Appendix for Testreport

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Appendix A: DTS (6 dB) Bandwidth

In this document, the "DTS6dBBW" refers to the measured "DTS (6 dB) Bandwidth" value. In this Appendix, the "fc(DTS6dBBW)" refers to the centre of the measured "DTS6dBBW". The introduction of the "fc(DTS6dBBW)" is due to that other measurements use it as the spectrum analyzer setting.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Ant	DTS6dBBW[MHz]	Verdict
TM1 _Ch0	L	2402	Ant 1	0.74	pass
TM1 _Ch19	M	2440	Ant 1	0.74	pass
TM1 _Ch39	H	2480	Ant 1	0.73	pass

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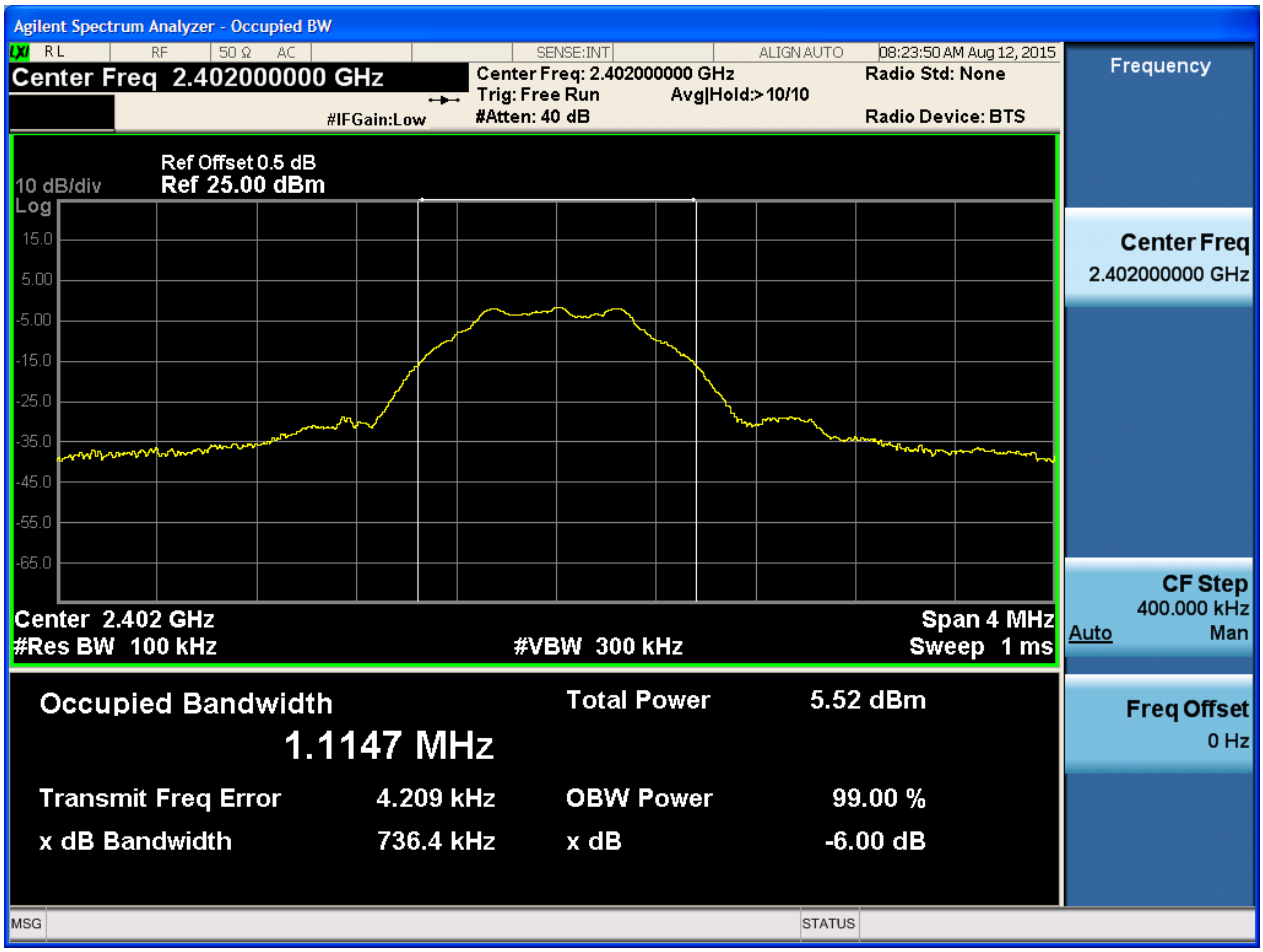
Part II - Test Plots

2.1 TM1_Ch0_L



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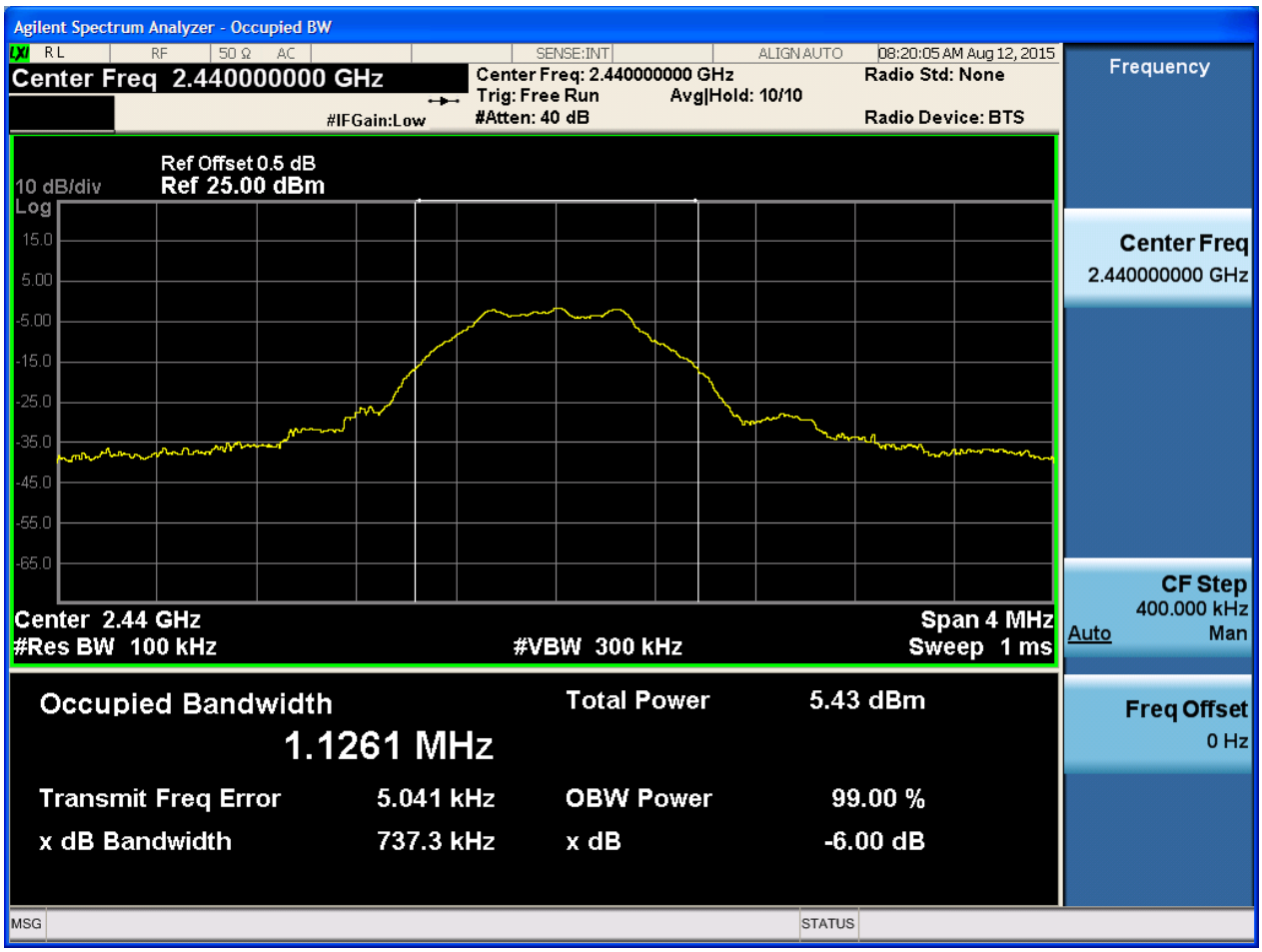
2.3 TM1_Ch19_M



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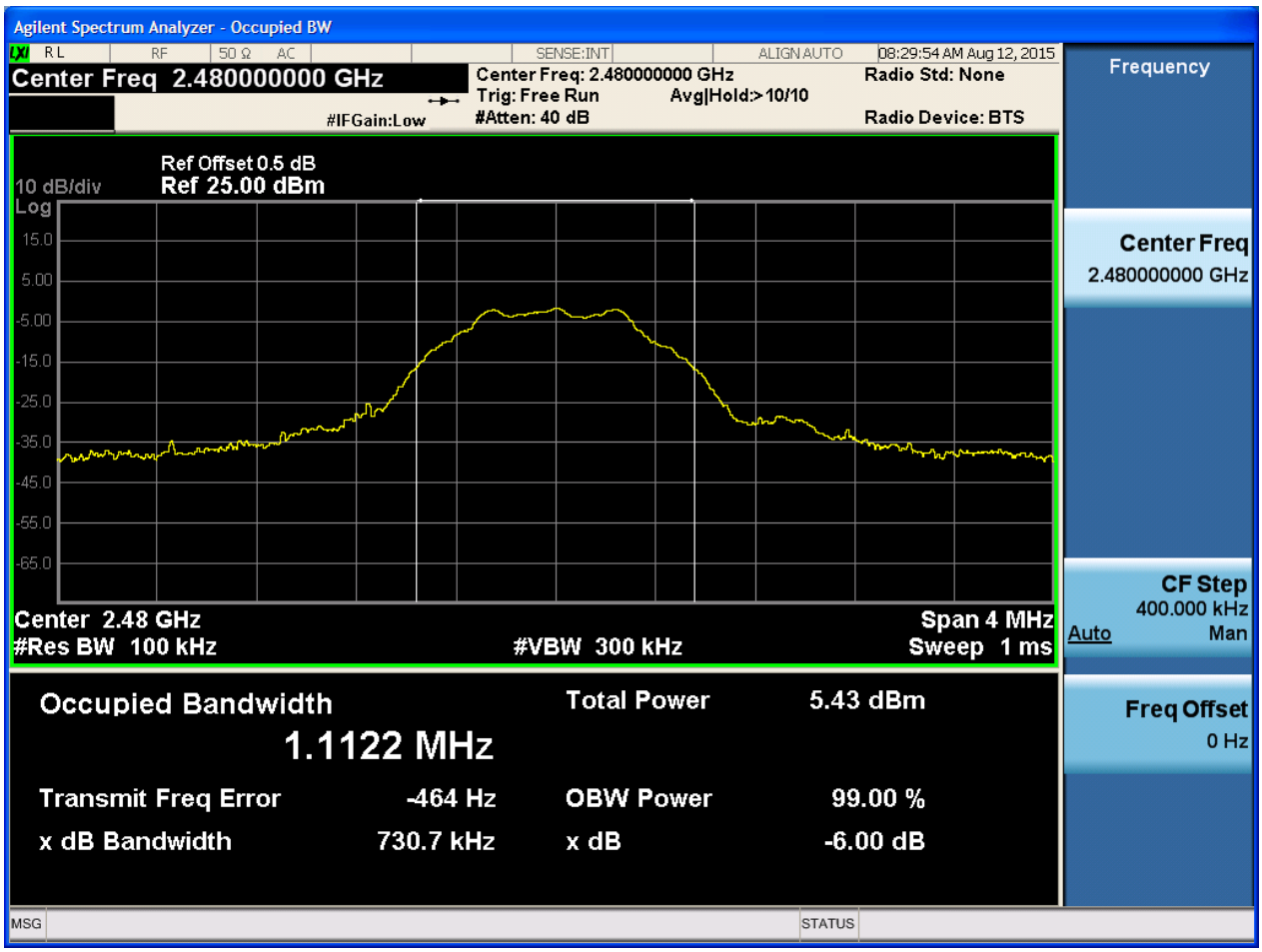
2.5 TM1_Ch39_H



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Appendix B: Occupied Bandwidth

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain, and used as respective results for each chain.

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Occupied Bandwidth [MHz]	Verdict
TM1 _CH0	L	2402	1.09	pass
TM1 _Ch19	M	2440	1.10	pass
TM1 _Ch39	H	2480	1.08	pass

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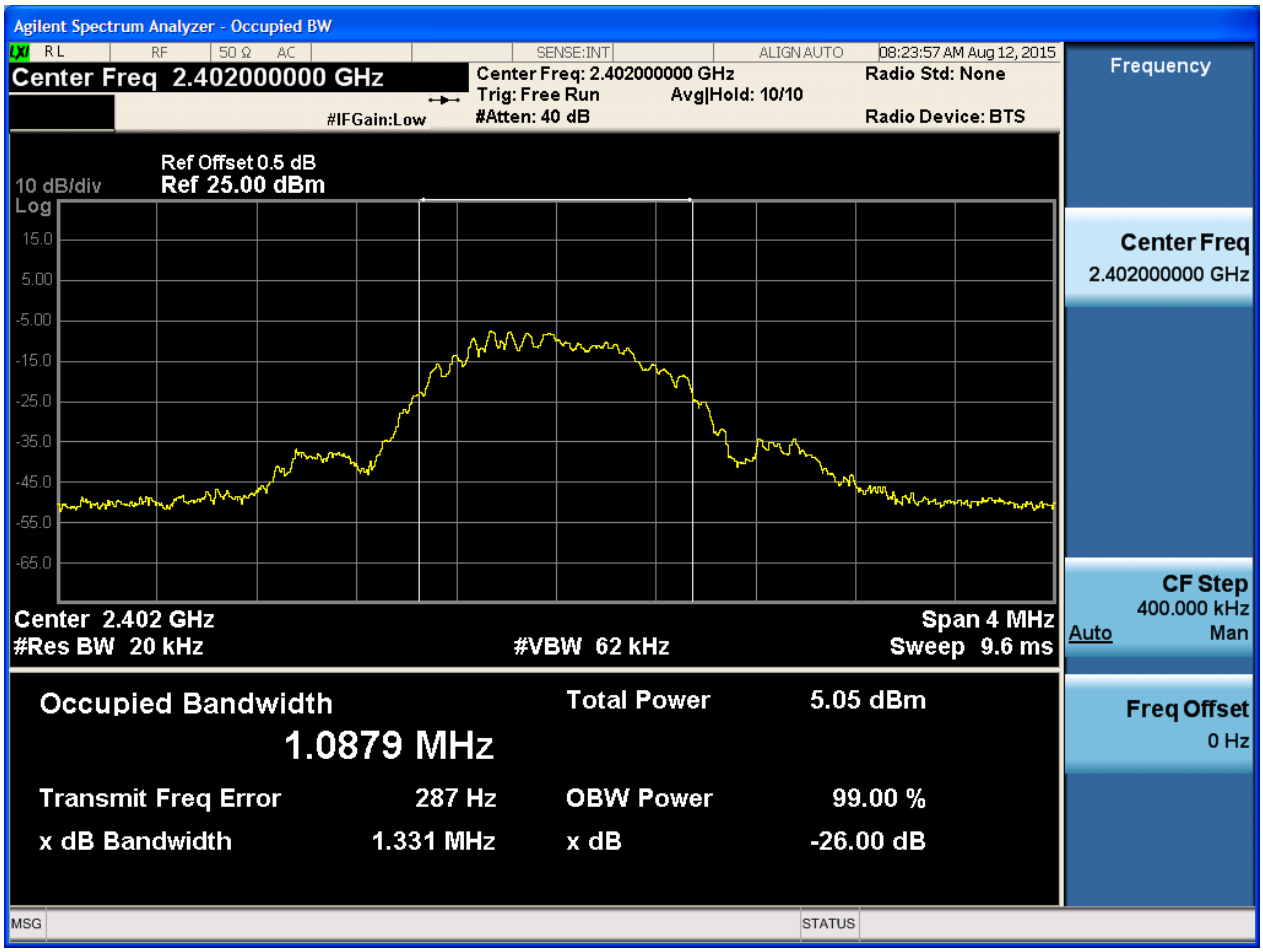
Part II - Test Plots

