

BAND 5. Upper Band Edge Plot (3M BW Ch.20635 QPSK_RB15_Offset 0)



BAND 5. Upper Extended Band Edge Plot (3M BW Ch.20635 QPSK_RB15_0)



BAND 5. Upper Band Edge Plot (5M BW Ch.20625 QPSK_RB1_Offset 24)



BAND 5. Upper Band Edge Plot (5M BW Ch.20625 QPSK_RB25_Offset 0)



BAND 5. Upper Extended Band Edge Plot (5M BW Ch.20625 QPSK_RB25_0)



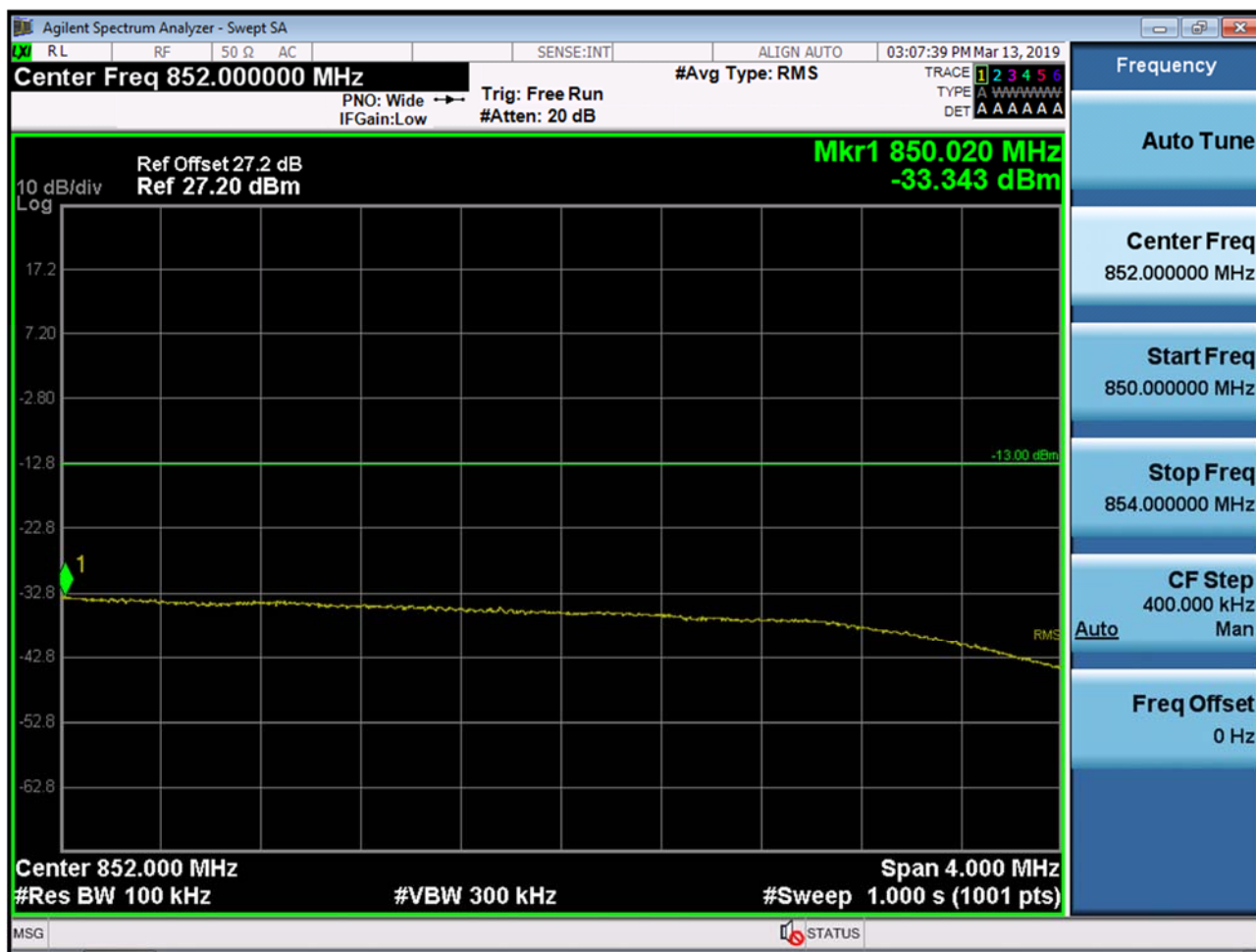
BAND 5. Upper Band Edge Plot (10M BW Ch.20600 QPSK_RB1_Offset 49)



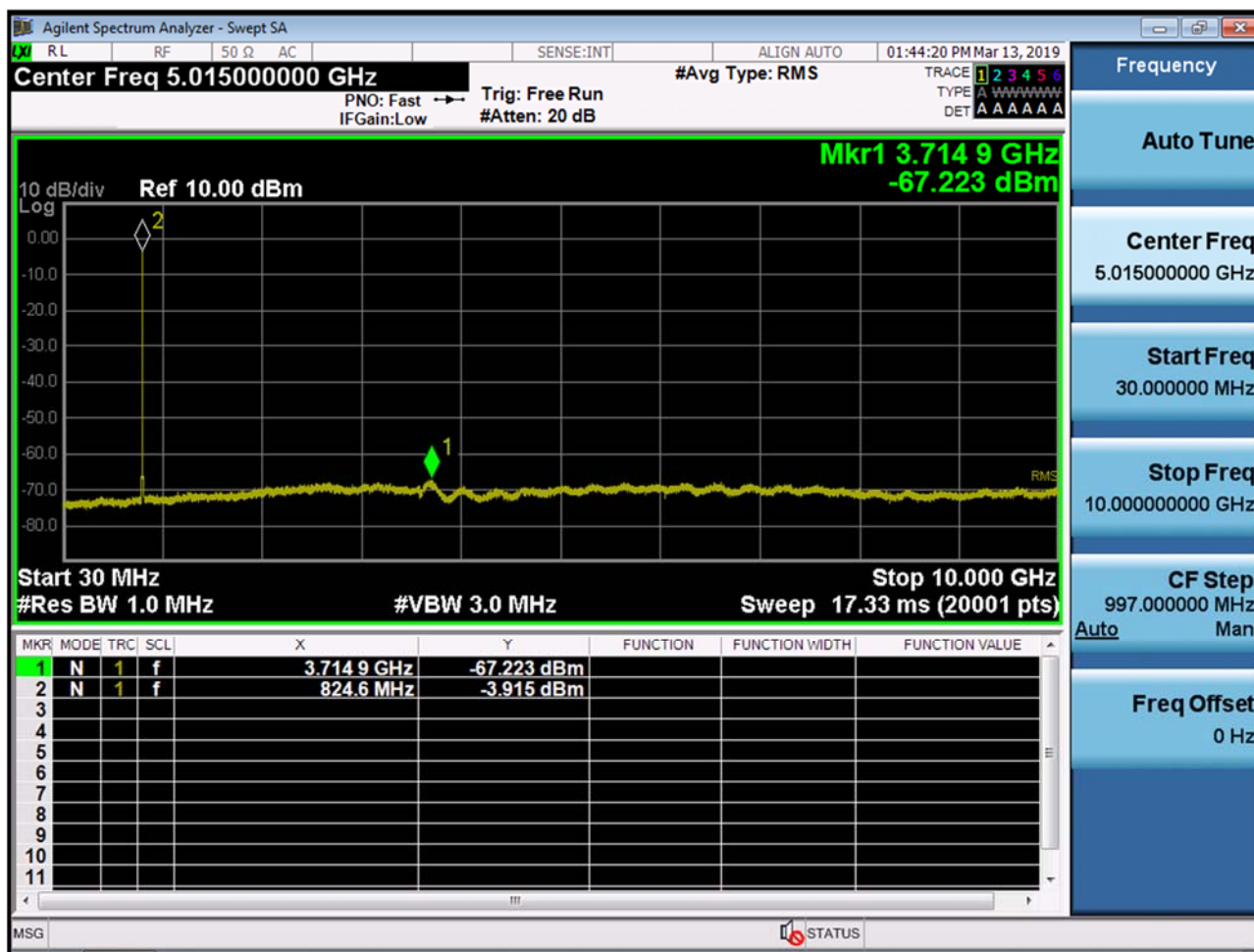
BAND 5. Upper Band Edge Plot (10M BW Ch.20600 QPSK_RB50_Offset 0)



