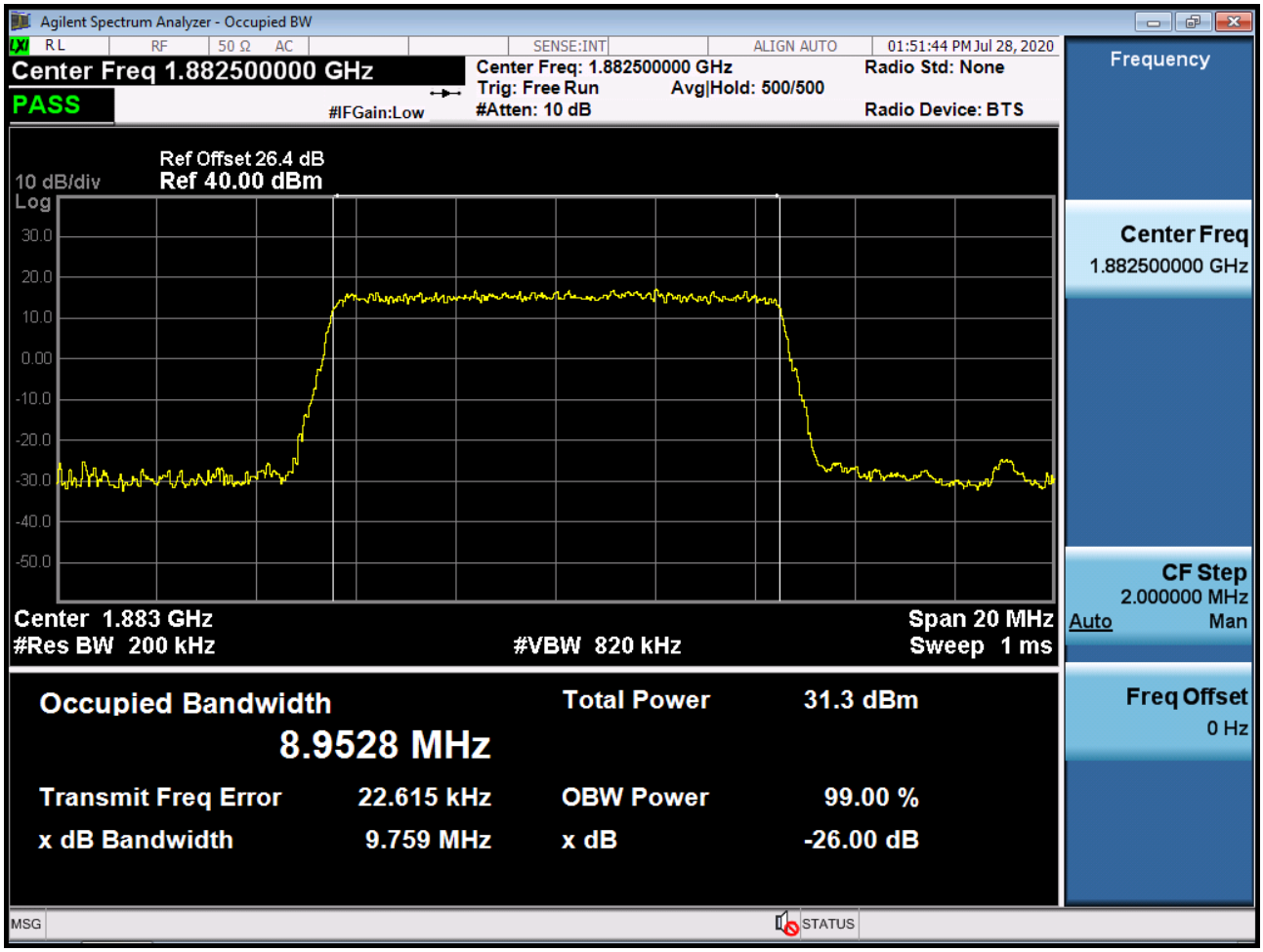
BAND 25/2. Occupied Bandwidth Plot (5M BW Ch.26365 16QAM RB 25_0)



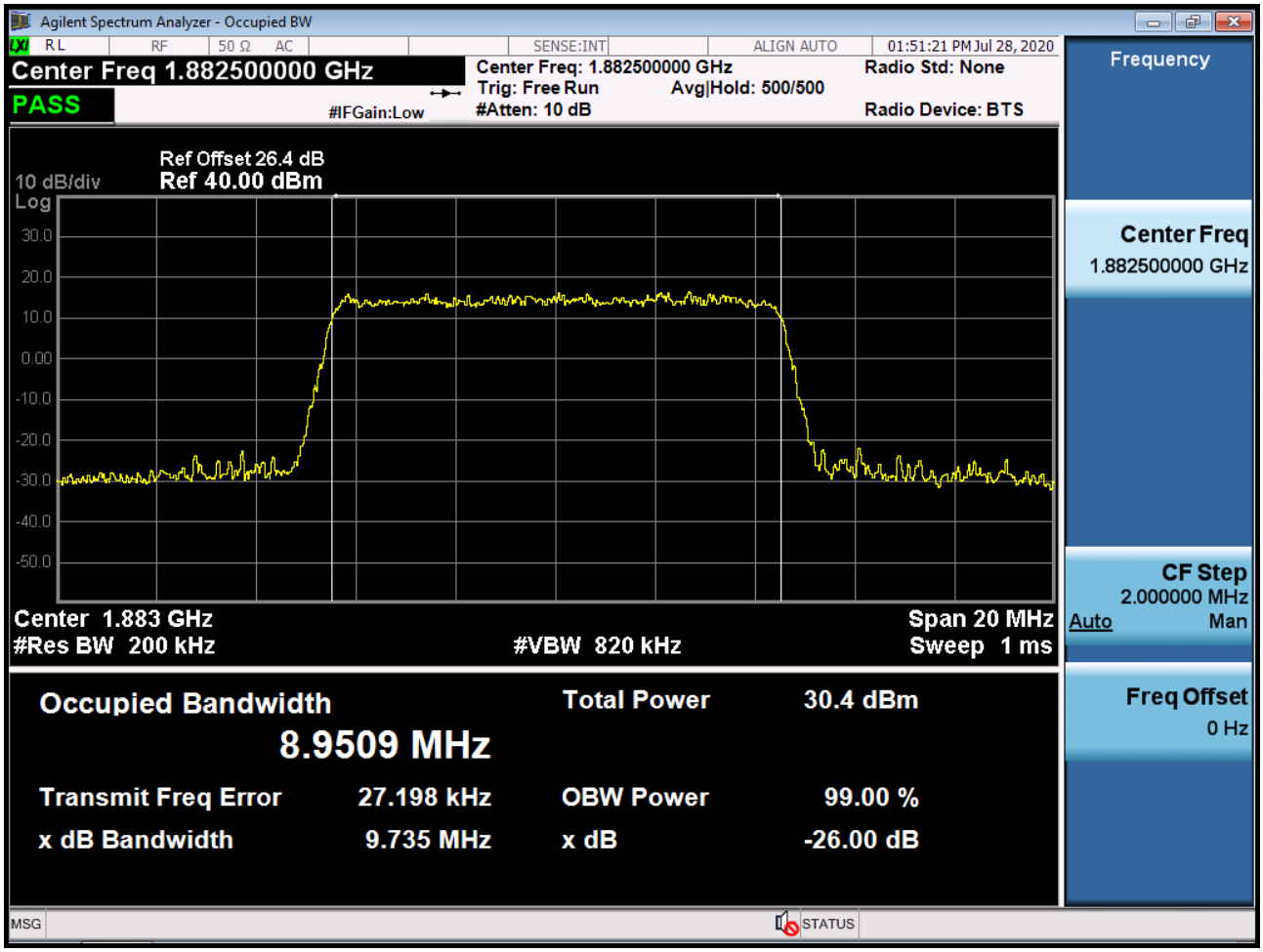
BAND 25/2. Occupied Bandwidth Plot (5M BW Ch.26365 64QAM RB 25_0)



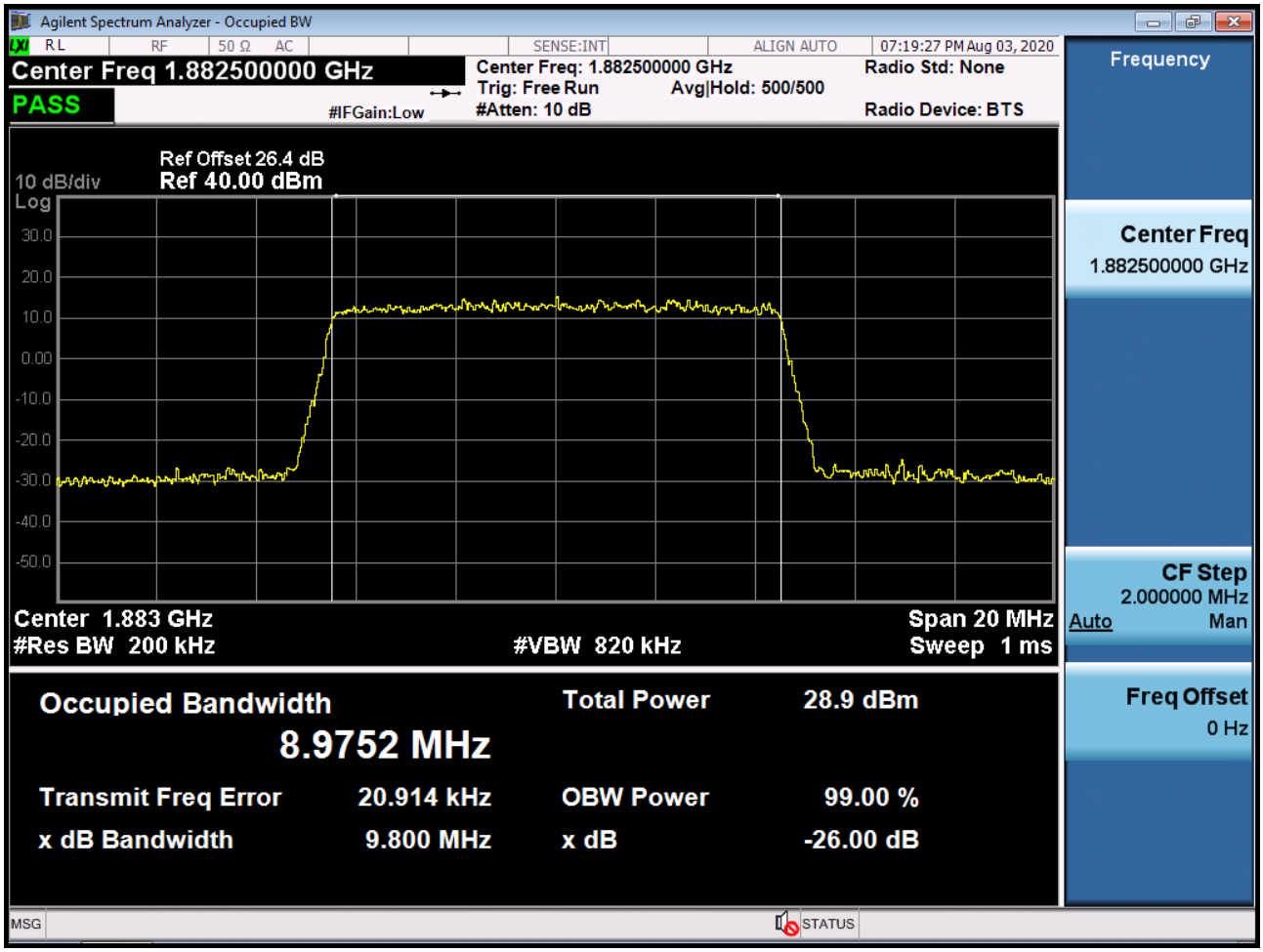
BAND 25/2. Occupied Bandwidth Plot (10M BW Ch.26365 QPSK RB 50_0)



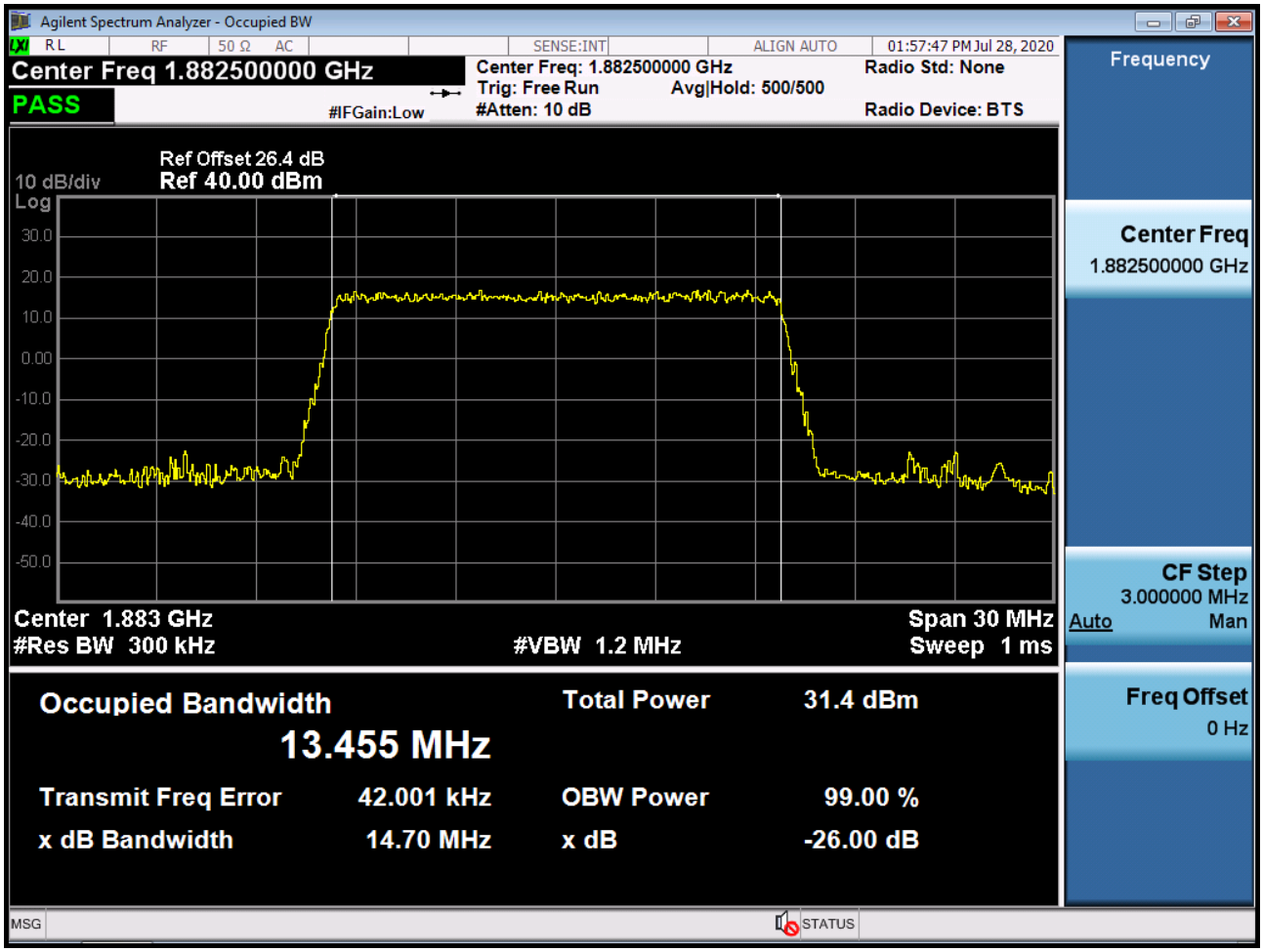
BAND 25/2. Occupied Bandwidth Plot (10M BW Ch.26365 16QAM RB 50_0)



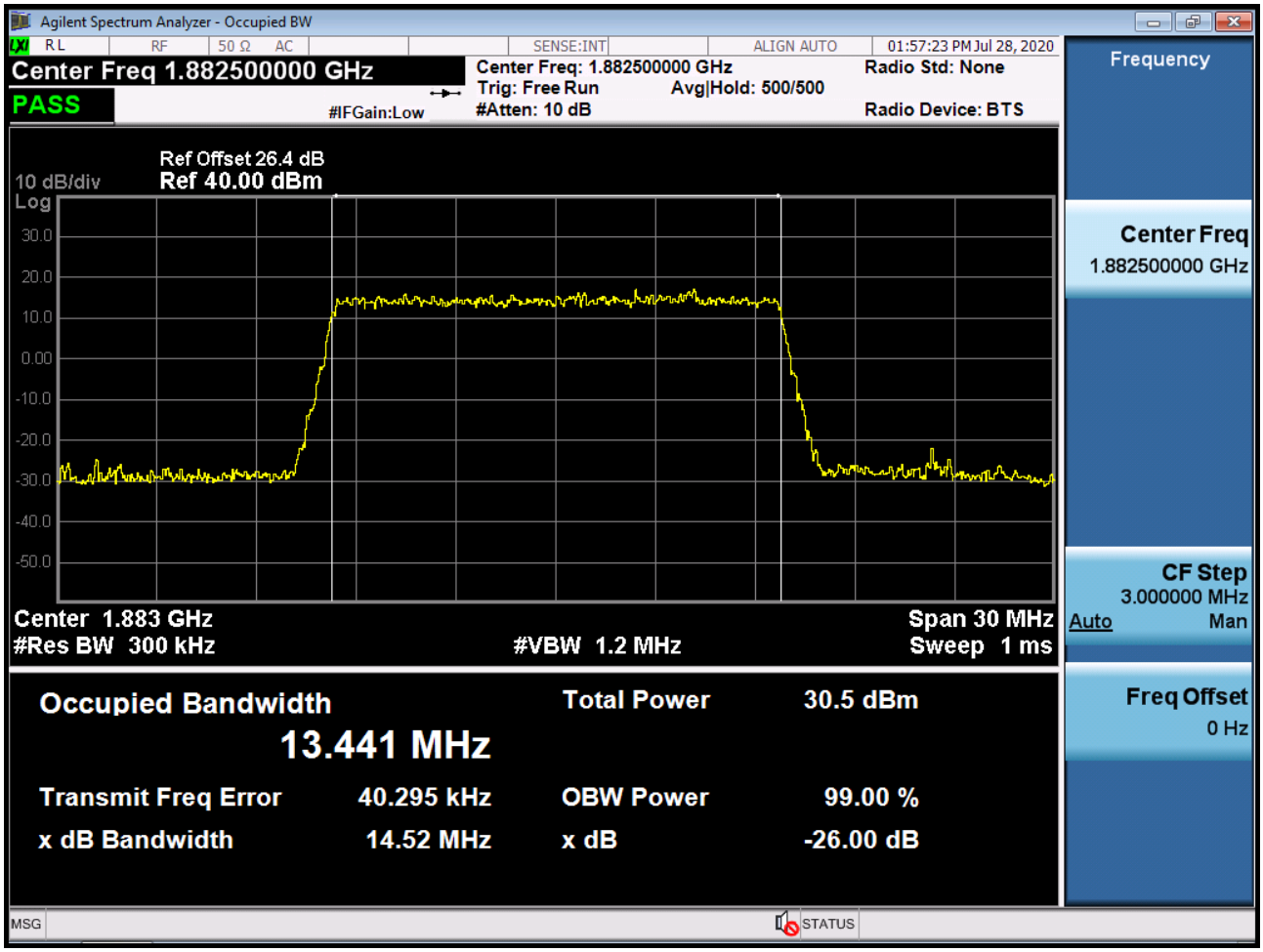
BAND 25/2. Occupied Bandwidth Plot (10M BW Ch.26365 64QAM RB 50_0)



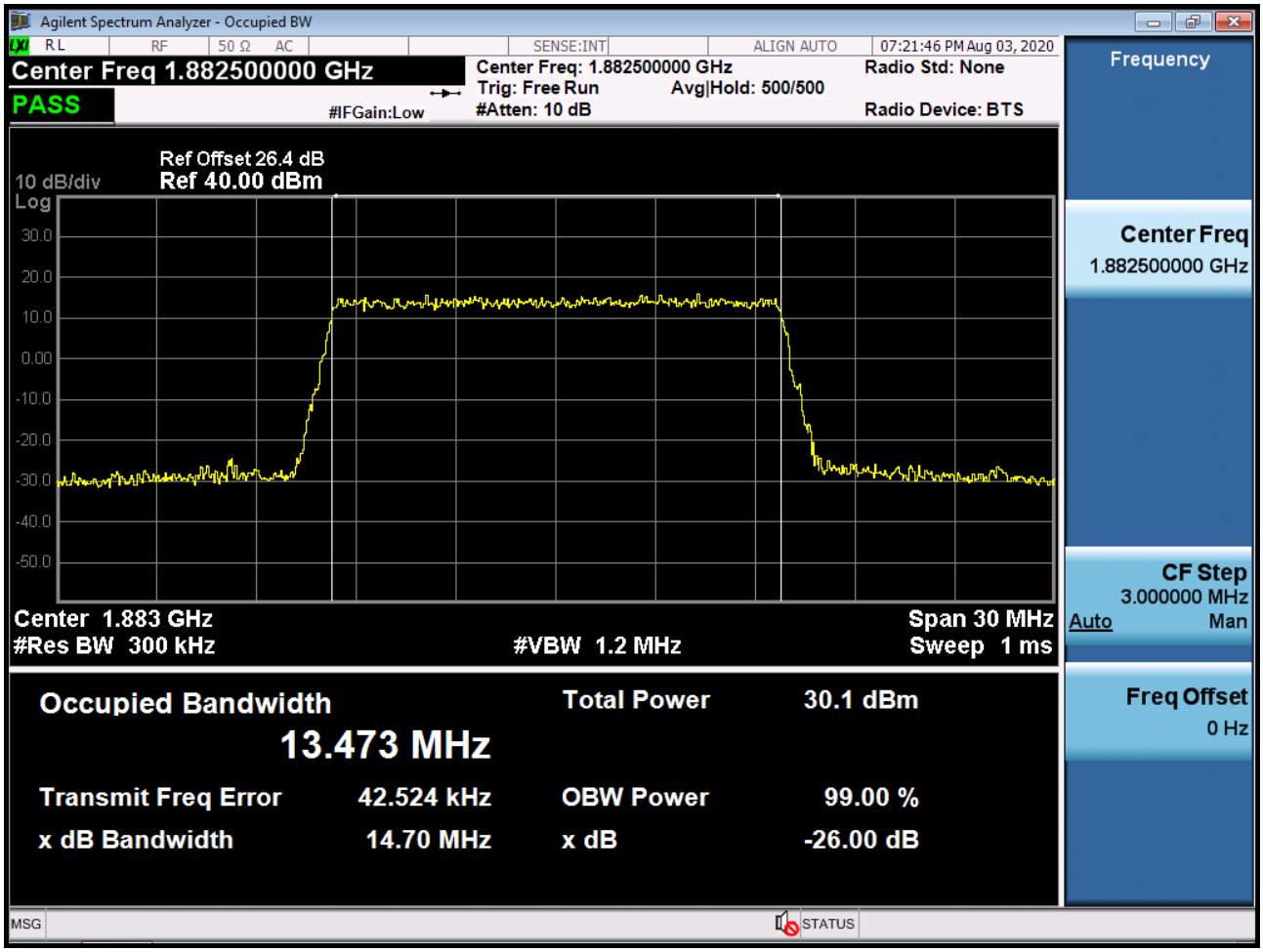
BAND 25/2. Occupied Bandwidth Plot (15M BW Ch.26365 QPSK RB 75_0)