2.1 TM1 _CH0_Ch0_L



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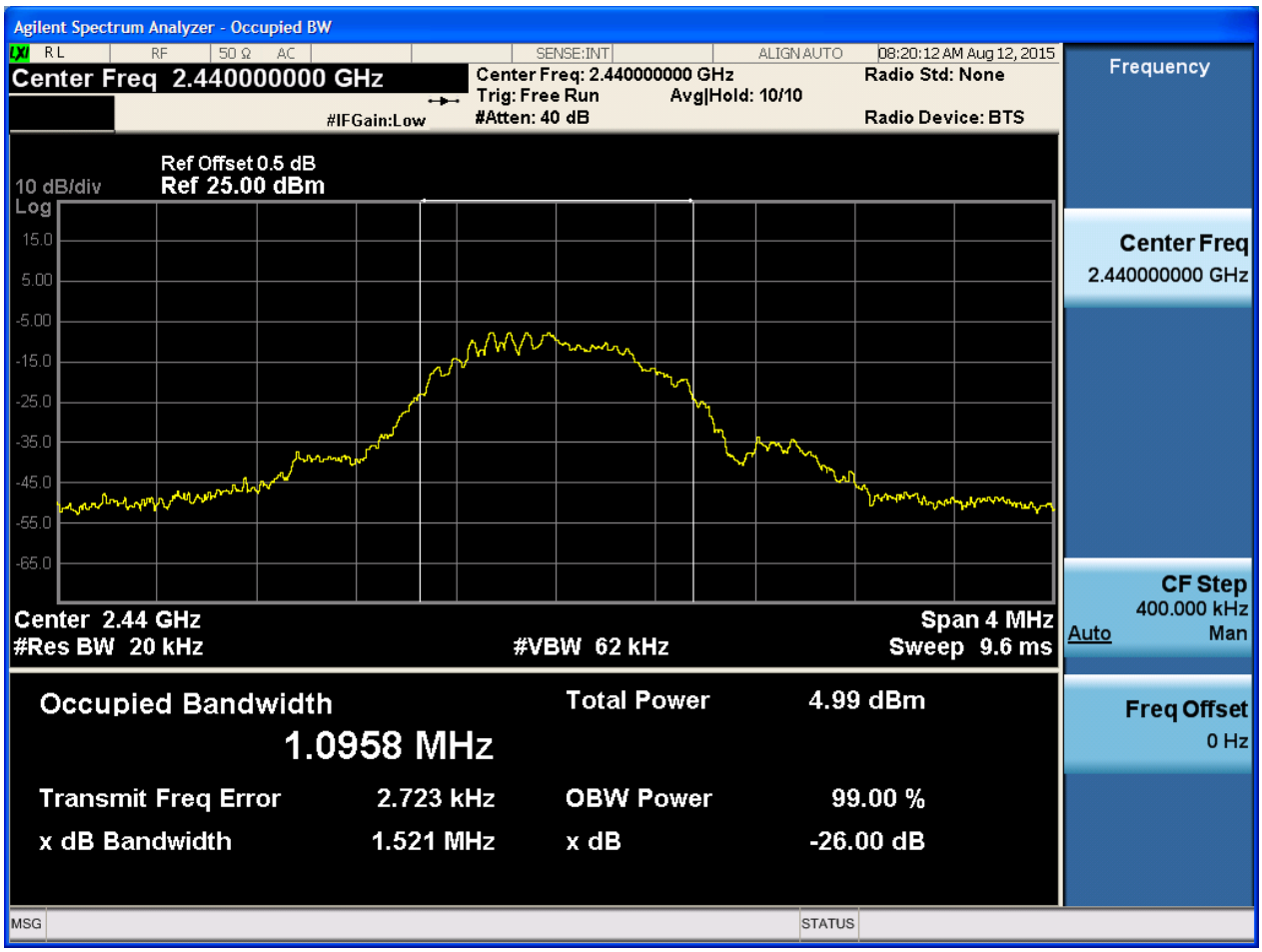
2.1 TM1 _CH0_Ch19_M



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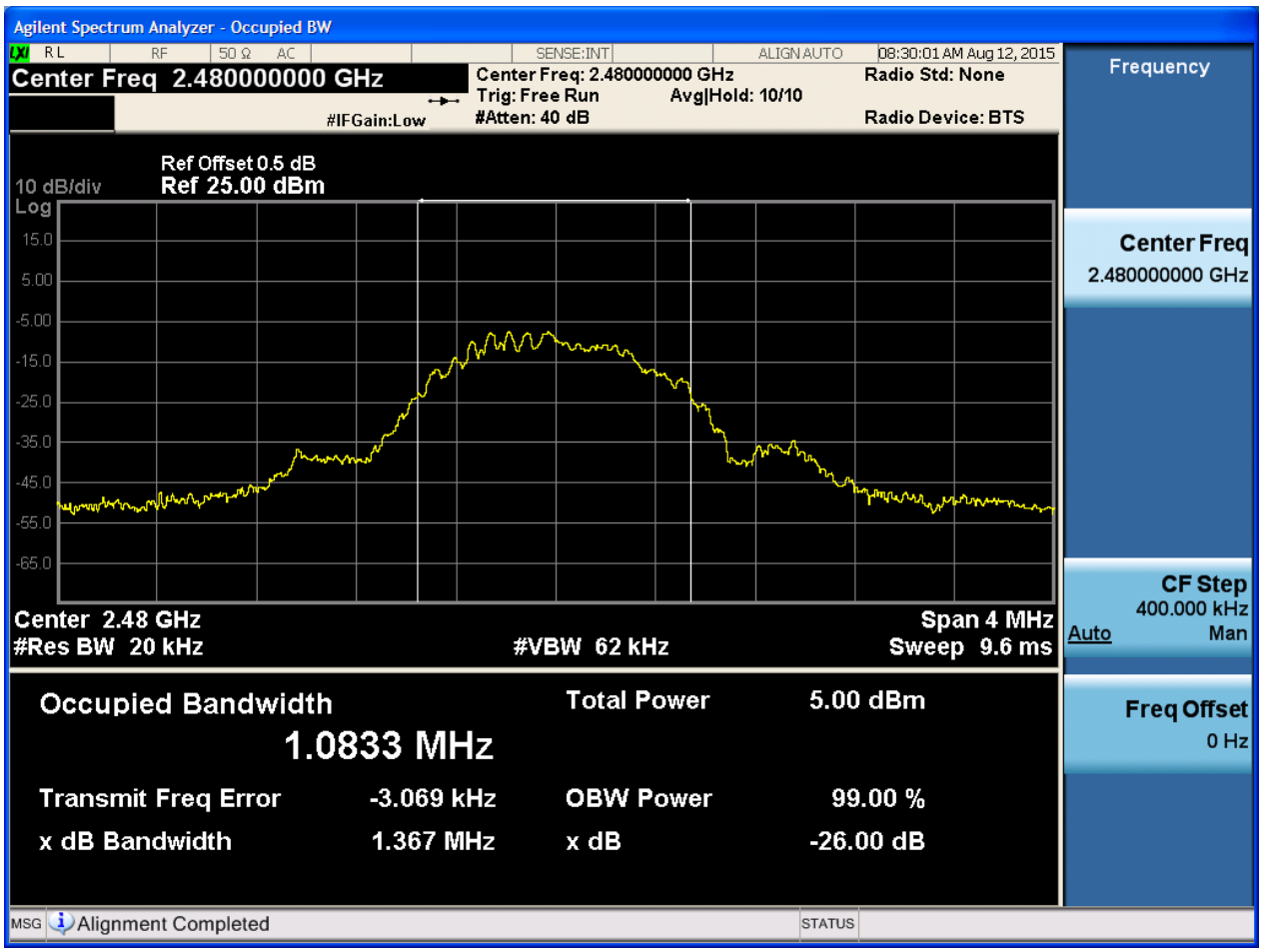
2.1 TM1 _CH0_Ch39_H



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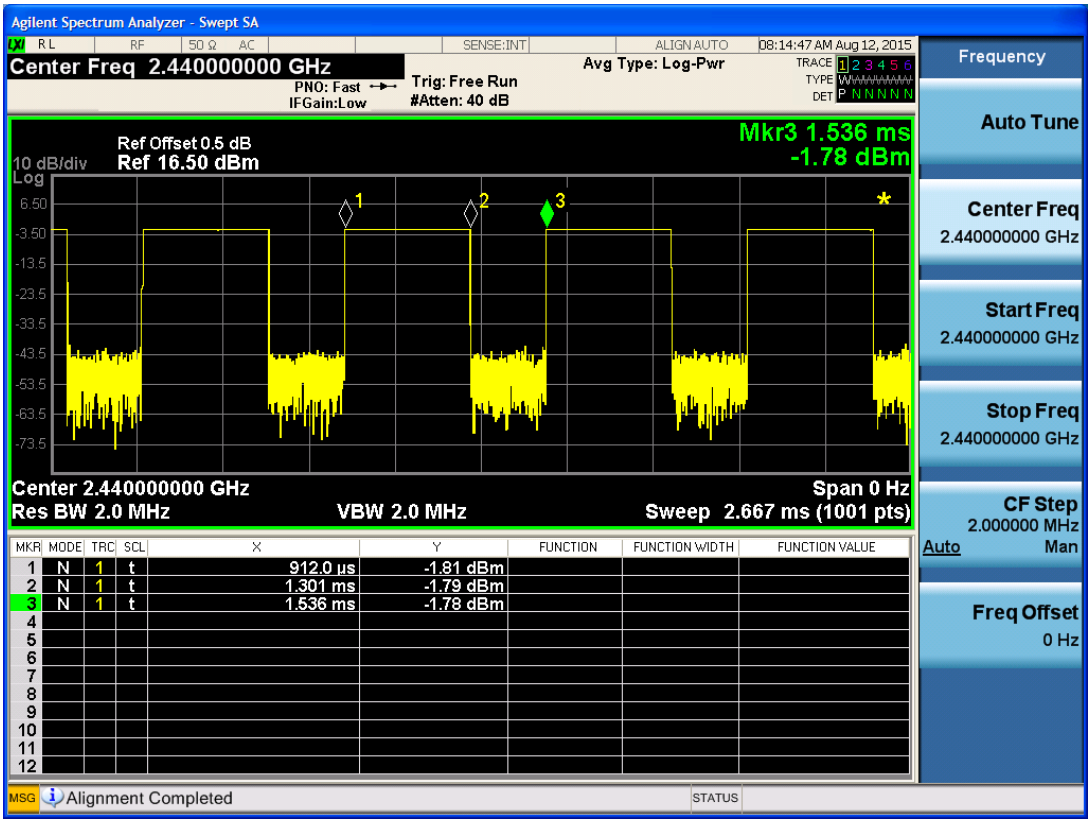
Appendix C: Duty Cycle

Part I - Test Results

Test Mode	TX Freq. [MHz]	Duty cycle [%]
TM1	CH0,CH19,CH39	62

Part II - Test Plots

2.1 TM1 _CH0



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Appendix D: Maximum Conducted Average Output Power

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	Power[dBm]	Verdict
TM1 _CH0	L	2402	62	-1.22	pass
TM1 _CH19	M	2440	62	-1.24	pass
TM1 _CH39	H	2480	62	-1.32	pass

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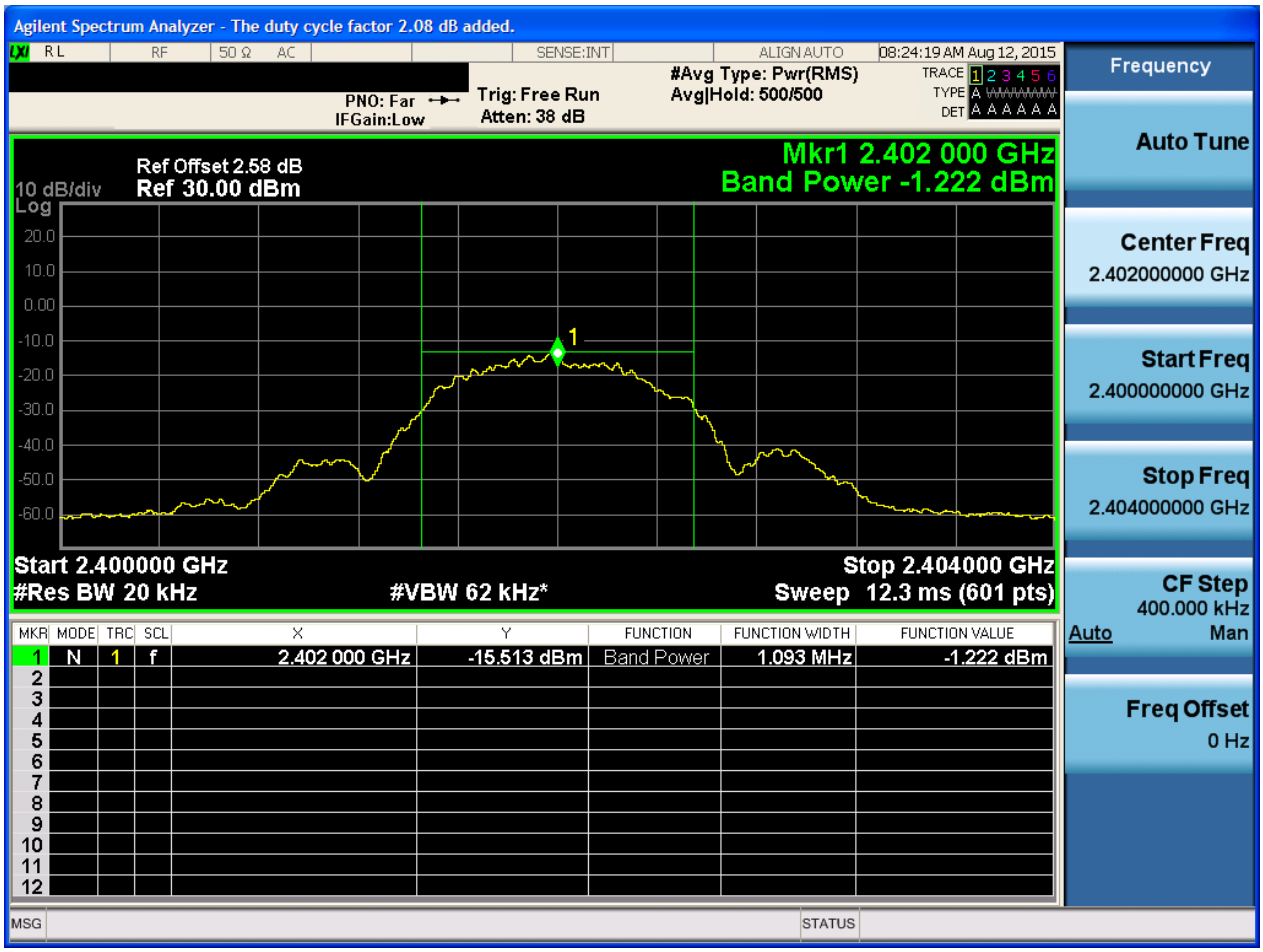
Part II - Test Plots

2.1 TM1 _CH0_Ch0_L



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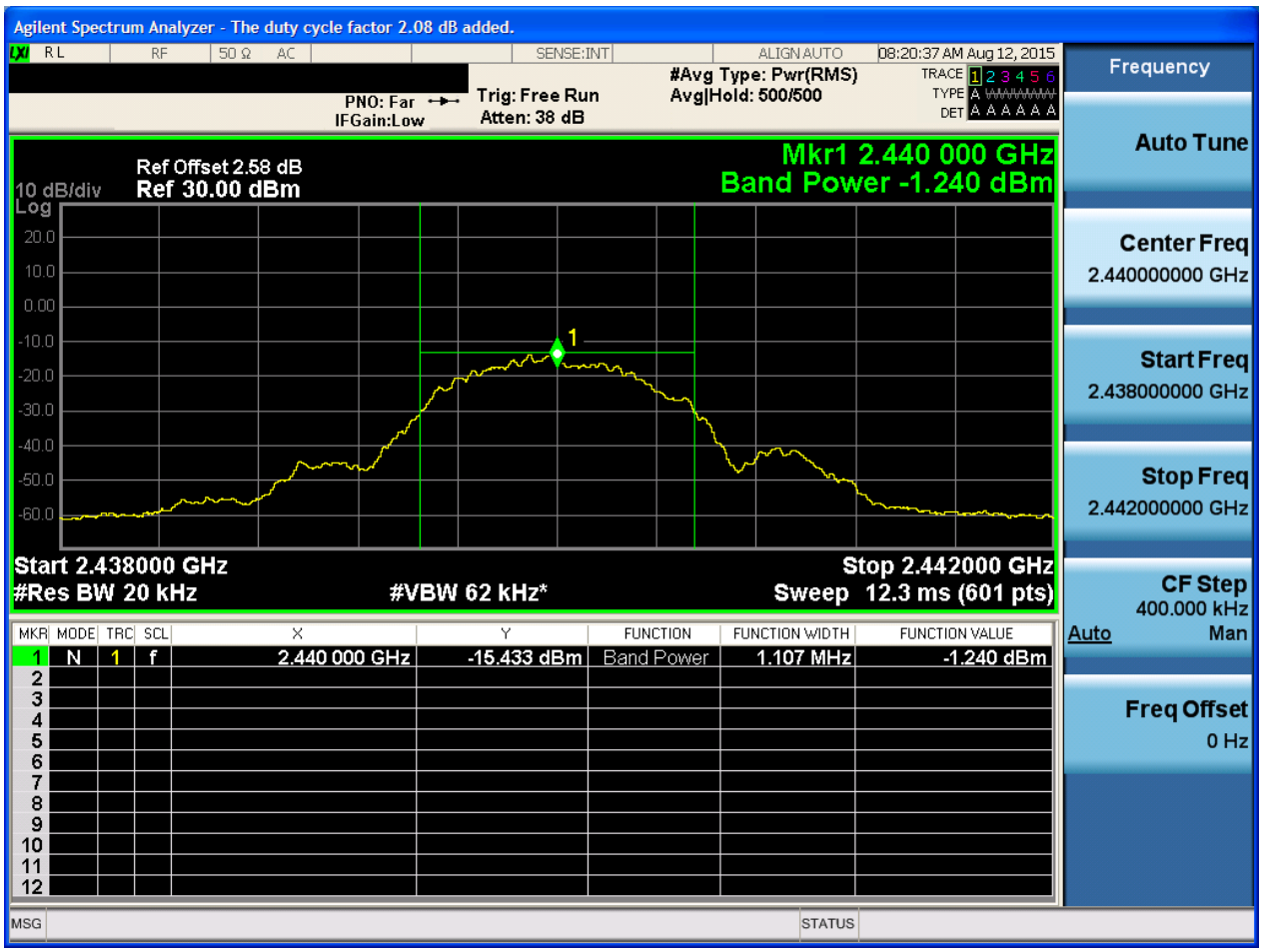
2.3 TM1 _CH0_Ch19_M



