

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 62

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
62 (Peak)	5319.600	0.104	93.293	93.397	--	--	--
62 (Peak)	5350.000	0.262	50.272	50.534	74.00	54.00	Pass
62 (Peak)	5350.700	0.266	51.760	52.026	74.00	54.00	Pass
62 (Average)	5316.200	0.062	78.919	78.981	--	--	--
62 (Average)	5350.000	0.262	36.868	37.130	74.00	54.00	Pass

Figure Channel 62: Horizontal (Peak)

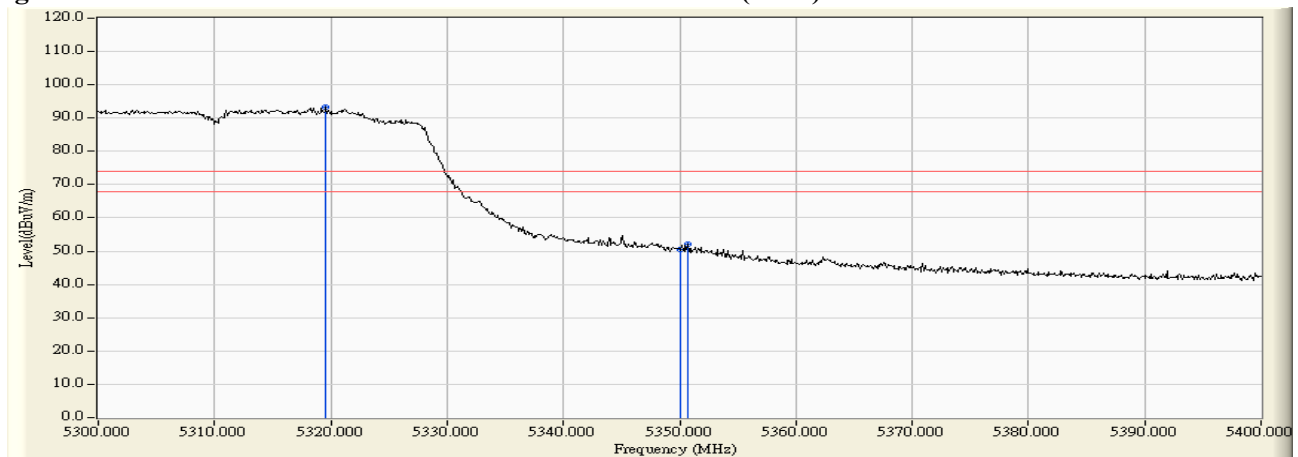
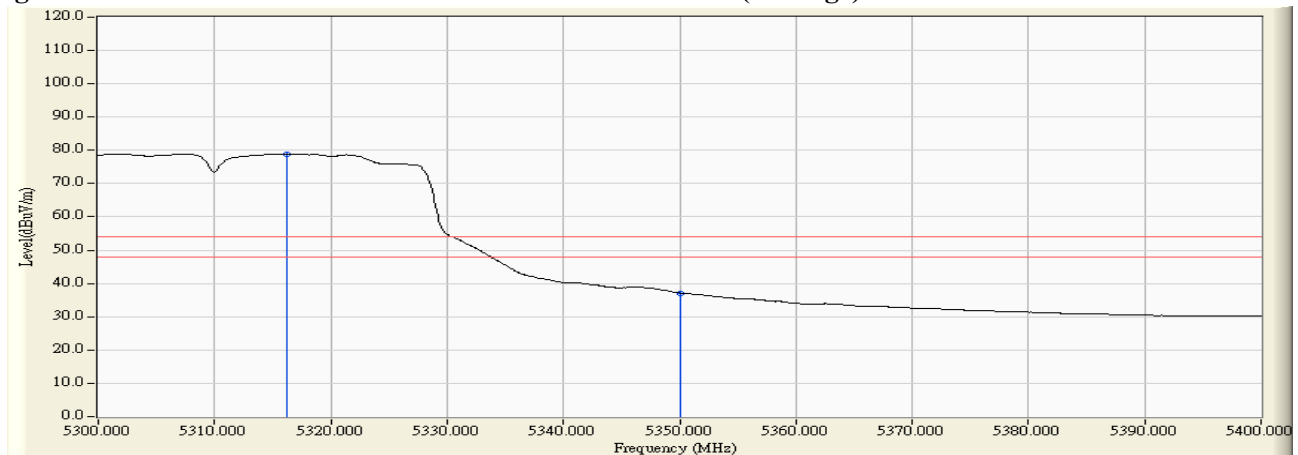


