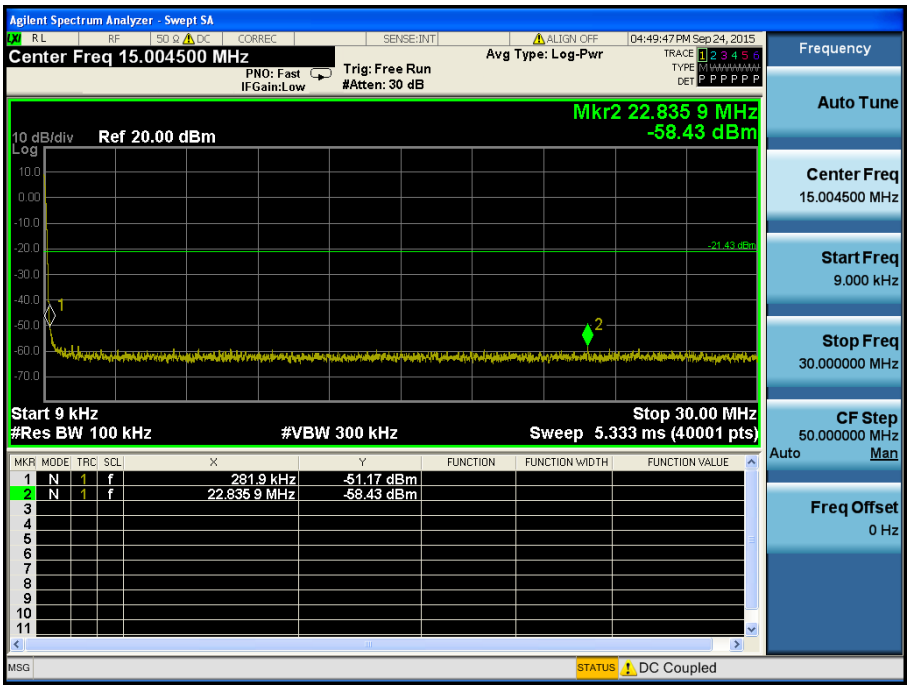
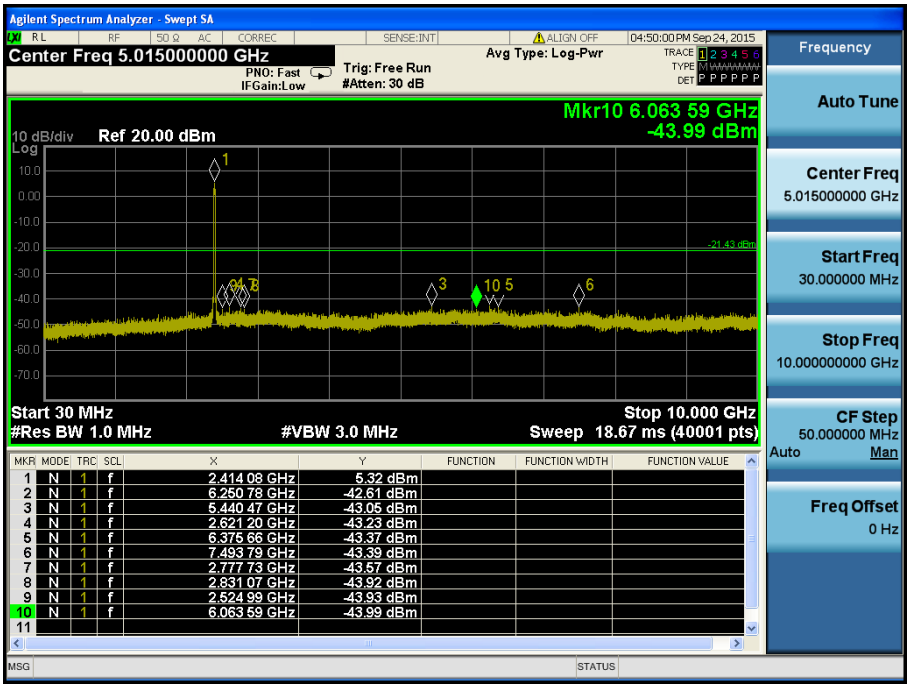
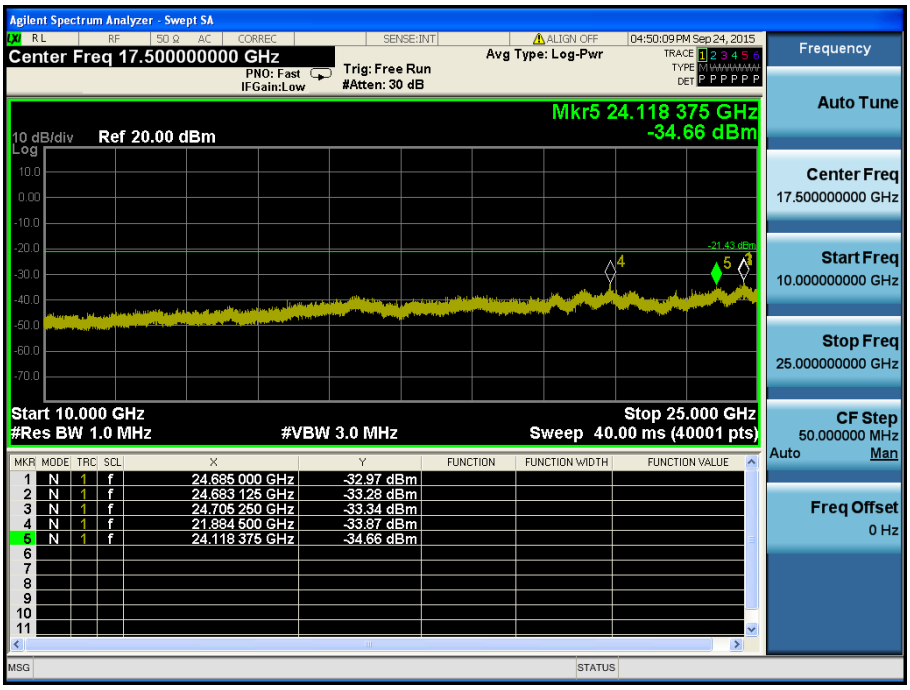
Conducted Spurious Emissions



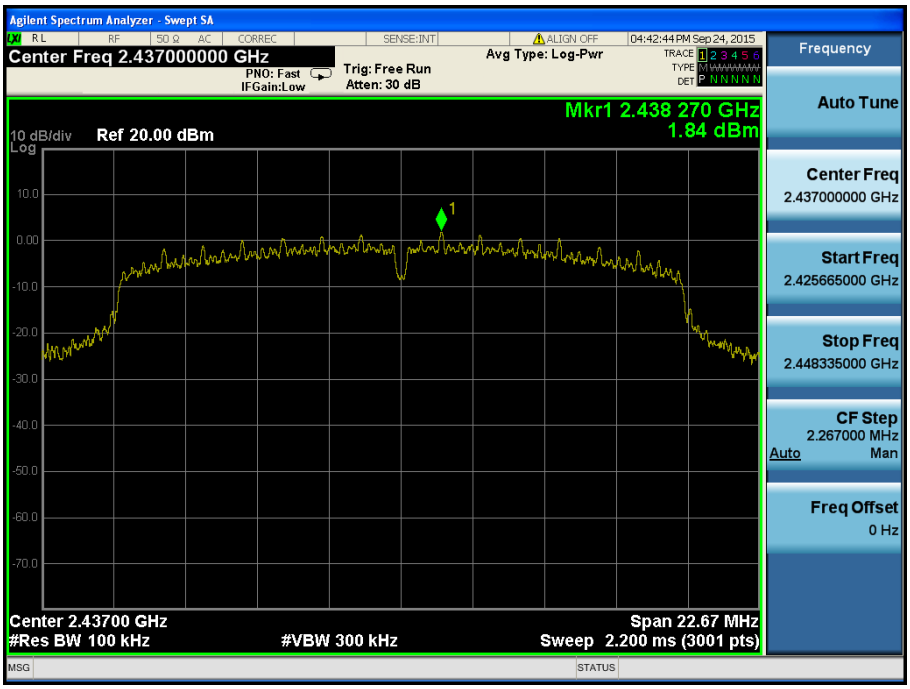


Conducted Spurious Emissions



TM 3 & ANT 1 & Middle

Reference



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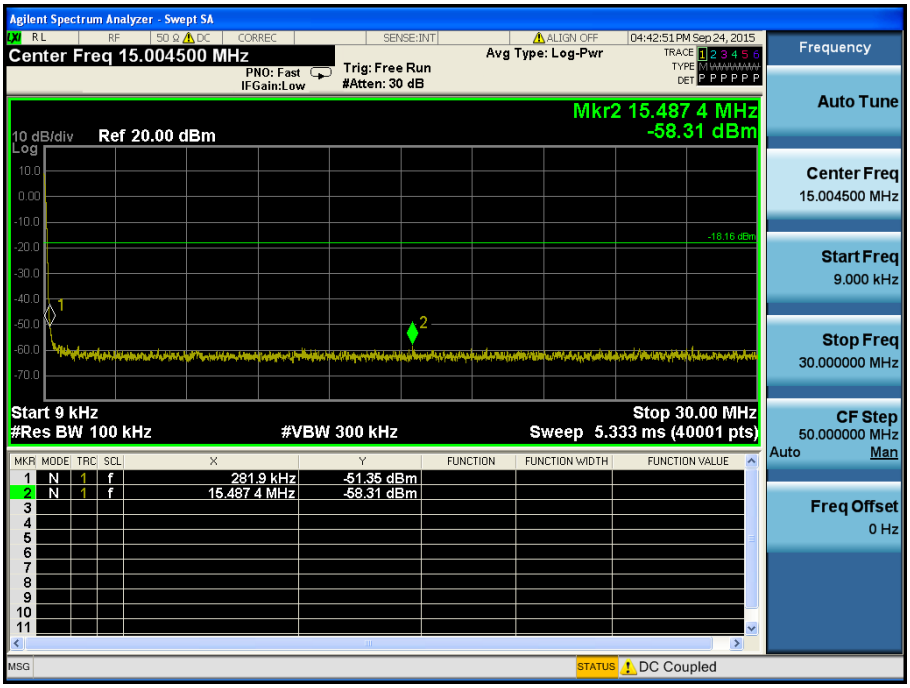

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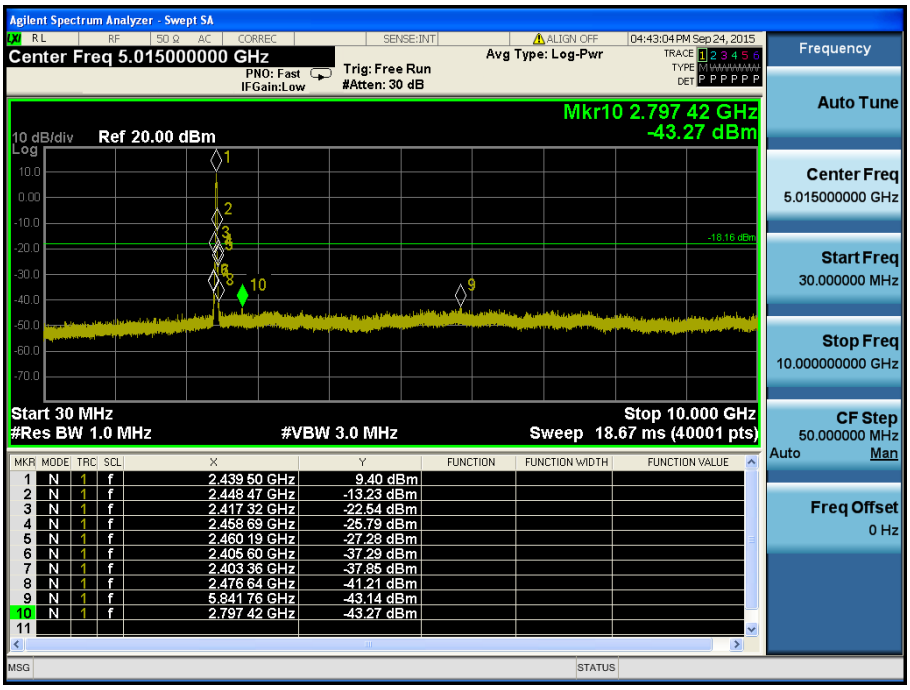
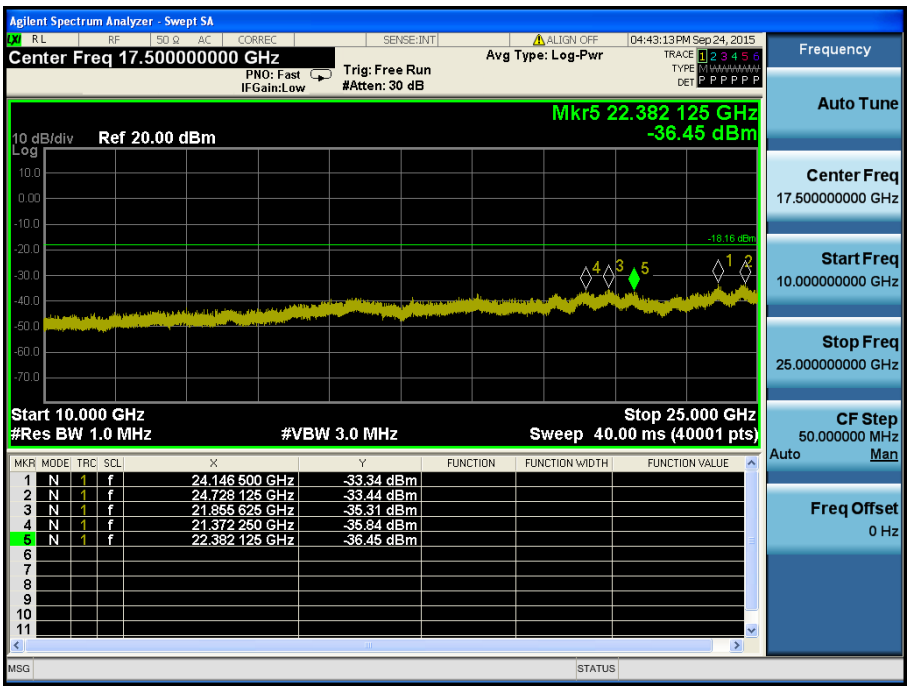
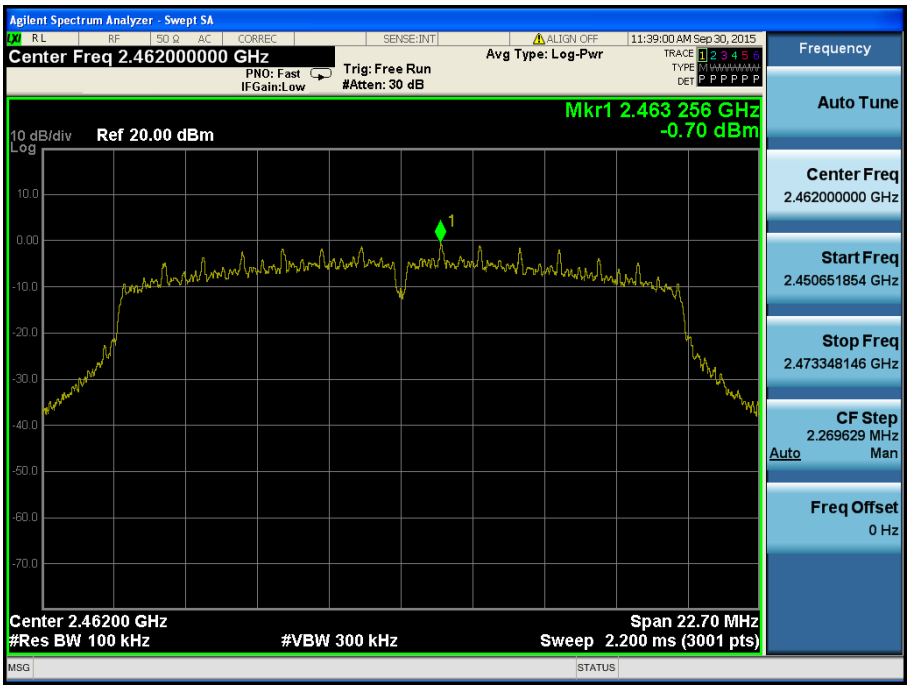


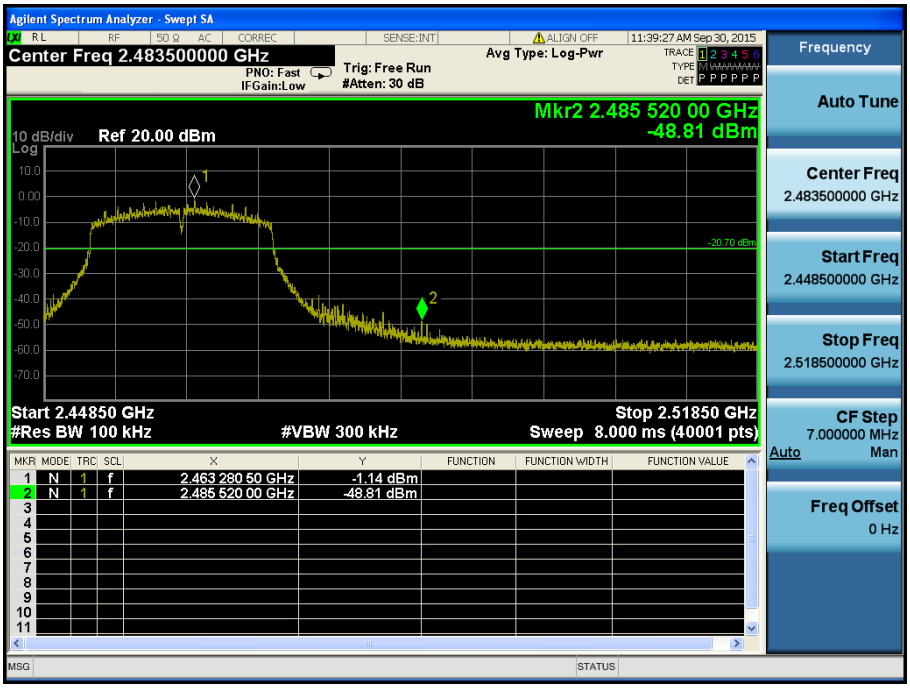


TM 3 & ANT 1 & Highest

Reference



High Band-edge



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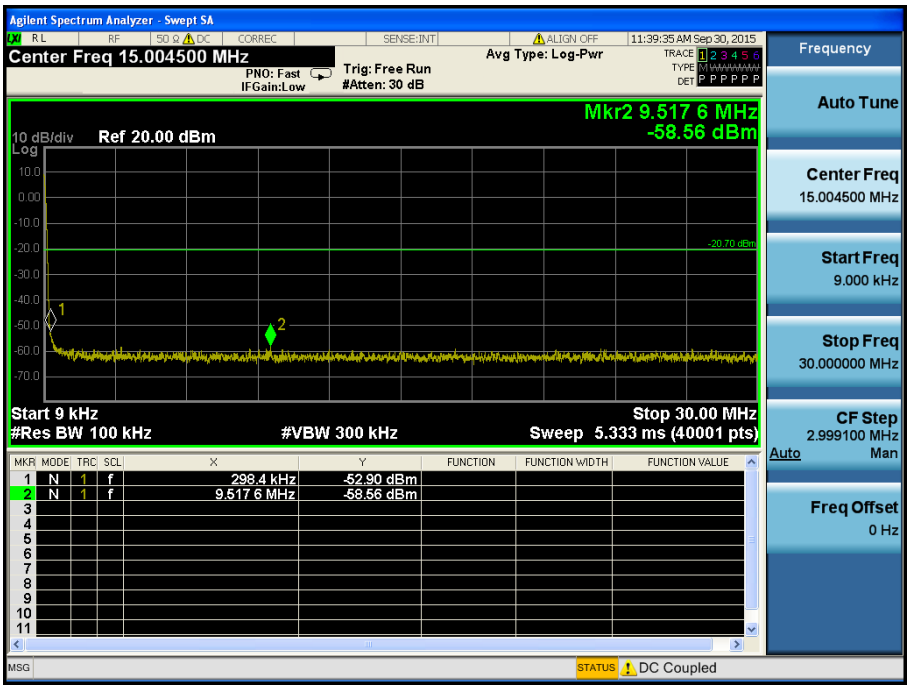