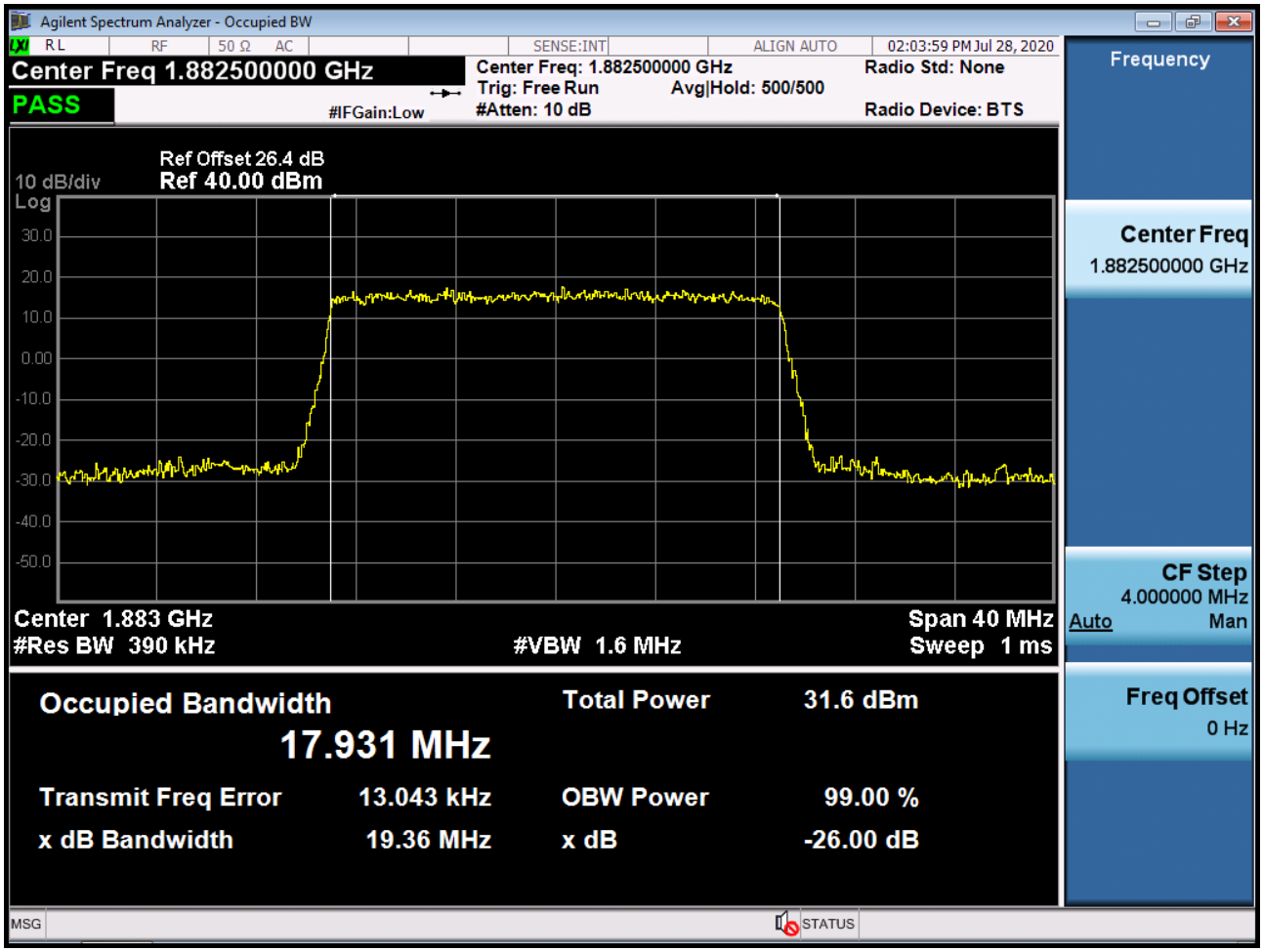
BAND 25/2. Occupied Bandwidth Plot (15M BW Ch.26365 16QAM RB 75_0)



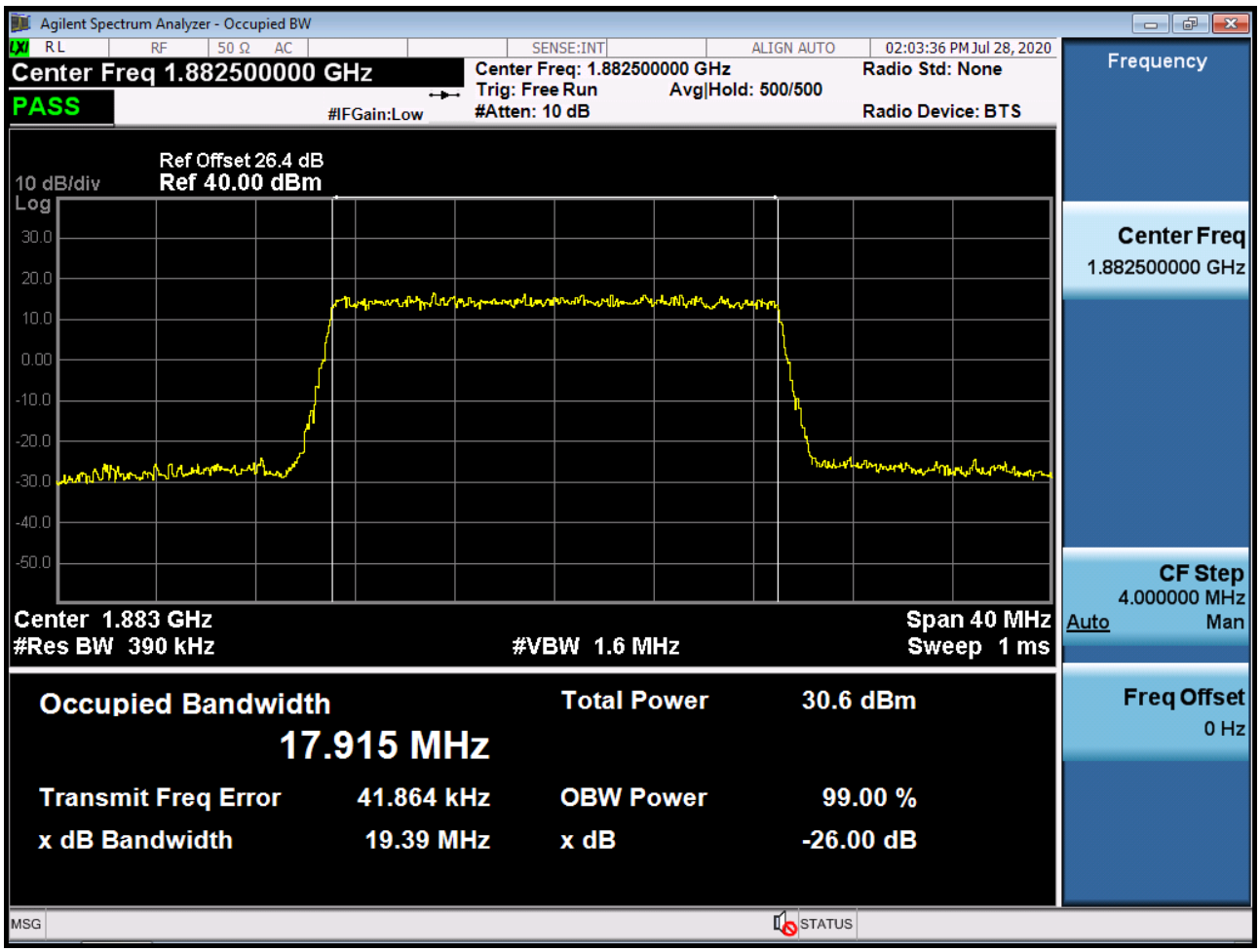
BAND 25/2. Occupied Bandwidth Plot (15M BW Ch.26365 64QAM RB 75_0)



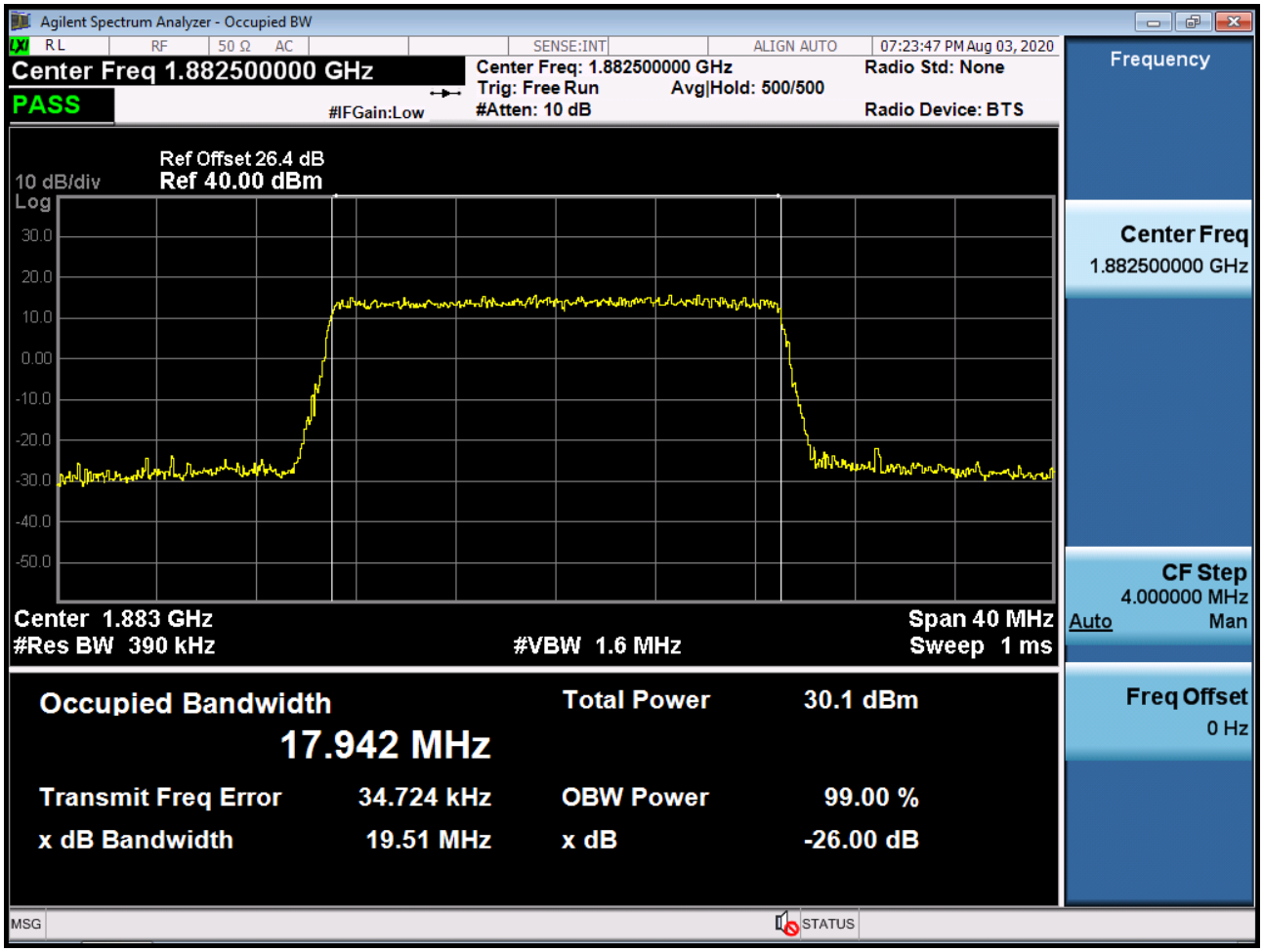
BAND 25/2. Occupied Bandwidth Plot (20M BW Ch.26365 QPSK RB 100_0)



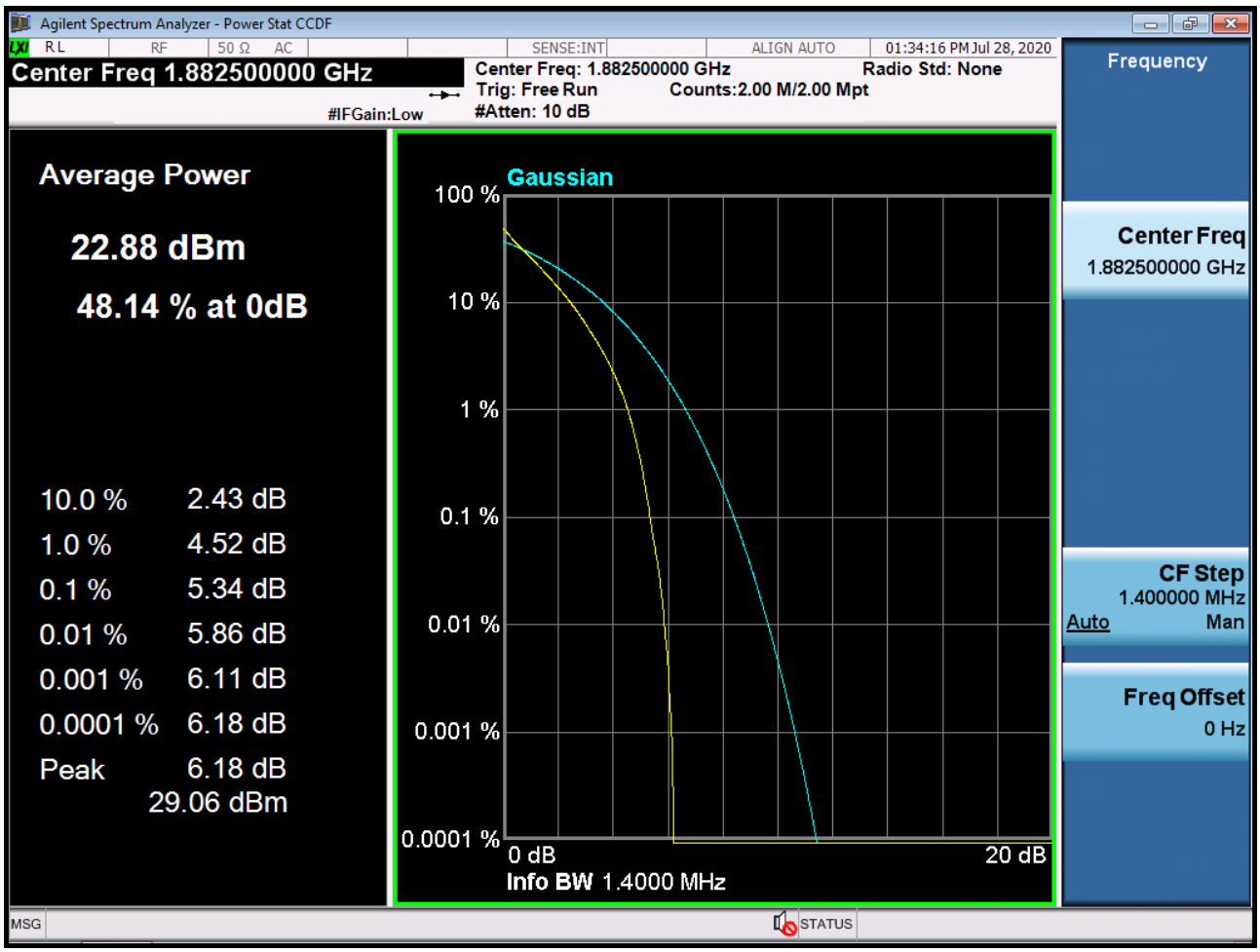
BAND 25/2. Occupied Bandwidth Plot (20M BW Ch.26365 16QAM RB 100_0)



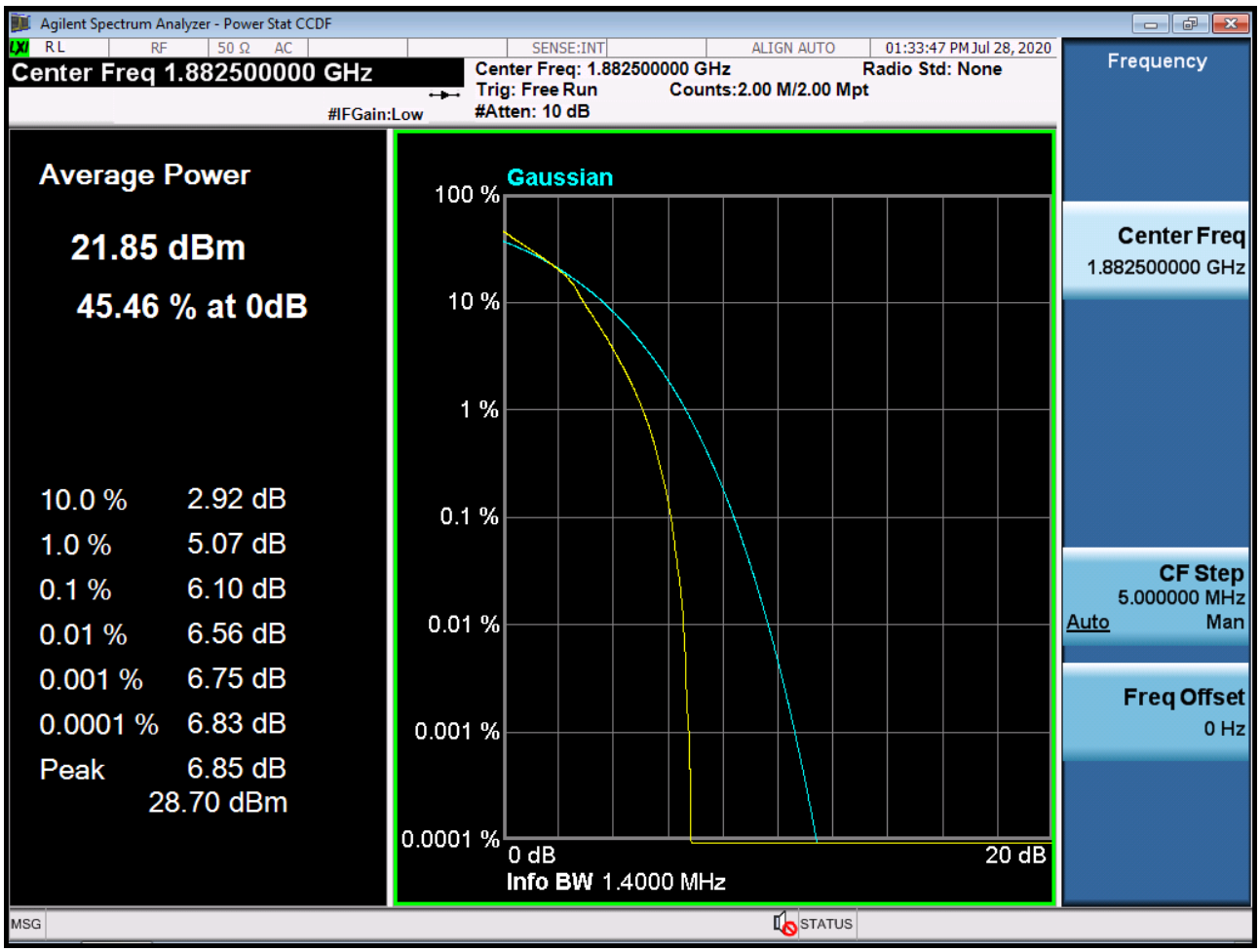
BAND 25/2. Occupied Bandwidth Plot (20M BW Ch.26365 64QAM RB 100_0)



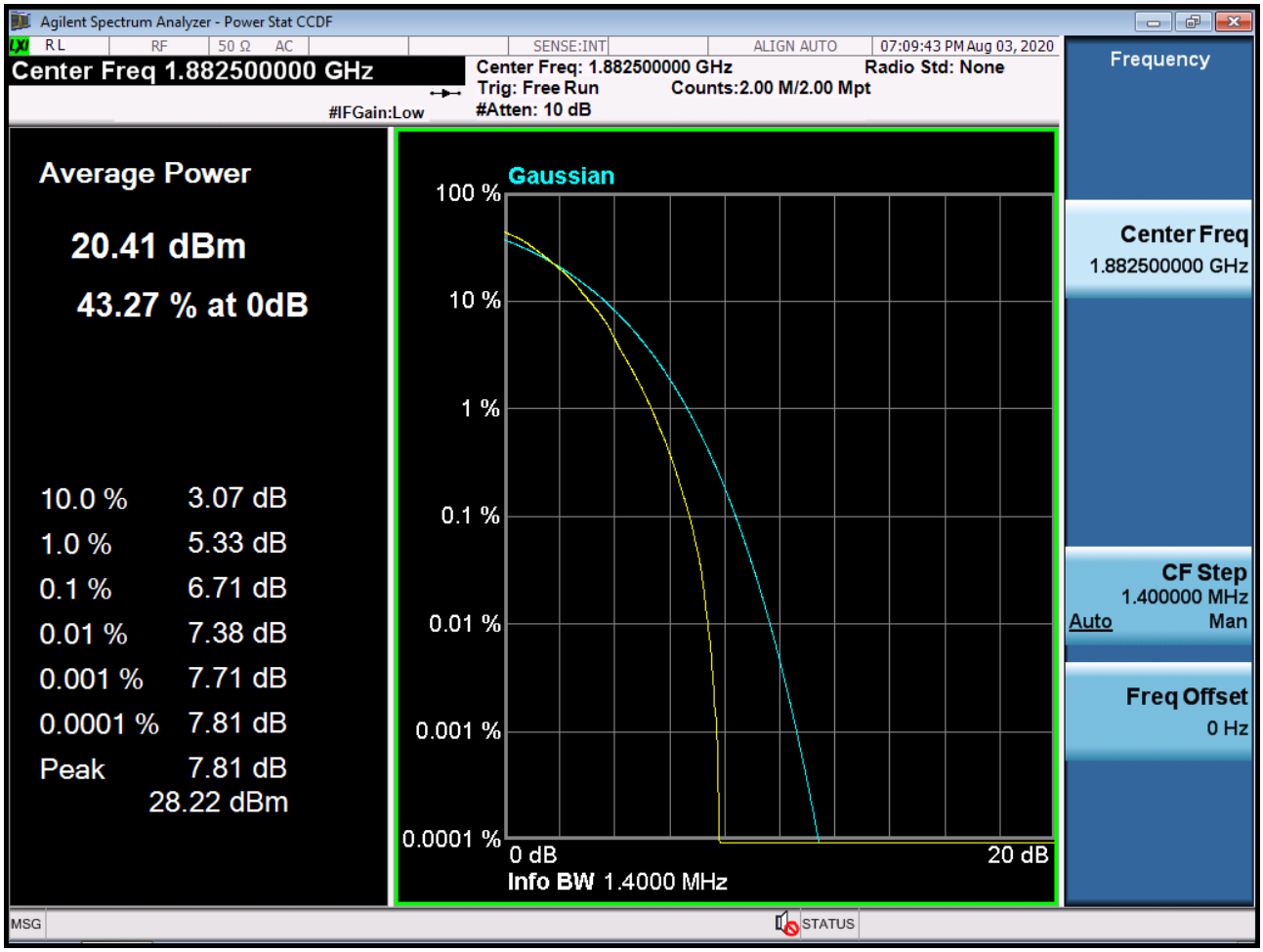
BAND 25/2. PAR Plot (1.4M BW Ch.26365 QPSK RB 6_0)