Figure Channel 62: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

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RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
62 (Peak)	5319.400	9.859	98.276	108.135	--	--	--
62 (Peak)	5350.000	9.923	57.061	66.985	74.00	54.00	Pass
62 (Peak)	5350.600	9.925	57.179	67.104	74.00	54.00	Pass
62 (Average)	5317.500	9.842	84.395	94.237	--	--	--
62 (Average)	5350.000	9.923	41.269	51.193	74.00	54.00	Pass

Figure Channel 62: Vertical (Peak)

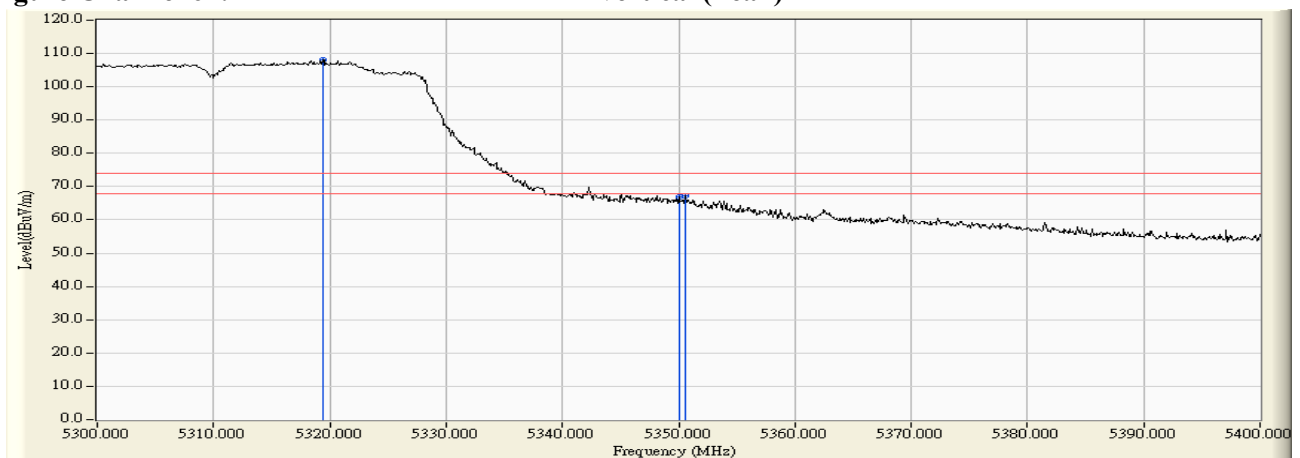
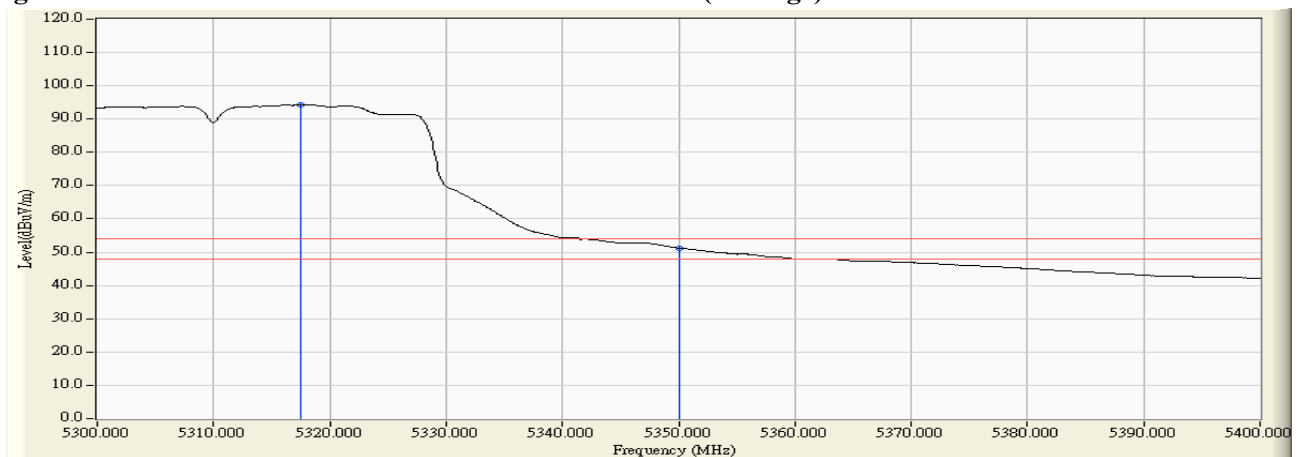


Figure Channel 62: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
102 (Peak)	5458.500	0.159	44.160	44.319	74.00	54.00	Pass
102 (Peak)	5460.000	0.178	42.736	42.914	74.00	54.00	Pass
102 (Peak)	5507.300	0.613	92.492	93.106	--	--	--
102 (Average)	5460.000	0.178	31.728	31.906	74.00	54.00	Pass
102 (Average)	5507.500	0.612	79.087	79.700	--	--	--