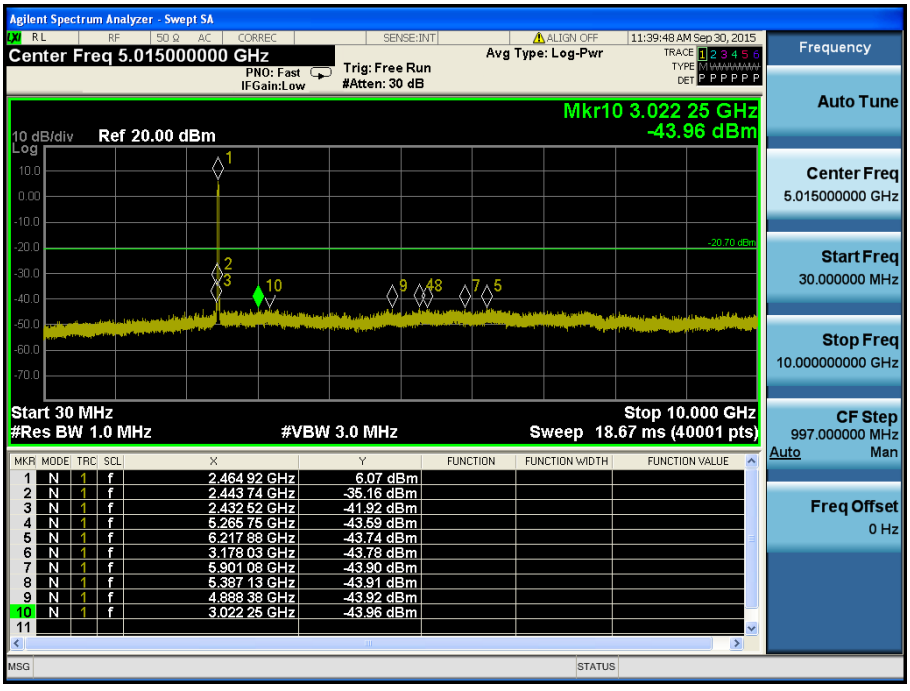

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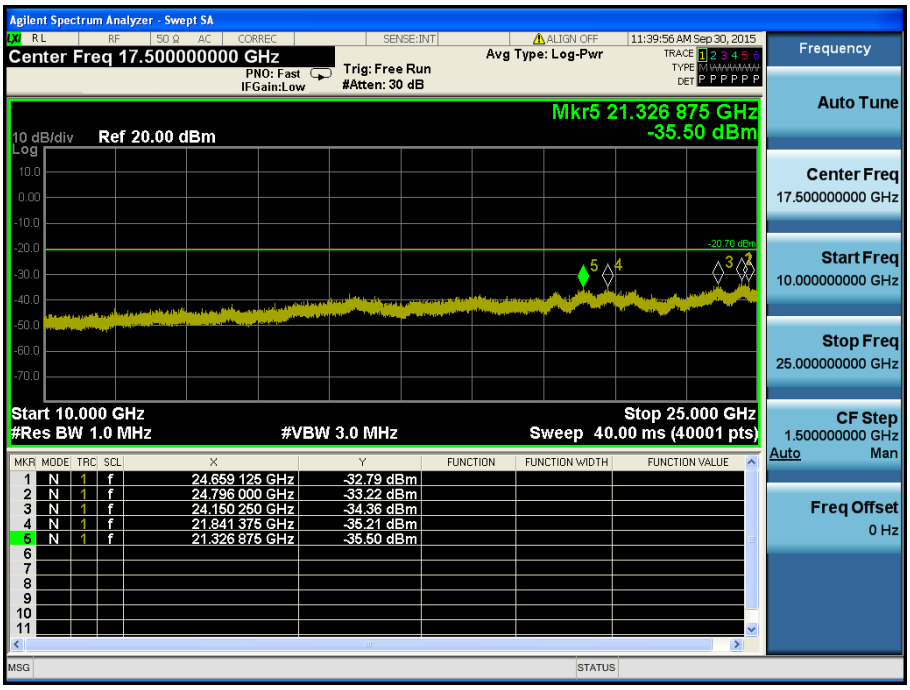
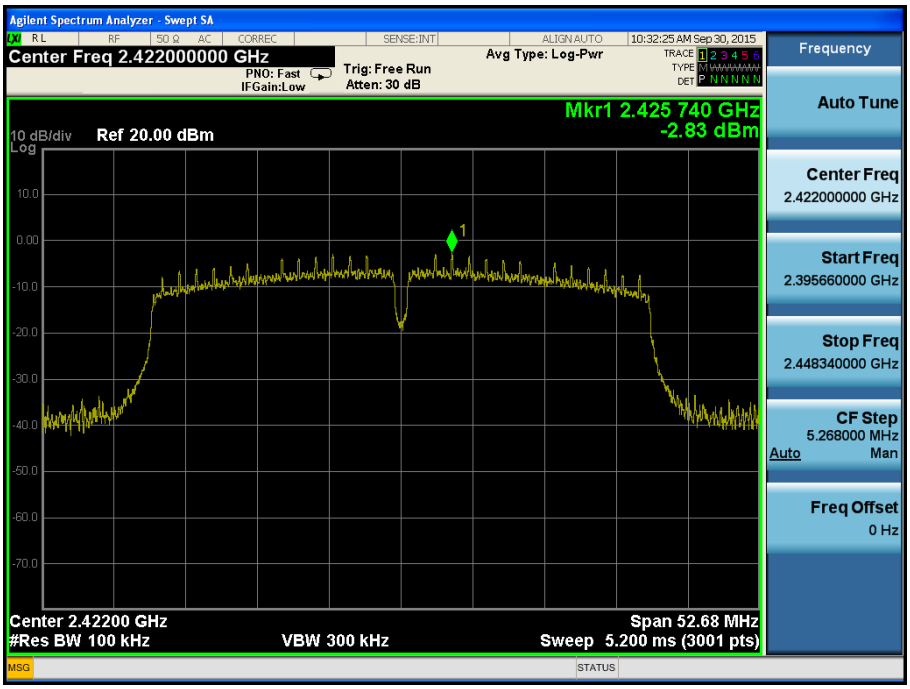
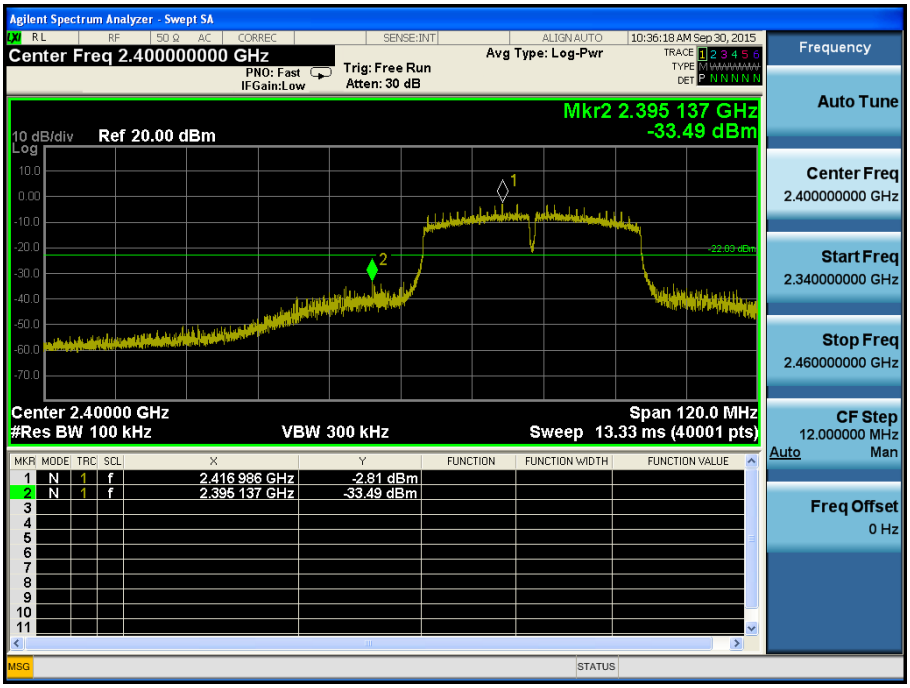


TM 4 & ANT 1 & Lowest

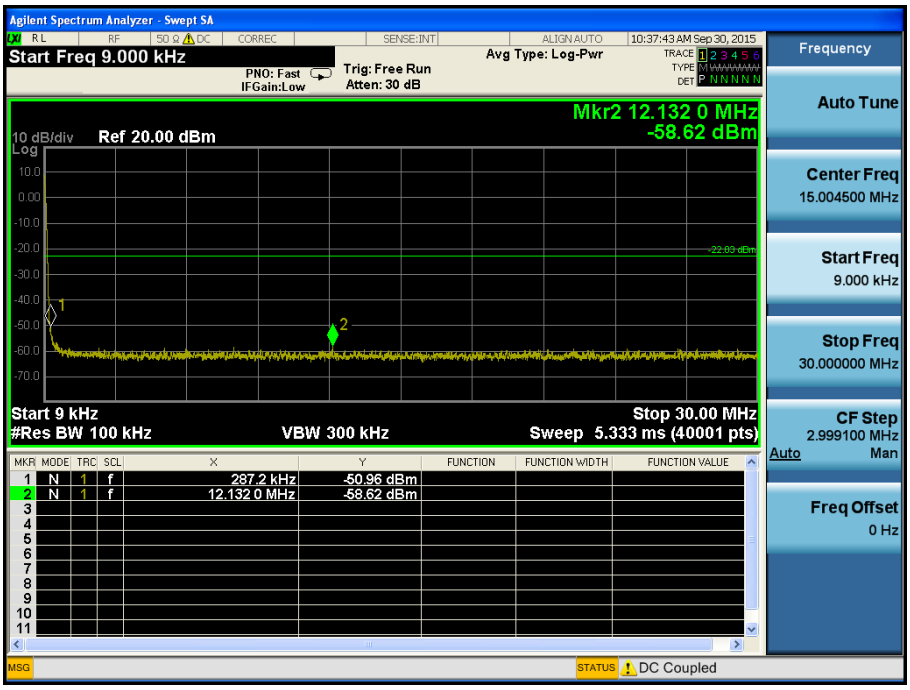
Reference

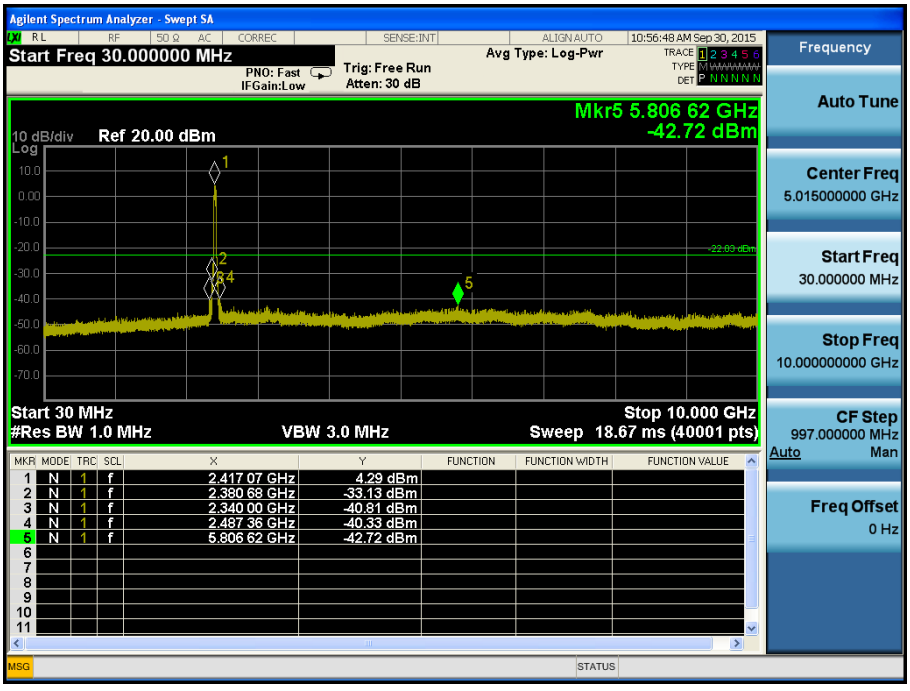


Low Band-edge



Conducted Spurious Emissions





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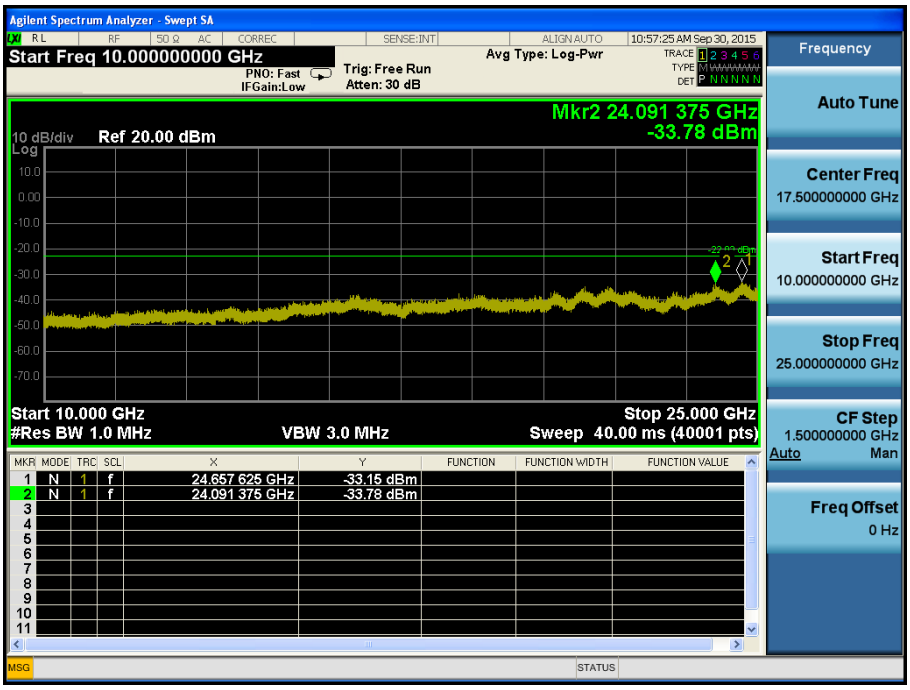
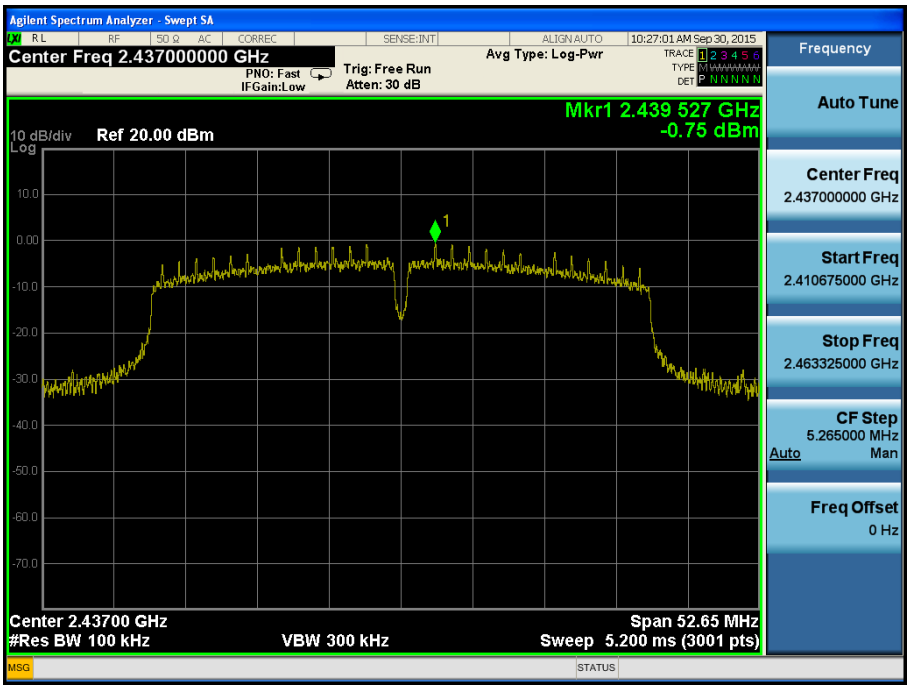


TM 4 & ANT 1 & Middle

Reference



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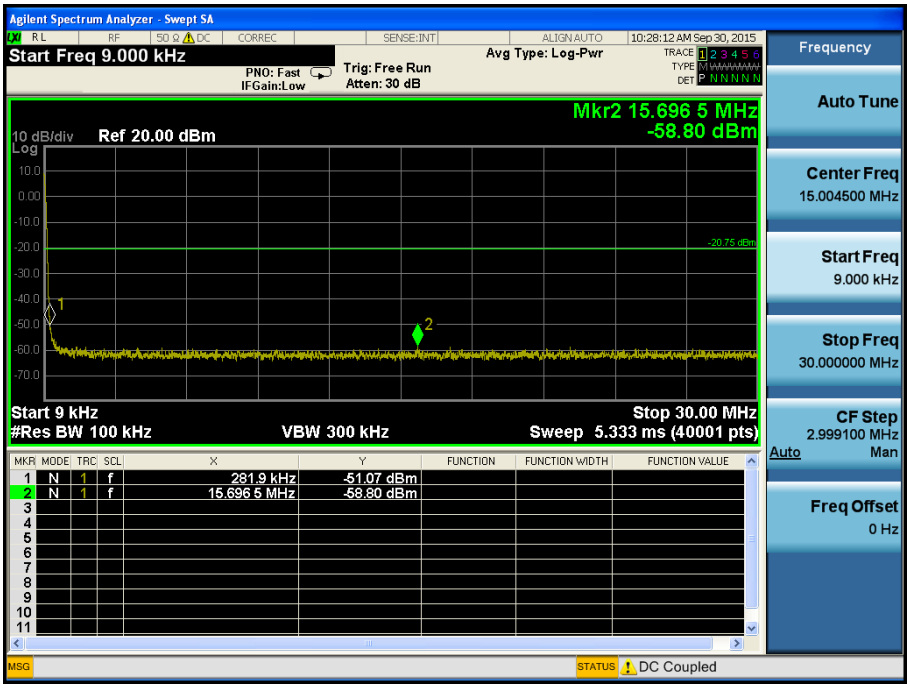

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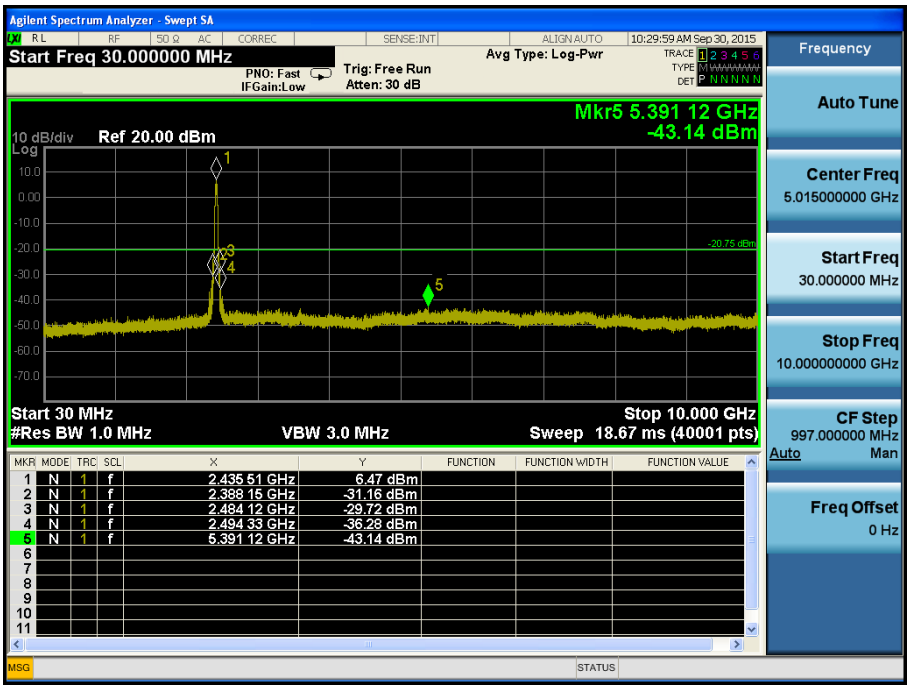
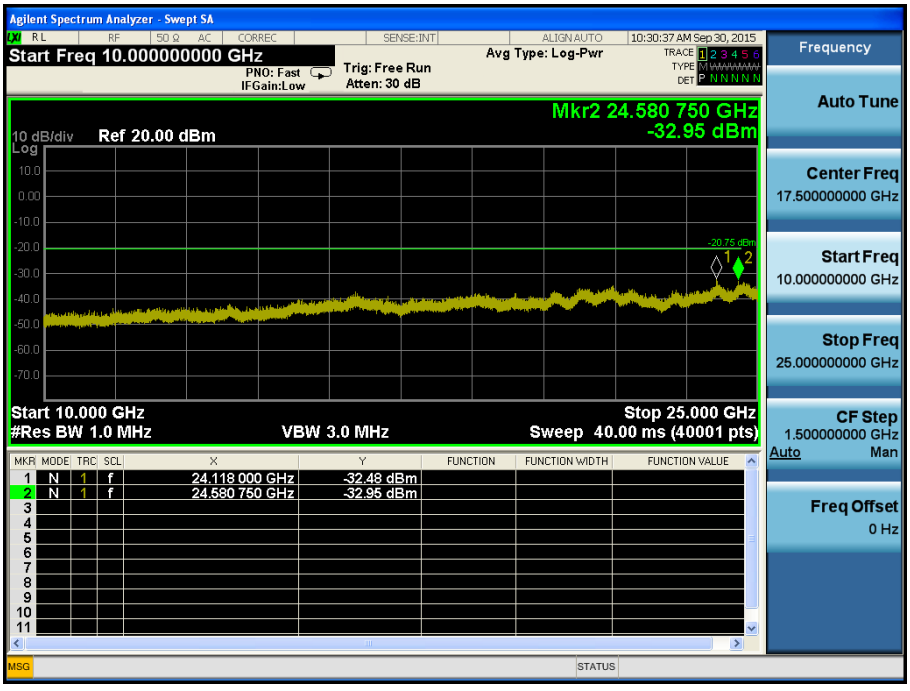
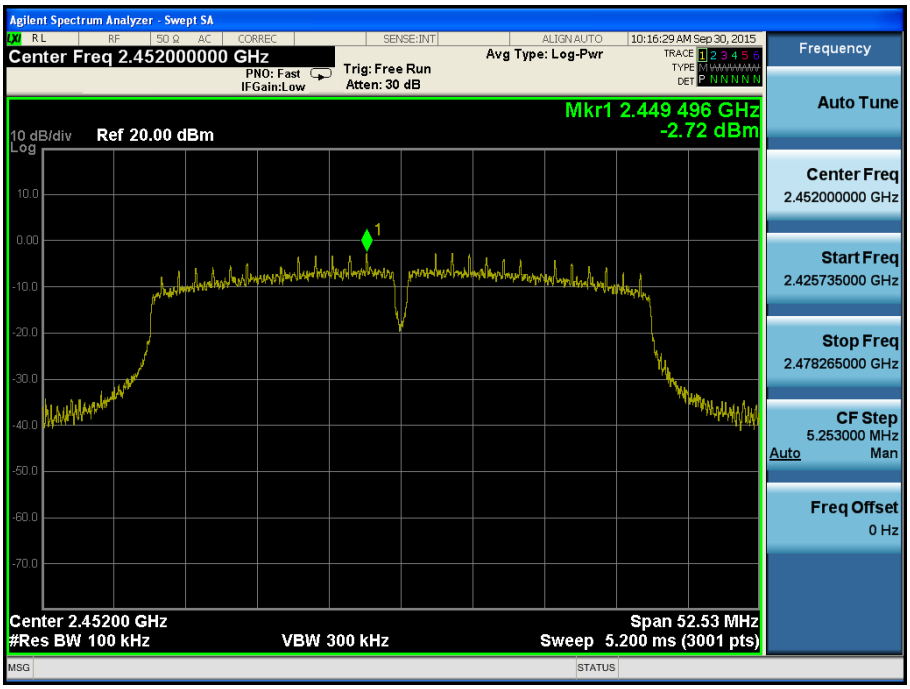


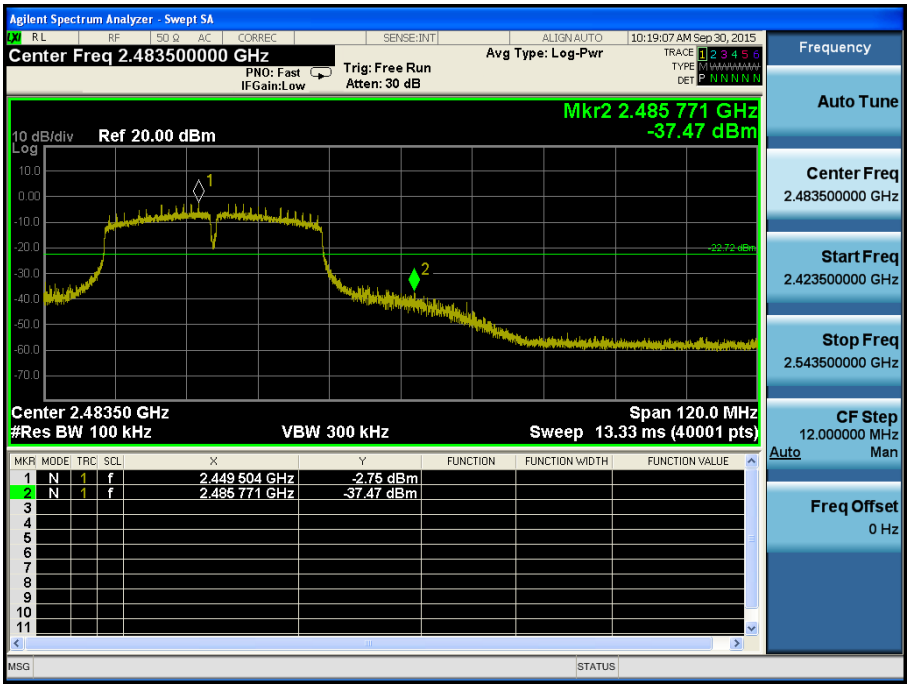


TM 4 & ANT 1 & Highest

Reference



High Band-edge



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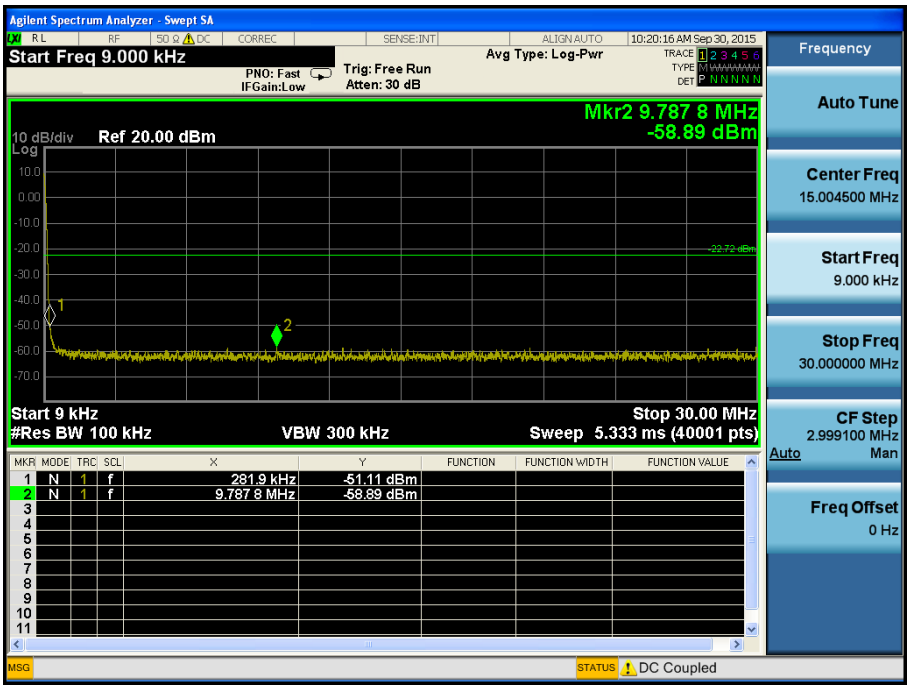

