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FCC LTE REPORT

Certification

Applicant Name:
SAMSUNG Electronics Co., Ltd.

Address:
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Suwon-si, Gyeonggi-do, 16677, Rep. of Korea

Date of Issue:
June 26, 2020

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

Report No.: HCT-RF-2006-FC056

FCC ID: **A3LSMA516U**

APPLICANT: **SAMSUNG Electronics Co., Ltd.**

Model(s): SM-A516U
Additional Model(s): SM-A516U1
EUT Type: Mobile Phone
FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s): §90, §22, §2

Mode (MHz)	Tx Frequency (MHz)	Emission Designator	Modulation	Conducted Output Power	
				Max. Power (W)	Max. Power (dBm)
LTE – Band26 (1.4)	814.7 – 823.3	1M10G7D	QPSK	0.224	23.51
		1M10W7D	16QAM	0.187	22.73
		1M10W7D	64QAM	0.152	21.82
LTE – Band26 (3)	815.5 – 822.5	2M71G7D	QPSK	0.224	23.50
		2M72W7D	16QAM	0.194	22.87
		2M71W7D	64QAM	0.150	21.75
LTE – Band26 (5)	816.5 – 821.5	4M53G7D	QPSK	0.226	23.55
		4M53W7D	16QAM	0.195	22.89
		4M52W7D	64QAM	0.151	21.79
LTE – Band26 (10)	819.0	9M03G7D	QPSK	0.235	23.71
		9M01W7D	16QAM	0.202	23.05
		9M02W7D	64QAM	0.153	21.85
LTE – Band26 (15)	821.5	13M5G7D	QPSK	0.244	23.88
		13M5W7D	16QAM	0.204	23.10
		13M5W7D	64QAM	0.158	22.00

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

This report only responds to the tested sample and may not be reproduced, except in full, without written approval of the HCT Co., Ltd.

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 KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (HCT Accreditation No.: KT197)

Version

TEST REPORT NO.	DATE	DESCRIPTION
HCT-RF-2006-FC056	June 26, 2020	- First Approval Report

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

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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:	A3LSMA516U
Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§90, §22, §2
EUT Type:	Mobile Phone
Model(s):	SM-A516U
Additional Model(s):	SM-A516U1
Tx Frequency:	814.7 MHz – 823.3 MHz (LTE – Band 26 (1.4 MHz)) 815.5 MHz – 822.5 MHz (LTE – Band 26 (3 MHz)) 816.5 MHz – 821.5 MHz (LTE – Band 26 (5 MHz)) 819.0 MHz (LTE – Band 26 (10 MHz)) 821.5 MHz (LTE – Band 26 (15 MHz))
Date(s) of Tests:	May 06, 2020 ~ June 25, 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(n2/5/41/66/71).

It also supports IEEE 802.11 a/b/g/n/ac (HT20/40/80), Bluetooth, BT LE, NFC, ANT+.

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
Channel 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	- KDB 971168 D01 v03r01 - Section 5.2.4 - ANSI C63.26-2015 - Section 5.2.1 & 5.2.4.2
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 CONDUCTED OUTPUT POWER

Test Overview

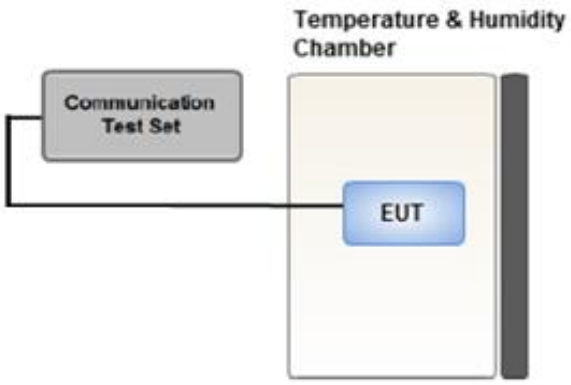
According to ANSI C63.26-2015 Section 5.2.1 when measuring the maximum RF output power from such devices, control over the EUT must be provided either through special test software (provided by manufacturer specifically for compliance testing, but not accessible by an end user) or through use of a base station emulator, communications test set, call box, or similar instrumentation that is capable of establishing a communications link with the EUT to enable control over variable parameters (e.g., output power, OBW, etc.).

In some cases, these instruments also include basic digital spectrum analyzer and/or power meter capabilities that can be utilized to measure the RF output power if the specified detectors and requirements can be realized and the measurement functions have been calibrated.

Test Procedure

1. The RF port of the EUT was connected to the Communication Tester via an RF cable.
2. Conducted average power was measured using a calibrated Radio Communication Tester.

Test setup



3.3 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.

3.4 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 10th 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;

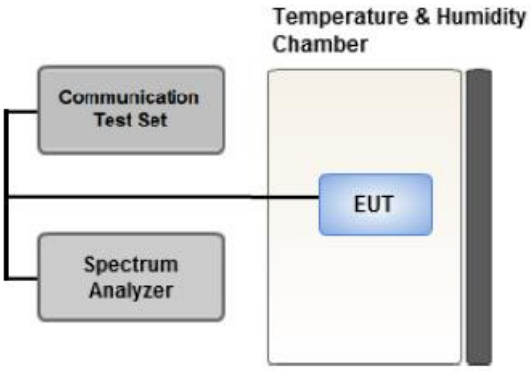
$$Result_{(dBm)} = Pg_{(dBm)} - \text{cable loss}_{(dB)} + \text{antenna gain}_{(dBi)}$$

   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.

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

3.5 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.

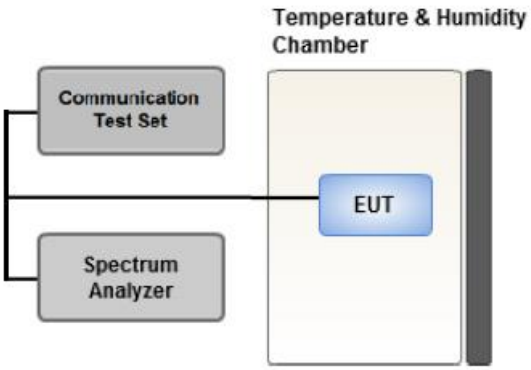
The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.

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.

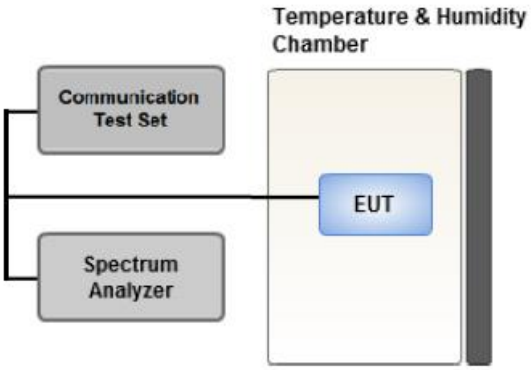
All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies.

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 = trace average
5. Sweep time = auto
6. Number of points in sweep ≥ 2 x Span / RBW

3.7 CHANNEL 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.

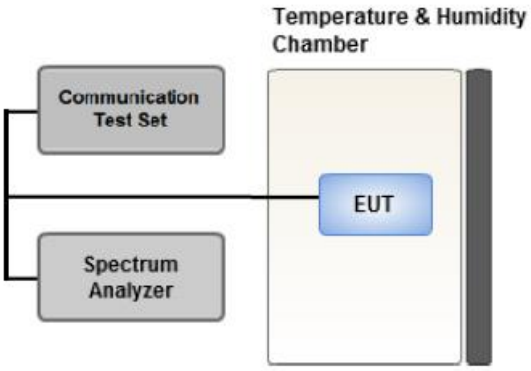
Test Settings

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 :
   .- EA licensee's frequency block by up to and including 37.5 kHz : 300Hz
   .- EA licensee's frequency block greater than 37.5 kHz : 100kHz
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

For 90.691(a), RBW=300 Hz for offset less than 37.5 kHz from channel edge and RBW=100 kHz for offsets greater than 37.5 kHz is allowed.

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.
- All modes of operation were tested and the worst case results are reported.
- Please refer to the table below.
-SM-A516U & additional models were tested and the worst case results are reported.

(Worst case : SM-A516U)

[Worst case]

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

3.10 WORST CASE(CONDUCTED TEST)

-Worst case : Of all modulation, We have tested modulation of the high Conducted Output Power.

-SM-A516U & additional models were tested and the worst case results are reported.

(Worst case : SM-A516U)

[Worst case]

Test Description	Modulation	Bandwidth (MHz)	Frequency	RB size	RB offset
Occupied Bandwidth	QPSK, 16QAM, 64QAM	1.4, 3, 5	High	Full RB	0
	QPSK, 16QAM, 64QAM	10, 15	Mid	Full RB	0
Channel 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	Mid	1	0
				1	49
		15	Mid	1	0
				1	74
		1.4, 3, 5	Low, High	Full RB	0
		10, 15	Mid	Full RB	0
Band Edge (Staddle Channel)	QPSK	1.4	Mid	1	5
		3	Mid	1	14
		5	Mid	1	24
		10	Mid	1	49
		15	Mid	1	74
		1.4, 3, 5 10,15	Mid	Full RB	0
Spurious and Harmonic Emissions at Antenna Terminal	QPSK	1.4, 3, 5	Low, High	1	0
		10, 15	Mid	1	0

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
Agilent	E3632A/DC Power Supply	MY40004326	07/01/2019	Annual	07/01/2020
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	93000717	08/14/2019	Annual	08/14/2020
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	9160-3368	08/09/2018	Biennial	08/09/2020
Schwarzbeck	VULB9160/ Hybrid Antenna	760	03/22/2019	Biennial	03/22/2021
Anritsu Corp.	MT8821C/Wideband Radio Communication Tester	6201502997	08/09/2019	Annual	08/09/2020
Anritsu Corp.	MT8820C/Wideband Radio Communication Tester	6201026545	01/22/2020	Annual	01/22/2021
REOHDE & SCHWARZ	SMB100A/ SIGNAL GENERATOR (100kHz~40GHz)	177633	07/15/2019	Annual	07/15/2020
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).
3. Model : 8493C(S/N: 17280)
   - Use date of Equipment : May 07, 2020 ~ June 03, 2020
4. Model : N9030B(S/N: MY55480167)
   - Use date of Equipment : June 07, 2020 ~ June 18, 2020

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
Channel Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §90.691	< 50 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions within 37.5 kHz of Block Edge	PASS
Band Edge / Spurious and Harmonic Emissions at Antenna Terminal.	§2.1051, §22.917(a)	< 43 + 10log10 (P[Watts]) at Band Edge and for all out-of-band emissions	PASS
Conducted Output Power	§2.1046 §90.635	< 100 Watts	PASS
Frequency stability / variation of ambient temperature	§2.1055, §90.213 §22.355	< 2.5 ppm	PASS

Note:

1. 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
Effective Radiated Power	§22.913(a)(5)	< 7 Watts max. ERP	PASS
Radiated Spurious and Harmonic Emissions	§2.1053, §90.691 §22.917(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

16QAM Modulation

Emission Designator = 4M48W7D

LTE BW = 4.48 MHz

W = Amplitude/Angle Modulated

7 = Quantized/Digital Info

D = Data transmission; telemetry; telecommand

64QAM 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 CONDUCTED OUTPUT POWER

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)				Limit (W)
				814.7MHz		823.3MHz		
				dBm	W	dBm	W	
1.4	QPSK	1	0	23.19	0.208	23.48	0.223	100
		1	3	23.17	0.207	23.44	0.221	100
		1	5	23.16	0.207	23.42	0.220	100
		3	0	23.11	0.205	23.40	0.219	100
		3	1	23.29	0.213	23.51	0.224	100
		3	3	23.22	0.210	23.49	0.223	100
		6	0	22.20	0.166	22.50	0.178	100
	16QAM	1	0	22.44	0.175	22.73	0.187	100
		1	3	22.30	0.170	22.62	0.183	100
		1	5	22.41	0.174	22.72	0.187	100
		3	0	22.22	0.167	22.54	0.179	100
		3	1	22.29	0.169	22.59	0.182	100
		3	3	22.32	0.171	22.64	0.184	100
		6	0	21.28	0.134	21.59	0.144	100
	64QAM	1	0	21.38	0.137	21.70	0.148	100
		1	3	21.37	0.137	21.69	0.148	100
		1	5	21.51	0.142	21.82	0.152	100
		3	0	21.31	0.135	21.64	0.146	100
		3	1	21.45	0.140	21.78	0.151	100
		3	3	21.31	0.135	21.63	0.146	100
		6	0	20.33	0.108	20.60	0.115	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)				Limit (W)
				815.5MHz		822.5MHz		
				dBm	W	dBm	W	
3	QPSK	1	0	23.08	0.203	23.48	0.223	100
		1	7	23.07	0.203	23.47	0.222	100
		1	14	23.18	0.208	23.50	0.224	100
		8	0	22.22	0.167	22.52	0.179	100
		8	3	22.21	0.166	22.51	0.178	100
		8	7	22.22	0.167	22.52	0.179	100
		15	0	22.28	0.169	22.58	0.181	100
	16QAM	1	0	22.41	0.174	22.84	0.192	100
		1	7	22.47	0.177	22.87	0.194	100
		1	14	22.39	0.173	22.80	0.191	100
		8	0	21.29	0.135	21.70	0.148	100
		8	3	21.25	0.133	21.68	0.147	100
		8	7	21.27	0.134	21.69	0.148	100
		15	0	21.28	0.134	21.69	0.148	100
	64QAM	1	0	21.41	0.138	21.75	0.150	100
		1	7	21.15	0.130	21.49	0.141	100
		1	14	21.32	0.136	21.68	0.147	100
		8	0	20.22	0.105	20.58	0.114	100
		8	3	20.25	0.106	20.59	0.115	100
		8	7	20.24	0.106	20.55	0.114	100
		15	0	20.24	0.106	20.55	0.114	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm)				Limit (W)
				816.5MHz		821.5MHz		
				dBm	W	dBm	W	
5	QPSK	1	0	23.17	0.207	23.55	0.226	100
		1	12	23.12	0.205	23.52	0.225	100
		1	24	23.15	0.207	23.54	0.226	100
		12	0	22.30	0.170	22.70	0.186	100
		12	6	22.31	0.170	22.71	0.187	100
		12	11	22.27	0.169	22.66	0.185	100
		25	0	22.24	0.167	22.65	0.184	100
	16QAM	1	0	22.35	0.172	22.75	0.188	100
		1	12	22.43	0.175	22.84	0.192	100
		1	24	22.48	0.177	22.89	0.195	100
		12	0	21.26	0.134	21.60	0.145	100
		12	6	21.26	0.134	21.60	0.145	100
		12	11	21.25	0.133	21.59	0.144	100
		25	0	21.22	0.132	21.58	0.144	100
	64QAM	1	0	21.38	0.137	21.77	0.150	100
		1	12	21.23	0.133	21.60	0.145	100
		1	24	21.37	0.137	21.79	0.151	100
		12	0	20.21	0.105	20.64	0.116	100
		12	6	20.22	0.105	20.63	0.116	100
		12	11	20.20	0.105	20.62	0.115	100
		25	0	20.21	0.105	20.64	0.116	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm) 819MHz		Limit (W)
				dBm	W	
10	QPSK	1	0	23.68	0.233	100
		1	24	23.62	0.230	100
		1	49	23.71	0.235	100
		25	0	22.73	0.187	100
		25	12	22.70	0.186	100
		25	24	22.74	0.188	100
		50	0	22.84	0.192	100
	16QAM	1	0	23.05	0.202	100
		1	24	22.74	0.188	100
		1	49	22.81	0.191	100
		25	0	21.71	0.148	100
		25	12	21.71	0.148	100
		25	24	21.73	0.149	100
		50	0	21.76	0.150	100
	64QAM	1	0	21.85	0.153	100
		1	24	21.74	0.149	100
		1	49	21.80	0.151	100
		25	0	20.77	0.119	100
		25	12	20.72	0.118	100
		25	24	20.69	0.117	100
		50	0	20.78	0.120	100

Band Width	Modulation	RB Size	RB Offset	Max. output power(dBm) 821.5MHz		Limit (W)
				dBm	W	
15	QPSK	1	0	23.88	0.244	100
		1	36	23.74	0.237	100
		1	74	23.85	0.243	100
		36	0	22.94	0.197	100
		36	18	22.97	0.198	100
		36	39	22.96	0.198	100
		75	0	22.94	0.197	100
	16QAM	1	0	23.10	0.204	100
		1	36	23.00	0.200	100
		1	74	23.03	0.201	100
		36	0	21.86	0.153	100
		36	18	21.84	0.153	100
		36	39	21.86	0.153	100
		75	0	21.88	0.154	100
	64QAM	1	0	22.00	0.158	100
		1	36	21.80	0.151	100
		1	74	21.89	0.155	100
		36	0	20.91	0.123	100
		36	18	20.86	0.122	100
		36	39	20.85	0.122	100
		75	0	20.81	0.121	100

8.2 EFFECTIVE RADIATED POWER

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
814.7	LTE B26/ 1.4 MHz	QPSK	-33.63	29.92	-10.29	1.27	V	< 100	0.069	18.36
		16QAM	-34.38	29.17	-10.29	1.27	V		0.058	17.61
		64QAM	-35.52	28.03	-10.29	1.27	V		0.044	16.47
823.3		QPSK	-32.68	30.93	-10.25	1.28	V		0.087	19.40
		16QAM	-33.45	30.16	-10.25	1.28	V		0.073	18.63
		64QAM	-34.54	29.07	-10.25	1.28	V		0.057	17.54

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
815.5	LTE B26/ 3 MHz	QPSK	-33.67	29.88	-10.29	1.27	V	< 100	0.068	18.32
		16QAM	-34.37	29.18	-10.29	1.27	V		0.058	17.62
		64QAM	-35.51	28.04	-10.29	1.27	V		0.044	16.48
822.5		QPSK	-32.80	30.77	-10.26	1.28	V		0.084	19.23
		16QAM	-33.52	30.05	-10.26	1.28	V		0.071	18.51
		64QAM	-34.64	28.93	-10.26	1.28	V		0.055	17.39

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
816.5	LTE B26/ 5 MHz	QPSK	-33.60	29.97	-10.28	1.27	V	< 100	0.069	18.42
		16QAM	-34.36	29.21	-10.28	1.27	V		0.058	17.66
		64QAM	-35.52	28.05	-10.28	1.27	V		0.045	16.50
821.5		QPSK	-32.88	30.65	-10.26	1.28	V		0.081	19.11
		16QAM	-33.70	29.83	-10.26	1.28	V		0.067	18.29
		64QAM	-34.81	28.72	-10.26	1.28	V		0.052	17.18

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
819.0	LTE B26/ 10 MHz	QPSK	-33.73	29.80	-10.27	1.27	V	< 100	0.067	18.26
		16QAM	-34.36	29.17	-10.27	1.27	V		0.058	17.63
		64QAM	-35.45	28.08	-10.27	1.27	V		0.045	16.54

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
821.5	LTE B26/ 15 MHz	QPSK	-33.15	30.38	-10.26	1.28	V	< 7.00	0.077	18.84
		16QAM	-33.97	29.56	-10.26	1.28	V		0.063	18.02
		64QAM	-34.99	28.54	-10.26	1.28	V		0.050	17.00

Note

1. Limit: None (for reporting purposes only.

8.3 RADIATED SPURIOUS EMISSIONS

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 1.4 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26697 (814.7)	1,629.40	-53.58	9.40	-64.17	1.82	H	-56.59	-13.00
	2,444.10	-55.24	10.47	-60.04	2.27	H	-51.85	-13.00
	3,258.80	-57.00	12.00	-58.51	2.66	V	-49.17	-13.00
26783 (823.3)	1,646.60	-52.84	9.48	-63.54	1.83	V	-55.89	-13.00
	2,469.90	-55.97	10.60	-61.01	2.28	V	-52.69	-13.00
	3,293.20	-57.65	12.20	-59.36	2.69	V	-49.85	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 3 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26705 (815.5)	1,631.00	-53.31	9.40	-63.90	1.82	H	-56.32	-13.00
	2,446.50	-55.23	10.47	-60.03	2.27	V	-51.84	-13.00
	3,262.00	-57.70	12.00	-59.21	2.66	H	-49.87	-13.00
26775 (822.5)	1,645.00	-53.36	9.48	-64.06	1.83	H	-56.41	-13.00
	2,467.50	-55.93	10.60	-60.97	2.28	V	-52.65	-13.00
	3,290.00	-58.16	12.20	-59.87	2.69	V	-50.36	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 5 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26715 (816.5)	1,633.00	-53.82	9.40	-64.41	1.82	V	-56.83	-13.00
	2,449.50	-55.58	10.53	-60.54	2.27	H	-52.28	-13.00
	3,266.00	-57.02	12.05	-58.49	2.67	V	-49.10	-13.00
26765 (821.5)	1,643.00	-53.15	9.45	-63.77	1.83	V	-56.15	-13.00
	2,464.50	-56.14	10.58	-61.02	2.28	V	-52.72	-13.00
	3,286.00	-58.15	12.15	-59.95	2.69	H	-50.49	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26740 (819.0)	1638.00	-53.14	9.45	-63.76	1.83	V	-56.14	-13.00
	2457.00	-56.56	10.55	-61.27	2.27	H	-52.99	-13.00
	3276.00	-58.36	12.10	-60.02	2.68	V	-50.60	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 15 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26765 (821.5)	1643.00	-53.87	9.45	-64.49	1.83	V	-56.87	-13.00
	2464.50	-56.08	10.58	-60.96	2.28	H	-52.66	-13.00
	3286.00	-58.20	12.15	-60.00	2.69	V	-50.54	-13.00

8.4 OCCUPIED BANDWIDTH

Band	Band Width	Frequency (MHz)	Modulation	Resource Block Size	Resource Block Offset	Data (MHz)
Band 26	1.4 MHz	823.3	QPSK	6	0	1.0962
			16QAM			1.0981
			64QAM			1.0985
	3 MHz	822.5	QPSK	15		2.7099
			16QAM			2.7154
			64QAM			2.7131
	5 MHz	821.5	QPSK	25		4.5249
			16QAM			4.5330
			64QAM			4.5241
	10 MHz	819.0	QPSK	50		9.0341
			16QAM			9.0060
			64QAM			9.0171
	15 MHz	821.5	QPSK	75		13.536
			16QAM			13.481
			64QAM			13.469

Note:

1. Plots of the EUT's Occupied Bandwidth are shown Page 47 ~ 61.

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)
26	1.4	814.7	3.7010	27.976	-67.089	-39.113	-13.00
		823.3	3.7015	27.976	-67.297	-39.321	
	3	815.5	3.6855	27.976	-67.357	-39.381	
		822.5	3.6980	27.976	-67.034	-39.058	
	5	816.5	3.6945	27.976	-67.164	-39.188	
		821.5	3.6790	27.976	-67.069	-39.093	
	10	819.0	3.7010	27.976	-67.034	-39.058	
	15	821.5	3.7214	27.976	-66.946	-38.970	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 82 ~ 89.
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 CHANNEL EDGE

- Plots of the EUT's Band Edge are shown Page 62 ~ 81.

8.7 FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

▣ MODE: LTE 26

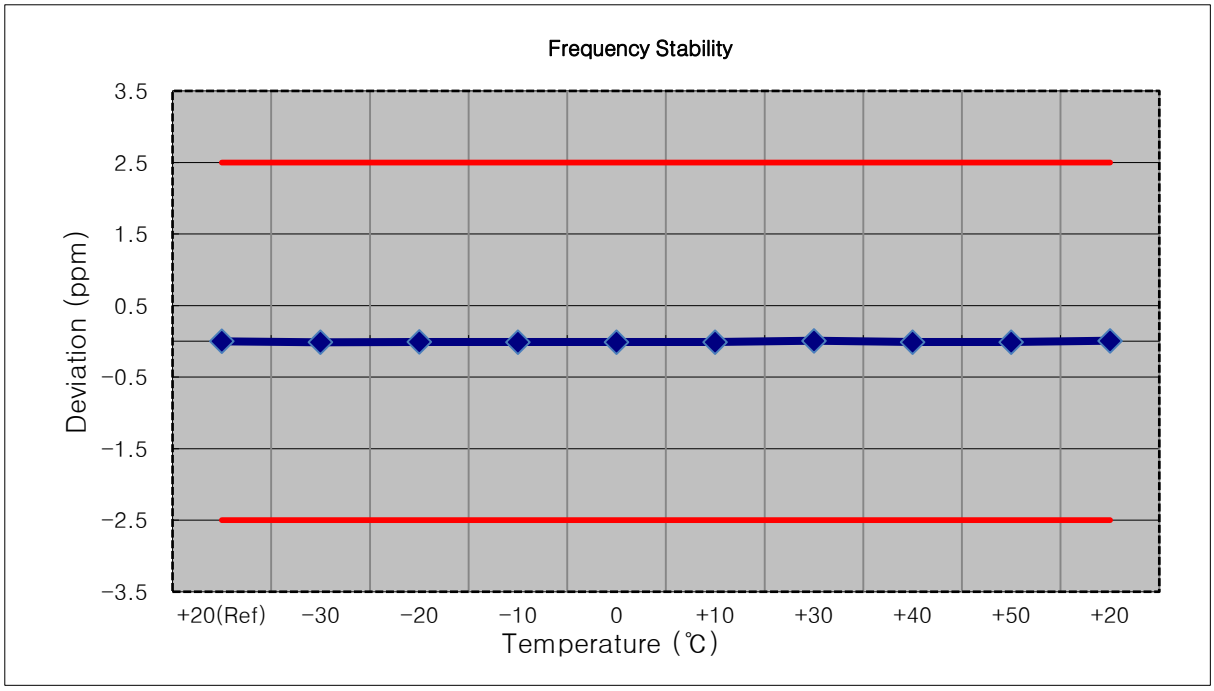
▣ OPERATING FREQUENCY: 823,300,000 Hz

▣ CHANNEL: 26783(1.4 MHz)

▣ REFERENCE VOLTAGE: 3.88 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.860	+20(Ref)	823 299 993	0.0	0.000 000	0.000
100%		-30	823 299 982	-10.5	-0.000 001	-0.013
100%		-20	823 299 985	-7.3	-0.000 001	-0.009
100%		-10	823 299 984	-8.4	-0.000 001	-0.010
100%		0	823 299 985	-7.9	-0.000 001	-0.010
100%		+10	823 299 985	-7.7	-0.000 001	-0.009
100%		+30	823 300 000	7.2	0.000 001	0.009
100%		+40	823 299 985	-7.4	-0.000 001	-0.009
100%		+50	823 299 985	-7.6	-0.000 001	-0.009
Batt. Endpoint	3.400	+20	823 299 999	6.6	0.000 001	0.008



▣ MODE: LTE 26

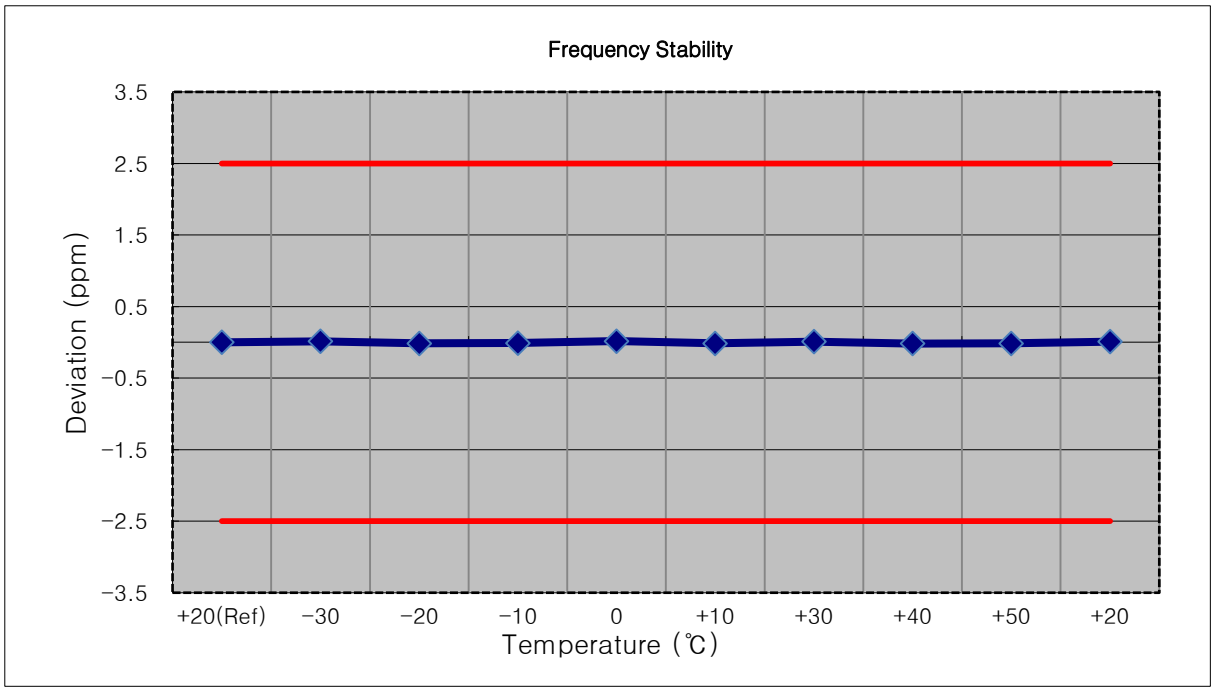
▣ OPERATING FREQUENCY: 822,500,000 Hz

▣ CHANNEL: 26775(3 MHz)

▣ REFERENCE VOLTAGE: 3.88 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.860	+20(Ref)	822 499 994	0.0	0.000 000	0.000
100%		-30	822 500 007	12.7	0.000 002	0.015
100%		-20	822 499 981	-12.5	-0.000 002	-0.015
100%		-10	822 499 986	-7.6	-0.000 001	-0.009
100%		0	822 500 008	14.4	0.000 002	0.018
100%		+10	822 499 982	-11.9	-0.000 001	-0.014
100%		+30	822 500 003	8.8	0.000 001	0.011
100%		+40	822 499 979	-14.6	-0.000 002	-0.018
100%		+50	822 499 981	-12.8	-0.000 002	-0.016
Batt. Endpoint	3.400	+20	822 500 003	8.7	0.000 001	0.011



▣ MODE: LTE 26

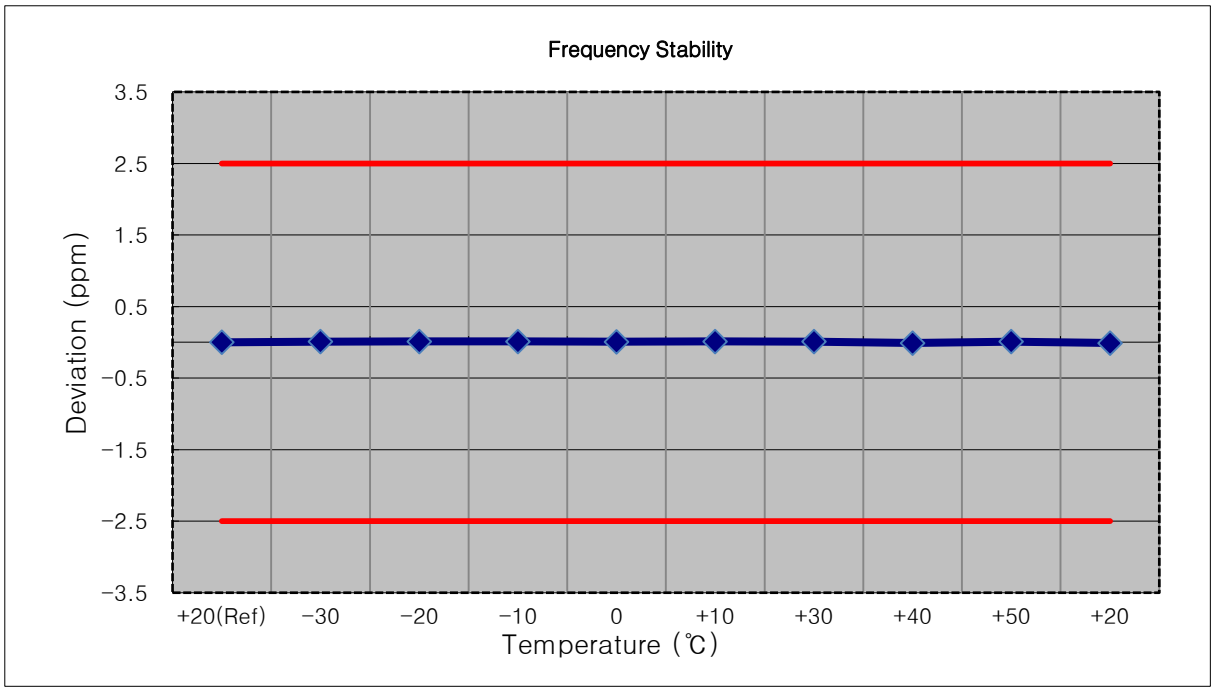
▣ OPERATING FREQUENCY: 821.500,000 Hz

▣ CHANNEL: 26765(5MHz)