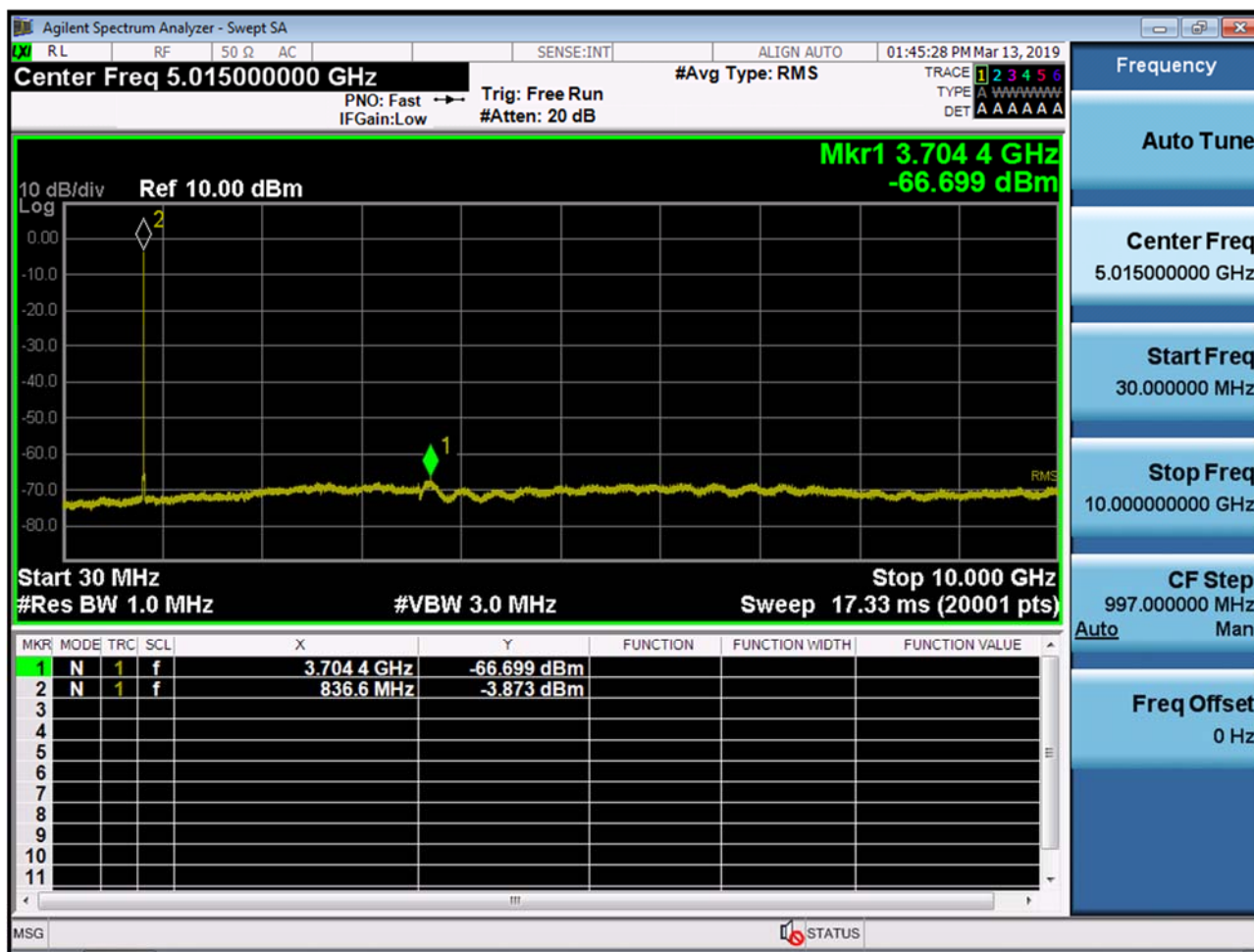
BAND 5. Upper Extended Band Edge Plot (10M BW Ch.20600 QPSK_RB50_0)



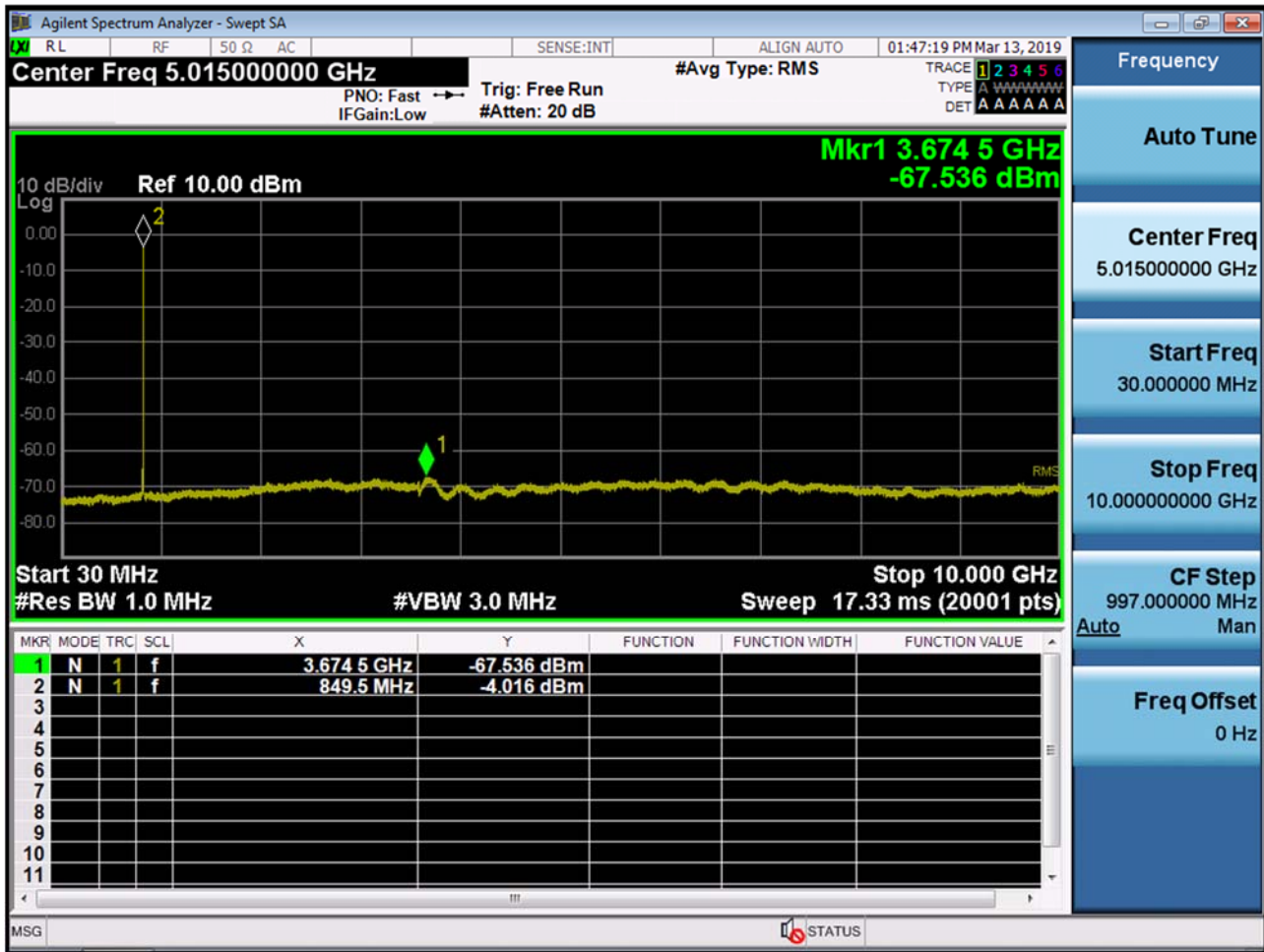
BAND 5. Conducted Spurious Plot (20407ch_1.4MHz_QPSK_RB 1_0)