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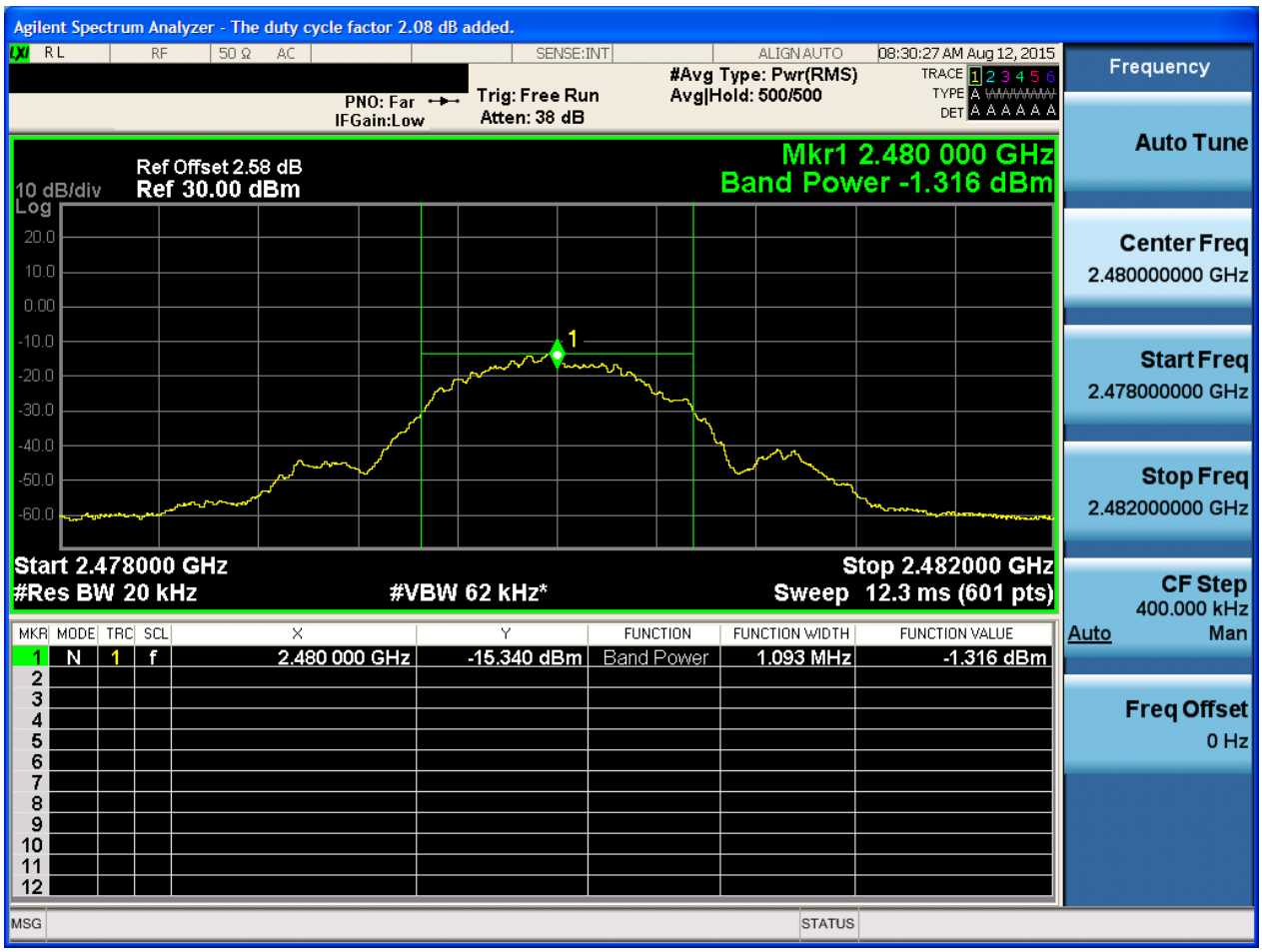
2.5 TM1 _CH0_Ch39_H



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Appendix E: Maximum Power Spectral Density Level

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Duty Cycle [%]	PD[MHz]	Verdict
TM1 _CH0	L	2402	62	-15.94	pass
TM1 _CH19	M	2440	62	-15.97	pass
TM1 _CH39	H	2480	62	-16.17	pass

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Part II - Test Plots

2.1 TM1 _CH0_Ch0_L

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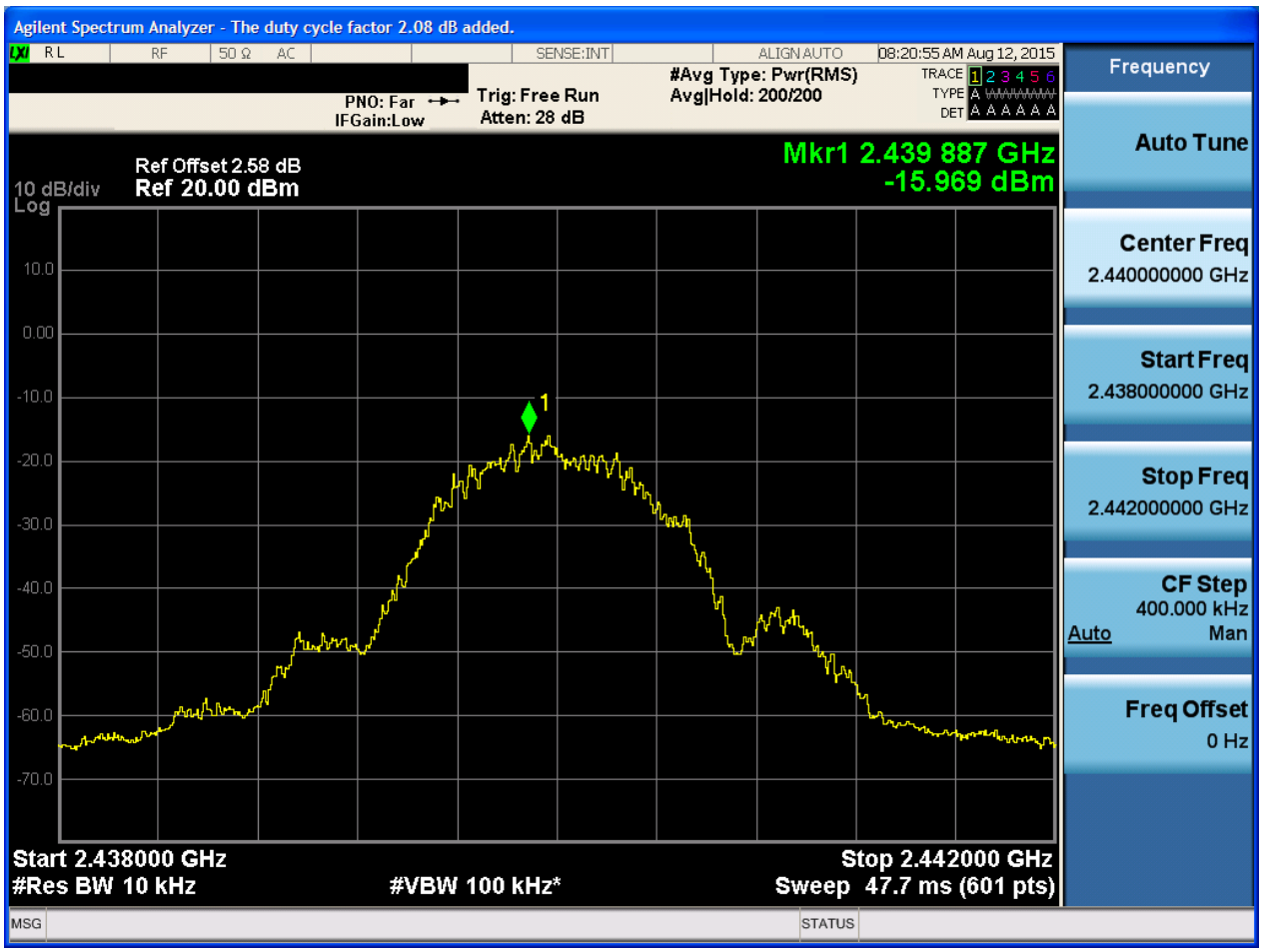
2.3 TM1 _CH0_Ch19_M



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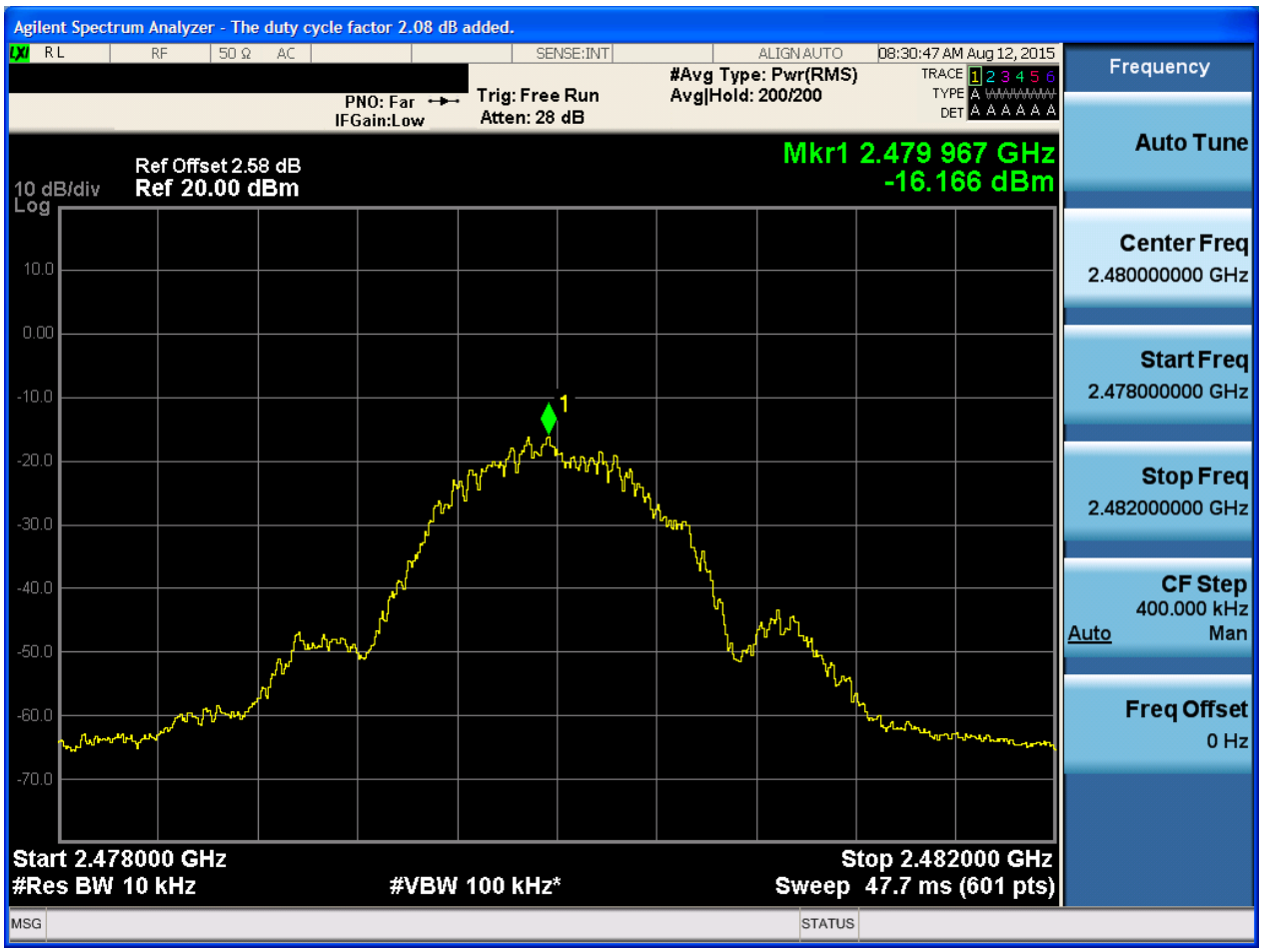
2.5 TM1 _CH0_Ch39_H



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Appendix F: Band Edges Compliance

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Carrier Power[dBm]	Max.Spurious Level[dBm]	Verdict
TM1 _CH0	L	2402	-1.80	-50.04	pass
TM1 _CH39	H	2480	-1.74	-43.64	pass

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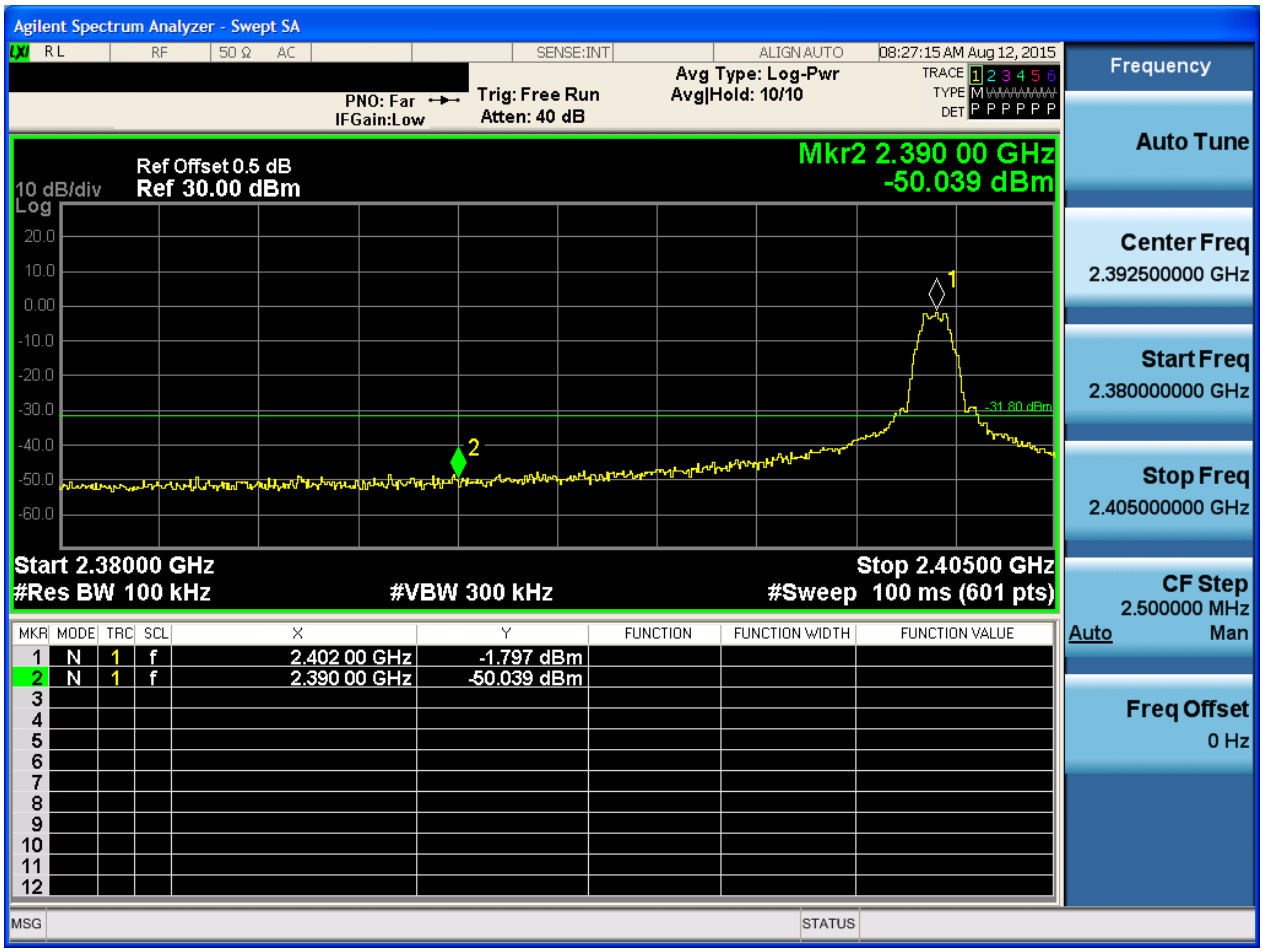
Part II - Test Plots

2.1 TM1 _CH0_Ch0_L



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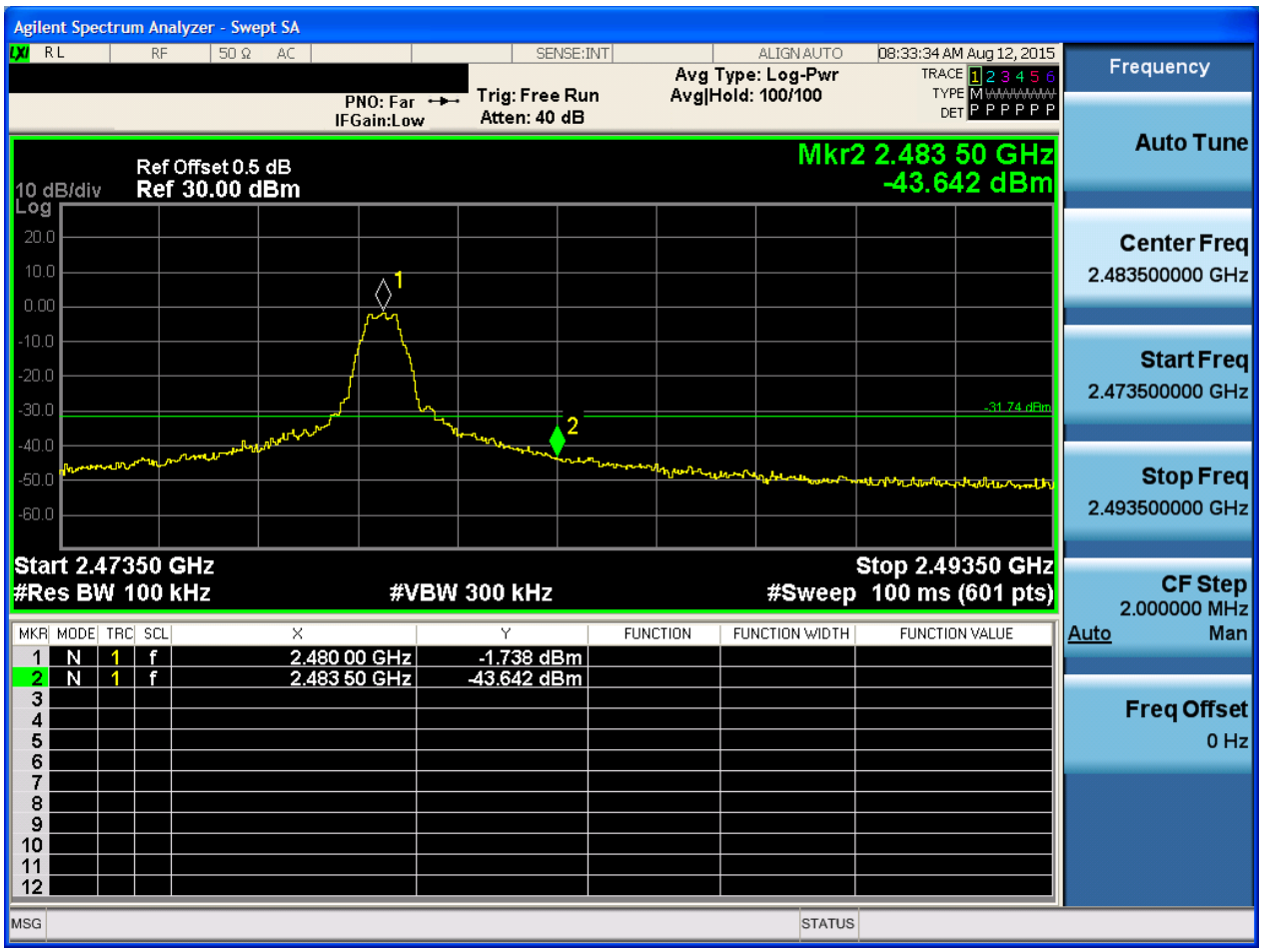
2.3 TM1 _CH0_Ch39_H



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Appendix G: Unwanted Emissions into Non-Restricted Frequency Bands

In this Appendix, the "Pref", which is used as the reference level, refers to the peak power level in any 100 kHz bandwidth within the fundamental emission, the "Puw" referrers to the maximum emission power in 100 kHz band segments outside of the authorized frequency band.