Figure Channel 102: Horizontal (Peak)

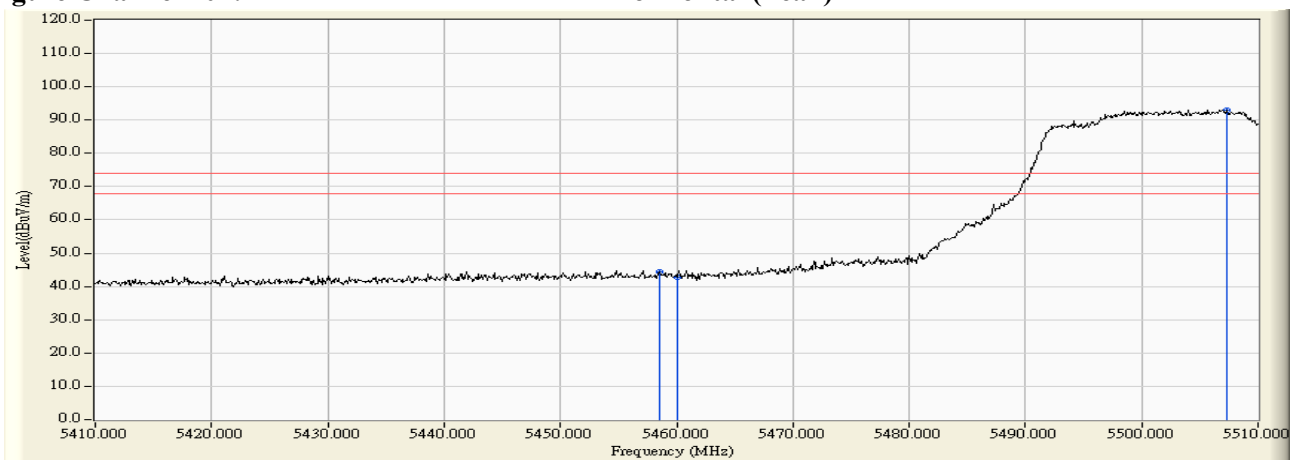
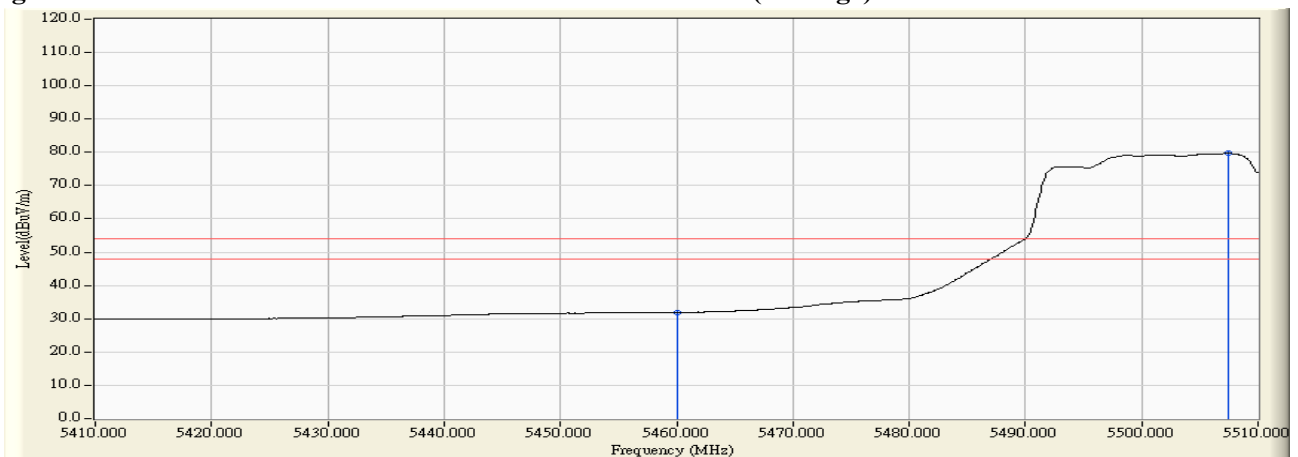


Figure Channel 102: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
102 (Peak)	5455.300	9.444	47.879	57.323	74.00	54.00	Pass
102 (Peak)	5460.000	9.497	47.103	56.599	74.00	54.00	Pass
102 (Peak)	5501.300	9.781	96.485	106.266	--	--	--
102 (Average)	5458.300	9.480	34.108	43.588	74.00	54.00	Pass
102 (Average)	5460.000	9.497	34.072	43.568	74.00	54.00	Pass
102 (Average)	5503.300	9.796	82.521	92.317	--	--	--