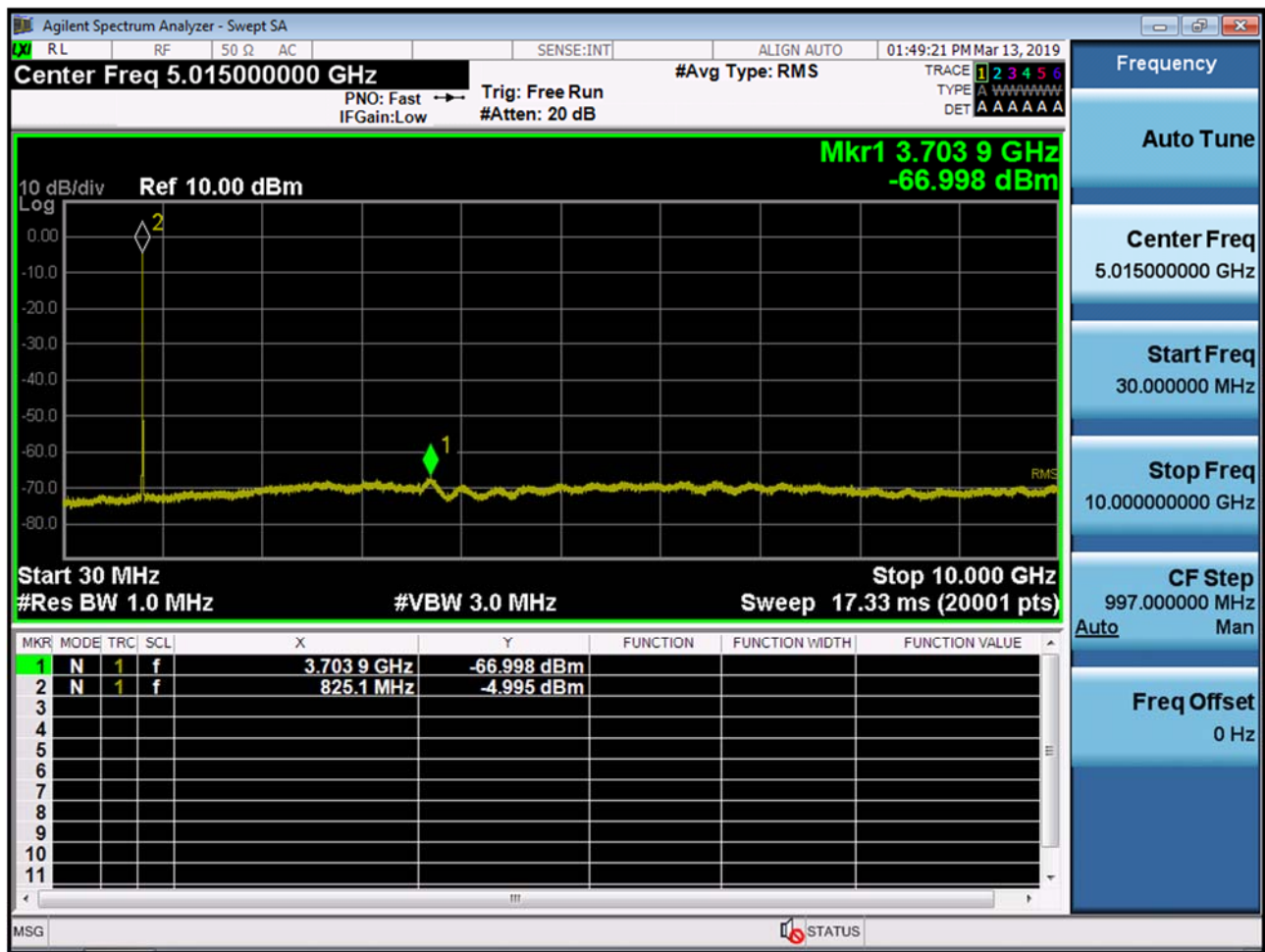
BAND 5. Conducted Spurious Plot (20525ch_1.4MHz_QPSK_RB 1_0)



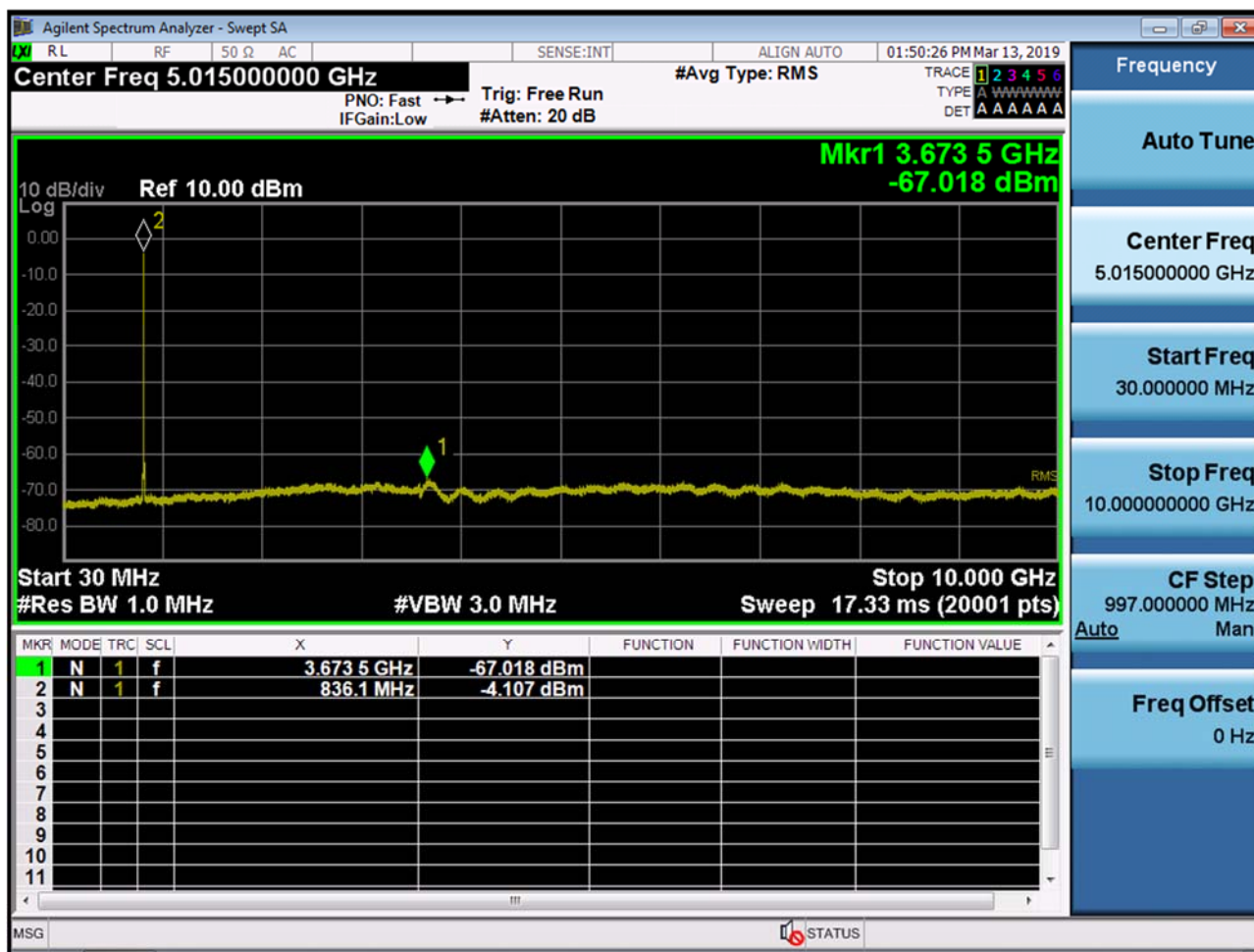
BAND 5. Conducted Spurious Plot (20643ch_1.4MHz_QPSK_RB 1_0)



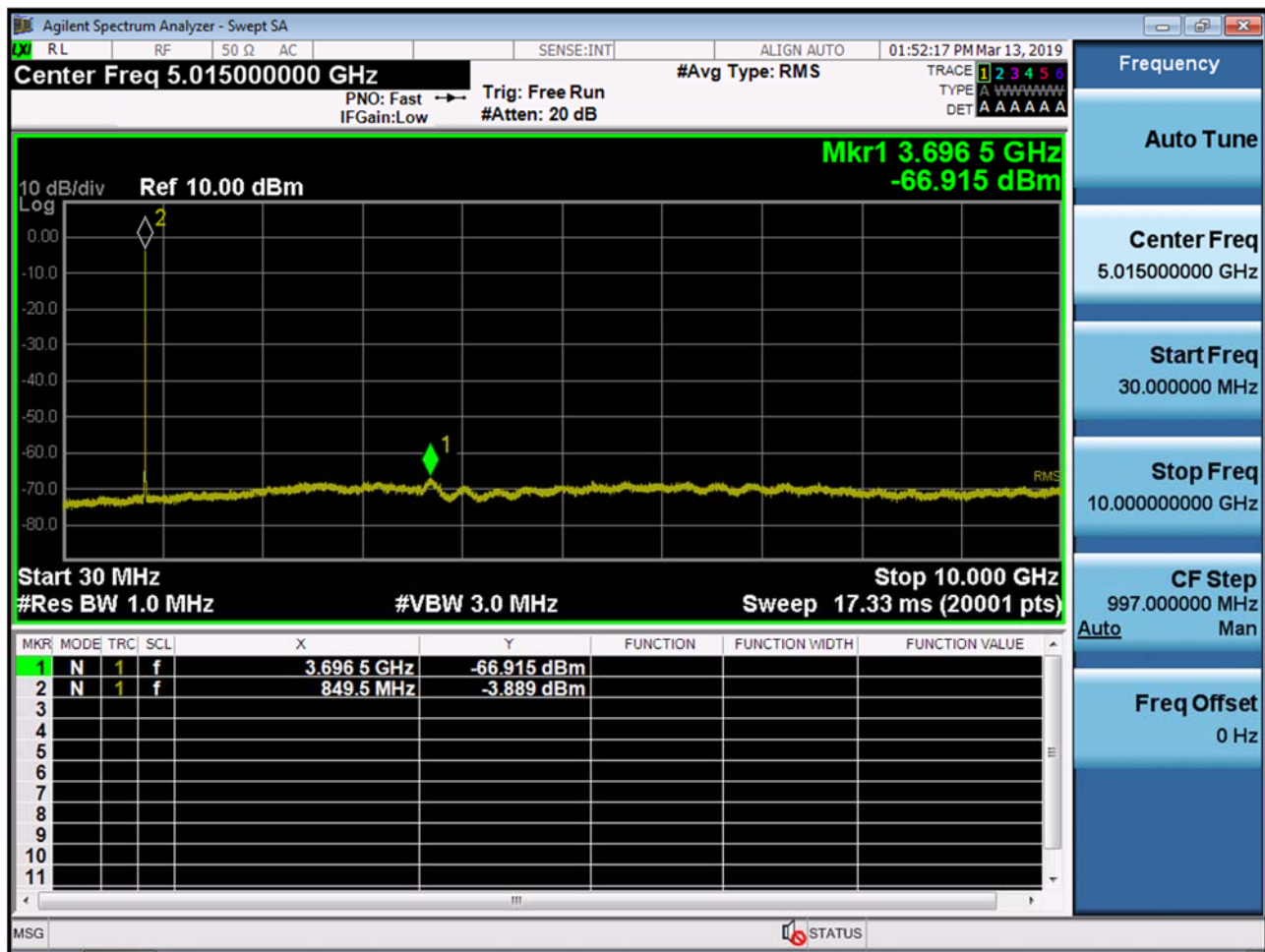
BAND 5. Conducted Spurious Plot (20415ch_3MHz_QPSK_RB 1_0)