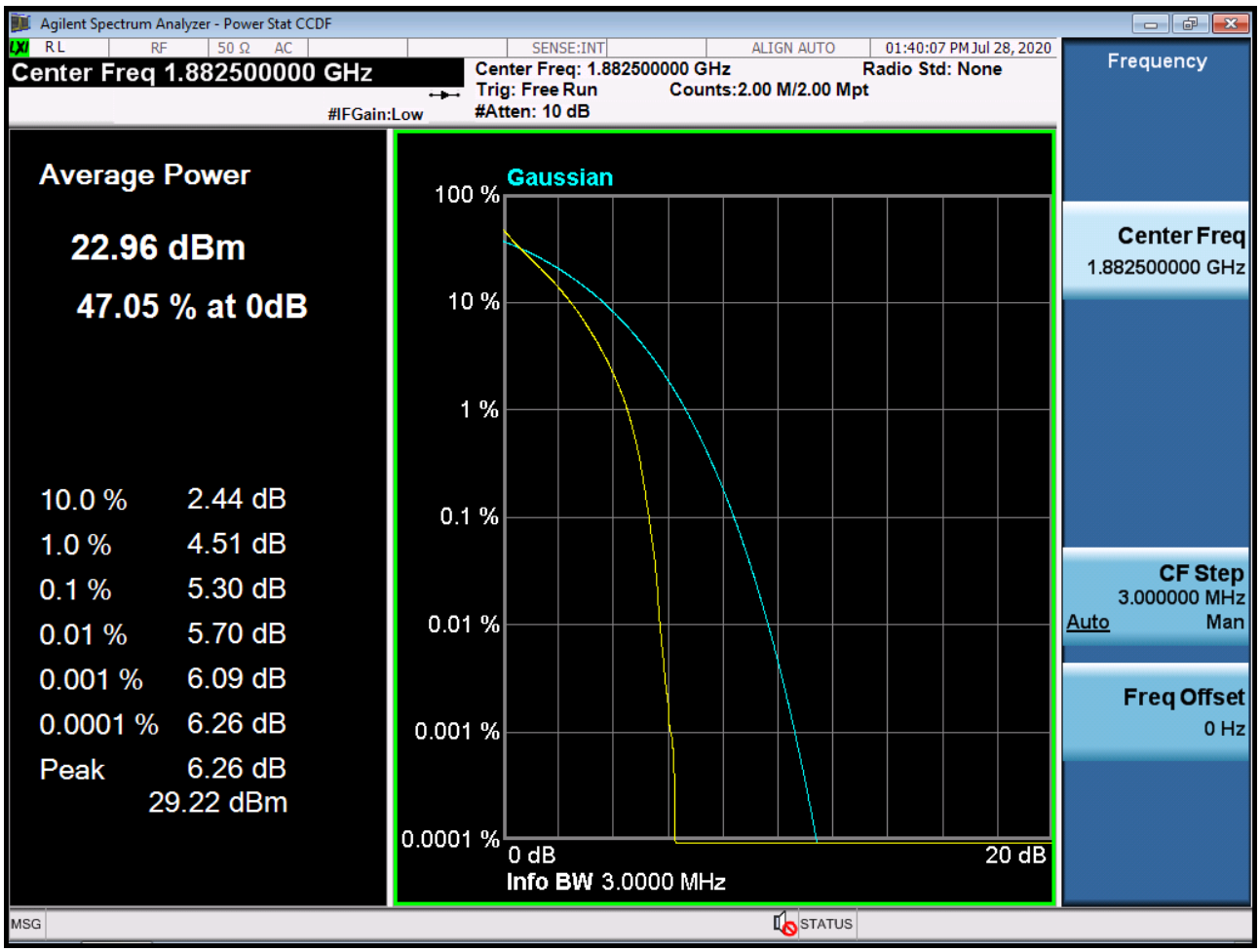
BAND 25/2. PAR Plot (1.4M BW Ch.26365 16QAM RB 6_0)



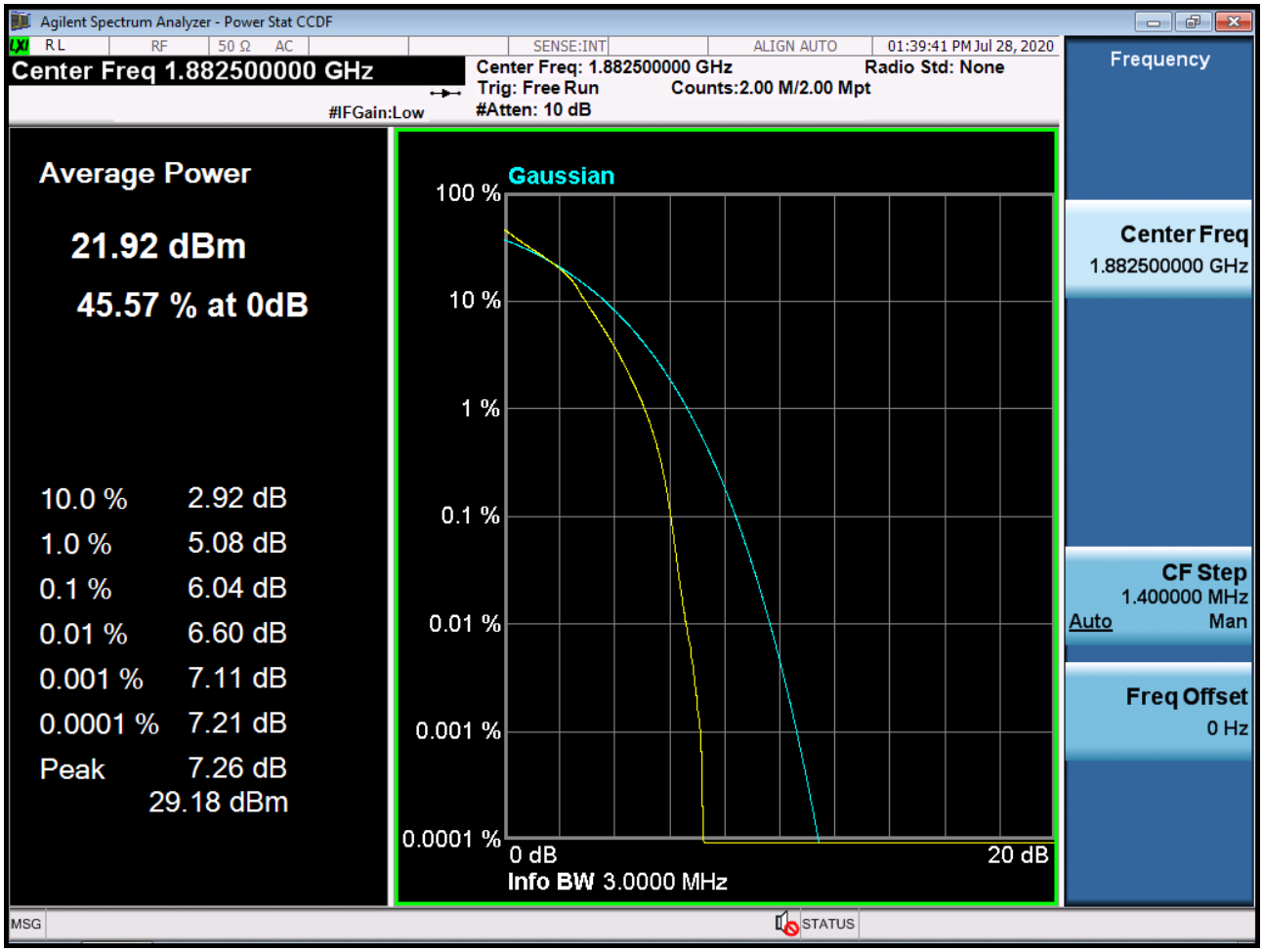
BAND 25/2. PAR Plot (1.4M BW Ch.26365 64QAM RB 6_0)



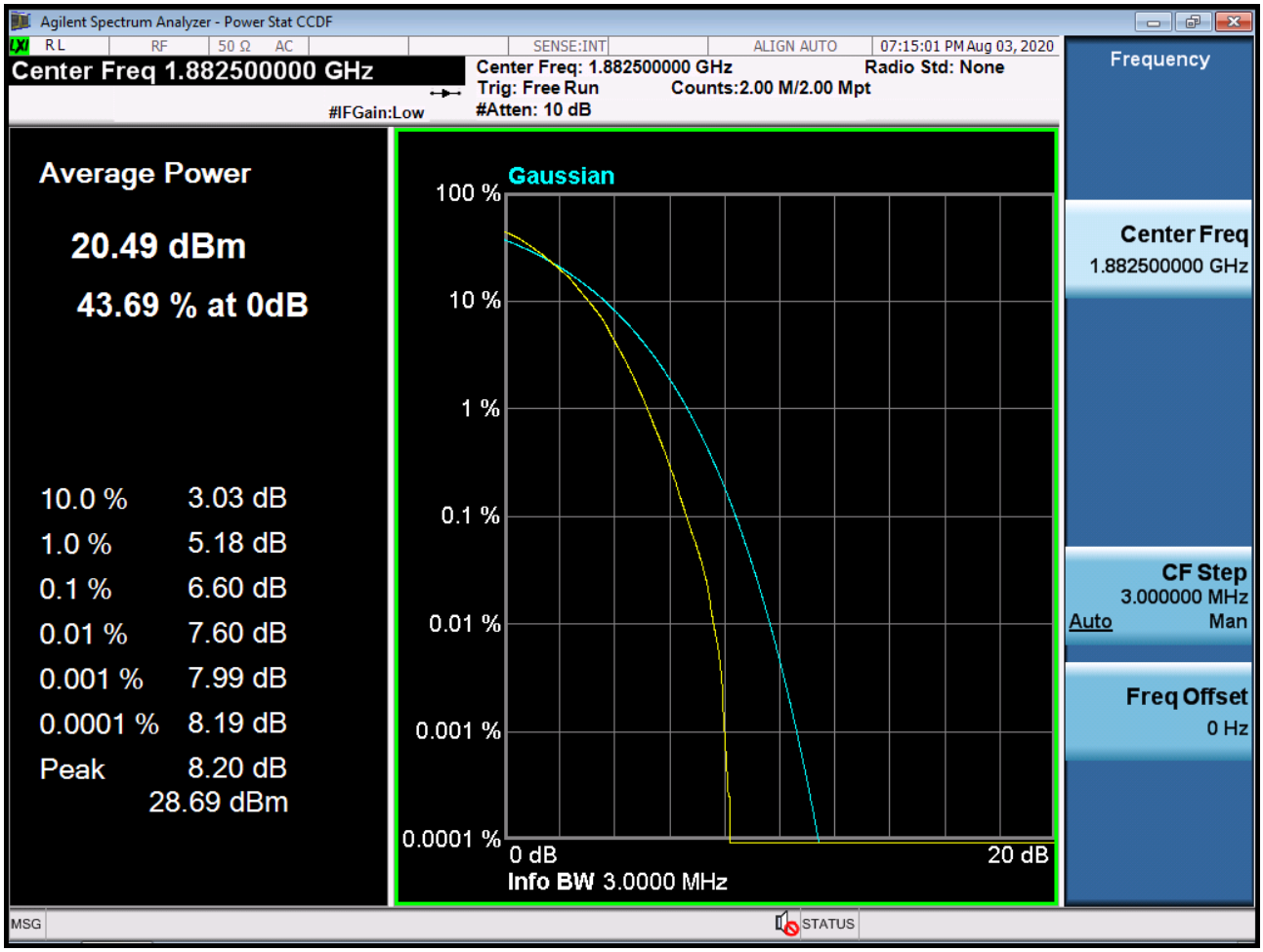
BAND 25/2. PAR Plot (3M BW Ch.26365 QPSK RB 15_0)



BAND 25/2. PAR Plot (3M BW Ch.26365 16QAM RB 15_0)



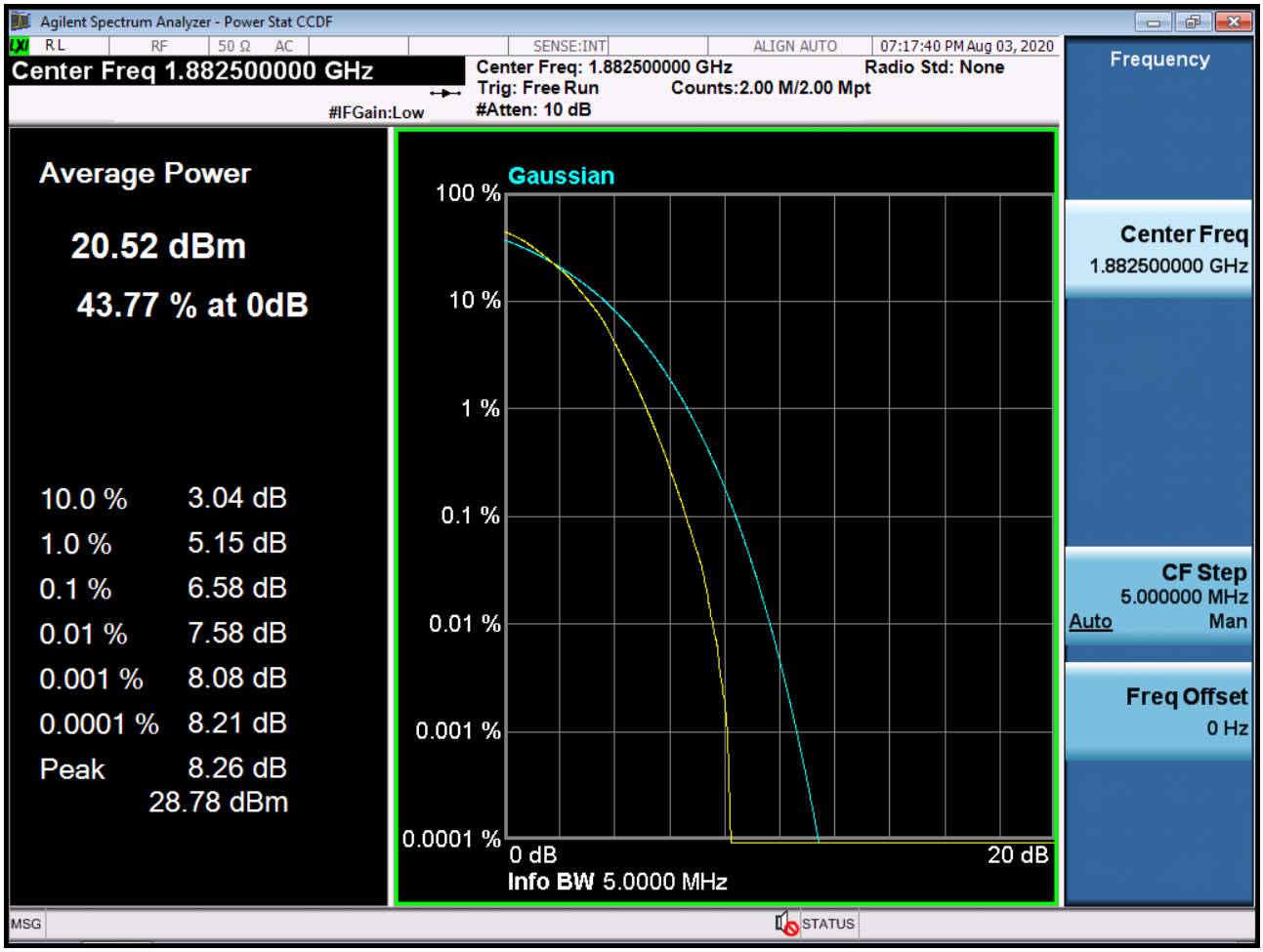
BAND 25/2. PAR Plot (3M BW Ch.26365 64QAM RB 15_0)



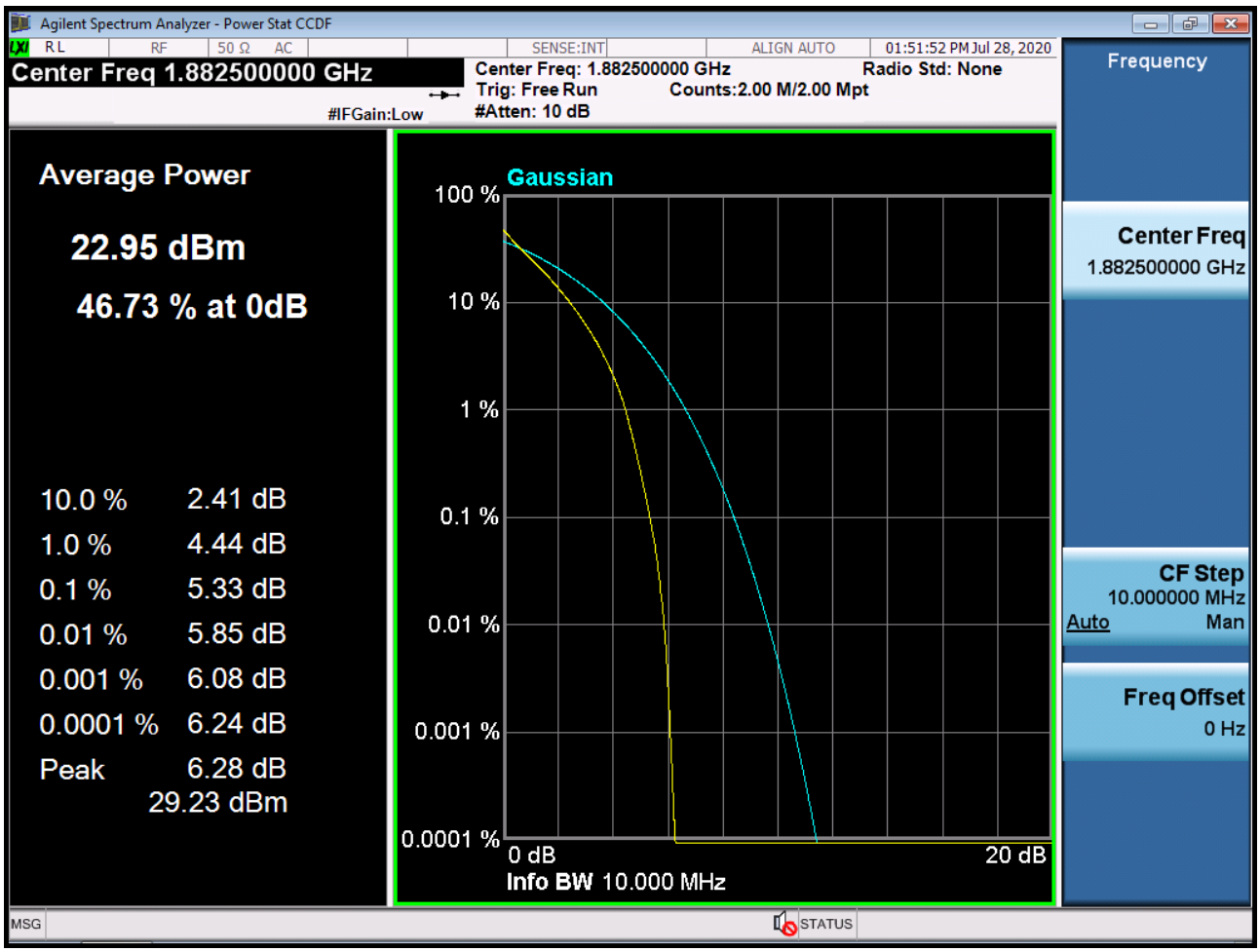
BAND 25/2. PAR Plot (5M BW Ch.26365 QPSK RB 25_0)

BAND 25/2. PAR Plot (5M BW Ch.26365 16QAM RB 25_0)

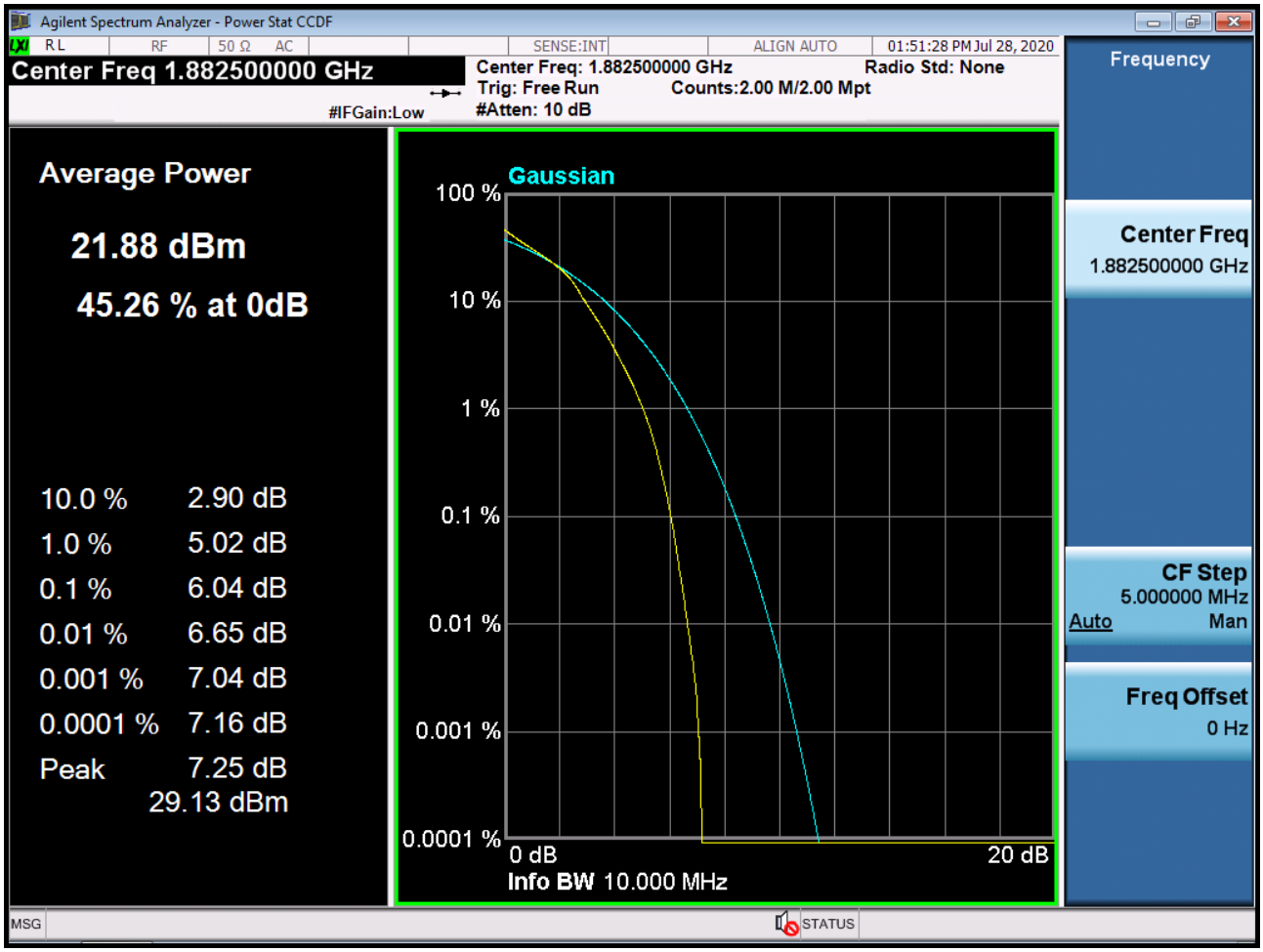
BAND 25/2. PAR Plot (5M BW Ch.26365 64QAM RB 25_0)