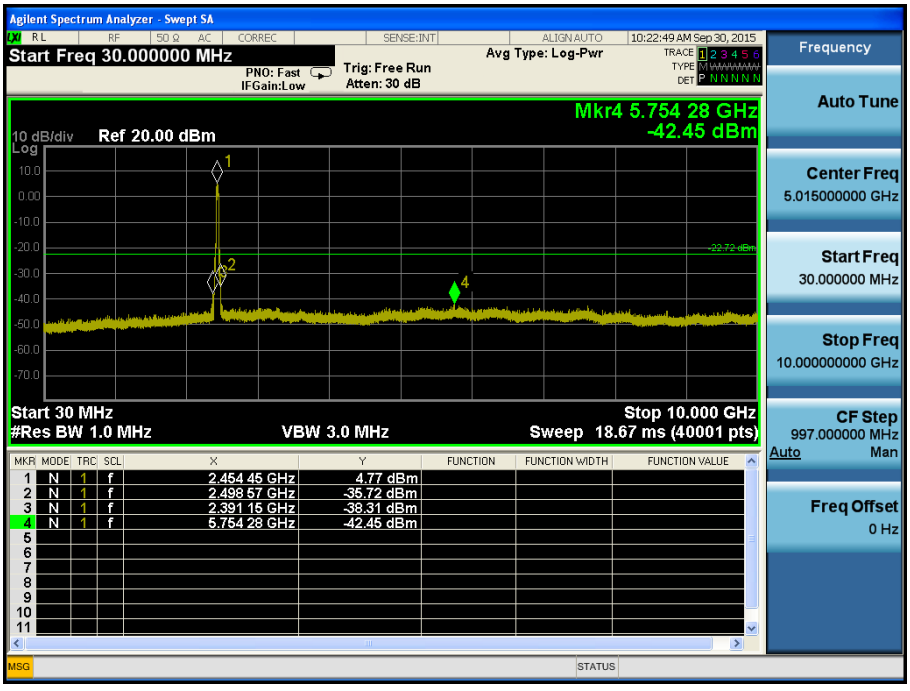

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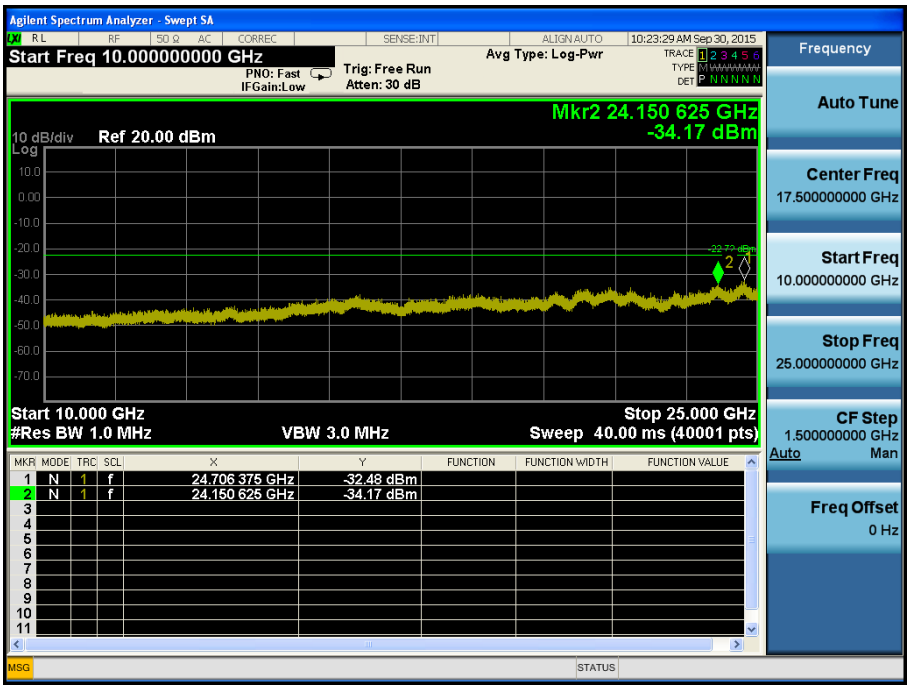
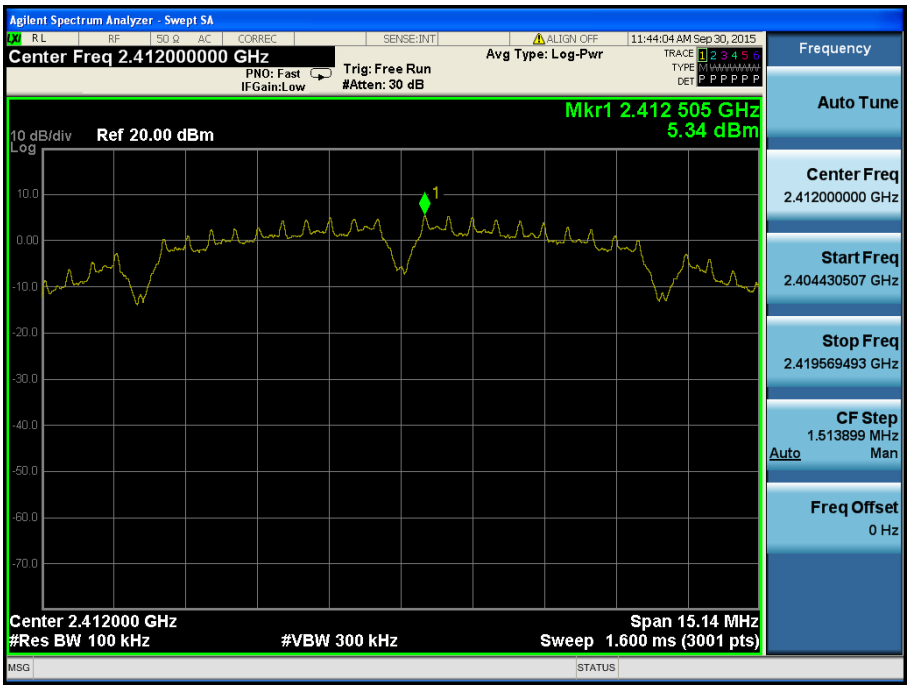
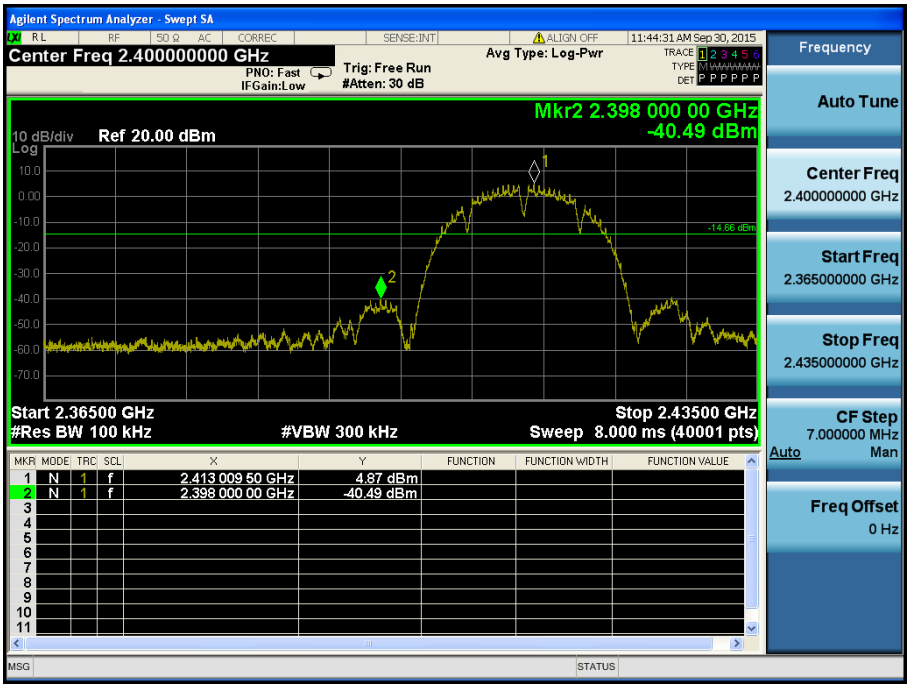


TM 1 & ANT 2 & Lowest

Reference



Low Band-edge



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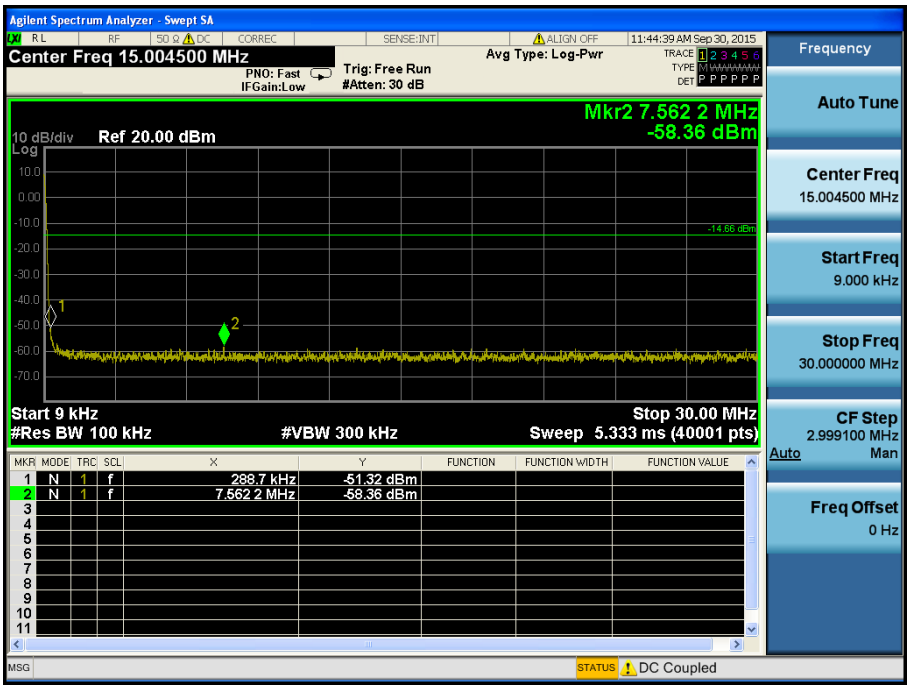

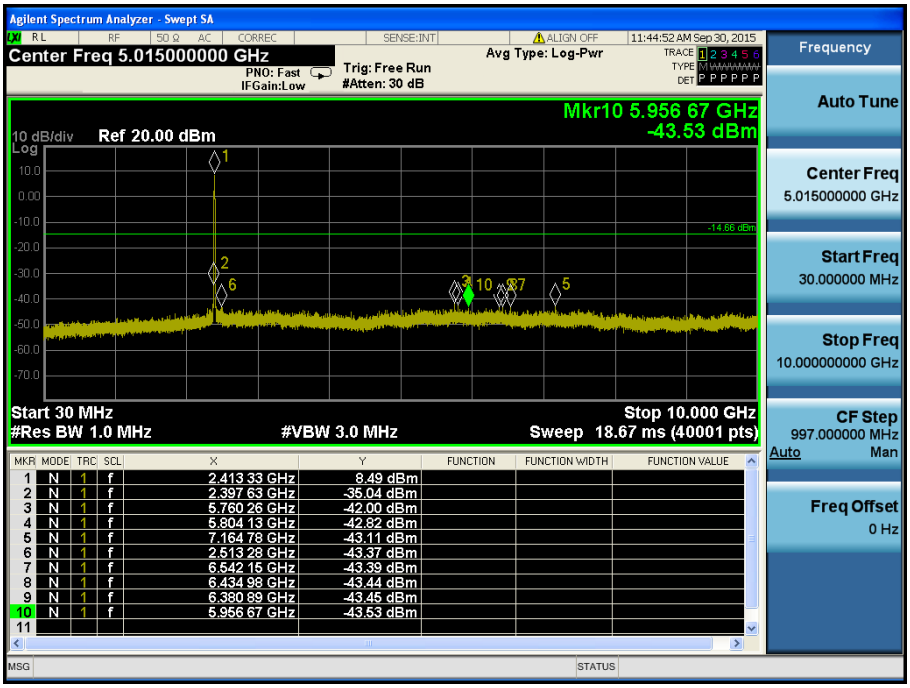

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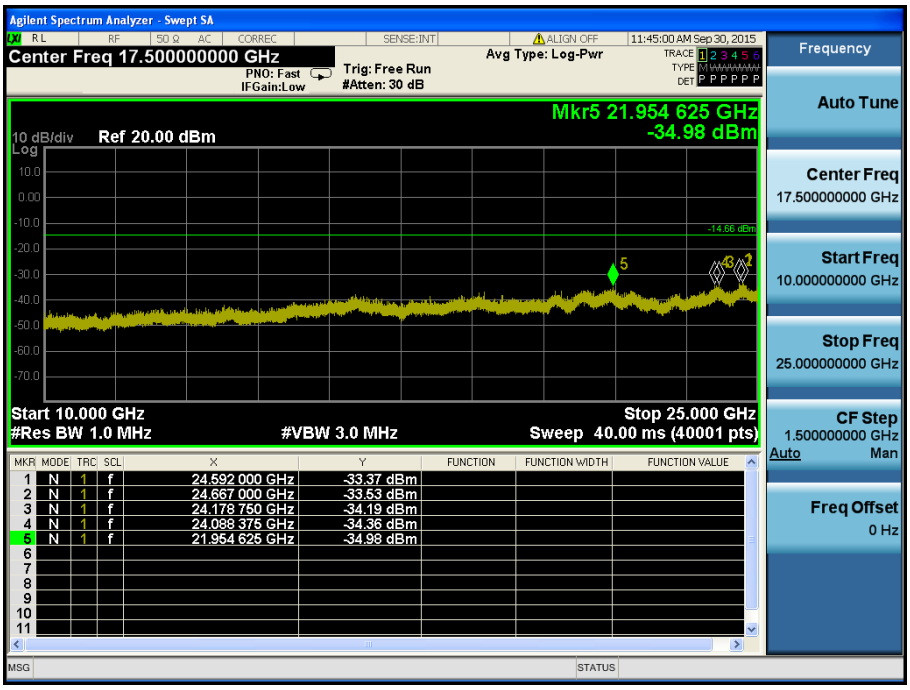
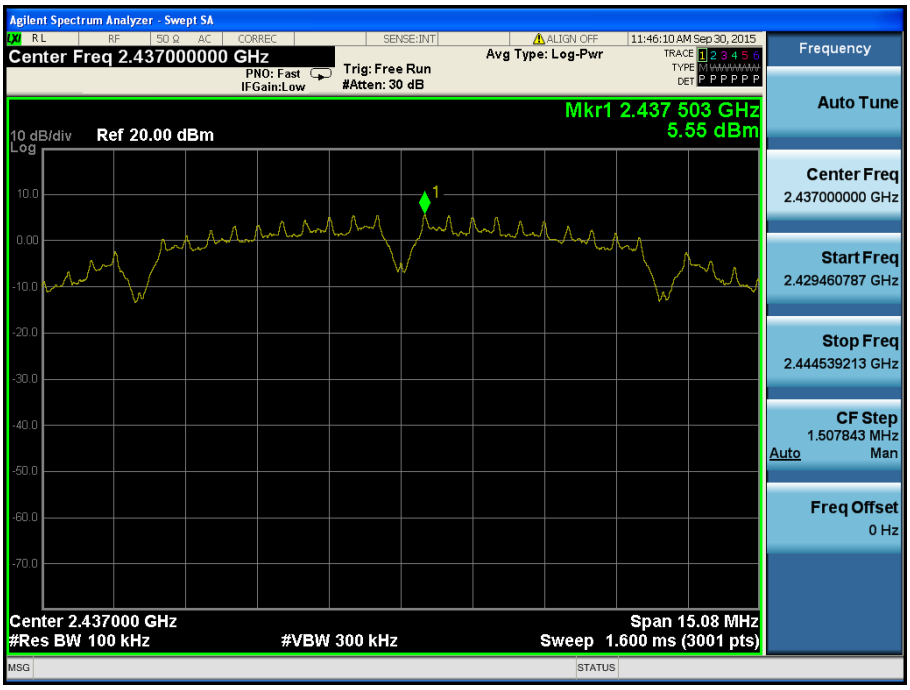


TM 1 & ANT 2 & Middle

Reference



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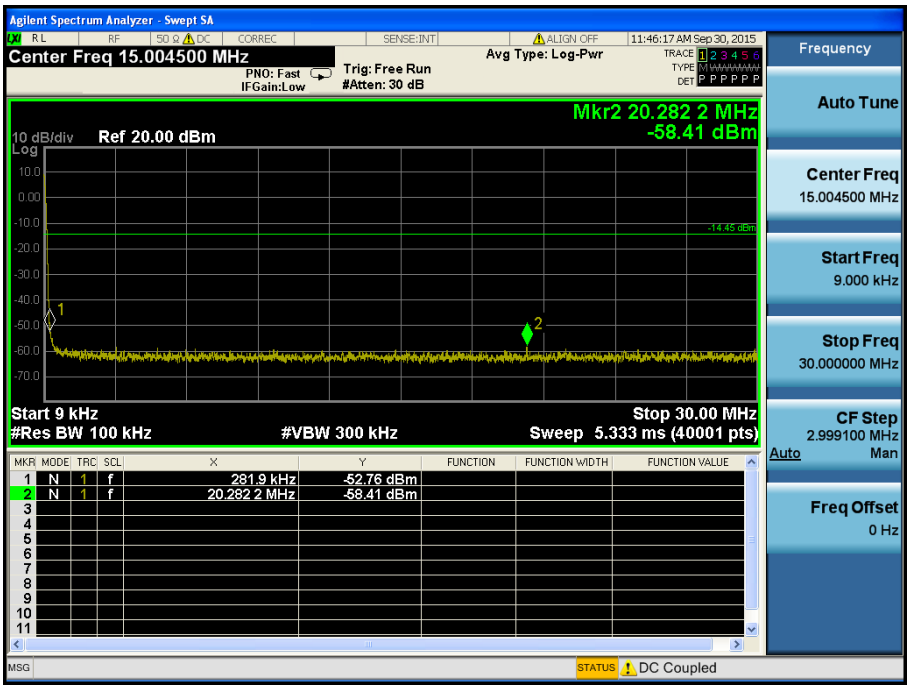

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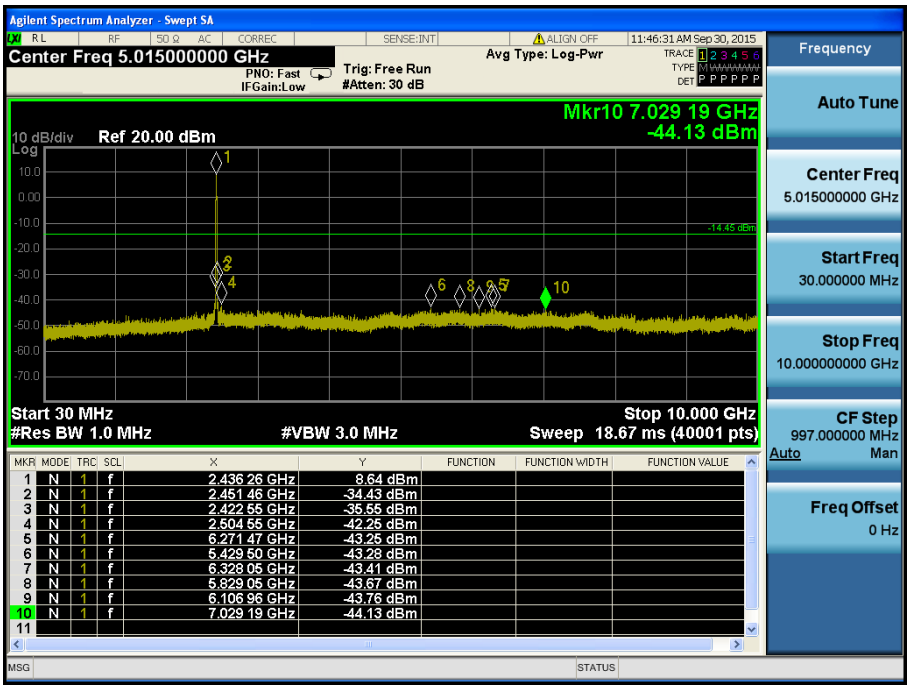
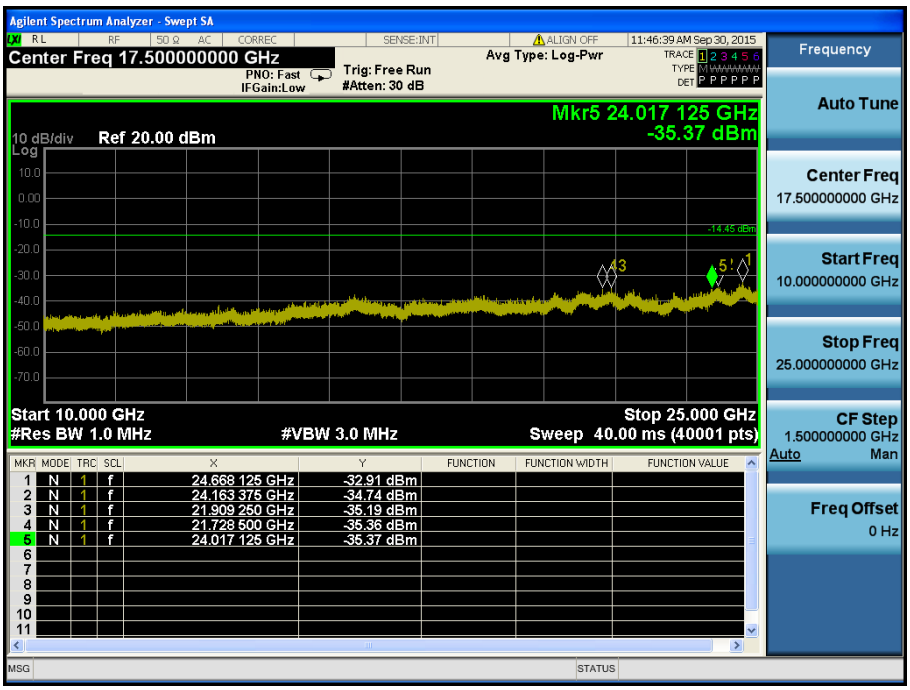
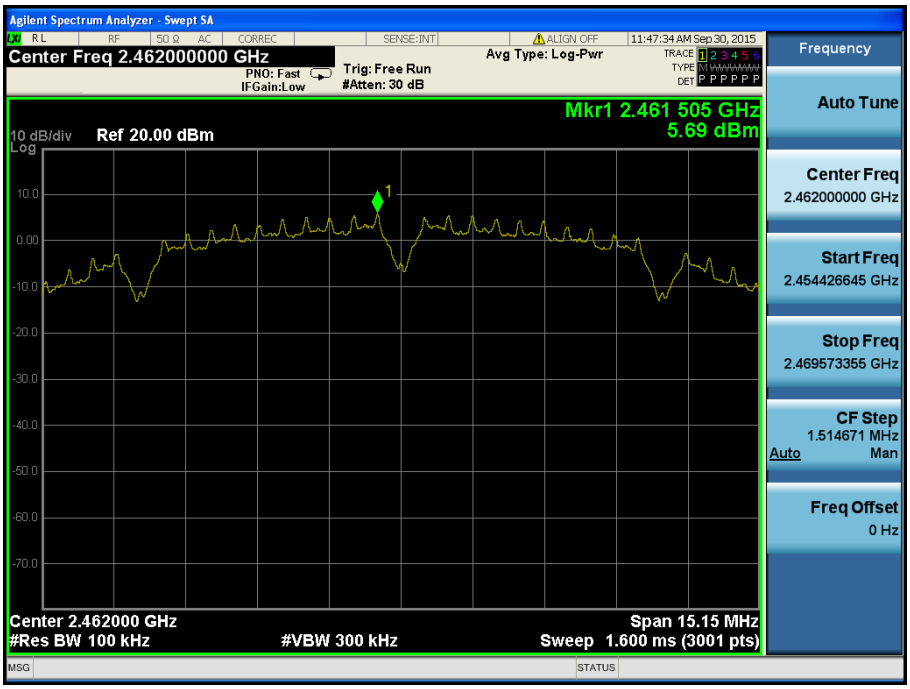