▣ REFERENCE VOLTAGE: 3.88 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.860	+20(Ref)	821 500 007	0.0	0.000 000	0.000
100%		-30	821 500 015	8.7	0.000 001	0.011
100%		-20	821 500 017	10.0	0.000 001	0.012
100%		-10	821 500 016	9.6	0.000 001	0.012
100%		0	821 500 014	7.0	0.000 001	0.009
100%		+10	821 500 016	9.8	0.000 001	0.012
100%		+30	821 500 015	8.8	0.000 001	0.011
100%		+40	821 499 998	-8.5	-0.000 001	-0.010
100%		+50	821 500 016	9.1	0.000 001	0.011
Batt. Endpoint	3.400	+20	821 499 998	-8.2	-0.000 001	-0.010



▣ MODE: LTE 26

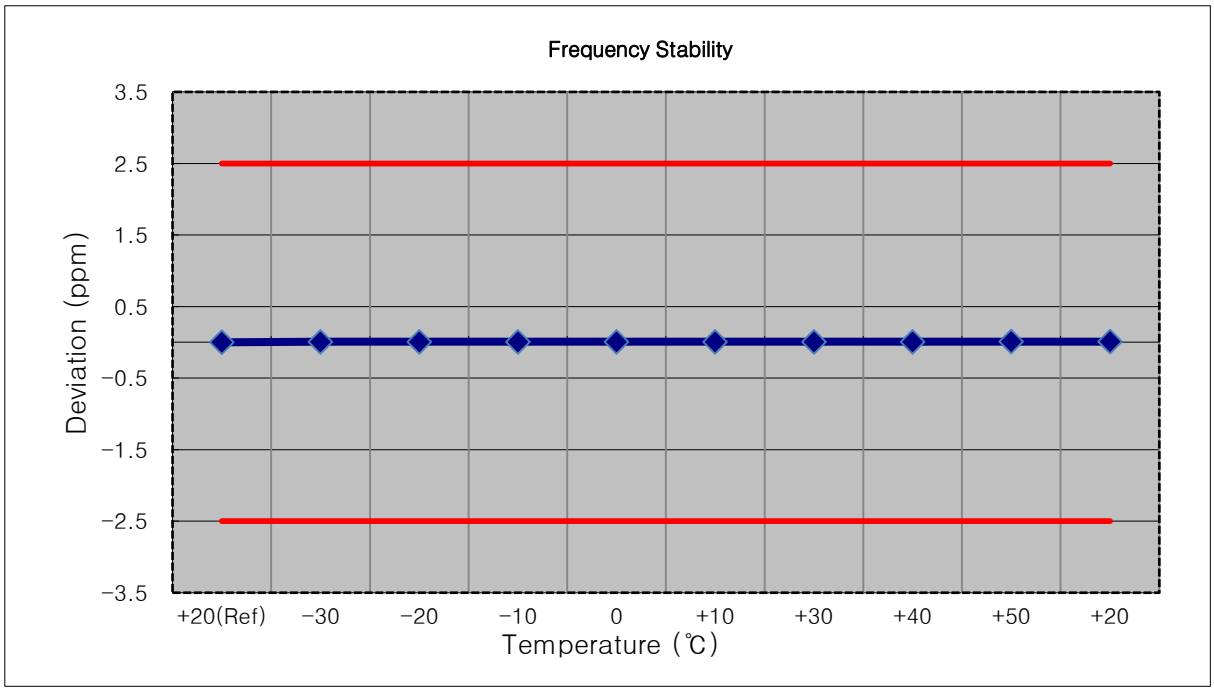
▣ OPERATING FREQUENCY: 819,000,000 Hz

▣ CHANNEL: 26740(10 MHz)

▣ REFERENCE VOLTAGE: 3.88 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.860	+20(Ref)	819 000 006	0.0	0.000 000	0.000
100%		-30	819 000 013	7.2	0.000 001	0.009
100%		-20	819 000 013	6.7	0.000 001	0.008
100%		-10	819 000 013	7.0	0.000 001	0.009
100%		0	819 000 013	6.8	0.000 001	0.008
100%		+10	819 000 013	6.5	0.000 001	0.008
100%		+30	819 000 013	7.2	0.000 001	0.009
100%		+40	819 000 013	7.0	0.000 001	0.009
100%		+50	819 000 014	8.2	0.000 001	0.010
Batt. Endpoint	3.400	+20	819 000 014	7.6	0.000 001	0.009



▣ MODE: LTE 26

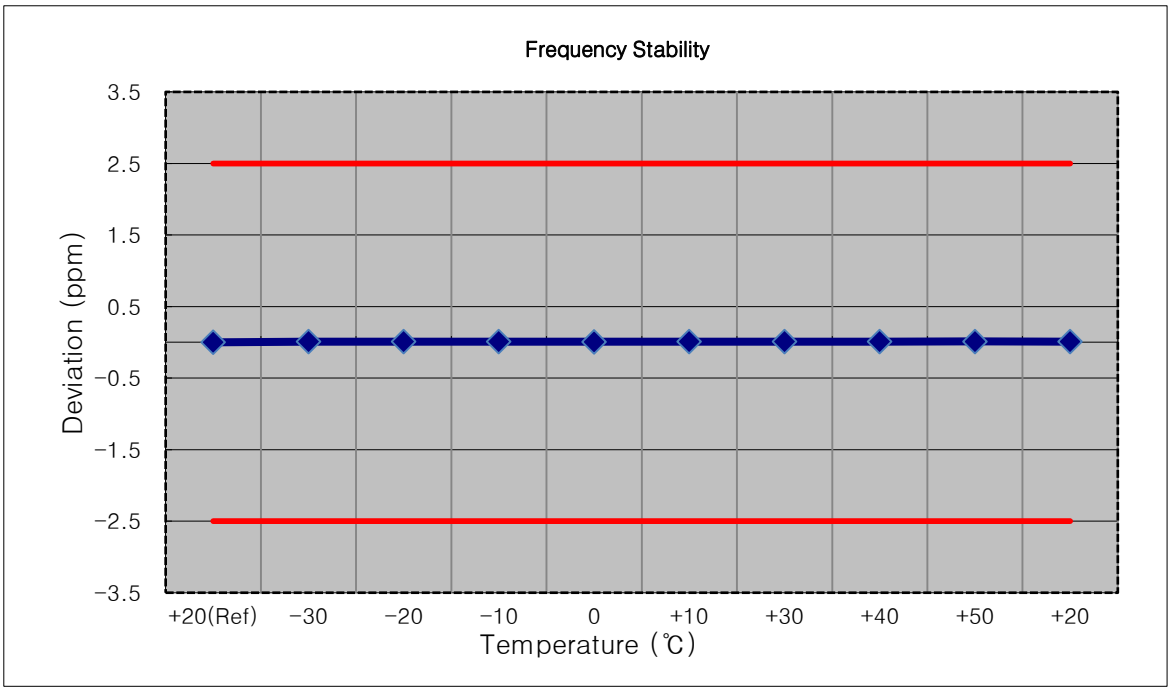
▣ OPERATING FREQUENCY: 821,500,000 Hz

▣ CHANNEL: 26765(15 MHz)

▣ REFERENCE VOLTAGE: 3.88 VDC

▣ DEVIATION LIMIT: ± 0.000 25 % or 2.5 ppm

Voltage (%)	Power (VDC)	Temp. (℃)	Frequency (Hz)	Frequency Error (Hz)	Deviation (%)	ppm
100%	3.860	+20(Ref)	821 500 008	0.0	0.000 000	0.000
100%		-30	821 500 015	7.6	0.000 001	0.009
100%		-20	821 500 015	7.7	0.000 001	0.009
100%		-10	821 500 016	8.1	0.000 001	0.010
100%		0	821 500 014	6.8	0.000 001	0.008
100%		+10	821 500 016	8.1	0.000 001	0.010
100%		+30	821 500 015	7.4	0.000 001	0.009
100%		+40	821 500 016	8.6	0.000 001	0.010
100%		+50	821 500 017	9.3	0.000 001	0.011
Batt. Endpoint	3.400	+20	821 500 016	8.9	0.000 001	0.011



8.8 STADDLE CHANNEL

8.8.1 EFFECTIVE RADIATED POWER

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
824.0	LTE B26/ 1.4 MHz	QPSK	-32.65	30.96	-10.25	1.28	V	< 7.00	0.088	19.43
		16QAM	-33.42	30.19	-10.25	1.28	V		0.073	18.66
		64QAM	-34.51	29.10	-10.25	1.28	V		0.057	17.57

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
824.0	LTE B26/ 3 MHz	QPSK	-32.66	30.95	-10.25	1.28	V	< 7.00	0.088	19.42
		16QAM	-33.38	30.23	-10.25	1.28	V		0.074	18.70
		64QAM	-34.50	29.11	-10.25	1.28	V		0.057	17.58

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
824.0	LTE B26/ 5 MHz	QPSK	-32.62	30.99	-10.25	1.28	V	< 7.00	0.088	19.46
		16QAM	-33.37	30.24	-10.25	1.28	V		0.074	18.71
		64QAM	-34.50	29.11	-10.25	1.28	V		0.057	17.58

Freq (MHz)	Bandwidth	Modulation	Measured Level (dBm)	Substitute Level (dBm)	Ant. Gain(dBd)	C.L	Pol	Limit	ERP	
								W	W	dBm
824.0	LTE B26/ 10 MHz	QPSK	-32.79	30.82	-10.25	1.28	V	< 7.00	0.085	19.29
		16QAM	-33.57	30.04	-10.25	1.28	V		0.071	18.51
		64QAM	-34.66	28.95	-10.25	1.28	V		0.055	17.42

8.8.2 RADIATED SPURIOUS EMISSIONS

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 1.4 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26790 (824.0)	1,648.00	-53.12	9.50	-63.88	1.84	H	-56.22	-13.00
	2,472.00	-55.45	10.60	-60.49	2.28	V	-52.17	-13.00
	3,296.00	-57.83	12.25	-59.65	2.69	H	-50.09	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 3 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26790 (824.0)	1,648.00	-52.93	9.50	-63.69	1.84	H	-56.03	-13.00
	2,472.00	-52.84	10.60	-57.88	2.28	V	-49.56	-13.00
	3,296.00	-58.17	12.25	-59.99	2.69	V	-50.43	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 5 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26790 (824.0)	1,648.00	-54.02	9.50	-64.78	1.84	V	-57.12	-13.00
	2,472.00	-55.78	10.60	-60.82	2.28	H	-52.50	-13.00
	3,296.00	-58.25	12.25	-60.07	2.69	V	-50.51	-13.00

▣ MODE: LTE B26

▣ MODULATION SIGNAL: 10 MHz QPSK

▣ DISTANCE: 3 meters

Ch	Freq (MHz)	Measured Level (dBm)	Ant. Gain (dBi)	Substitute Level (dBm)	C.L	Pol	Result (dBm)	Limit
26790 (824.0)	1,648.00	-53.70	9.50	-64.46	1.84	H	-56.80	-13.00
	2,472.00	-55.67	10.60	-60.71	2.28	H	-52.39	-13.00
	3,296.00	-57.78	12.25	-59.60	2.69	V	-50.04	-13.00

8.8.3 CONDUCTED SPURIOUS EMISSIONS

Band	Band Width (MHz)	Frequency (MHz)	Frequency of Maximum Harmonic (GHz)	Factor (dB)	Measurement Maximum Data (dBm)	Result (dBm)	Limit (dBm)
26	1.4	824.0	3.7015	27.976	-67.066	-39.090	-13.00
	3		3.7005	27.976	-67.196	-39.220	
	5		3.7054	27.976	-67.189	-39.213	
	10		3.6970	27.976	-67.275	-39.299	

Note:

1. Plots of the EUT's Conducted Spurious Emissions are shown Page 91 ~ 94.
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

8.8.4 CHANNEL EDGE(Part90)

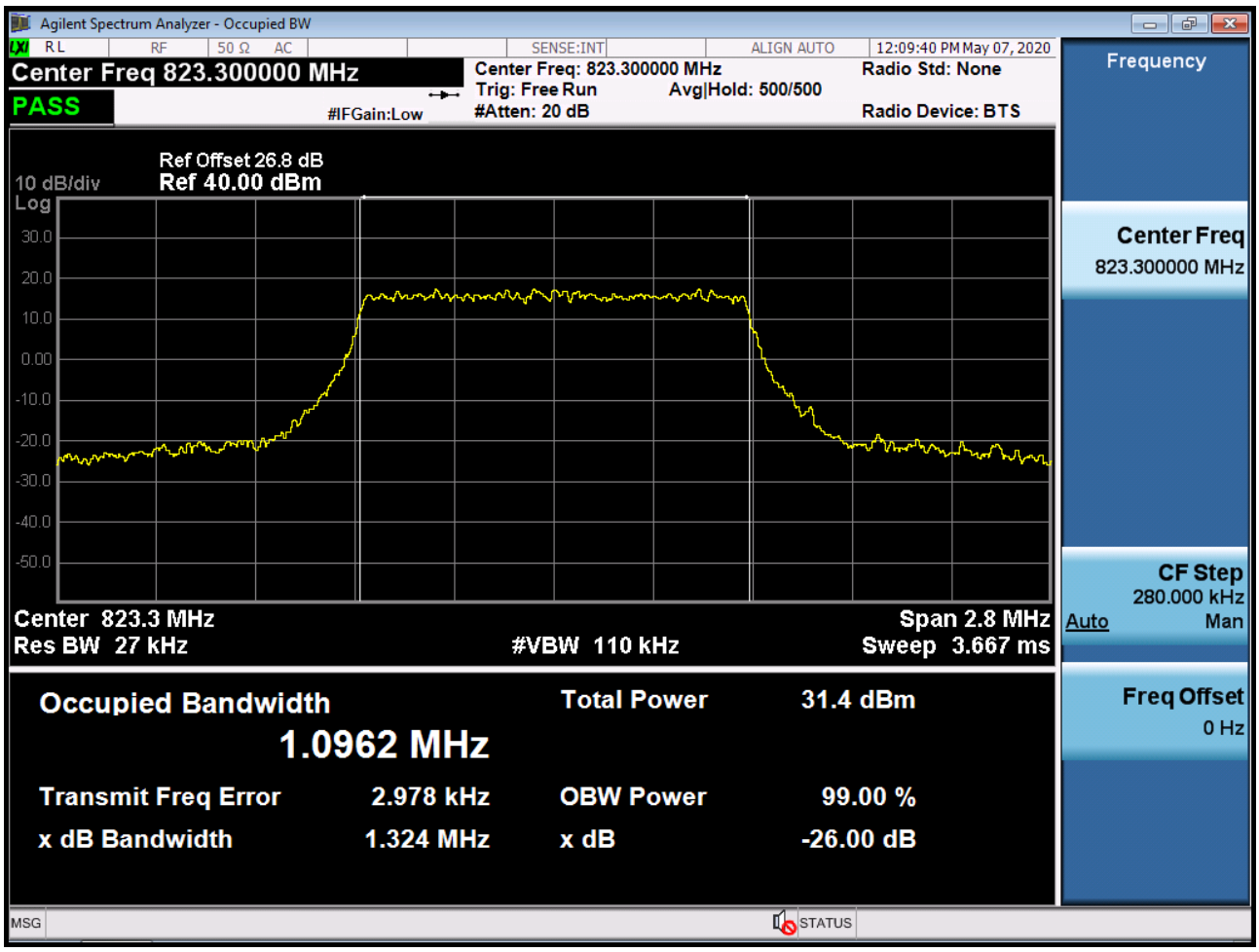
- Test Channel : 26790(824.0MHz)
- Plots of the EUT's Band Edge are shown Page 95 ~ 106.

8.8.5 BAND EDGE(Part22)

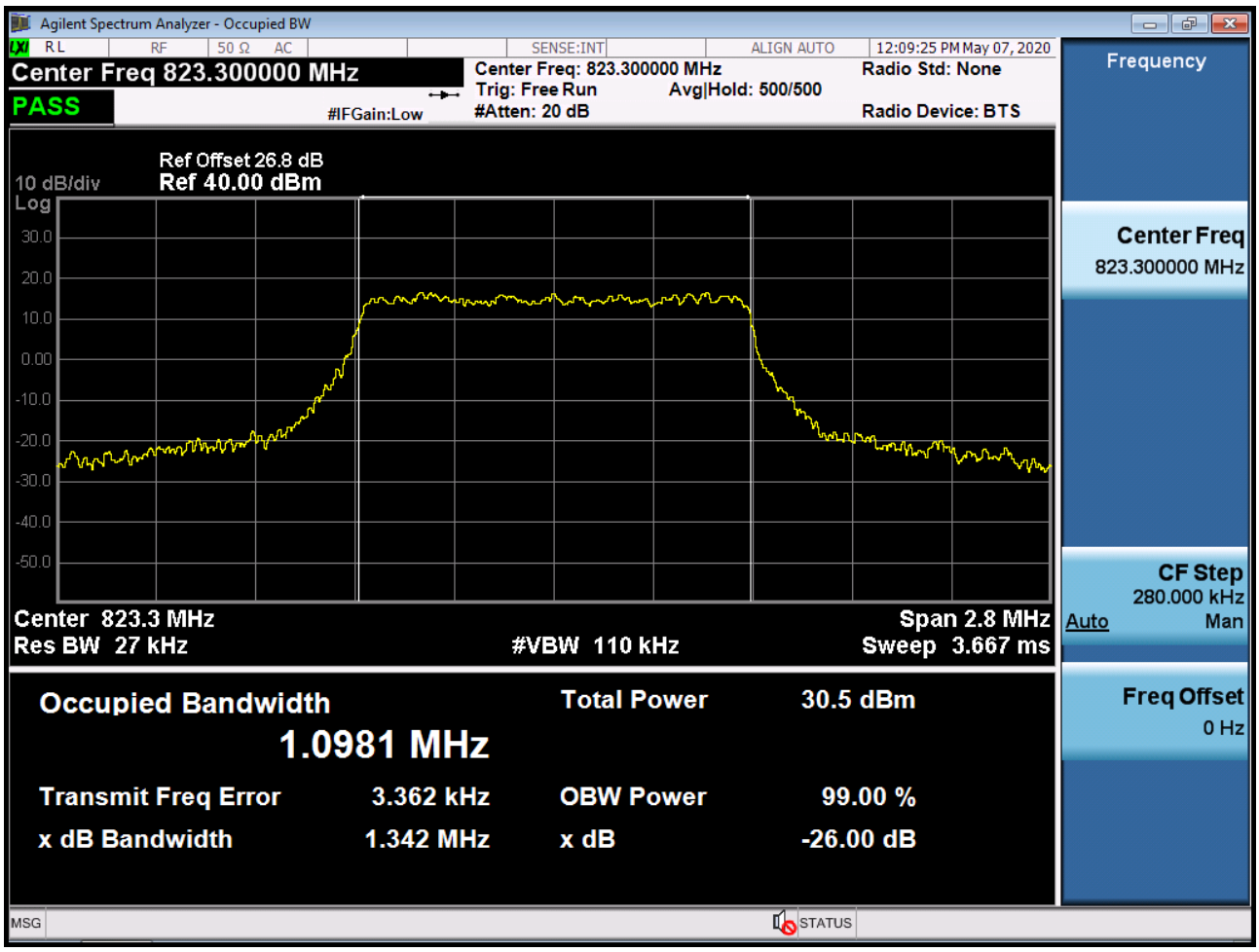
- Test Channel : 26790(824.0MHz)
- Plots of the EUT's Band Edge are shown Page 107 ~ 114.

9. TEST PLOTS

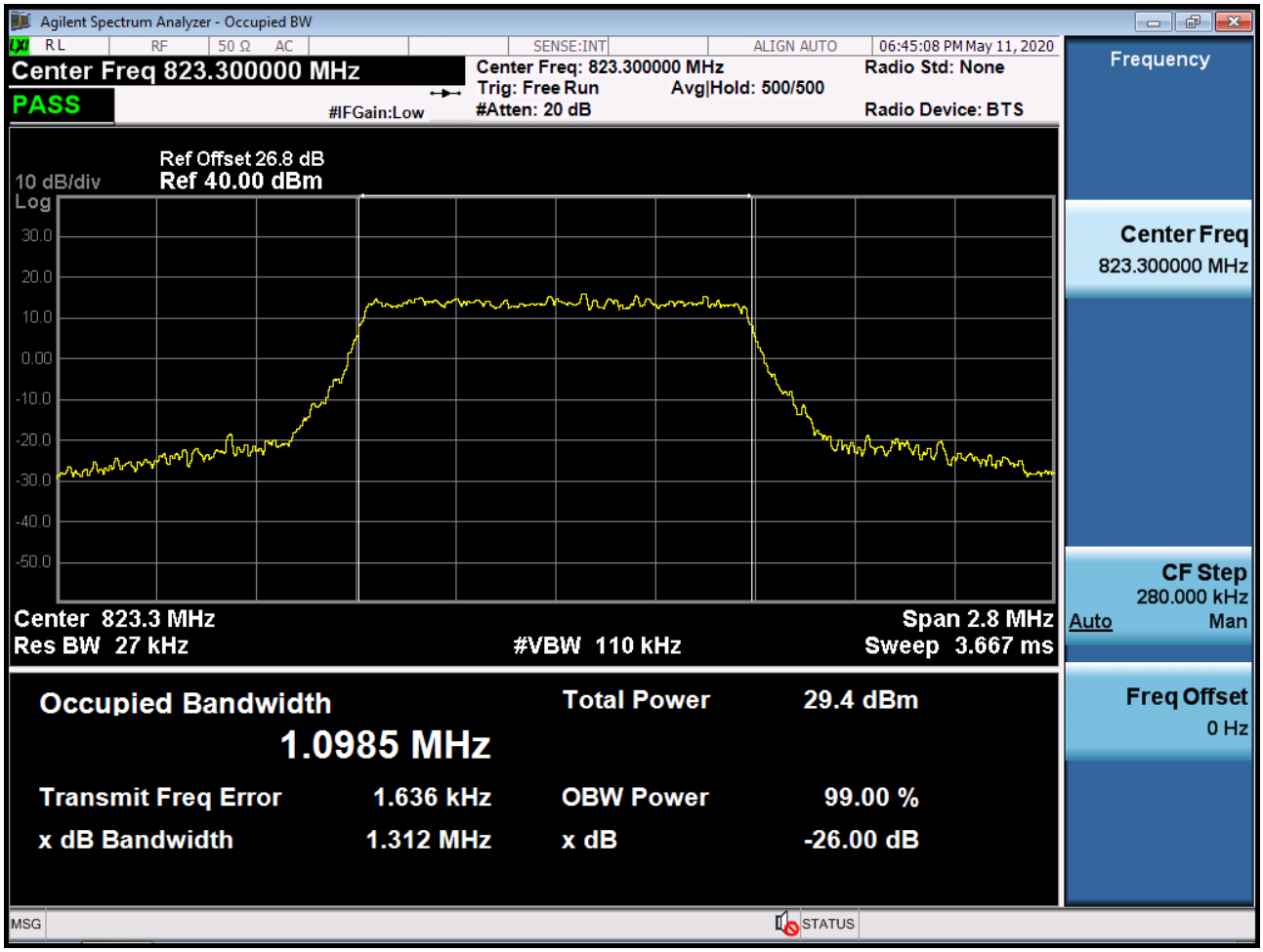
BAND 26. Occupied Bandwidth Plot (1.4M BW Ch.26783 QPSK RB 6_0)



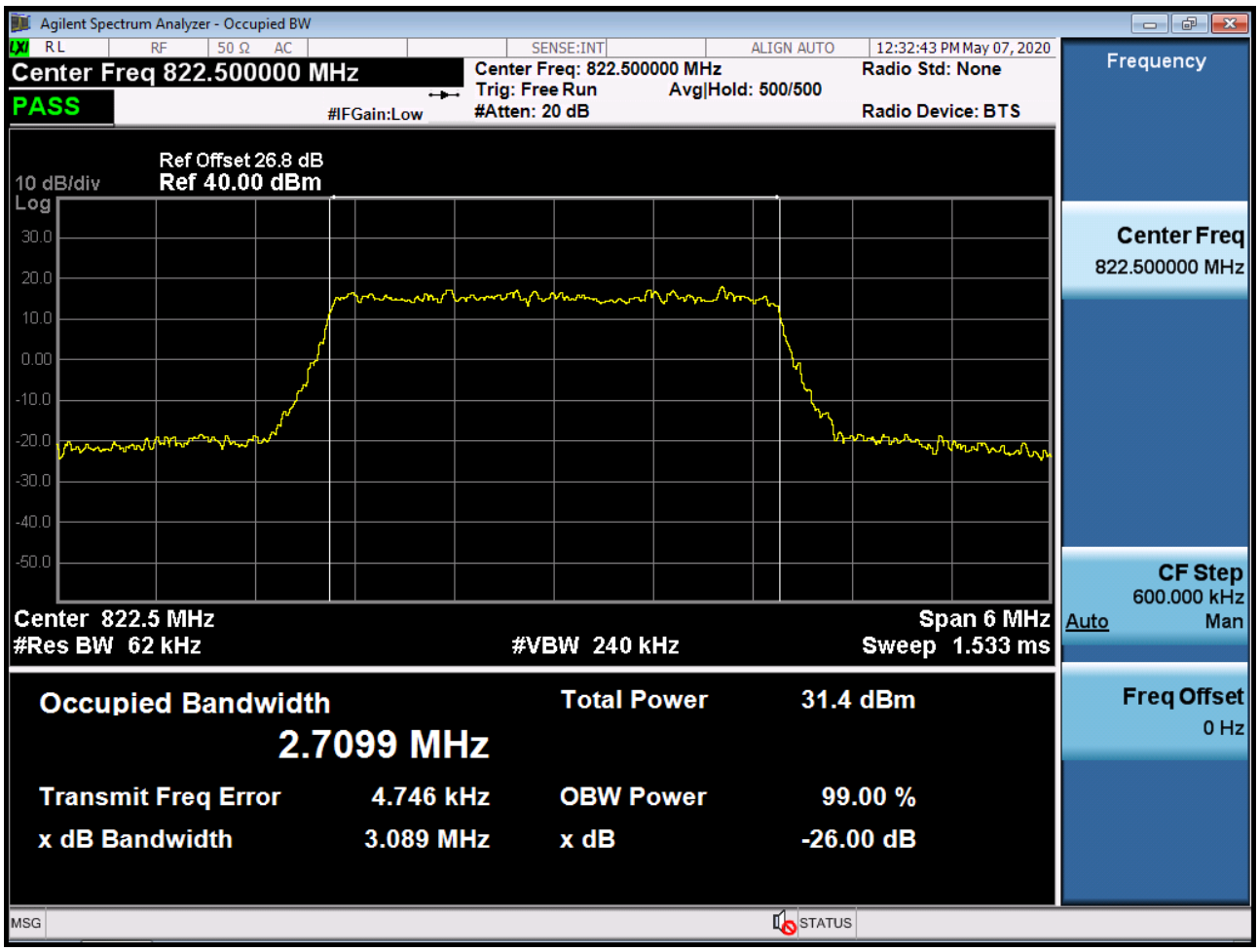
BAND 26. Occupied Bandwidth Plot (1.4M BW Ch.26783 16QAM RB 6_0)



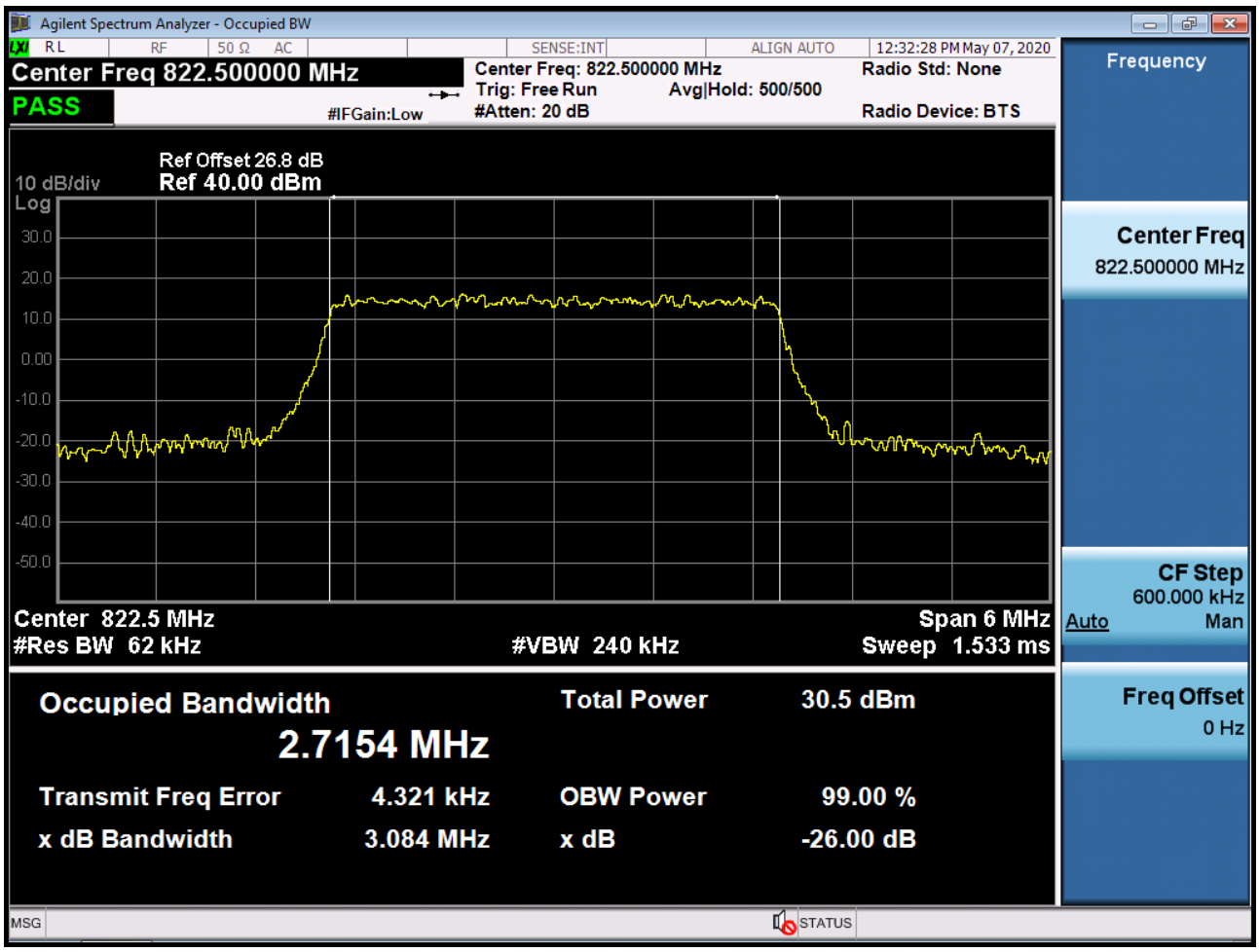
BAND 26. Occupied Bandwidth Plot (1.4M BW Ch.26783 64QAM RB 6_0)



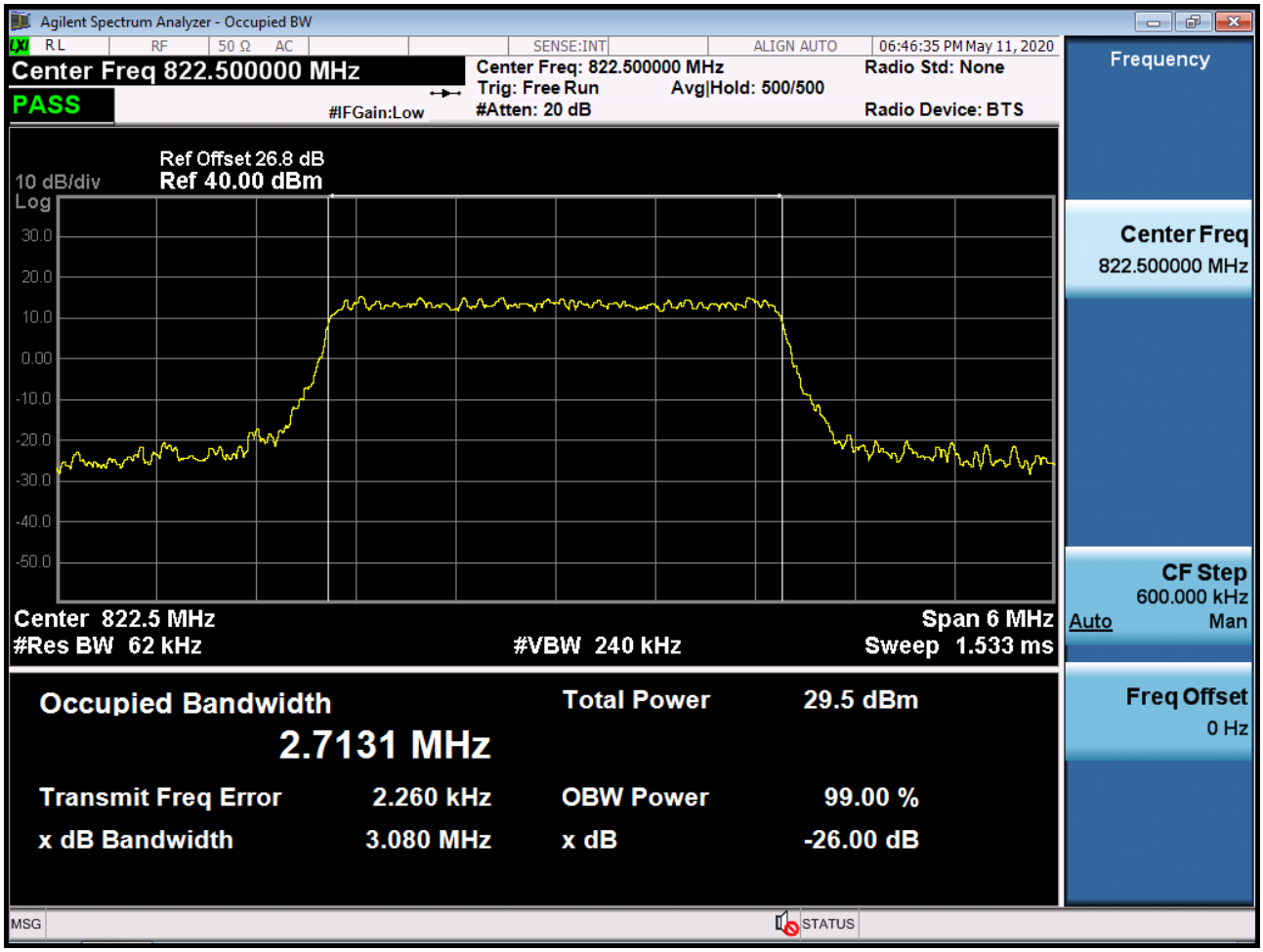
BAND 26. Occupied Bandwidth Plot (3M BW Ch.26775 QPSK RB 15_0)