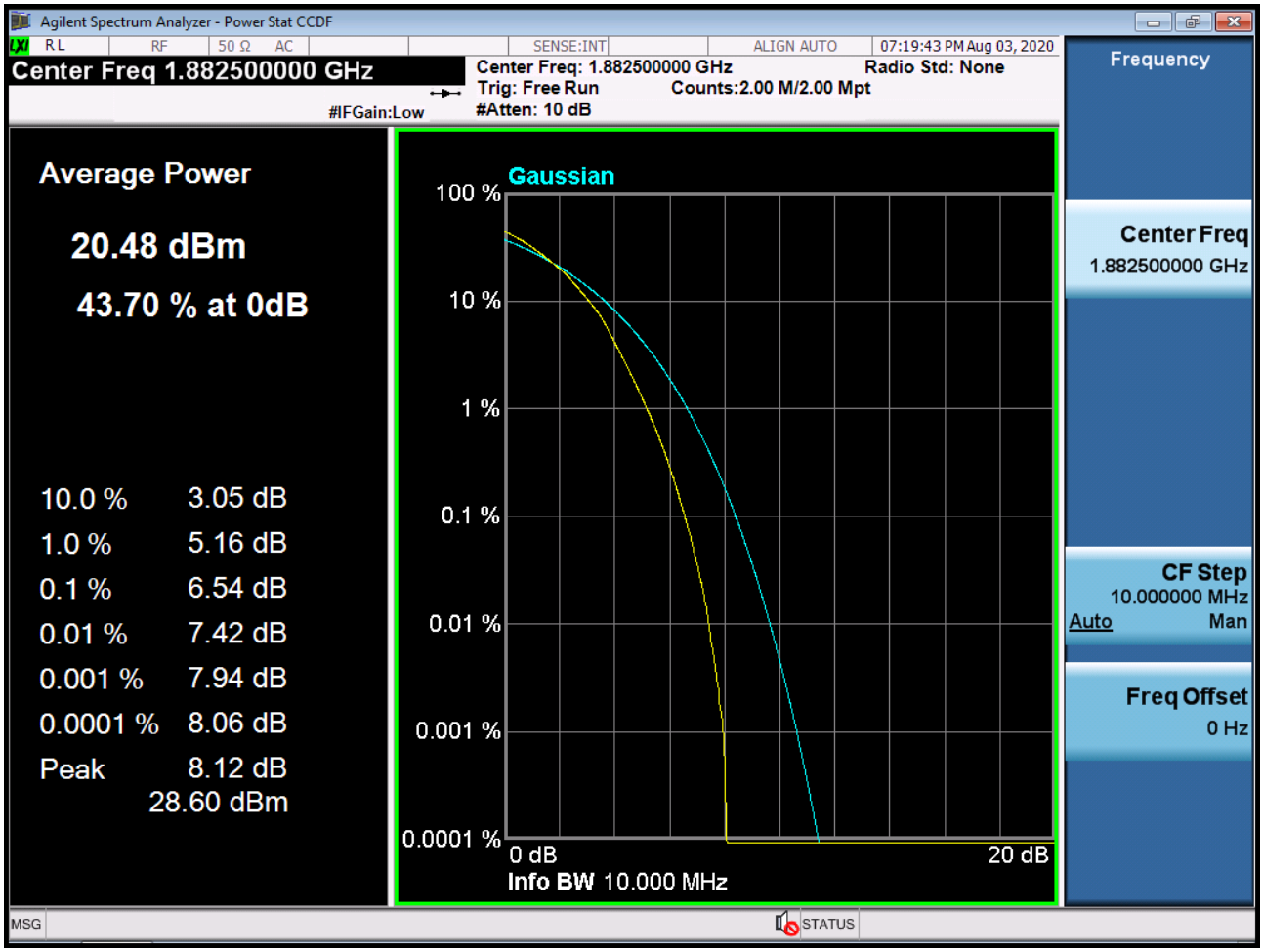
BAND 25/2. PAR Plot (10M BW Ch.26365 QPSK RB 50_0)



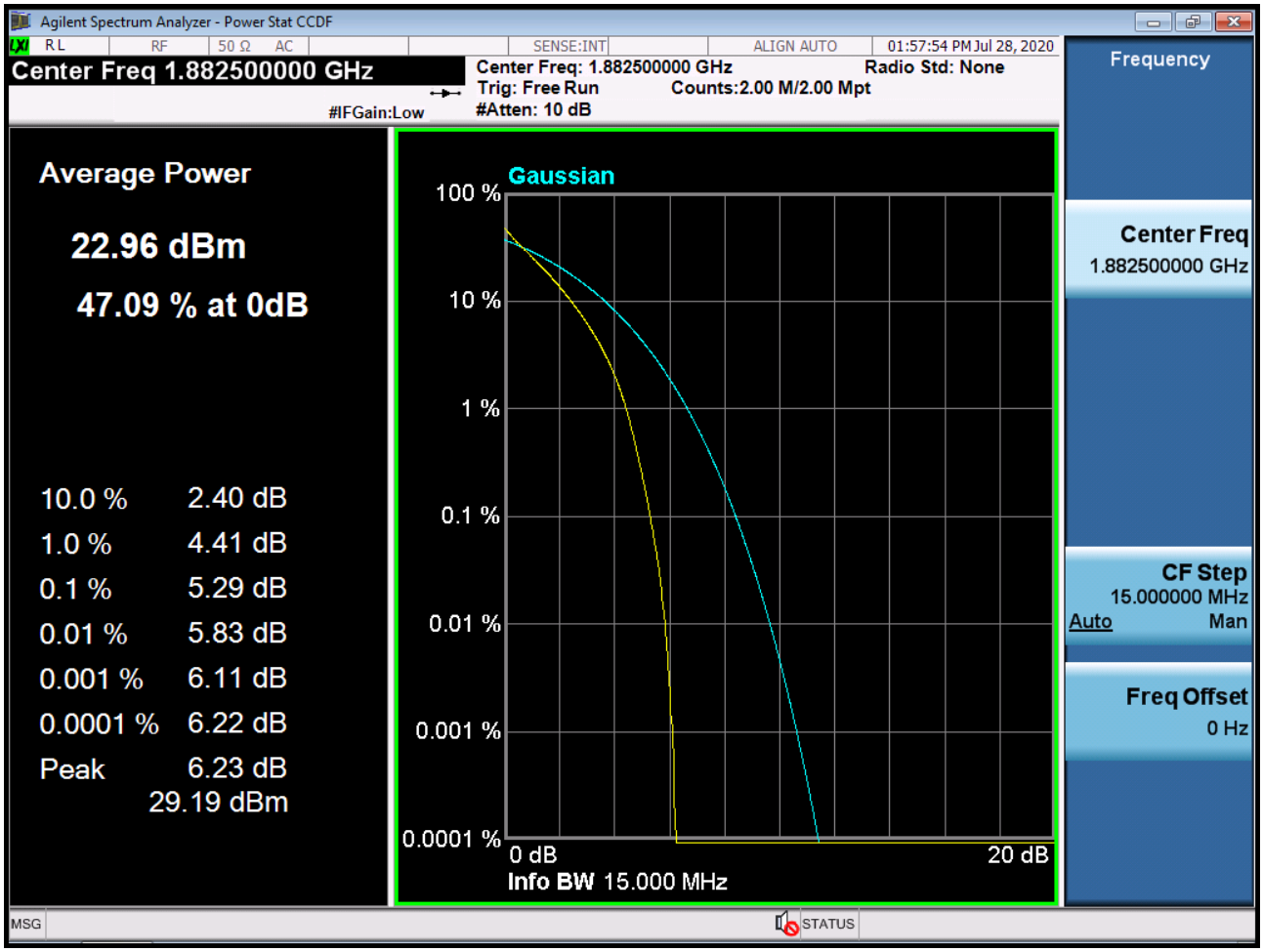
BAND 25/2. PAR Plot (10M BW Ch.26365 16QAM RB 50_0)



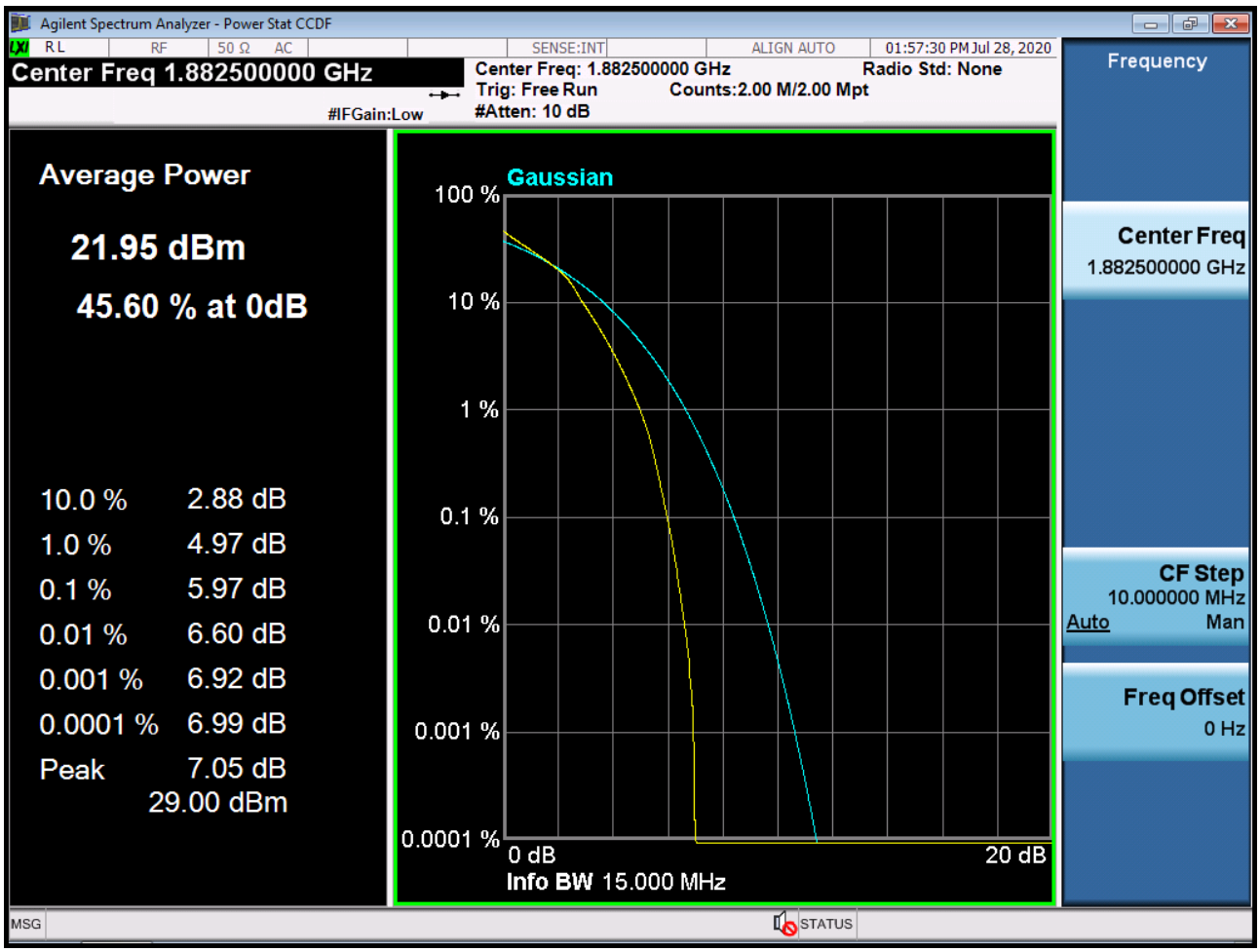
BAND 25/2. PAR Plot (10M BW Ch.26365 64QAM RB 50_0)



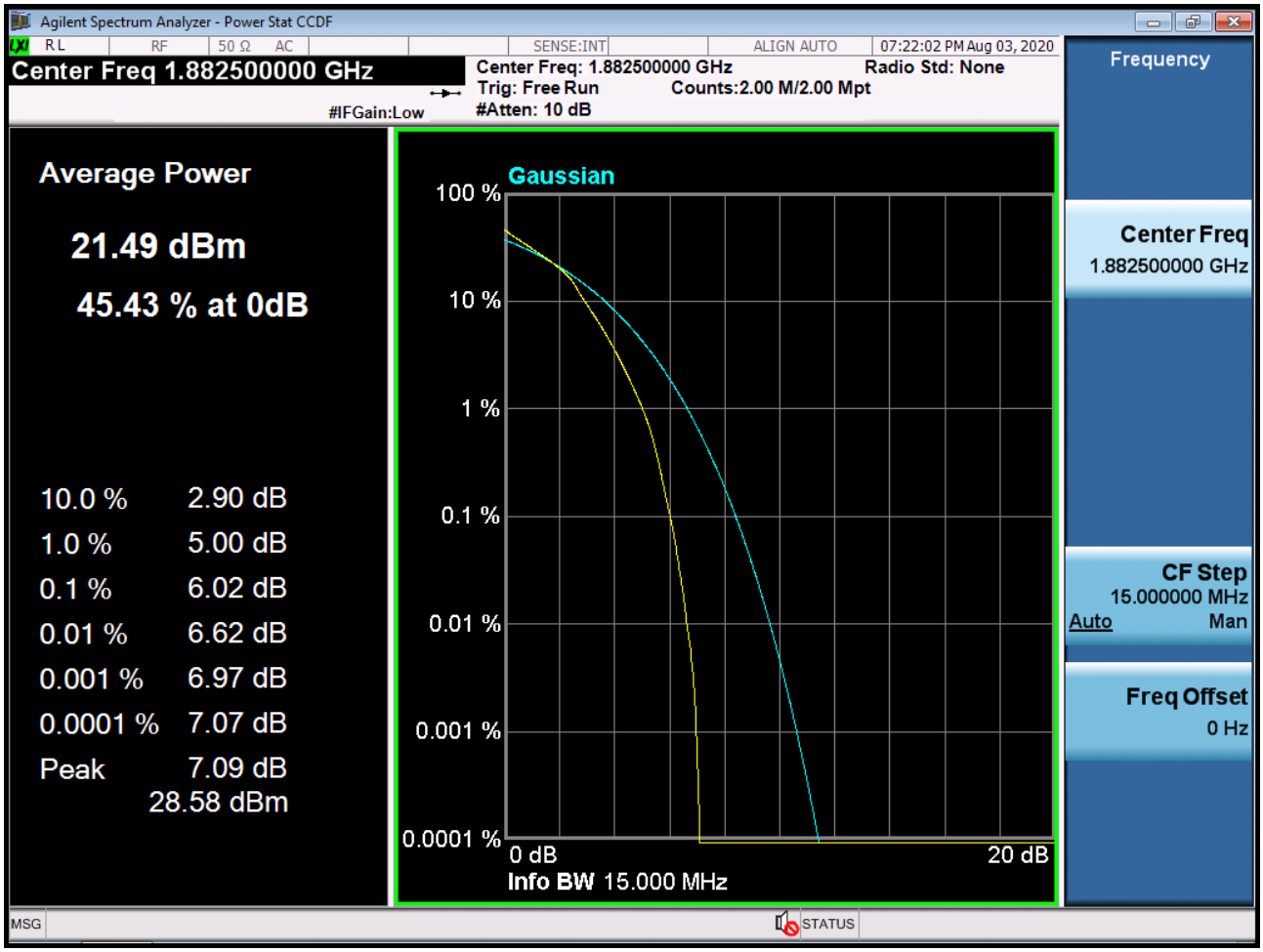
BAND 25/2. PAR Plot (15M BW Ch.26365 QPSK RB 75_0)



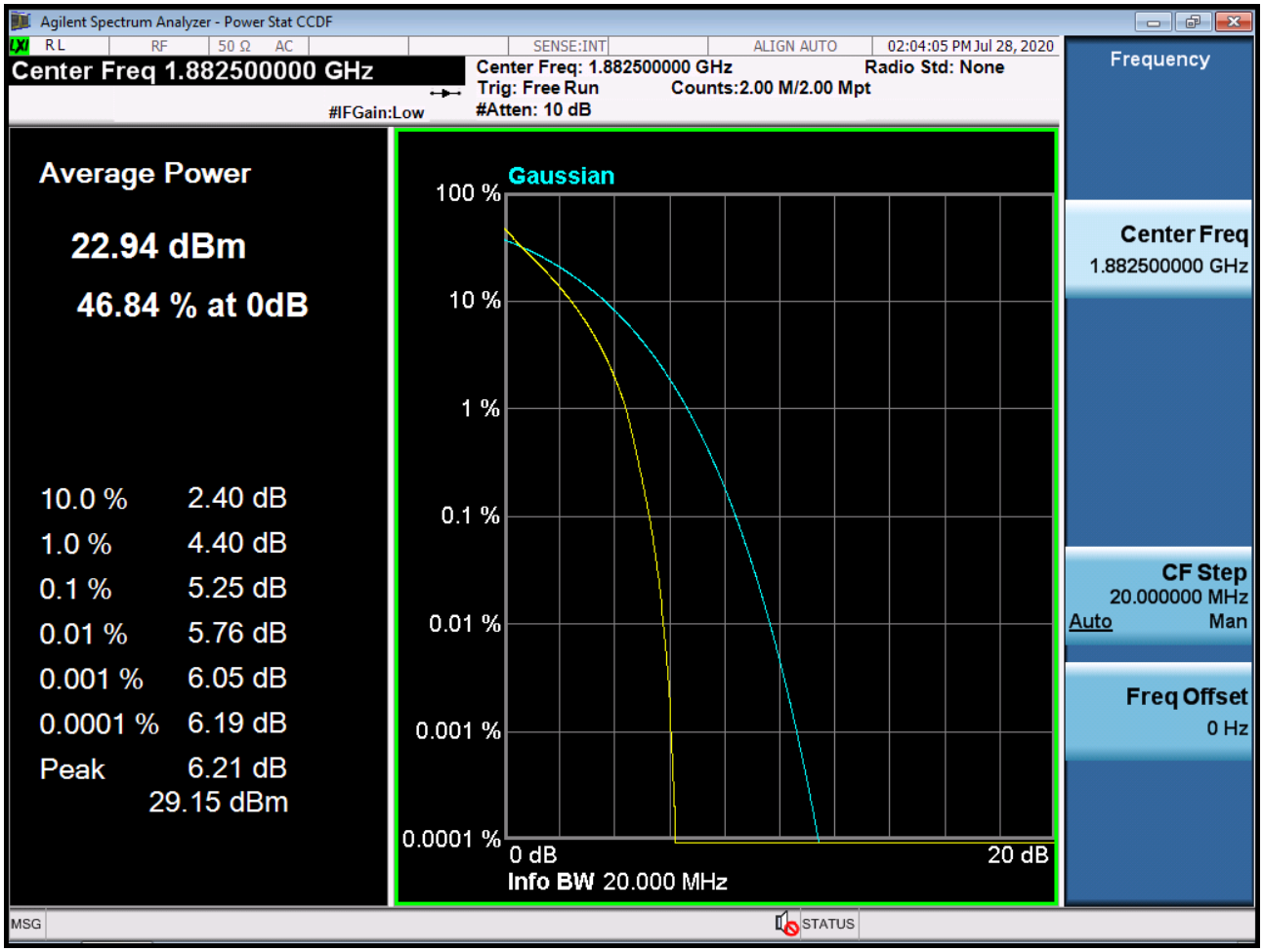
BAND 25/2. PAR Plot (15M BW Ch.26365 16QAM RB 75_0)



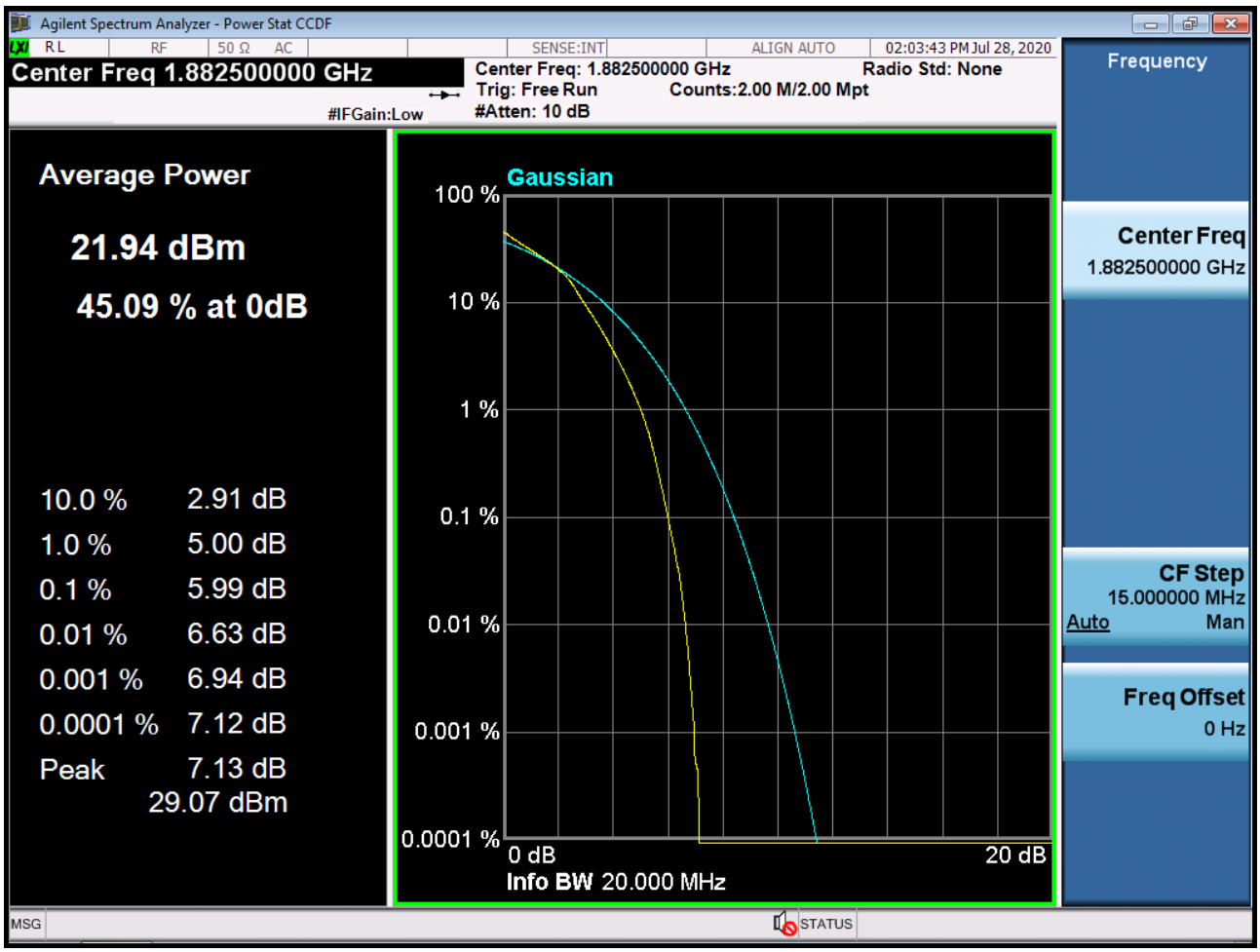
BAND 25/2. PAR Plot (15M BW Ch.26365 64QAM RB 75_0)



