

BAND 12. Upper Band Edge Plot (3M BW Ch.23165 QPSK_RB1_Offset 14)-1



BAND 12. Upper Band Edge Plot (3M BW Ch.23165 QPSK_RB1_Offset 14)-2



BAND 12. Upper Band Edge Plot (3M BW Ch.23165 QPSK_RB15_Offset 0)



BAND 12. Upper Extended Band Edge Plot (3M BW Ch.23165 QPSK_RB15_0)



BAND 12 / 17. Upper Band Edge Plot (5M BW Ch.23155 QPSK_RB1_Offset 24)



BAND 12 / 17. Upper Band Edge Plot (5M BW Ch.23155 QPSK_RB25_Offset 0)



BAND 12 / 17. Upper Extended Band Edge Plot (5M BW Ch.23155 QPSK_RB25_0)



BAND 12 / 17. Upper Band Edge Plot (10M BW Ch.23130 QPSK_RB1_Offset 49)



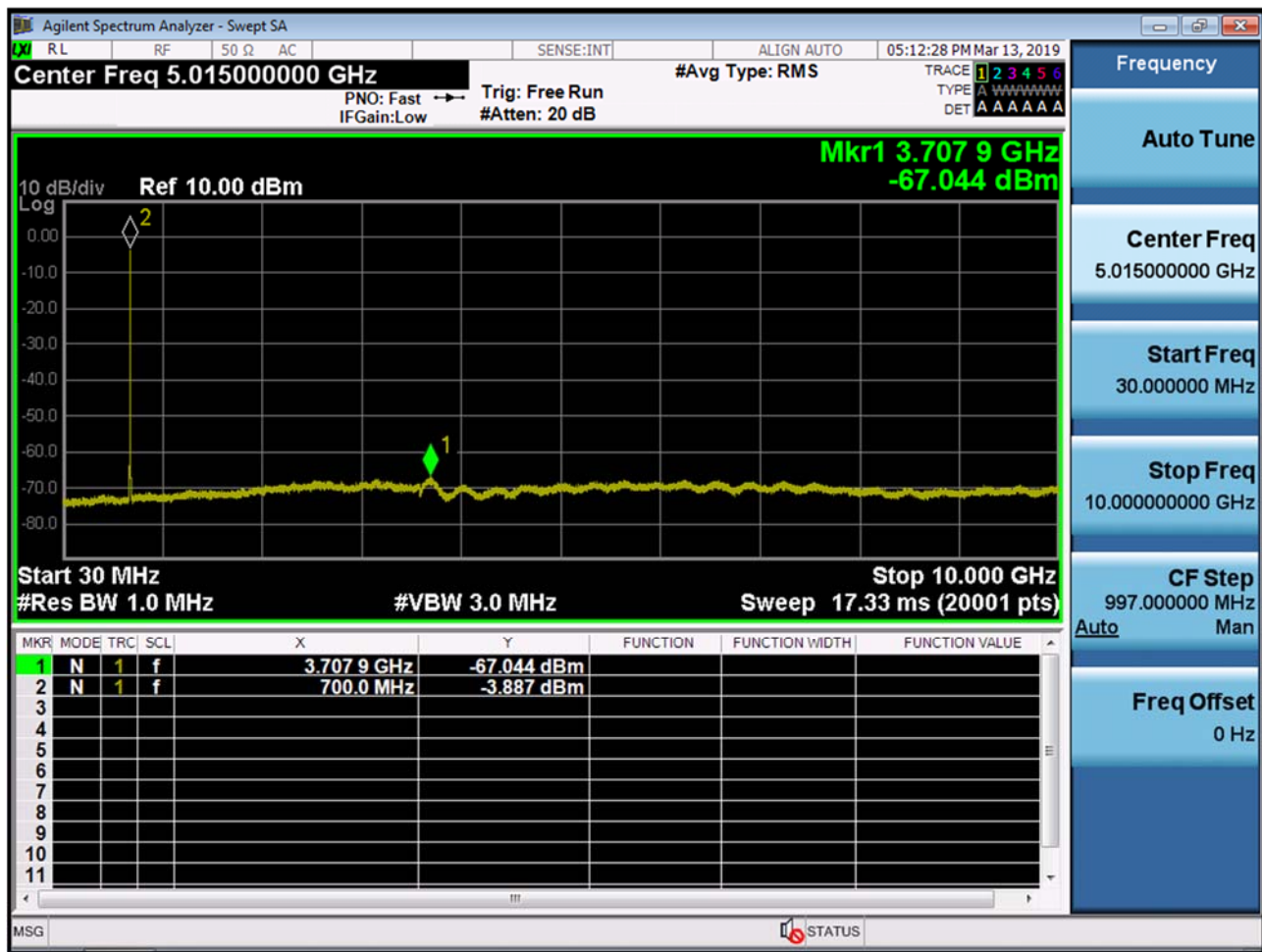
BAND 12 / 17. Upper Band Edge Plot (10M BW Ch.23130 QPSK_RB50_Offset 0)



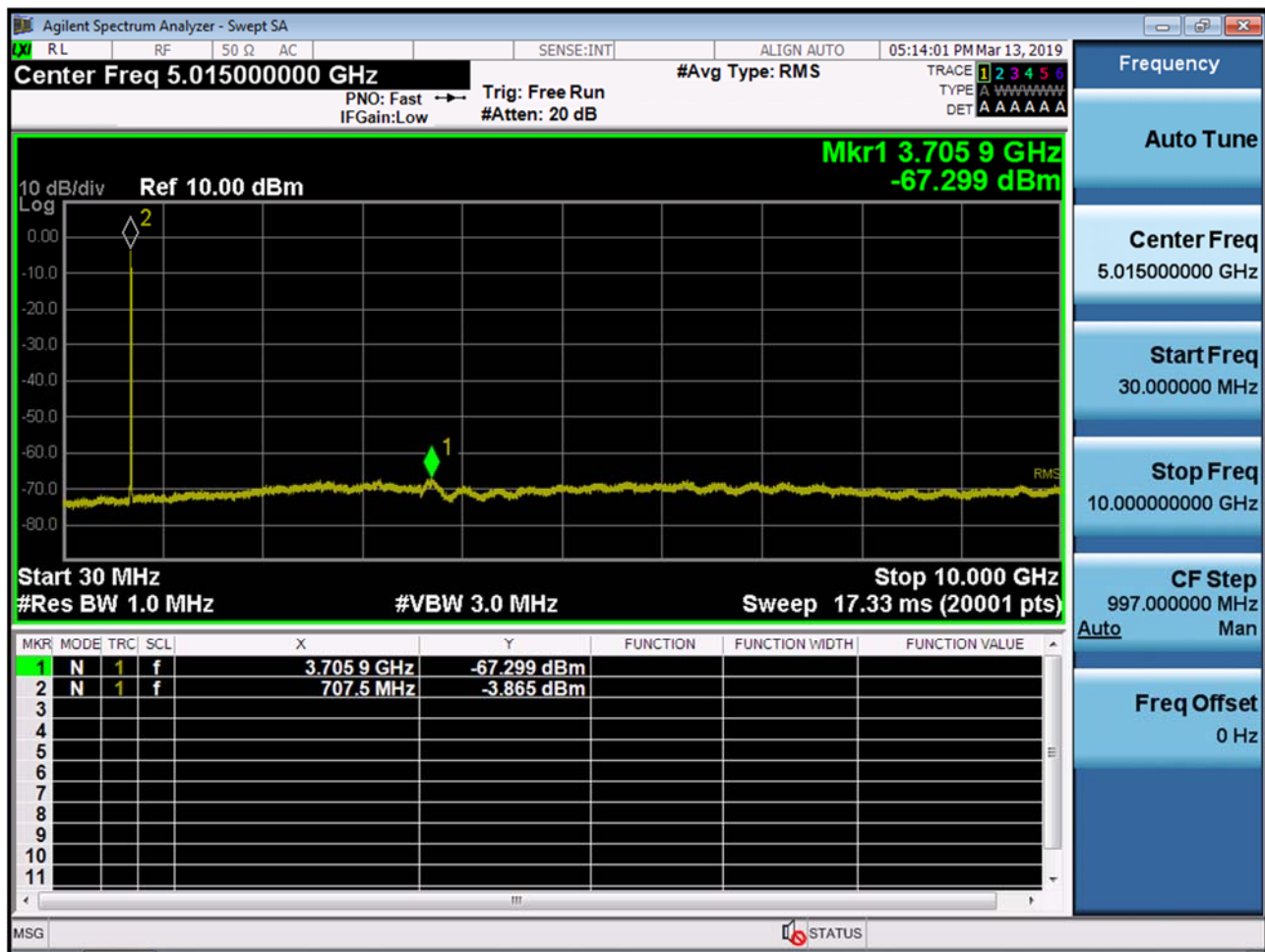
BAND 12 / 17. Upper Extended Band Edge Plot (10M BW Ch.23130 QPSK_RB50_0)