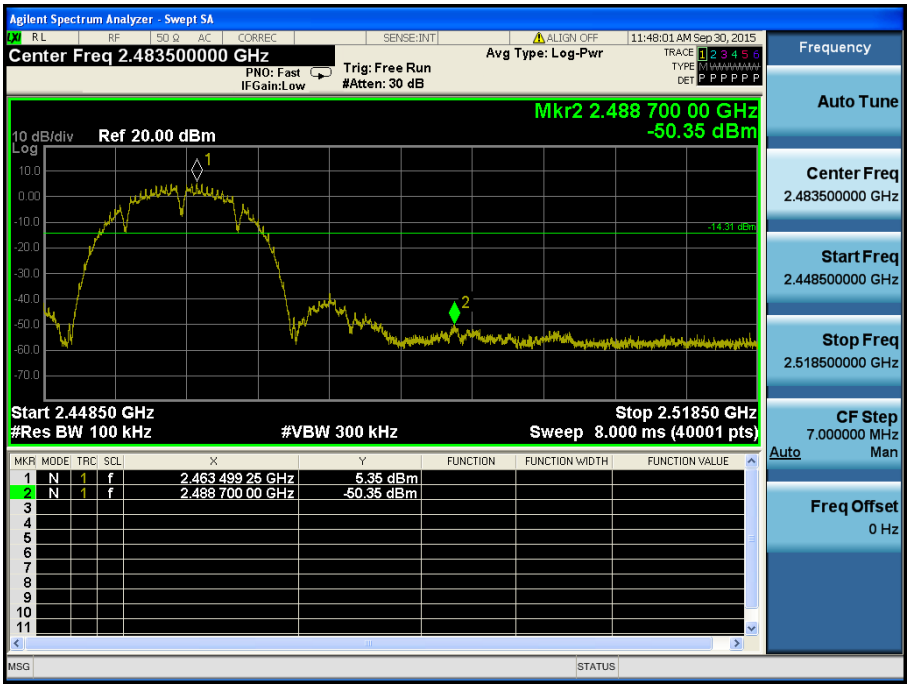


TM 1 & ANT 2 & Highest

Reference



High Band-edge



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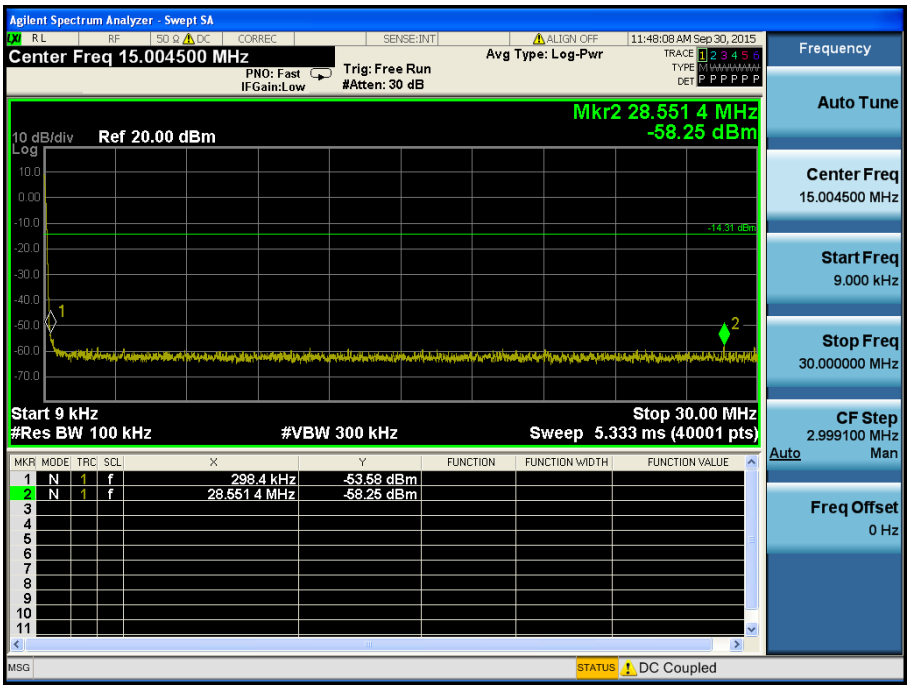

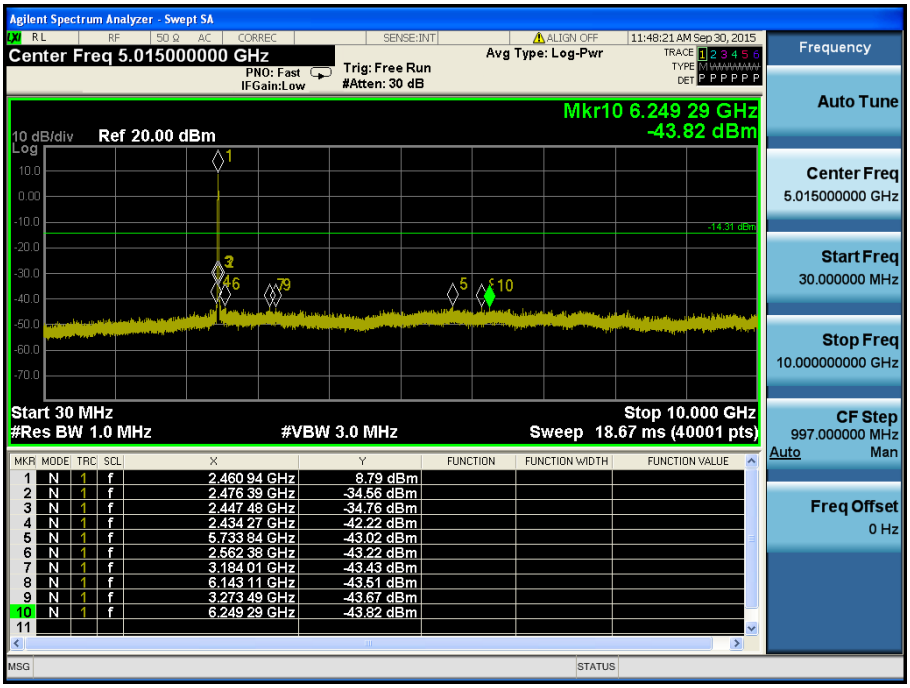

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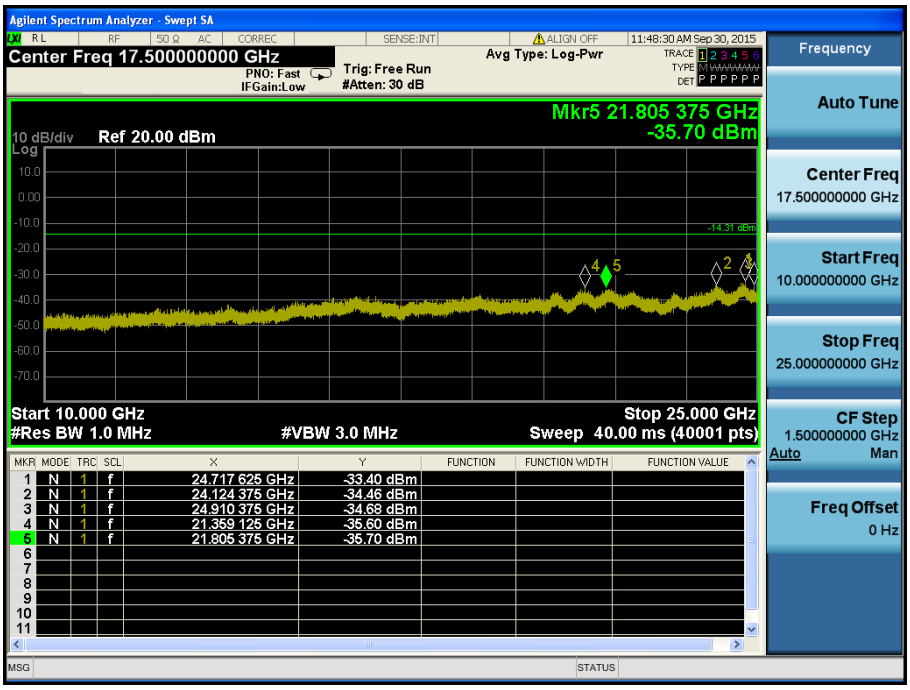
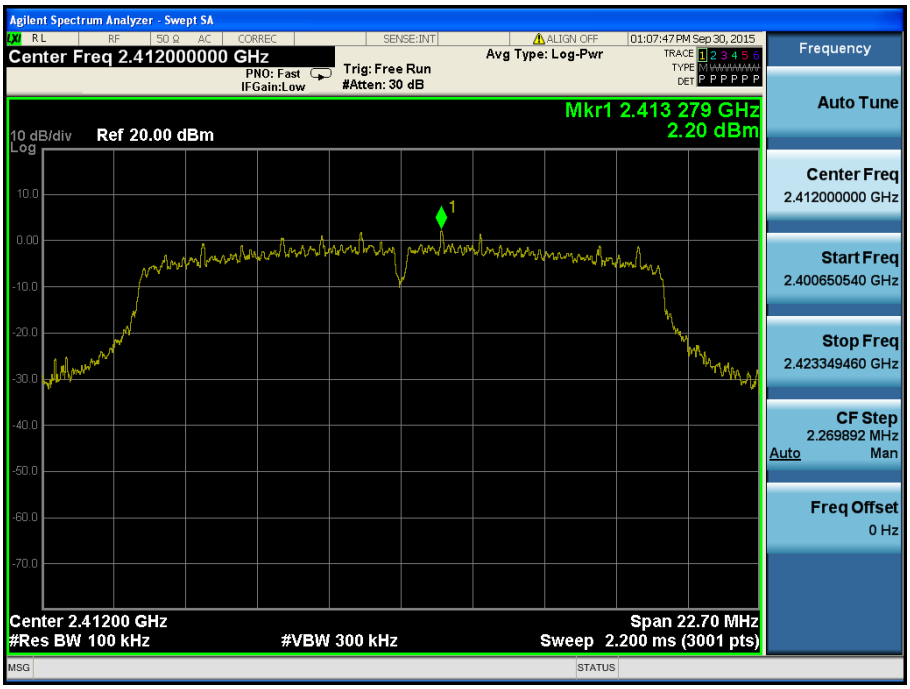
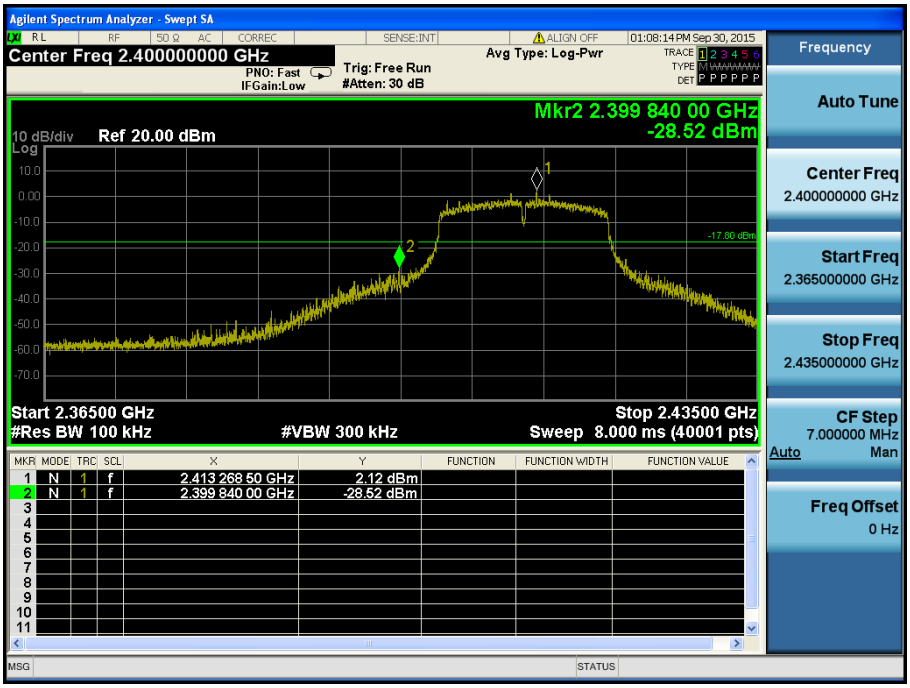


TM 2 & ANT 2 & Lowest

Reference



Low Band-edge



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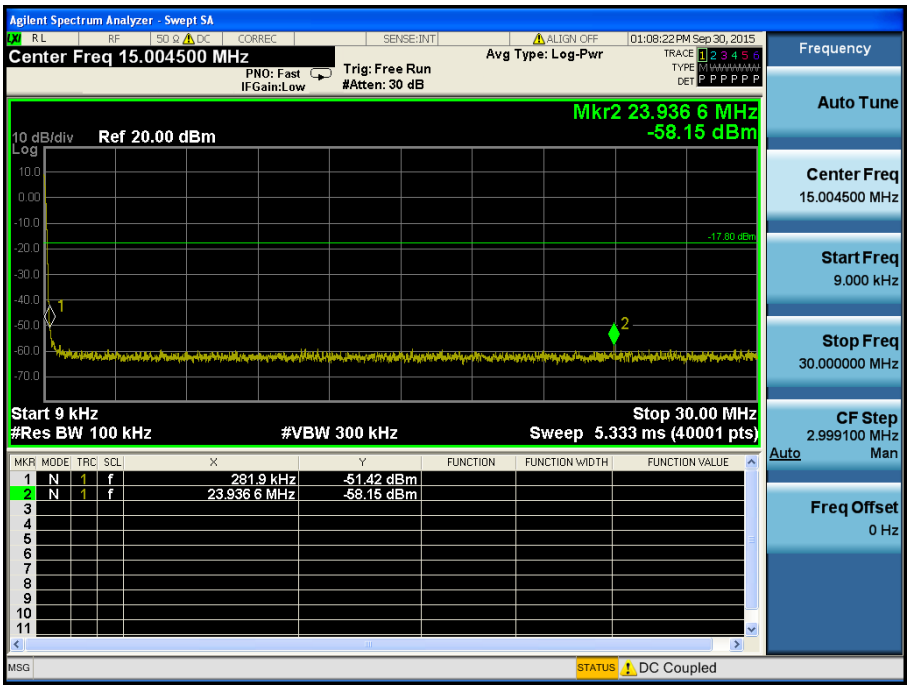
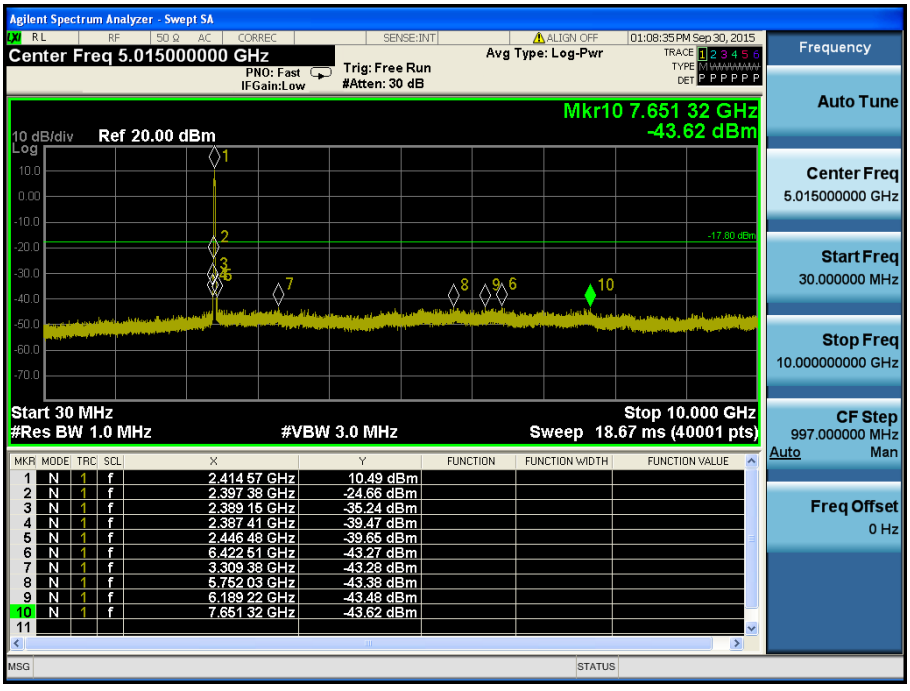
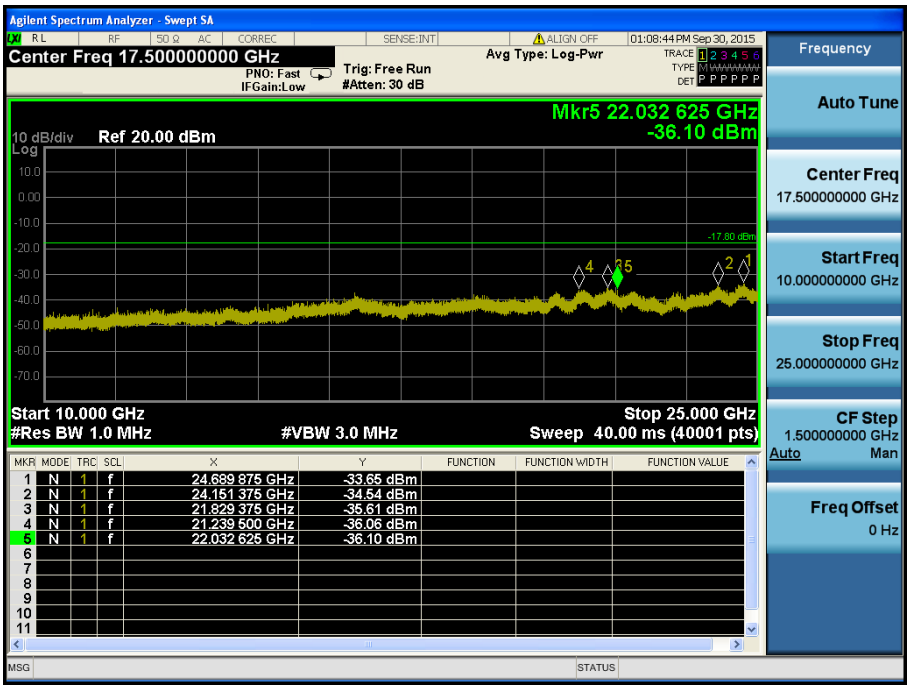




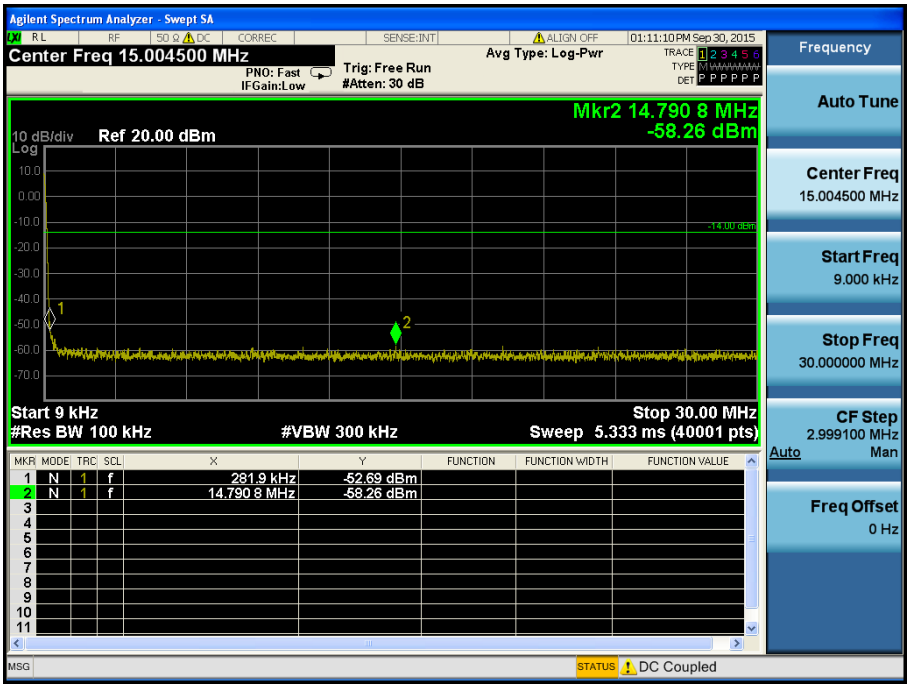
Conducted Spurious Emissions



TM 2 & ANT 2 & Middle

Reference

Conducted Spurious Emissions



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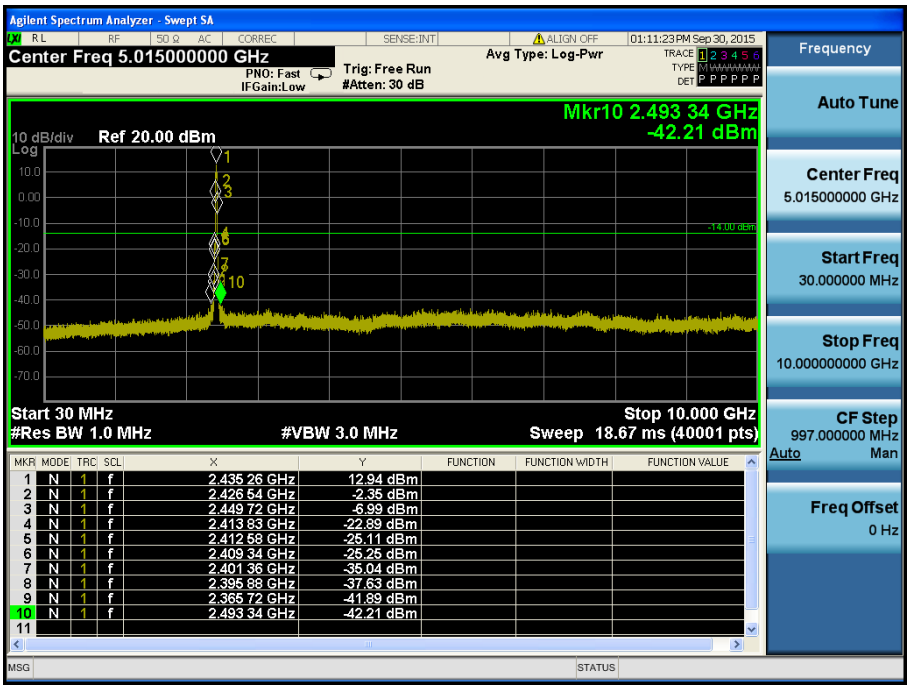
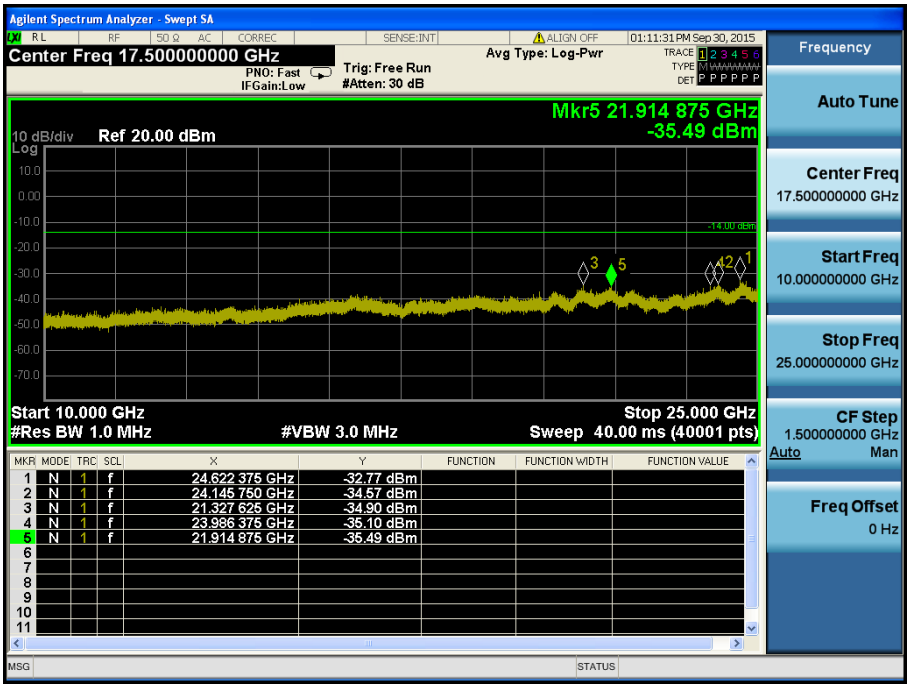
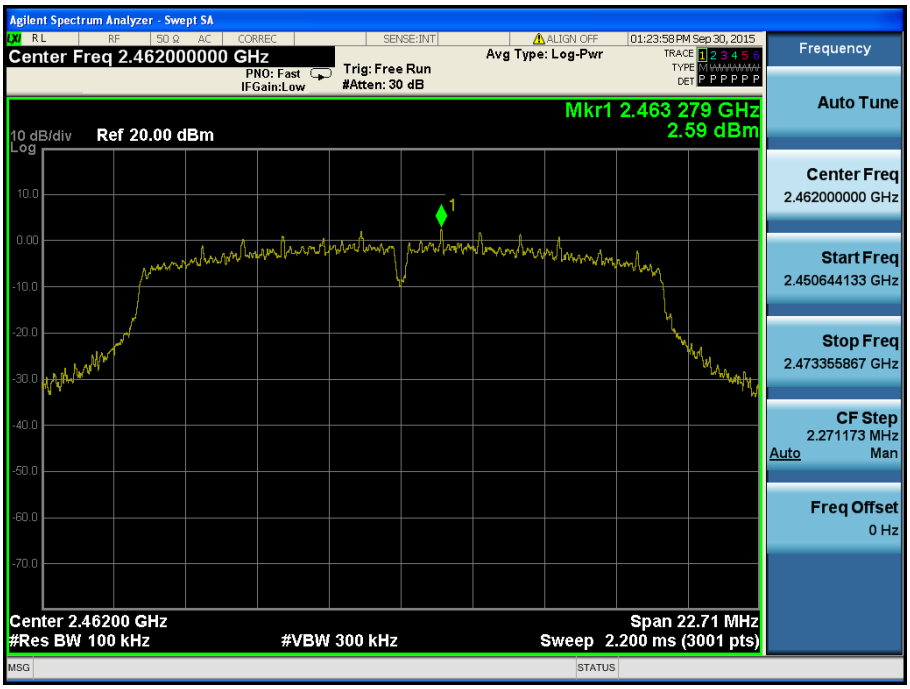