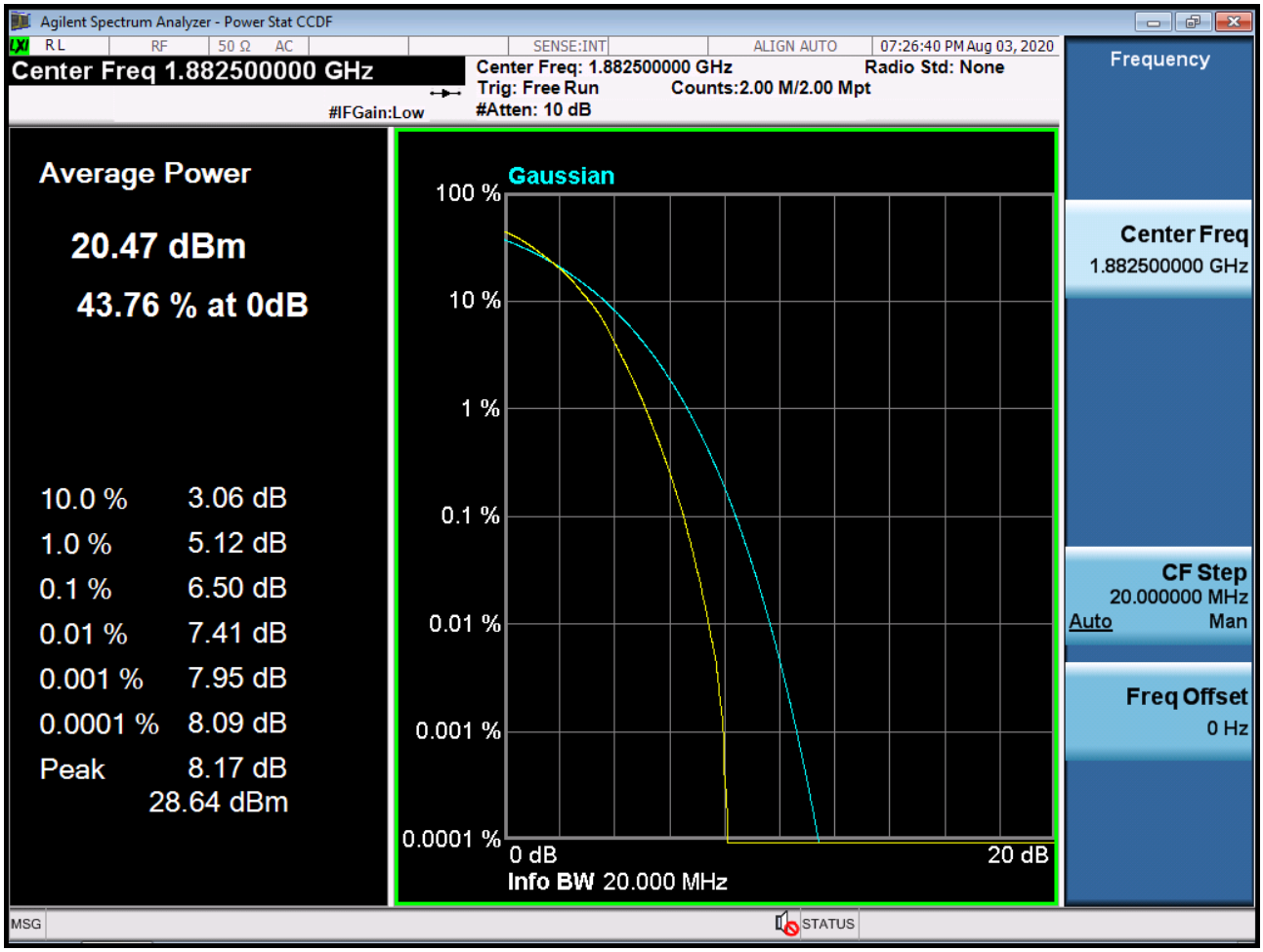
BAND 25/2. PAR Plot (20M BW Ch.26365 QPSK RB 100_0)



BAND 25/2. PAR Plot (20M BW Ch.26365 16QAM RB 100_0)



BAND 25/2. PAR Plot (20M BW Ch.26365 64QAM RB 100_0)

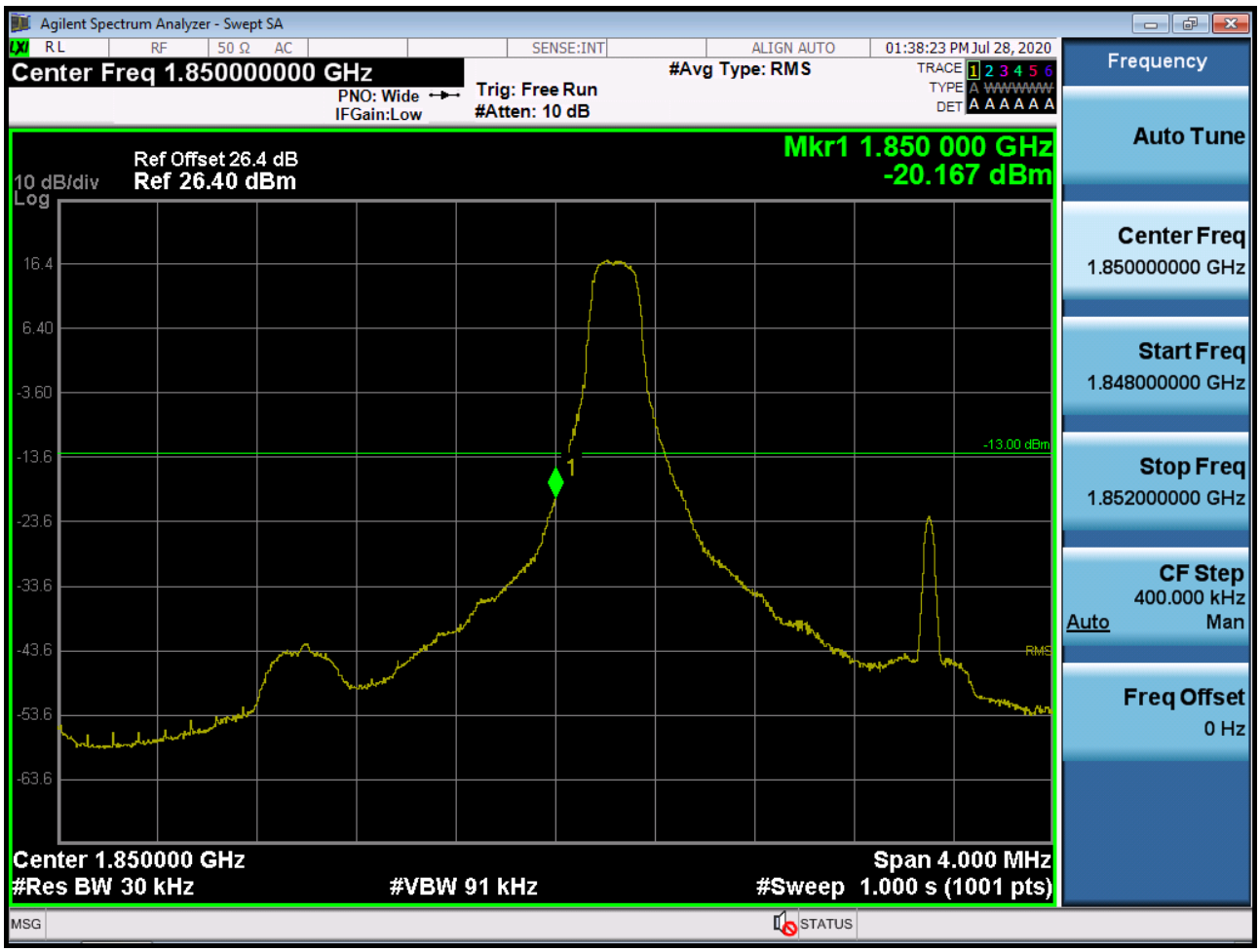


BAND 25/2. Lower Band Edge Plot (1.4M BW Ch.26047 QPSK_RB1_Offset 0) -1

BAND 25/2. Lower Band Edge Plot (1.4M BW Ch.26047 QPSK_RB6_Offset 0) -2

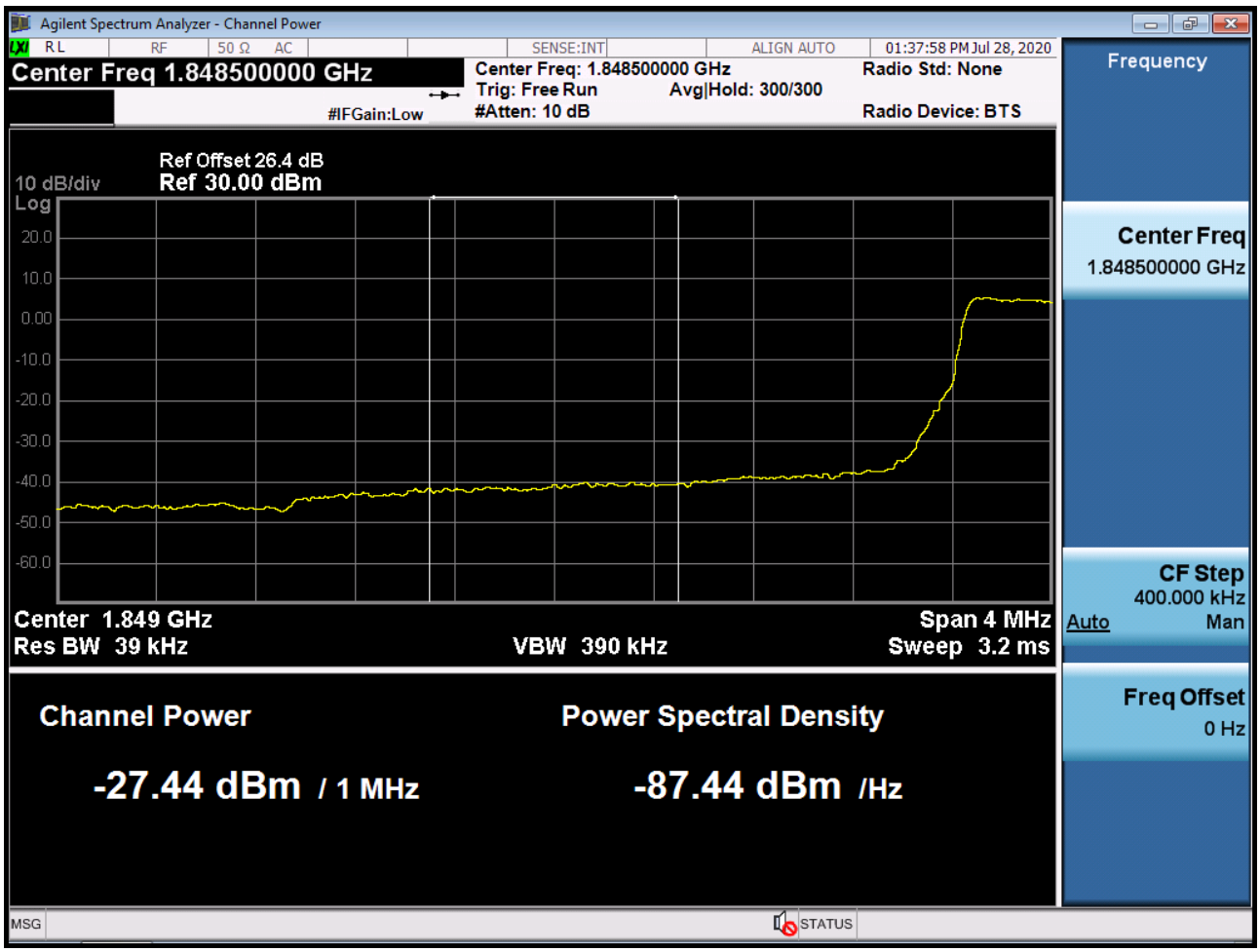
BAND 25/2. Lower Extended Band Edge Plot (1.4M BW Ch.26047 QPSK_RB6_0) -3

BAND 25/2. Lower Band Edge Plot (3M BW Ch.26055 QPSK_RB1_Offset 0) -1

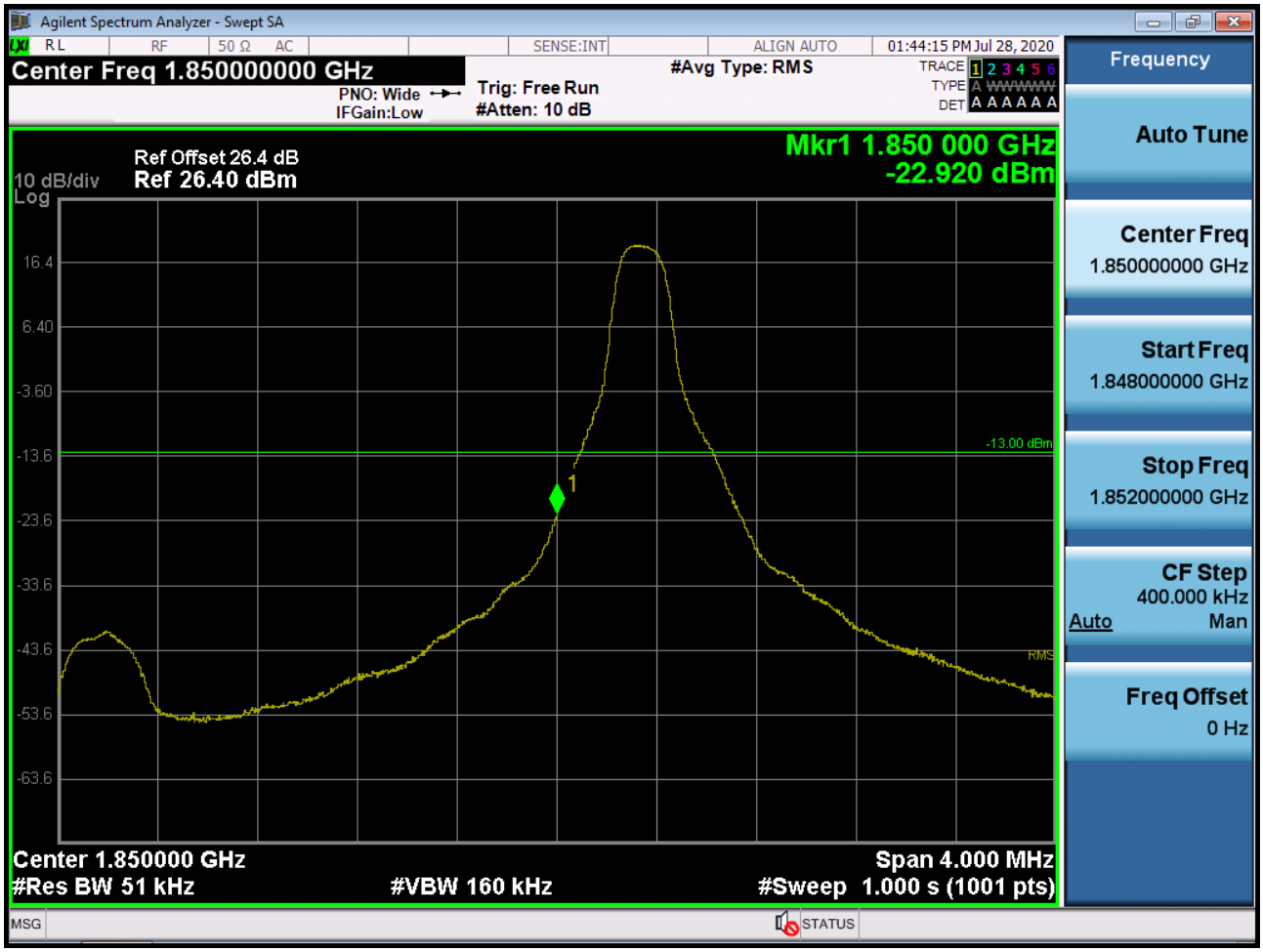


BAND 25/2. Lower Band Edge Plot (3M BW Ch.26055 QPSK_RB15_Offset 0) -2

BAND 25/2. Lower Extended Band Edge Plot (3M BW Ch.26055 QPSK_RB15_0) -3

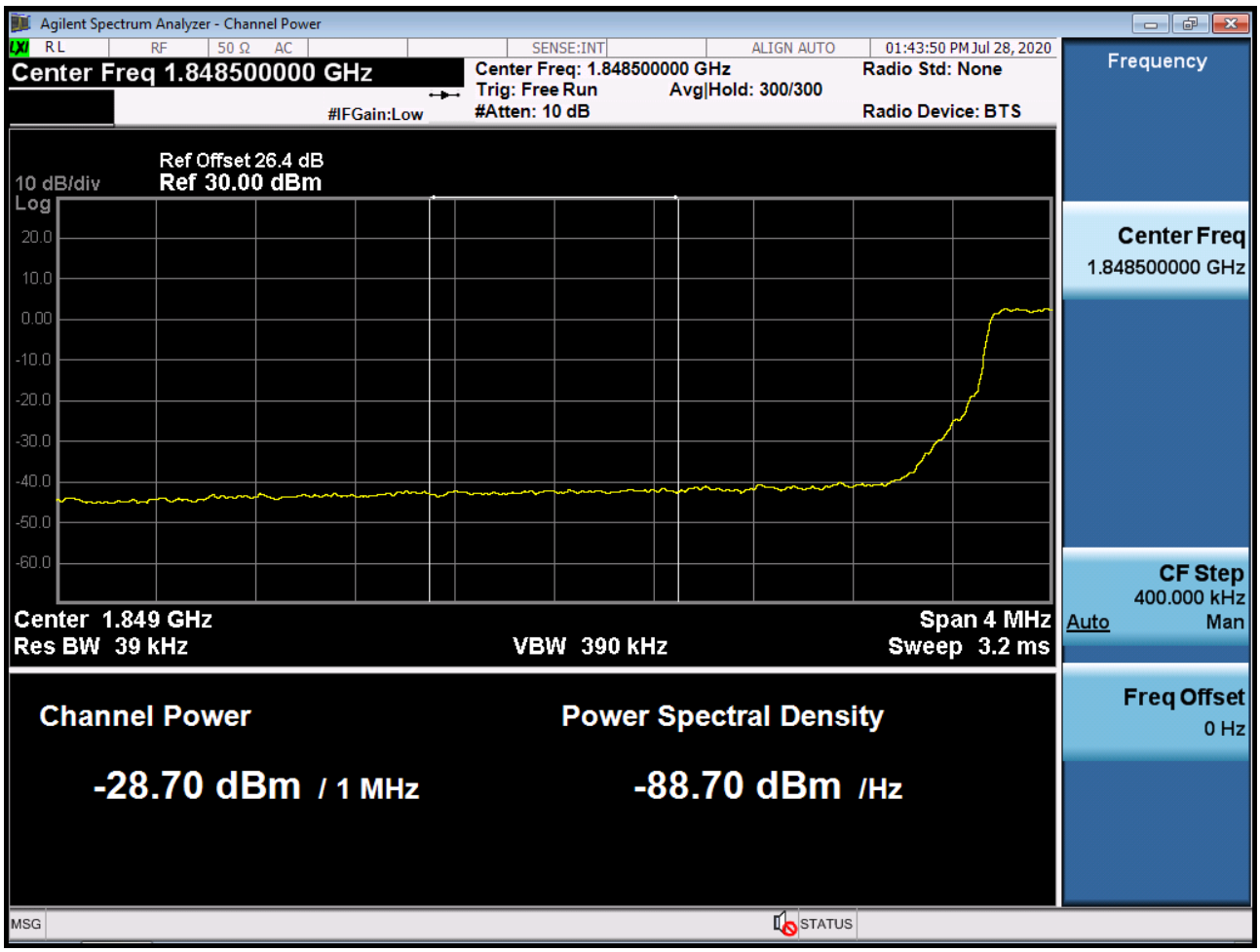


BAND 25/2. Lower Band Edge Plot (5M BW Ch.26065 QPSK_RB1_Offset 0) -1



BAND 25/2. Lower Band Edge Plot (5M BW Ch.26065 QPSK_RB255_Offset 0) -2

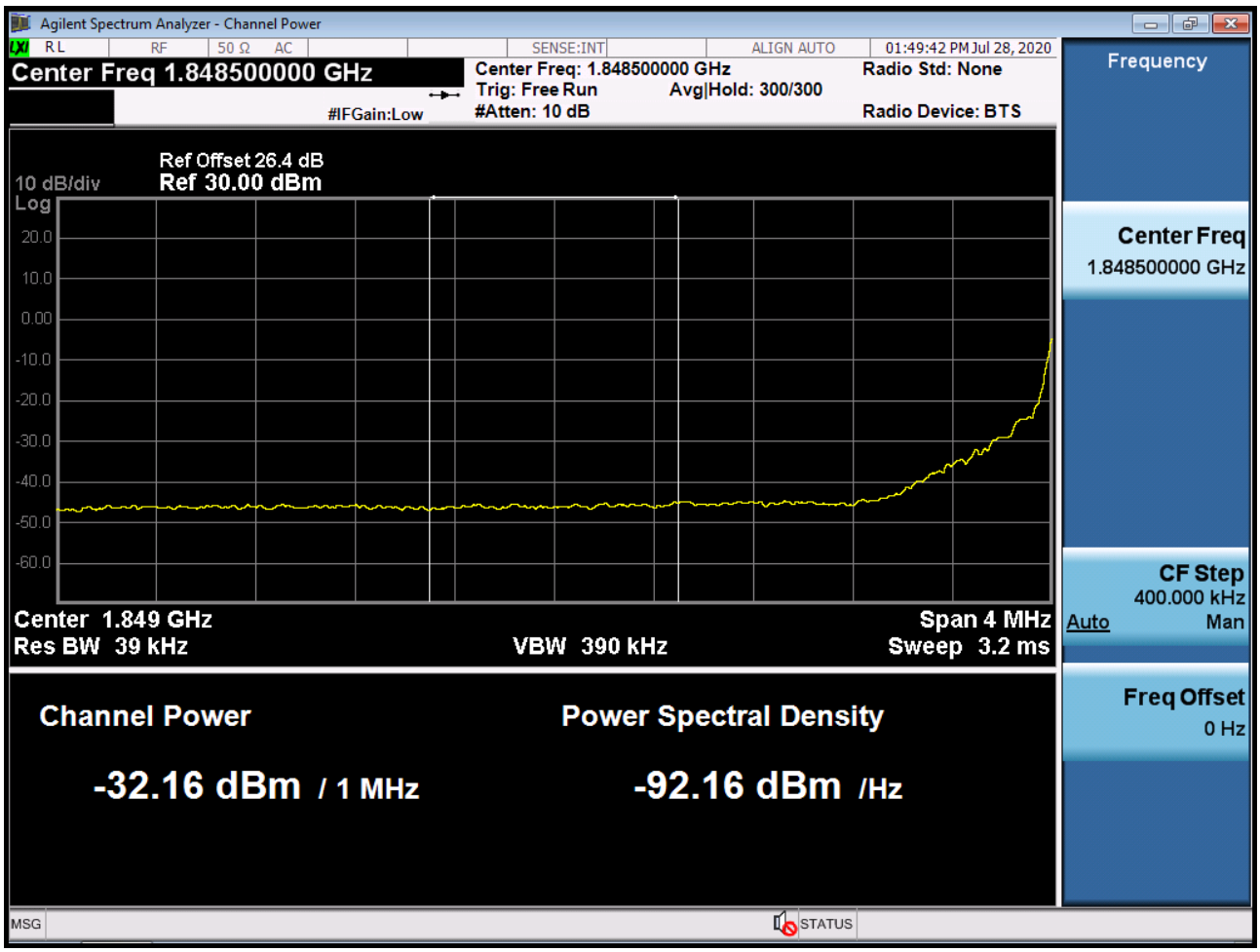
BAND 25/2. Lower Extended Band Edge Plot (5M BW Ch.26065 QPSK_RB255_0) -3