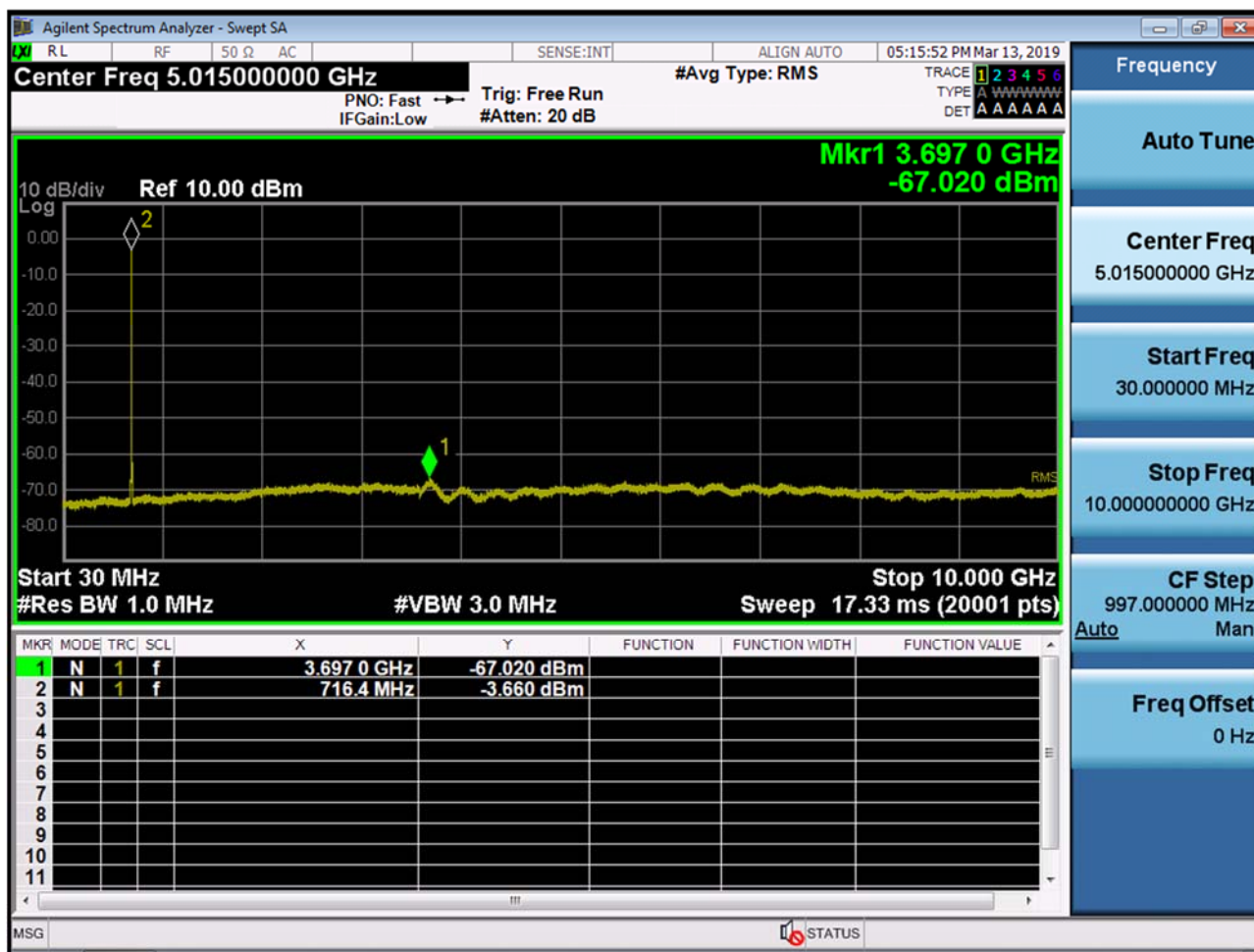
BAND 12. Conducted Spurious Plot _ (23017ch_1.4MHz_QPSK_RB 1_0)



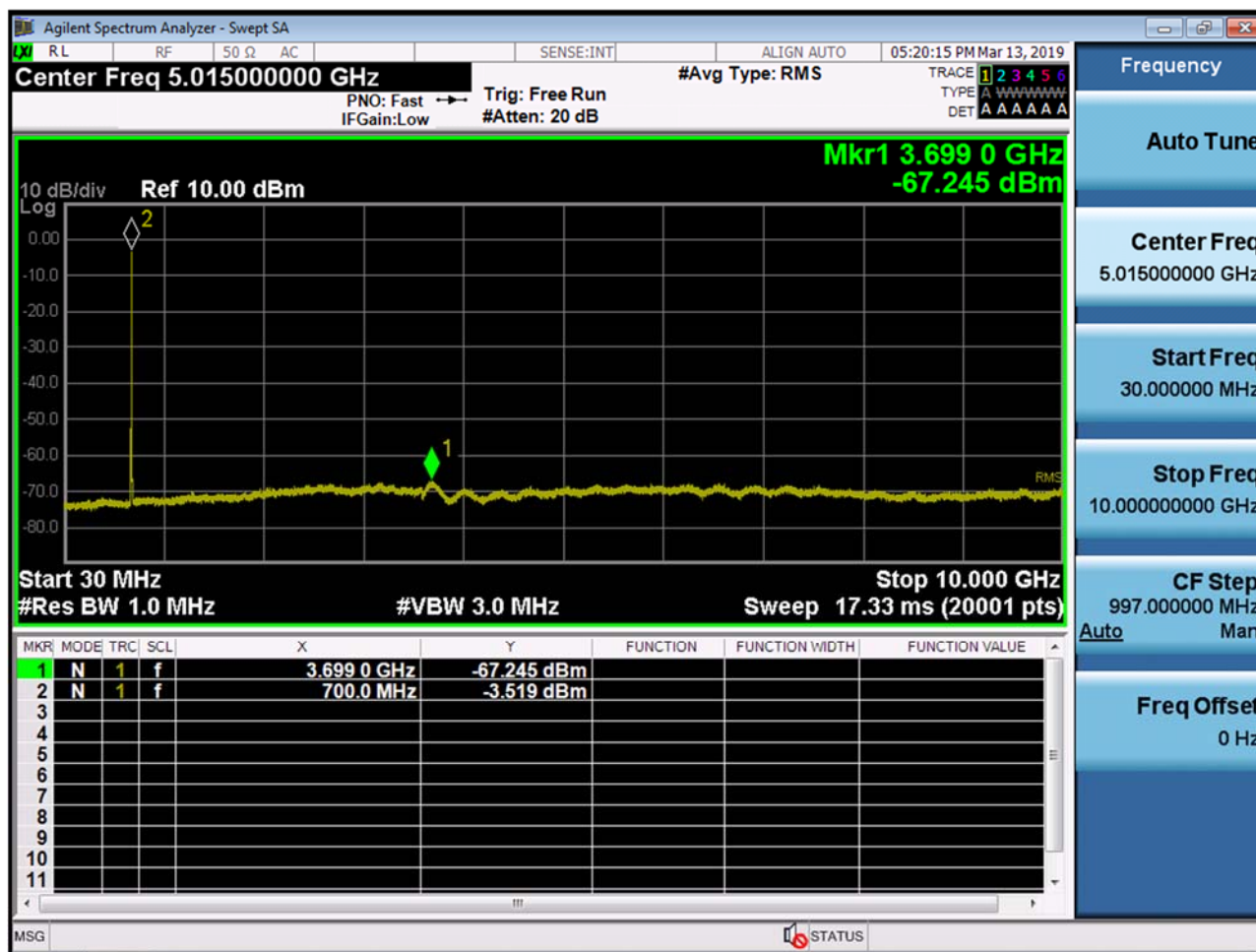
BAND 12. Conducted Spurious Plot _ (23095ch_1.4MHz_QPSK_RB 1_0)