Figure Channel 102: Vertical (Peak)

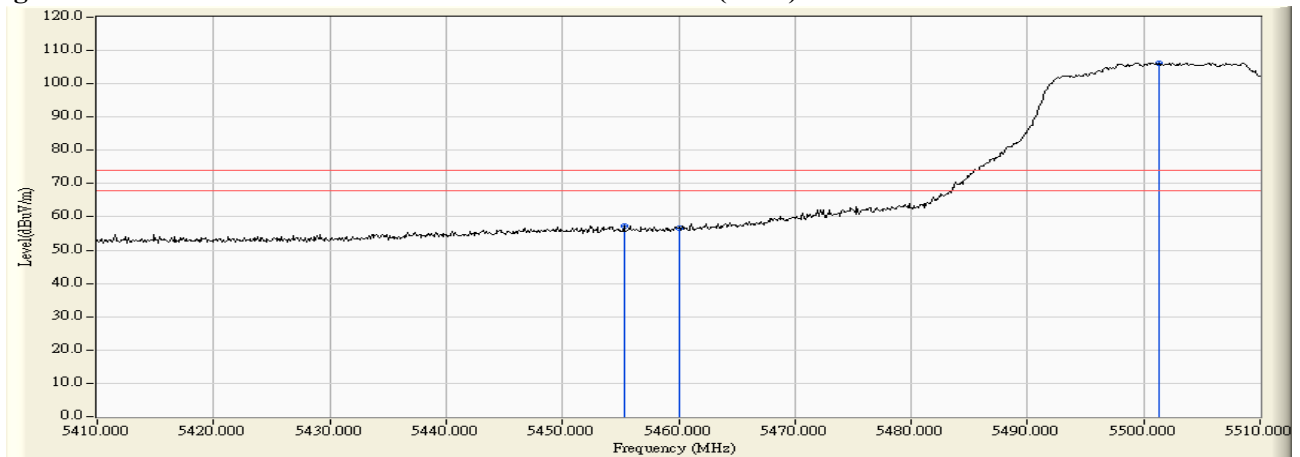
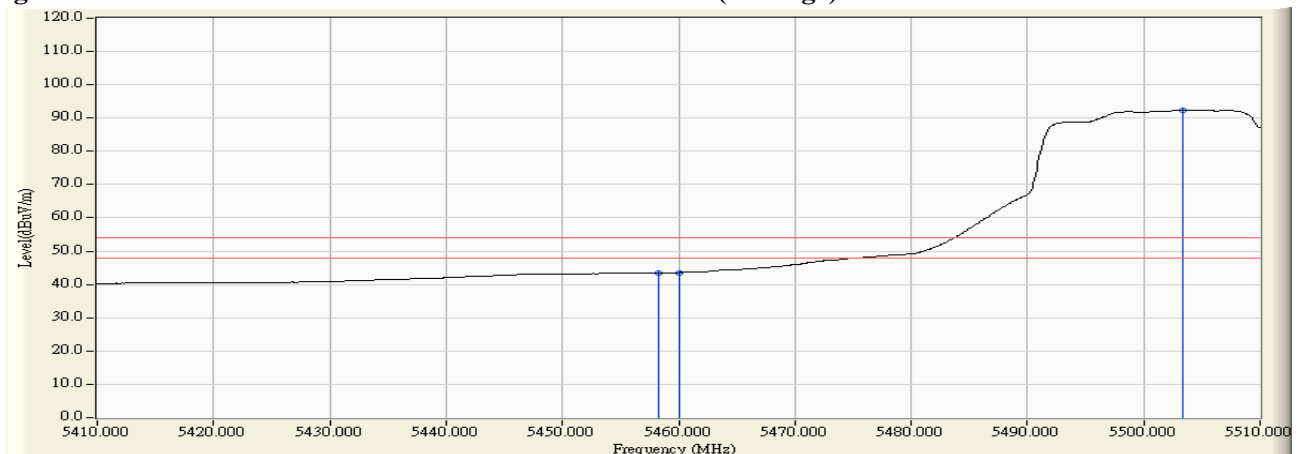
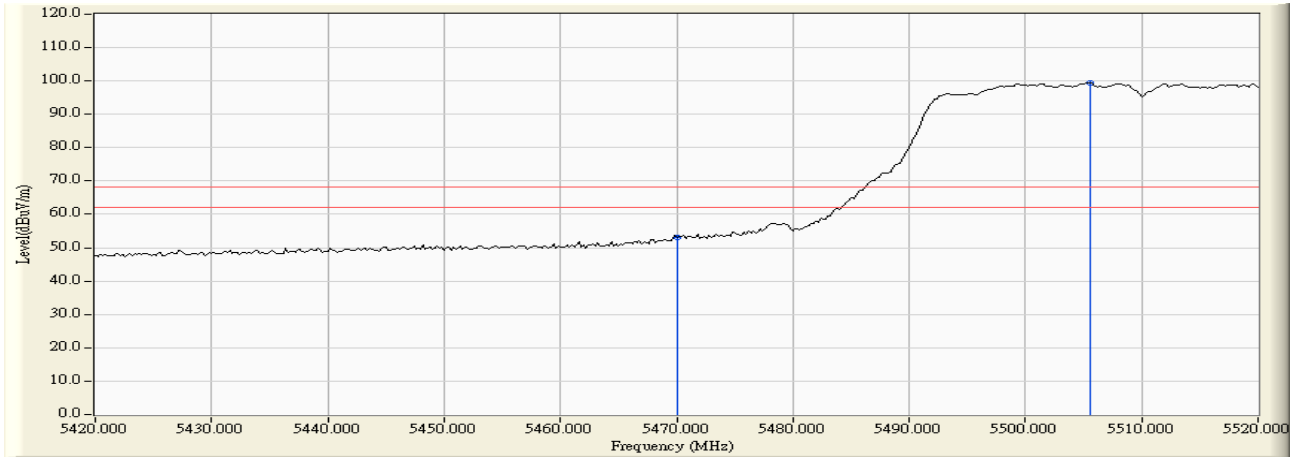