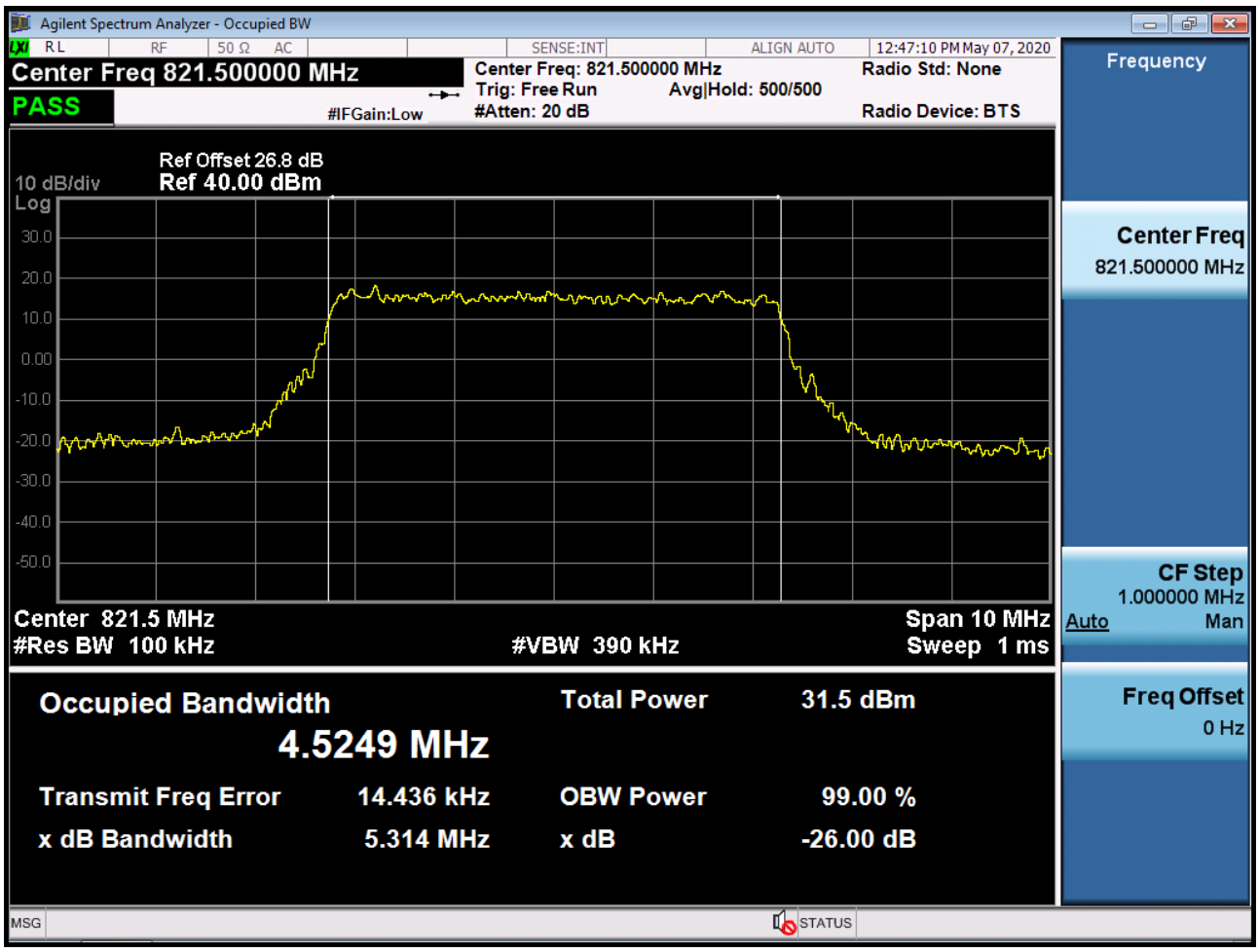
BAND 26. Occupied Bandwidth Plot (3M BW Ch.26775 16QAM RB 15_0)



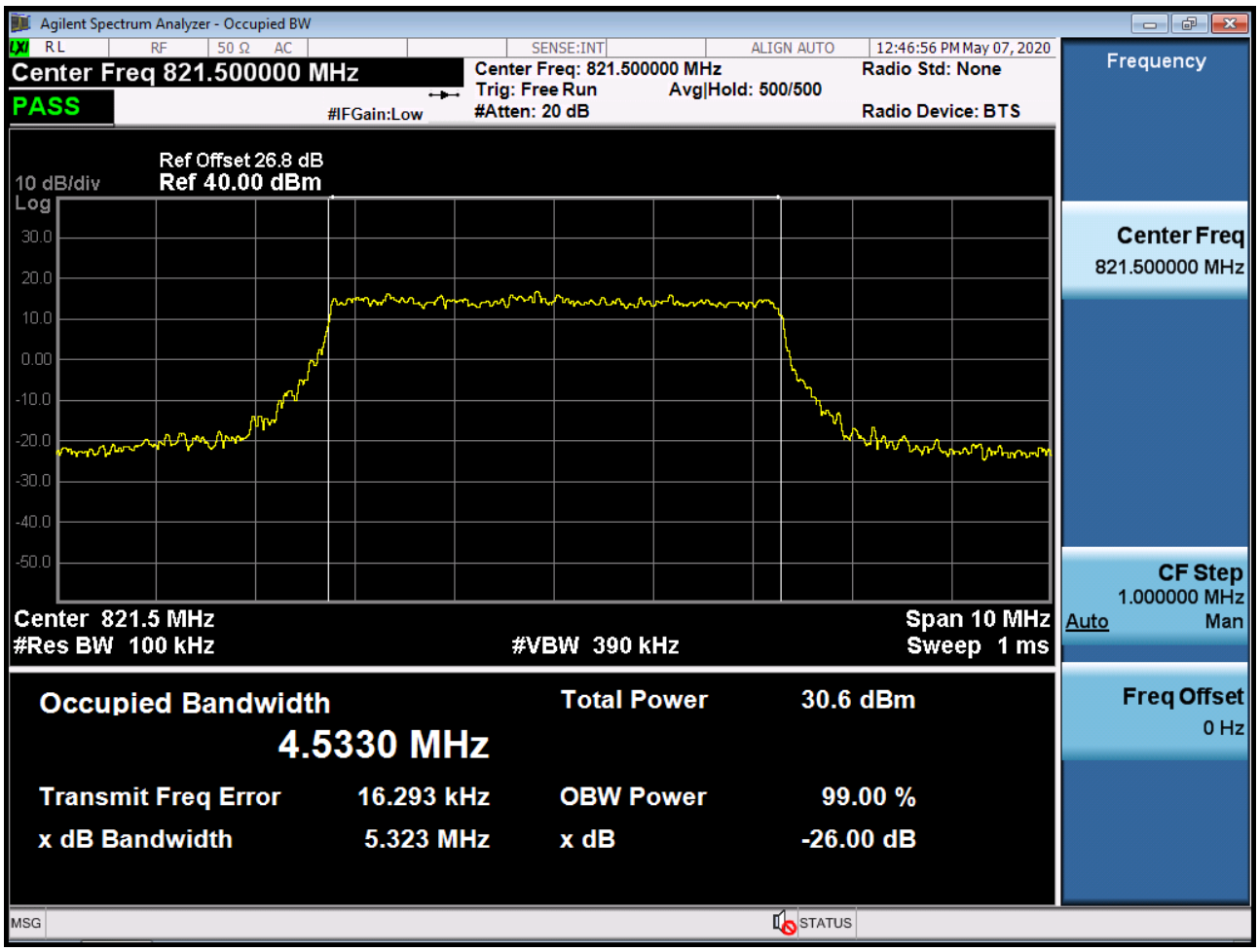
BAND 26. Occupied Bandwidth Plot (3M BW Ch.26775 64QAM RB 15_0)



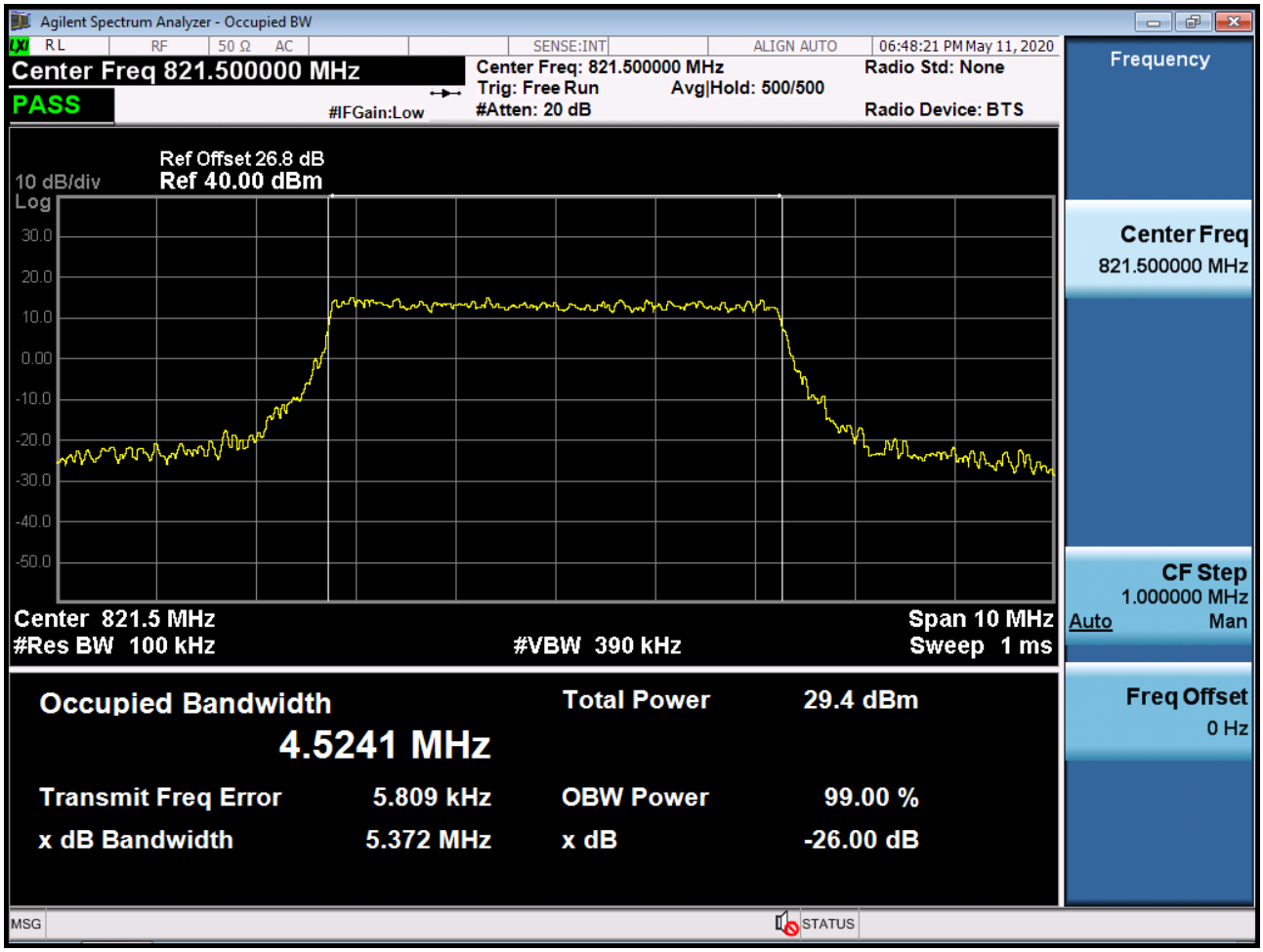
BAND 26. Occupied Bandwidth Plot (5M BW Ch.26765 QPSK RB 25_0)



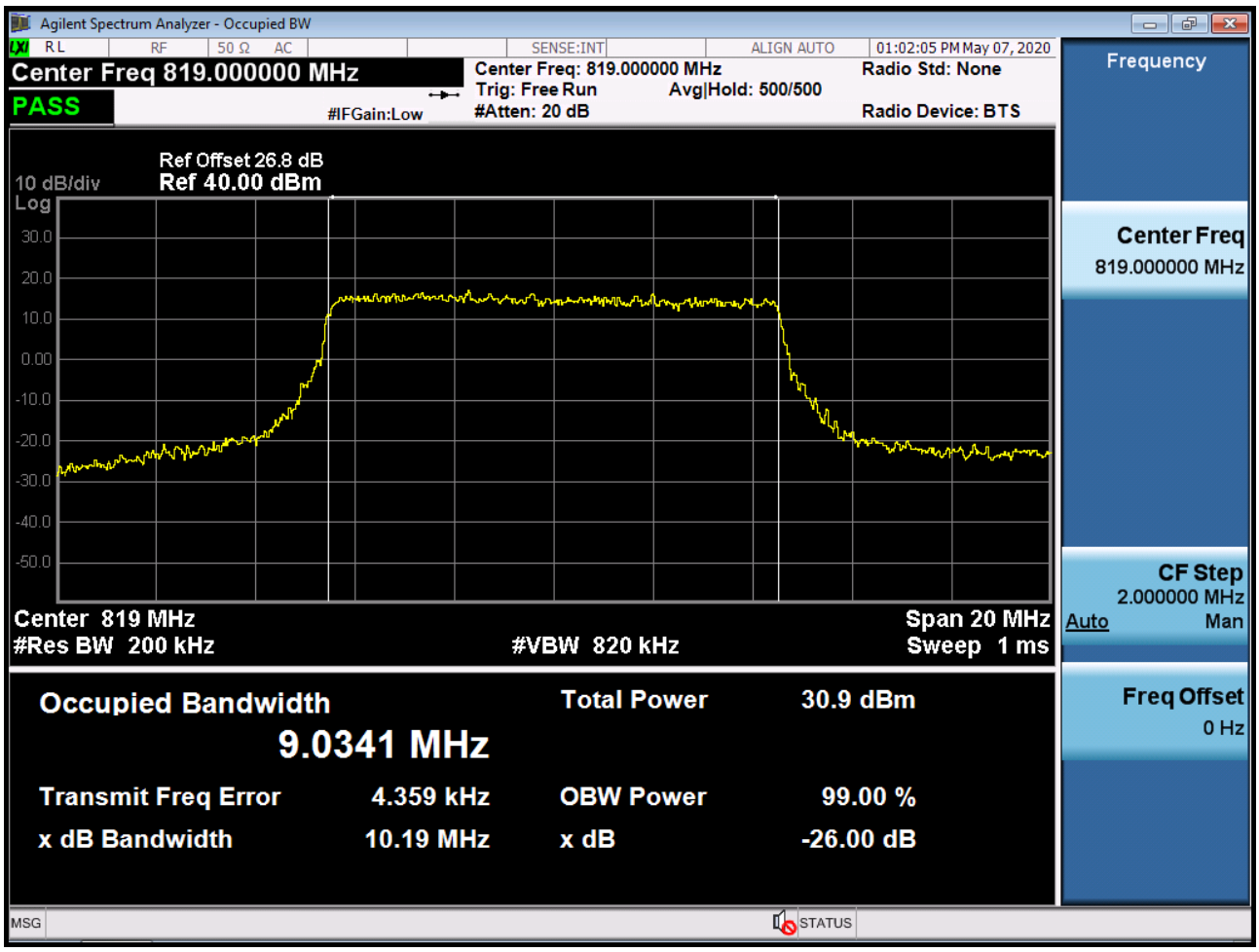
BAND 26. Occupied Bandwidth Plot (5M BW Ch.26765 16QAM RB 25_0)



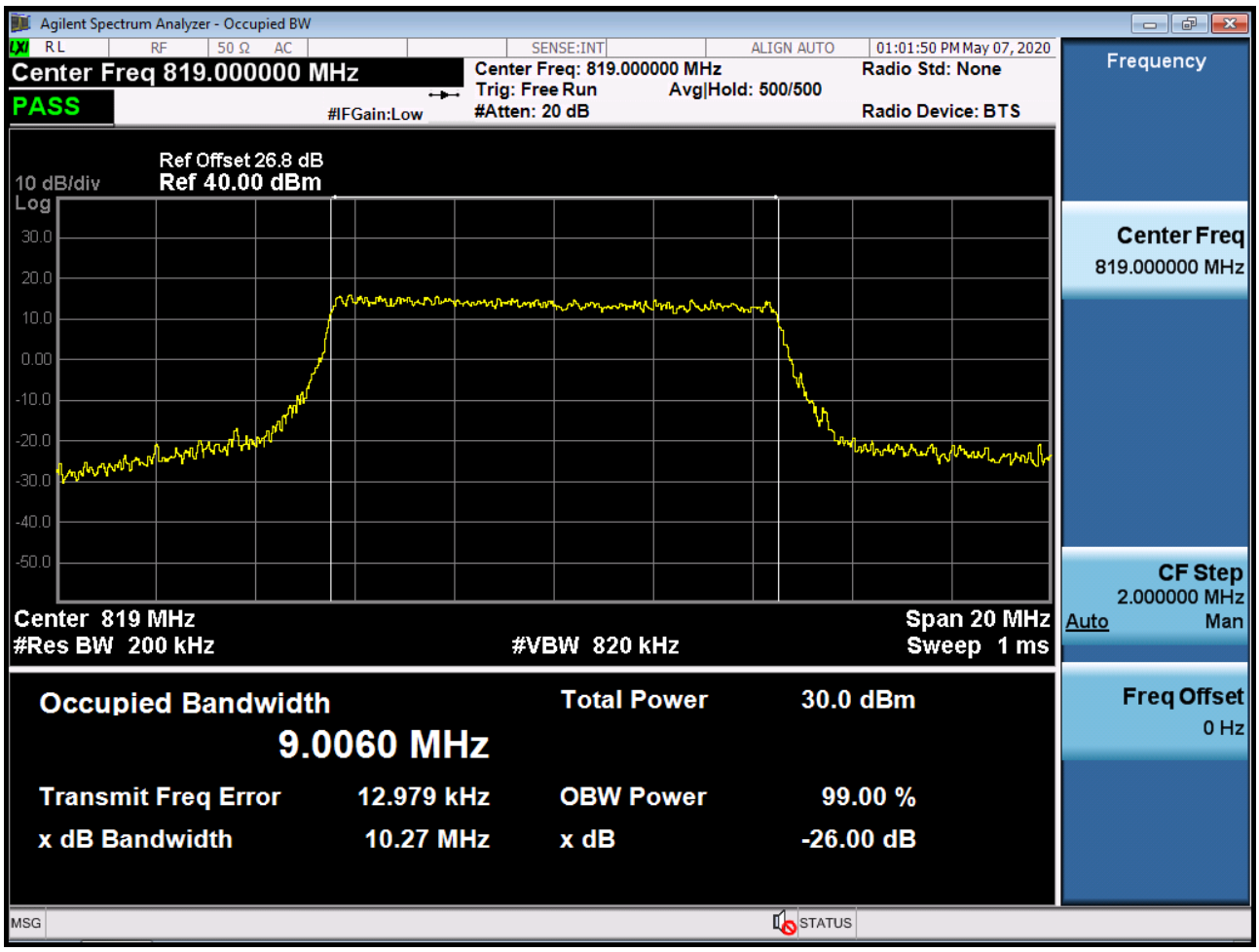
BAND 26. Occupied Bandwidth Plot (5M BW Ch.26765 64QAM RB 25_0)



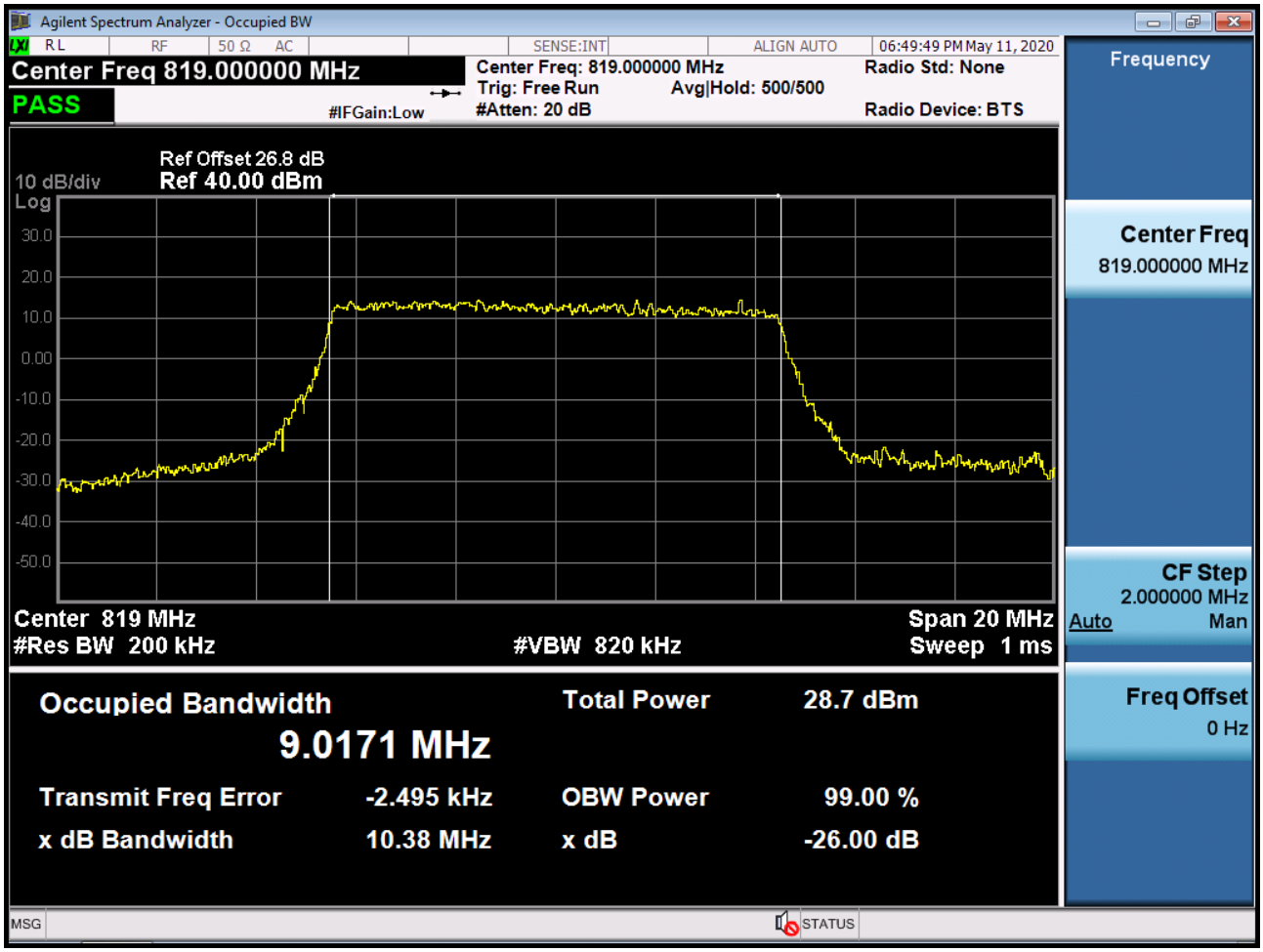
BAND 26. Occupied Bandwidth Plot (10M BW Ch.26740 QPSK RB 50_0)



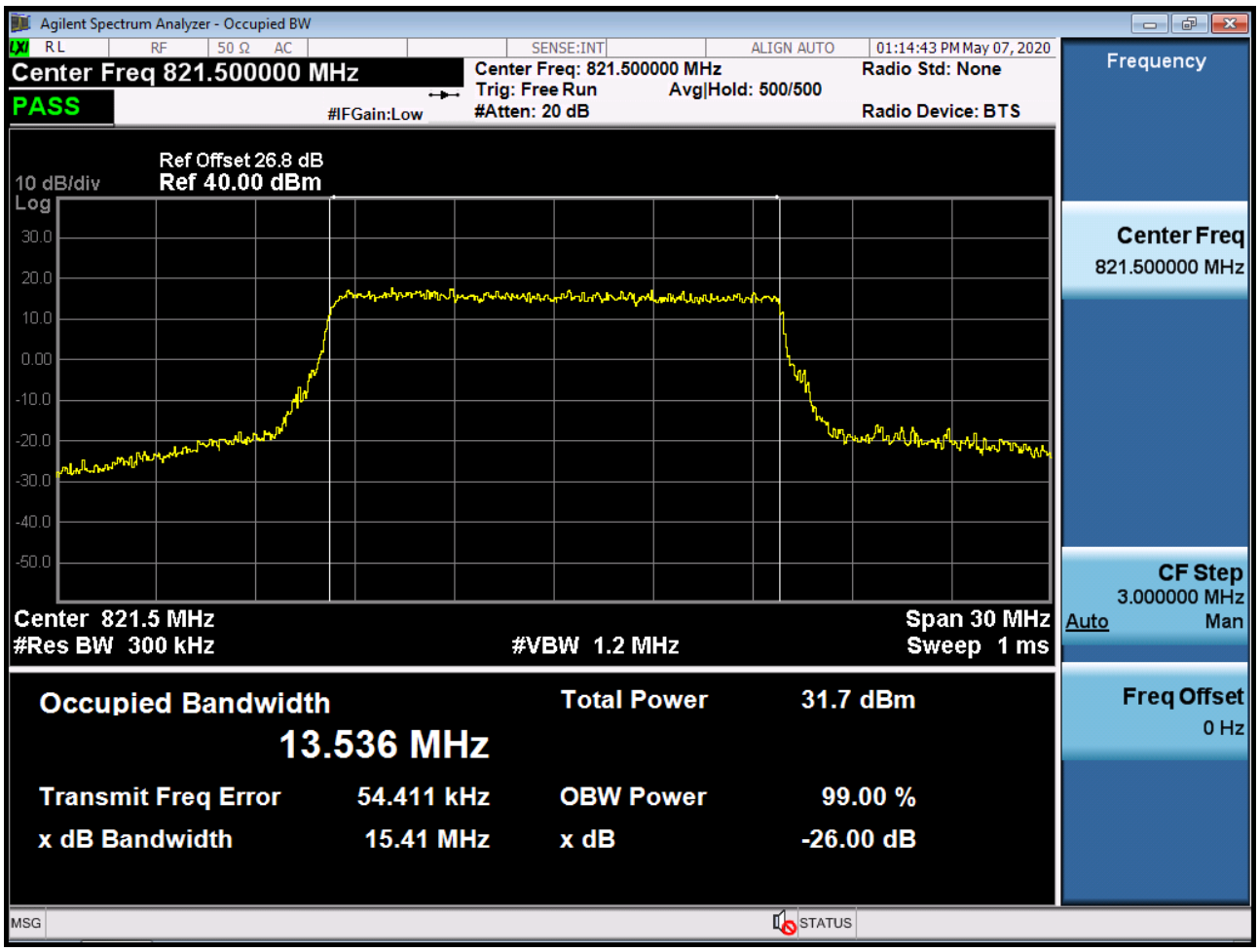
BAND 26. Occupied Bandwidth Plot (10M BW Ch.26740 16QAM RB 50_0)



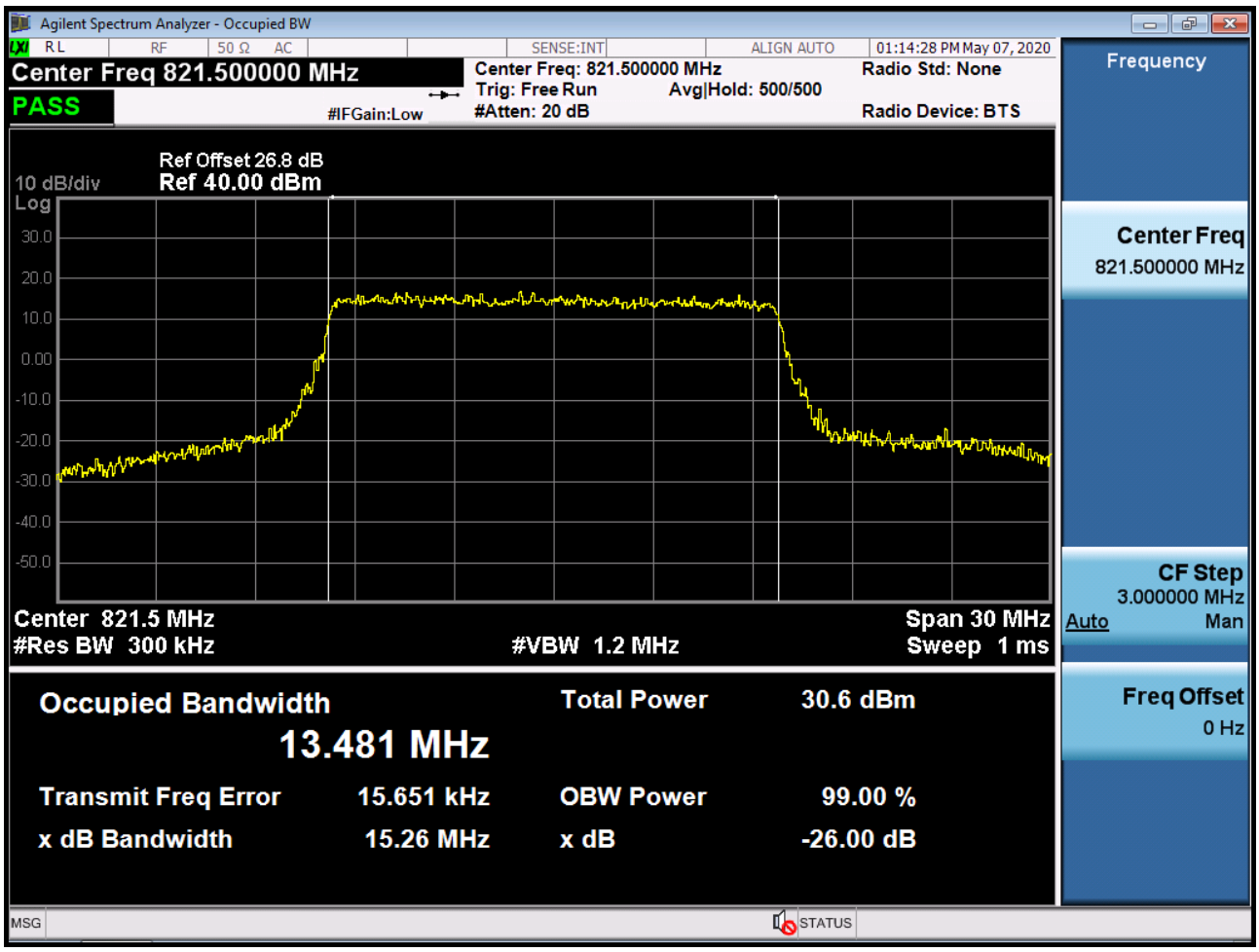
BAND 26. Occupied Bandwidth Plot (10M BW Ch.26740 64QAM RB 50_0)