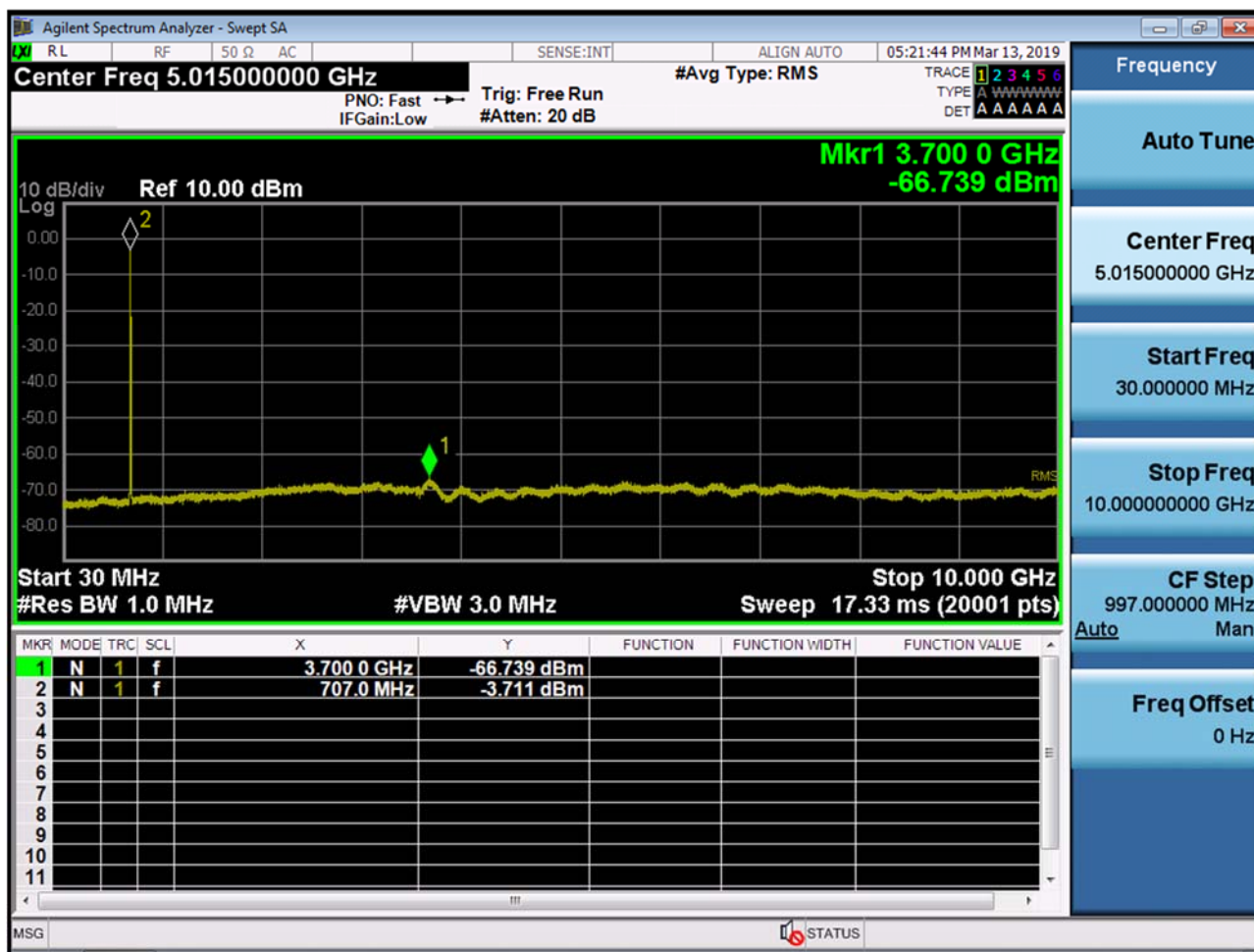
BAND 12. Conducted Spurious Plot _ (23173ch_1.4MHz_QPSK_RB 1_0)



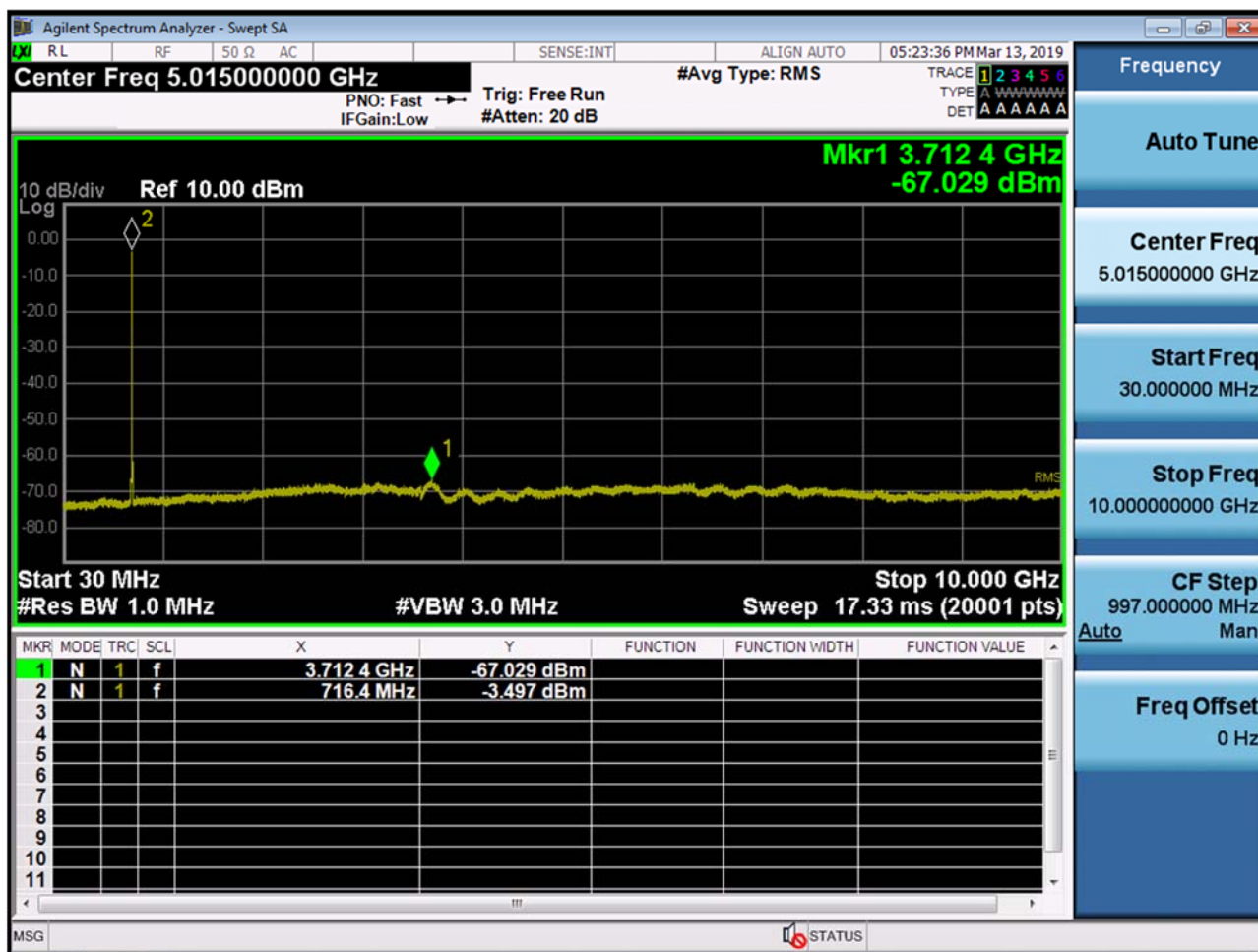
BAND 12. Conducted Spurious Plot _ (23025ch_3MHz_QPSK_RB 1_0)