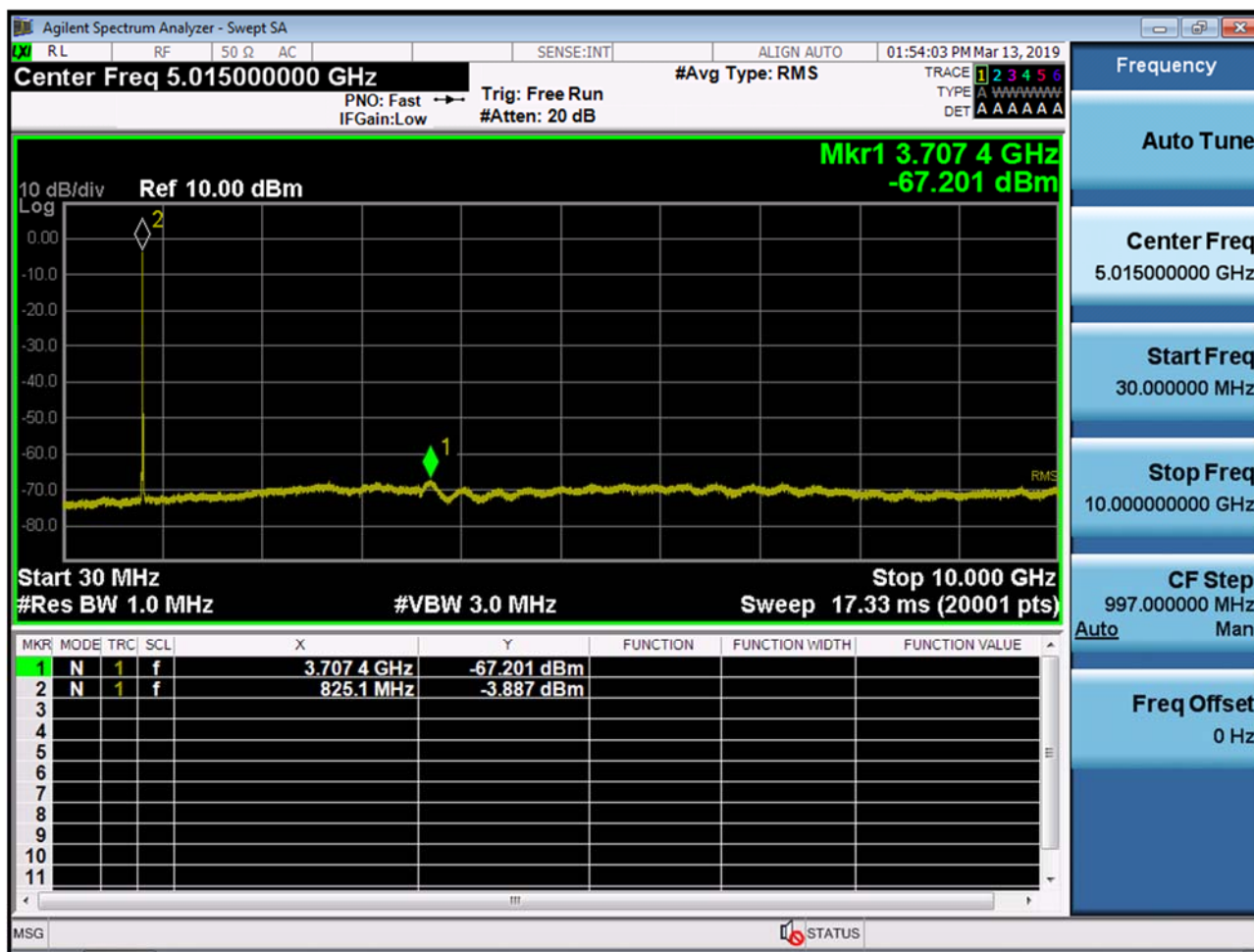
BAND 5. Conducted Spurious Plot (20525ch_3MHz_QPSK_RB 1_0)



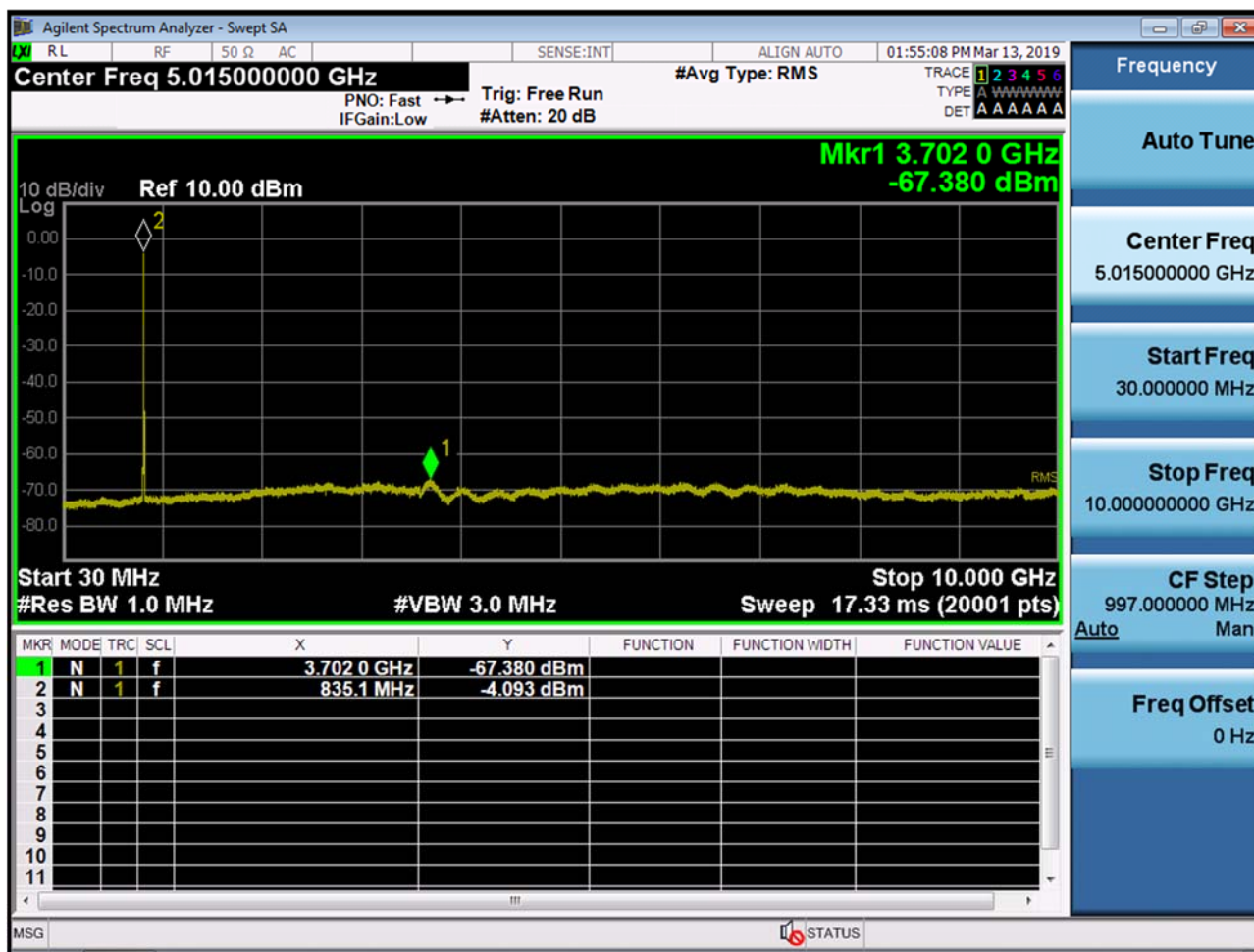
BAND 5. Conducted Spurious Plot (20635ch_3MHz_QPSK_RB 1_0)