Considering that the higher ratio of RBW to the span for the frequency ranges below 30 MHz makes the results determination be complicated,a narrower RBW other than 100 kHz is used for these ranges. The measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] = 10 x lg(100 [kHz]/narrower RBW [kHz]). As to this Appendix, the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

For measurements on smart antenna systems (devices with multiple transmit chains), the test is performed at each chain and used as respective results for each chain, due to the relative-limit requirement.

In the result taTM1 _CH0, the "< Limit" denotes that "The Puw [dBm] is less than Pref[dBm]-30[dBm],see test plots for detailed".

Part I - Test Results

Test Mode	Test Channel	Frequency[MHz]	Pref[dBm]	Puw[dBm]	Verdict
TM1 _CH0	L	2402	-1.69	<limit	pass
TM1 _CH19	M	2440	-1.70	<limit	pass
TM1 _CH39	H	2480	-1.79	<limit	pass

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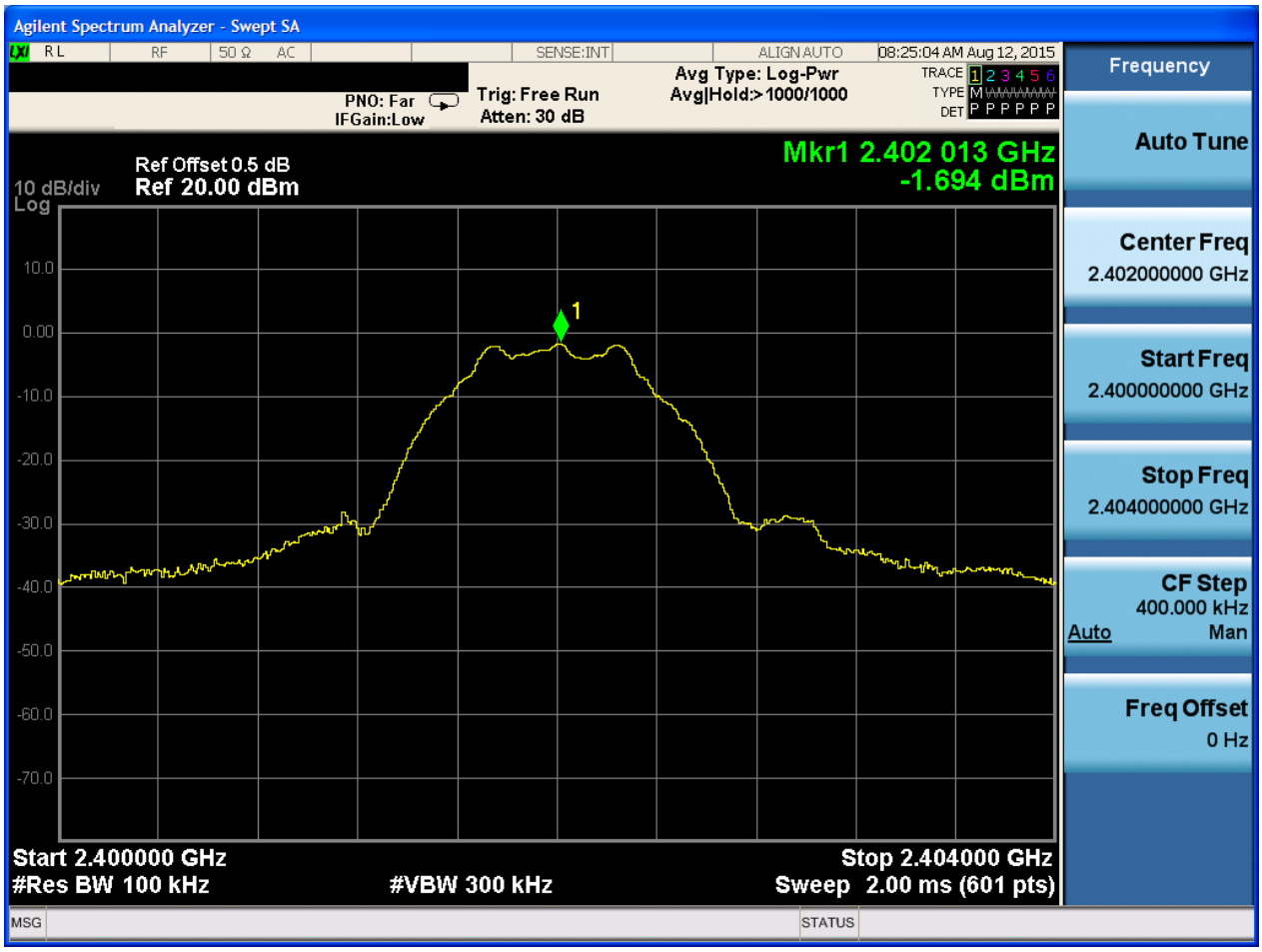
Part II - Test Plots

2.1 TM1 _CH0_Ch0_L

Pref:



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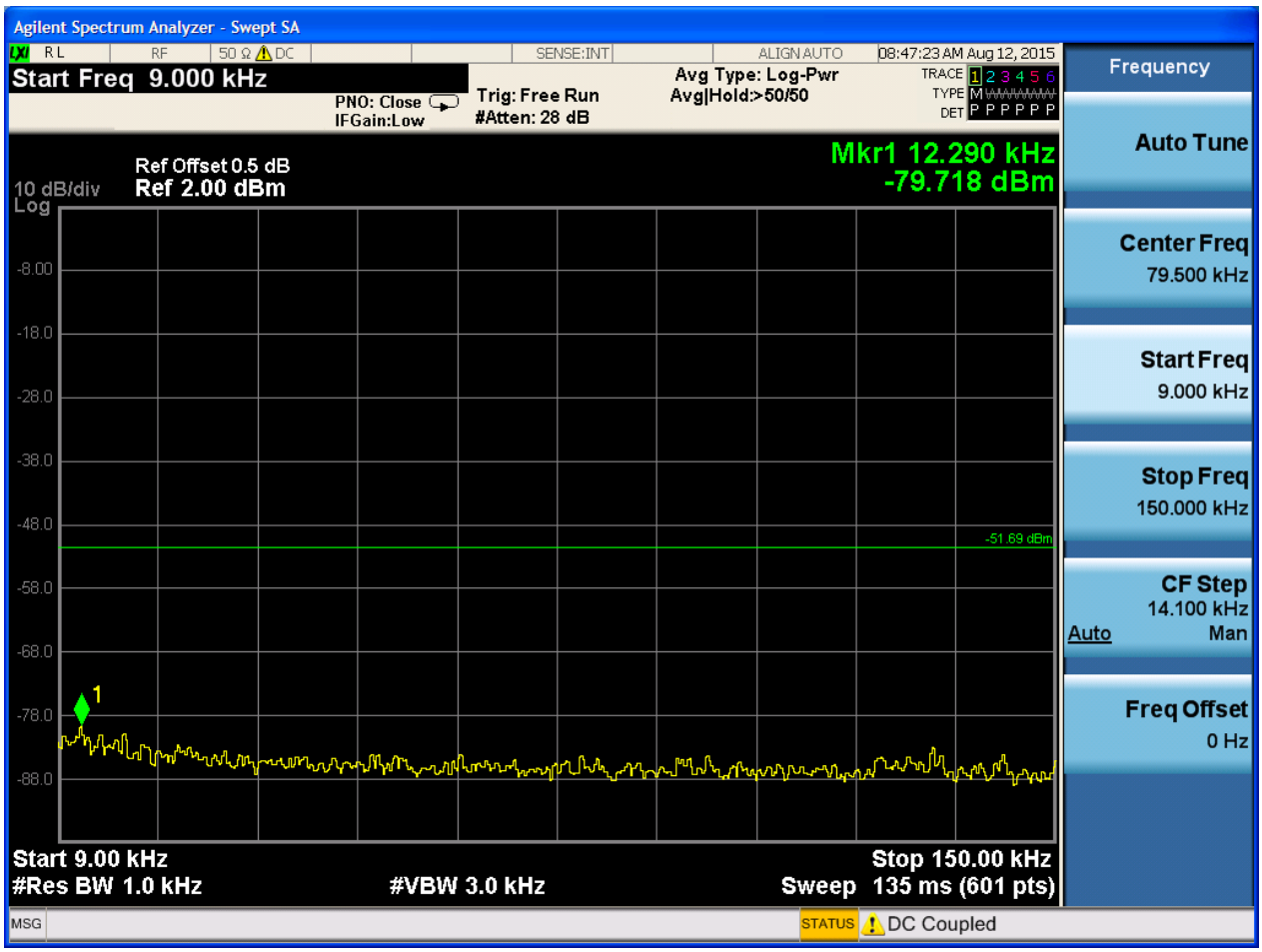
Puw:



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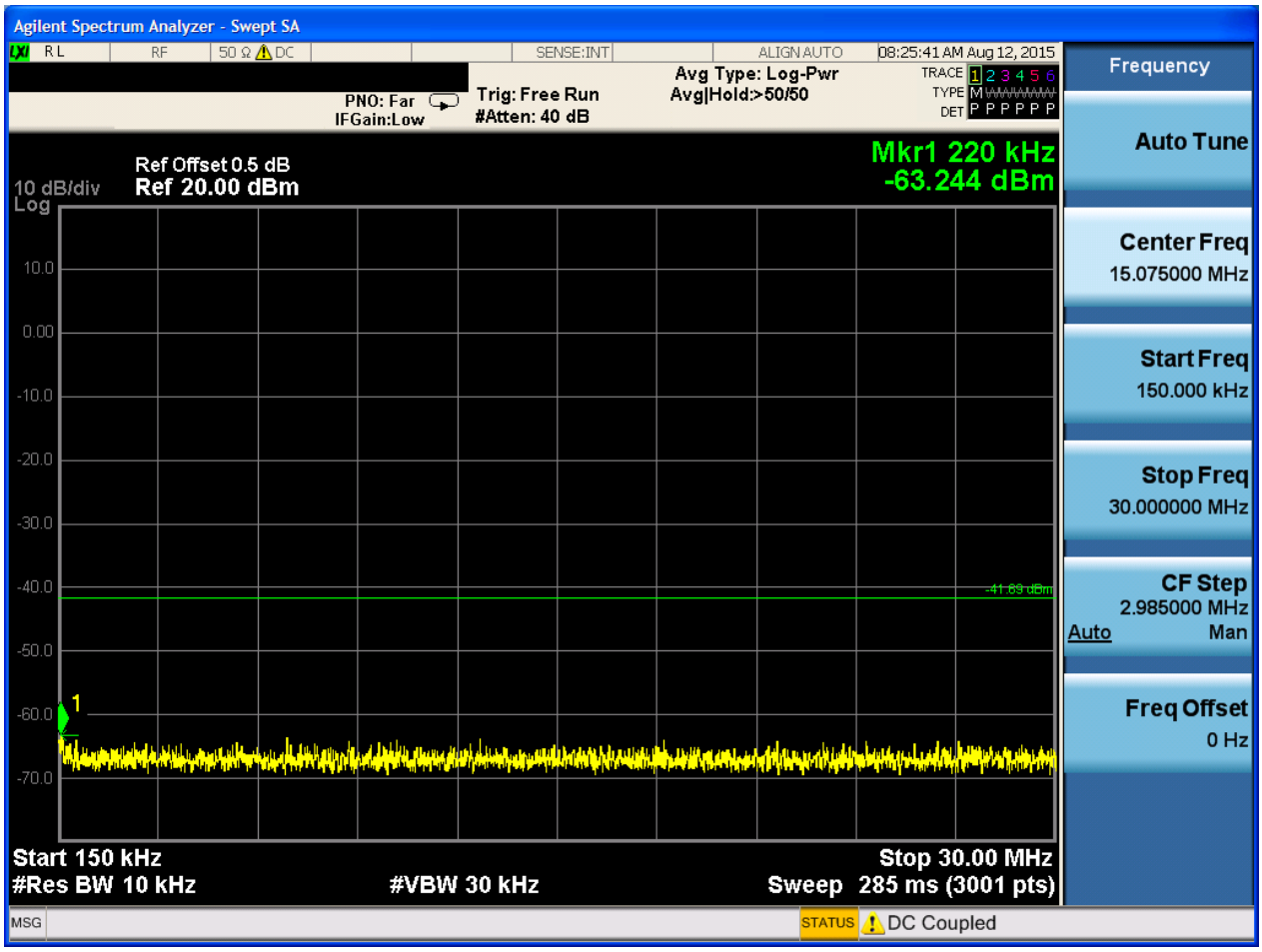

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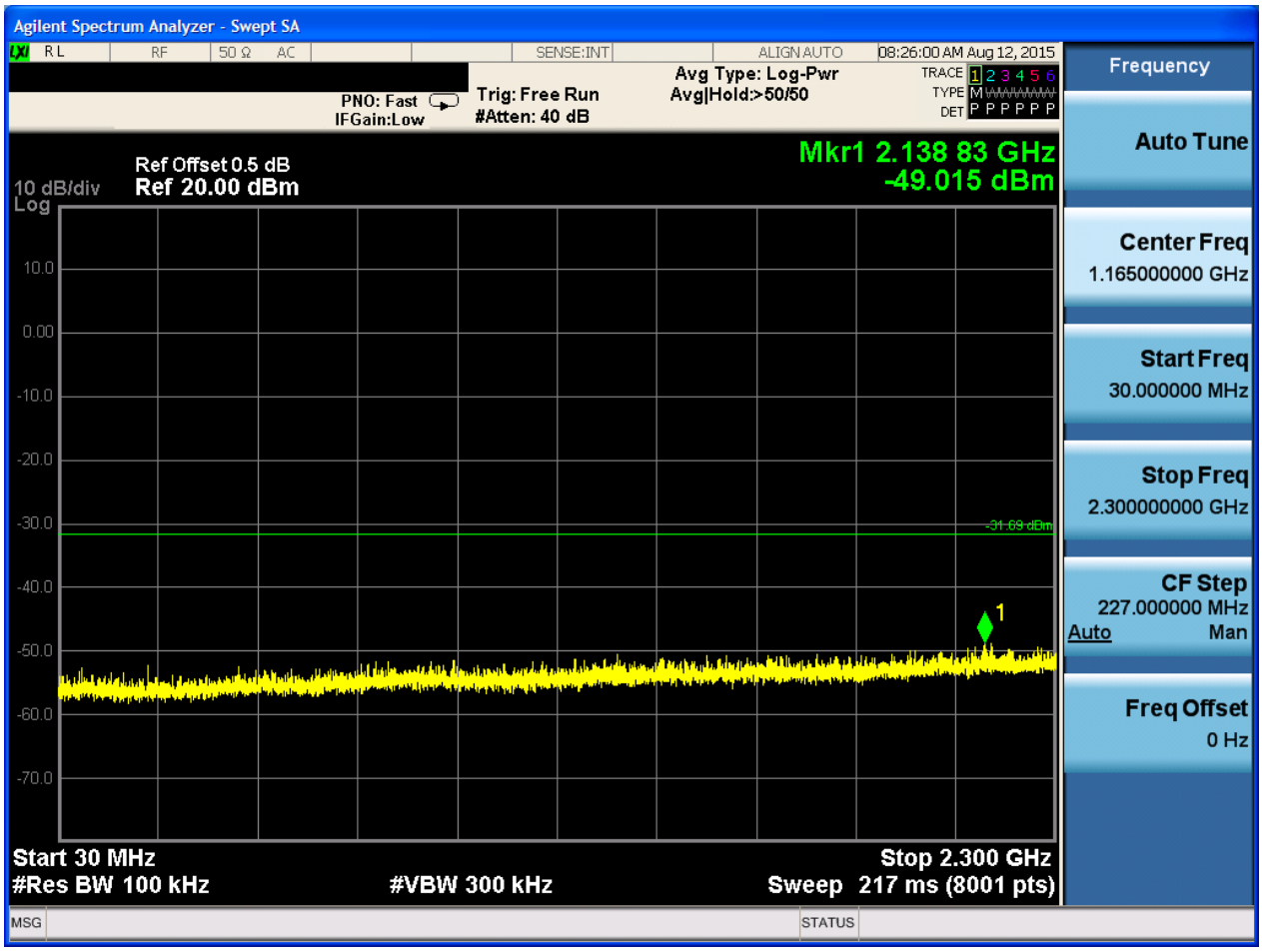