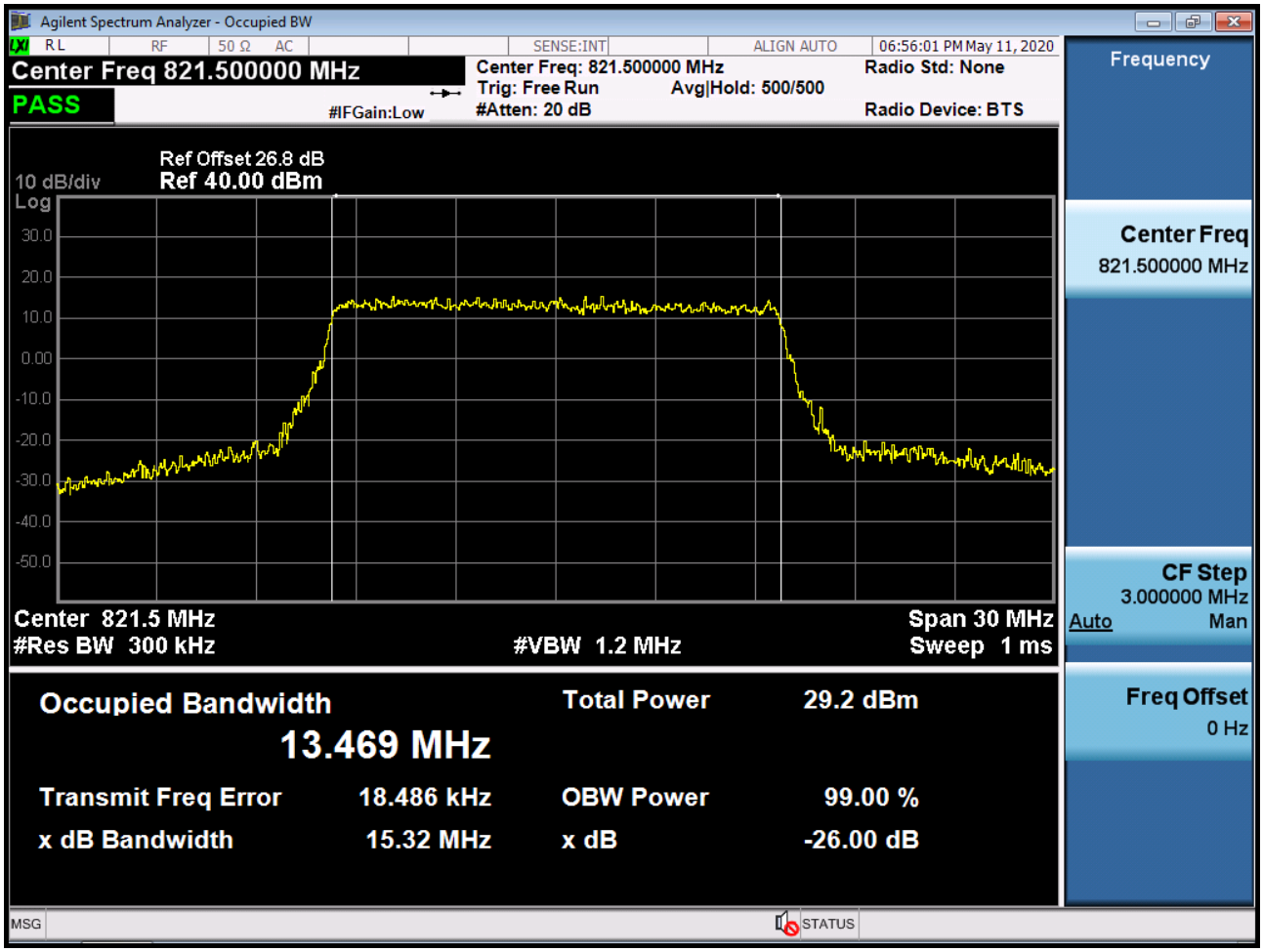
BAND 26. Occupied Bandwidth Plot (15M BW Ch.26765 QPSK RB 75_0)



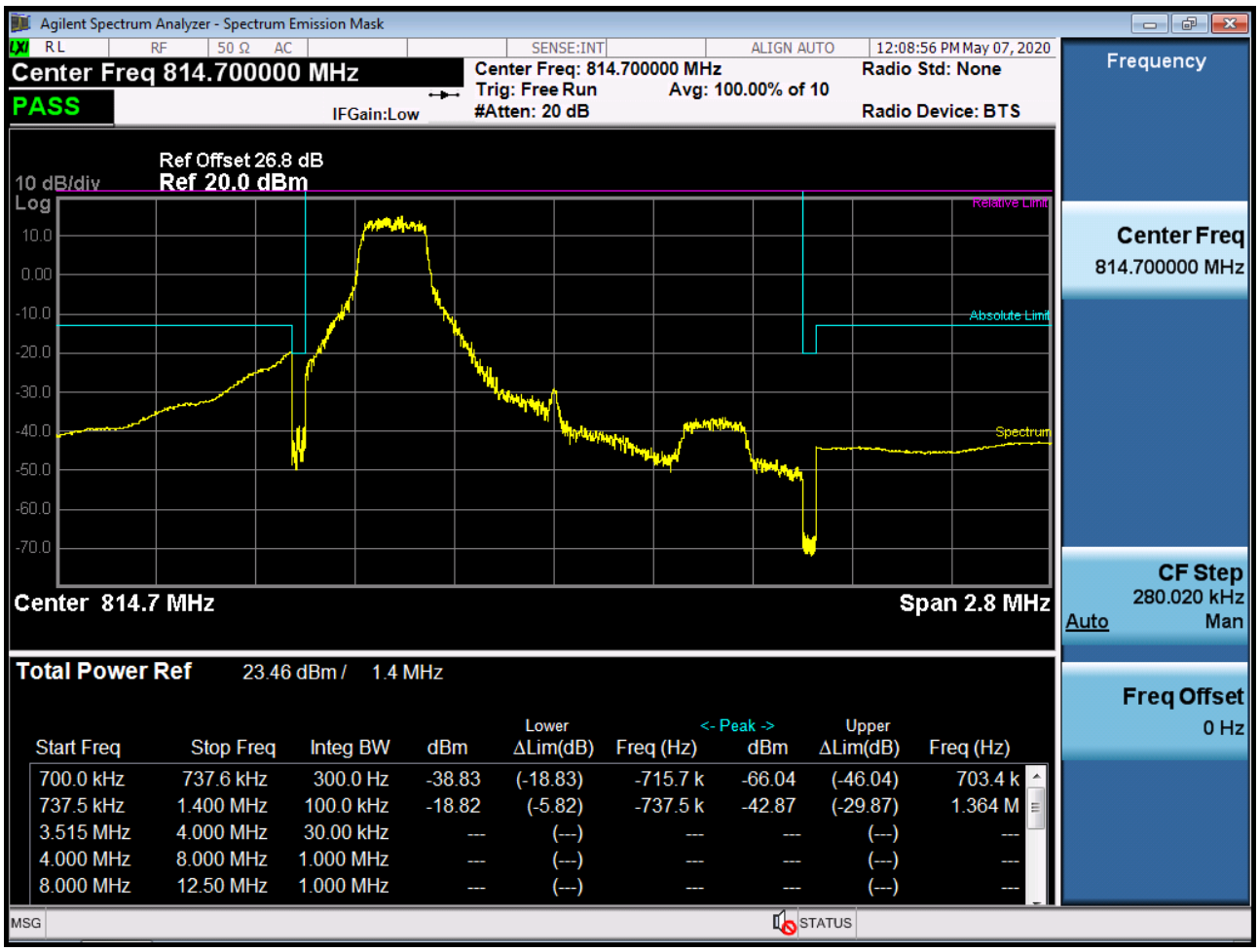
BAND 26. Occupied Bandwidth Plot (15M BW Ch.26765 16QAM RB 75_0)



BAND 26. Occupied Bandwidth Plot (15M BW Ch.26765 64QAM RB 75_0)

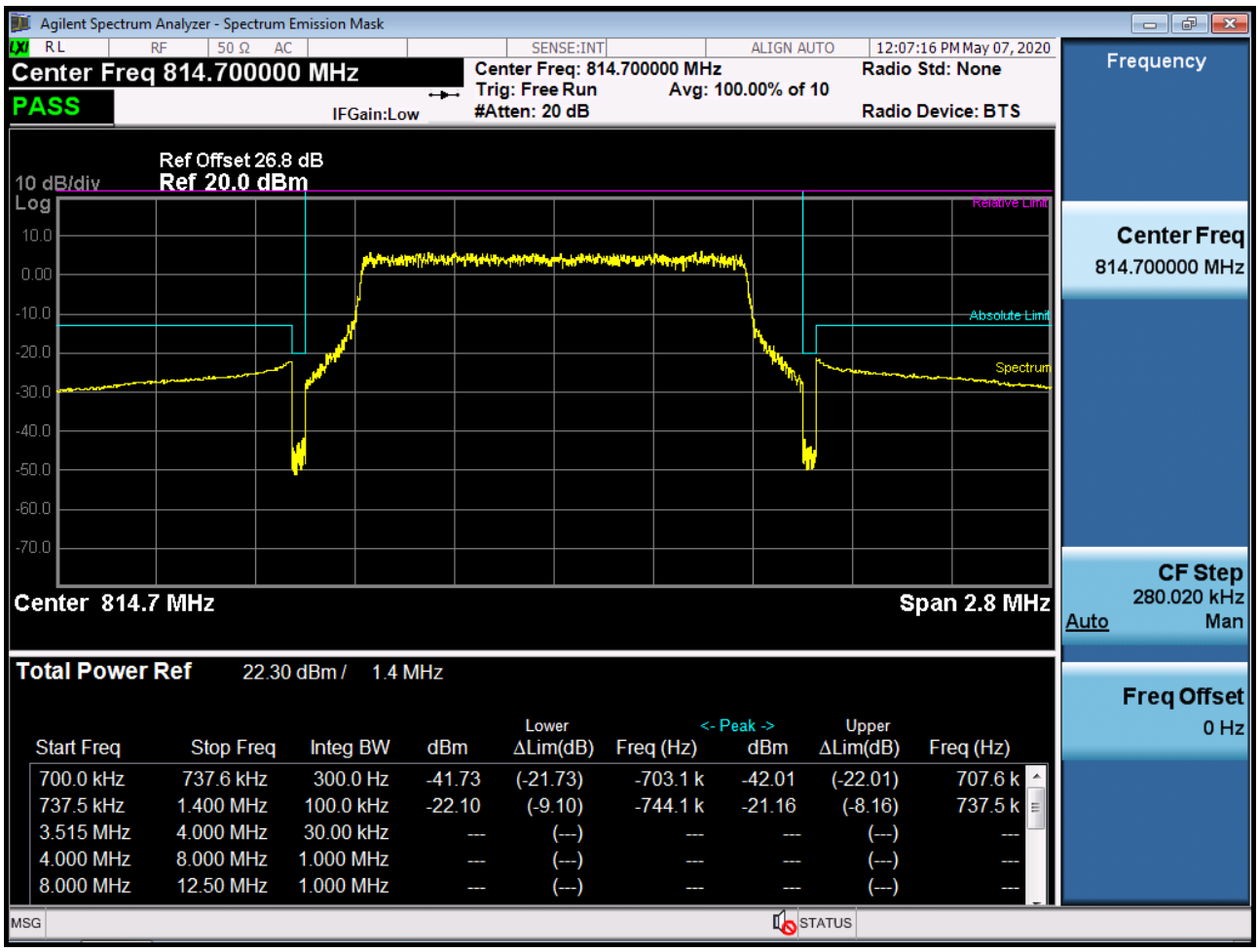


BAND 26. Lower Channel Edge Plot (1.4M BW Ch.26697 QPSK RB 1, Offset 0)



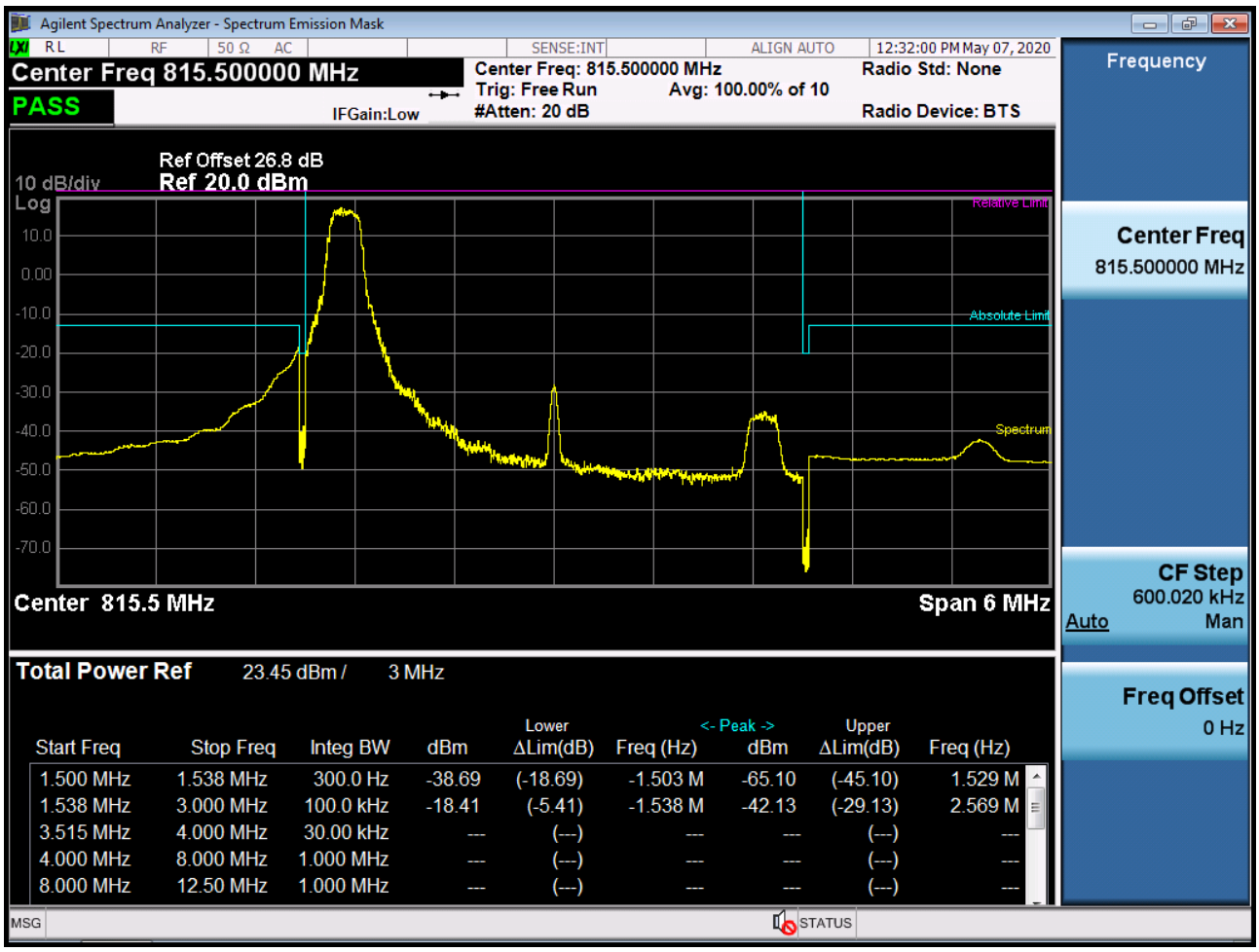
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-38.83	(-18.83)	-715.7 k	-66.04	(-46.04)	703.4 k
737.5 kHz	1.400 MHz	100.0 kHz	-18.82	(-5.82)	-737.5 k	-42.87	(-29.87)	1.364 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Lower Channel Edge Plot (1.4M BW Ch.26697 QPSK_RB6_Offset 0)



Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-41.73	(-21.73)	-703.1 k	-42.01	(-22.01)	707.6 k
737.5 kHz	1.400 MHz	100.0 kHz	-22.10	(-9.10)	-744.1 k	-21.16	(-8.16)	737.5 k
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

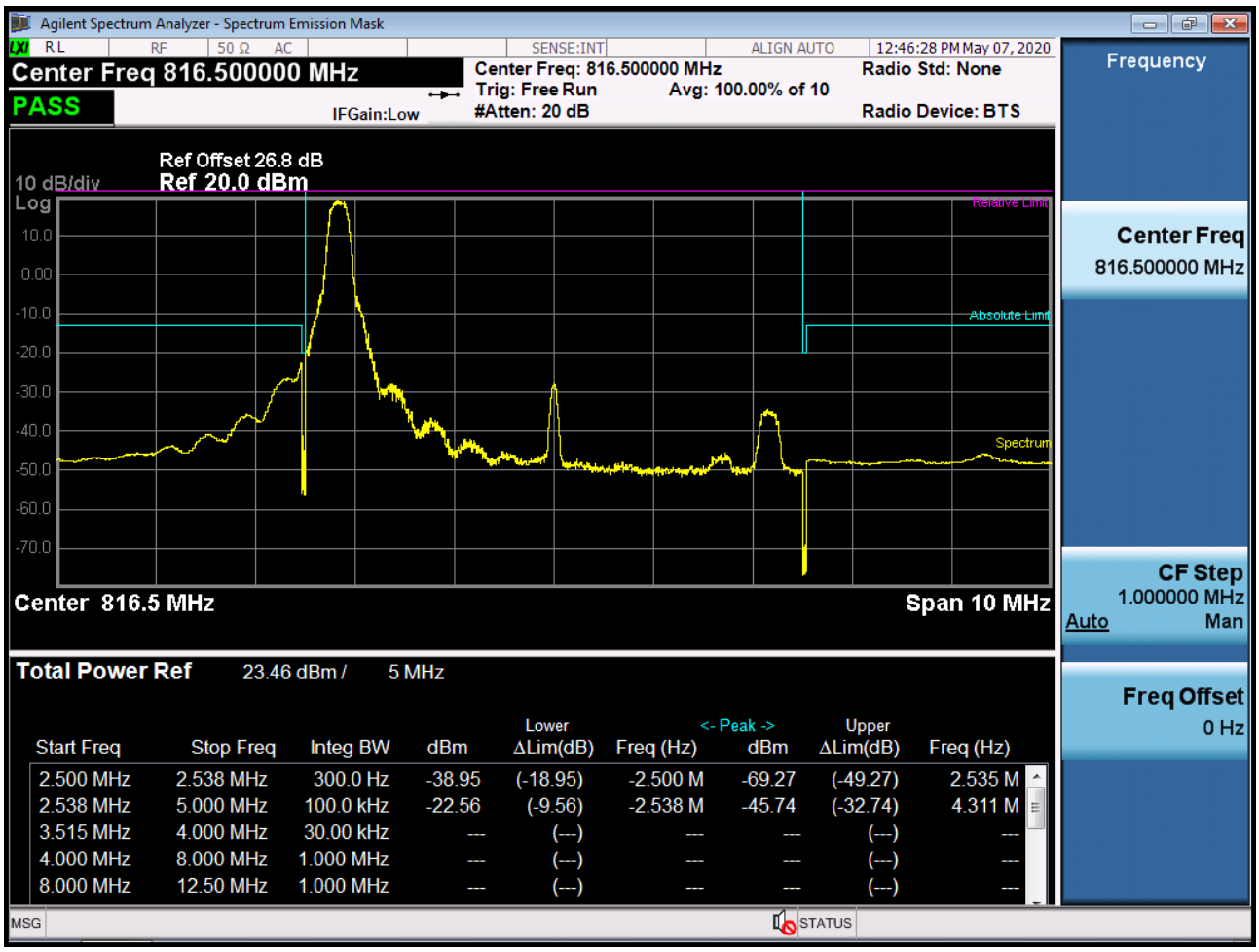
BAND 26. Lower Channel Edge Plot (3M BW Ch.26705 QPSK RB 1, Offset 0)



Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
1.500 MHz	1.538 MHz	300.0 Hz	-38.69	(-18.69)	-1.503 M	-65.10	(-45.10)	1.529 M
1.538 MHz	3.000 MHz	100.0 kHz	-18.41	(-5.41)	-1.538 M	-42.13	(-29.13)	2.569 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

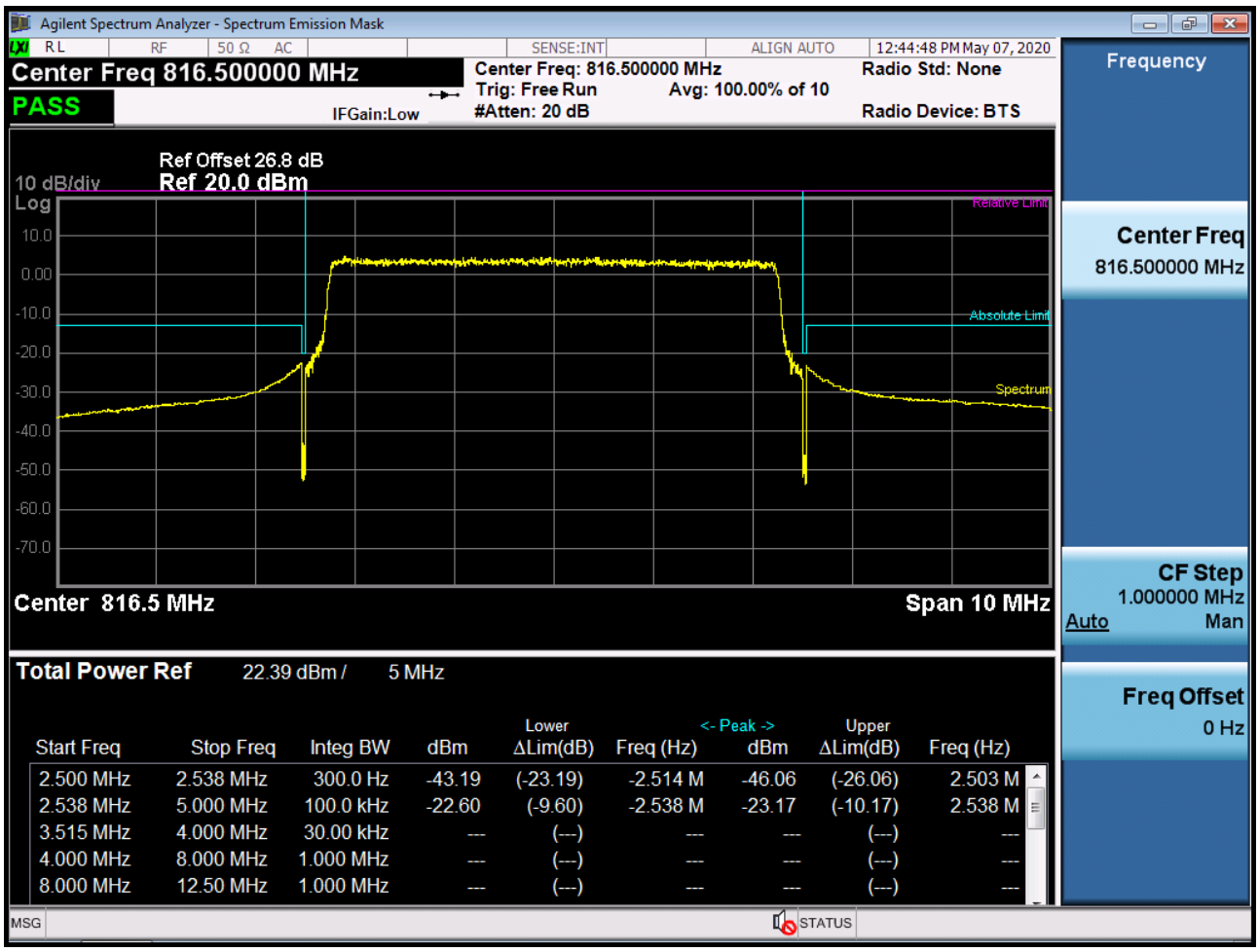
BAND 26. Lower Channel Edge Plot (3M BW Ch.26705 QPSK_RB15_Offset 0)

BAND 26. Lower Channel Edge Plot (5M BW Ch.26715 QPSK RB 1, Offset 0)



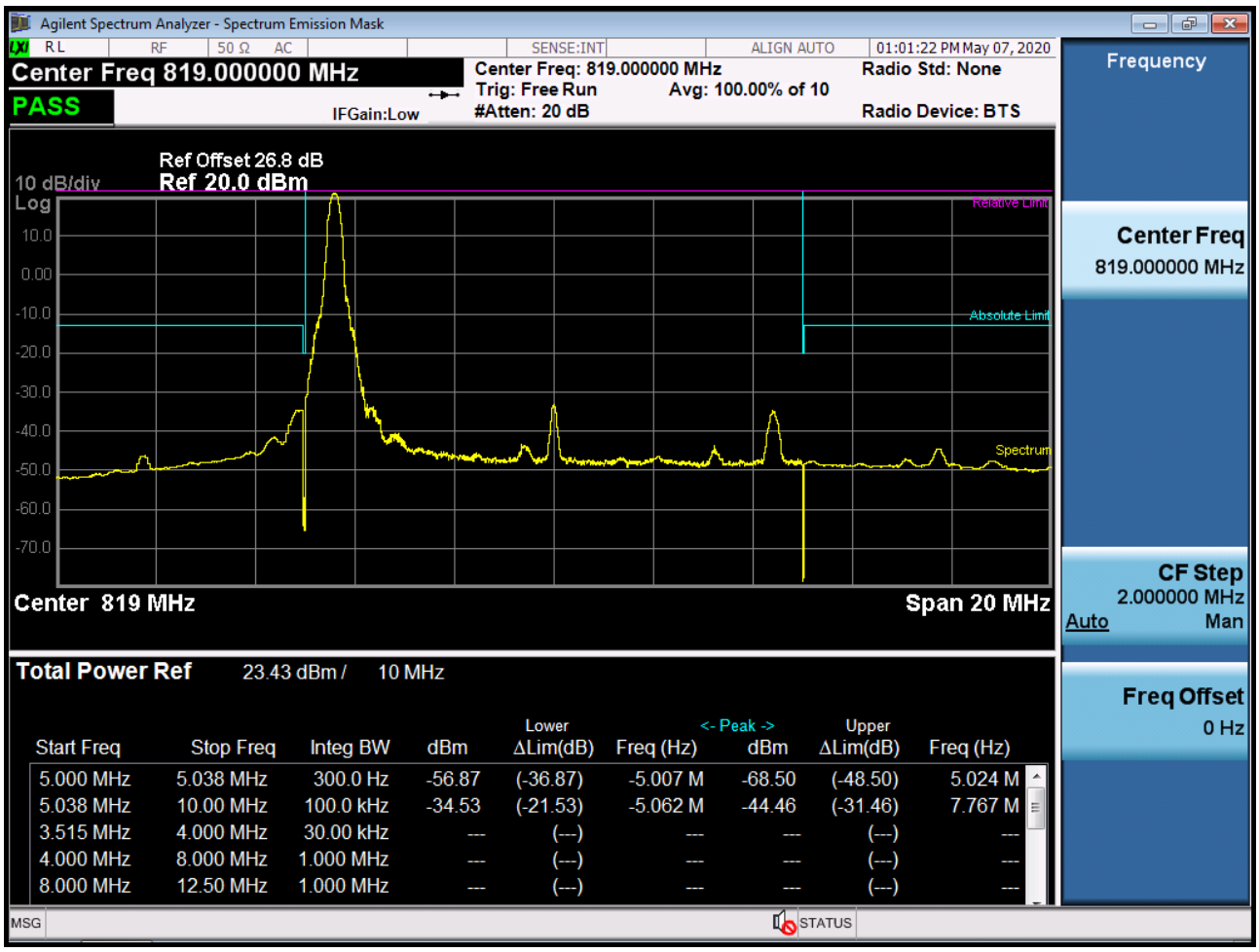
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
2.500 MHz	2.538 MHz	300.0 Hz	-38.95	(-18.95)	-2.500 M	-69.27	(-49.27)	2.535 M
2.538 MHz	5.000 MHz	100.0 kHz	-22.56	(-9.56)	-2.538 M	-45.74	(-32.74)	4.311 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Lower Channel Edge Plot (5M BW Ch.26715 QPSK_RB25_Offset 0)



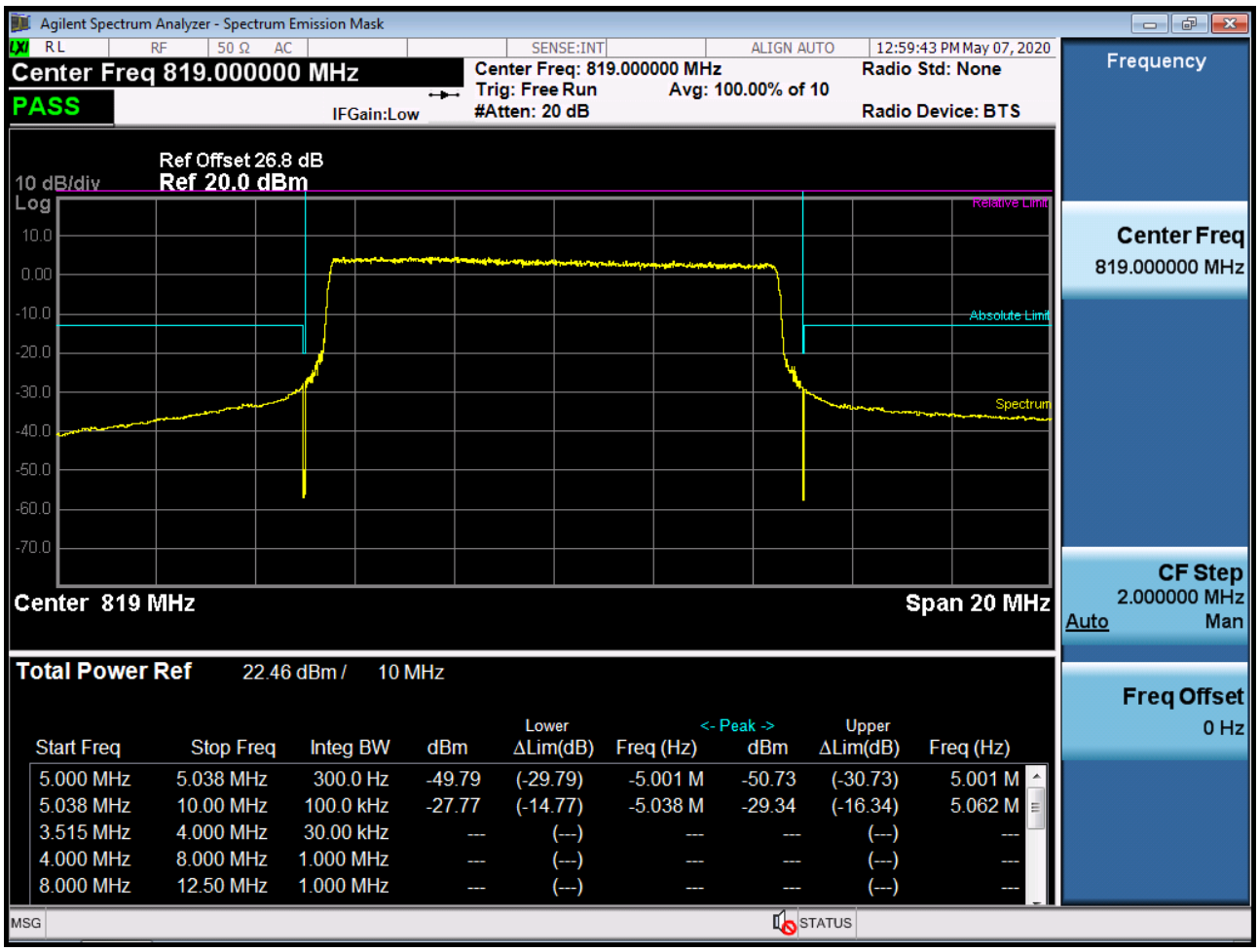
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	ΔLim(dB)	Upper Freq (Hz)
2.500 MHz	2.538 MHz	300.0 Hz	-43.19	(-23.19)	-2.514 M	-46.06	(-26.06)	2.503 M
2.538 MHz	5.000 MHz	100.0 kHz	-22.60	(-9.60)	-2.538 M	-23.17	(-10.17)	2.538 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Low Channel Edge Plot (10M BW Ch.26740 QPSK RB 1, Offset 0)