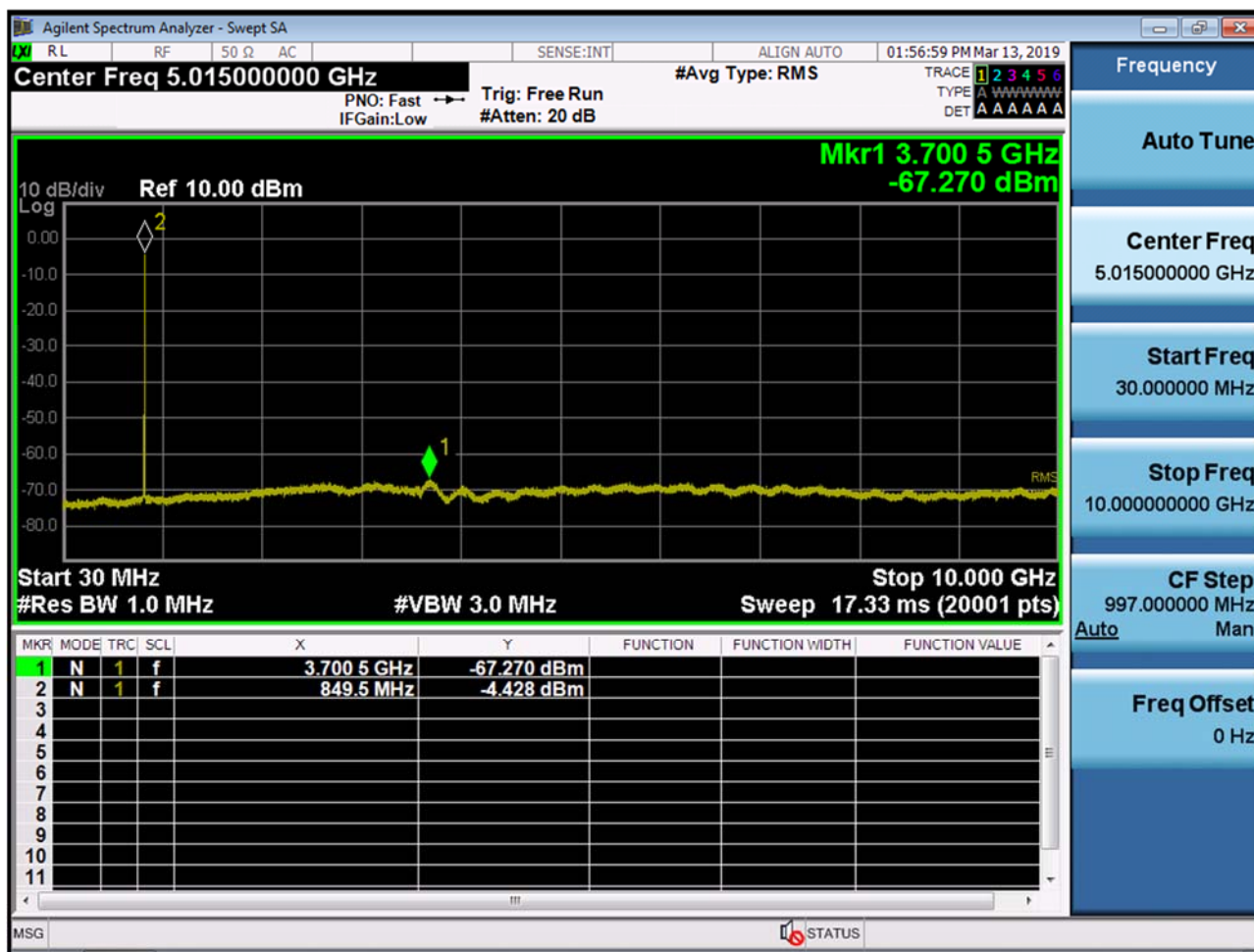
BAND 5. Conducted Spurious Plot (20425ch_5MHz_QPSK_RB 1_0)



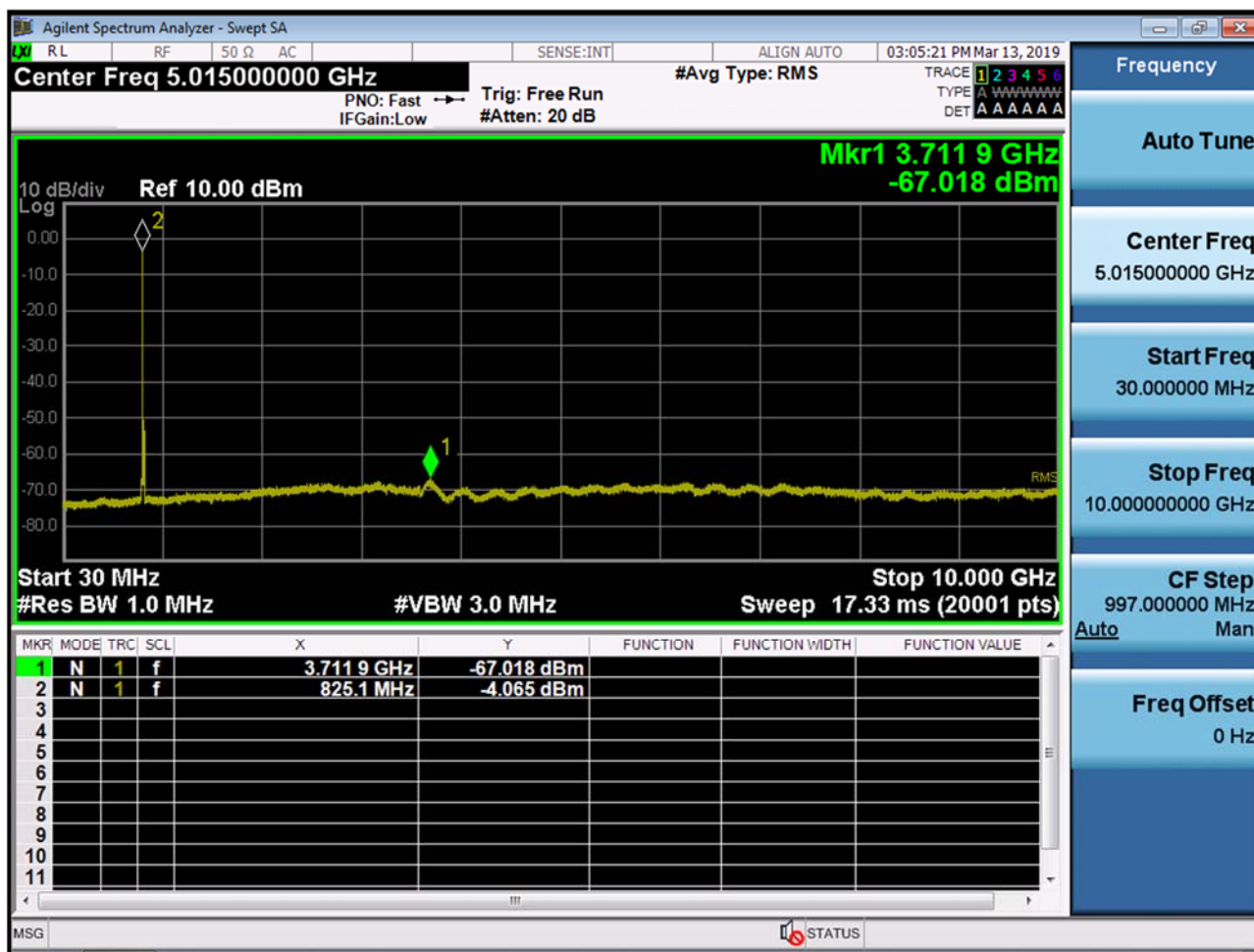
BAND 5. Conducted Spurious Plot (20525ch_5MHz_QPSK_RB 1_0)