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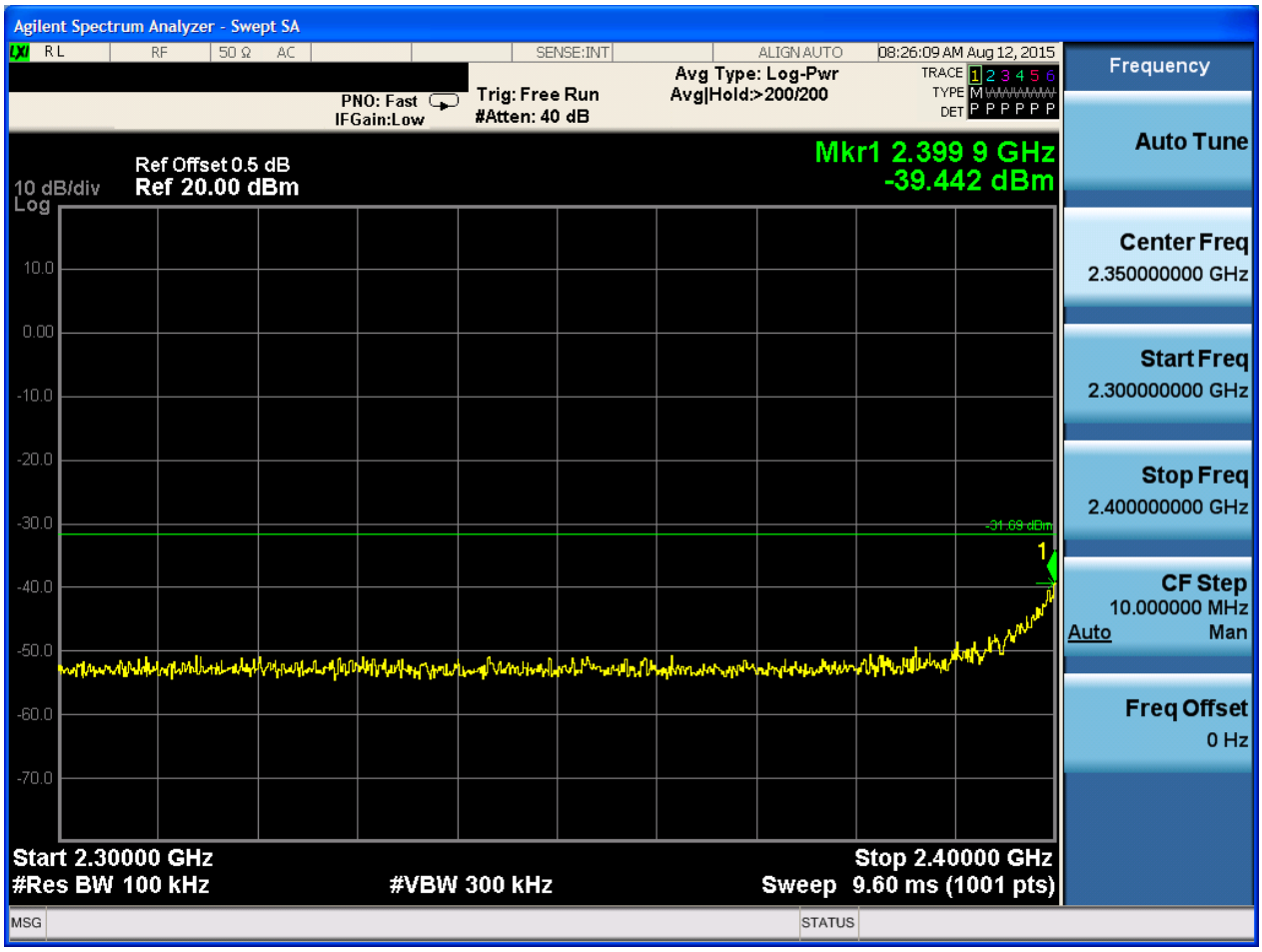

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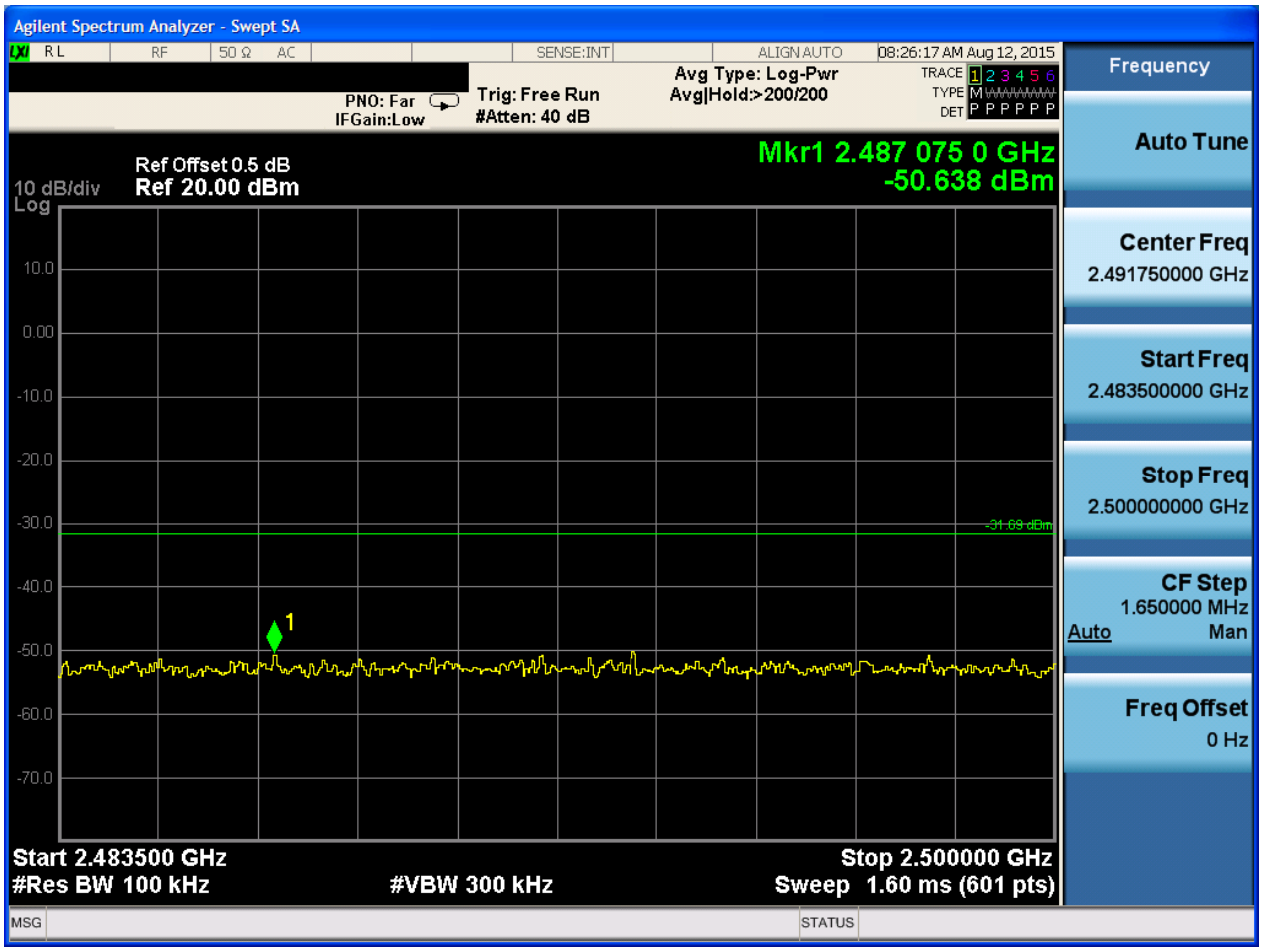

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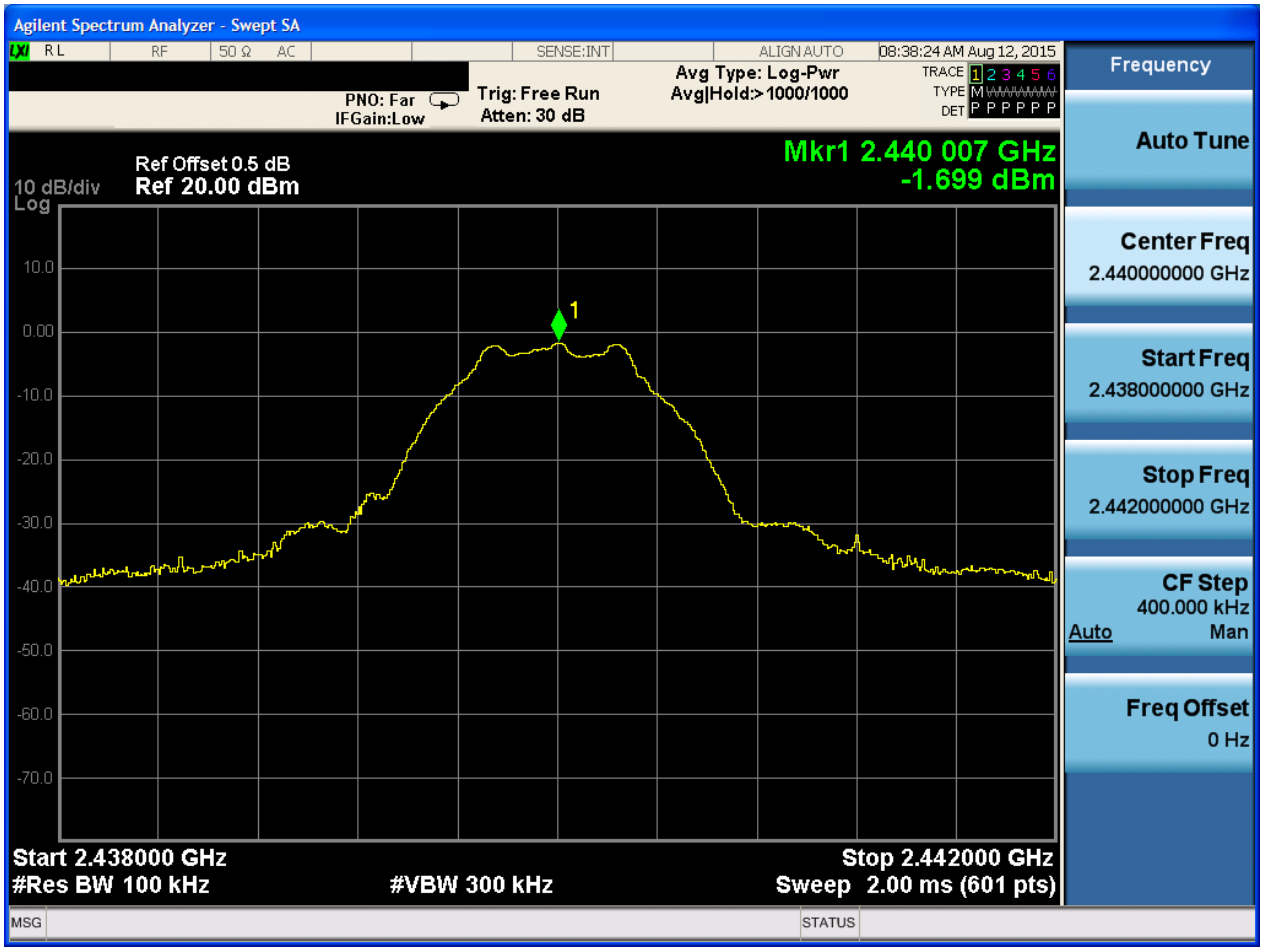
2.3 TM1 _CH0_Ch19_M

Pref:



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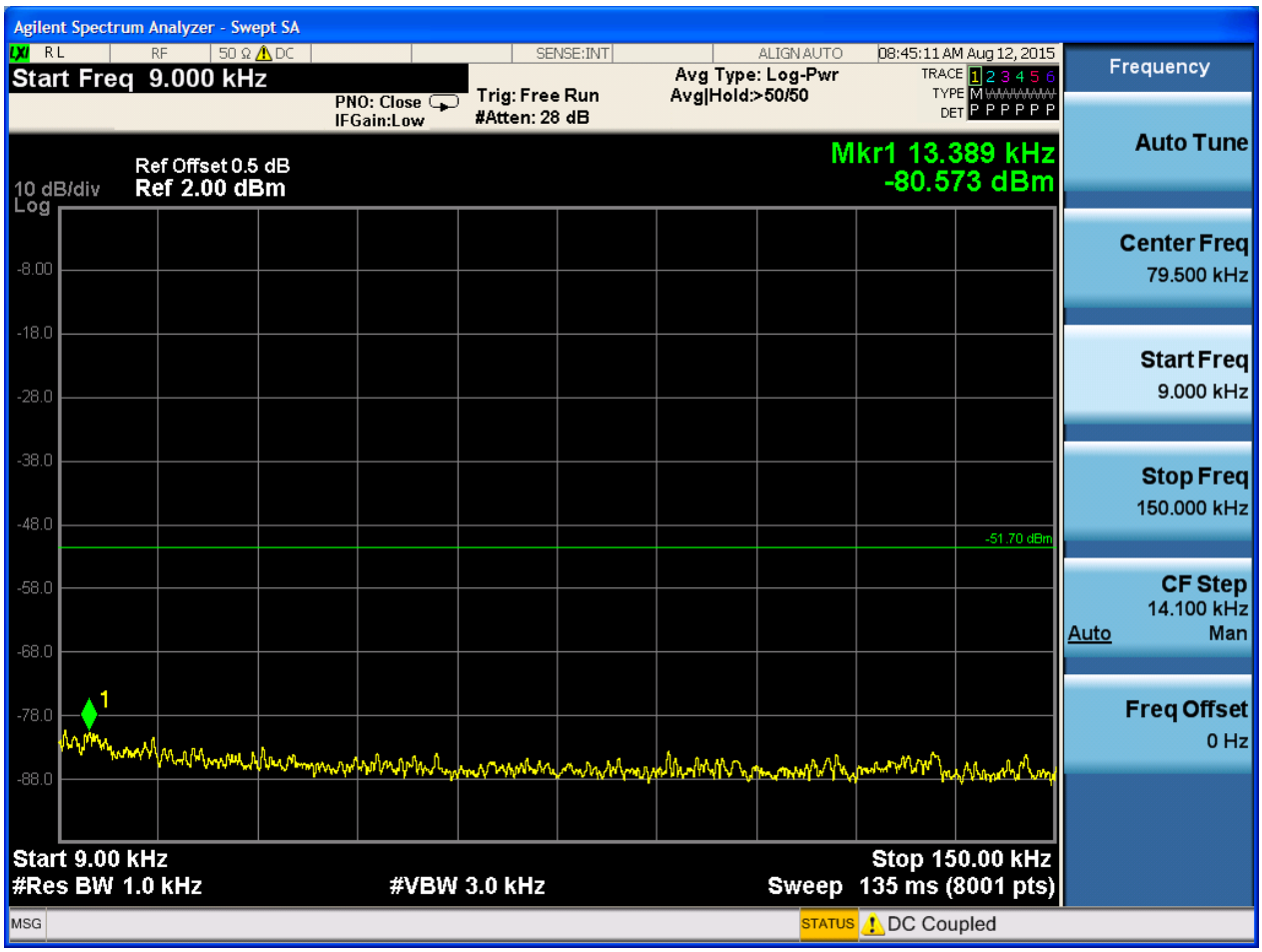

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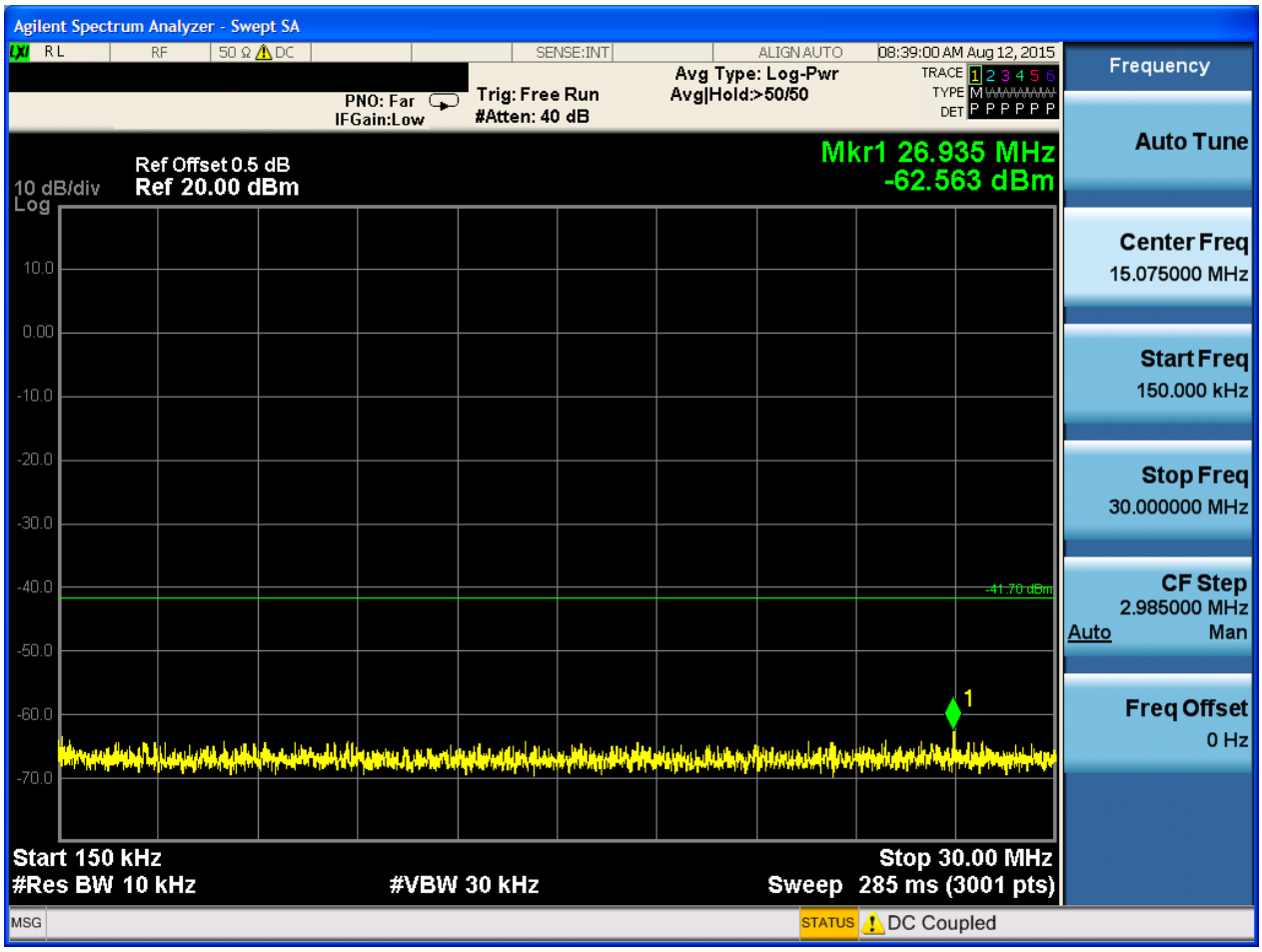