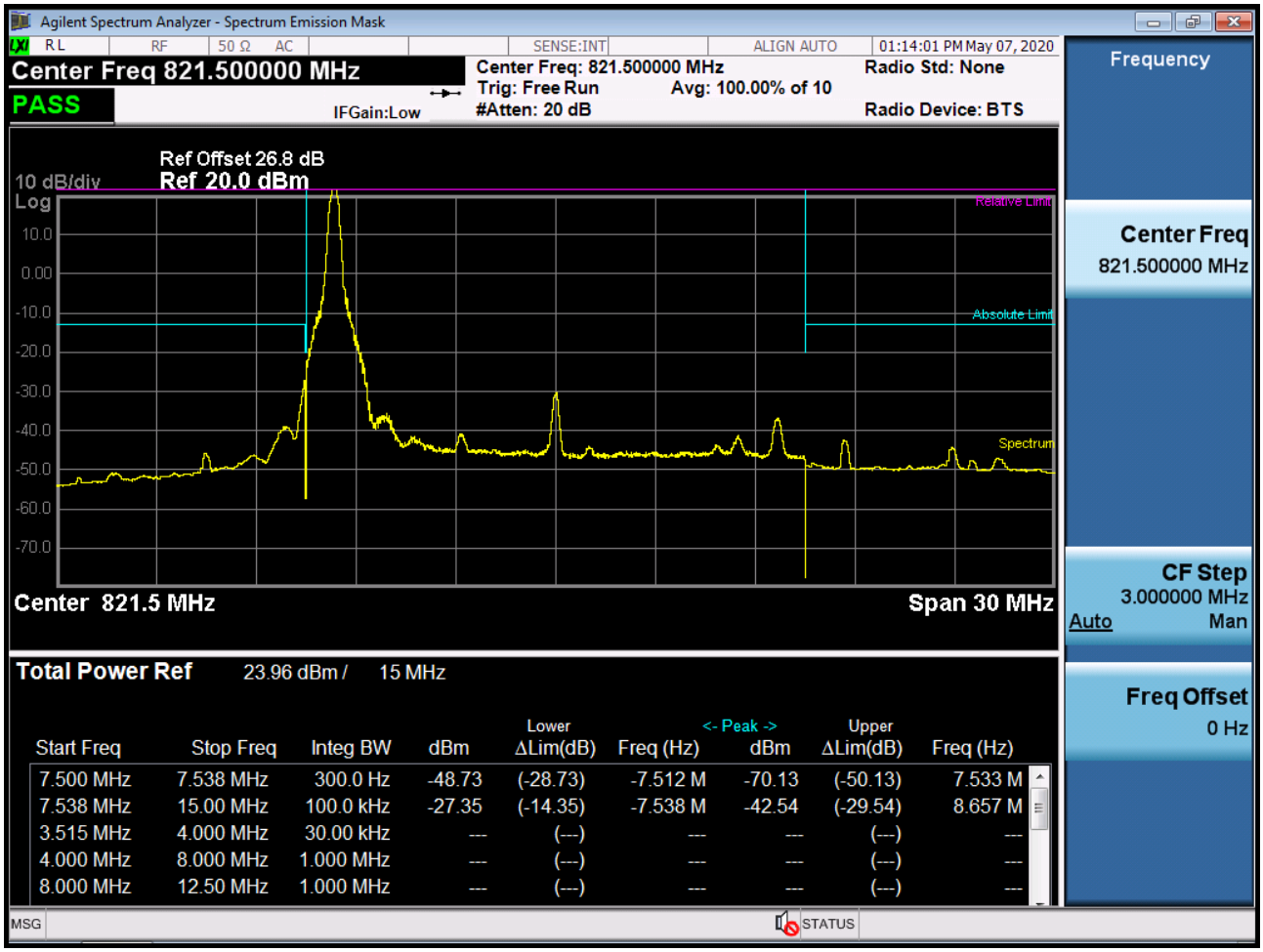


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
5.000 MHz	5.038 MHz	300.0 Hz	-56.87	(-36.87)	-5.007 M	-68.50	(-48.50)	5.024 M
5.038 MHz	10.00 MHz	100.0 kHz	-34.53	(-21.53)	-5.062 M	-44.46	(-31.46)	7.767 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Low Channel Edge Plot (10M BW Ch.26740 QPSK_RB50_Offset 0)

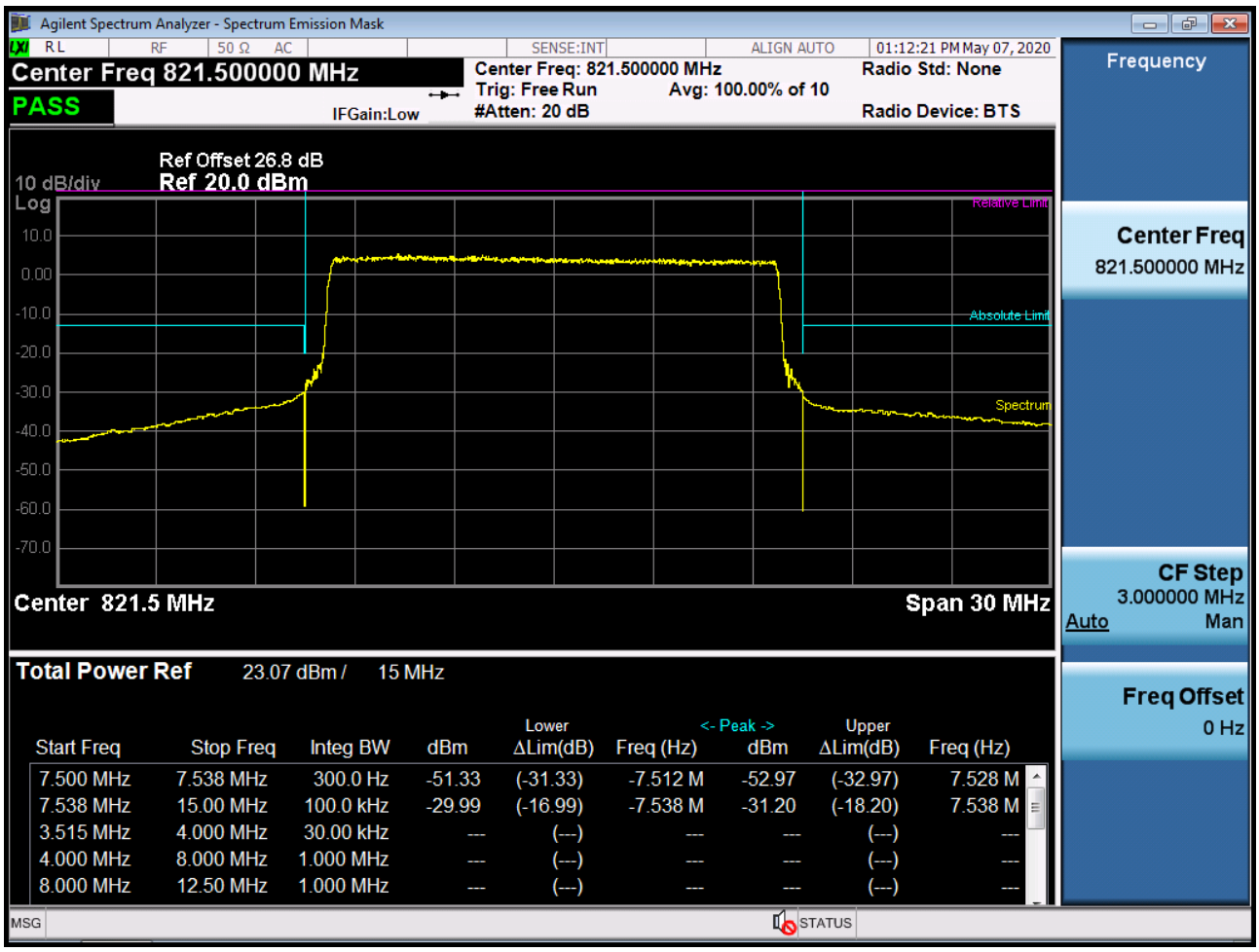


BAND 26. Low Channel Edge Plot (15M BW Ch.26765 QPSK RB 1, Offset 0)



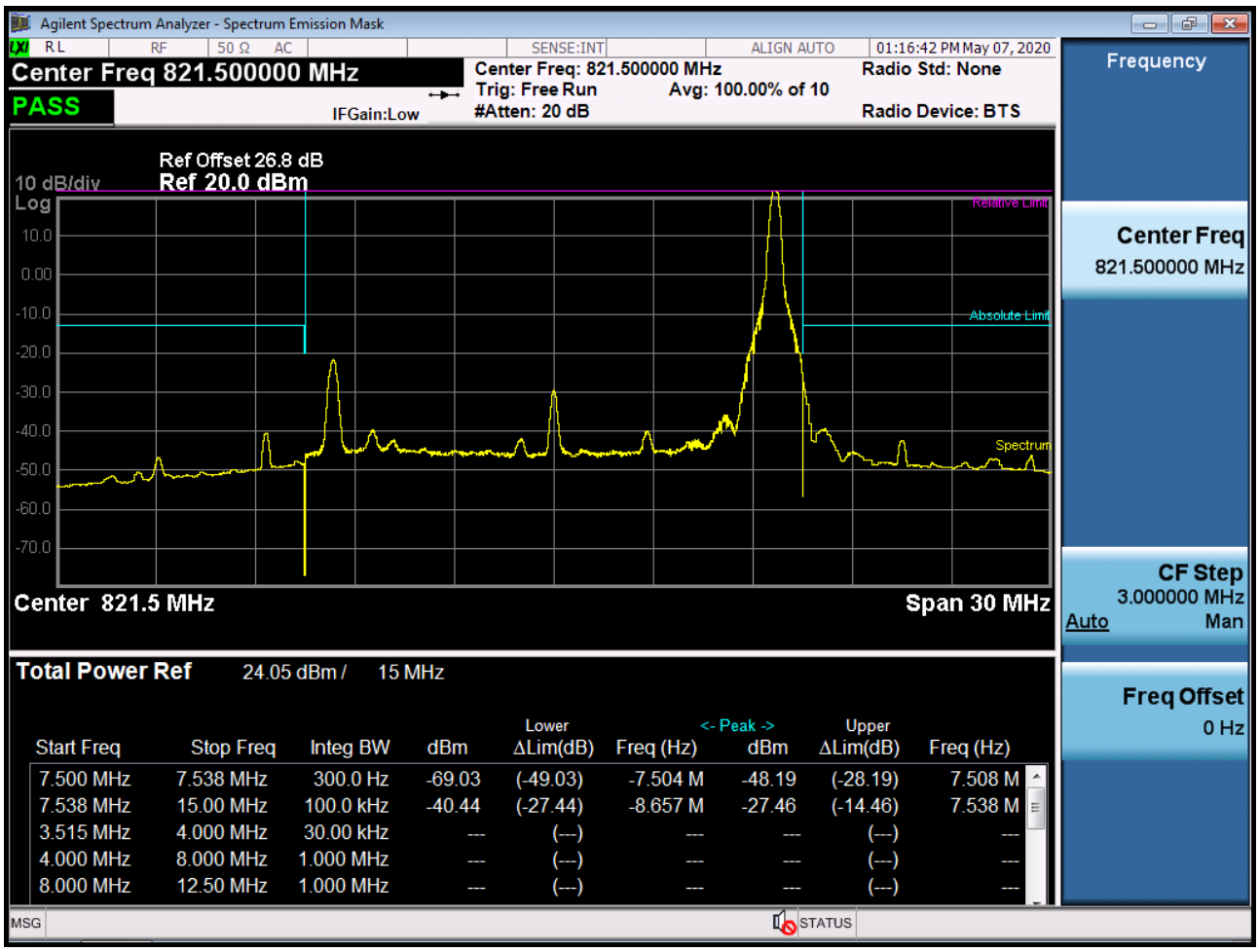
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
7.500 MHz	7.538 MHz	300.0 Hz	-48.73	(-28.73)	-7.512 M	-70.13	(-50.13)	7.533 M
7.538 MHz	15.00 MHz	100.0 kHz	-27.35	(-14.35)	-7.538 M	-42.54	(-29.54)	8.657 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Low Channel Edge Plot (15M BW Ch.26765 QPSK RB 1, Offset74)



Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
7.500 MHz	7.538 MHz	300.0 Hz	-51.33	(-31.33)	-7.512 M	-52.97	(-32.97)	7.528 M
7.538 MHz	15.00 MHz	100.0 kHz	-29.99	(-16.99)	-7.538 M	-31.20	(-18.20)	7.538 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

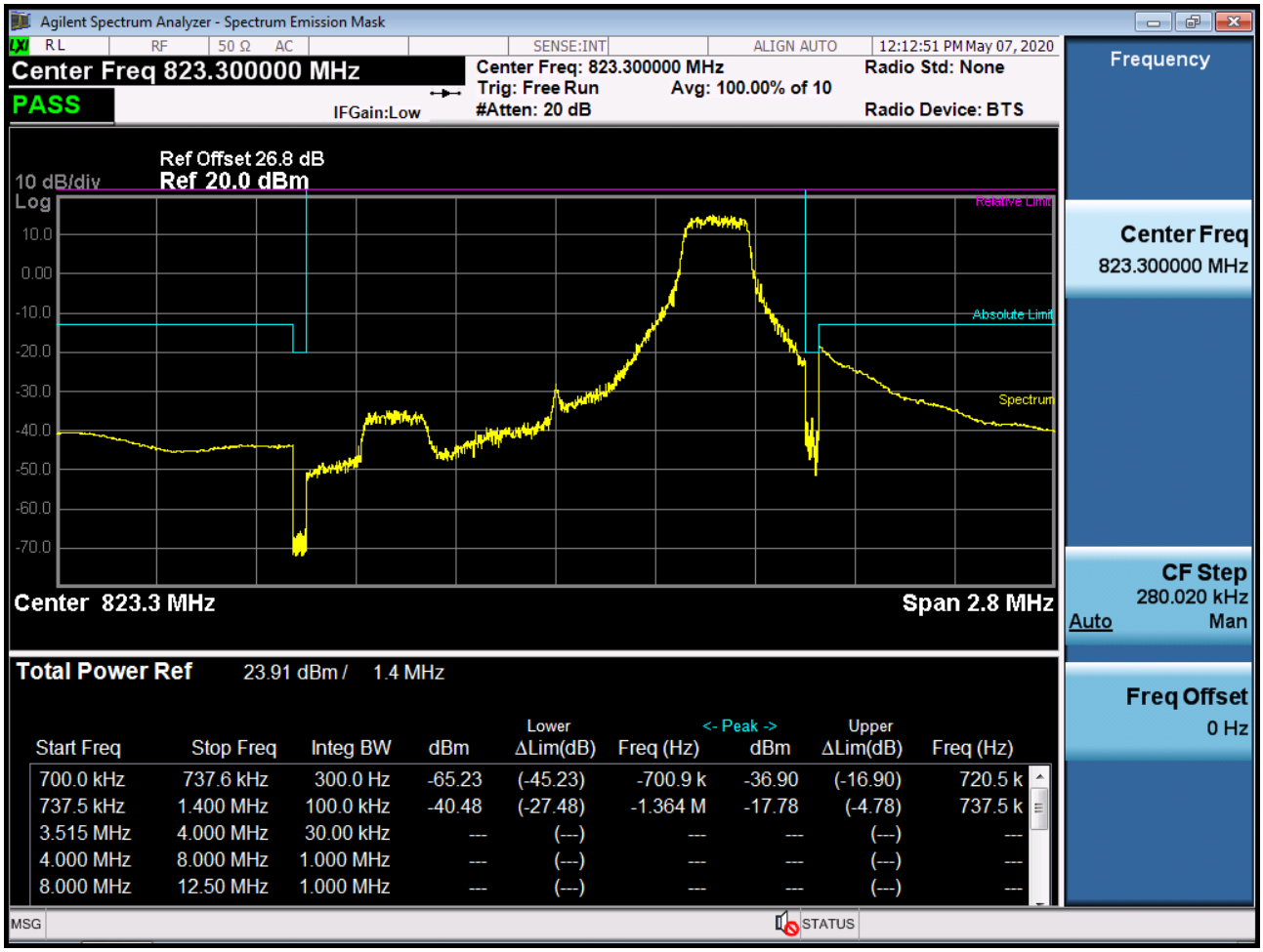
BAND 26. Mid Channel Edge Plot (15M BW Ch.26765 QPSK_RB75_Offset 0)



BAND 26. Mid Band Edge Plot (15M BW Ch.26765 QPSK RB 1, Offset74)-1

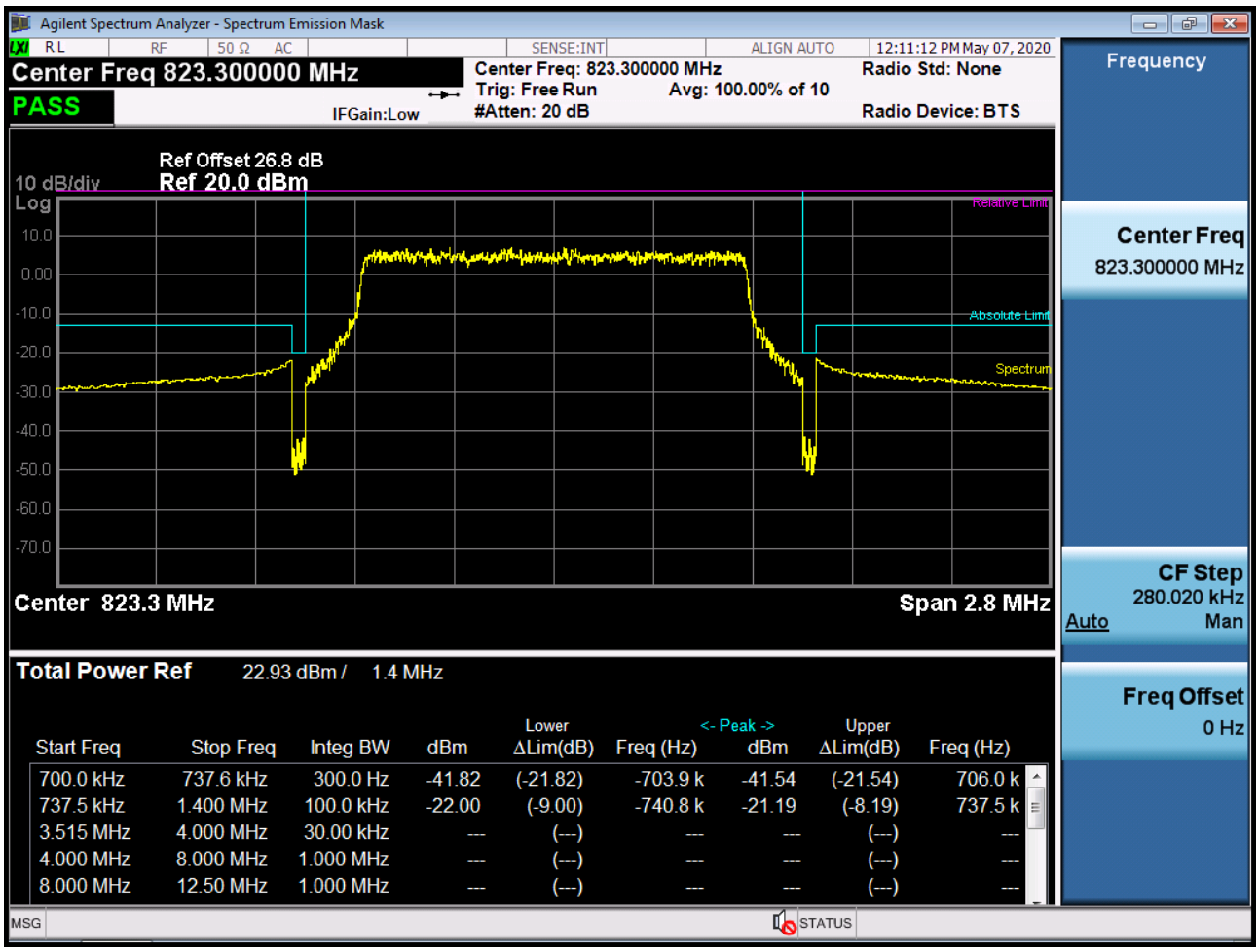
BAND 26. Mid Band Edge Plot (15M BW Ch.26765 QPSK_RB75_Offset 0)-2

BAND 26. Upper Channel Edge Plot (1.4M BW Ch.26783 QPSK_RB1_Offset 5)



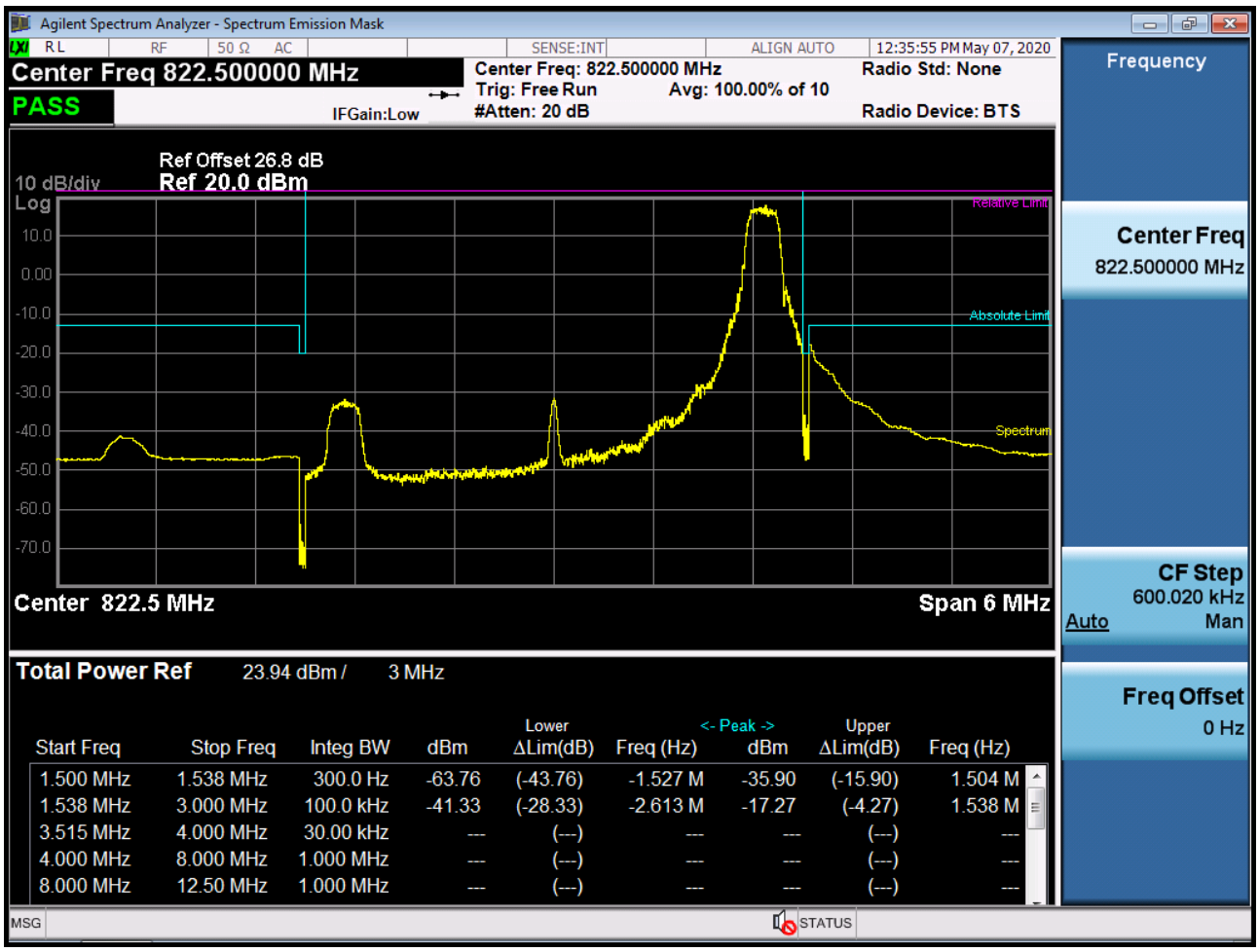
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-65.23	(-45.23)	-700.9 k	-36.90	(-16.90)	720.5 k
737.5 kHz	1.400 MHz	100.0 kHz	-40.48	(-27.48)	-1.364 M	-17.78	(-4.78)	737.5 k
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Upper Channel Edge Plot (1.4M BW Ch.26783 QPSK_RB6_Offset 0)



Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-41.82	(-21.82)	-703.9 k	-41.54	(-21.54)	706.0 k
737.5 kHz	1.400 MHz	100.0 kHz	-22.00	(-9.00)	-740.8 k	-21.19	(-8.19)	737.5 k
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Upper Channel Edge Plot (3M BW Ch.26775 QPSK_RB1_Offset 14)

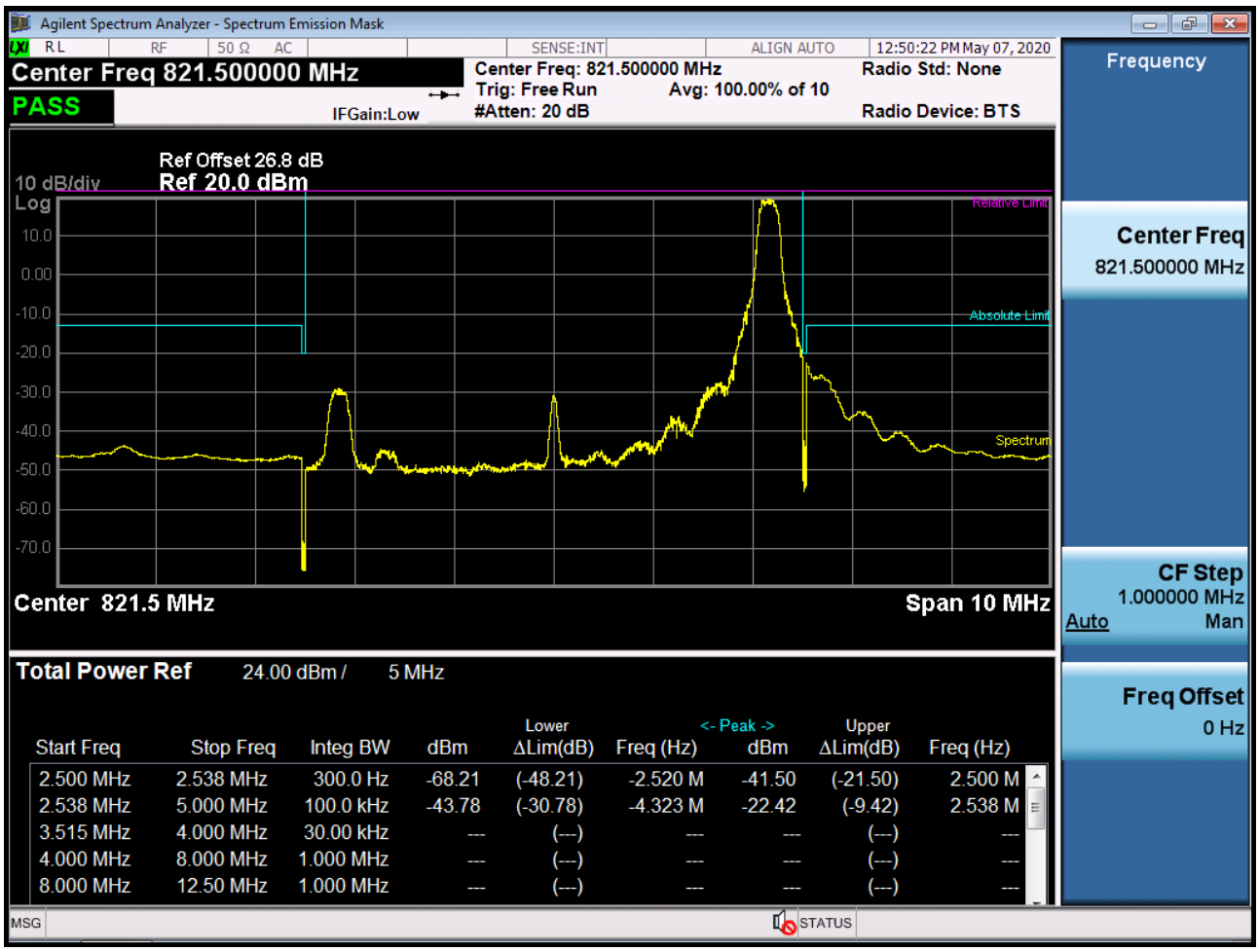


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
1.500 MHz	1.538 MHz	300.0 Hz	-63.76	(-43.76)	-1.527 M	-35.90	(-15.90)	1.504 M
1.538 MHz	3.000 MHz	100.0 kHz	-41.33	(-28.33)	-2.613 M	-17.27	(-4.27)	1.538 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

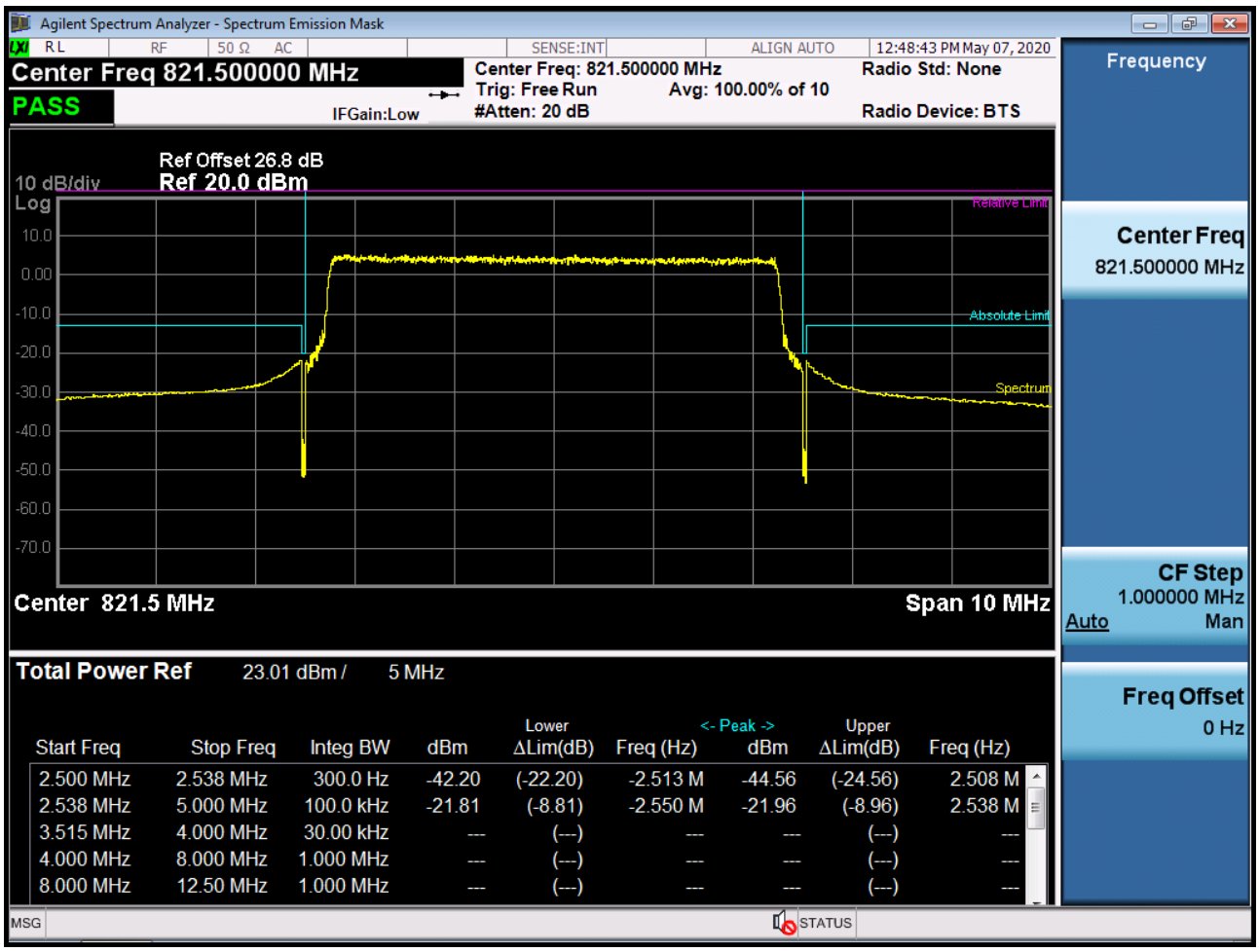
BAND 26. Upper Channel Edge Plot (3M BW Ch.26775 QPSK_RB15_Offset 0)

Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
1.500 MHz	1.538 MHz	300.0 Hz	-39.17	(-19.17)	-1.501 M	-40.12	(-20.12)	1.503 M
1.538 MHz	3.000 MHz	100.0 kHz	-20.82	(-7.82)	-1.545 M	-20.50	(-7.50)	1.538 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Upper Channel Edge Plot (5M BW Ch.26765 QPSK_RB1_Offset 24)

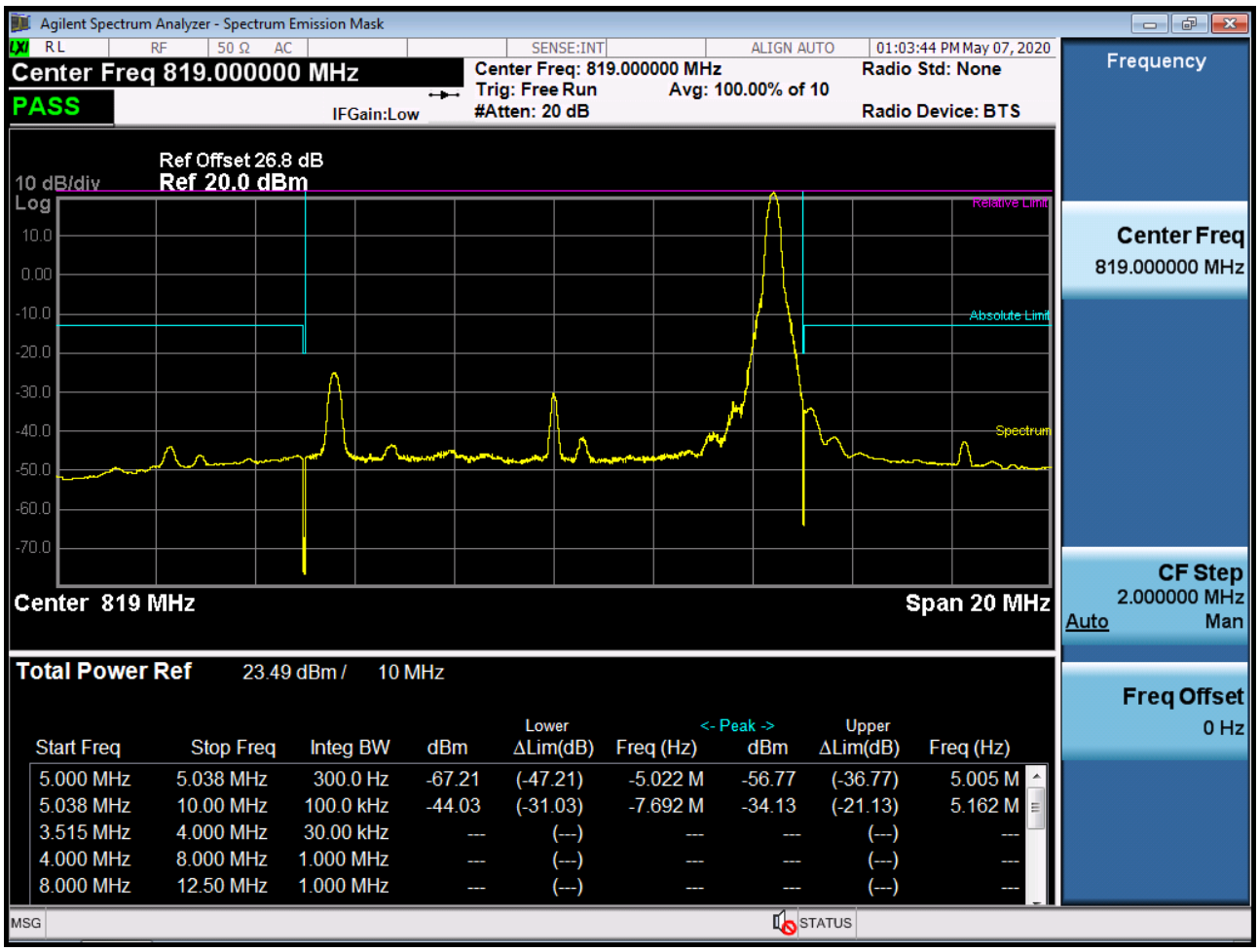


BAND 26. Upper Channel Edge Plot (5M BW Ch.26765 QPSK_RB25_Offset 0)