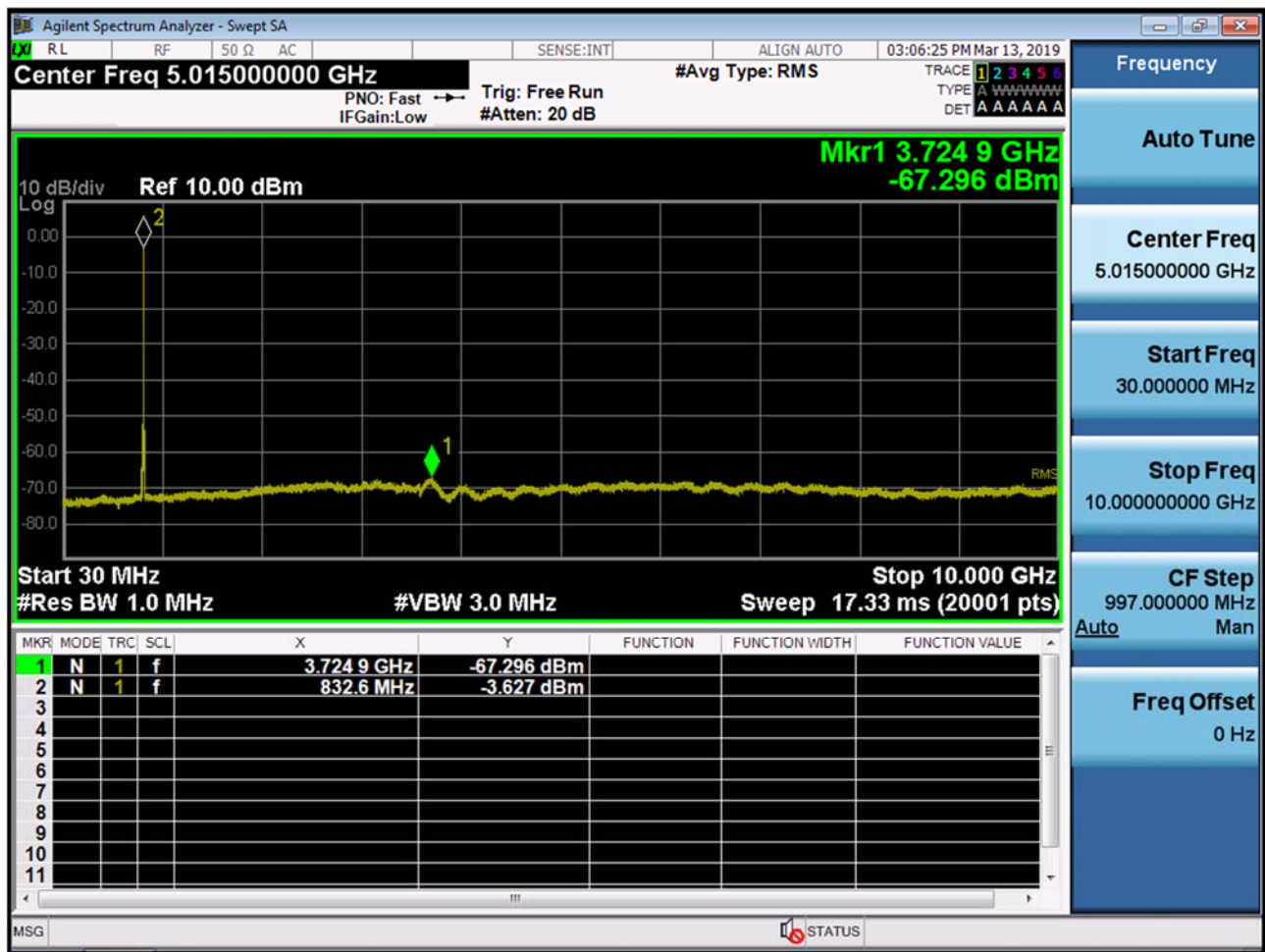
BAND 5. Conducted Spurious Plot (20625ch_5MHz_QPSK_RB 1_0)



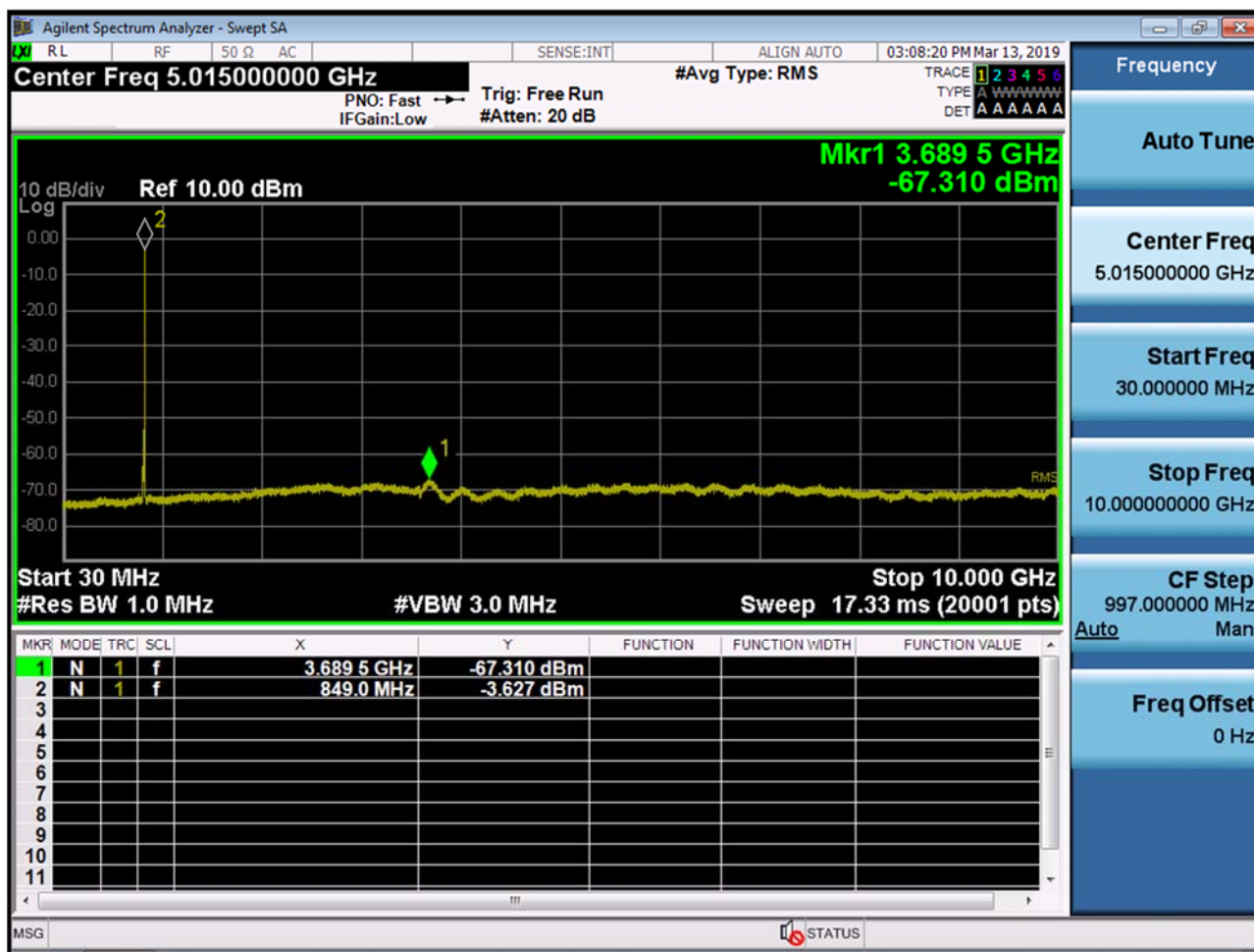
BAND 5. Conducted Spurious Plot (20450ch_10MHz_QPSK_RB 1_0)



BAND 5. Conducted Spurious Plot (20525ch_10MHz_QPSK_RB 1_0)



BAND 5. Conducted Spurious Plot (20600ch_10MHz_QPSK_RB 1_0)



10. ANNEX A_EMI TEST RESULT

LTE B5 Low CH Idle_RE (30 MHz ~ 1GHz)