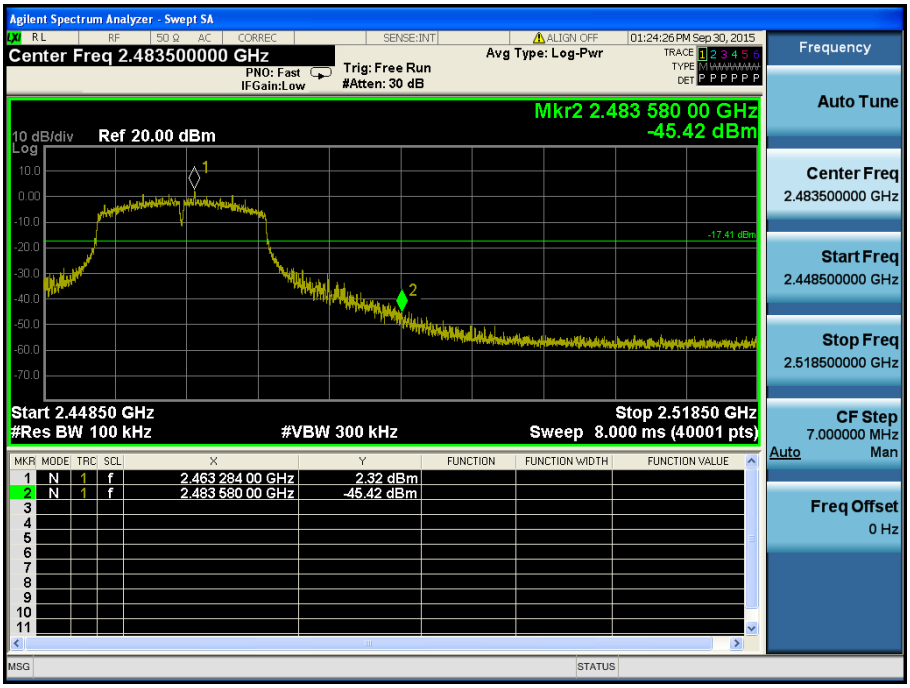


TM 2 & ANT 2 & Highest

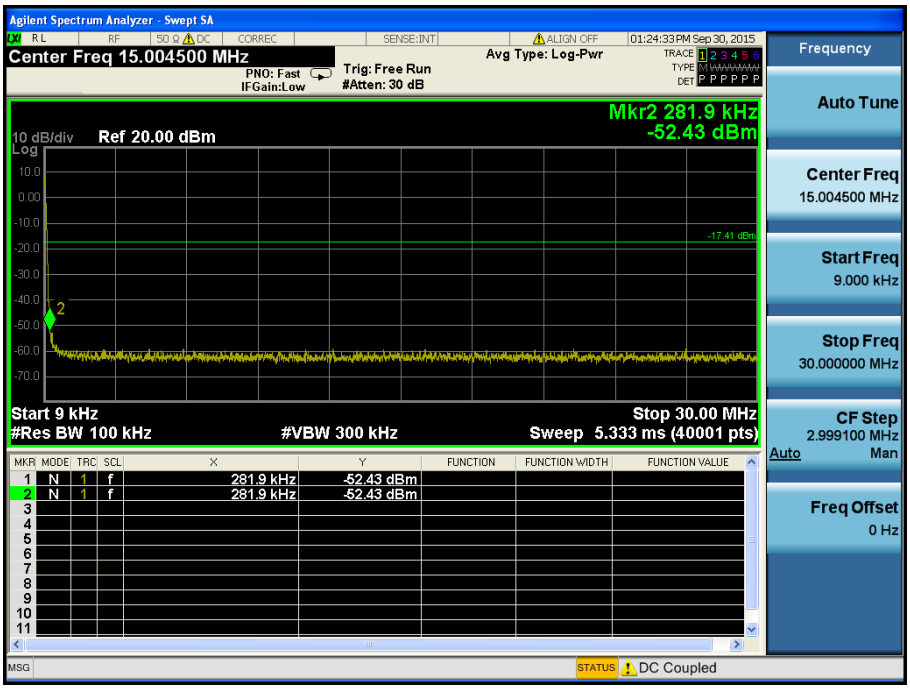
Reference

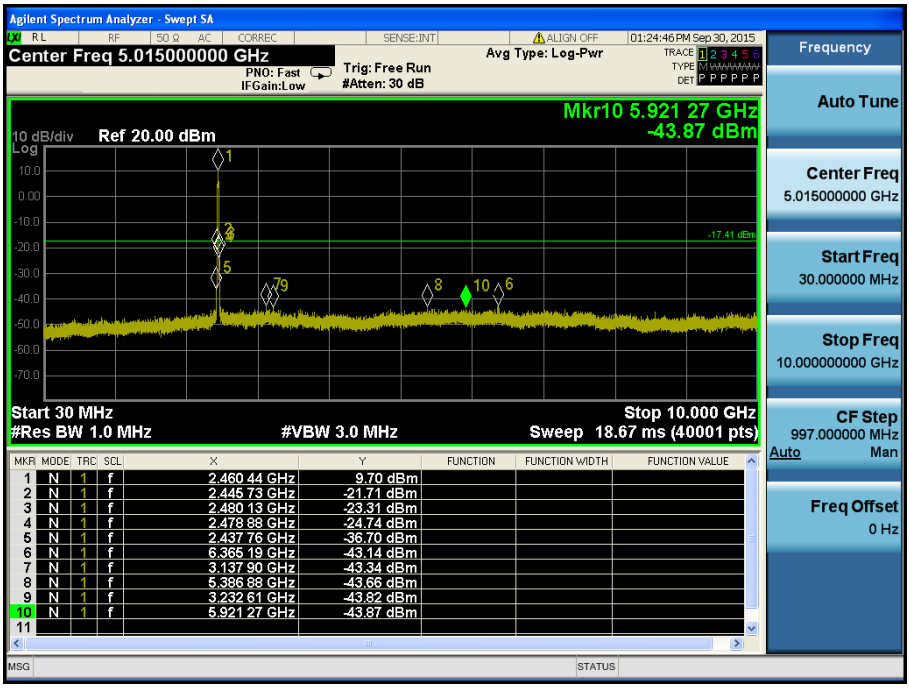


High Band-edge

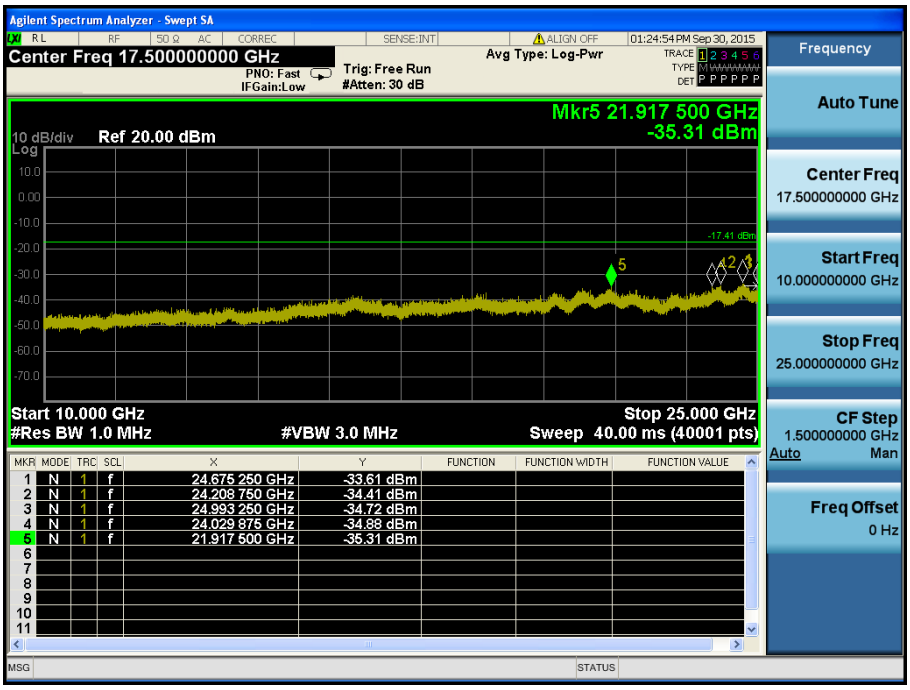


Conducted Spurious Emissions



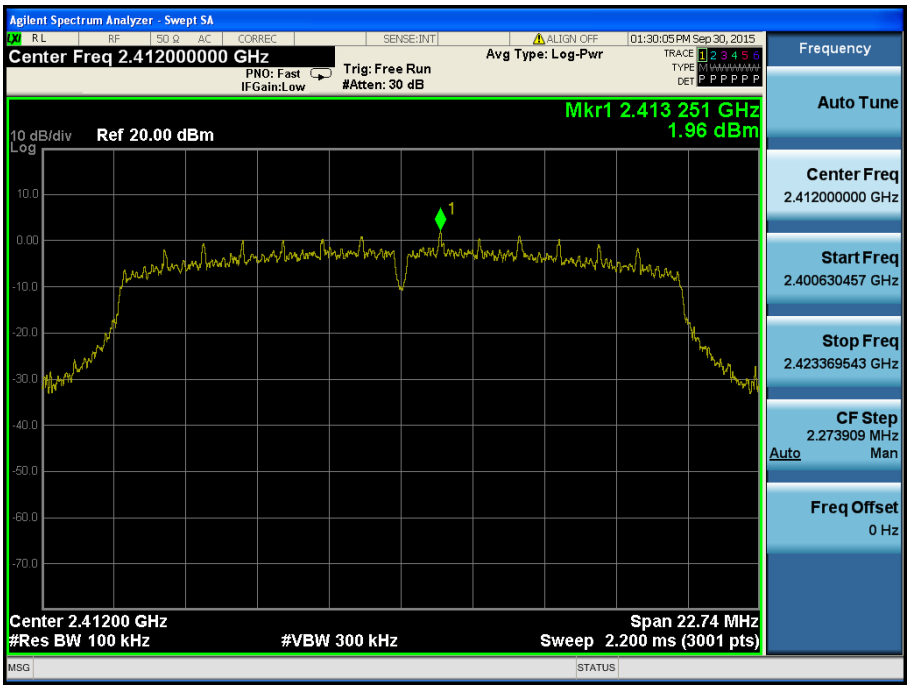


Conducted Spurious Emissions

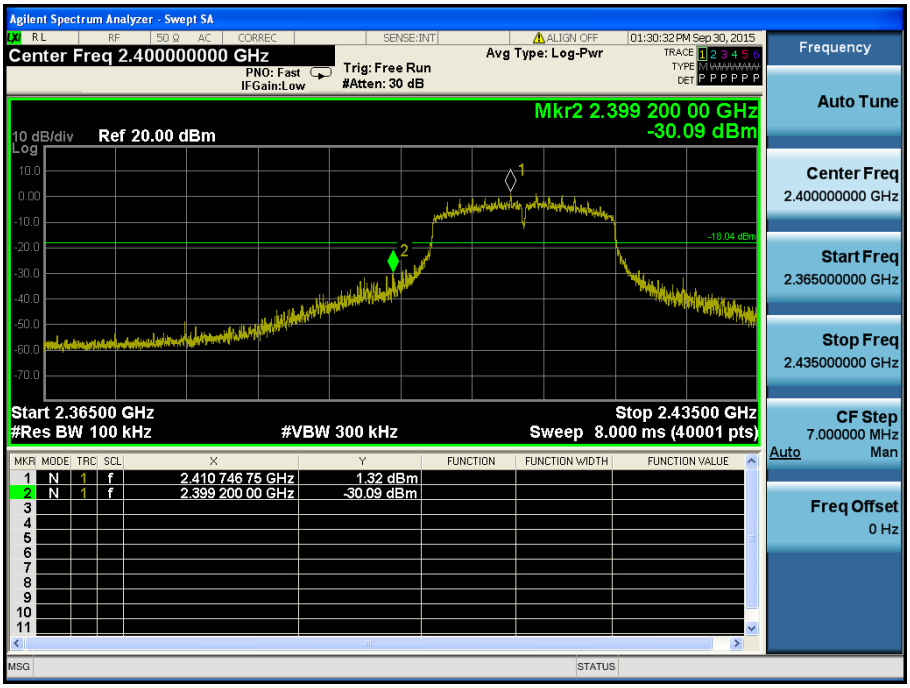


TM 3 & ANT 2 & Lowest

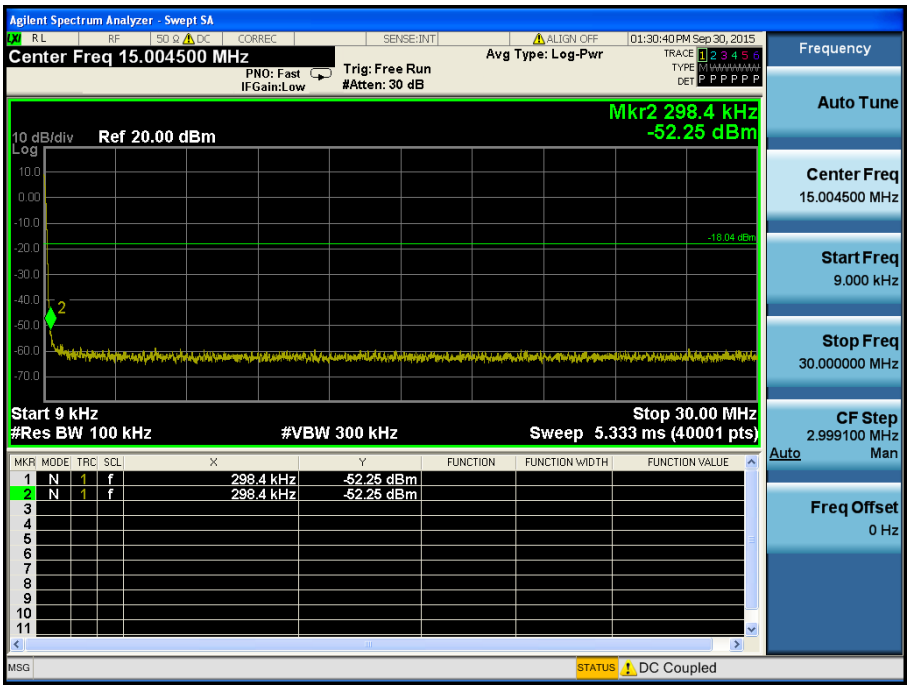
Reference

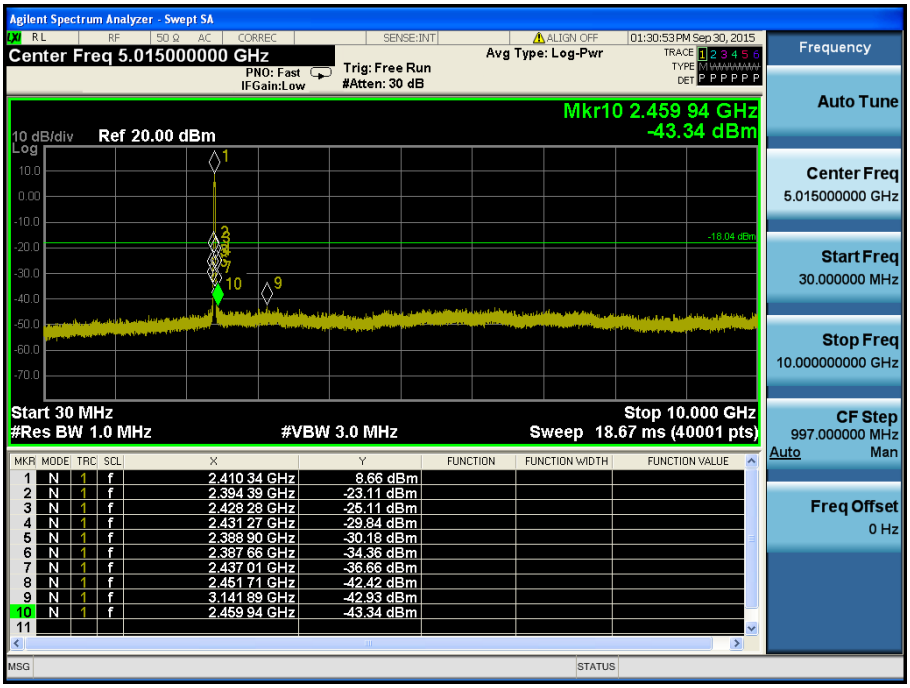


Low Band-edge

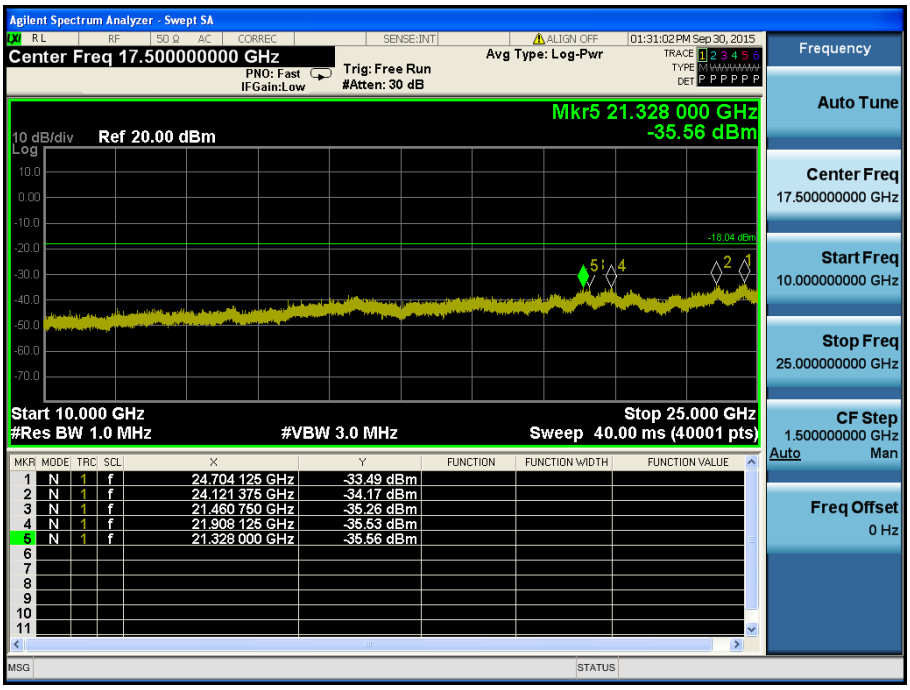


Conducted Spurious Emissions



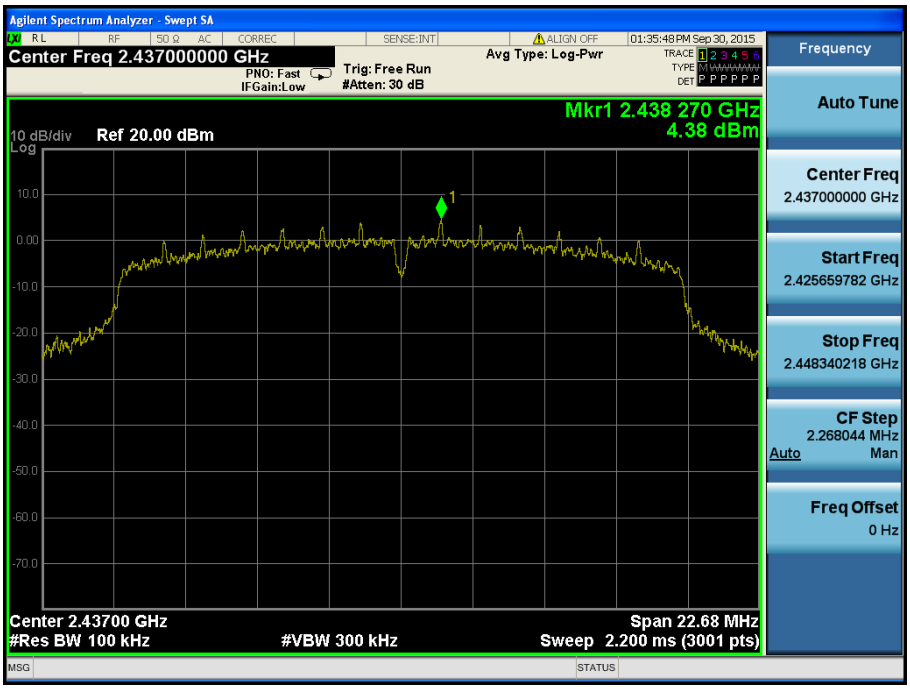


Conducted Spurious Emissions

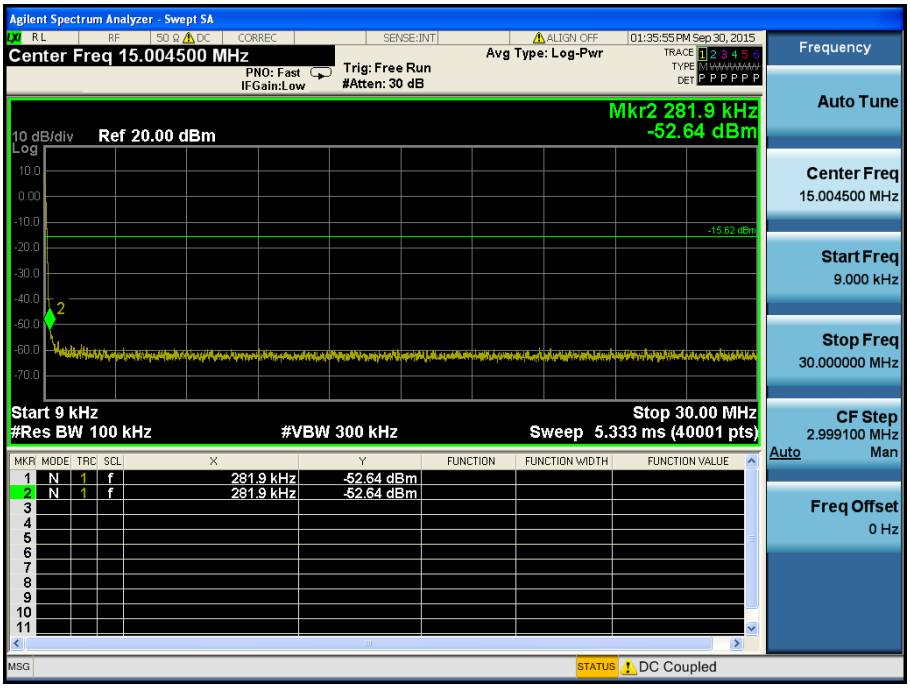


TM 3 & ANT 2 & Middle

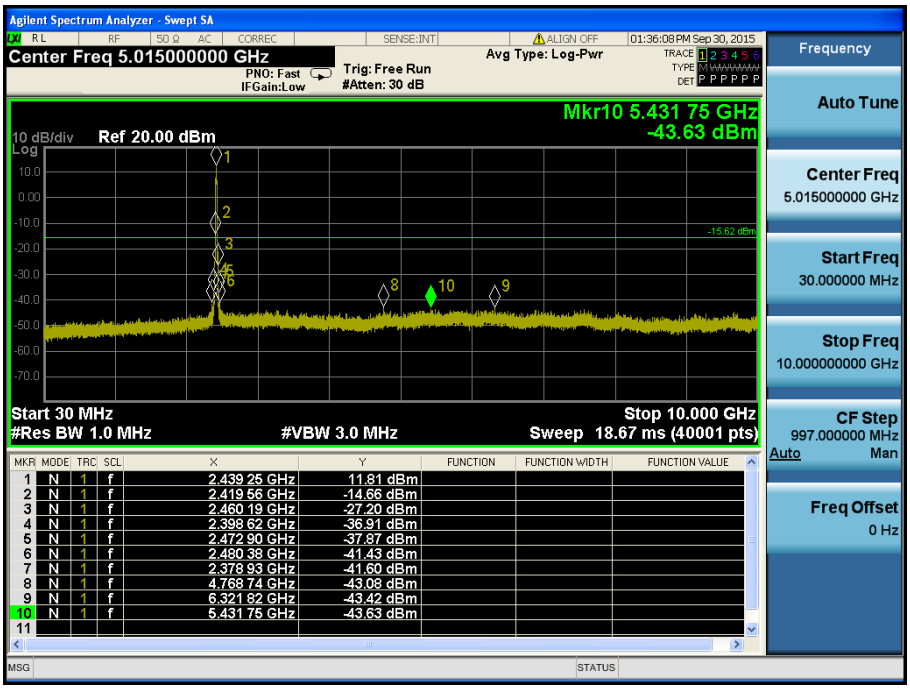
Reference

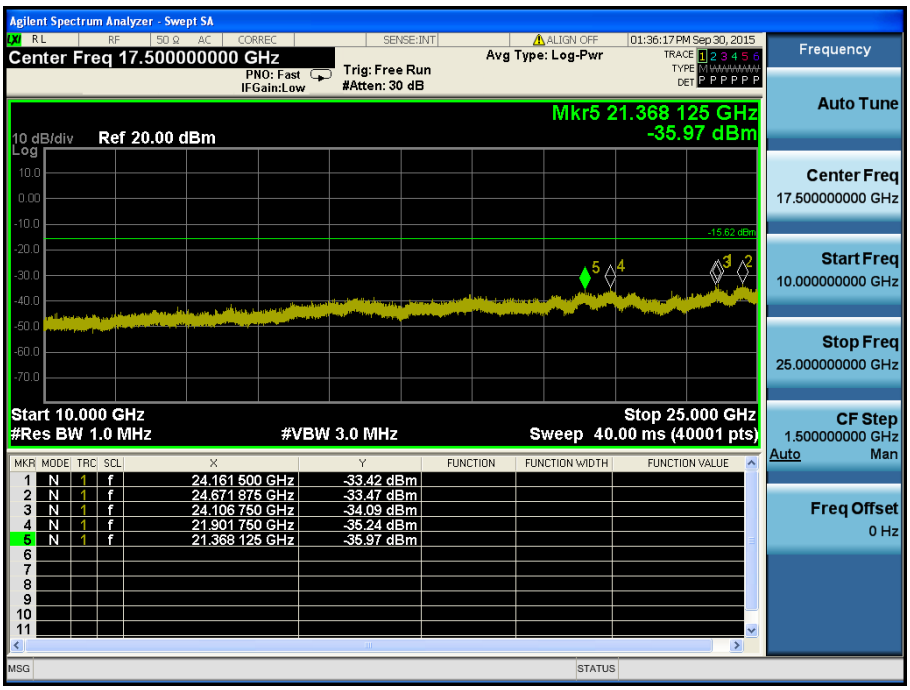


Conducted Spurious Emissions



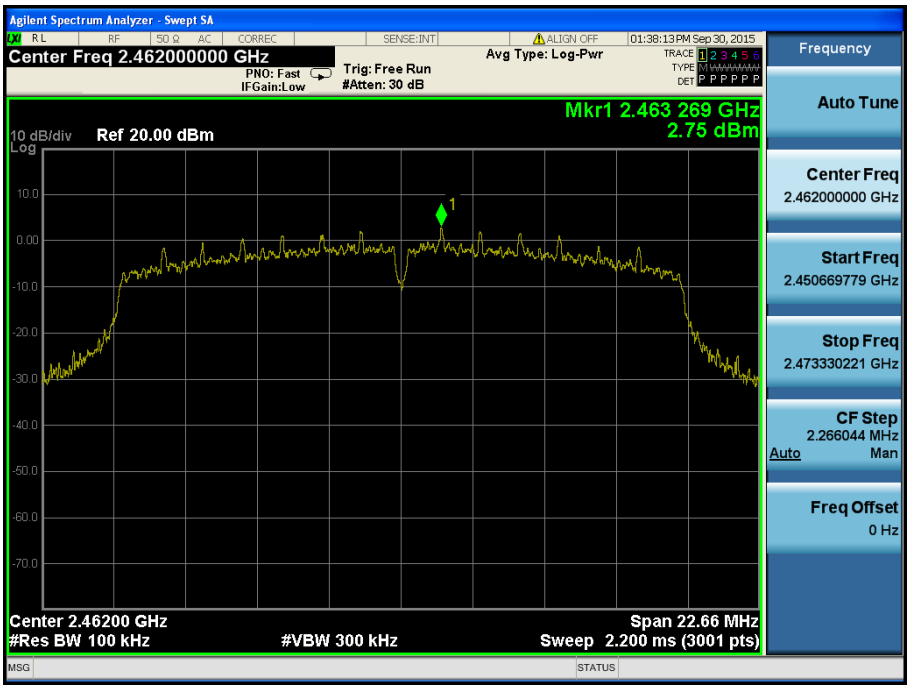
Conducted Spurious Emissions



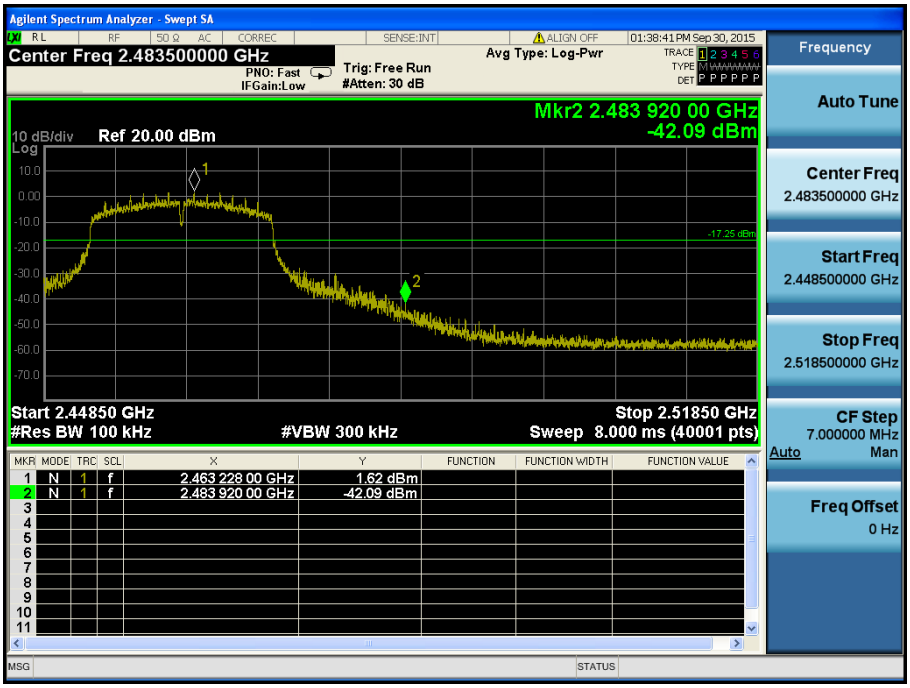


TM 3 & ANT 2 & Highest

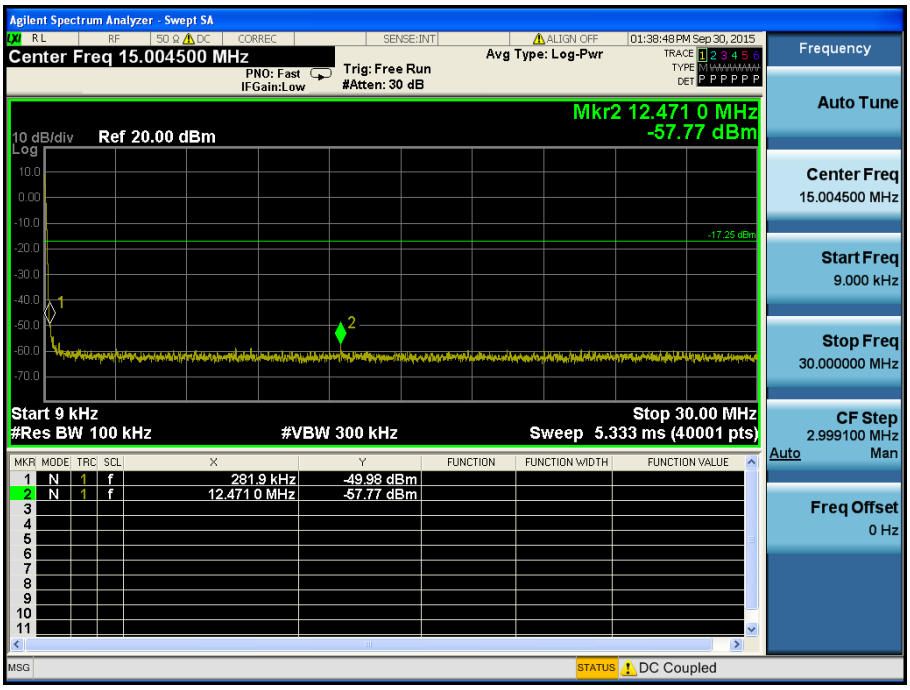
Reference

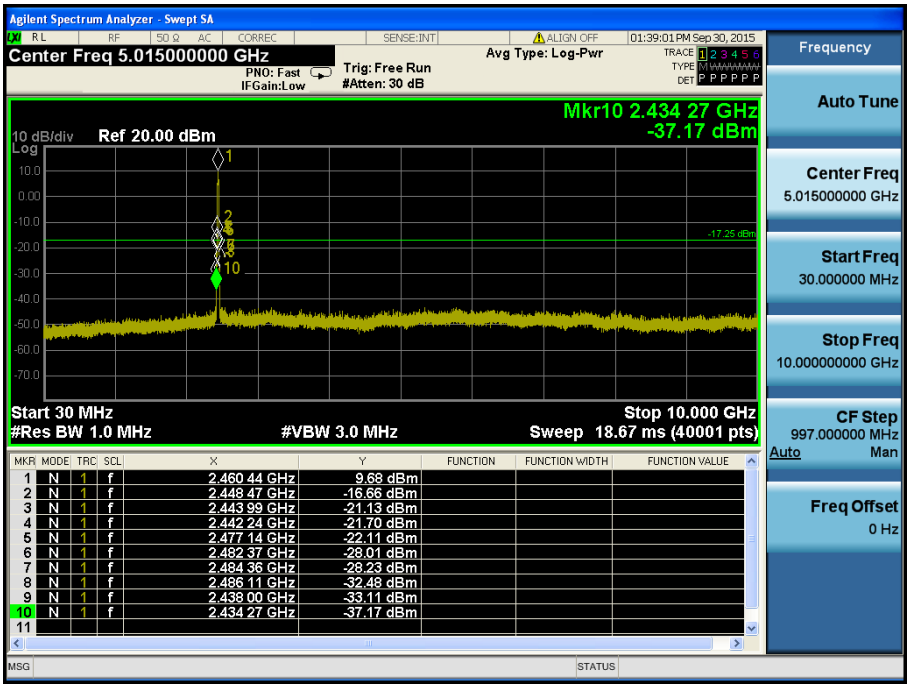


High Band-edge

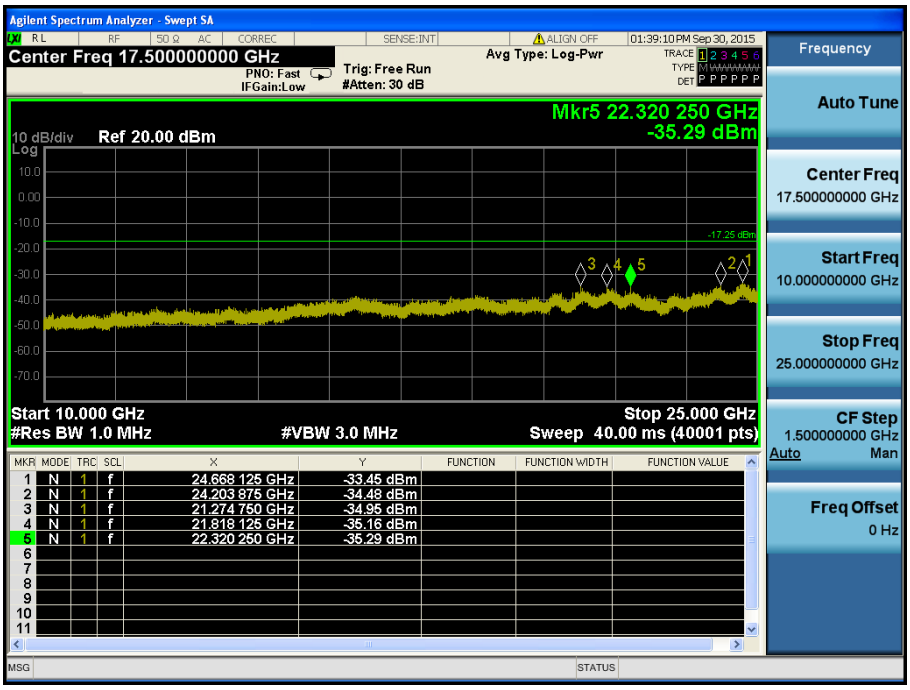


Conducted Spurious Emissions



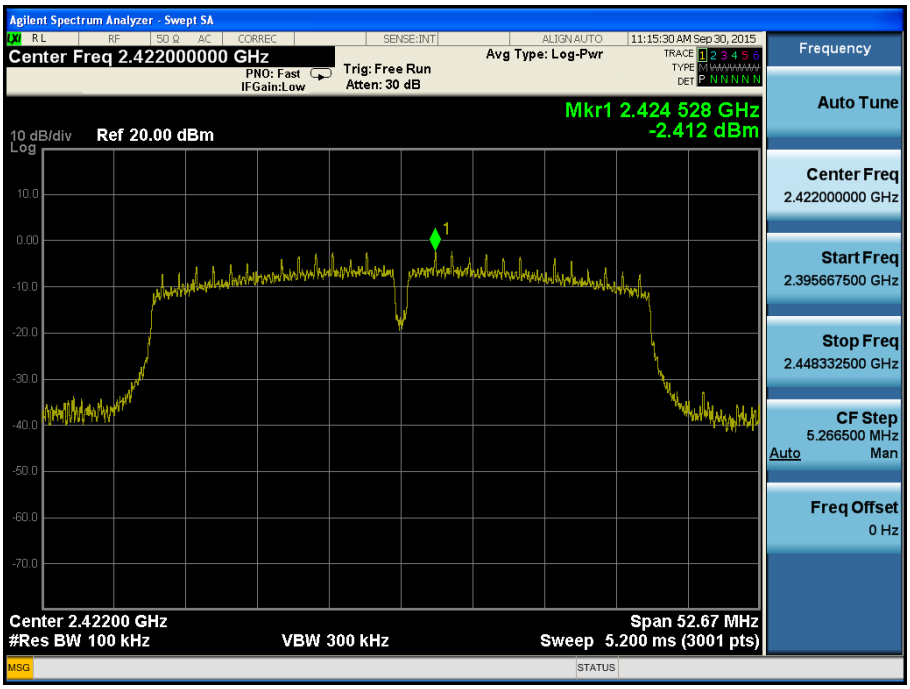


Conducted Spurious Emissions

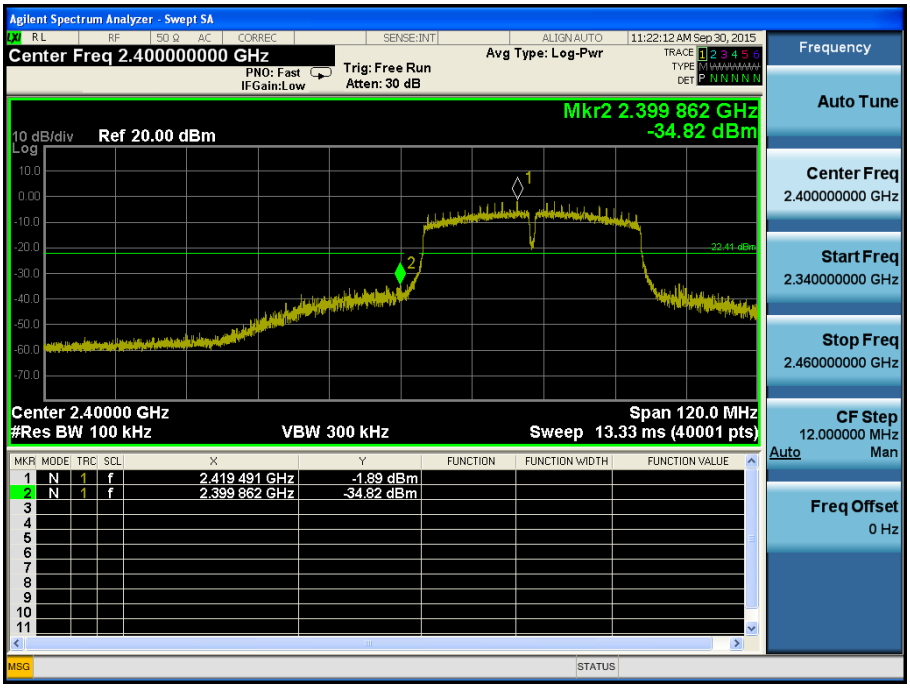


TM 4 & ANT 2 & Lowest

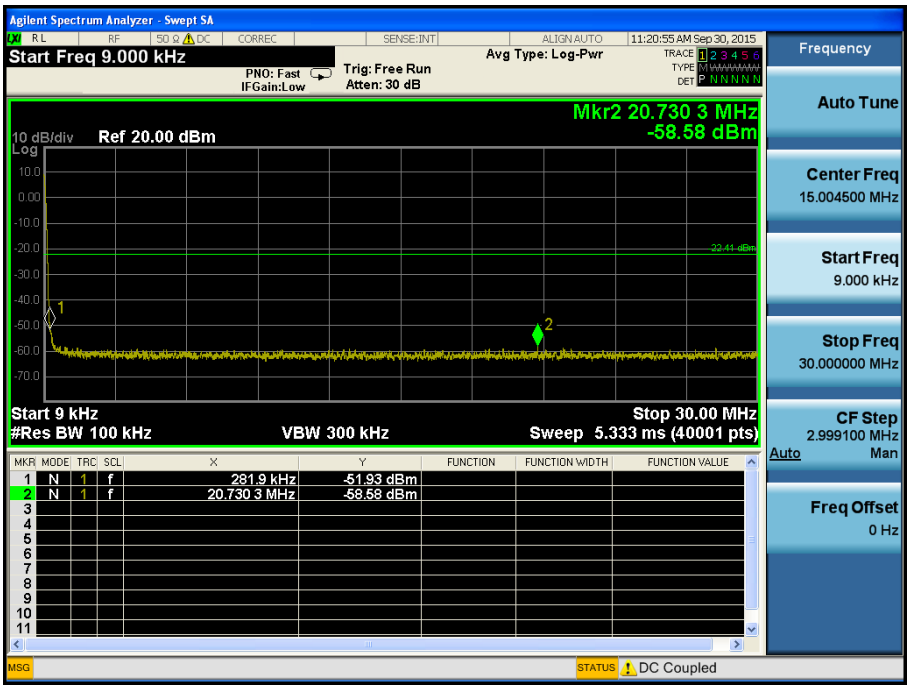
Reference

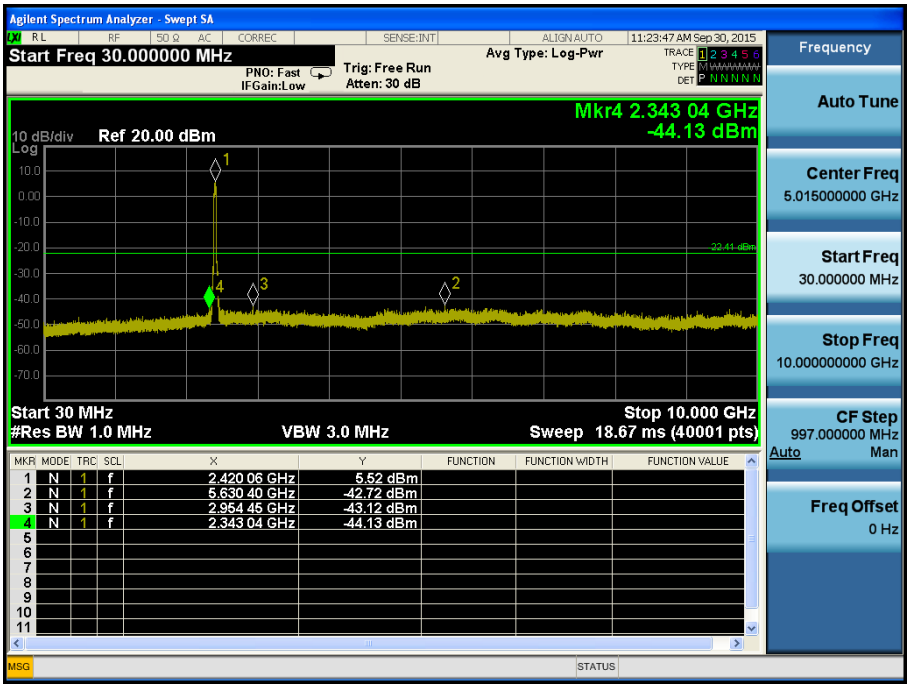


Low Band-edge

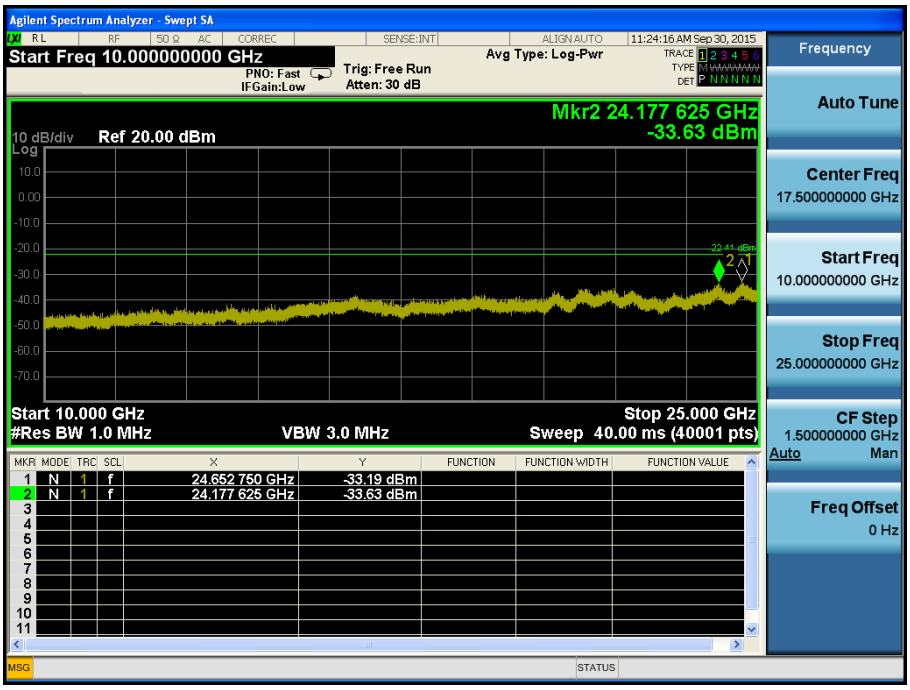


Conducted Spurious Emissions



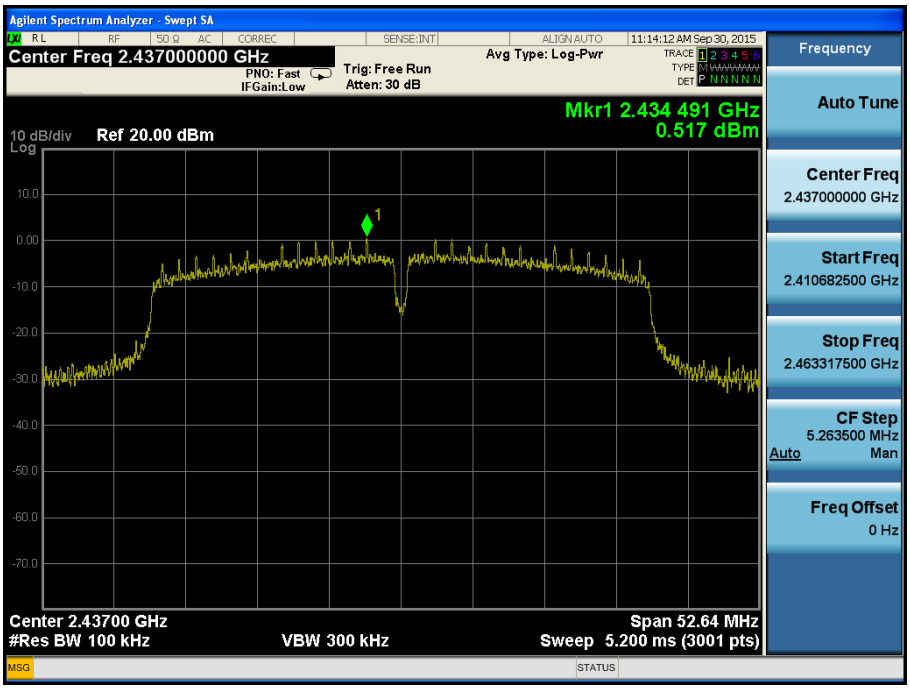


Conducted Spurious Emissions



TM 4 & ANT 2 & Middle

Reference