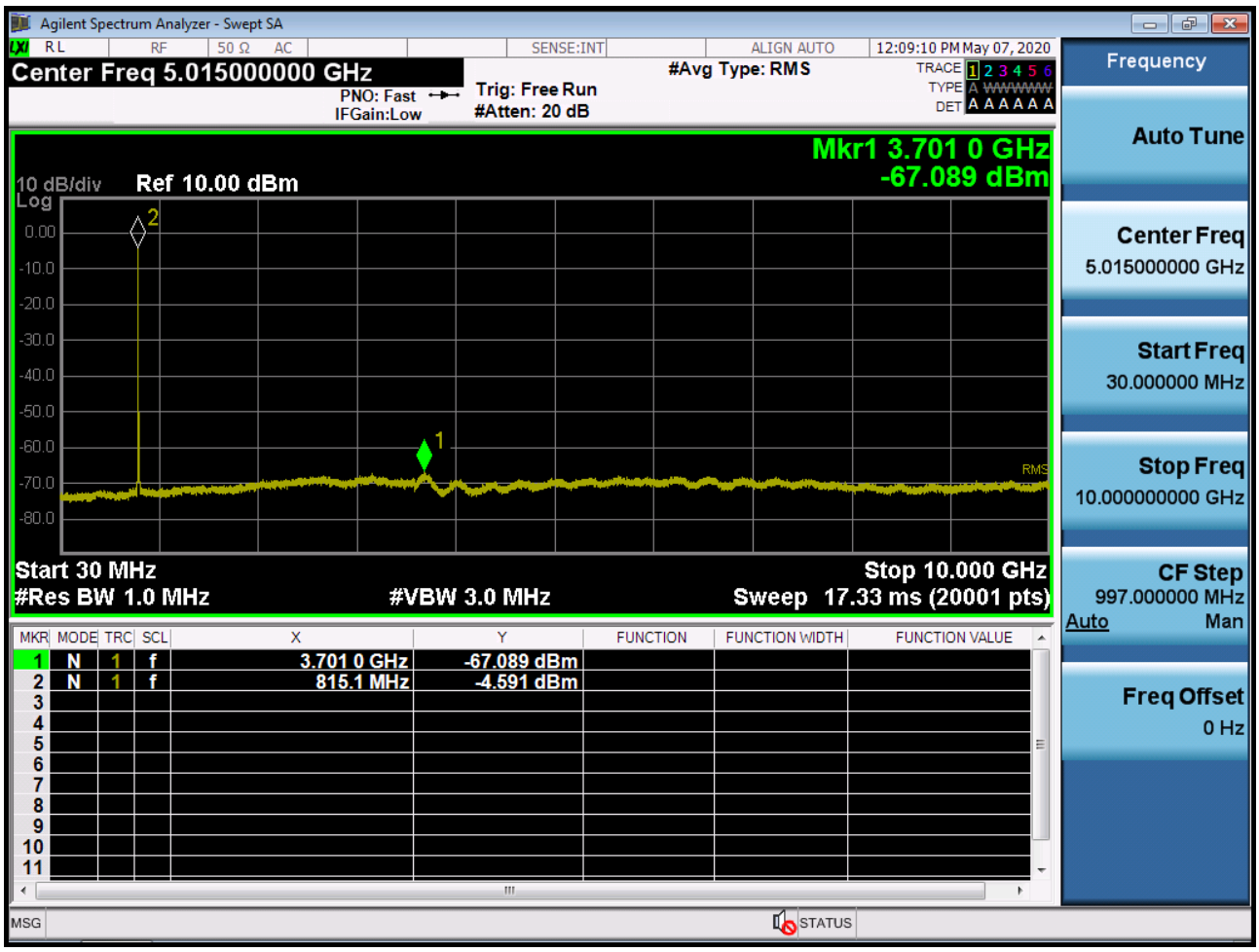


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
2.500 MHz	2.538 MHz	300.0 Hz	-42.20	(-22.20)	-2.513 M	-44.56	(-24.56)	2.508 M
2.538 MHz	5.000 MHz	100.0 kHz	-21.81	(-8.81)	-2.550 M	-21.96	(-8.96)	2.538 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

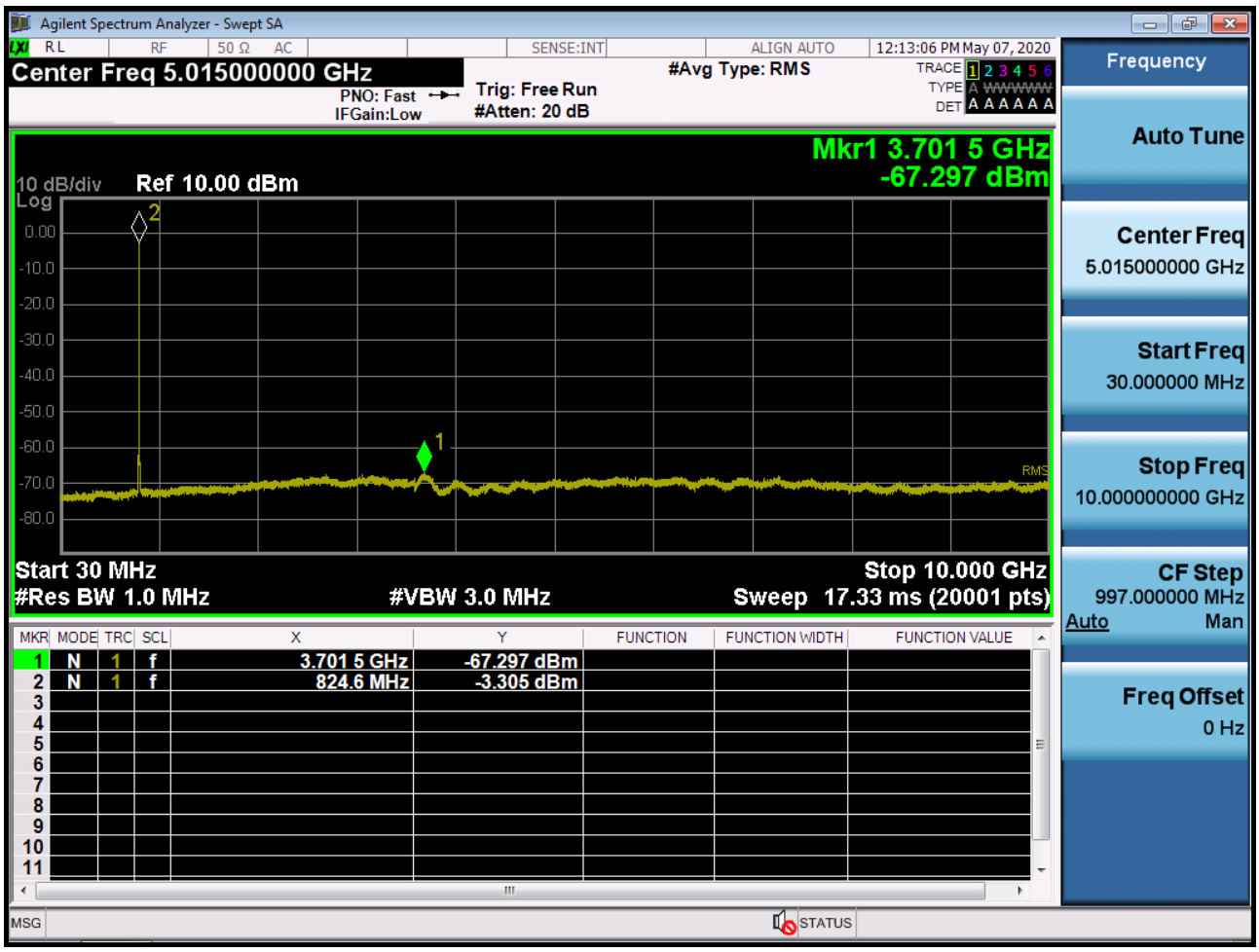
BAND 26. Mid Channel Edge Plot (10M BW Ch. 26740 QPSK_RB1_Offset 49)



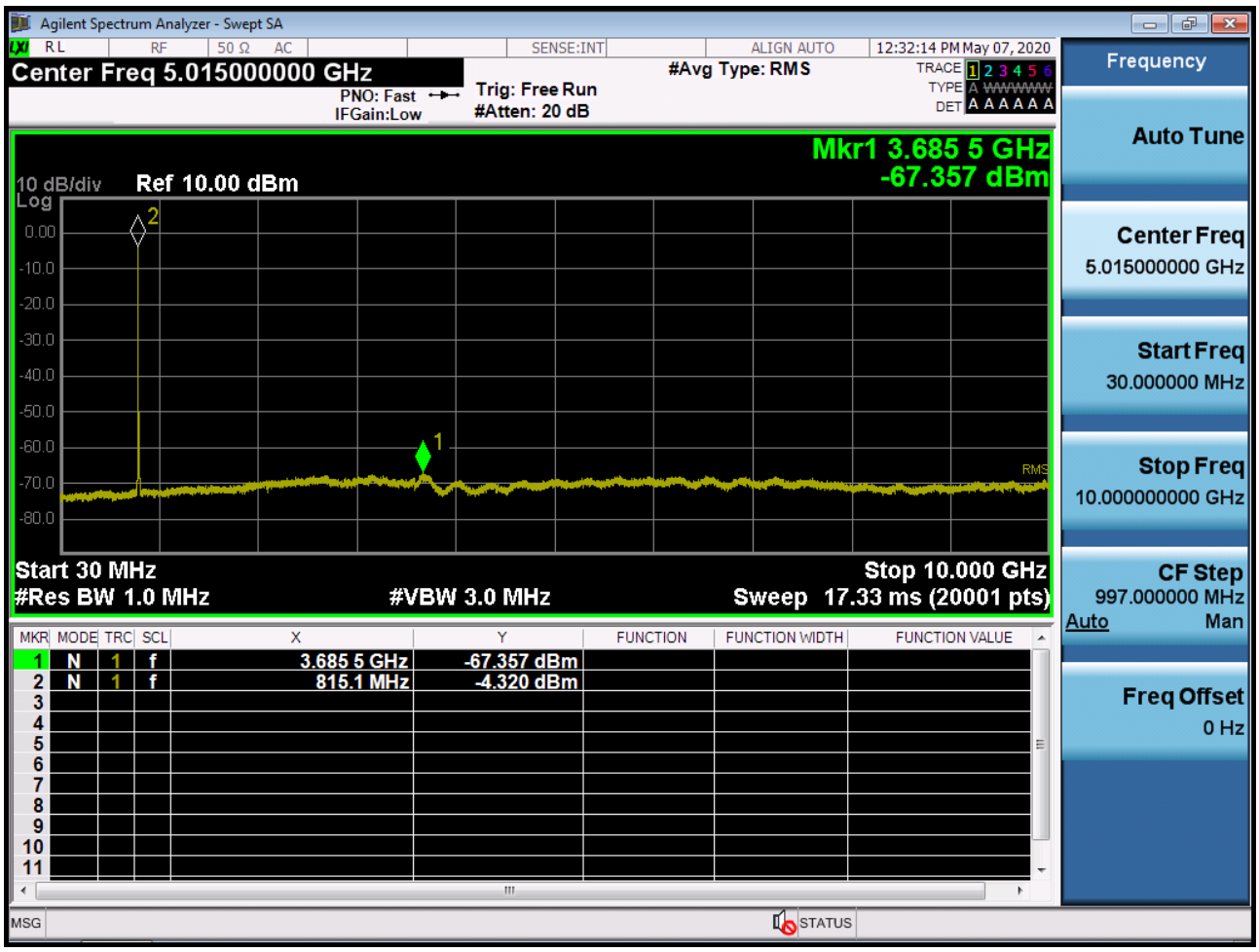
BAND 26. Conducted Spurious (26697 ch_1.4MHz_QPSK_RB 1_0)



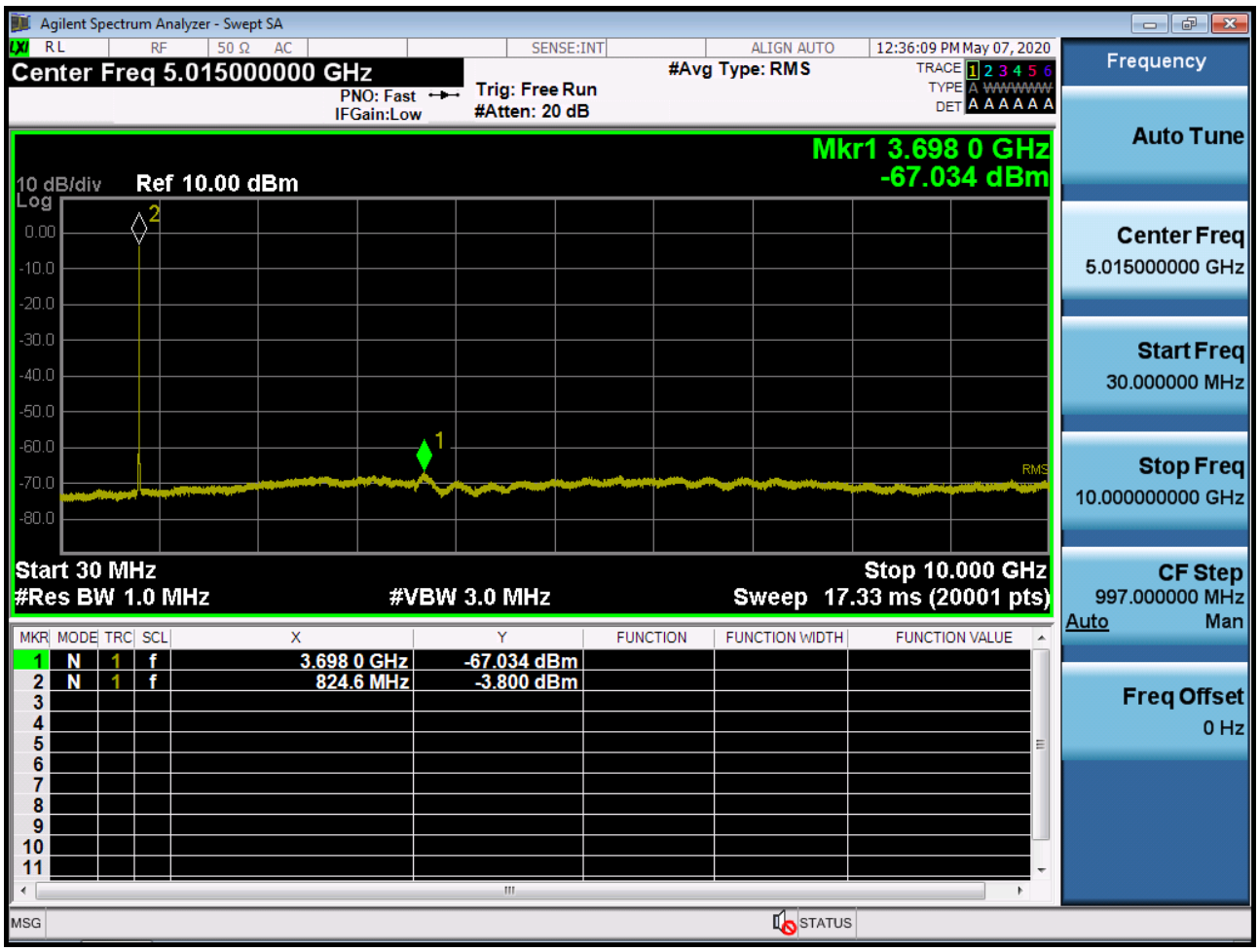
BAND 26. Conducted Spurious (26783 ch_1.4MHz_QPSK_RB 1_0)



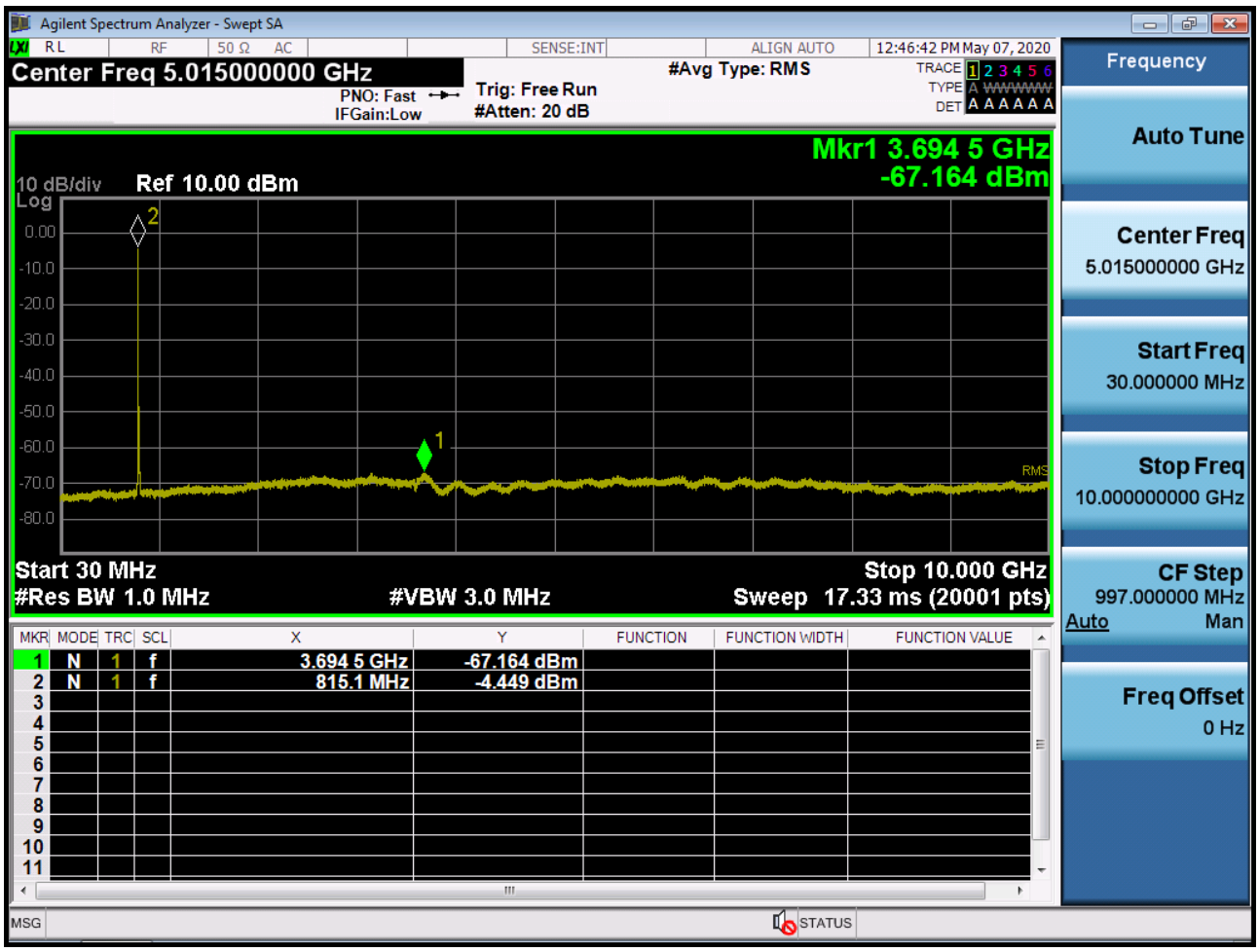
BAND 26. Conducted Spurious (26705 ch_3MHz_QPSK_RB 1_0)



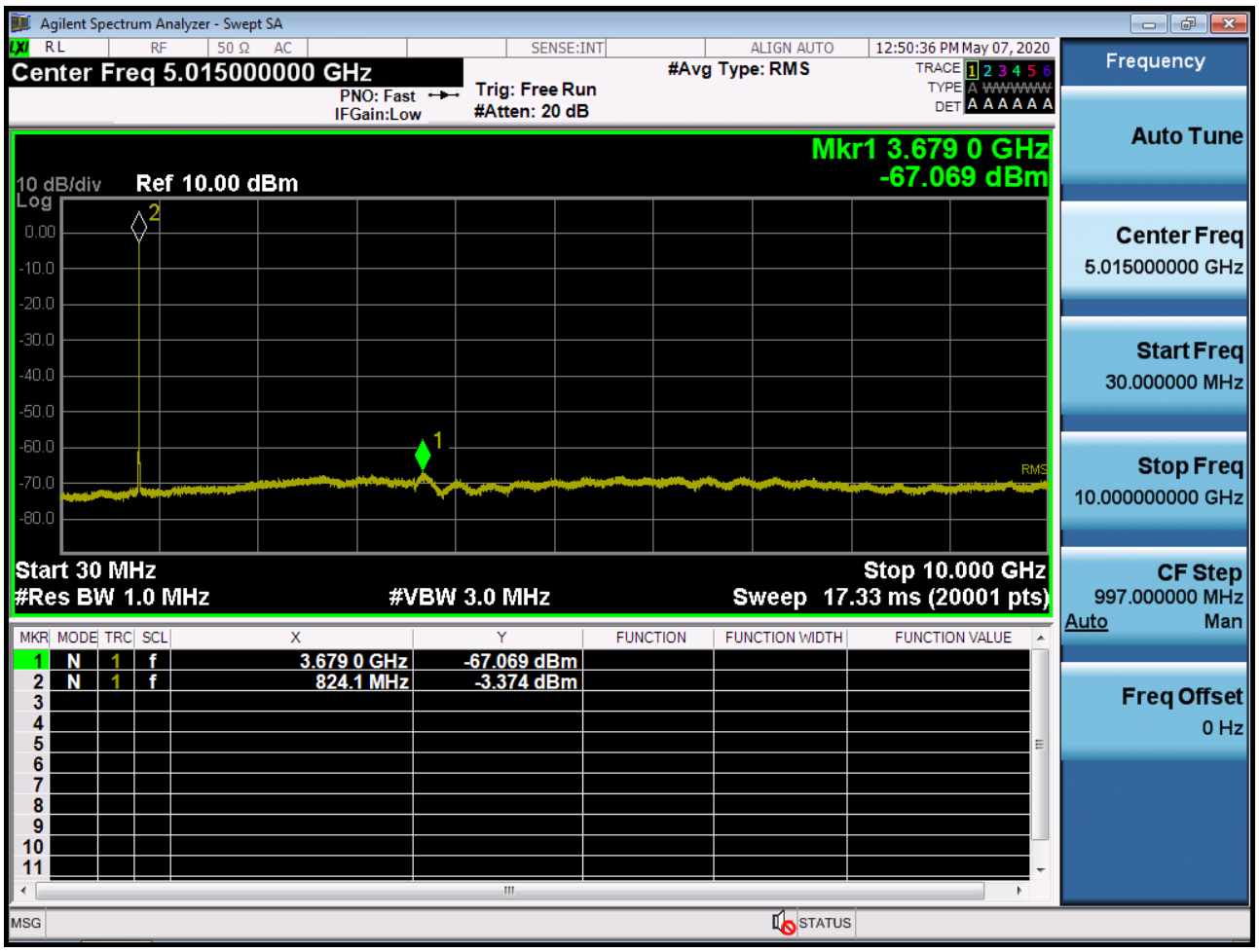
BAND 26. Conducted Spurious (26775 ch_3MHz_QPSK_RB 1_0)



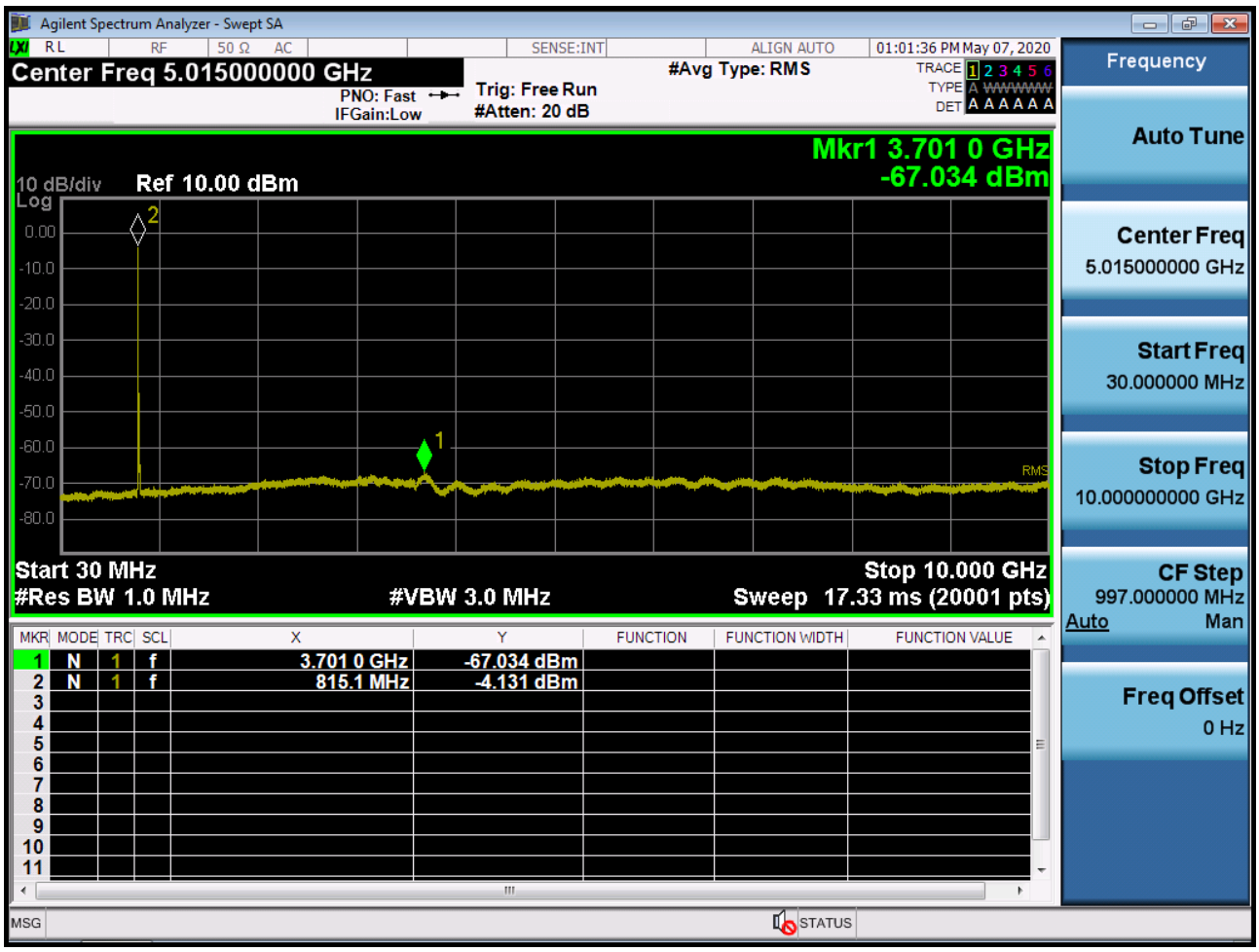
BAND 26. Conducted Spurious (26715 ch_5MHz_QPSK_RB 1_0)



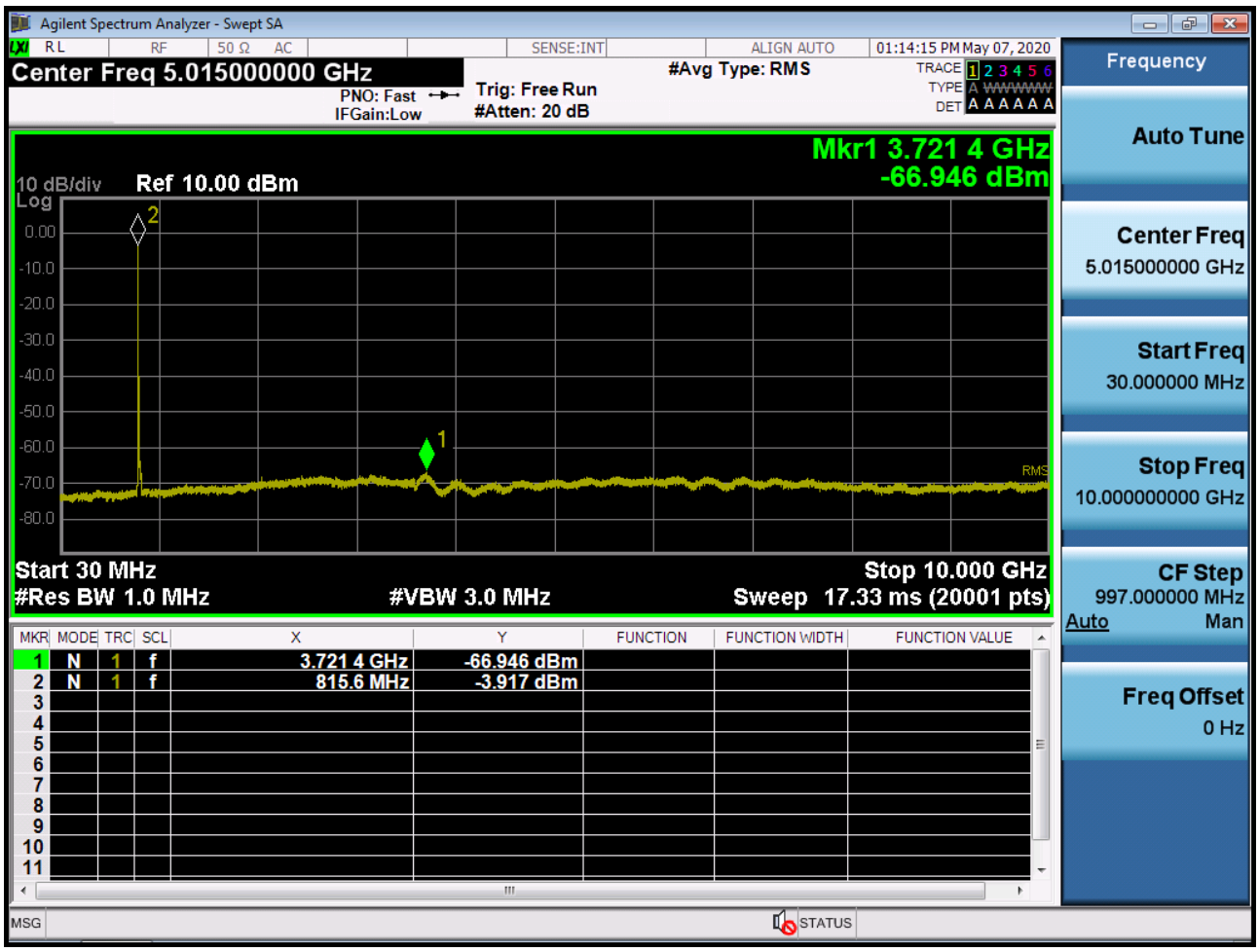
BAND 26. Conducted Spurious (26765 ch_5MHz_QPSK_RB 1_0)



BAND 26. Conducted Spurious (26740 ch_10MHz_QPSK_RB 1_0)