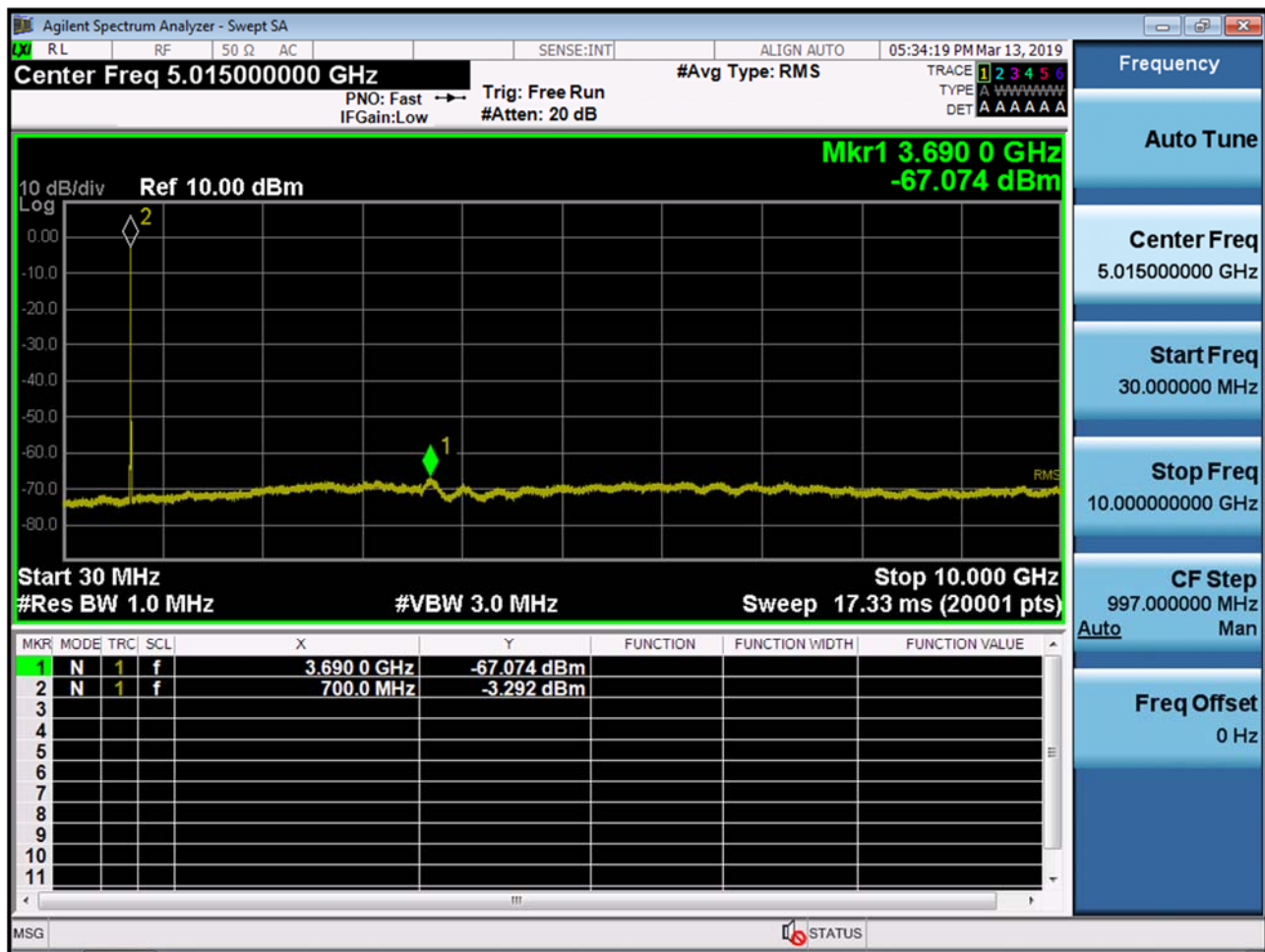
BAND 12. Conducted Spurious Plot _ (23095ch_3MHz_QPSK_RB 1_0)