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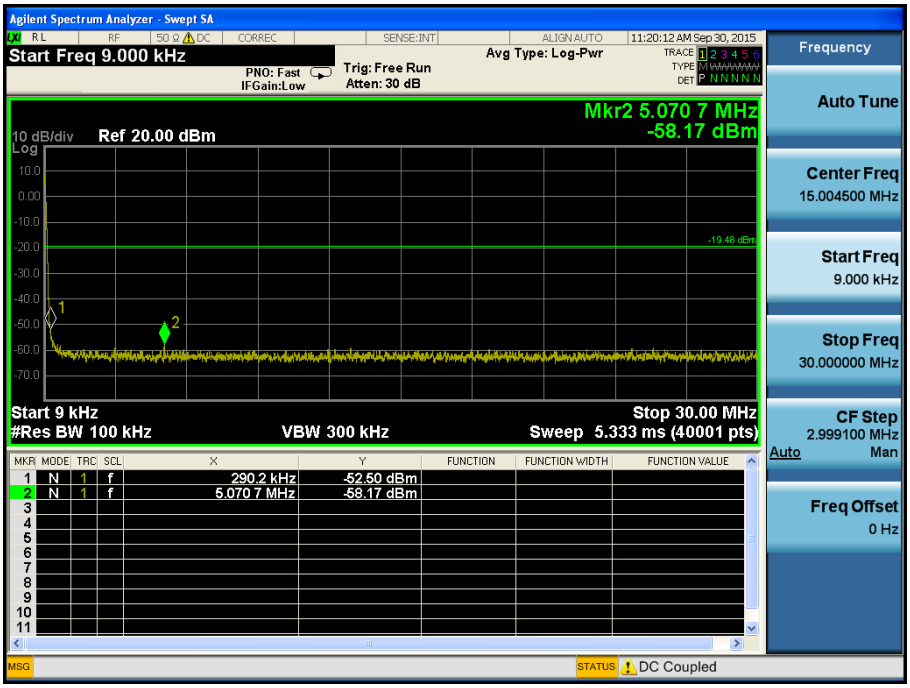

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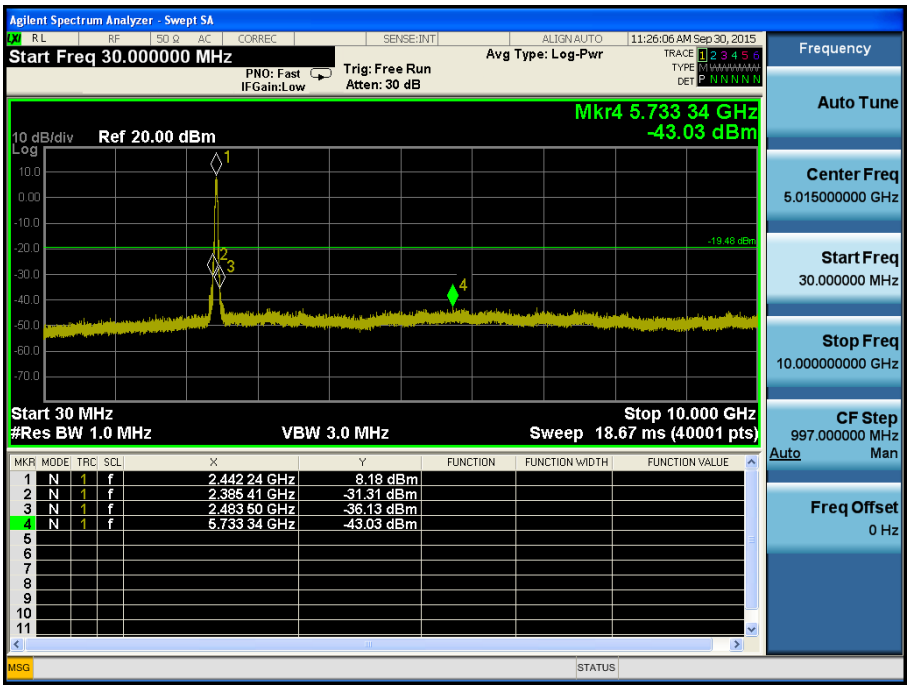
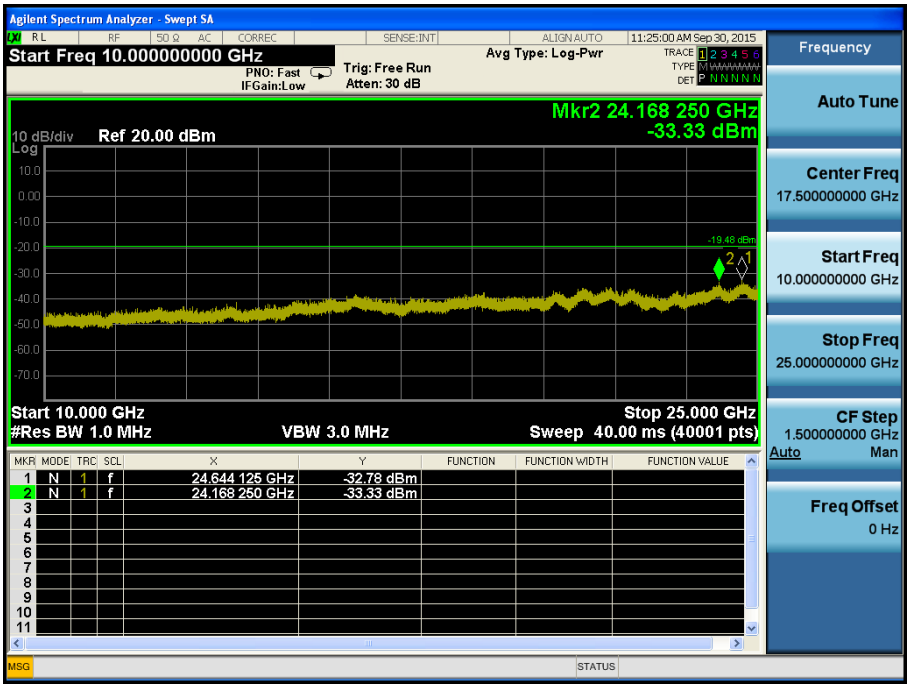
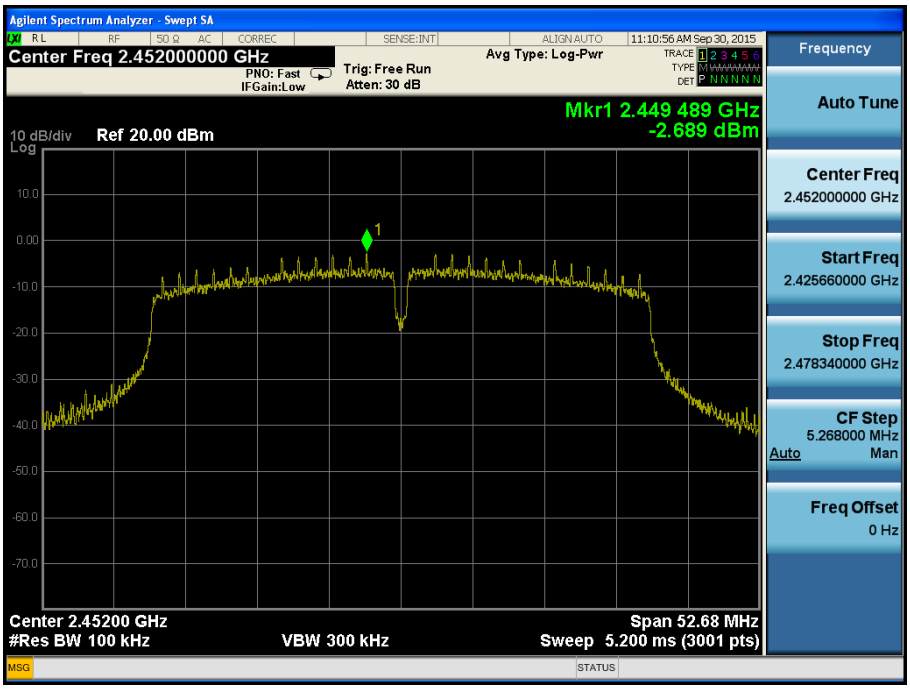


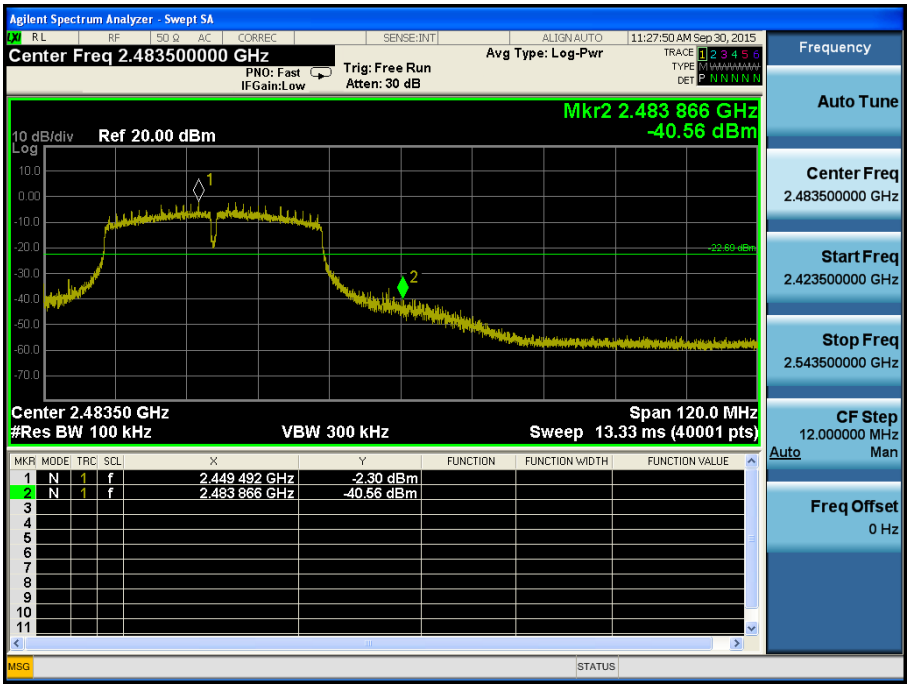


TM 4 & ANT 2 & Highest

Reference



High Band-edge



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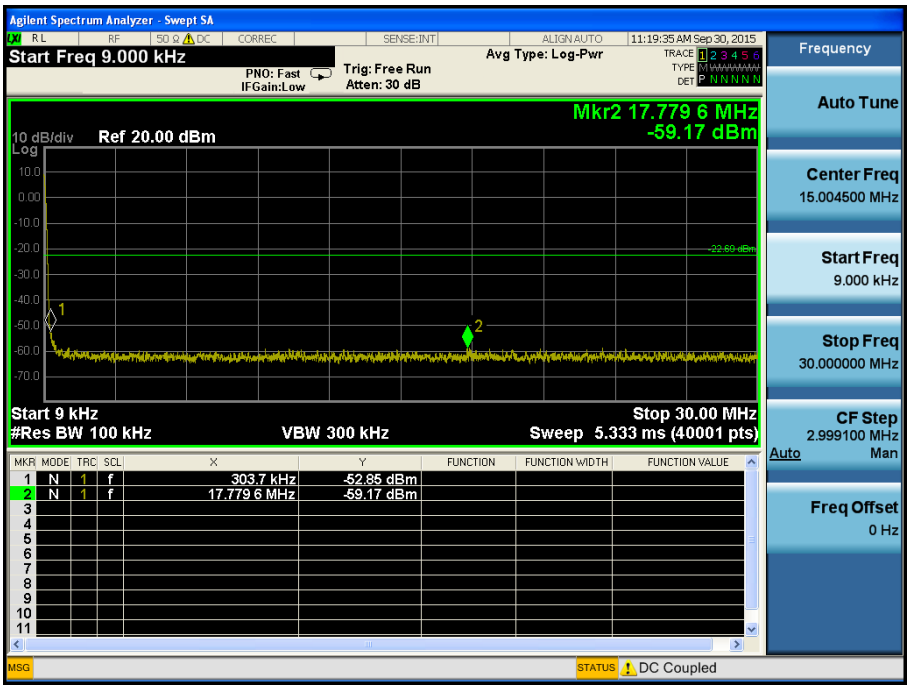
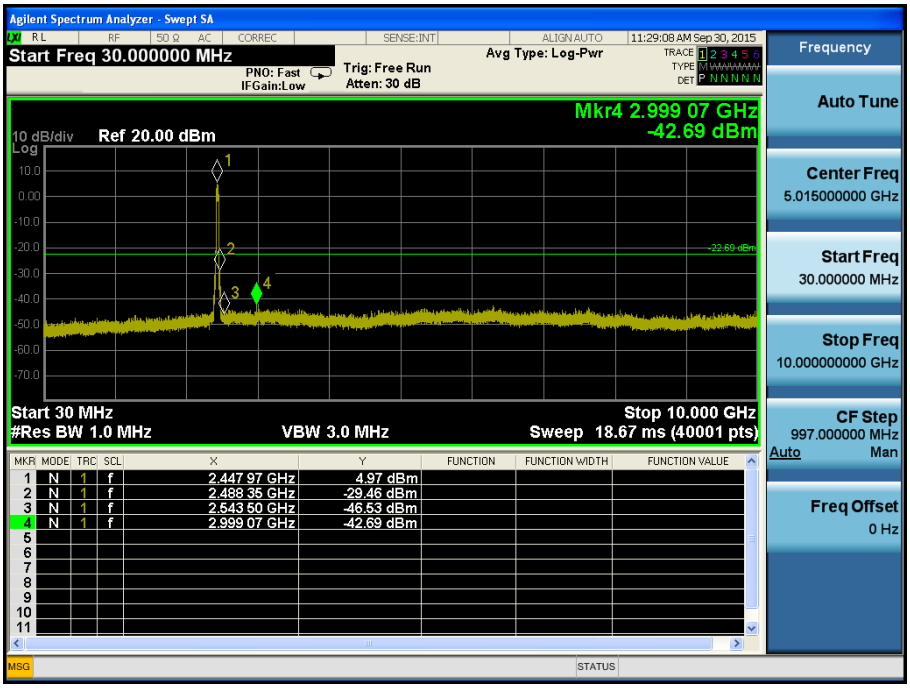
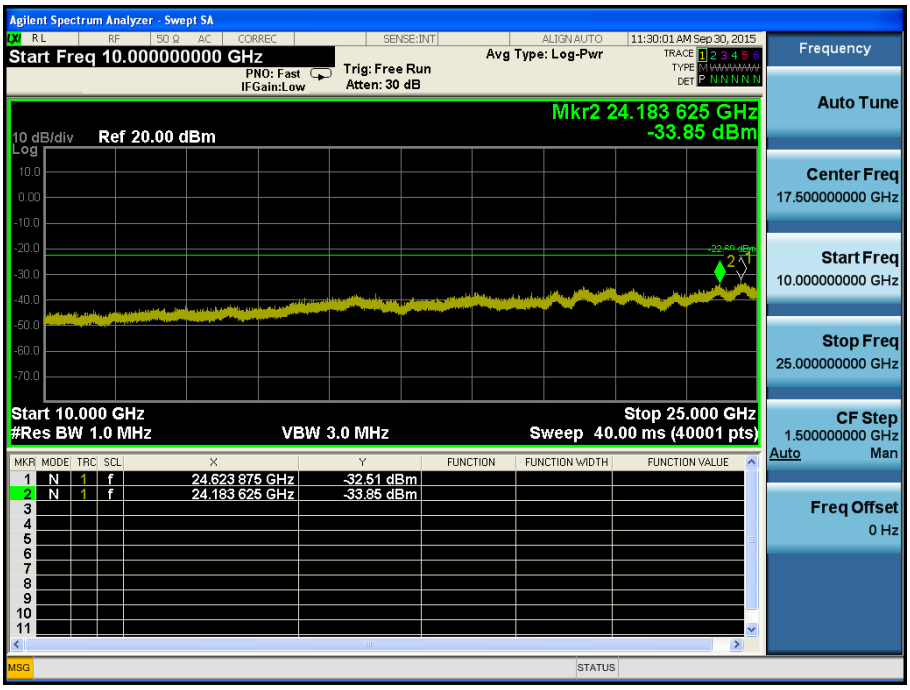




Conducted Spurious Emissions



8.5 Radiated Spurious Emissions

Test Requirements and limit,

§15.247(d), §15.205, §15.209

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a) and (b), then the 15.209(a) limit in the table below has to be followed

▪ **FCC Part 15.209(a) and (b)**

Frequency (MHz)	Limit (uV/m)	Measurement Distance (meter)
0.009 – 0.490	2400/F (KHz)	300
0.490 – 1.705	24000/F (KHz)	30
1.705 – 30.0	30	30
30 ~ 88	100 **	3
88 ~ 216	150 **	3
216 ~ 960	200 **	3
Above 960	500	3

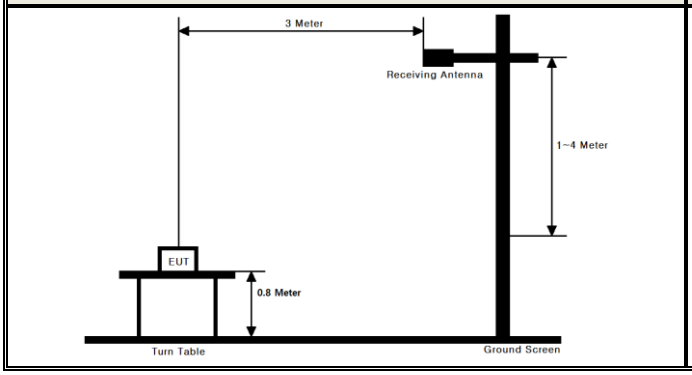
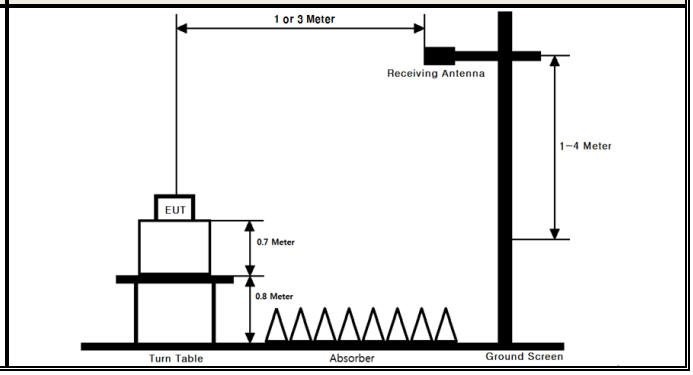
** Except as provided in 15.209(g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54 - 72 MHz, 76 - 88 MHz, 174 - 216 MHz or 470 - 806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g. 15.231 and 15.241.

▪ **FCC Part 15.205 (a):** Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	GHz	GHz
0.009 ~ 0.110	8.41425 ~ 8.41475	108 ~ 121.94	1300 ~ 1427	4.5 ~ 5.15	14.47 ~ 14.5
0.495 ~ 0.505	12.29 ~ 12.293	123 ~ 138	1435 ~ 1626.5	5.35 ~ 5.46	15.35 ~ 16.2