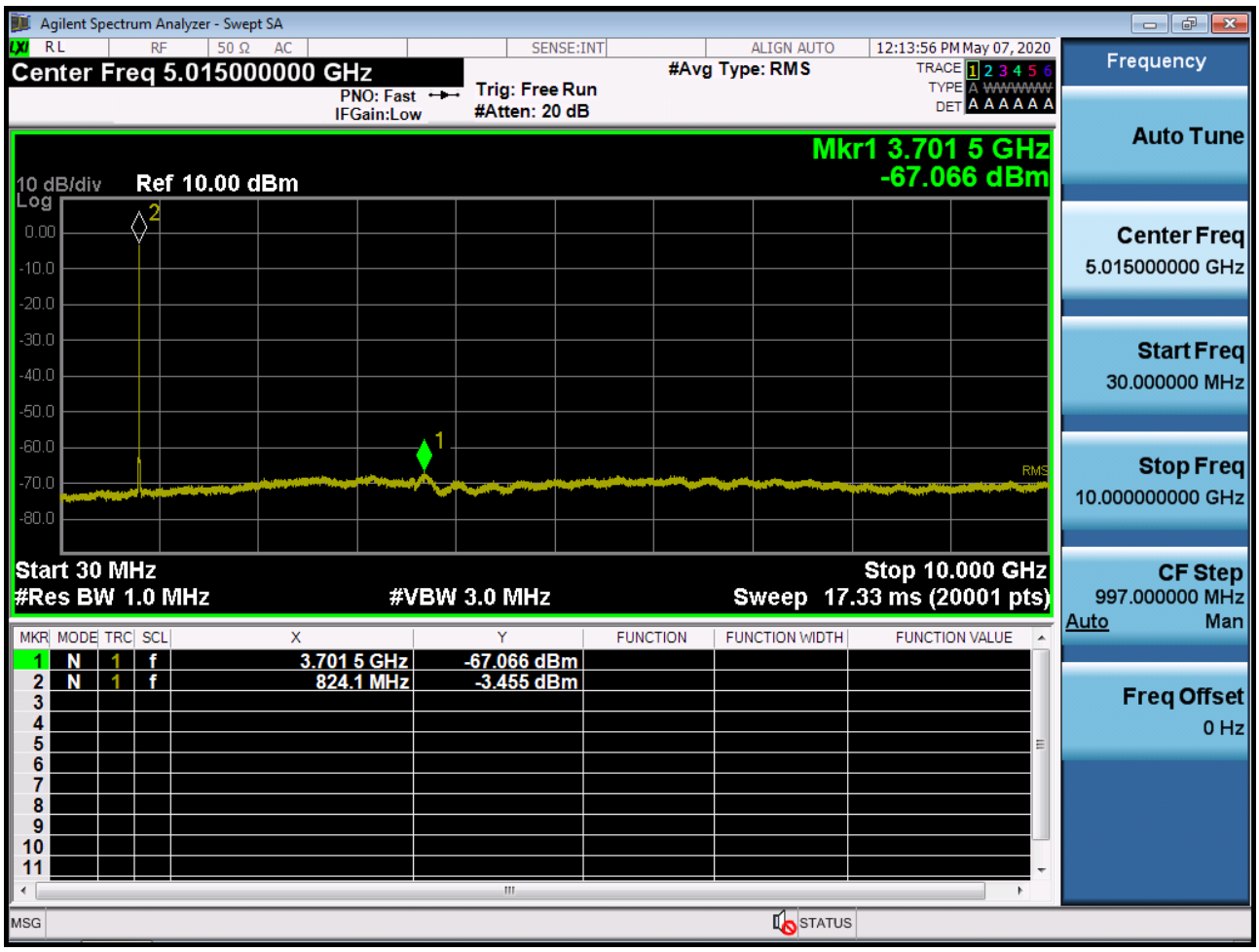


BAND 26. Conducted Spurious (26765 ch_15MHz_QPSK_RB 1_0)

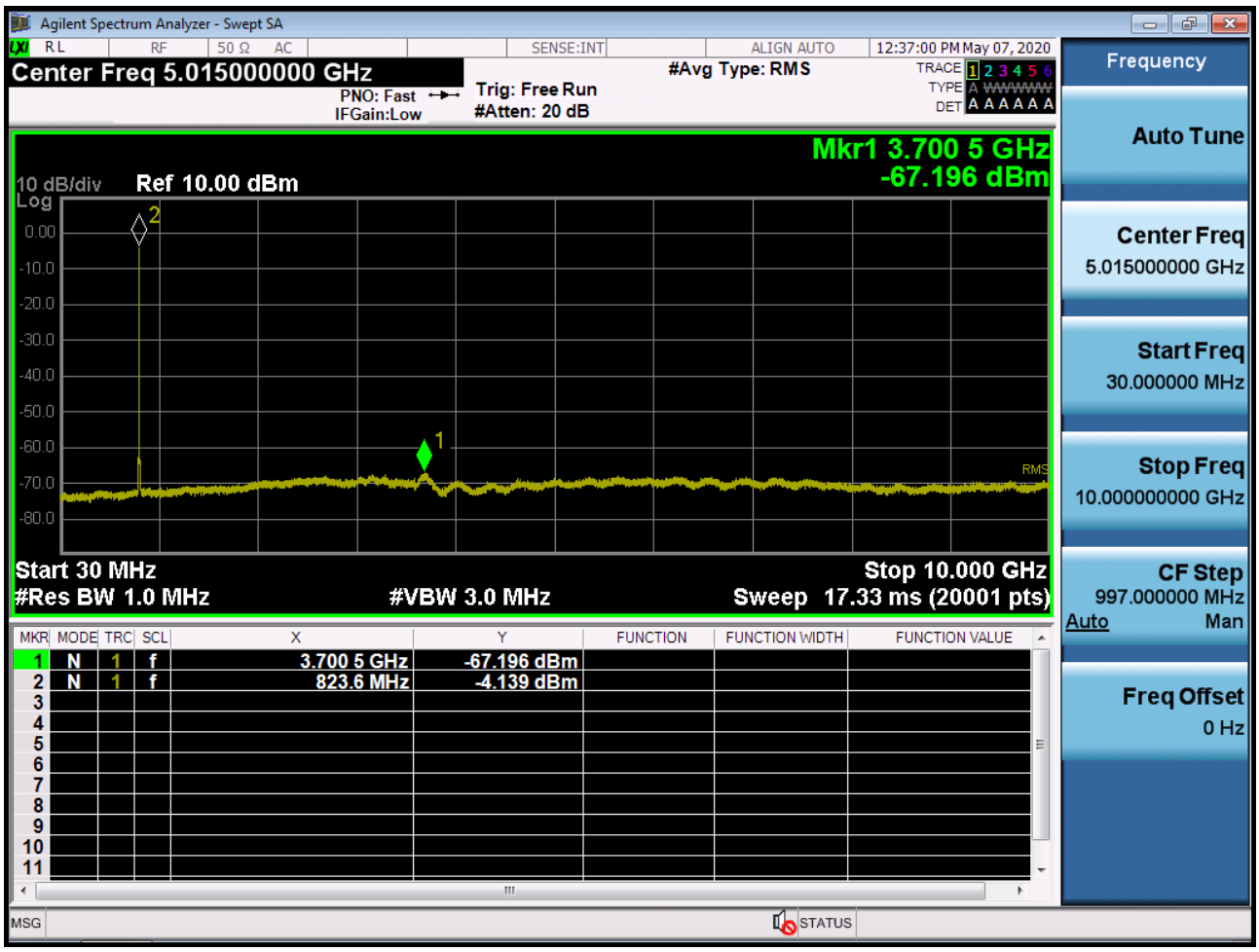


10. TEST PLOTS (STRADDLE CHANNEL)

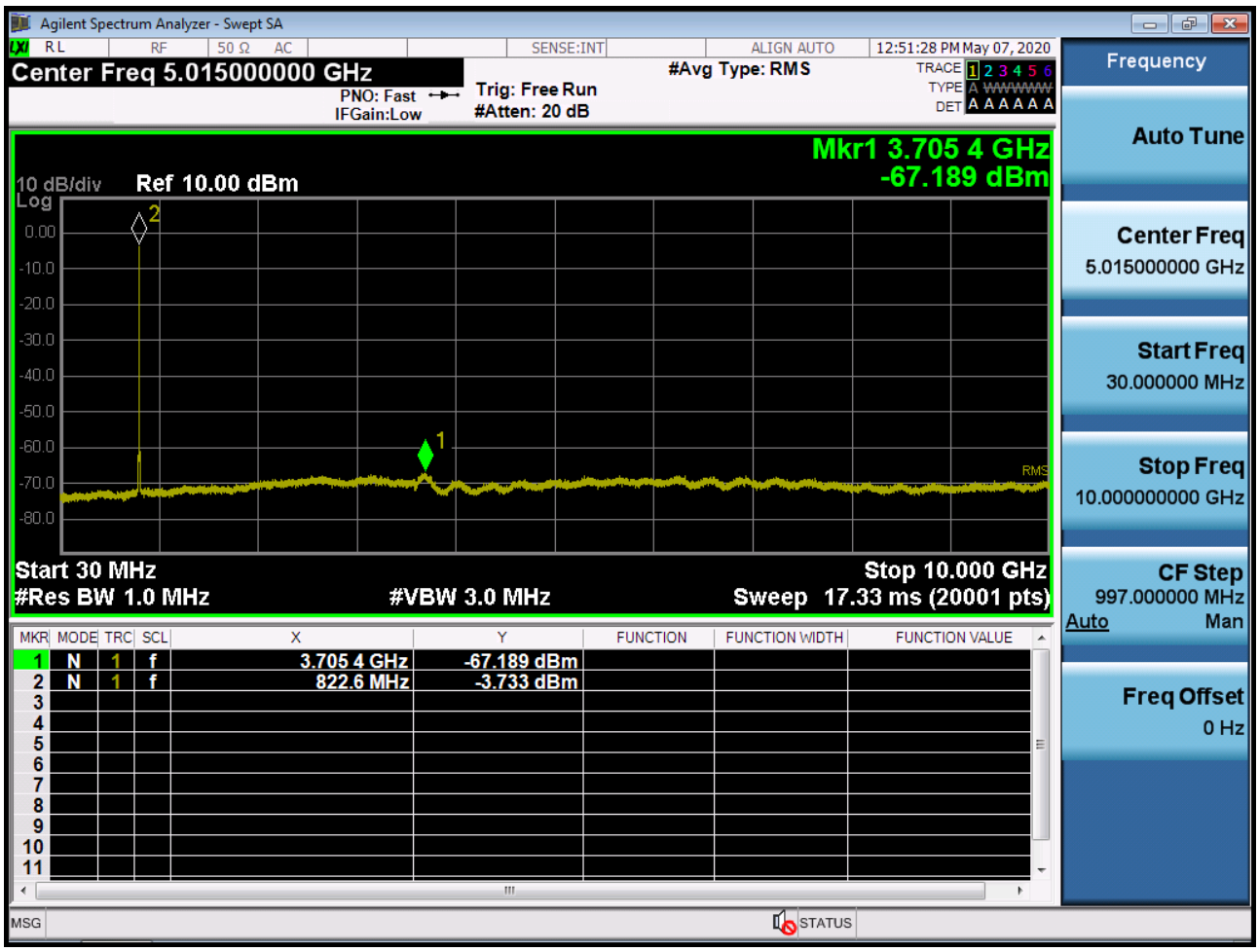
BAND 26. Conducted Spurious (1.4MHz_QPSK_RB 1_0)



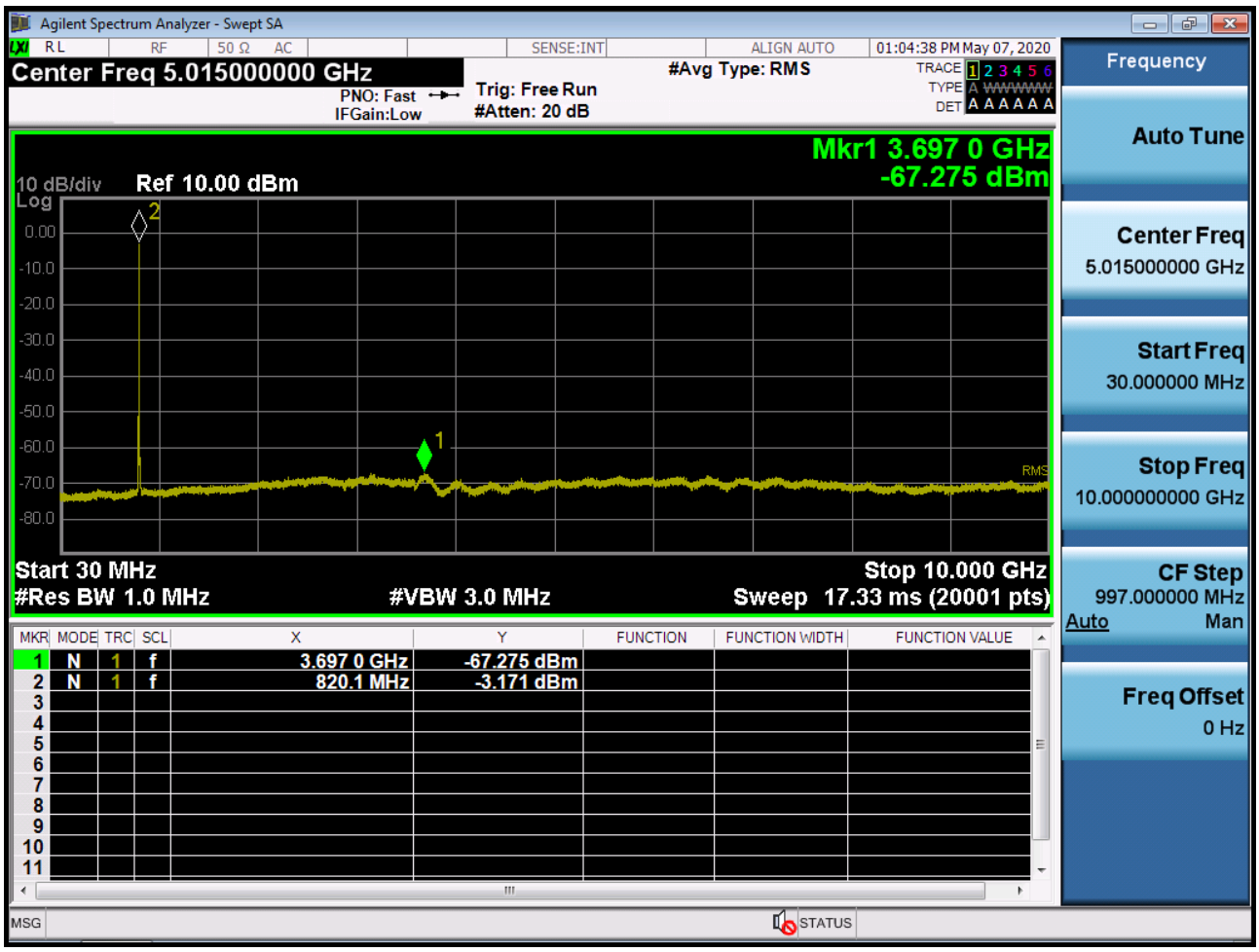
BAND 26. Conducted Spurious (3MHz_QPSK_RB 1_0)



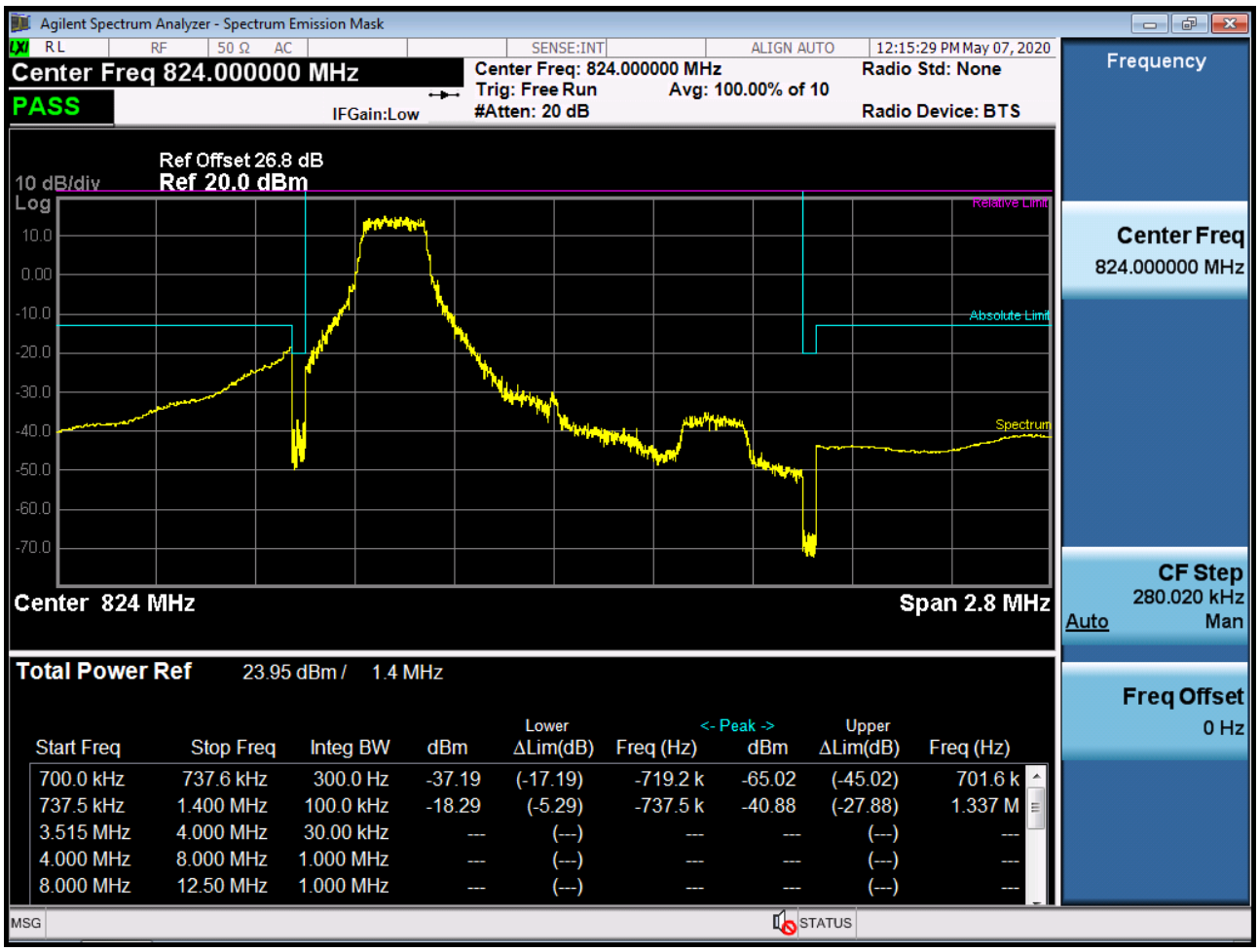
BAND 26. Conducted Spurious (5MHz_QPSK_RB 1_0)



BAND 26. Conducted Spurious (10MHz_QPSK_RB 1_0)

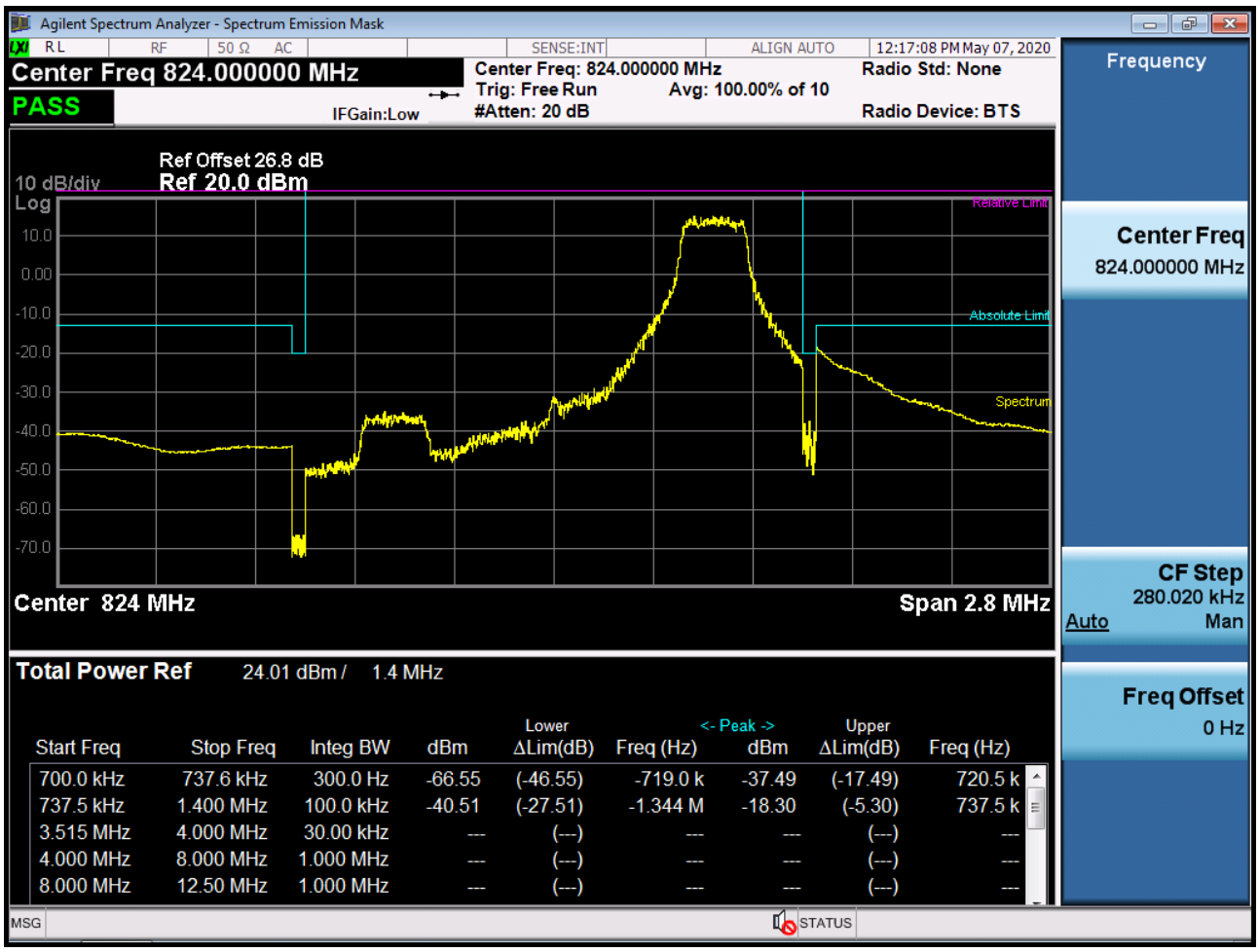


BAND 26. Channel Edge (1.4MHz_QPSK_RB 1_0)



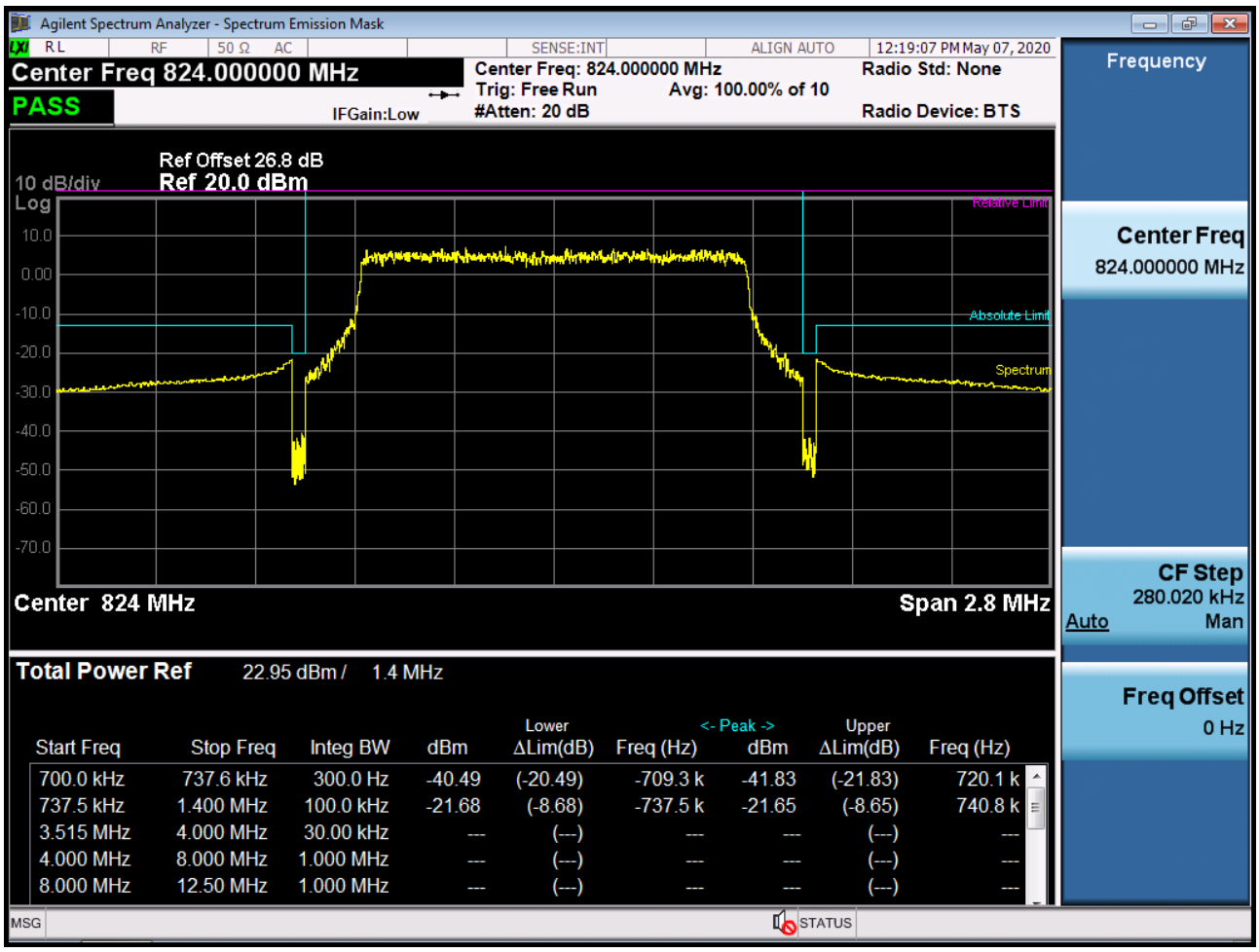
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-37.19	(-17.19)	-719.2 k	-65.02	(-45.02)	701.6 k
737.5 kHz	1.400 MHz	100.0 kHz	-18.29	(-5.29)	-737.5 k	-40.88	(-27.88)	1.337 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Channel Edge (1.4MHz_QPSK_RB 1_5)

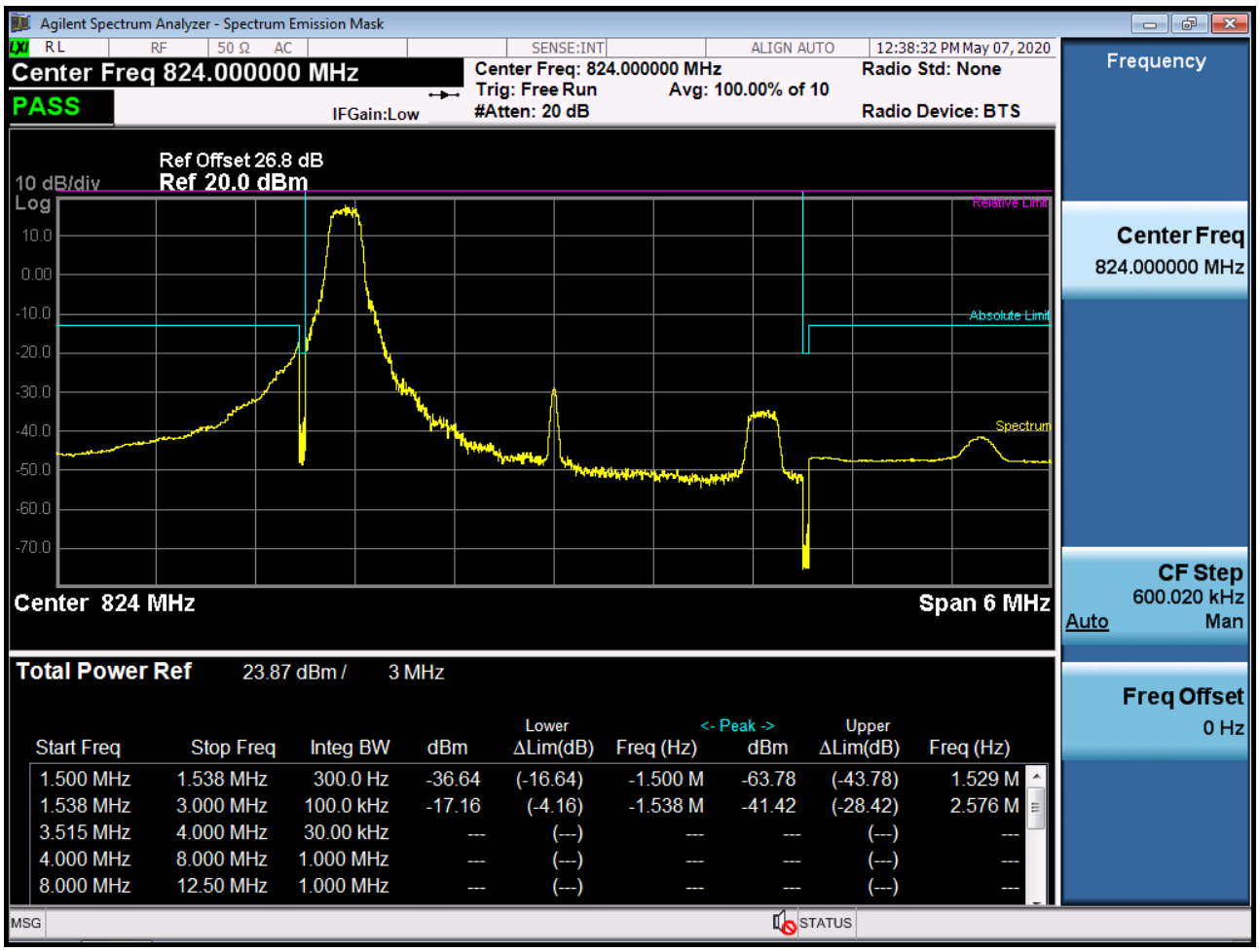


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
700.0 kHz	737.6 kHz	300.0 Hz	-66.55	(-46.55)	-719.0 k	-37.49	(-17.49)	720.5 k
737.5 kHz	1.400 MHz	100.0 kHz	-40.51	(-27.51)	-1.344 M	-18.30	(-5.30)	737.5 k
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Channel Edge (1.4MHz_QPSK_Full RB)

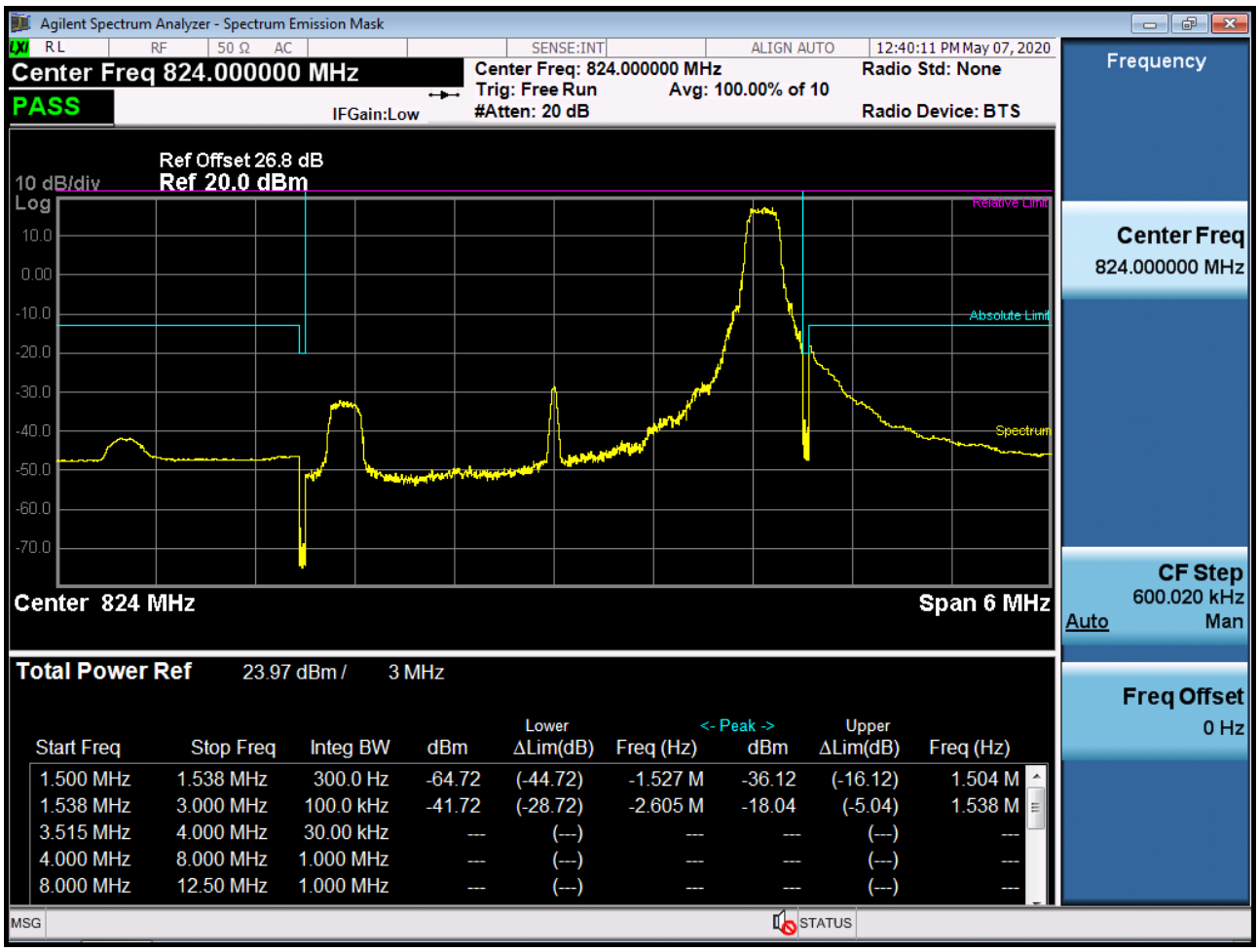


BAND 26. Channel Edge (3MHz_QPSK_RB 1_0)