Figure Channel 102: Vertical (Average)



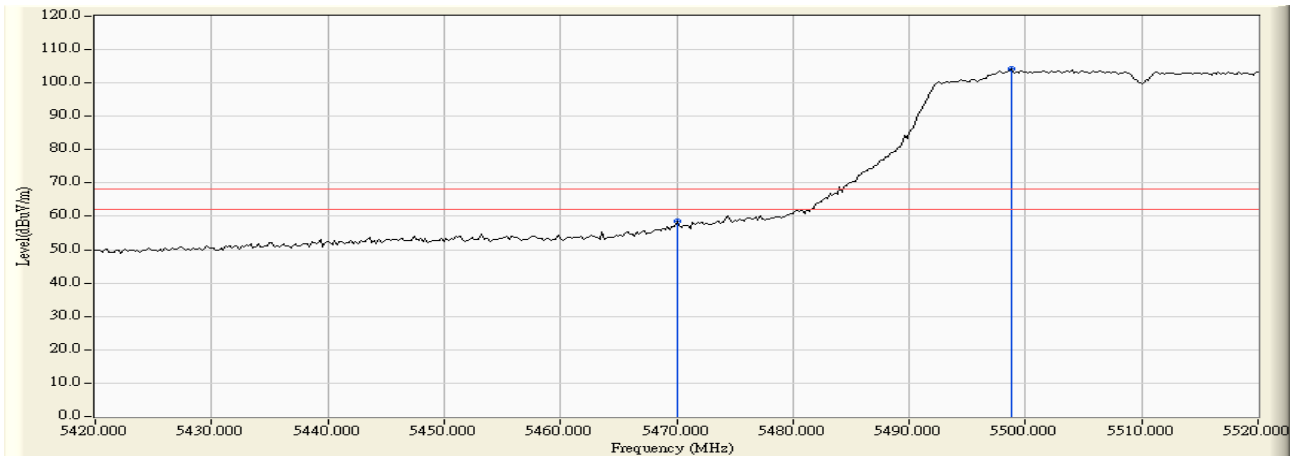
- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 102