2.1735 ~ 2.1905	12.51975 ~	149.9 ~ 150.05	1645.5 ~ 1646.5	7.25 ~ 7.75	17.7 ~ 21.4
4.125 ~ 4.128	12.52025	156.52475 ~	1660 ~ 1710	8.025 ~ 8.5	22.01 ~ 23.12
4.17725 ~ 4.17775	12.57675 ~	156.52525	1718.8 ~ 1722.2	9.0 ~ 9.2	23.6 ~ 24.0
4.20725 ~ 4.20775	12.57725	156.7 ~ 156.9	2200 ~ 2300	9.3 ~ 9.5	31.2 ~ 31.8
6.215 ~ 6.218	13.36 ~ 13.41	162.0125 ~ 167.17	2310 ~ 2390	10.6 ~ 12.7	36.43 ~ 36.5
6.26775 ~ 6.26825	16.42 ~ 16.423	167.72 ~ 173.2	2483.5 ~ 2500	13.25 ~ 13.4	Above 38.6
6.31175 ~ 6.31225	16.69475 ~	240 ~ 285	2655 ~ 2900		
8.291 ~ 8.294	16.69525	322 ~ 335.4	3260 ~ 3267		
8.362 ~ 8.366	16.80425 ~	399.90 ~ 410	3332 ~ 3339		
8.37625 ~ 8.38675	16.80475	608 ~ 614	3345.8 ~ 3358		
	25.5 ~ 25.67	960 ~ 1240	3600 ~ 4400		
	37.5 ~ 38.25				
	73 ~ 74.6				
	74.8 ~ 75.2				

▪ **FCC Part 15.205(b):** The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in §15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in §15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in §15.35 apply to these measurements.

Test Configuration

Below 1 GHz	Above 1 GHz
	

▣ TEST PROCEDURE

1. The EUT is placed on a non-conductive table, emission measurements at below 1 GHz, the table height is 80 cm and above 1 GHz, the table height is 1.5 m.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

▣ Measurement Instrument Setting for Radiated Emission Measurements.

The radiated emission was tested according to the section 6.3, 6.4, 6.5 and 6.6 of the ANSI C63.10-2013 with following settings.

Peak Measurement:

RBW = As specified in below table , VBW ≥ 3 x RBW, Sweep = Auto, Detector = Peak, Trace mode = Max Hold until the trace stabilizes.