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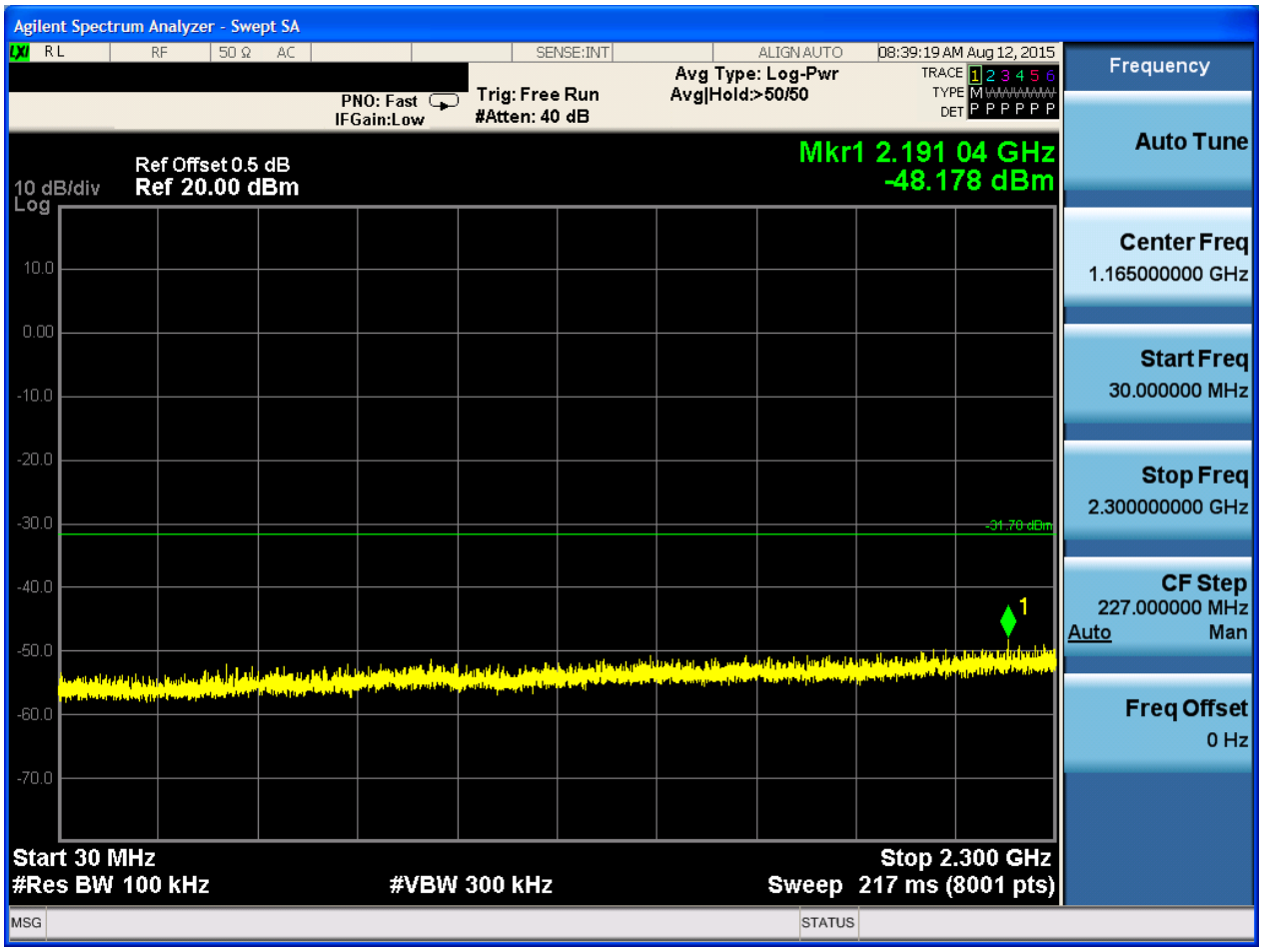

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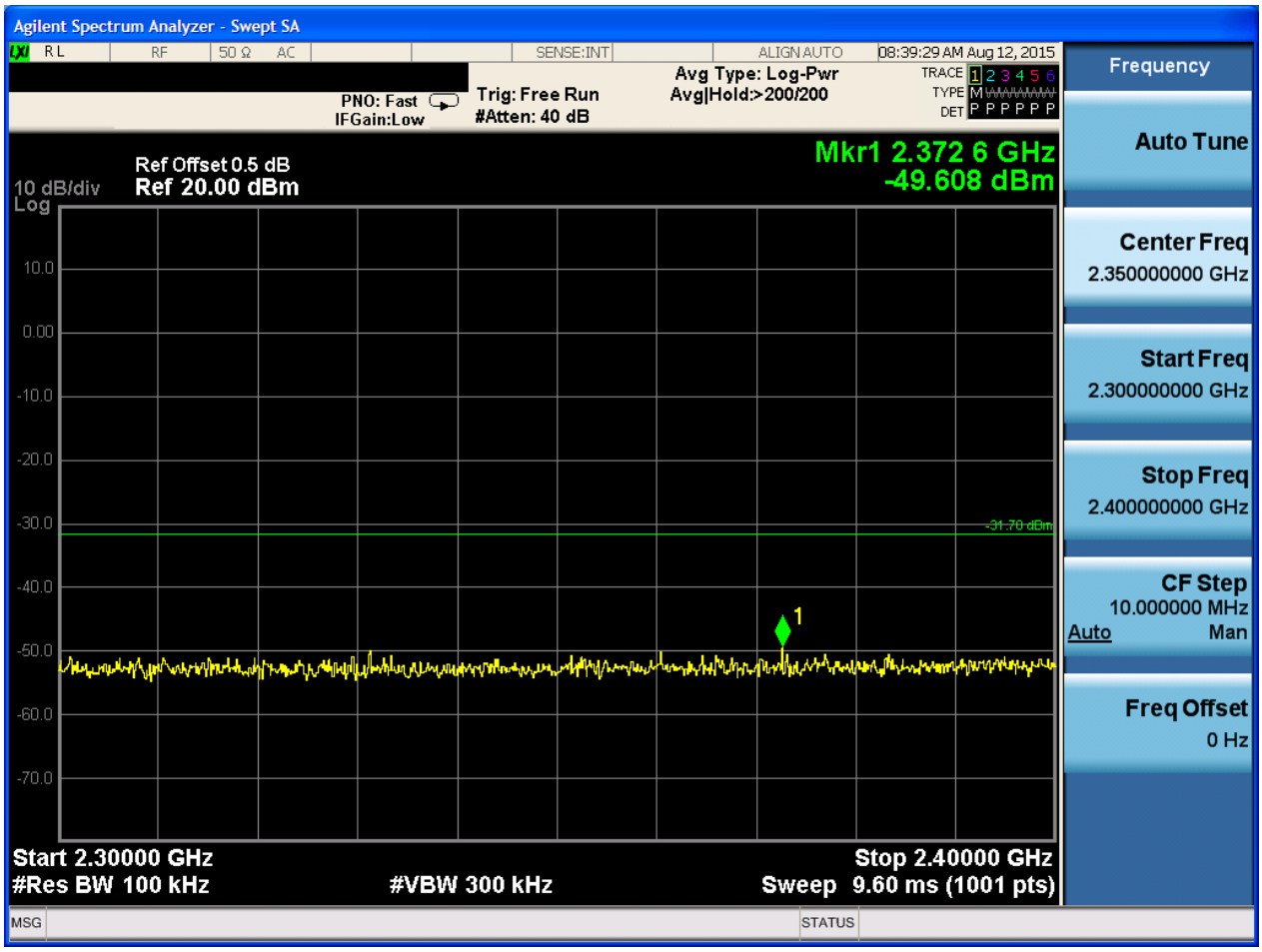

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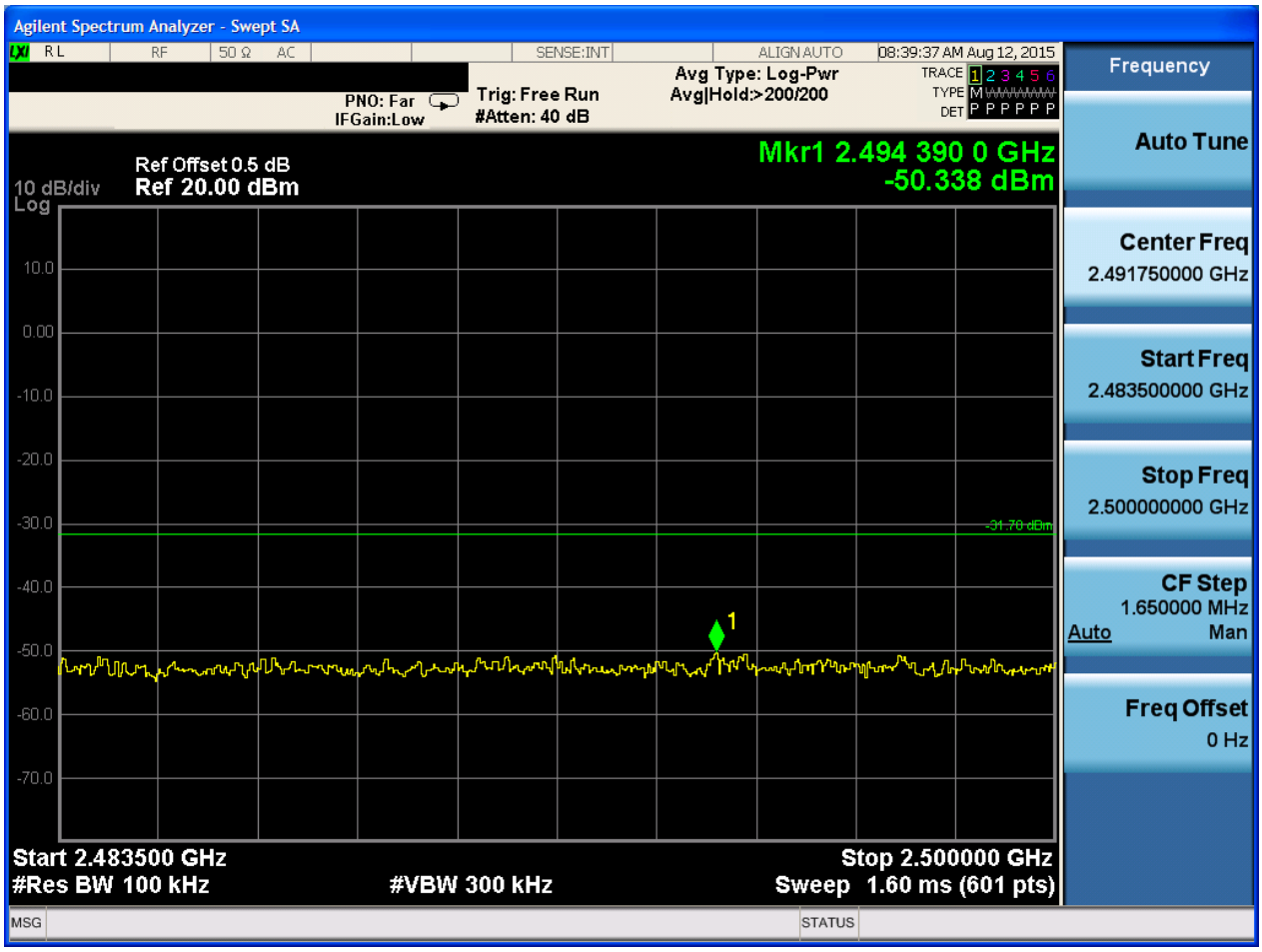

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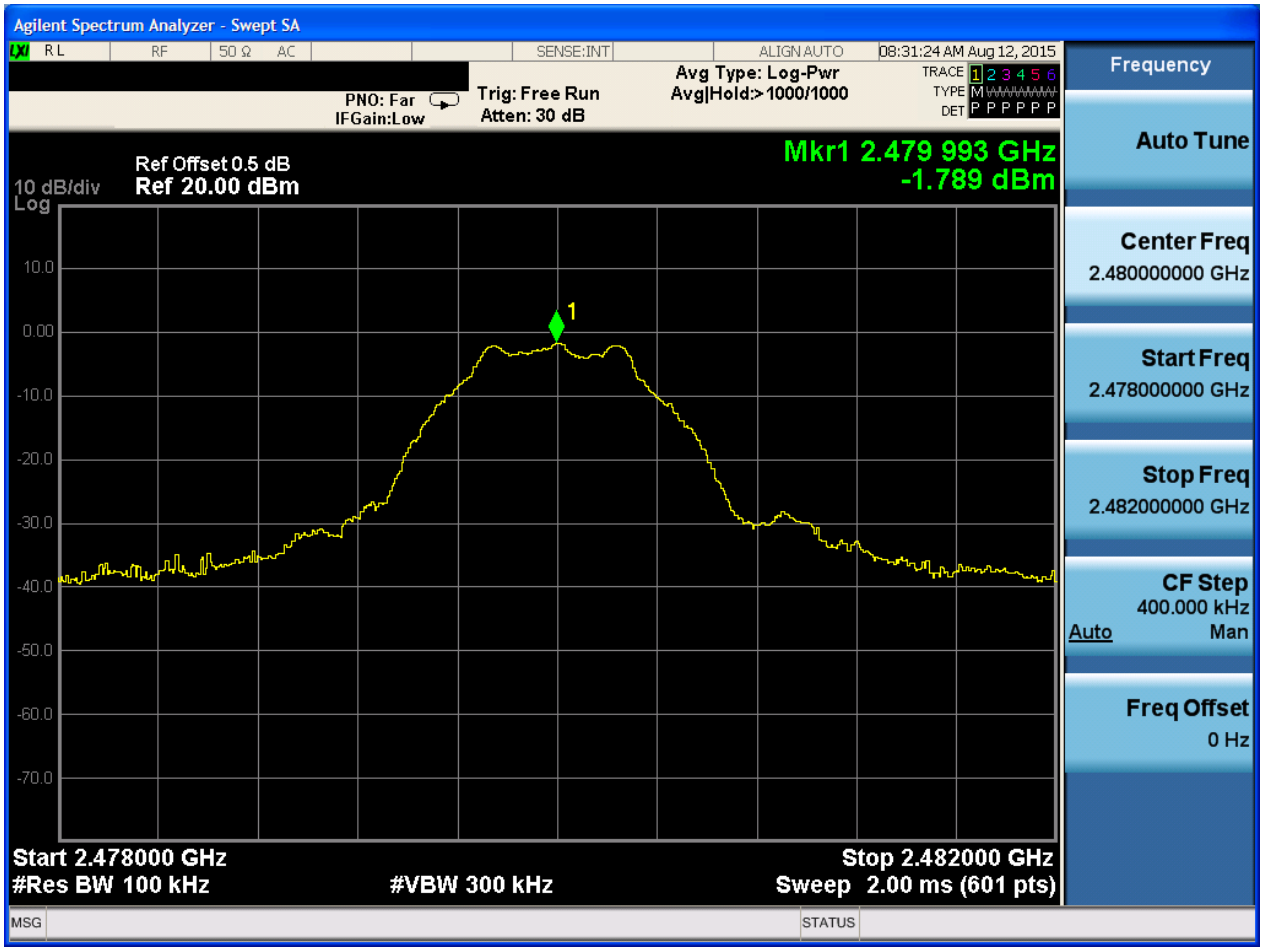
2.5 TM1 _CH0_Ch39_H

Pref:



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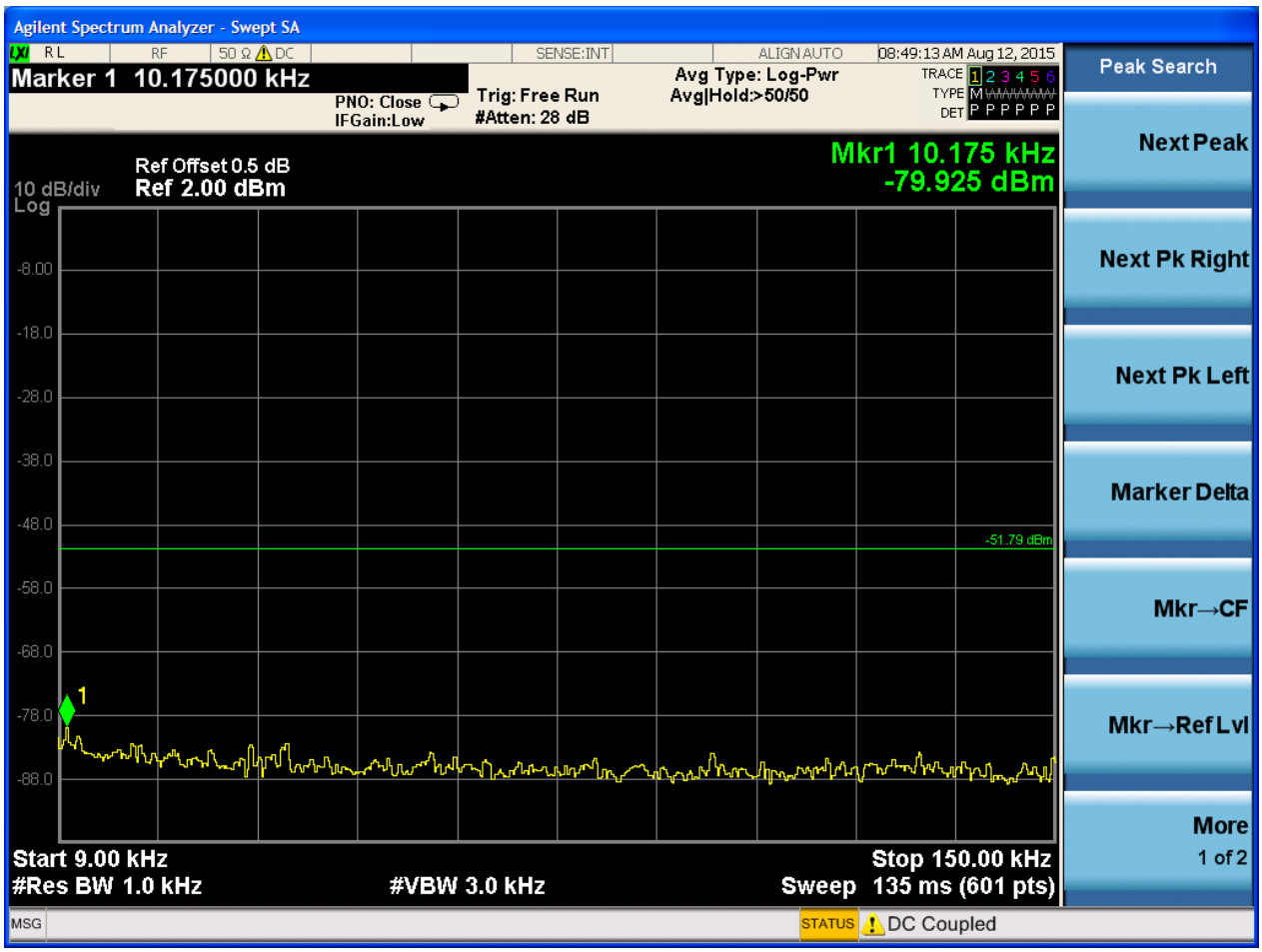
Puw:



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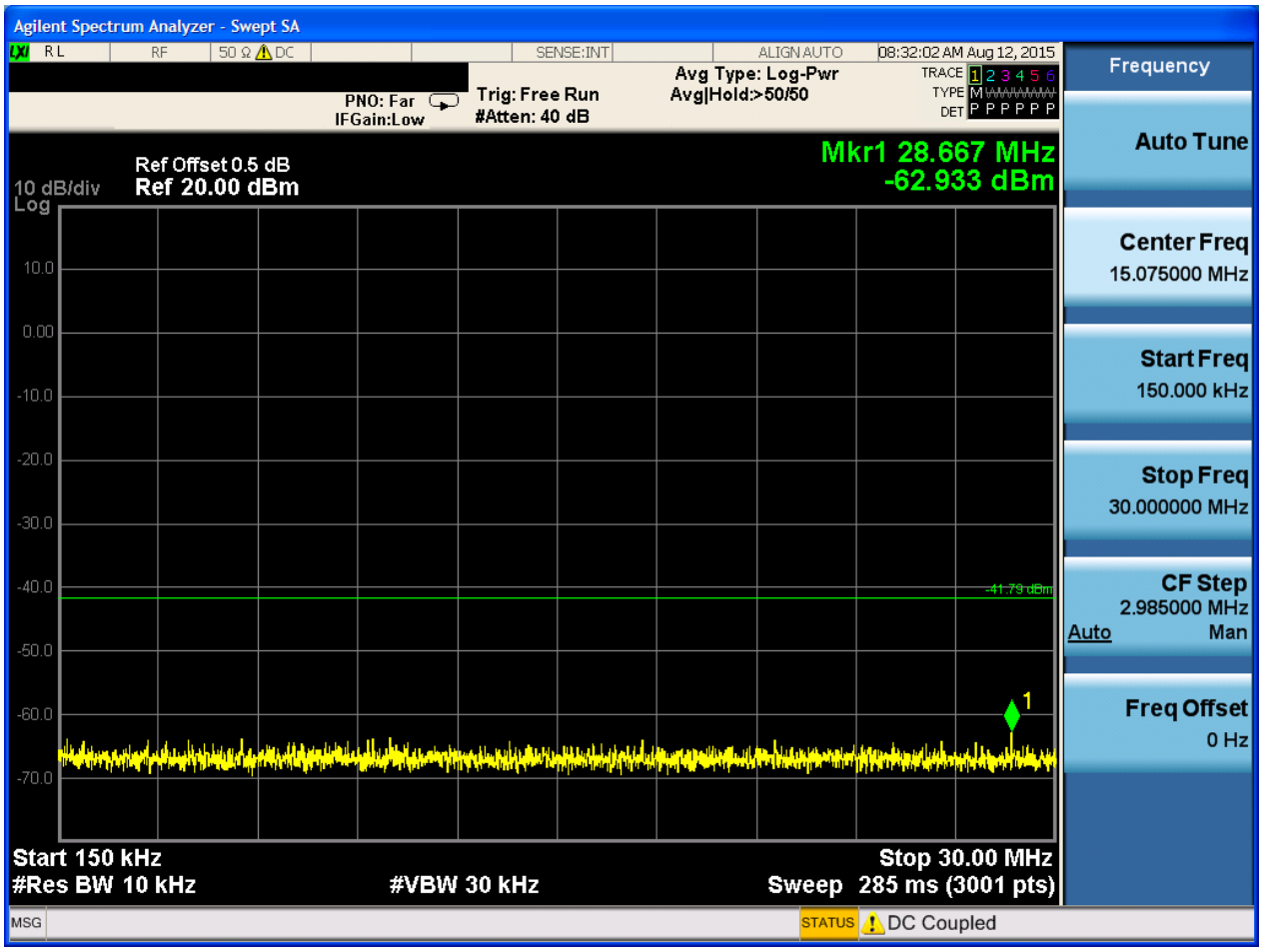

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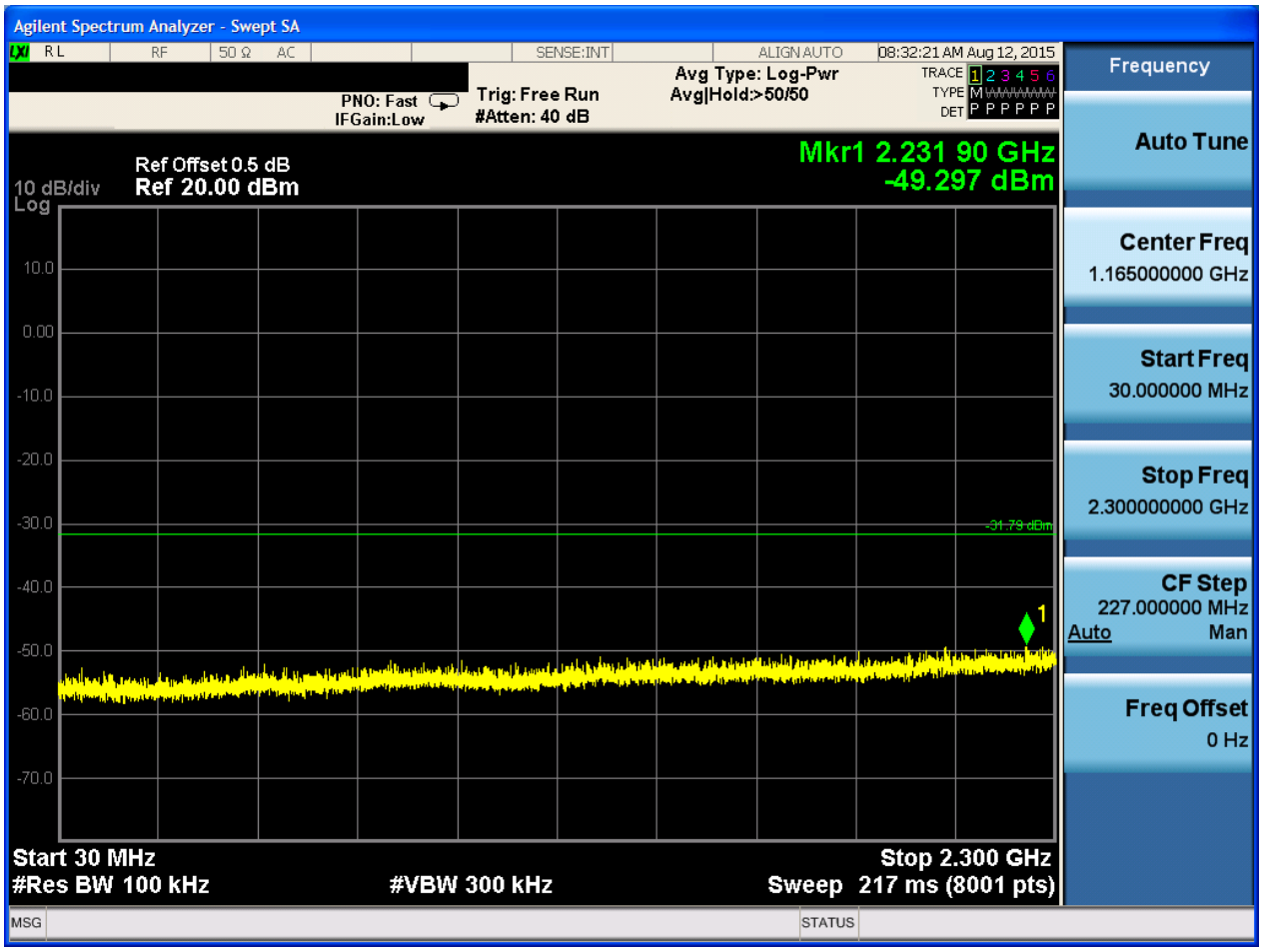

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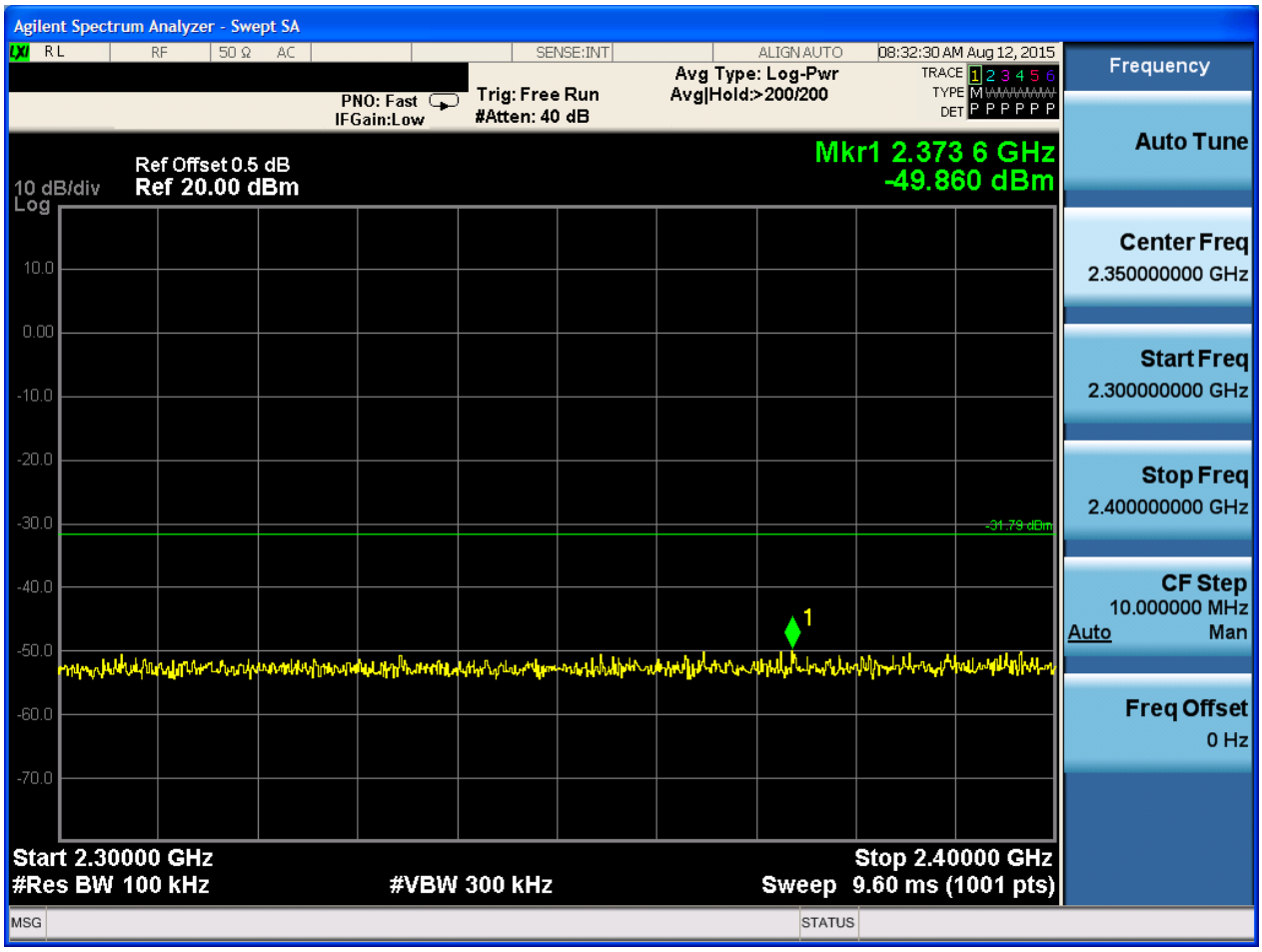

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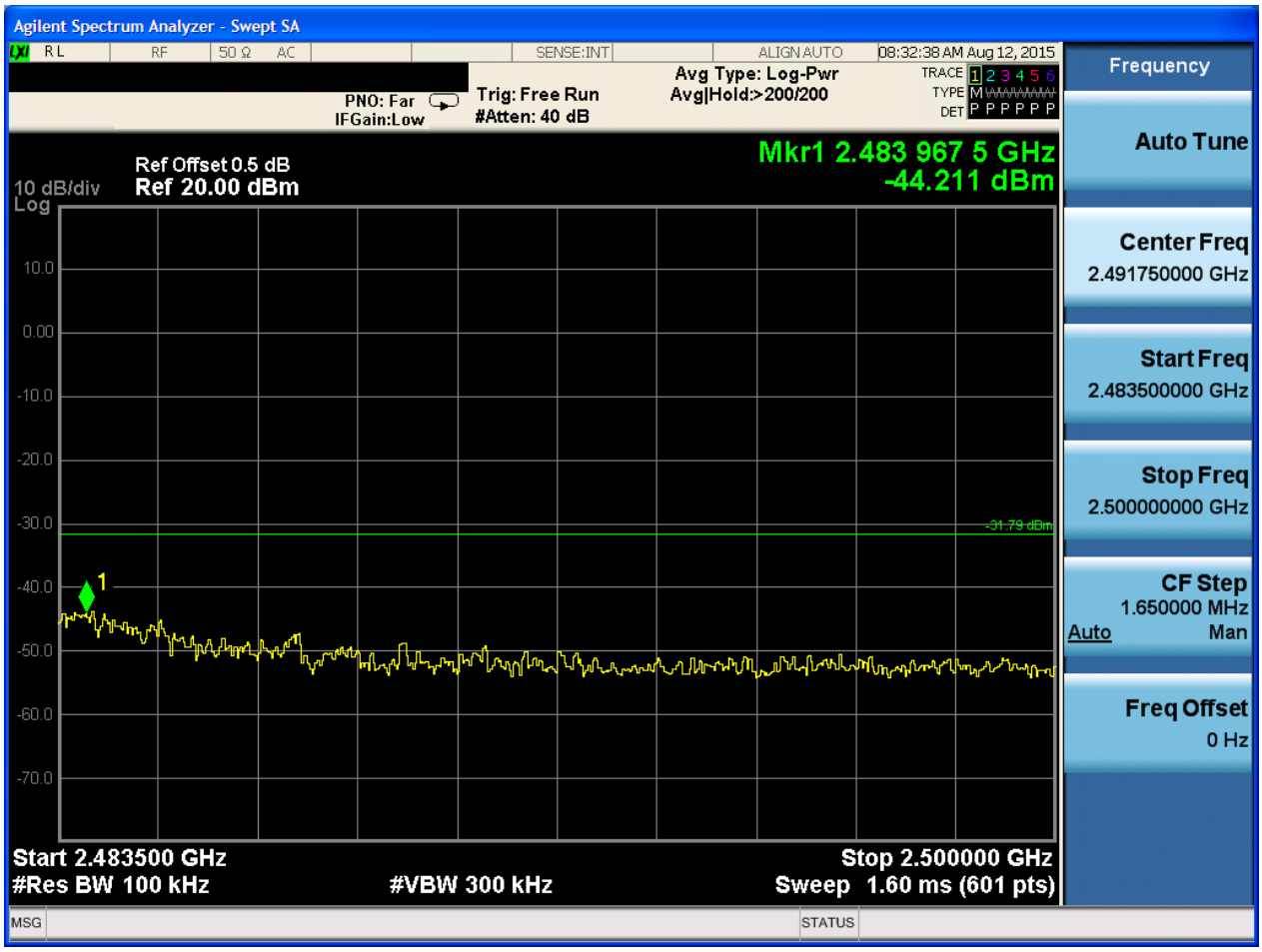

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Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