LTE B5 Low CH Idle

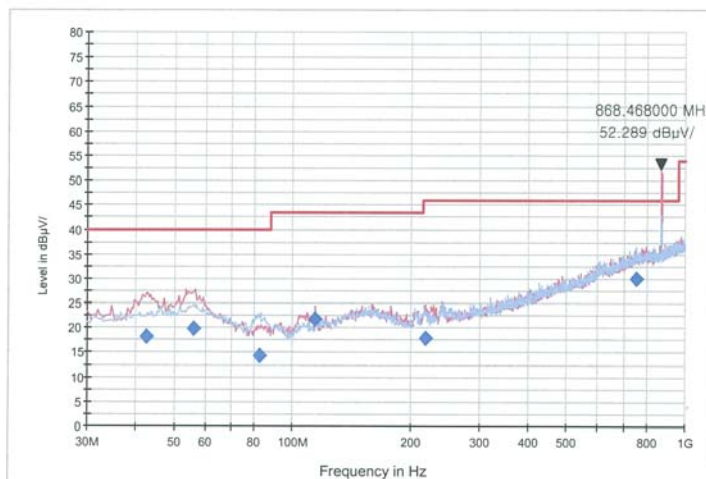
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B5 Low 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)
42.596000	18.2	100.0	V	102.0	20.1	21.8	40.0
56.011200	19.8	100.0	V	0.0	19.9	20.2	40.0
82.825600	14.3	299.7	H	123.0	15.4	25.7	40.0
114.570400	21.9	225.1	V	9.0	17.1	21.6	43.5
218.100800	17.7	100.0	V	68.0	17.5	28.3	46.0
751.235200	29.9	174.7	H	90.0	30.0	16.1	46.0

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오후

LTE B5 Middle CH Idle_RE (30 MHz ~ 1GHz)

LTE B5 Middle CH Idle

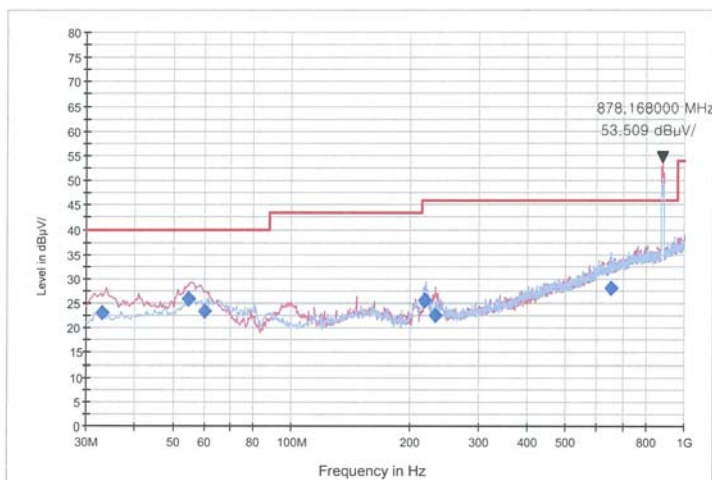
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B5 Middle 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)
33.046400	23.0	100.0	V	63.0	18.6	17.0	40.0
54.863200	26.0	100.0	V	72.0	20.0	14.0	40.0
60.245600	23.3	100.0	V	77.0	19.5	16.7	40.0
218.805600	25.6	115.8	H	133.0	17.6	20.4	46.0
233.661600	22.5	125.2	V	56.0	18.2	23.5	46.0
653.852000	28.1	100.0	H	36.0	28.1	17.9	46.0

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오전

LTE B5 Middle CH Idle_RE (1 GHz ~ 30GHz)

LTE B5 Middle CH Idle_1~18GHz

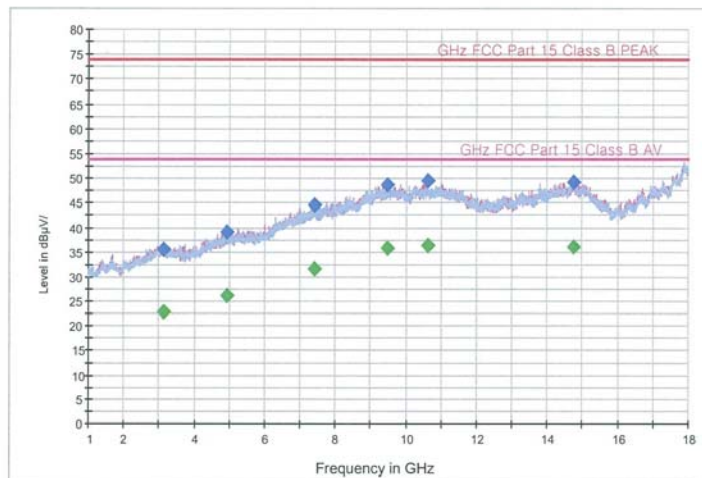
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B5 Middle CH Idle_1~18GHz
Configuration:

Tilting of GHz FCC PART 15 CLASS B



Final Result 1

Frequency (MHz)	MaxPeak (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
3134.295000	35.4	191.4	V	47.0	-21.0	38.6	74.0
4943.515000	39.2	150.1	V	197.0	-16.1	34.8	74.0
7411.430000	44.4	249.4	V	0.0	-9.7	29.6	74.0
9462.890000	48.6	149.5	V	259.0	-5.5	25.4	74.0
10614.965000	49.5	202.5	V	89.0	-3.4	24.5	74.0
14747.475000	49.2	249.9	V	209.0	0.8	24.8	74.0

Final Result 2

Frequency (MHz)	CAverage (dBμV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
3134.295000	22.8	191.4	V	47.0	-21.0	31.2	54.0
4943.515000	26.2	150.1	V	197.0	-16.1	27.8	54.0
7411.430000	31.8	249.4	V	0.0	-9.7	22.2	54.0
9462.890000	35.8	149.5	V	259.0	-5.5	18.2	54.0
10614.965000	36.2	202.5	V	89.0	-3.4	17.8	54.0
14747.475000	36.0	249.9	V	209.0	0.8	18.0	54.0

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오전

LTE B5 Middle CH Idle_18~30GHz

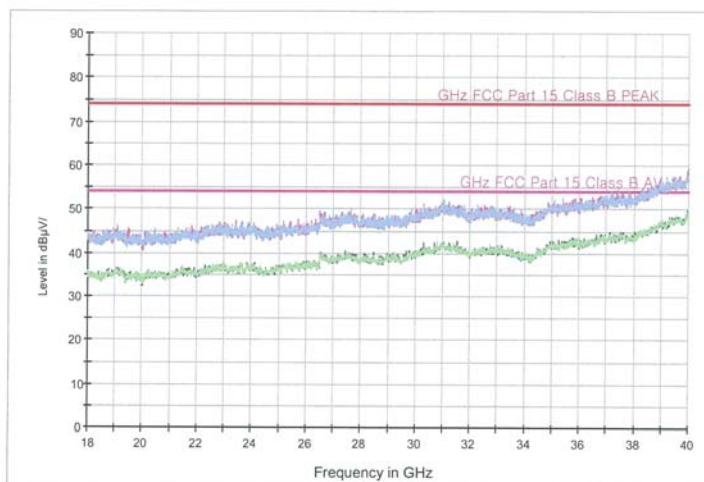
1 / 1

EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B5 Middle CH Idle_18~30GHz
Configuration:

Tilting of GHz FCC PART 15 CLASS B_18~40GHz



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오후

LTE B5 Middle CH Idle_CE L1

LTE B5 Middle CH Idle mode_L1

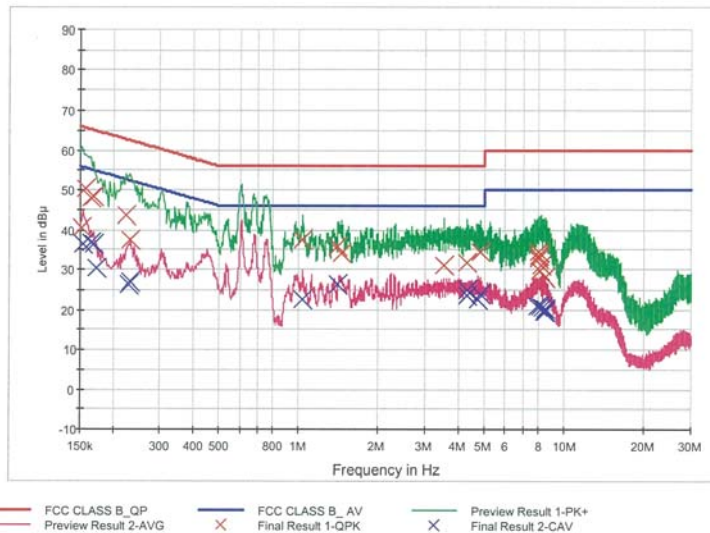
1 / 2

HCT TEST Report

Common Information

EUT: SM-A3050
 Manufacturer: SAMSUNG
 Test Site: SHIELD ROOM
 Operating Conditions: LTE B5 Middle CH Idle mode_L1