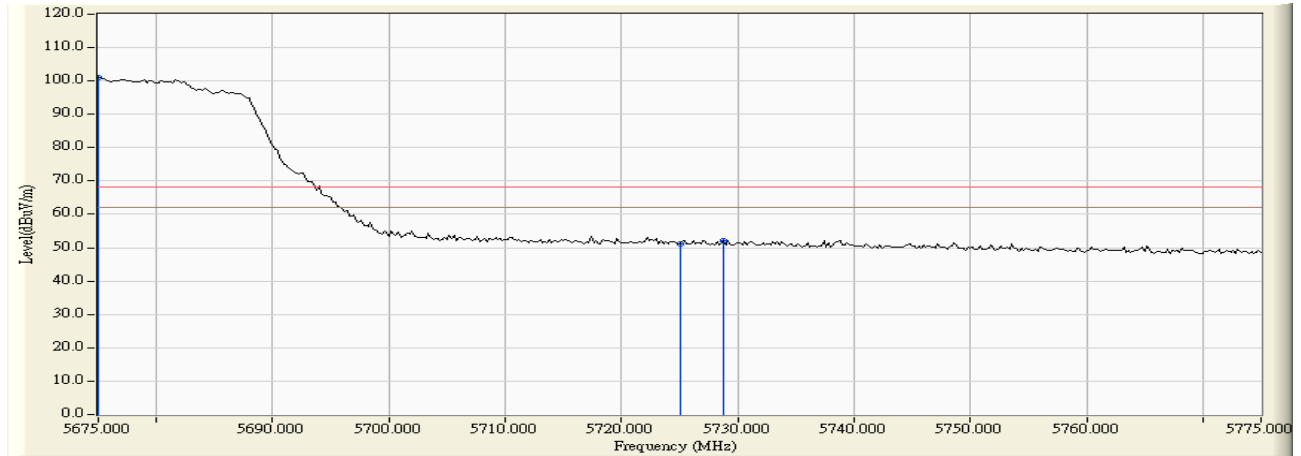
RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5470.000	3.970	49.244	53.214	-15.006	68.220	Pass
Horizontal	5505.600	4.546	94.849	99.395	--	--	--



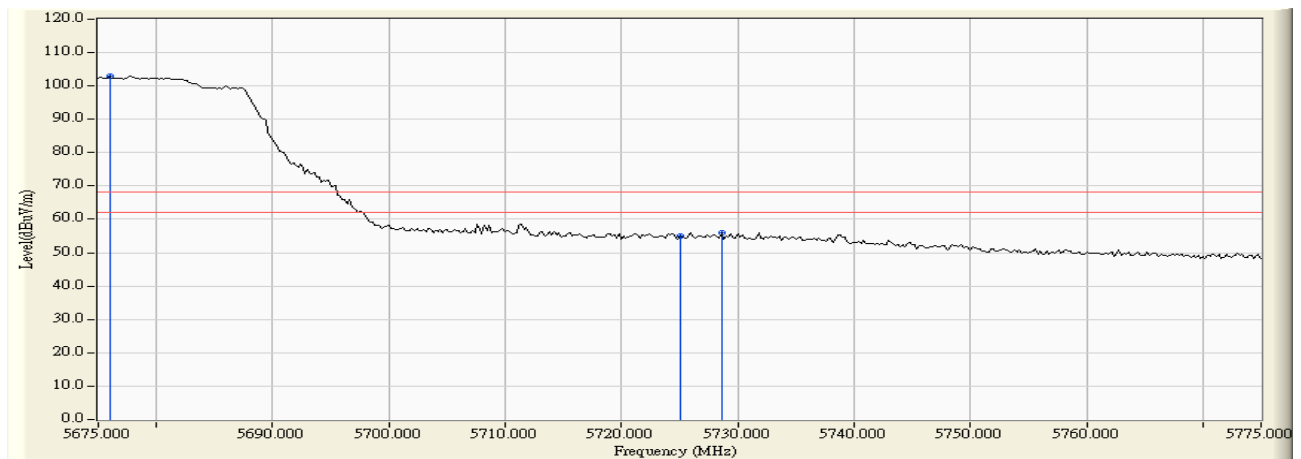
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5470.000	4.079	54.533	58.612	-9.608	68.220	Pass
Vertical	5498.800	4.447	99.669	104.116	--	--	--

Product : RUGGED TABLET COMPUTER
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Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 134



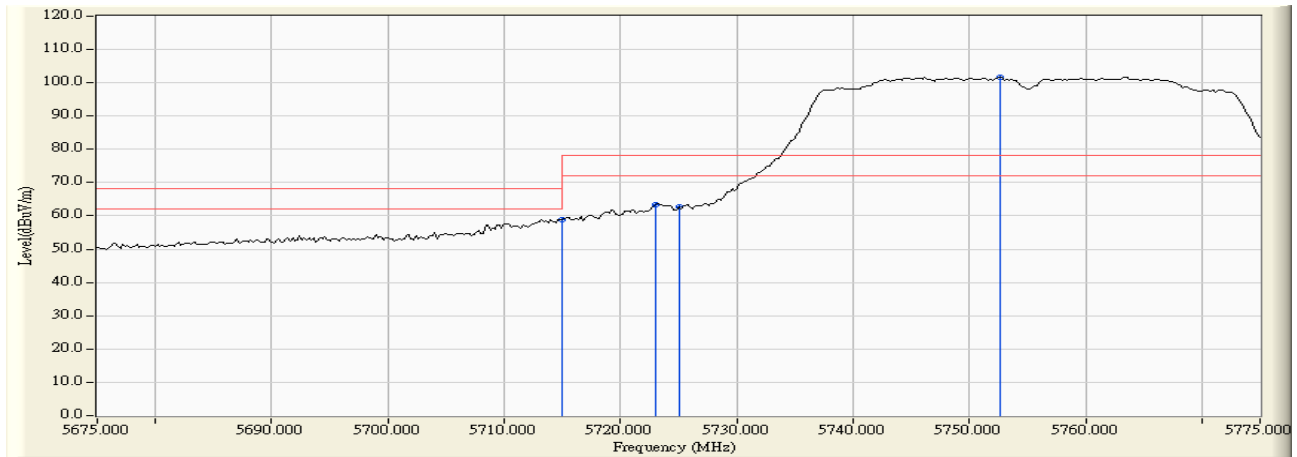
RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5675.000	4.907	96.172	101.079	--	--	--
Horizontal	5725.000	5.104	45.930	51.033	-17.187	68.220	Pass
Horizontal	5728.800	5.118	47.132	52.251	-15.969	68.220	Pass