BAND 25/2. Lower Band Edge Plot (10M BW Ch.26090 QPSK_RB1_Offset 0) -1

BAND 25/2. Lower Band Edge Plot (10M BW Ch.26090 QPSK_RB50_Offset 0) -2

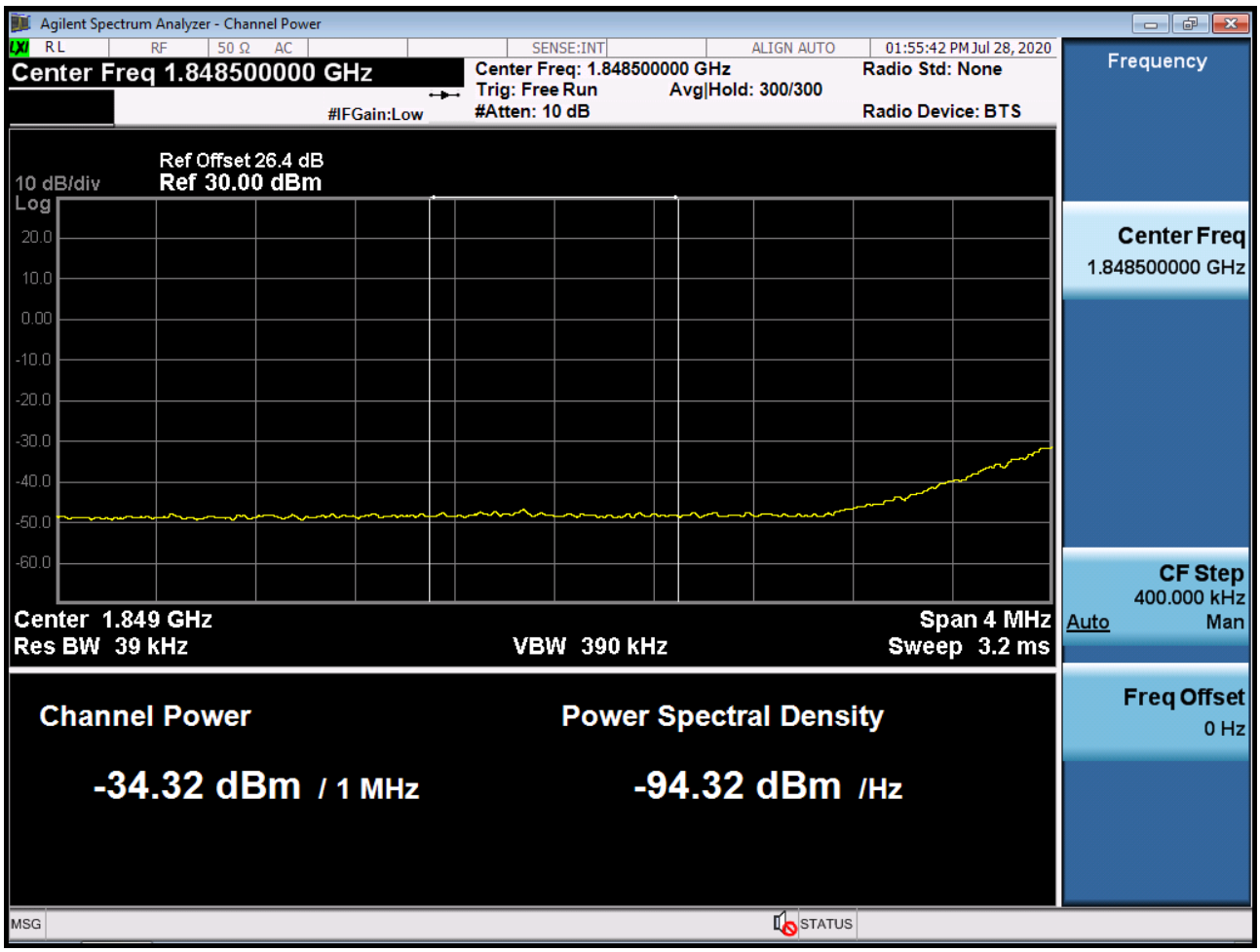
BAND 25/2. Lower Extended Band Edge Plot (10M BW Ch.26090 QPSK_RB50_0) -3



BAND 25/2. Lower Band Edge Plot (15M BW Ch.26115 QPSK_RB75_Offset 0) -1

BAND 25/2. Lower Band Edge Plot (15M BW Ch.26115 QPSK_RB75_Offset 0) -2

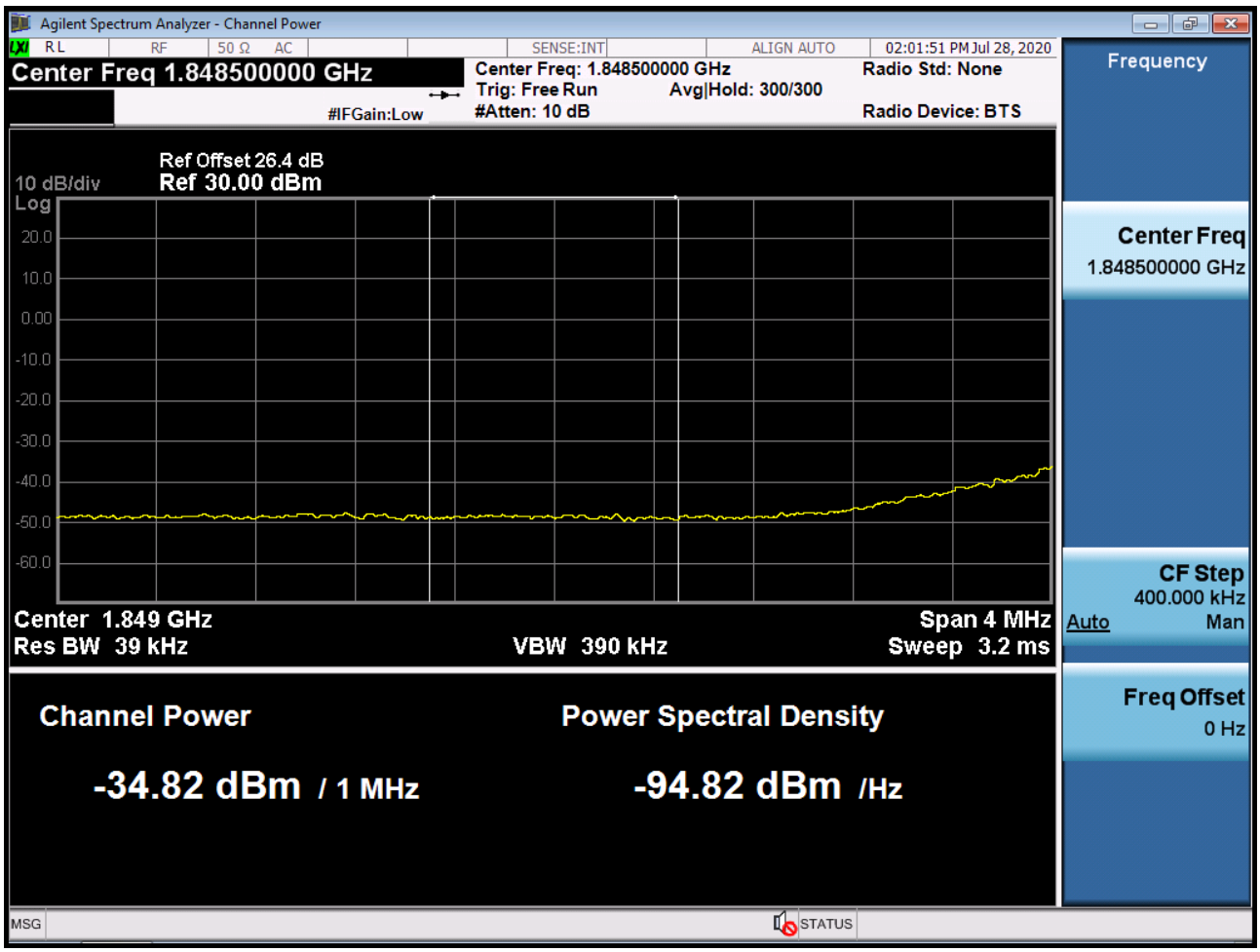
BAND 25/2. Lower Extended Band Edge Plot (15M BW Ch.26115 QPSK_RB75_0) -3



BAND 25/2. Lower Band Edge Plot (20M BW Ch.26140 QPSK_RB1_Offset 0) -1

BAND 25/2. Lower Band Edge Plot (20M BW Ch.26140 QPSK_RB100_Offset 0) -2

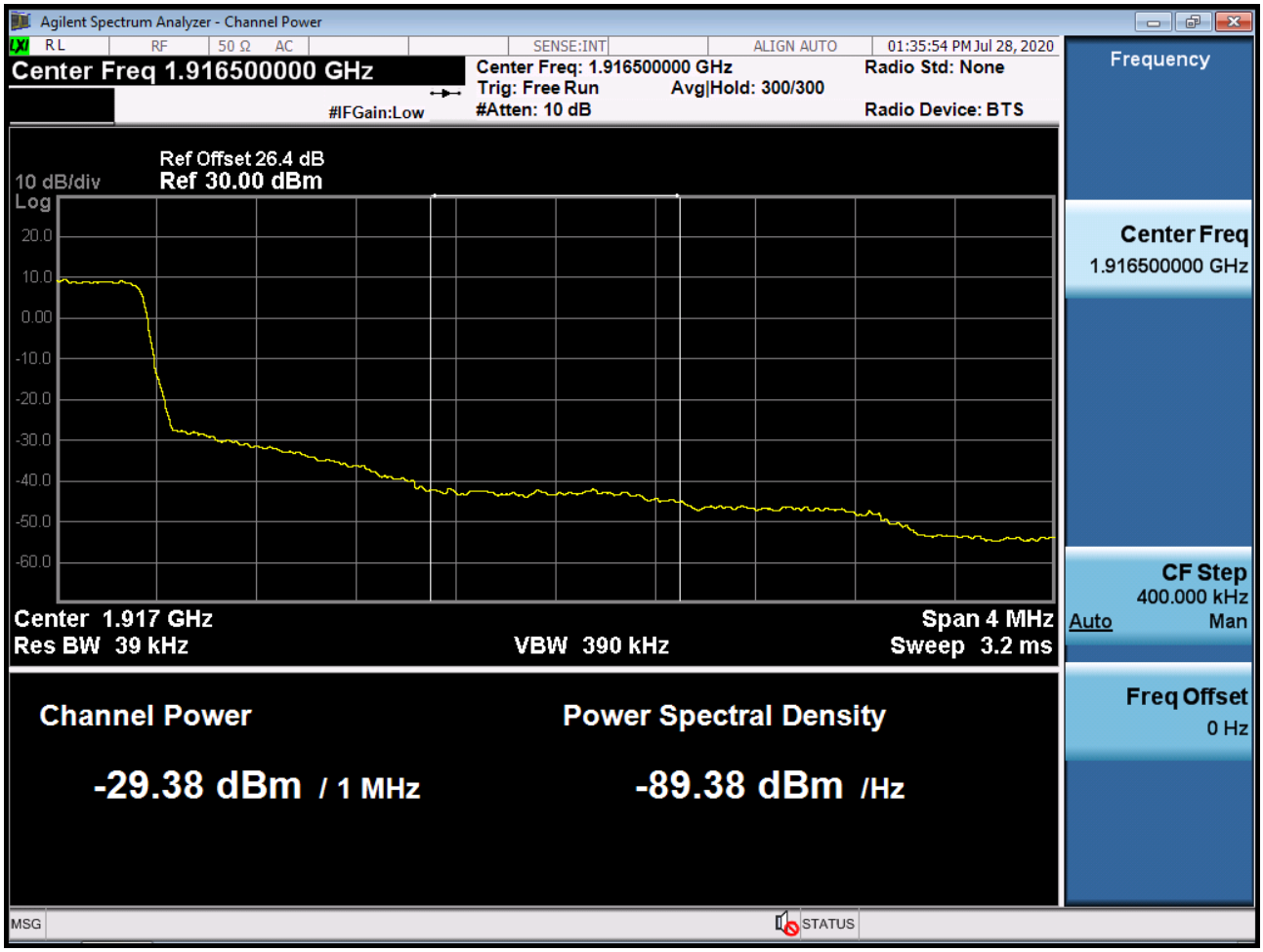
BAND 25/2. Lower Extended Band Edge Plot (20M BW Ch.26140 QPSK_RB100_0) -3



BAND 25/2. Upper Band Edge Plot (1.4M BW Ch.26683 QPSK_RB1_Offset 5) -1

BAND 25/2. Upper Band Edge Plot (1.4M BW Ch.26683 QPSK_RB6_Offset 0) -2

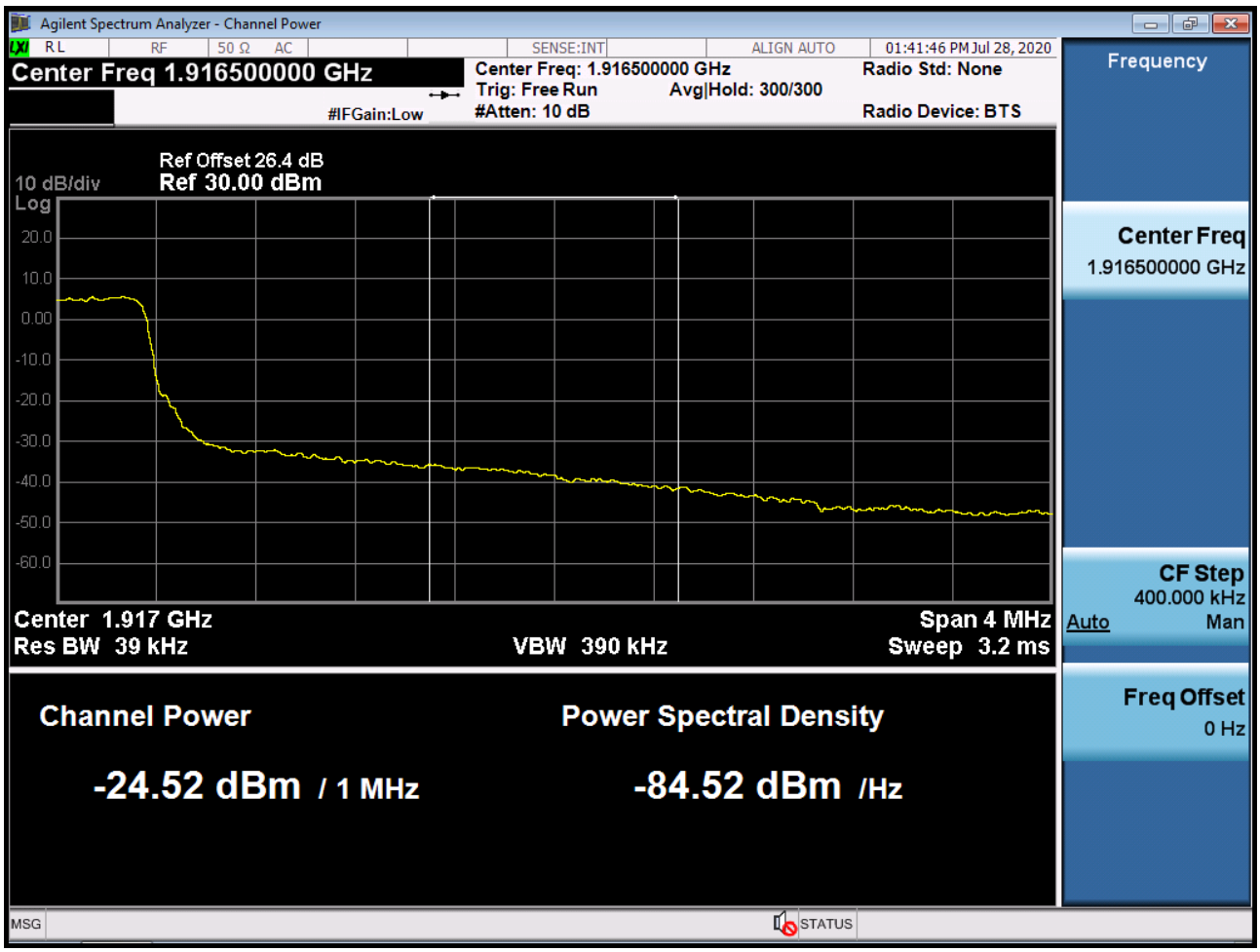
BAND 25/2. Upper Extended Band Edge Plot (1.4M BW Ch.26683 QPSK_RB6_0) -3



BAND 25/2. Upper Band Edge Plot (3M BW Ch.26675 QPSK_RB1_Offset 14) -1

BAND 25/2. Upper Band Edge Plot (3M BW Ch.26675 QPSK_RB15_Offset 0) -2

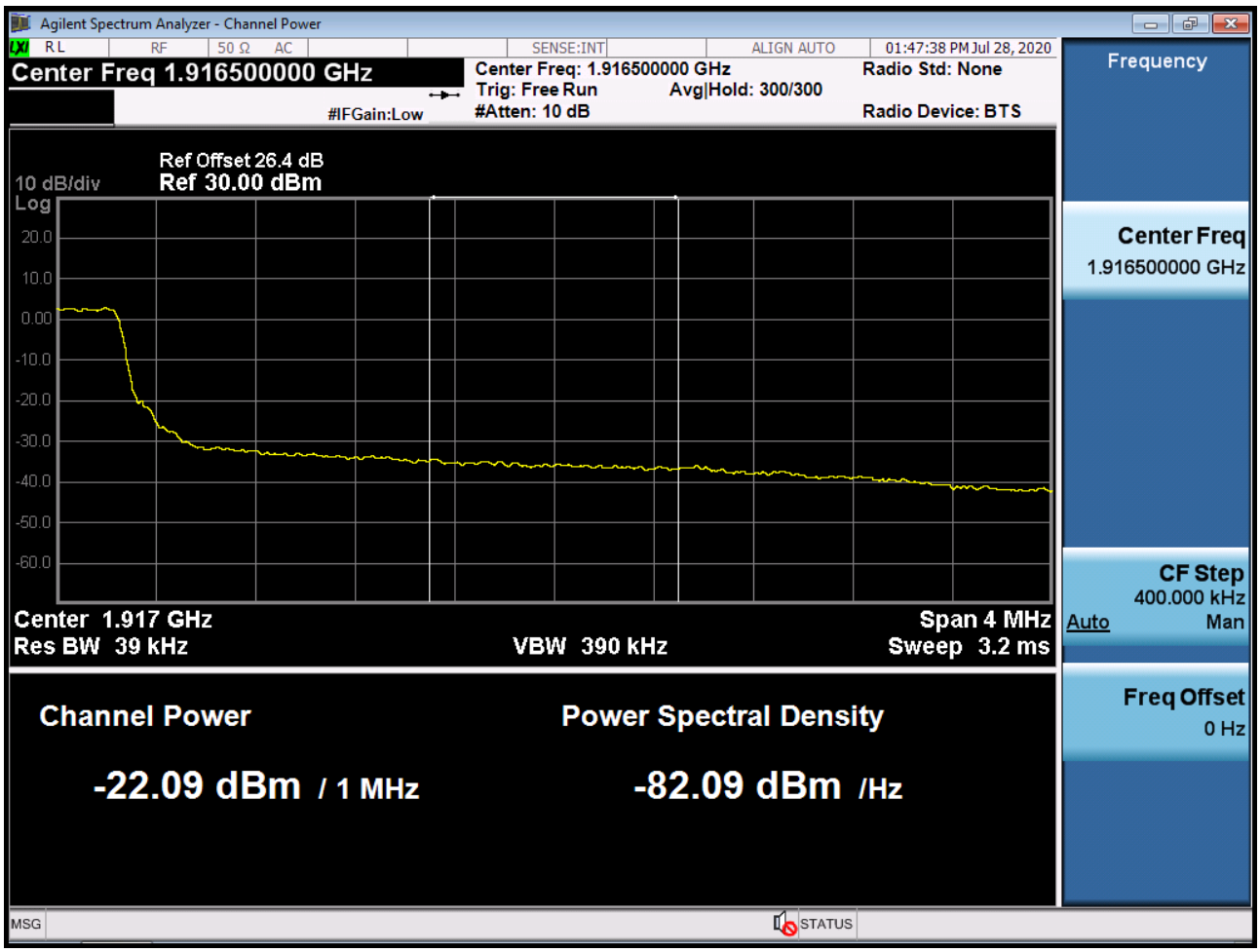
BAND 25/2. Upper Extended Band Edge Plot (3M BW Ch.26675 QPSK_RB15 0) -3



BAND 25/2. Upper Band Edge Plot (5M BW Ch.26665 QPSK_RB1_Offset 24) -1

BAND 25/2. Upper Band Edge Plot (5M BW Ch.26665 QPSK_RB255_Offset 0) -2

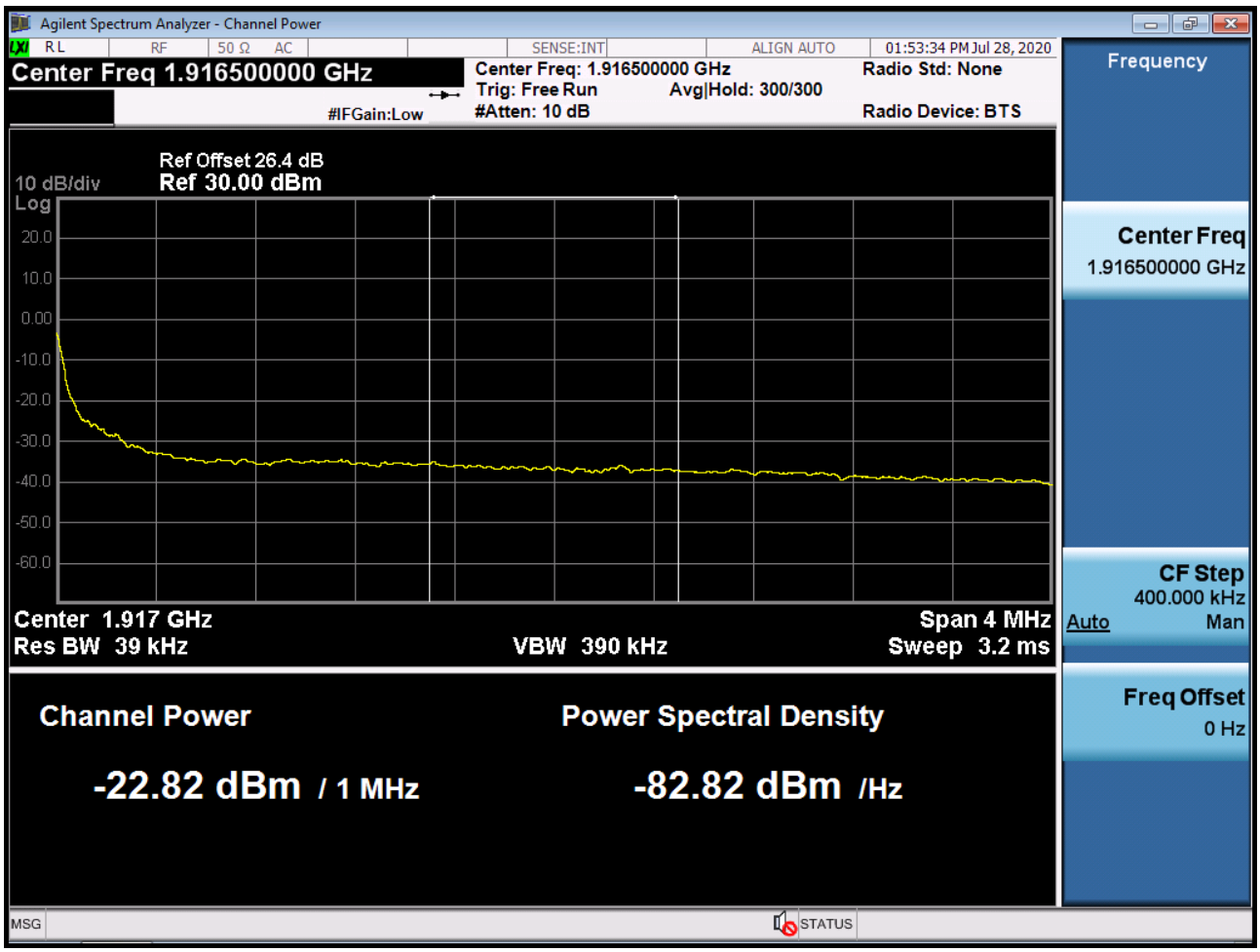
BAND 25/2. Upper Extended Band Edge Plot (5M BW Ch.26665 QPSK_RB255_0) -3