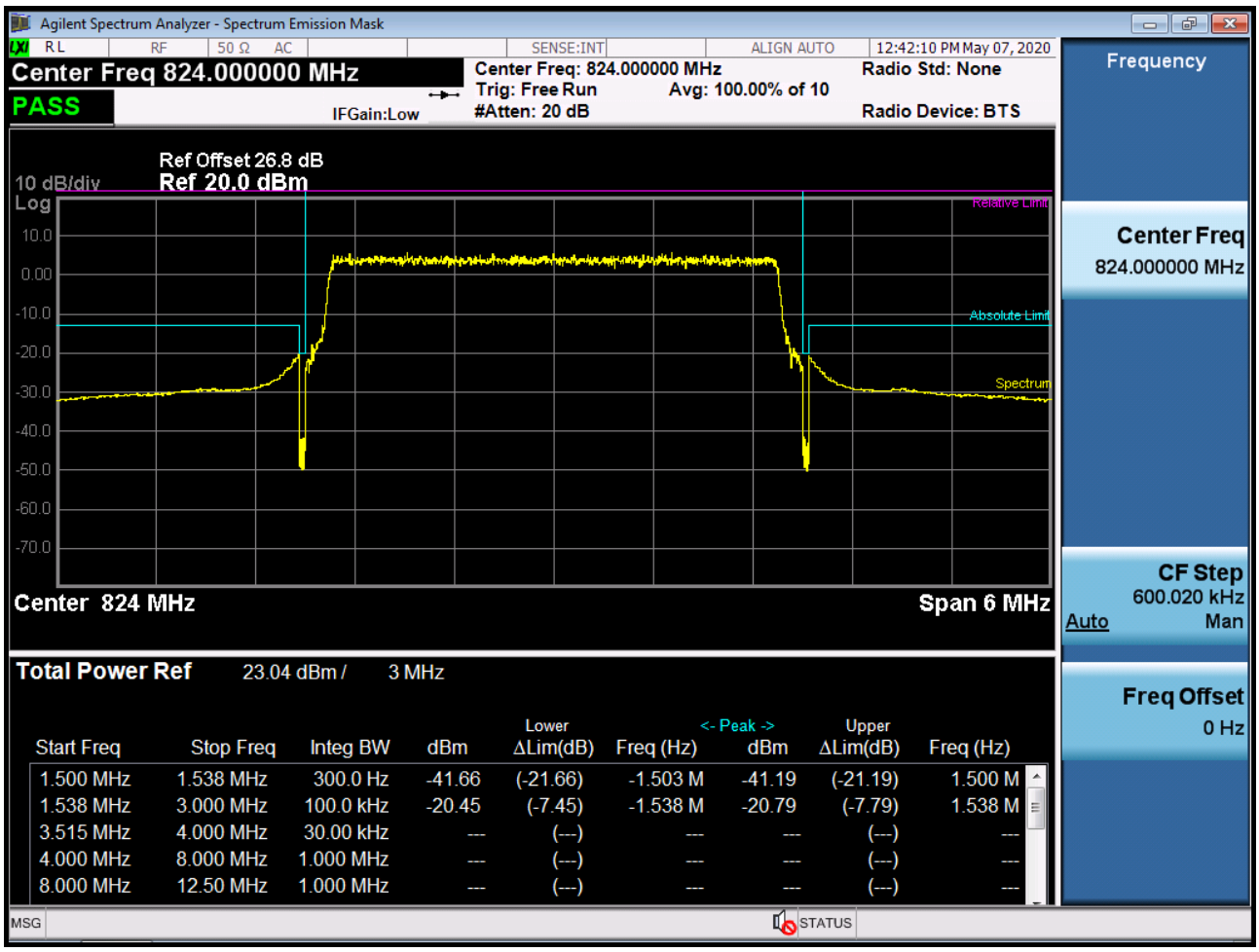


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
1.500 MHz	1.538 MHz	300.0 Hz	-36.64	(-16.64)	-1.500 M	-63.78	(-43.78)	1.529 M
1.538 MHz	3.000 MHz	100.0 kHz	-17.16	(-4.16)	-1.538 M	-41.42	(-28.42)	2.576 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

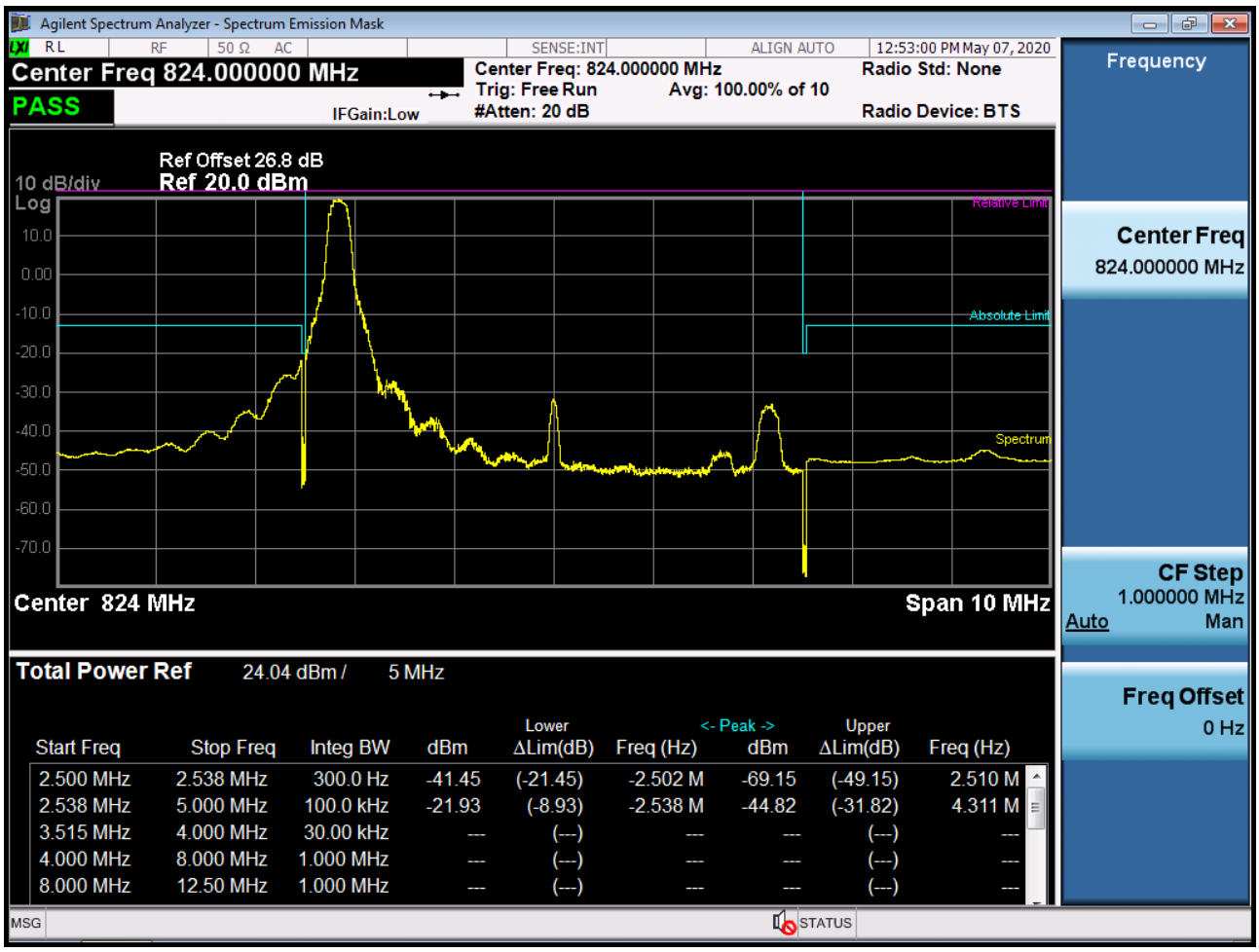
BAND 26. Channel Edge (3MHz_QPSK_RB 1_14)



BAND 26. Channel Edge (3MHz_QPSK_Full RB)

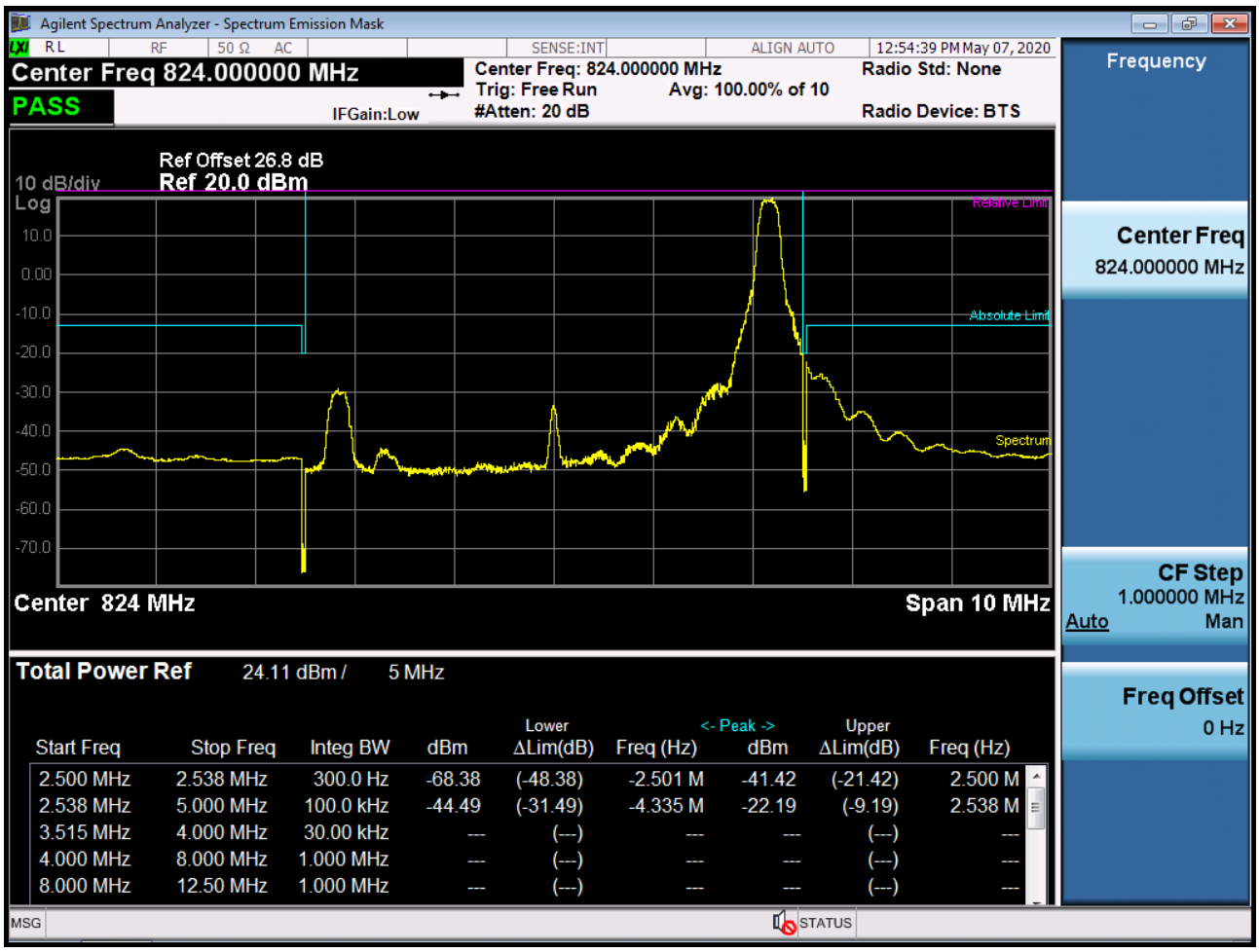


BAND 26. Channel Edge (5MHz_QPSK_RB 1_0)

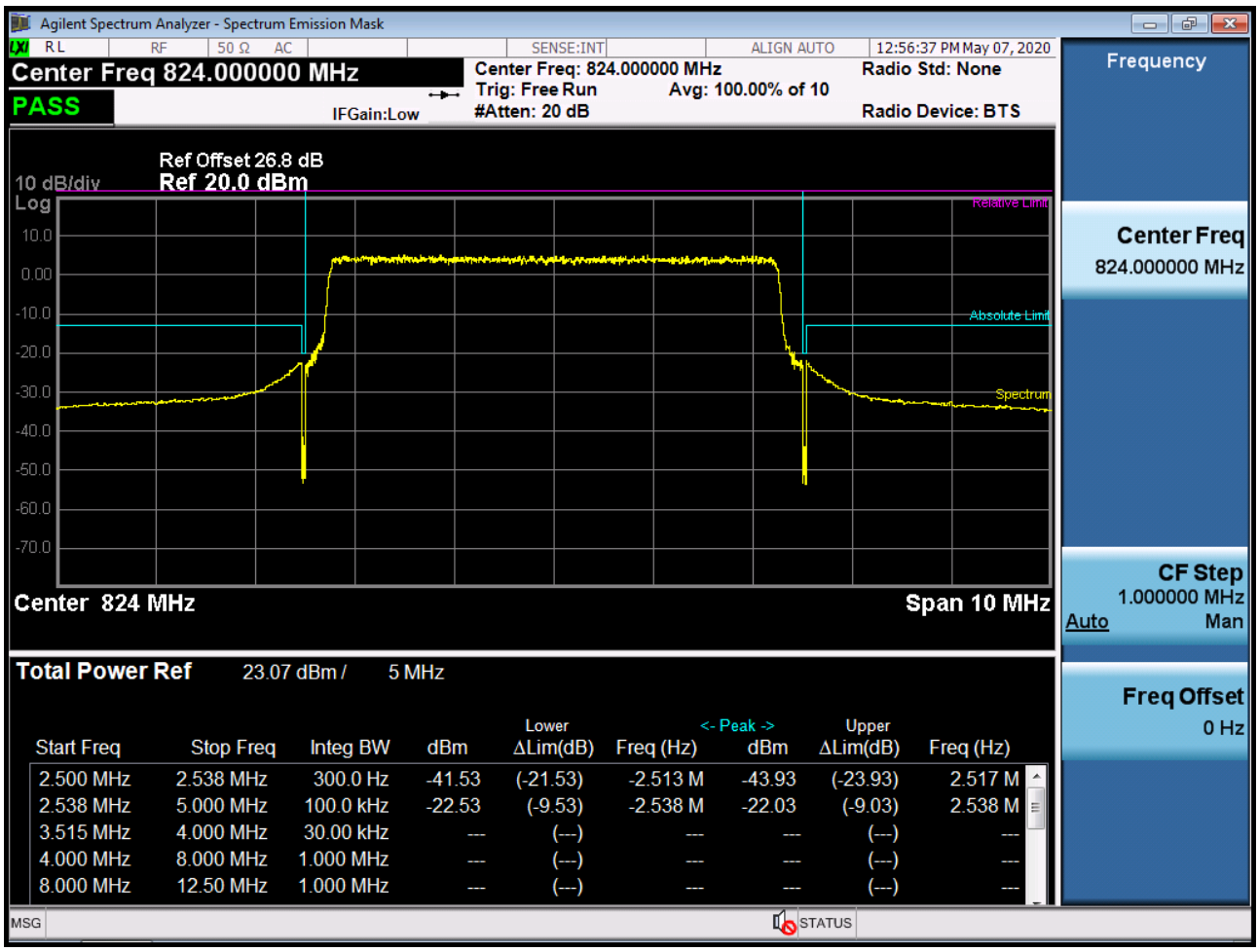


Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
2.500 MHz	2.538 MHz	300.0 Hz	-41.45	(-21.45)	-2.502 M	-69.15	(-49.15)	2.510 M
2.538 MHz	5.000 MHz	100.0 kHz	-21.93	(-8.93)	-2.538 M	-44.82	(-31.82)	4.311 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

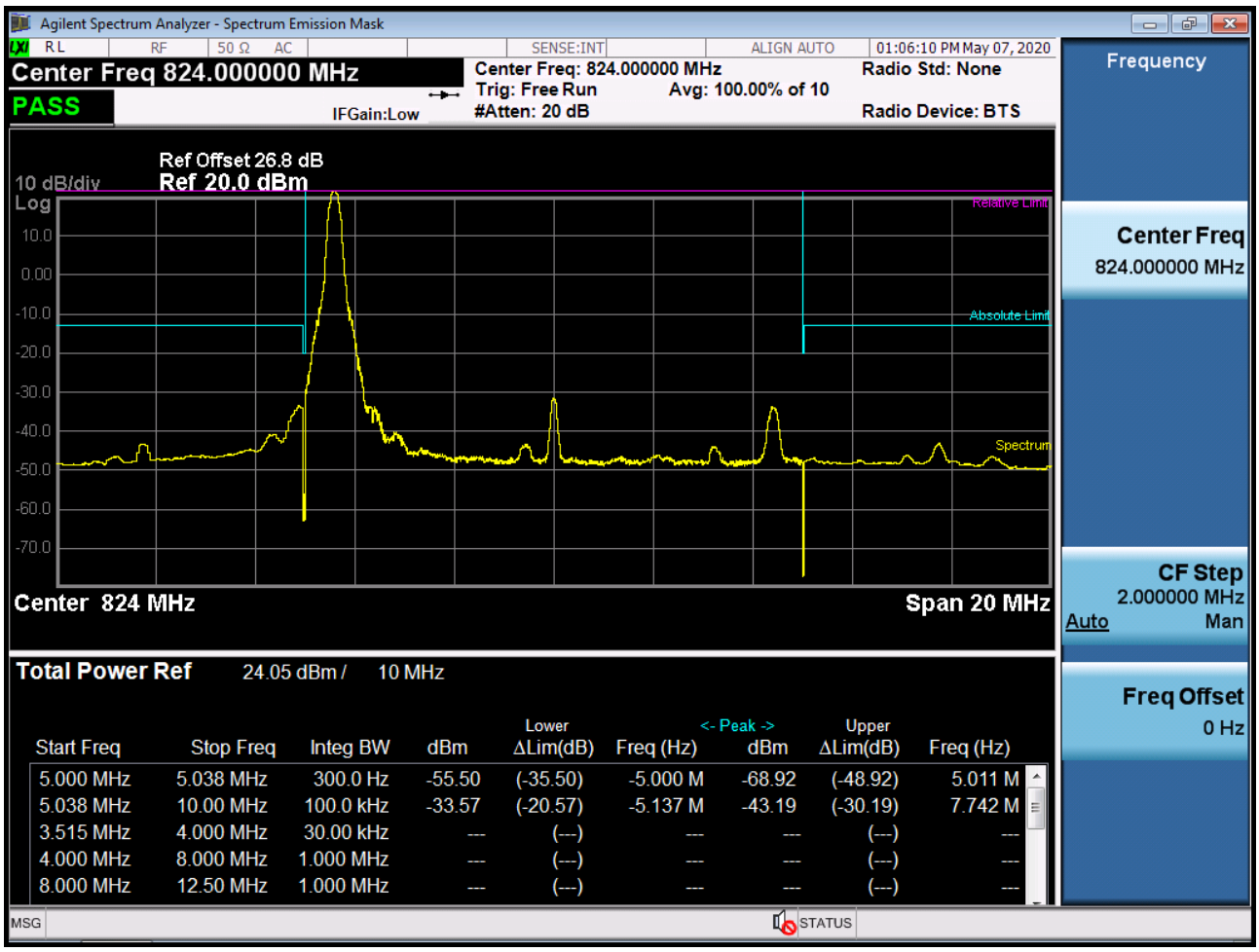
BAND 26. Channel Edge (5MHz_QPSK_RB 1_24)



BAND 26. Channel Edge (5MHz_QPSK_Full RB)

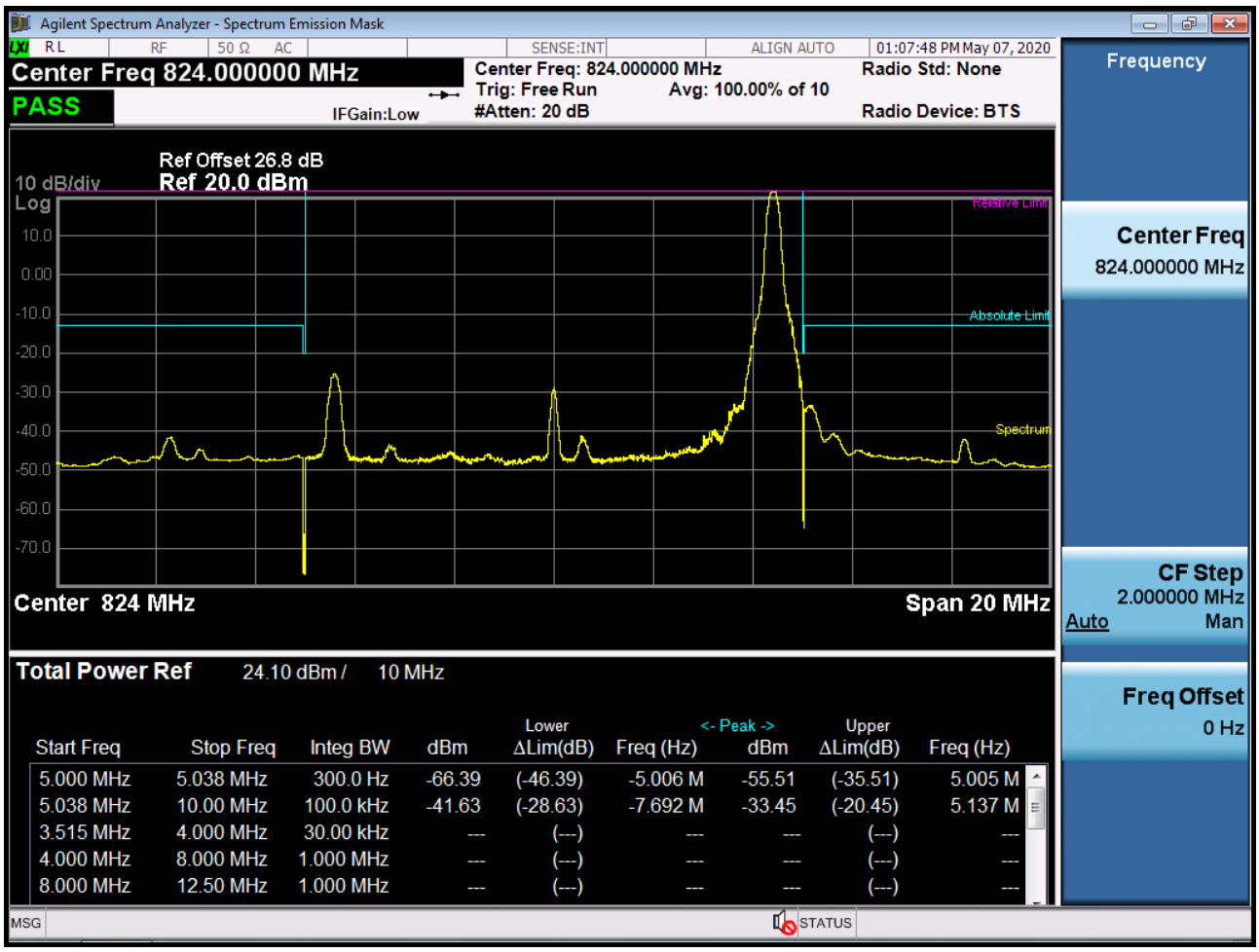


BAND 26. Channel Edge (10MHz_QPSK_RB 1_0)



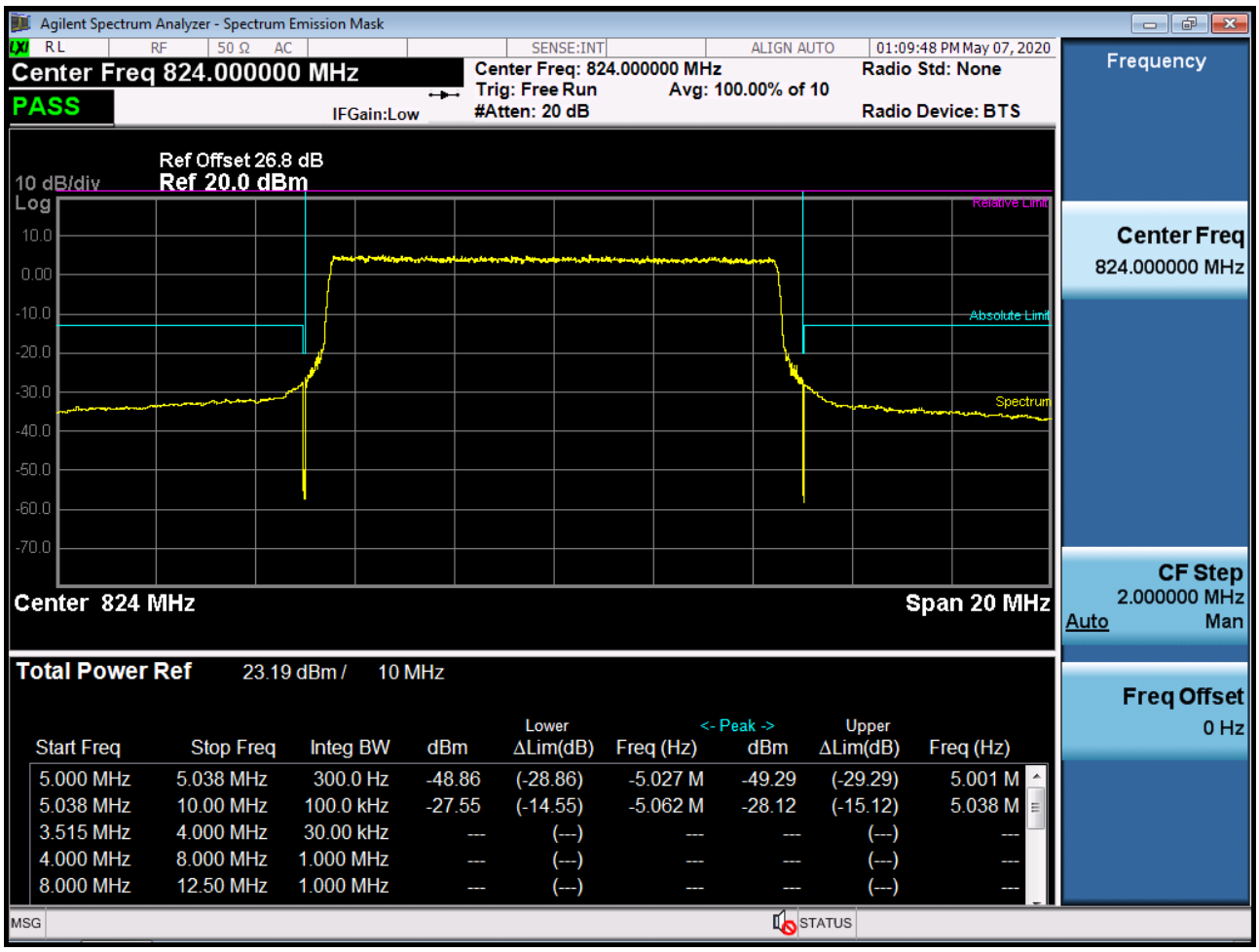
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
5.000 MHz	5.038 MHz	300.0 Hz	-55.50	(-35.50)	-5.000 M	-68.92	(-48.92)	5.011 M
5.038 MHz	10.00 MHz	100.0 kHz	-33.57	(-20.57)	-5.137 M	-43.19	(-30.19)	7.742 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Channel Edge (10MHz_QPSK_RB 1_49)



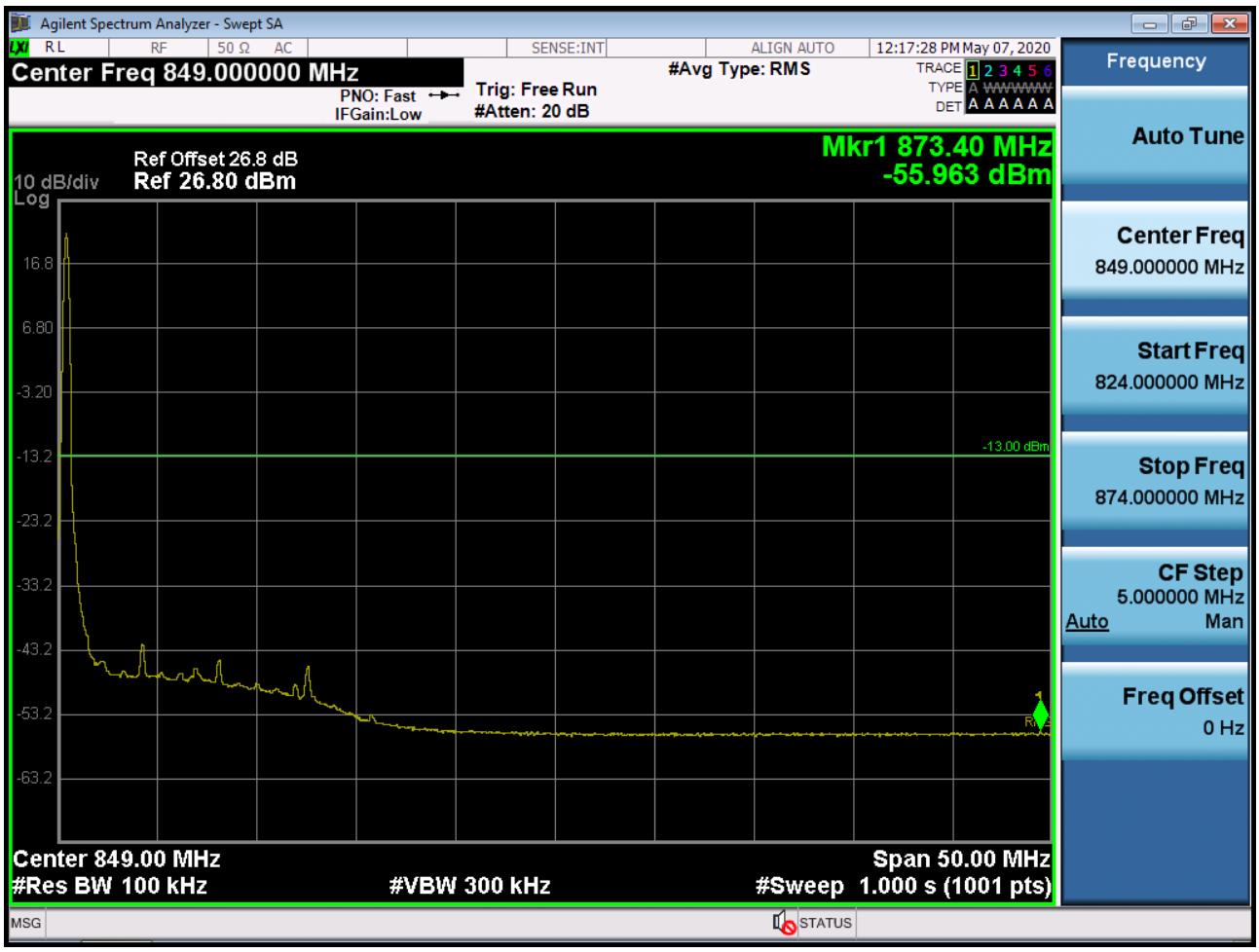
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	ΔLim(dB)	Upper Freq (Hz)
5.000 MHz	5.038 MHz	300.0 Hz	-66.39	(-46.39)	-5.006 M	-55.51	(-35.51)	5.005 M
5.038 MHz	10.00 MHz	100.0 kHz	-41.63	(-28.63)	-7.692 M	-33.45	(-20.45)	5.137 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Channel Edge (10MHz_QPSK_Full RB)



Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)
5.000 MHz	5.038 MHz	300.0 Hz	-48.86	(-28.86)	-5.027 M	-49.29	(-29.29)	5.001 M
5.038 MHz	10.00 MHz	100.0 kHz	-27.55	(-14.55)	-5.062 M	-28.12	(-15.12)	5.038 M
3.515 MHz	4.000 MHz	30.00 kHz	---	(---)	---	---	(---)	---
4.000 MHz	8.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---
8.000 MHz	12.50 MHz	1.000 MHz	---	(---)	---	---	(---)	---

BAND 26. Band Edge (1.4MHz_QPSK_RB 1_5)



BAND 26. Band Edge (1.4MHz_QPSK_FullRB)

BAND 26. Band Edge (3MHz_QPSK_RB 1_14)

BAND 26. Band Edge (3MHz_QPSK_ Full RB)

BAND 26. Band Edge (5MHz_QPSK_RB 1_24)

BAND 26. Band Edge (5MHz_QPSK_ Full RB)

BAND 26. Band Edge (10MHz_QPSK_RB 1_49)

BAND 26. Band Edge (10MHz_QPSK_ Full RB)

11 ANNEX A_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-2006-FC056-P