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.152000	40.7	9.000	Off	L1	9.7	25.2	65.9
0.158000	50.3	9.000	Off	L1	9.7	15.3	65.6
0.164000	48.0	9.000	Off	L1	9.7	17.3	65.3
0.168000	48.3	9.000	Off	L1	9.7	16.8	65.1
0.224000	43.6	9.000	Off	L1	9.7	19.1	62.7
0.232000	37.6	9.000	Off	L1	9.7	24.8	62.4
1.036000	37.5	9.000	Off	L1	9.8	18.5	56.0
1.406000	35.7	9.000	Off	L1	9.9	20.3	56.0
1.452000	34.0	9.000	Off	L1	9.9	22.0	56.0
3.538000	31.1	9.000	Off	L1	9.9	24.9	56.0
4.310000	31.5	9.000	Off	L1	10.0	24.5	56.0
4.842000	34.4	9.000	Off	L1	10.0	21.6	56.0
7.982000	33.5	9.000	Off	L1	10.2	26.5	60.0
7.996000	32.8	9.000	Off	L1	10.2	27.2	60.0
8.002000	34.4	9.000	Off	L1	10.2	25.6	60.0
8.070000	29.6	9.000	Off	L1	10.2	30.4	60.0
8.154000	31.1	9.000	Off	L1	10.2	28.9	60.0
8.462000	28.1	9.000	Off	L1	10.2	31.9	60.0

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LTE B5 Middle CH Idle mode_L1

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	36.3	9.000	Off	L1	9.7	19.5	55.8
0.164000	36.9	9.000	Off	L1	9.7	18.3	55.3
0.168000	36.4	9.000	Off	L1	9.7	18.6	55.1
0.172000	30.4	9.000	Off	L1	9.7	24.4	54.9
0.228000	26.4	9.000	Off	L1	9.7	26.2	52.5
0.232000	26.9	9.000	Off	L1	9.7	25.5	52.4
1.036000	22.4	9.000	Off	L1	9.8	23.6	46.0
1.406000	26.4	9.000	Off	L1	9.9	19.6	46.0
4.290000	24.8	9.000	Off	L1	10.0	21.2	46.0
4.310000	23.5	9.000	Off	L1	10.0	22.5	46.0
4.754000	22.7	9.000	Off	L1	10.0	23.3	46.0
4.842000	23.7	9.000	Off	L1	10.0	22.3	46.0
7.872000	21.0	9.000	Off	L1	10.2	29.0	50.0
8.070000	20.8	9.000	Off	L1	10.2	29.2	50.0
8.290000	20.4	9.000	Off	L1	10.2	29.6	50.0
8.346000	19.6	9.000	Off	L1	10.2	30.4	50.0
8.454000	20.2	9.000	Off	L1	10.2	29.8	50.0
8.462000	19.5	9.000	Off	L1	10.2	30.5	50.0

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LTE B5 Middle CH Idle_CE N

LTE B5 Middle CH Idle mode_N

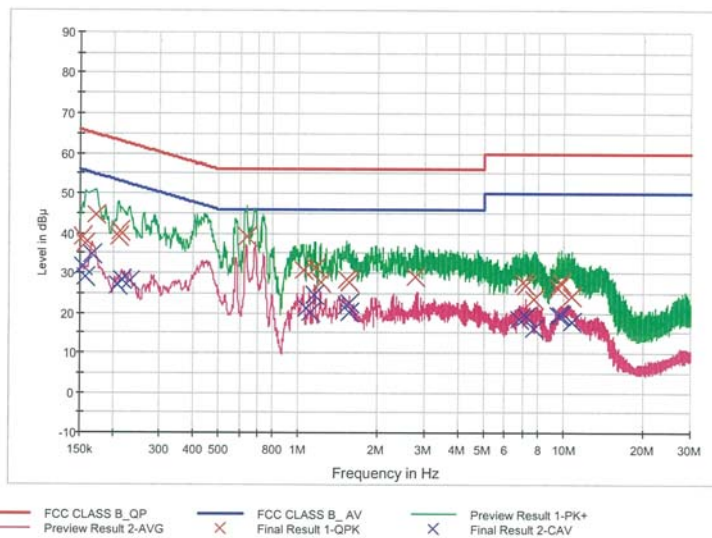
1 / 2

HCT TEST Report

Common Information

EUT: SM-A3050
 Manufacturer: SAMSUNG
 Test Site: SHIELD ROOM
 Operating Conditions: LTE B5 Middle CH Idle mode_N

FCC CLASS B_Exten Cable



Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	39.3	9.000	Off	N	9.8	26.5	65.8
0.158000	37.6	9.000	Off	N	9.8	27.9	65.6
0.172000	44.4	9.000	Off	N	9.8	20.4	64.9
0.210000	39.0	9.000	Off	N	9.9	24.2	63.2
0.214000	40.7	9.000	Off	N	9.9	22.4	63.0
0.640000	39.3	9.000	Off	N	9.9	16.7	56.0
1.040000	30.7	9.000	Off	N	10.0	25.3	56.0
1.156000	31.5	9.000	Off	N	10.0	24.5	56.0
1.218000	27.8	9.000	Off	N	10.0	28.2	56.0
1.512000	28.4	9.000	Off	N	10.1	27.6	56.0
1.552000	27.7	9.000	Off	N	10.1	28.3	56.0
2.762000	29.1	9.000	Off	N	10.1	26.9	56.0
7.064000	27.5	9.000	Off	N	10.3	32.5	60.0
7.178000	26.9	9.000	Off	N	10.3	33.1	60.0
7.704000	23.6	9.000	Off	N	10.4	36.4	60.0
9.570000	26.4	9.000	Off	N	10.4	33.6	60.0
9.800000	27.5	9.000	Off	N	10.4	32.5	60.0
10.770000	24.1	9.000	Off	N	10.5	35.9	60.0

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LTE B5 Middle CH Idle mode_N

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Final Result 2

Frequency (MHz)	CAverage (dBuV)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	31.8	9.000	Off	N	9.8	24.0	55.8
0.158000	28.9	9.000	Off	N	9.8	26.7	55.6
0.166000	34.8	9.000	Off	N	9.8	20.4	55.2
0.208000	27.0	9.000	Off	N	9.9	26.3	53.3
0.216000	28.3	9.000	Off	N	9.9	24.7	53.0
0.230000	27.9	9.000	Off	N	9.9	24.5	52.4
1.074000	21.0	9.000	Off	N	10.0	25.0	46.0
1.102000	20.3	9.000	Off	N	10.0	25.7	46.0
1.154000	24.5	9.000	Off	N	10.0	21.5	46.0
1.512000	22.0	9.000	Off	N	10.1	24.0	46.0
1.552000	20.1	9.000	Off	N	10.1	25.9	46.0
1.560000	22.7	9.000	Off	N	10.1	23.3	46.0
6.772000	18.4	9.000	Off	N	10.3	31.6	50.0
7.178000	19.1	9.000	Off	N	10.3	30.9	50.0
7.702000	16.2	9.000	Off	N	10.4	33.8	50.0
9.570000	19.5	9.000	Off	N	10.4	30.5	50.0
9.800000	19.3	9.000	Off	N	10.4	30.7	50.0
10.770000	17.7	9.000	Off	N	10.5	32.3	50.0

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LTE B5 High CH Idle_RE (30 MHz ~ 1GHz)

LTE B5 High CH Idle

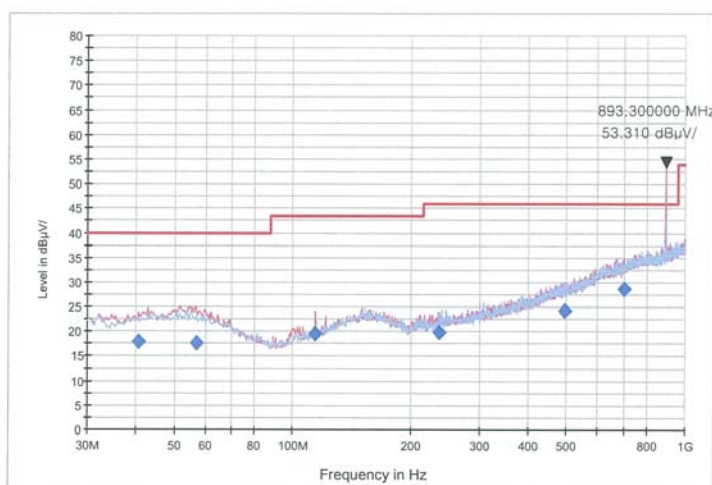
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EMC32 Report

Common Information

Model: SM-A3050
Operating Conditions: LTE B5 High 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)
40.496800	18.0	100.0	V	102.0	20.0	22.0	40.0
56.745600	17.6	116.8	V	58.0	19.8	22.4	40.0
114.611200	19.6	191.8	V	132.0	17.1	23.9	43.5
236.018400	19.8	100.0	V	42.0	18.3	26.2	46.0
494.745600	24.2	274.9	V	327.0	25.1	21.8	46.0
701.775200	28.7	174.9	V	202.0	28.8	17.3	46.0

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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-FC040-P