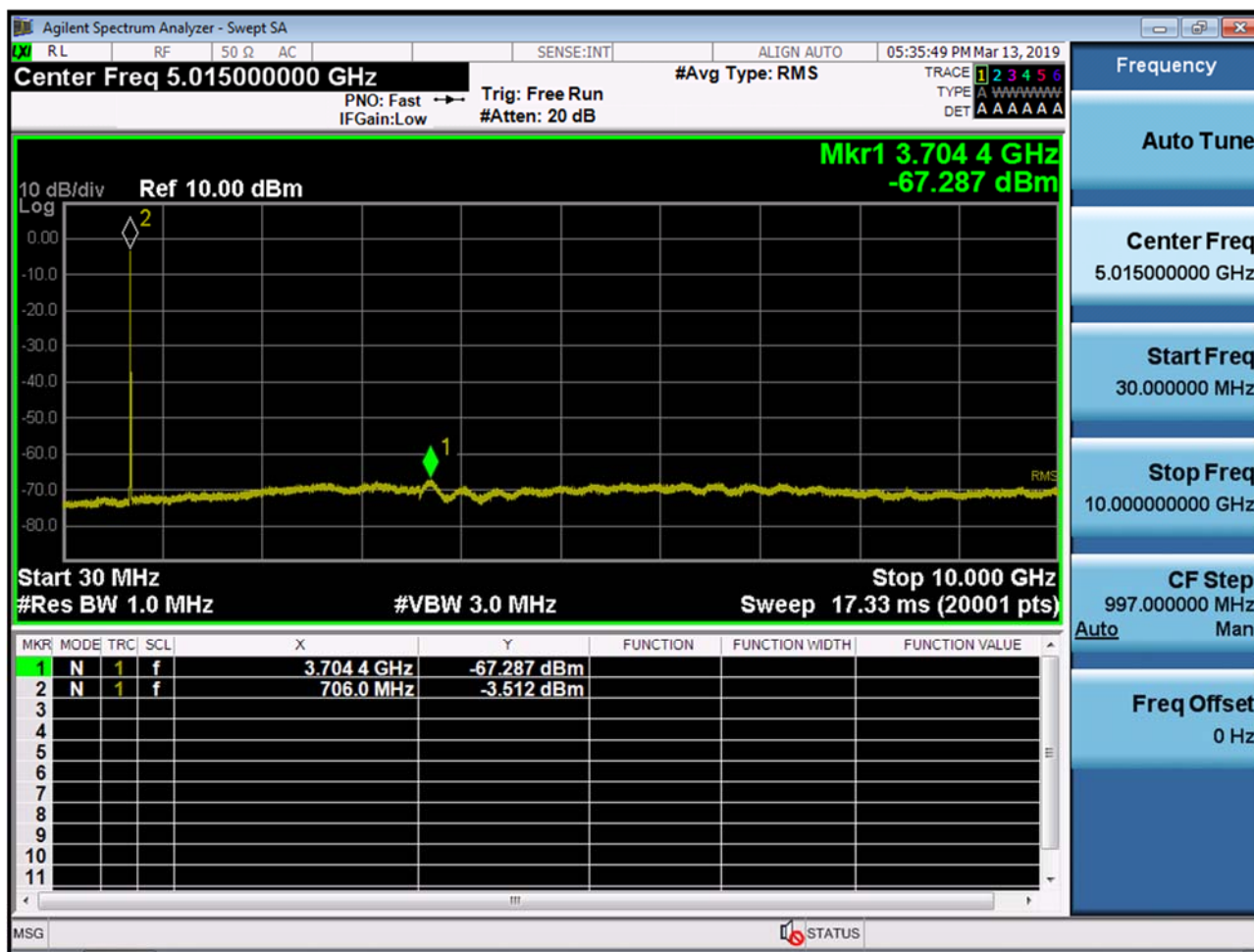
BAND 12. Conducted Spurious Plot _ (23165ch_3MHz_QPSK_RB 1_0)



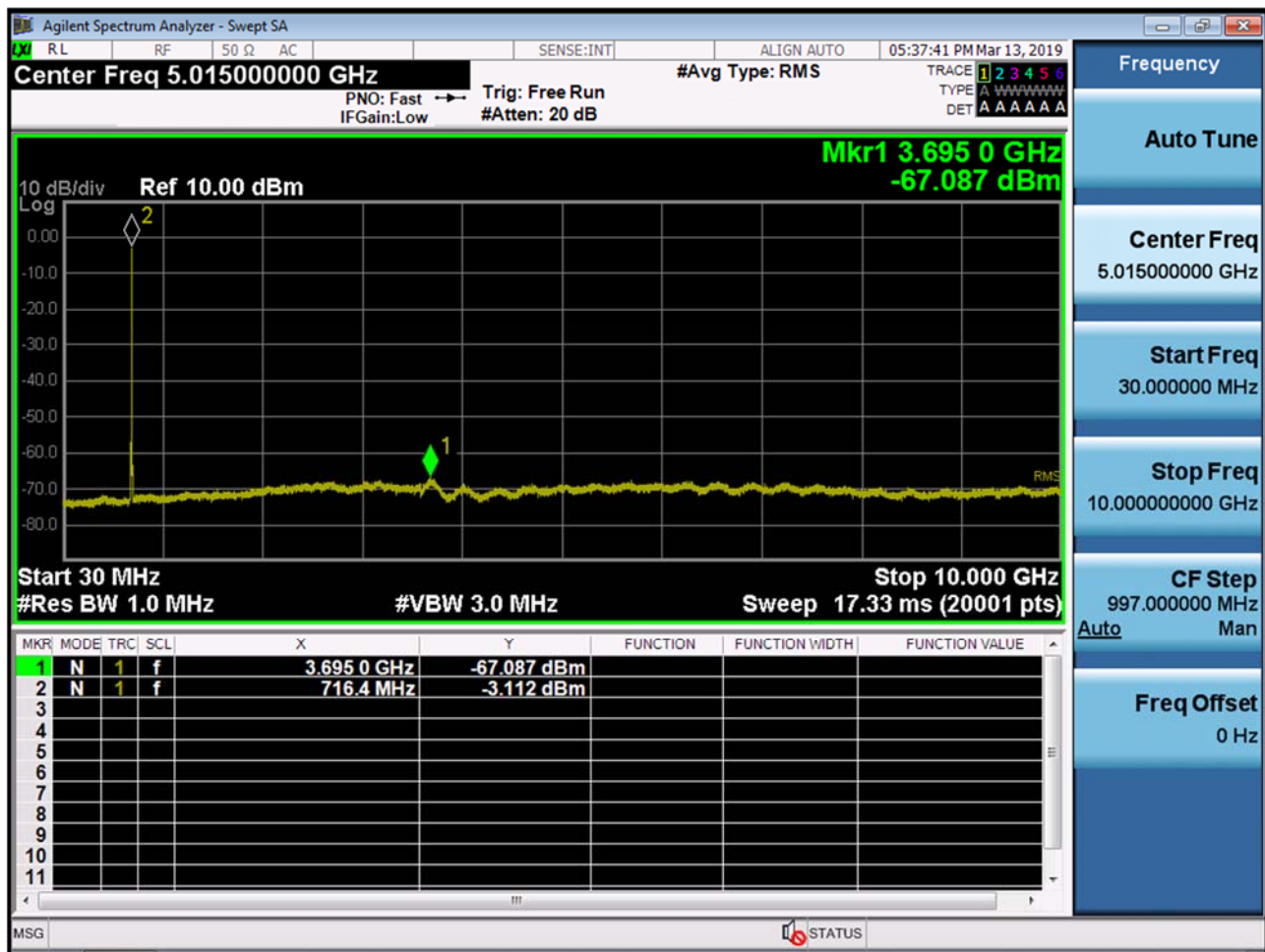
BAND 12 / 17. Conducted Spurious Plot _ (23035ch_5MHz_QPSK_RB 1_0)