BAND 25/2. Upper Band Edge Plot (10M BW Ch.26640 QPSK_RB1_Offset 49) -1

BAND 25/2. Upper Band Edge Plot (10M BW Ch.26640 QPSK_RB50_Offset 0) -2

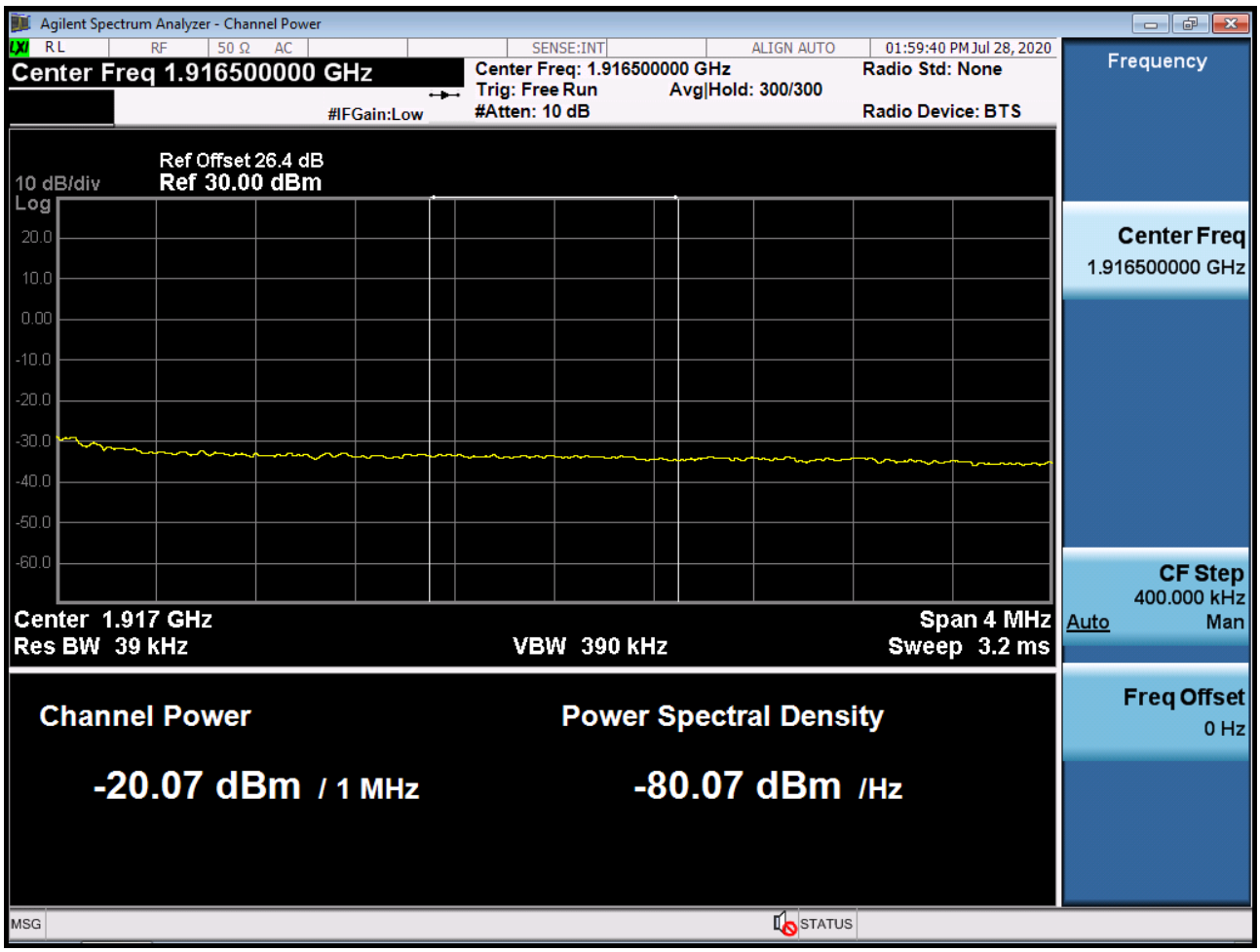
BAND 25/2. Upper Extended Band Edge Plot (10M BW Ch.26640 QPSK_RB50_0) -3



BAND 25/2. Upper Band Edge Plot (15M BW Ch.26615 QPSK_RB1_Offset 74) -1

BAND 25/2. Upper Band Edge Plot (15M BW Ch.26615 QPSK_RB75_Offset 0) -2

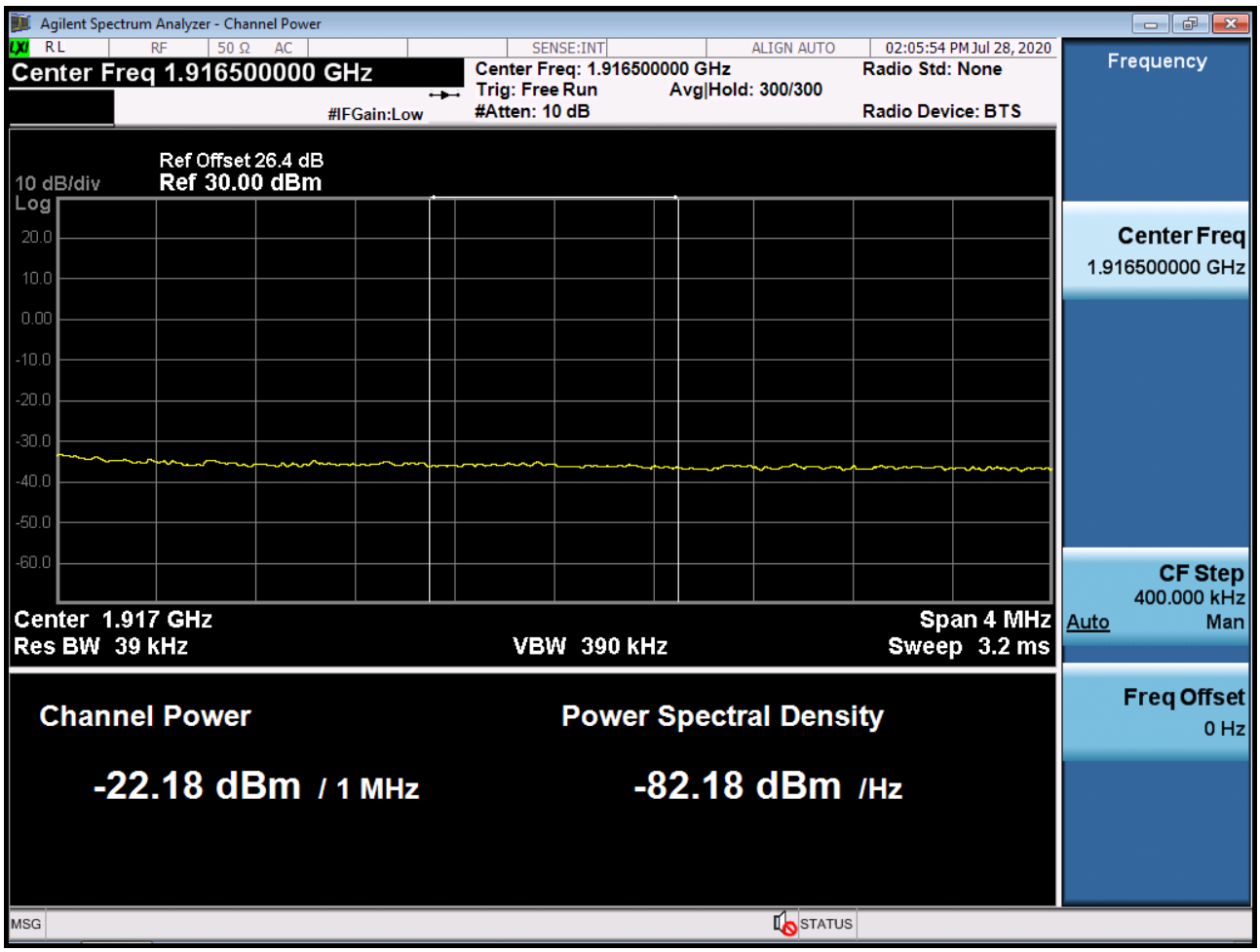
BAND 25/2. Upper Extended Band Edge Plot (15M BW Ch.26615 QPSK_RB75_0) -3



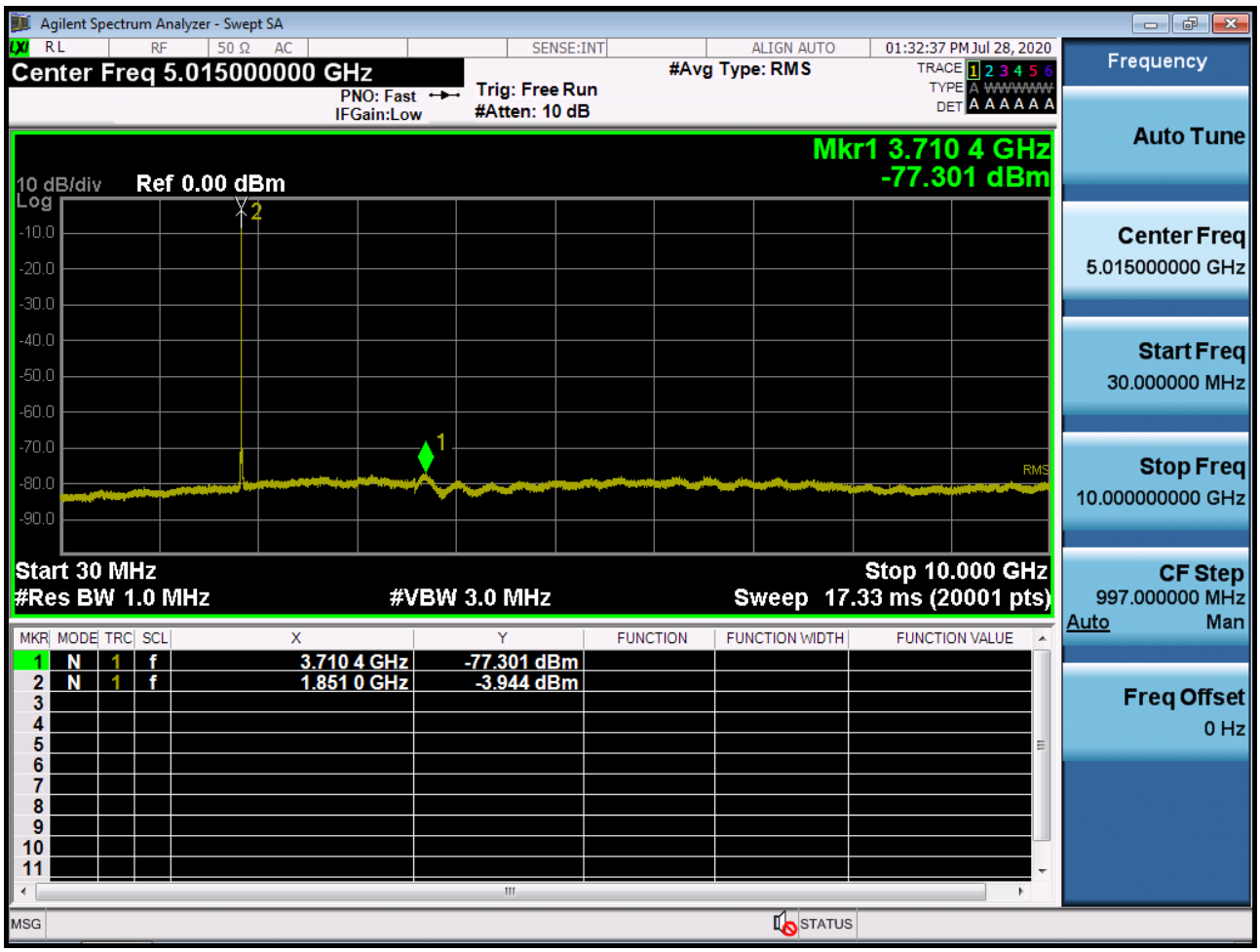
BAND 25/2. Upper Band Edge Plot (20M BW Ch.26590 QPSK_RB1_Offset 99) -1

BAND 25/2. Upper Band Edge Plot (20M BW Ch.26590 QPSK_RB100_Offset 0) -2

BAND 25/2. Upper Extended Band Edge Plot (20M BW Ch.26590 QPSK_RB100_0) -3

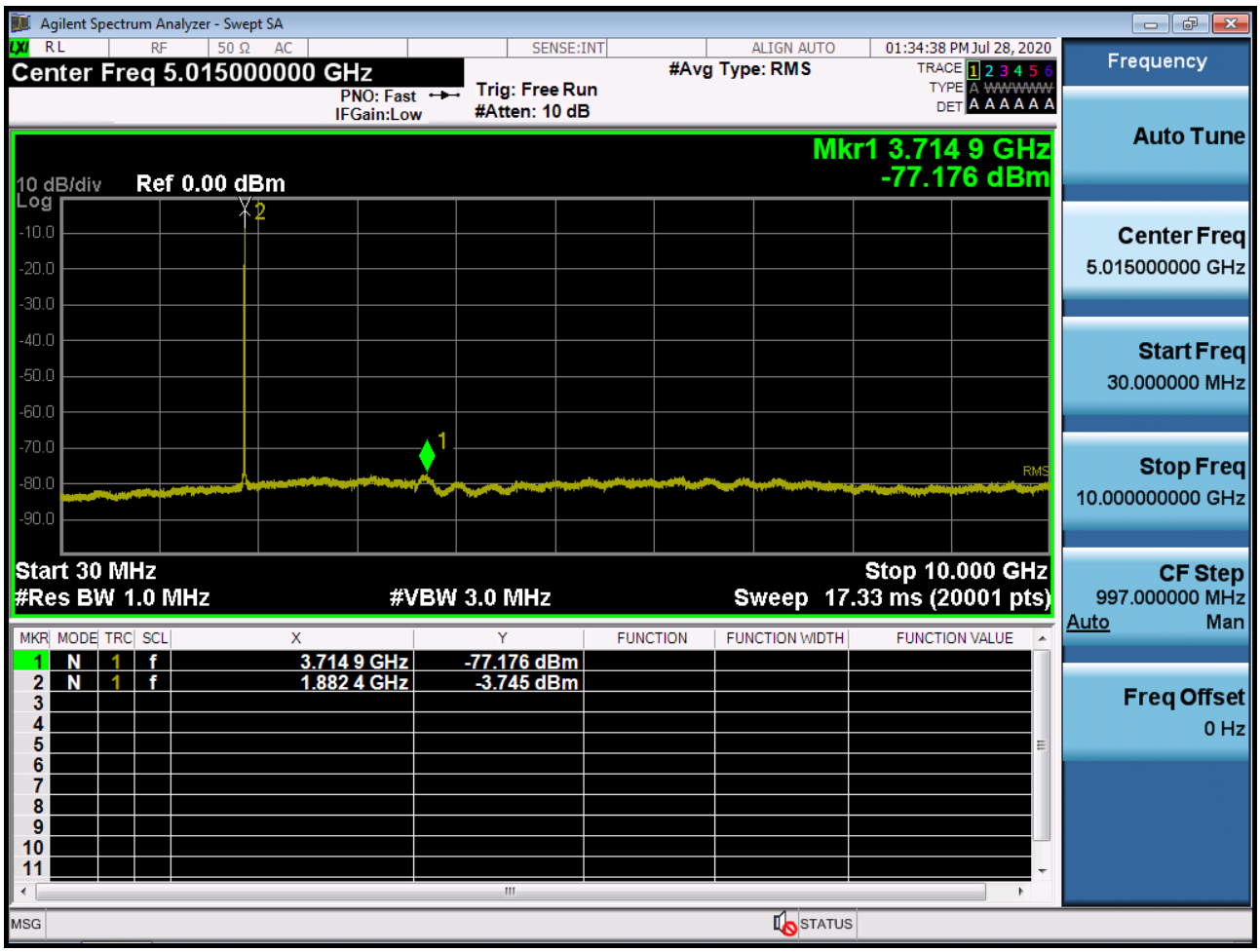


BAND 25/2. Conducted Spurious_1 (26047ch_1.4MHz_QPSK_RB 1_0)



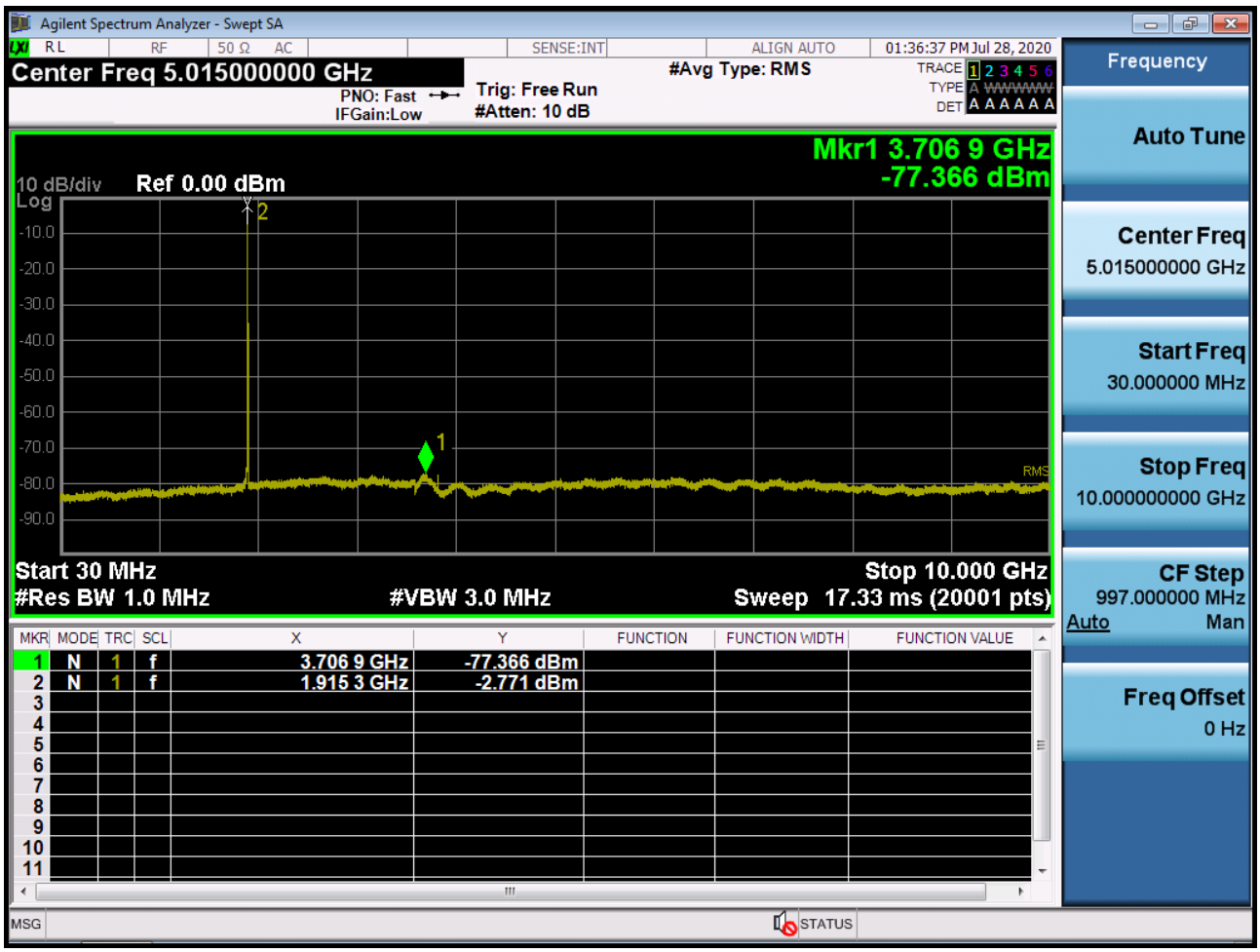
BAND 25/2. Conducted Spurious_2 (26047ch_1.4MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26365ch_1.4MHz_QPSK_RB 1_0)



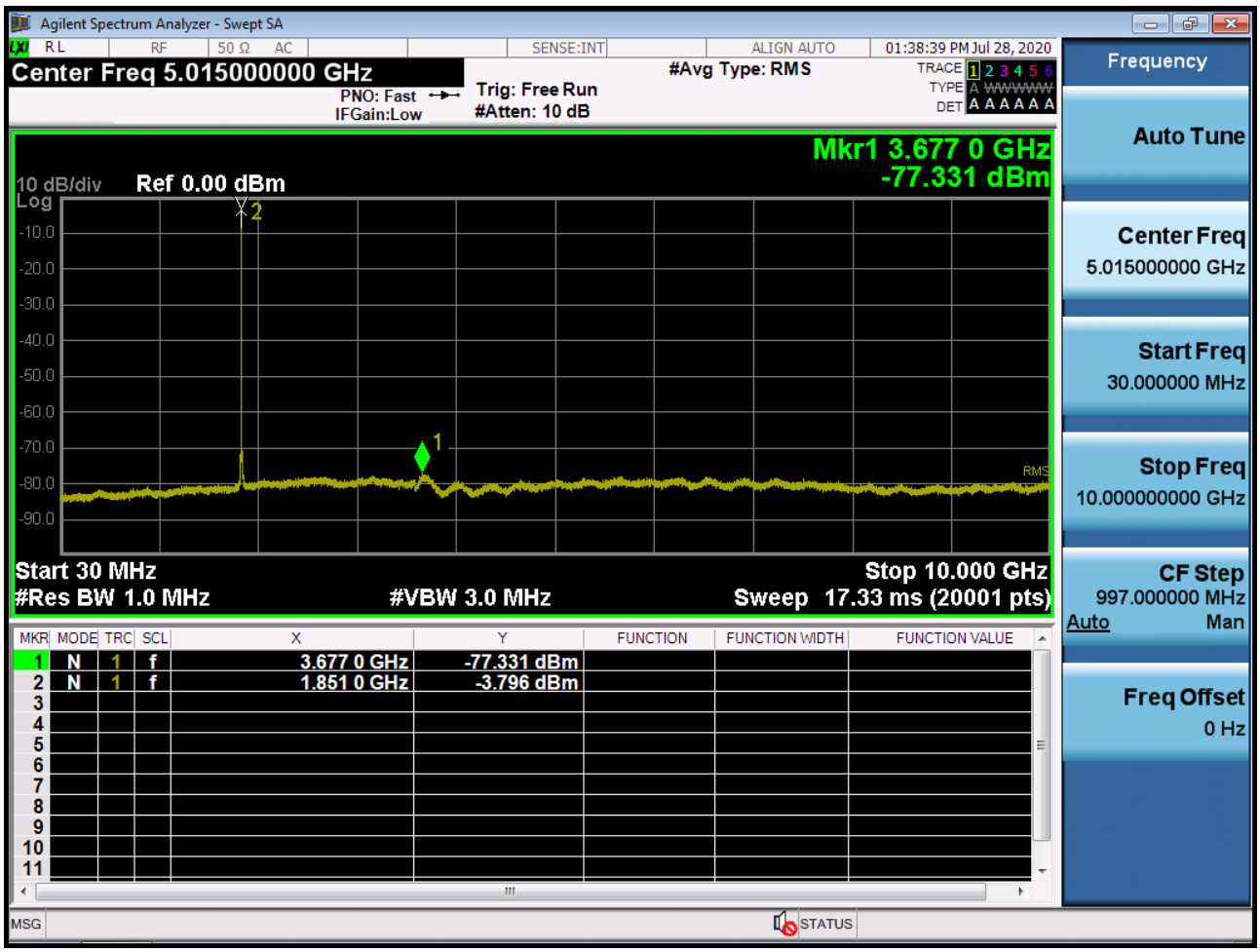
BAND 25/2. Conducted Spurious_2 (26365ch_1.4MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26683ch_1.4MHz_QPSK_RB 1_0)