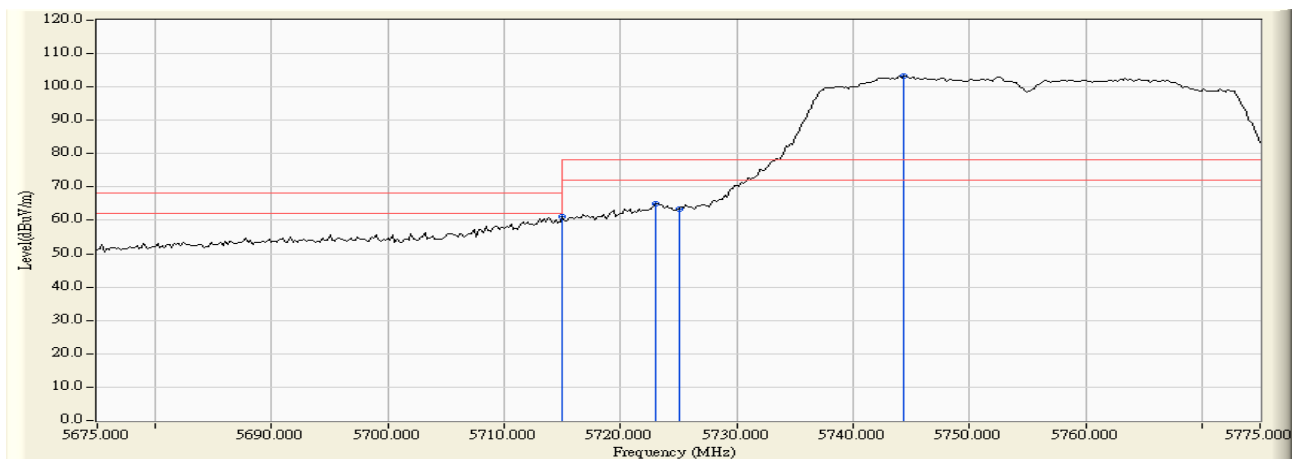
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5676.000	4.270	98.710	102.980	--	--	--
Vertical	5725.000	4.215	50.831	55.046	-13.174	68.220	Pass
Vertical	5728.600	4.225	51.908	56.133	-12.087	68.220	Pass

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 151



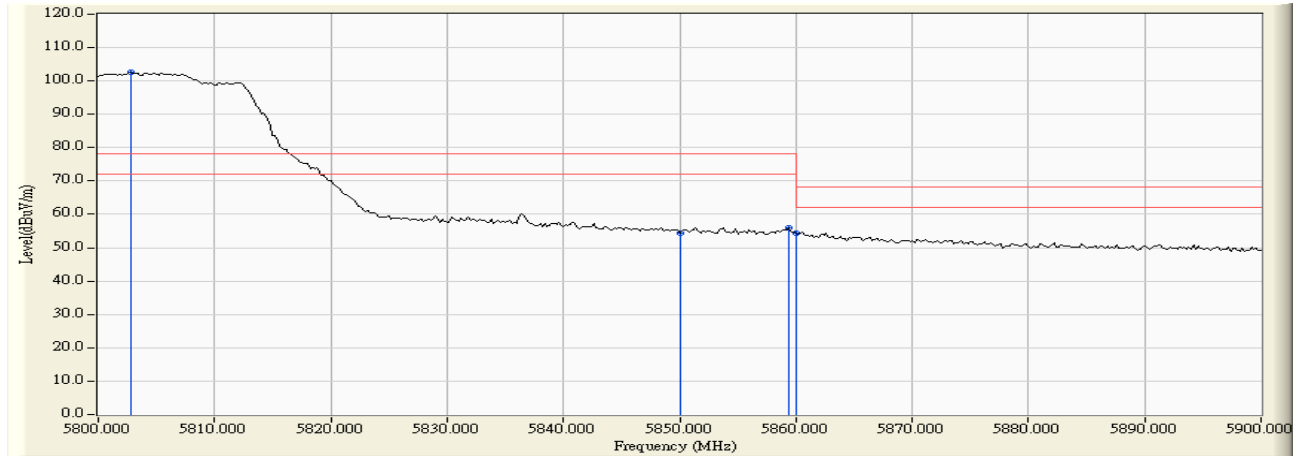
RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5715.000	5.063	53.958	59.021	-9.199	68.220	Pass
Horizontal	5723.000	5.096	58.301	63.396	-14.824	78.220	Pass
Horizontal	5725.000	5.104	57.623	62.726	-15.494	78.220	Pass
Horizontal	5752.600	5.213	96.470	101.684	--	--	--