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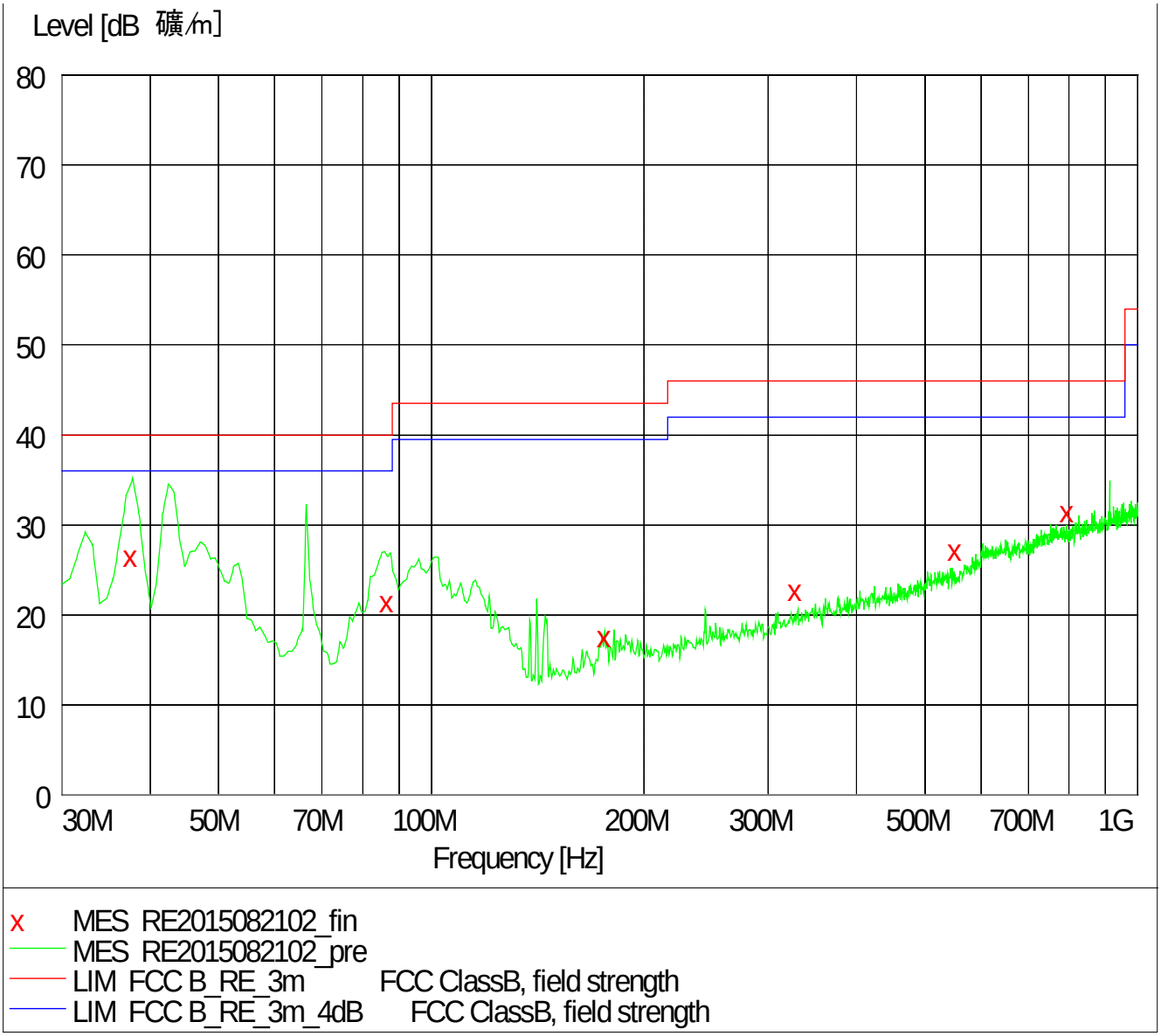

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Plarization
37.460000	26.80	15.2	40.0	13.2	VERTICAL
86.408000	21.80	11.6	43.50	18.2	VERTICAL
175.528000	17.90	11.0	46.00	25.6	VERTICAL
326.792000	23.00	15.9	46.00	23.0	HORIZONTAL
550.572000	27.50	20.1	46.00	18.5	VERTICAL
793.460000	31.70	23.6	46.00	14.3	HORIZONTAL

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Part 3: Testing Range of “18 GHz to 26.5 GHz”

NOTE: No peak found in the Test Range of “18 GHz to 26.5GHz”

Part 4: Testing Range of “2.3GHz to 2.5GHz”

Note 1: The testing range of “2.3 GHz to 2.5 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

Test Mode:

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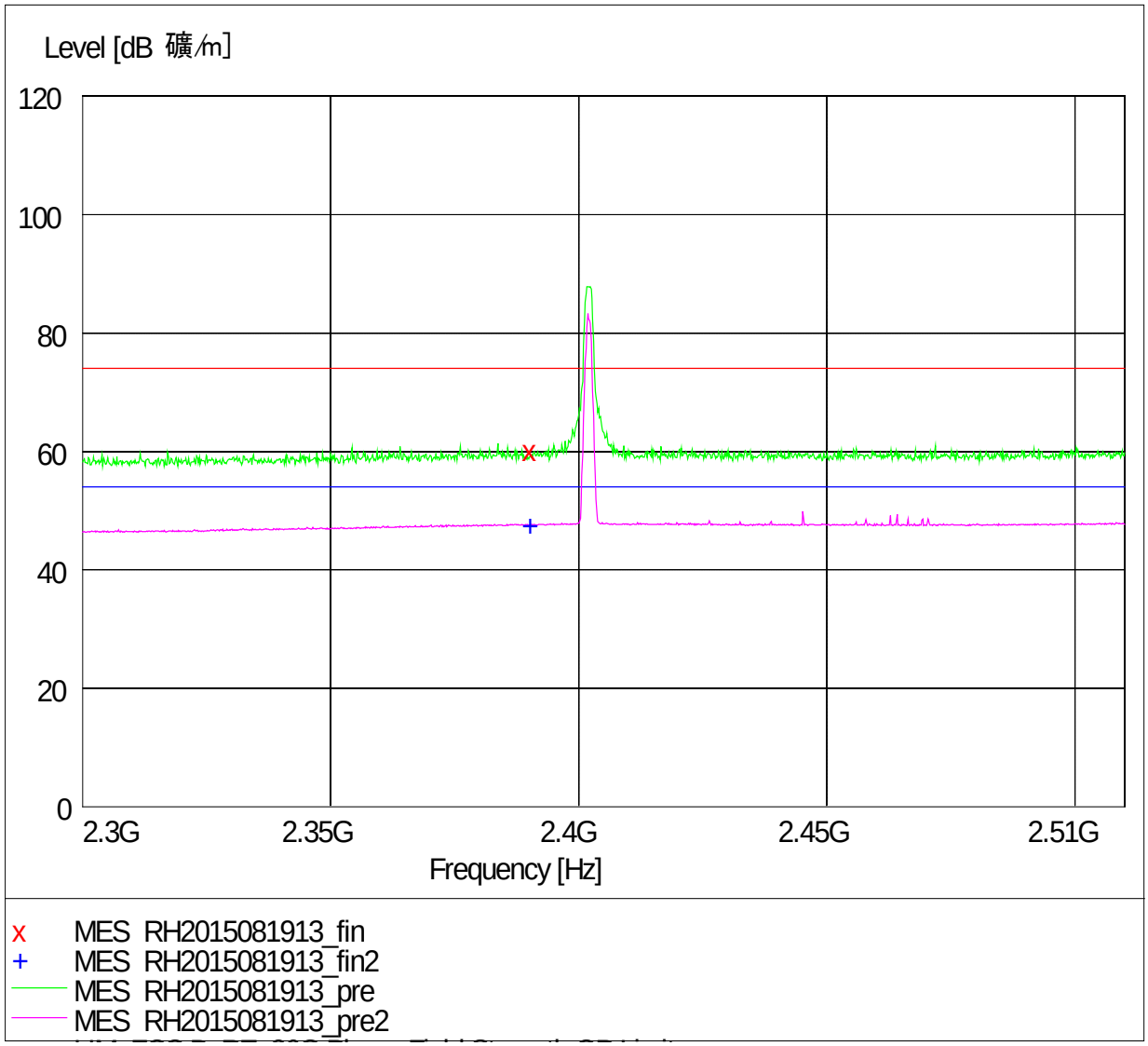
Channel 0



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	60.60	34.8	74.0	13.4	100.0	300.00	VERTICAL

MEASUREMENT RESULT: AVDetector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2390.000000	47.80	34.8	54.0	6.2	200.0	0.00	HORIZONTAL

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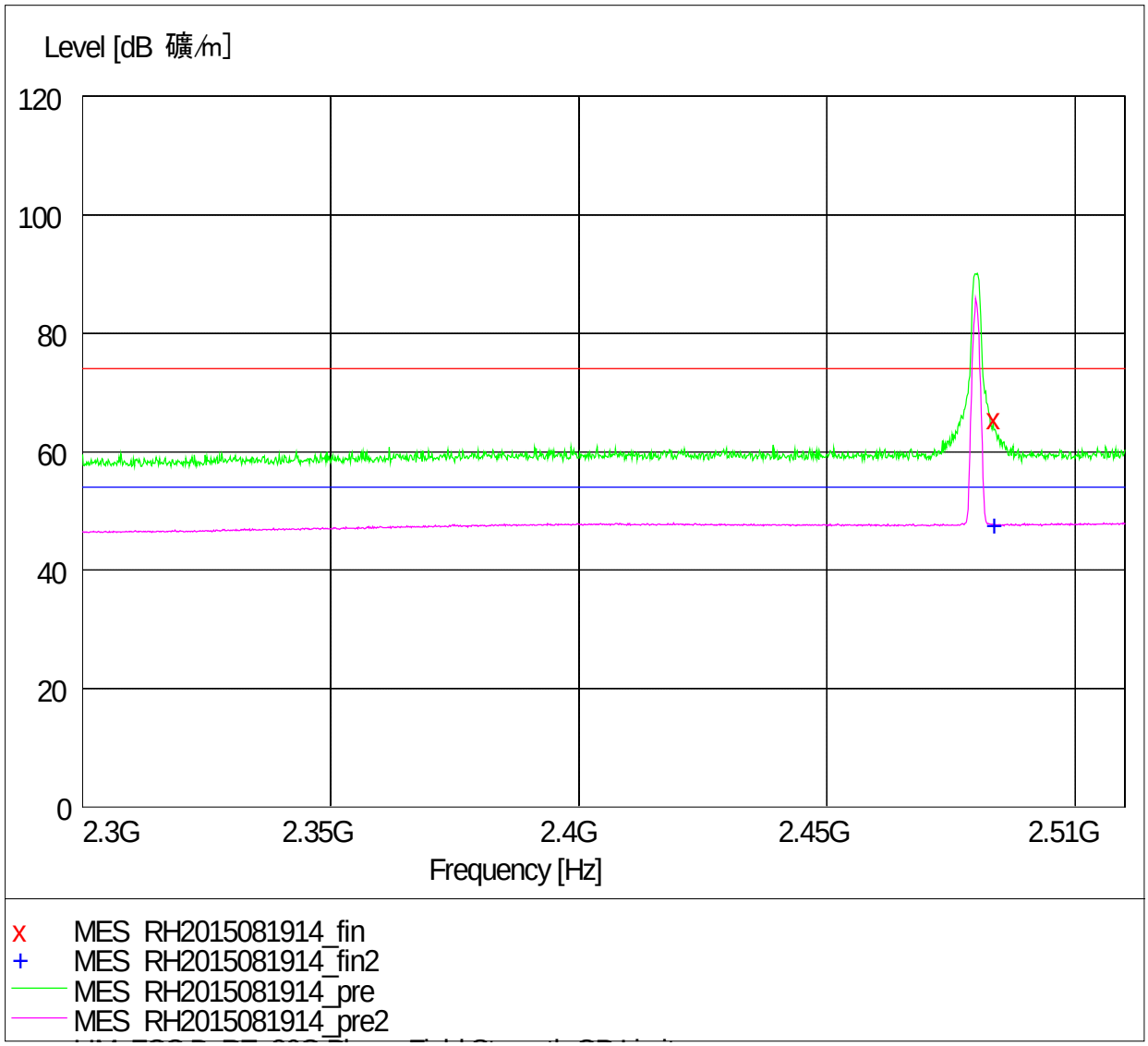
Channel 39



Note: The peak exceeds the limit line is carrier frequency.

MEASUREMENT RESULT: PK Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	66.00	35.1	74.0	8.0	100.0	12	HORIZONTAL

MEASUREMENT RESULT: AV Detector

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Height cm	Azimuth deg	Polarization
2483.500000	48.00	35.1	54.0	6.0	100.0	13	HORIZONTAL

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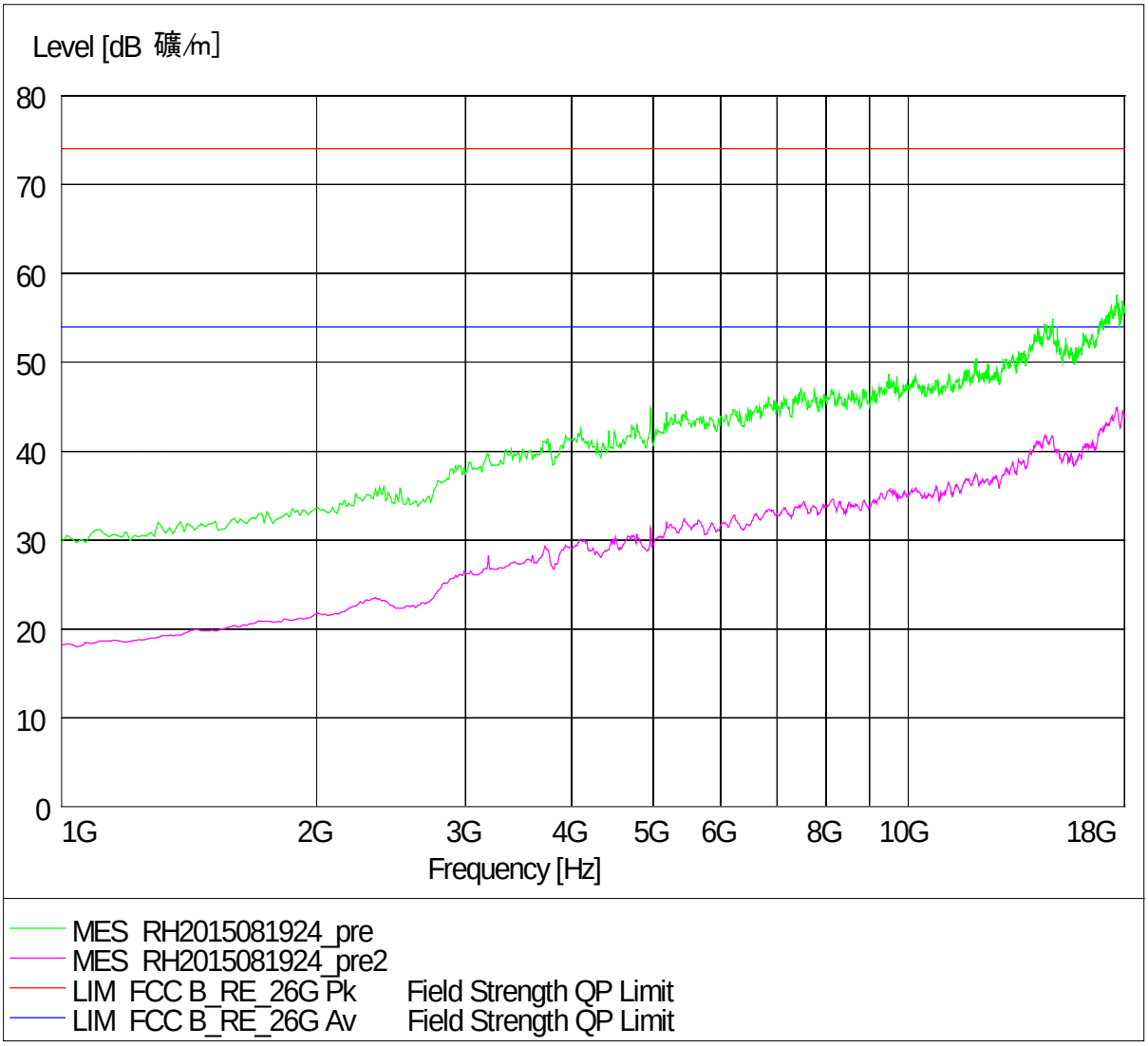
Part 5: Testing Range of "1 GHz to 18 GHz"

Note 1: The test results and plot for testing range of "1 GHz to 18 GHz" showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of "1 GHz to 18 GHz" is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).



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Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

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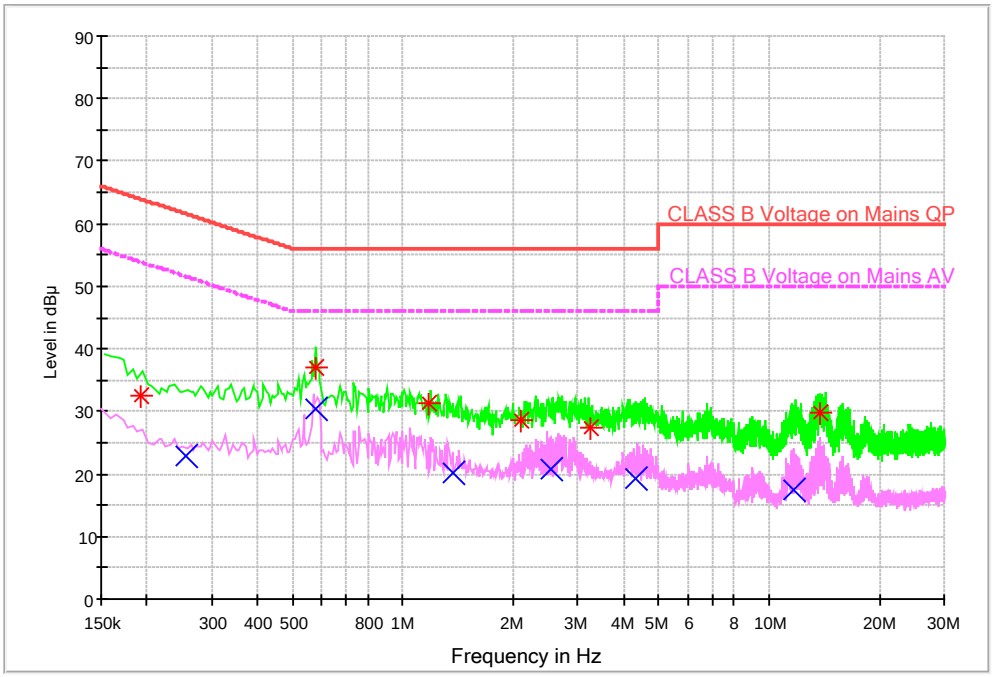
Channel 39

CLASS B Voltage with ENV216



MEASUREMENT RESULT: QP Detector

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.192420	32.6	L1	9.8	31.3	63.9
0.577050	37.1	L1	9.8	18.9	56.0
1.170201	31.4	L1	9.8	24.6	56.0
2.087730	28.7	L1	9.8	27.3	56.0
3.253272	27.5	L1	9.9	28.5	56.0
13.740276	29.7	N	10.1	30.3	60.0

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	QuasiPeak (dB µ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB µ V)
0.255483	22.9	L1	9.8	28.7	51.6
0.576702	30.3	L1	9.8	15.7	46.0
1.362681	20.3	L1	9.8	25.7	46.0
2.522859	20.9	L1	9.8	25.1	46.0
4.288482	19.3	L1	9.9	26.7	46.0
11.630592	17.5	N	10.1	32.5	50.0

Note: Level= Reading level+ Transd (caTM1 _CH0 loss + correction factor).The reading level is used to calculate by software which is not shown in the sheet.

END

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