Frequency	RBW
9 - 150 kHz	200 - 300 Hz
0.15 - 30 MHz	9 - 10 kHz
30 - 1000 MHz	100 - 120 kHz
> 1000 MHz	1 MHz

Average Measurement:

1. RBW = 1 MHz (unless otherwise specified).
2. VBW ≥ 3 x RBW.
3. Detector = RMS (Number of points ≥ 2 x Span / RBW)
4. Averaging type = power. (i.e., RMS)
5. Sweep time = auto.
6. Perform a trace average of at least 100 traces.
7. A correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle. The correction factor is computed as follows:

1) If power averaging (RMS) mode was used in step 4, then the applicable correction factor is 10 log(1/x), where x is the duty cycle.
2) If linear voltage averaging mode was used in step 4, then the applicable correction factor is 20 log(1/x), where x is the duty cycle.
3) If a specific emission is demonstrated to be continuous (≥ 98 percent duty cycle) rather than turning on and off with the transmit cycle, then no duty cycle correction is required for that emission.

Duty Cycle Corrections (Refer to appendix II for duty cycle measurement procedure and plots)

Band	Date rate	Duty Cycle (%)	T_{on} (ms)	T_{on}+ T_{off} (ms)	DCF = 10log(1 / Duty) (dB)
TM 1	1Mbps	98.50	16.450	16.700	-
TM 2	6Mbps	89.84	2.740	3.050	0.47
TM 3	MCS 0	88.77	2.530	2.850	0.52
	MCS 8	80.06	1.285	1.605	0.97
TM 4	MCS 0	79.55	1.245	1.565	1.00

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : ***Test Mode 1(TM 1)***

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCF (dB)	Distance F (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Test Ant of Worst data[Note2]
Lowest	2484.52	V	Y	PK	54.32	2.88	N/A	N/A	57.20	74.00	16.80	1
	2383.64	V	Y	AV	47.19	2.88	N/A	N/A	50.07	54.00	3.93	1
	4824.19	H	Z	PK	49.76	8.20	N/A	N/A	57.96	74.00	16.04	2
	4823.92	H	Z	AV	43.13	8.20	N/A	N/A	51.33	54.00	2.67	2
Middle	4874.22	H	Z	PK	49.57	8.66	N/A	N/A	58.23	74.00	15.77	2
	4873.88	H	Z	AV	43.40	8.66	N/A	N/A	52.06	54.00	1.94	2
Highest	2483.56	V	Y	PK	52.18	3.36	N/A	N/A	55.54	74.00	18.46	1
	2483.57	V	Y	AV	44.83	3.36	N/A	N/A	48.19	54.00	5.81	1
	4924.05	H	Z	PK	48.96	8.99	N/A	N/A	57.95	74.00	16.05	2
	4923.96	H	Z	AV	42.79	8.99	N/A	N/A	51.78	54.00	2.22	2

Note.

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.
2. This device was tested under single transmitting(Ant 1, 2) and the worst case data are reported in the table above.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + T.F + DCF + Distance F / T.F = AF + CL – AG
   Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,
   DCF = Duty Cycle Correction Factor, Distance F = Distance Correction Factor
4. Measurement Distance = 3 m for below 10 GHz, Measurement Distance = 1 m for above 10 GHz.
   Therefore Distance Correction Factor(DCF) : - 9.54 dB = 20*log(1m/3m)

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : ***Test Mode 2(TM 2)***

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCF (dB)	Distance F (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Test Ant of Worst data[Note2]
Lowest	2389.95	V	Y	PK	66.89	2.88	N/A	N/A	69.77	74.00	4.23	1
	2390.00	V	Y	AV	48.27	2.88	0.47	N/A	51.62	54.00	2.38	1
	4824.37	H	Z	PK	46.12	8.20	N/A	N/A	54.32	74.00	19.68	2
	4824.31	H	Z	AV	36.84	8.20	0.47	N/A	45.51	54.00	8.49	2
Middle	4874.45	H	Z	PK	47.86	8.66	N/A	N/A	56.52	74.00	17.48	2
	4874.05	H	Z	AV	38.48	8.66	0.47	N/A	47.61	54.00	6.39	2
Highest	2483.86	V	Y	PK	62.20	3.36	N/A	N/A	65.56	74.00	8.44	1
	2483.93	V	Y	AV	44.86	3.36	0.47	N/A	48.69	54.00	5.31	1
	4924.13	H	Z	PK	47.22	8.99	N/A	N/A	56.21	74.00	17.79	2
	4923.98	H	Z	AV	36.49	8.99	0.47	N/A	45.95	54.00	8.05	2

Note.

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.
2. This device was tested under single transmitting(Ant 1, 2) and the worst case data are reported in the table above.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + T.F + DCF + Distance F / T.F = AF + CL – AG
   Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,
   DCF = Duty Cycle Correction Factor, Distance F = Distance Correction Factor
4. Measurement Distance = 3 m for below 10 GHz, Measurement Distance = 1 m for above 10 GHz.
   Therefore Distance Correction Factor(DCF) : - 9.54 dB = 20*log(1m/3m)

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : ***Test Mode 3(TM 3)***

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCF (dB)	Distance F (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Test Ant of Worst data[Note2]
Lowest	2389.52	V	Y	PK	67.23	2.88	N/A	N/A	70.11	74.00	3.89	1
	2389.88	V	Y	AV	48.72	2.88	0.52	N/A	52.12	54.00	1.88	1
	4924.65	H	Z	PK	46.84	8.20	N/A	N/A	55.04	74.00	18.96	2
	4924.48	H	Z	AV	36.76	8.20	0.52	N/A	45.48	54.00	8.52	2
Middle	4874.00	H	Z	PK	46.01	8.66	N/A	N/A	54.67	74.00	19.33	1+2
	4874.15	H	Z	AV	37.94	8.66	0.97	N/A	47.57	54.00	6.43	1+2
Highest	2483.53	V	Y	PK	63.79	3.36	N/A	N/A	67.15	74.00	6.85	1
	2483.50	V	Y	AV	45.24	3.36	0.52	N/A	49.12	54.00	4.88	1
	4925.03	H	Z	PK	46.95	8.99	N/A	N/A	55.94	74.00	18.06	2
	4924.12	H	Z	AV	36.15	8.99	0.52	N/A	45.66	54.00	8.34	2

Note.

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.
2. This device was tested under single transmitting(Ant 1, 2) and multiple transmitting (Ant 1+2) and the worst case data are reported in the table above.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + T.F + DCF + Distance F / T.F = AF + CL – AG
   Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,
   DCF = Duty Cycle Correction Factor, Distance F = Distance Correction Factor
4. Measurement Distance = 3 m for below 10 GHz, Measurement Distance = 1 m for above 10 GHz.
   Therefore Distance Correction Factor(DCF) : - 9.54 dB = 20*log(1m/3m)

Radiated Spurious Emissions data(9 kHz ~ 25 GHz) : ***Test Mode 4(TM 4)***

Tested Frequency	Frequency (MHz)	ANT Pol	EUT Position (Axis)	Detector Mode	Reading (dBuV)	T.F (dB/m)	DCF (dB)	Distance F (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Test Ant of Worst data[Note2]
Lowest	2389.43	V	Y	PK	65.84	2.88	N/A	N/A	68.72	74.00	5.28	1
	2389.52	V	Y	AV	47.86	2.88	1.00	N/A	51.74	54.00	2.26	1
	4846.12	H	Z	PK	45.34	8.38	N/A	N/A	53.72	74.00	20.28	2
	4845.30	H	Z	AV	35.48	8.38	1.00	N/A	44.86	54.00	9.14	2
Middle	4873.58	H	Z	PK	46.96	8.66	N/A	N/A	55.62	74.00	18.38	2
	4874.17	H	Z	AV	36.84	8.66	1.00	N/A	46.50	54.00	7.50	2
Highest	2484.81	V	Y	PK	64.04	3.36	N/A	N/A	67.40	74.00	6.60	2
	2483.56	V	Y	AV	46.01	3.36	1.00	N/A	50.37	54.00	3.63	2
	4903.93	H	Z	PK	46.12	8.86	N/A	N/A	54.98	74.00	19.02	2
	4904.00	H	Z	AV	36.55	8.86	1.00	N/A	46.41	54.00	7.59	2

Note.

1. No other spurious and harmonic emissions were found greater than listed emissions on above table.
2. This device was tested under single transmitting(Ant 1, 2) and the worst case data are reported in the table above.
3. Sample Calculation.
   Margin = Limit – Result / Result = Reading + T.F + DCF + Distance F / T.F = AF + CL – AG
   Where, T.F = Total Factor, AF = Antenna Factor, CL = Cable Loss, AG = Amplifier Gain,
   DCF = Duty Cycle Correction Factor, Distance F = Distance Correction Factor
4. Measurement Distance = 3 m for below 10 GHz, Measurement Distance = 1 m for above 10 GHz.
   Therefore Distance Correction Factor(DCF) : - 9.54 dB = 20*log(1m/3m)

8.6 Power-line conducted emissions

Test Requirements and limit, §15.207

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 uH/50 ohm line impedance stabilization network(LISN).

Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequency ranges.

Frequency Range (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15 ~ 0.5	66 to 56 *	56 to 46 *
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency

▣ TEST PROCEDURE

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to the test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

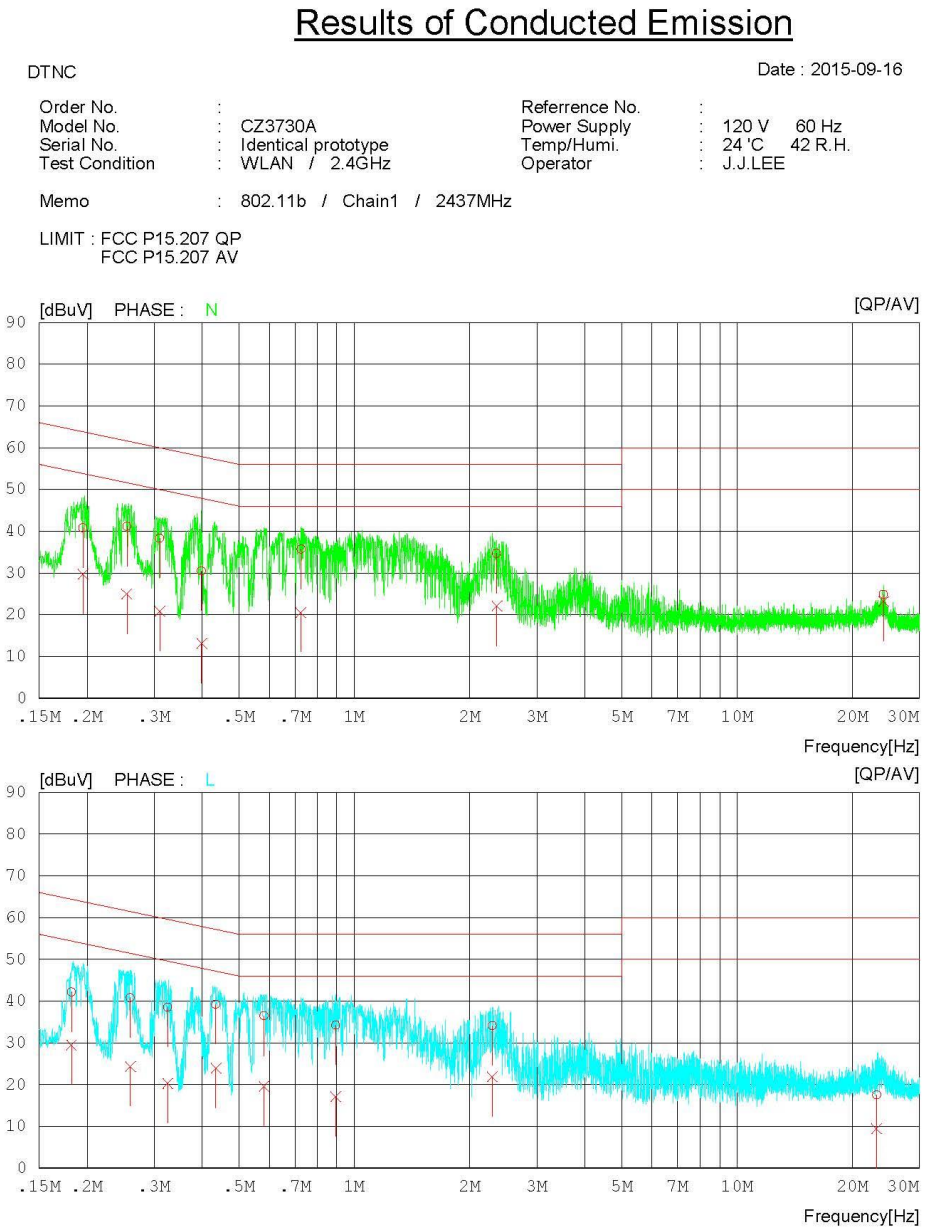
▣ Test Results: Comply(Refer to next page.)

The worst data was reported.

▣ RESULT PLOTS

AC Line Conducted Emissions (Graph)

Test Mode: 802.11b & 1 Mbps & 2437 MHz



AC Line Conducted Emissions (List)

Test Mode: 802.11b & 1 Mbps & 2437 MHz

Results of Conducted Emission

DTNC Date : 2015-09-16

Order No.	:		Referrence No.	:	
Model No.	:	CZ3730A	Power Supply	:	120 V 60 Hz
Serial No.	:	Identical prototype	Temp/Humi.	:	24 'C 42 R.H.
Test Condition	:	WLAN / 2.4GHz	Operator	:	J.J.LEE

Memo : 802.11b / Chain1 / 2437MHz

LIMIT : FCC P15.207 QP
FCC P15.207 AV

NO	FREQ	READING QP	READING AV	C.FACTOR	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	
1	0.19519	30.7	19.6	10.1	40.8	29.7	63.8	53.8	23.0	24.1	N
2	0.25420	31.0	14.9	10.1	41.1	25.0	61.6	51.6	20.5	26.6	N
3	0.31013	28.2	10.8	10.1	38.3	20.9	60.0	50.0	21.7	29.1	N
4	0.39841	20.4	3.0	10.1	30.5	13.1	57.9	47.9	27.4	34.8	N
5	0.72531	25.6	10.5	10.1	35.7	20.6	56.0	46.0	20.3	25.4	N
6	2.35600	24.4	11.9	10.2	34.6	22.1	56.0	46.0	21.4	23.9	N
7	24.17300	14.0	12.3	10.9	24.9	23.2	60.0	50.0	35.1	26.8	N
8	0.18214	32.0	19.4	10.1	42.1	29.5	64.4	54.4	22.3	24.9	L
9	0.25982	30.7	14.2	10.1	40.8	24.3	61.4	51.4	20.6	27.1	L
10	0.32532	28.4	10.1	10.1	38.5	20.2	59.6	49.6	21.1	29.4	L
11	0.43451	29.1	13.8	10.1	39.2	23.9	57.2	47.2	18.0	23.3	L
12	0.58086	26.3	9.4	10.1	36.4	19.5	56.0	46.0	19.6	26.5	L
13	0.89343	24.0	7.0	10.1	34.1	17.1	56.0	46.0	21.9	28.9	L
14	2.29240	23.8	11.6	10.2	34.0	21.8	56.0	46.0	22.0	24.2	L
15	23.18000	6.5	-1.6	11.0	17.5	9.4	60.0	50.0	42.5	40.6	L

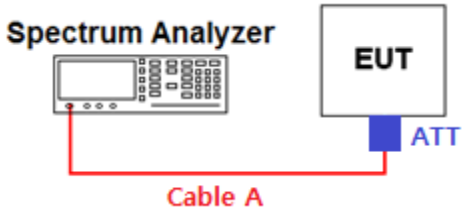
9. LIST OF TEST EQUIPMENT

Type	Manufacturer	Model	Cal.Date (yy/mm/dd)	Next.Cal.Date (yy/mm/dd)	S/N
MXA Signal Analyzer	Agilent Technologies	N9020A	15/08/18	16/08/18	MY50200867
Power Meter & Wide Bandwidth Sensor	Anritsu	ML2496A MA2411B	15/06/25	16/06/25	1338004 1306053
Vector Signal Generator	Rohde Schwarz	SMBV100A	15/01/06	16/01/06	255571
Signal Generator	Rohde Schwarz	SMF100A	15/06/29	16/06/29	102341
Dynamic Measurement DC Source	Agilent Technologies	66332A	15/01/22	16/01/22	GB37470200
Multimeter	FLUKE	17B	15/04/27	16/04/27	26030065WS
Thermohygrometer	BODYCOM	BJ5478	15/02/26	16/02/26	1209
Loop Antenna	Schwarzbeck	FMZB1513	14/04/29	16/04/29	1513-128
TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB 9160	14/04/04	16/04/04	3357
HORN ANT	ETS	3117	14/05/12	16/05/12	00140394
HORN ANT	A.H.Systems	SAS-574	15/04/30	17/04/30	154
Highpass Filter	Wainwright	WHKX12-2580-3000-18000-80SS	14/10/17	15/10/17	3
Highpass Filter	Wainwright	WHNX6-6320-8000-26500-40CC	14/10/17	15/10/17	7
Low Noise Pre Amplifier	tsj	MLA-010K01-B01-27	15/04/09	16/04/09	1844539
Amplifier (30dB)	Agilent	8449B	14/11/06	15/11/06	3008A02108
EMI TEST RECEIVER	R&S	ESR7	14/10/21	15/10/21	101109
EMI TEST RECEIVER	R&S	ESCI	15/02/25	16/02/25	100364
FREQUENCY CONVERTER	Taejin Electronic	CVCF	15/09/09	16/09/09	ZU0033
ARTIFICIAL MAINS NETWORK	Narda S.T.S. / PMM	PMM L2-16B	15/06/26	16/06/26	000WX20305

APPENDIX I

Conducted Test set up Diagram & Path loss Information

- **Conducted Measurement**



Path loss information

Frequency (GHz)	Path Loss (dB)	Frequency (GHz)	Path Loss (dB)
0.03	3.07	15	4.40
1	3.16	20	4.69
2.412 & 2.422 & 2.437 & 2.452 & 2.462	3.43	25	4.97
5	3.61	-	-
10	4.12	-	-

Note. 1: The path loss from EUT to Spectrum analyzer was measured and used for test.
Path loss (S/A's offset value) = Cable A (Attenuator, Applied only when it was used externally)

APPENDIX II

Duty cycle plots

▣ TEST PROCEDURE

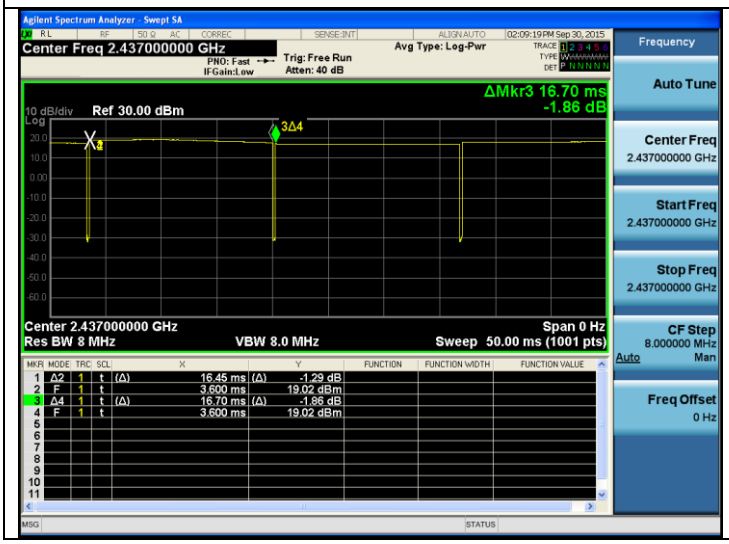
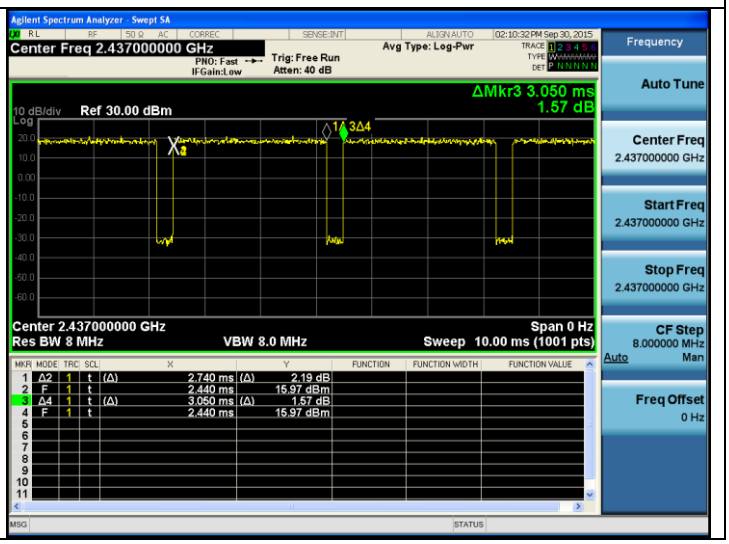
Duty Cycle measured using **section 6.0 b) of KDB558074**

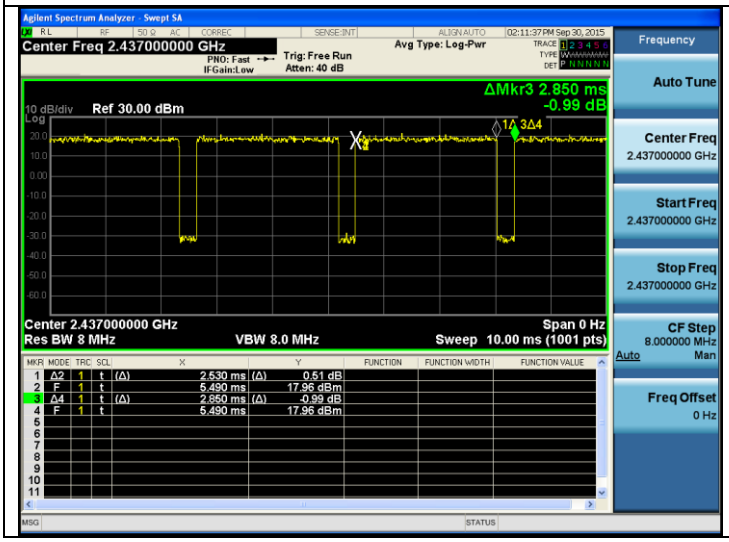
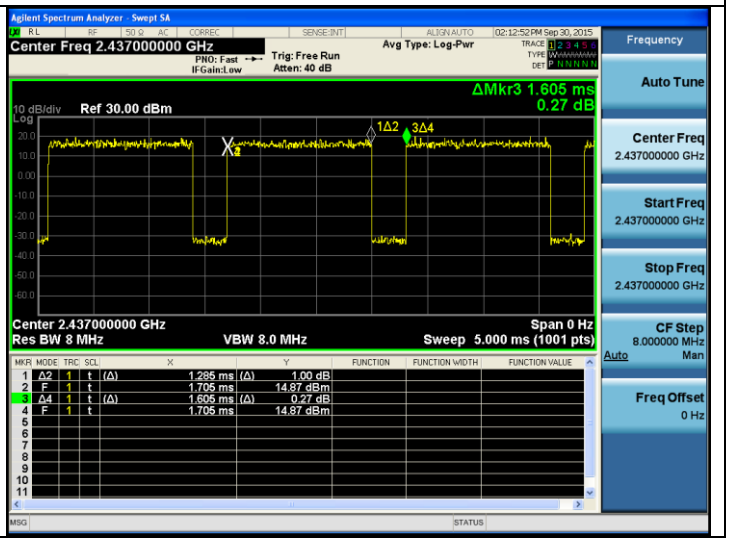
The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the on and off times of the transmitted signal.

Set the center frequency of the instrument to the center frequency of the transmission. Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value. Set VBW ≥ RBW. Set detector = peak or average.

The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T and the number of sweep points across duration T exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring duty cycle shall not be used if T ≤ 16.7 microseconds.)

▣ Result Plots

Duty cycle data : **TM 1** & **ANT 1** & **1Mbps** & **Middle**	Duty cycle data : **TM 2** & **ANT 1** & **6Mbps** & **Middle**
	

Duty cycle data : **TM 3** & **ANT 1** & **MCS 0** & **Middle**	Duty cycle data : **TM 3** & **ANT 1** & **MCS 8** & **Middle**
	

Duty cycle data : **TM 4** & **ANT 1** & **MCS 0** & **Middle**