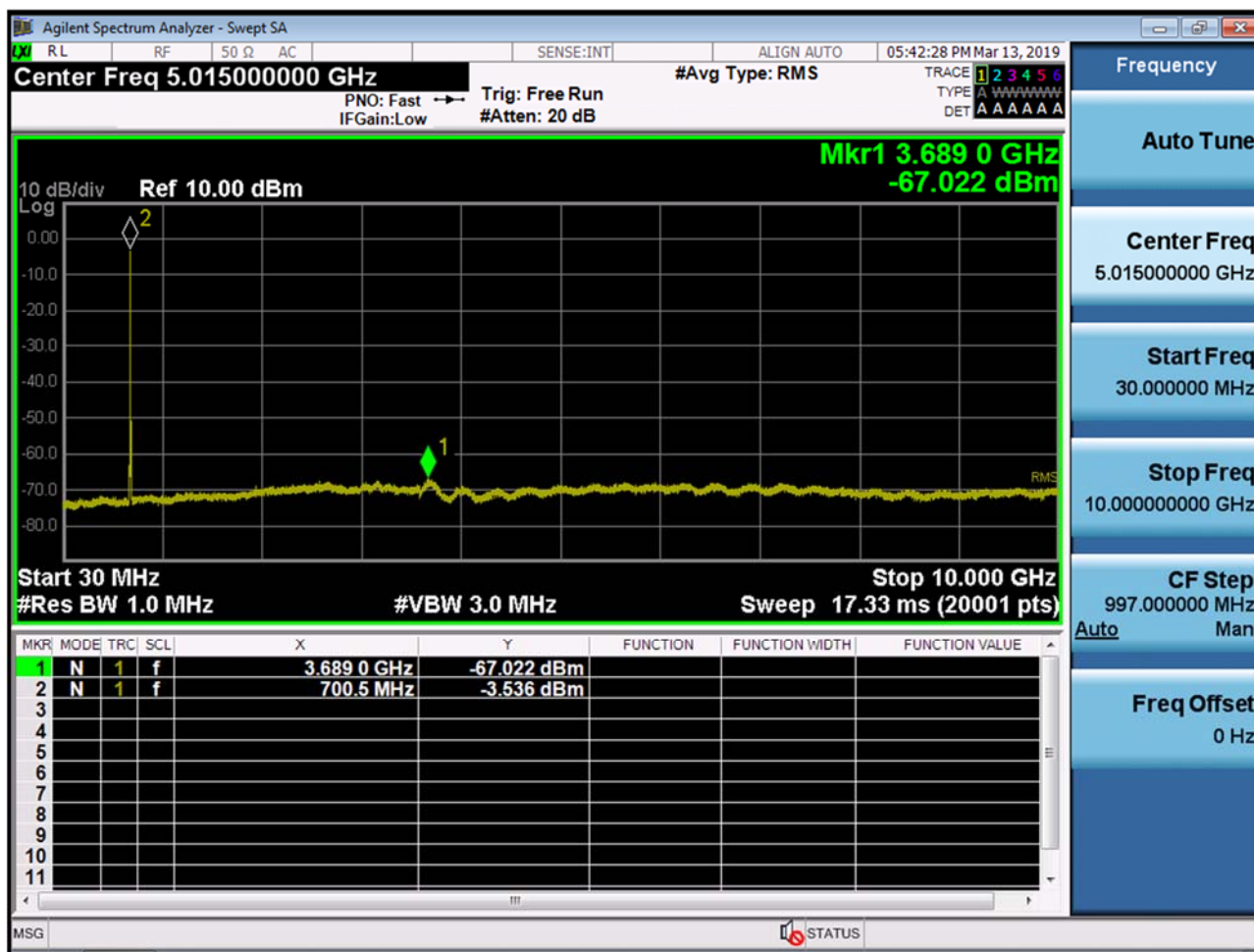
BAND 12 / 17. Conducted Spurious Plot _ (23095ch_5MHz_QPSK_RB 1_0)



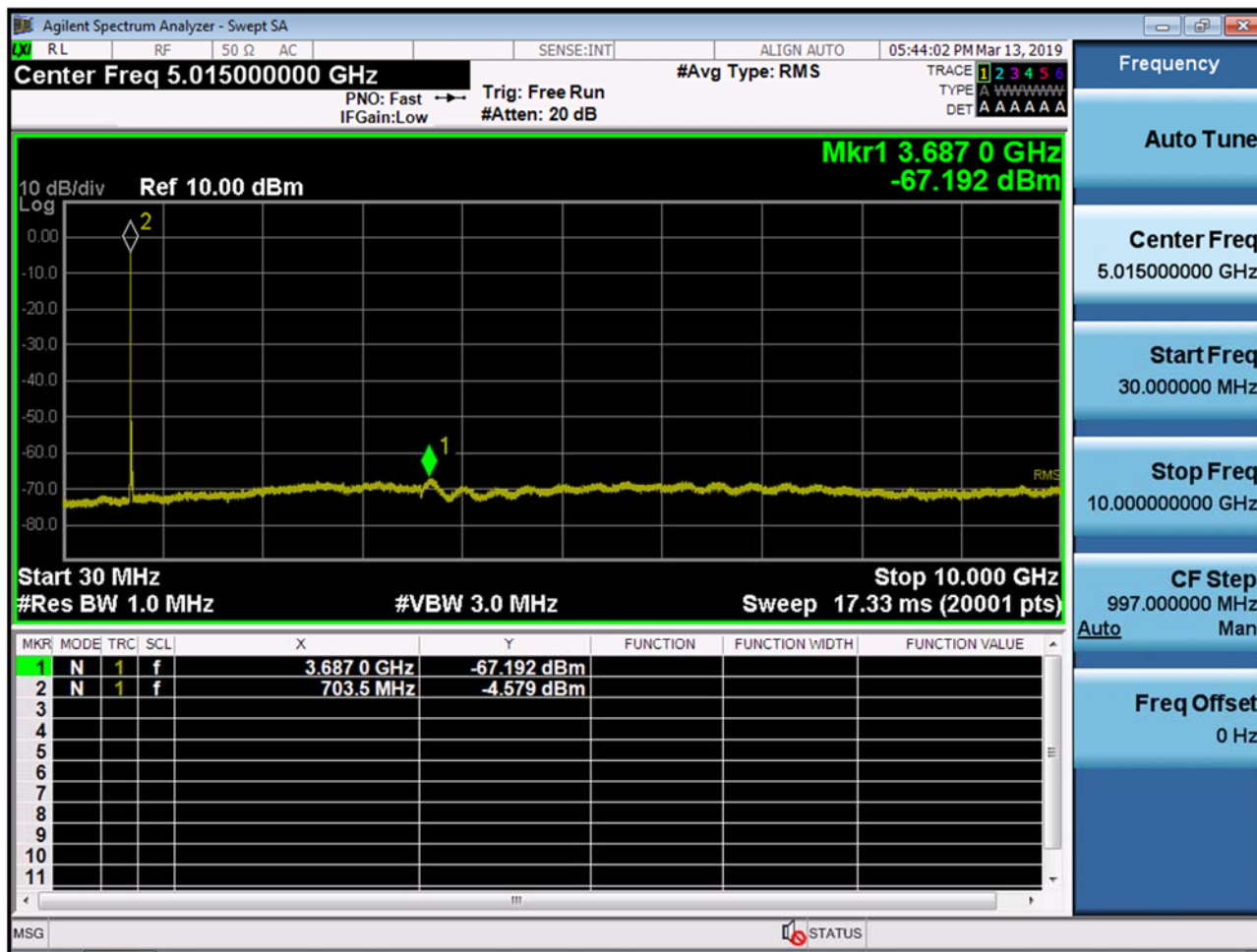
BAND 12 / 17. Conducted Spurious Plot _ (23155ch_5MHz_QPSK_RB 1_0)