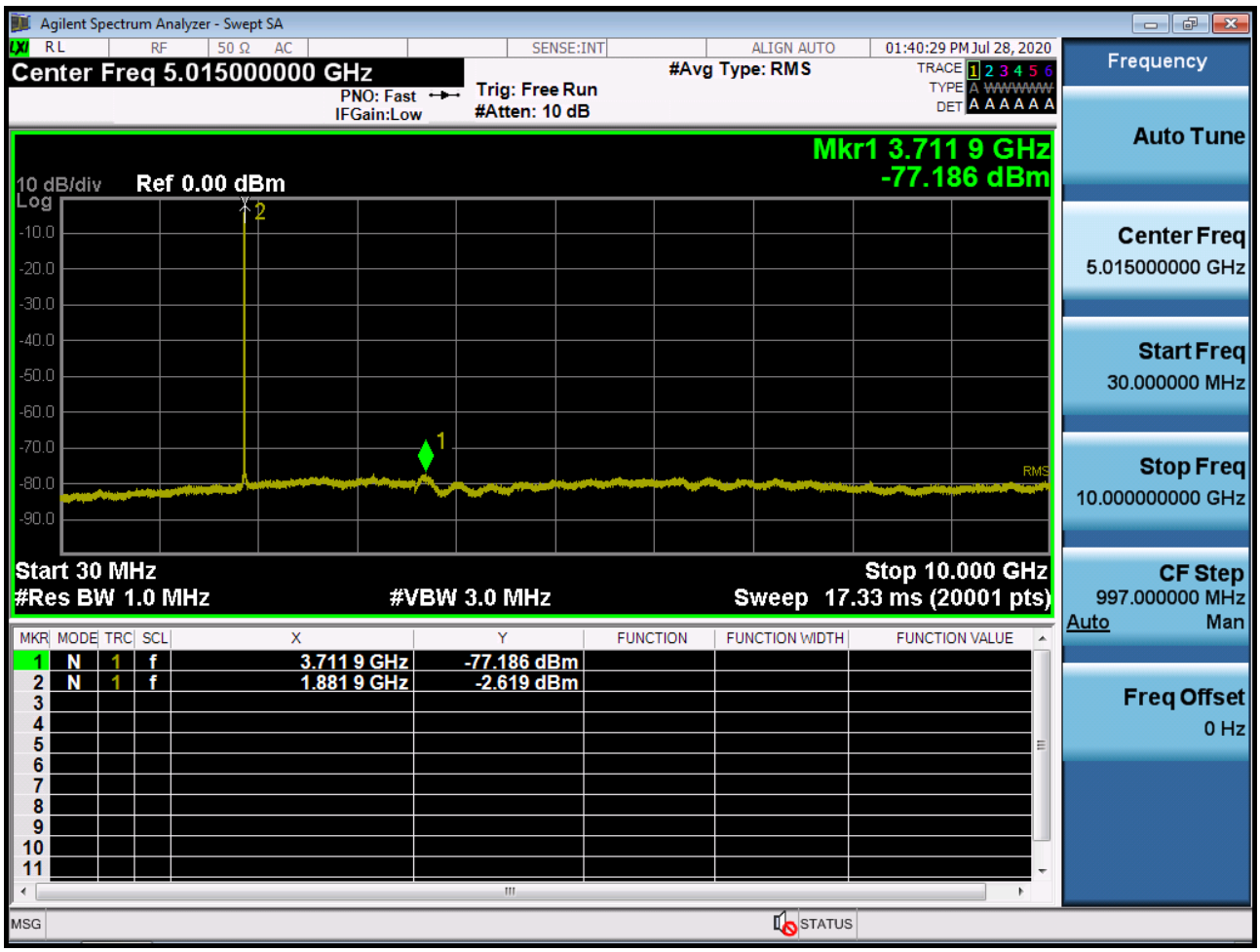
BAND 25/2. Conducted Spurious_2 (26683ch_1.4MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26055ch_3MHz_QPSK_RB 1_0)



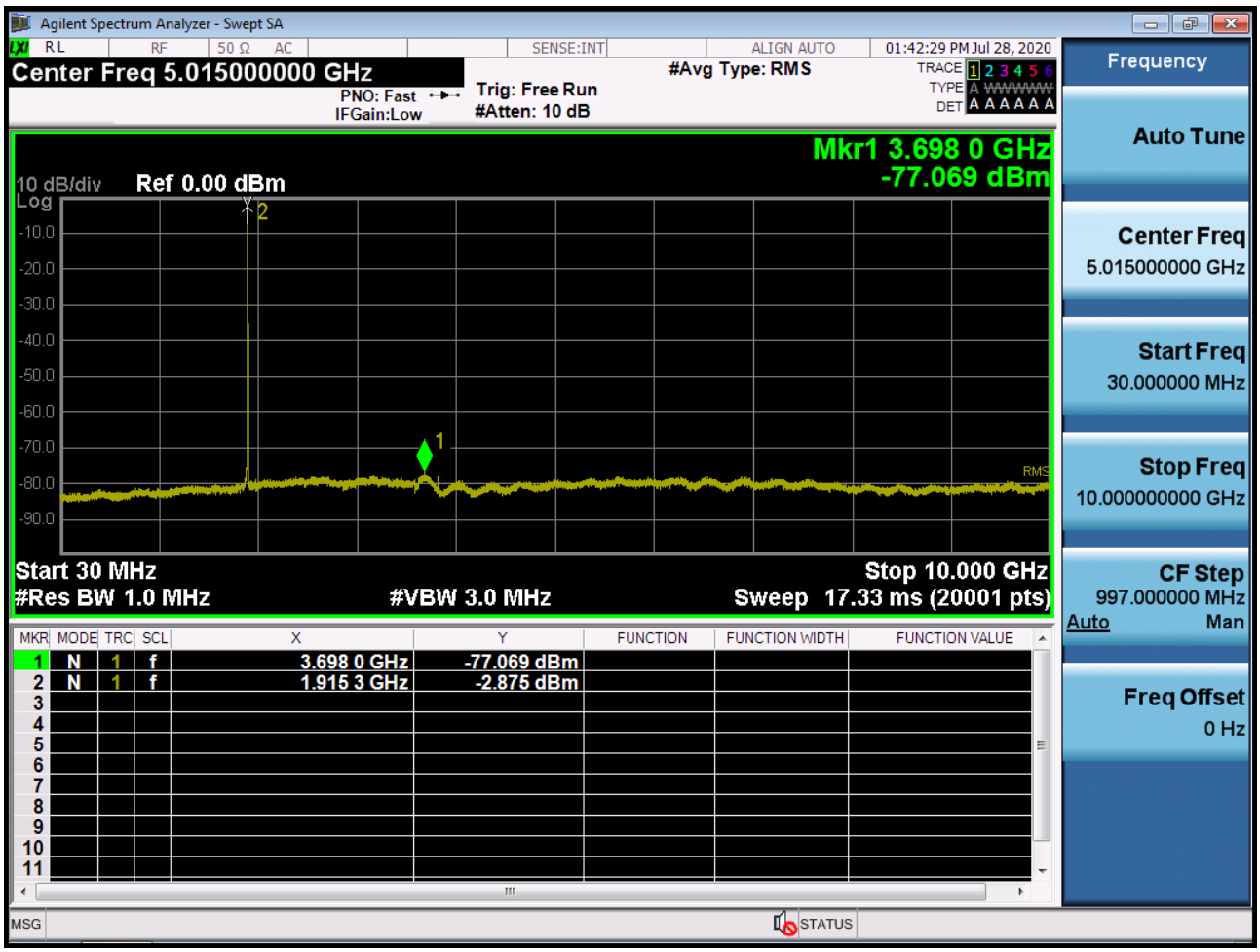
BAND 25/2. Conducted Spurious_2 (26055ch_3MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26365ch_3MHz_QPSK_RB 1_0)



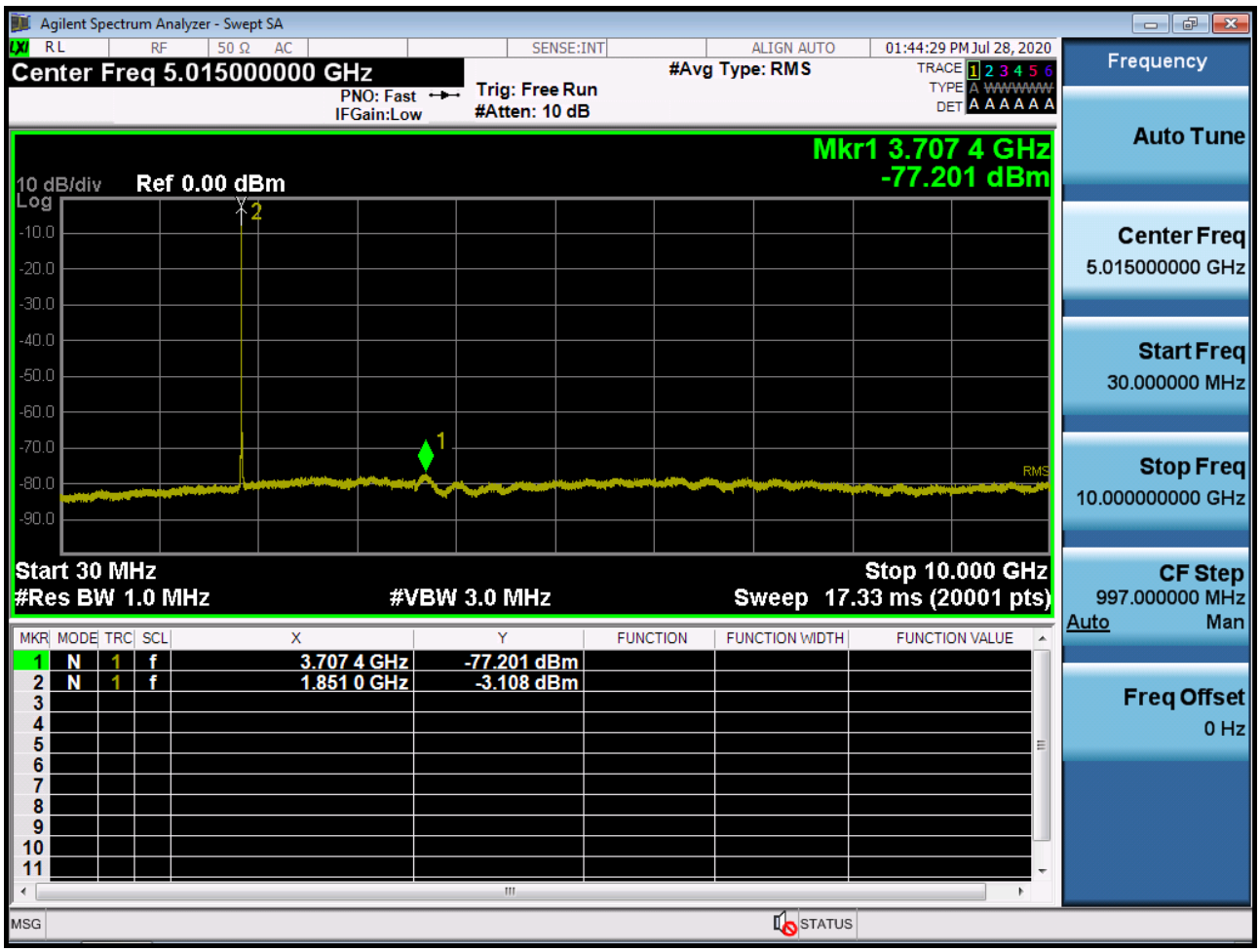
BAND 25/2. Conducted Spurious_2 (26365ch_3MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26675ch_3MHz_QPSK_RB 1_0)



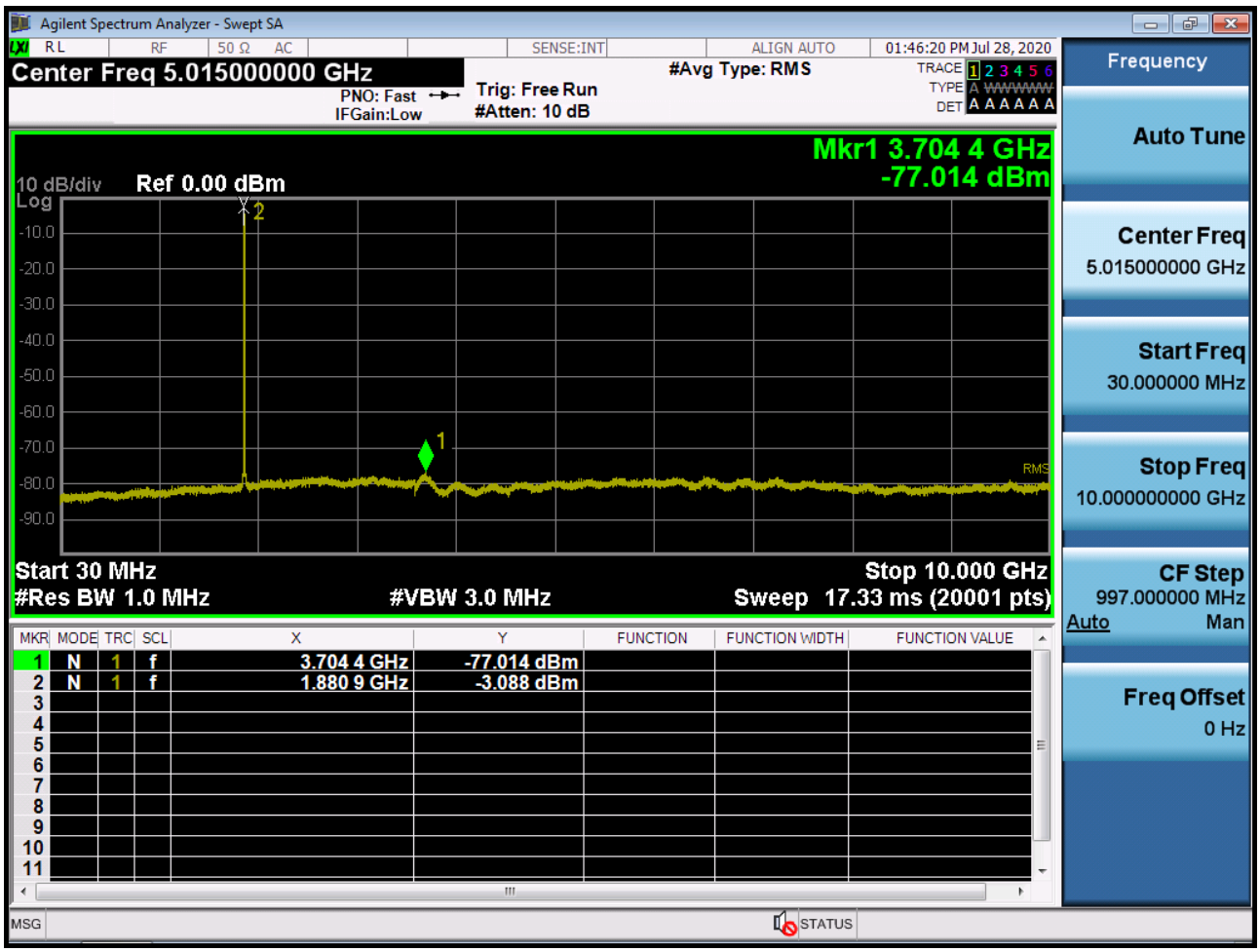
BAND 25/2. Conducted Spurious_2 (26675ch_3MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26065ch_5MHz_QPSK_RB 1_0)



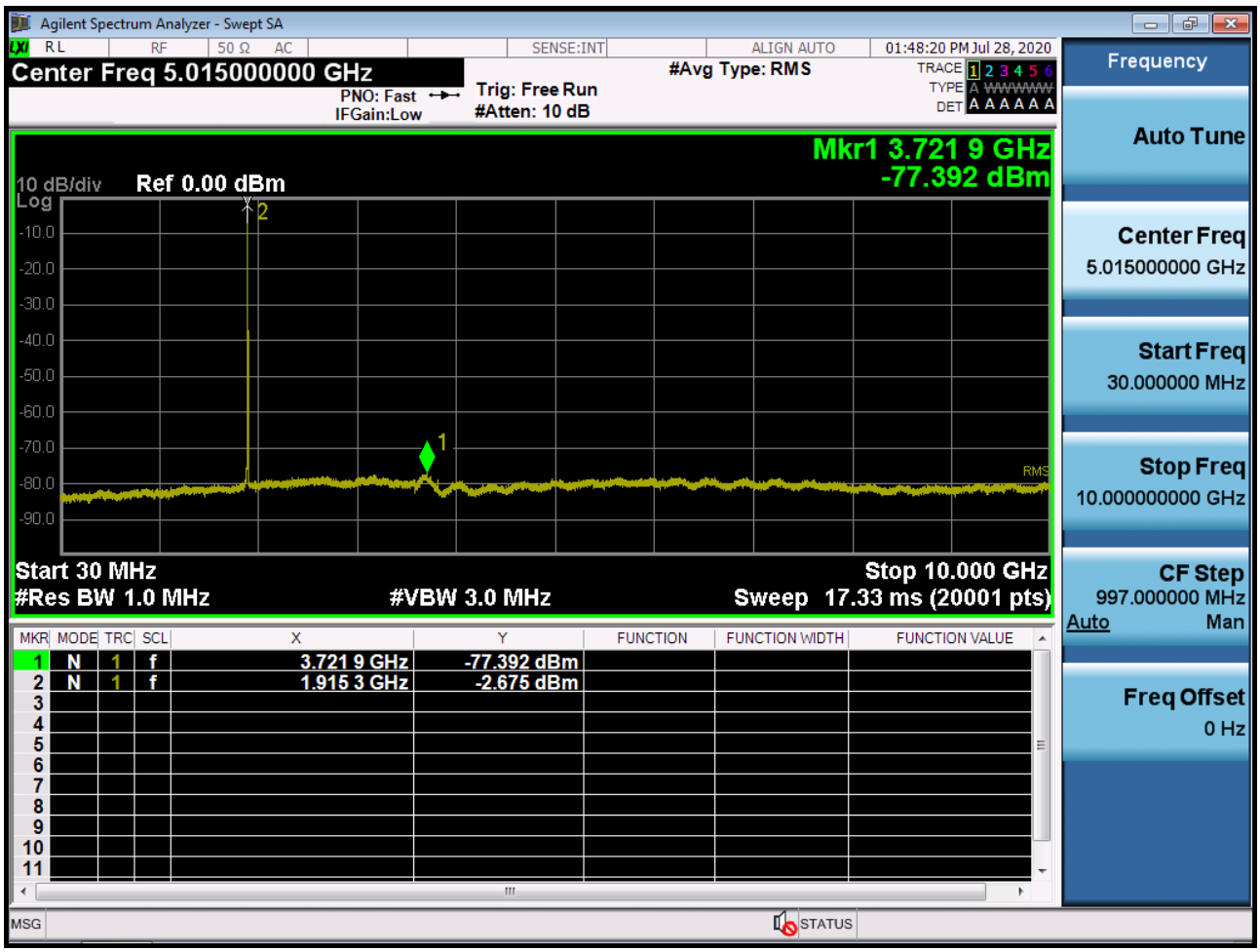
BAND 25/2. Conducted Spurious_2 (26065ch_5MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26365ch_5MHz_QPSK_RB 1_0)



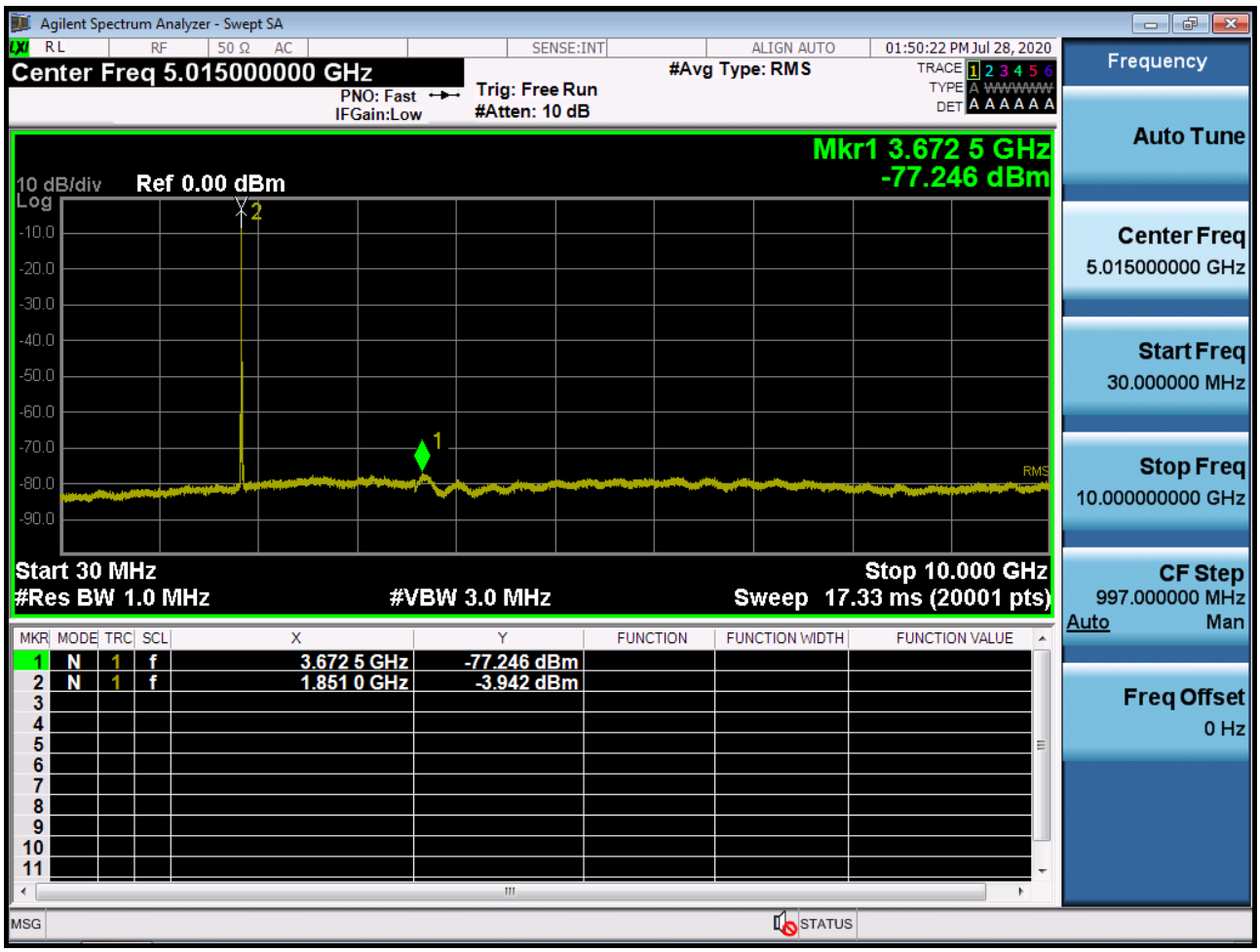
BAND 25/2. Conducted Spurious_2 (26365ch_5MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26665ch_5MHz_QPSK_RB 1_0)



BAND 25/2. Conducted Spurious_2 (26665ch_5MHz_QPSK_RB 1_0)

BAND 25/2. Conducted Spurious_1 (26090ch_10MHz_QPSK_RB 1_0)



BAND 25/2. Conducted Spurious_2 (26090ch_10MHz_QPSK_RB 1_0)