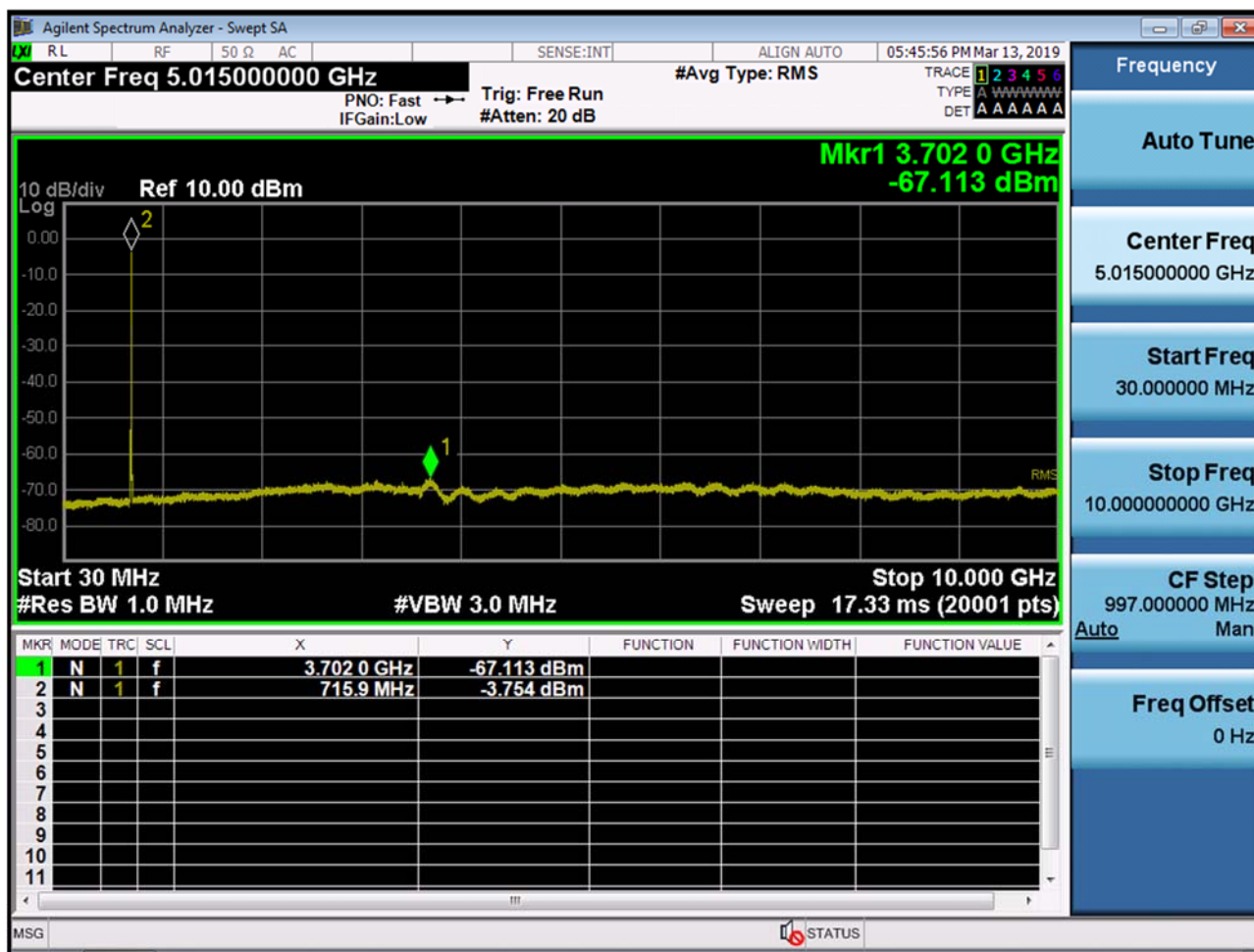
BAND 12 / 17. Conducted Spurious Plot _ (23060ch_10MHz_QPSK_RB 1_0)



BAND 12 / 17. Conducted Spurious Plot _ (23095ch_10MHz_QPSK_RB 1_0)



BAND 12 / 17. Conducted Spurious Plot _ (23130ch_10MHz_QPSK_RB 1_0)



10. ANNEX A_EMI TEST RESULT

LTE B12 Low CH Idle_RE (30 MHz ~ 1GHz)

LTE B12 Low CH Idle

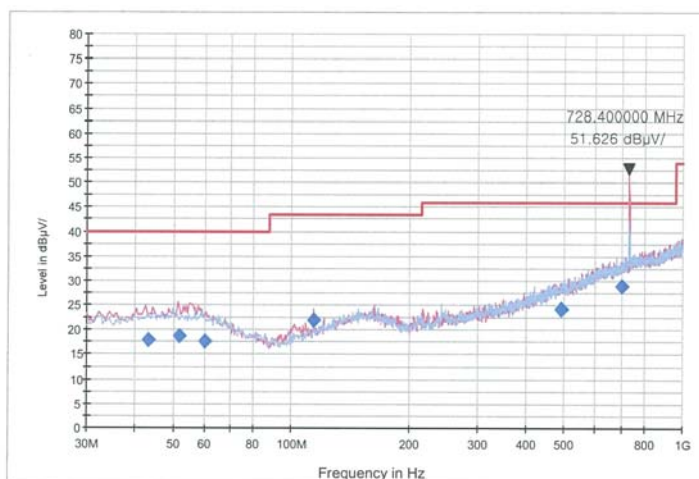
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B12 Low CH Idle
Configuration:

FCC PART 15 CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
43.088800	17.9	100.0	V	251.0	20.1	22.1	40.0
51.935200	18.7	174.8	V	103.0	20.2	21.3	40.0
60.284800	17.5	174.8	V	107.0	19.5	22.5	40.0
114.569600	22.0	225.2	V	29.0	17.1	21.5	43.5
489.200800	24.1	191.8	H	87.0	25.0	21.9	46.0
700.652800	28.8	174.9	H	31.0	28.8	17.2	46.0

2019-03-20

오후

LTE B12 High CH Idle_RE (30 MHz ~ 1GHz)

LTE B12 High CH Idle

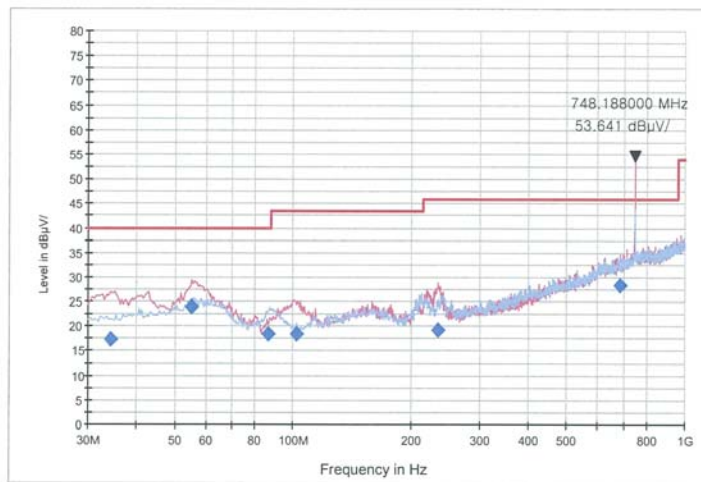
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B12 High CH Idle
Configuration:

FCC PART 15 CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
34.310400	17.2	100.0	V	99.0	18.7	22.8	40.0
55.220800	23.8	100.0	V	54.0	20.0	16.2	40.0
86.741600	18.5	225.1	H	344.0	14.8	21.5	40.0
102.346400	18.4	100.0	V	1.0	15.7	25.1	43.5
235.560800	19.4	100.0	V	40.0	18.2	26.6	46.0
686.488000	28.4	174.9	V	78.0	28.6	17.6	46.0

2019-03-21

오전

LTE B12 High CH Idle_RE (1 GHz ~ 30GHz)

LTE B12 High CH Idle_1~18GHz

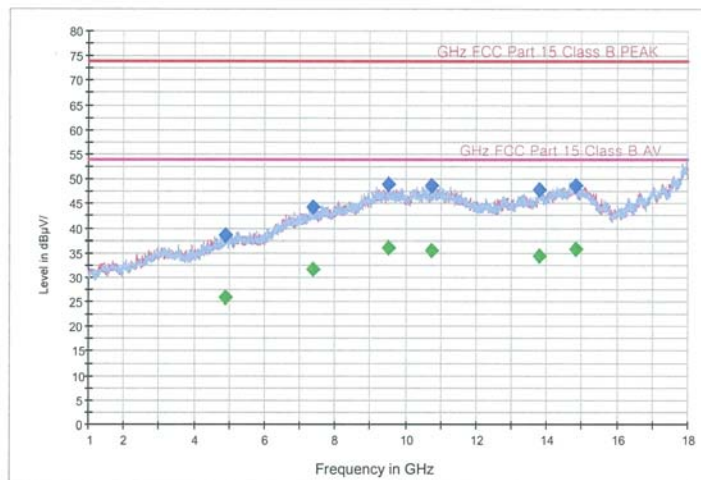
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B12 High CH Idle_1~18GHz
Configuration:

Tilting of GHz FCC PART 15 CLASS B



Final Result 1

Frequency (MHz)	MaxPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
4891.095000	38.5	100.0	V	52.0	-16.3	35.5	74.0
7382.930000	44.3	149.7	V	210.0	-9.8	29.7	74.0
9535.355000	49.0	100.0	V	0.0	-5.4	25.0	74.0
10754.175000	48.8	261.4	V	78.0	-3.1	25.2	74.0
13802.405000	47.7	160.6	V	0.0	-1.2	26.3	74.0
14816.100000	48.7	249.9	H	223.0	0.9	25.3	74.0

Final Result 2

Frequency (MHz)	CAverage (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
4891.095000	25.9	100.0	V	52.0	-16.3	28.1	54.0
7382.930000	31.7	149.7	V	210.0	-9.8	22.3	54.0
9535.355000	36.1	100.0	V	0.0	-5.4	17.9	54.0
10754.175000	35.5	261.4	V	78.0	-3.1	18.5	54.0
13802.405000	34.5	160.6	V	0.0	-1.2	19.5	54.0
14816.100000	35.8	249.9	H	223.0	0.9	18.2	54.0

2019-03-21

오전

LTE B12 High CH Idle_18~30GHz

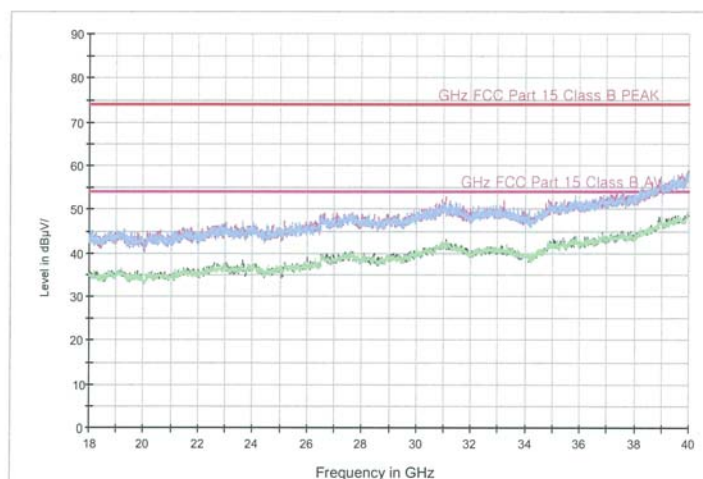
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B12 High CH Idle_18~30GHz
Configuration:

Tilting of GHz FCC PART 15 CLASS B_18~40GHz



2019-03-21

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LTE B17 Middle CH Idle_RE (30 MHz ~ 1GHz)

LTE B17 Middle CH Idle

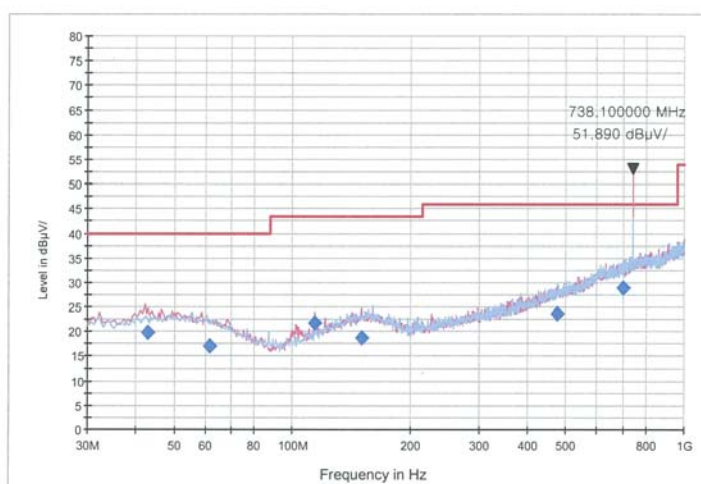
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B17 Middle CH Idle
Configuration:

FCC PART 15 CLASS B



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBuV/m)
42.951200	19.8	100.0	V	178.0	20.1	20.2	40.0
61.491200	17.1	100.0	H	0.0	19.3	22.9	40.0
114.553600	21.7	174.8	V	205.0	17.1	21.8	43.5
150.902200	18.8	100.0	H	0.0	17.3	24.7	43.5
474.427200	23.8	225.0	H	130.0	24.8	22.2	46.0
699.900000	28.7	100.0	H	0.0	28.8	17.3	46.0

2019-03-20

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LIST OF TEST EQUIPMENT

■ Radiated Emission (30 MHz ~ 1 GHz)

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
REOHDE & SCHWARZ	ESU40 / EMI Test Receiver	100524	07/27/2018	Annual	07/27/2019
INNCO SYSTEM	MA4640-XP-ET / Antenna master	-	-	Annual	-
INNCO SYSTEM	CO3000 / Antenna master controller	CO3000/870/35990515/L	-	Annual	-
INNCO SYSTEM	1060 / Turn Table	-	-	Annual	-
INNCO SYSTEM	CO2000 / Turn Table controller	CO2000/095/7590304/L	-	Annual	-
Schwarzbeck	VULB9168 / Bilog Antenna	847	04/13/2018	Biennial	04/13/2020
ANRITSU	MT8820C / RADIO COMMUNICATION ANALYZER	6201138643	08/21/2018	Annual	08/21/2019
Schwarzbeck	USLP9142 / ANTENNA (for Communication)	VSLP 9142-200	-	Biennial	-

■ Radiated Emission (1 GHz ~ 30 GHz)

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
REOHDE & SCHWARZ	ESU40 / EMI Test Receiver	100524	07/27/2018	Annual	07/27/2019
INNCO SYSTEM	MA4640-XP-ET / Antenna master	-	-	Annual	-
INNCO SYSTEM	CO3000 / Antenna master controller	CO3000/870/35990515/L	-	Annual	-
INNCO SYSTEM	1060 / Turn Table	-	-	Annual	-
INNCO SYSTEM	CO2000 / Turn Table controller	CO2000/095/7590304/L	-	Annual	-
Schwarzbeck	BBHA 9120D / Horn Antenna	01836	07/20/2018	Biennial	07/20/2020
Schwarzbeck	BBHA 9170 / Horn Antenna	BBHA 9170 #786	12/05/2017	Biennial	12/05/2019
TESTEK	TK-PA18H / Power Amplifier	170034-L	03/04/2019	Annual	03/04/2020
TESTEK	TK-PA1840H / Power Amplifier	170030-L	12/17/2018	Annual	12/17/2019
ANRITSU	MT8820C / RADIO COMMUNICATION ANALYZER	6201138643	08/21/2018	Annual	08/21/2019
Schwarzbeck	USLP9142 / ANTENNA (for Communication)	VSLP 9142-200	-	Biennial	-

■ Conducted Emission

Manufacture	Model/ Equipment	Serial Number	Calibration Date	Calibration Interval	Calibration Due
REOHDE & SCHWARZ	ESCI / EMI Test Receiver	100033	06/27/2018	Annual	06/27/2019
REOHDE & SCHWARZ	ENV216 / LISN	102245	12/12/2018	Annual	12/12/2019

11. ANNEX B_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-1903-FC041-P