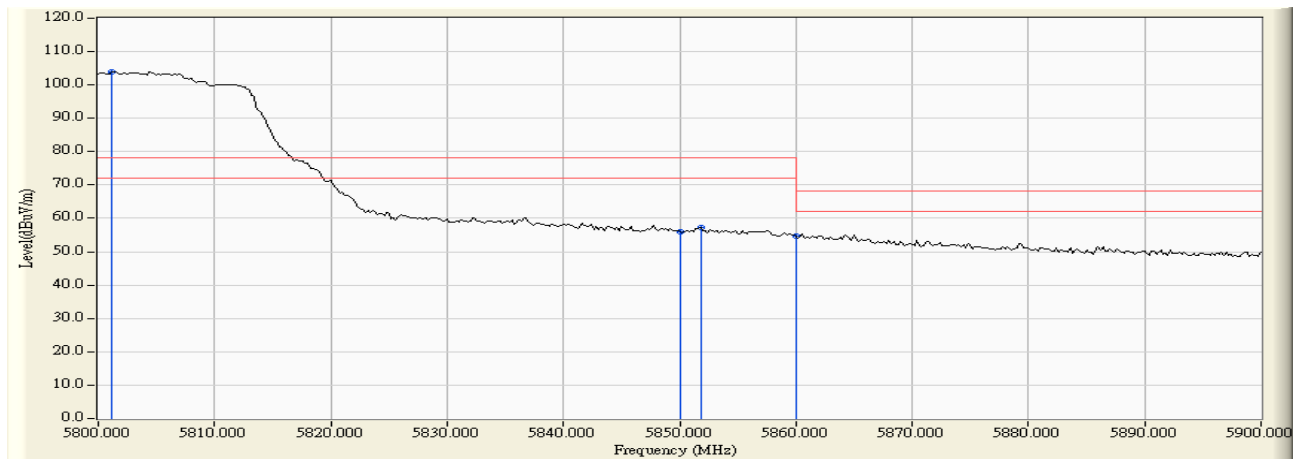
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5715.000	4.186	56.921	61.107	-7.113	68.220	Pass
Vertical	5723.000	4.209	60.791	65.000	-13.220	78.220	Pass
Vertical	5725.000	4.215	59.251	63.466	-14.754	78.220	Pass
Vertical	5744.400	4.272	99.004	103.276	--	--	--

Product : RUGGED TABLET COMPUTER
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Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) -Channel 159



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5802.800	5.402	97.326	102.728	--	--	--
Horizontal	5850.000	5.715	48.506	54.221	-23.999	78.220	Pass
Horizontal	5859.400	5.793	50.282	56.075	-22.145	78.220	Pass
Horizontal	5860.000	5.798	48.629	54.427	-13.793	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5801.200	4.369	99.436	103.805	--	--	--
Vertical	5850.000	4.194	51.842	56.036	-22.184	78.220	Pass
Vertical	5851.800	4.190	53.099	57.289	-20.931	78.220	Pass
Vertical	5860.000	4.168	50.599	54.767	-13.453	68.220	Pass

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 42

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dB μ V)	Emission Level (dB μ V/m)	Peak Limit (dB μ V/m)	Average Limit (dB μ V/m)	Result
42 (Peak)	5145.300	0.104	52.293	52.397	74.00	54.00	Pass
42 (Peak)	5150.000	0.085	46.744	46.829	74.00	54.00	Pass
42 (Peak)	5193.100	0.563	90.191	90.755	--	--	--
42 (Average)	5147.200	0.087	34.466	34.553	74.00	54.00	Pass
42 (Average)	5150.000	0.085	34.424	34.509	74.00	54.00	Pass
42 (Average)	5185.400	0.483	74.060	74.544	--	--	--

Figure Channel 42: Horizontal (Peak)

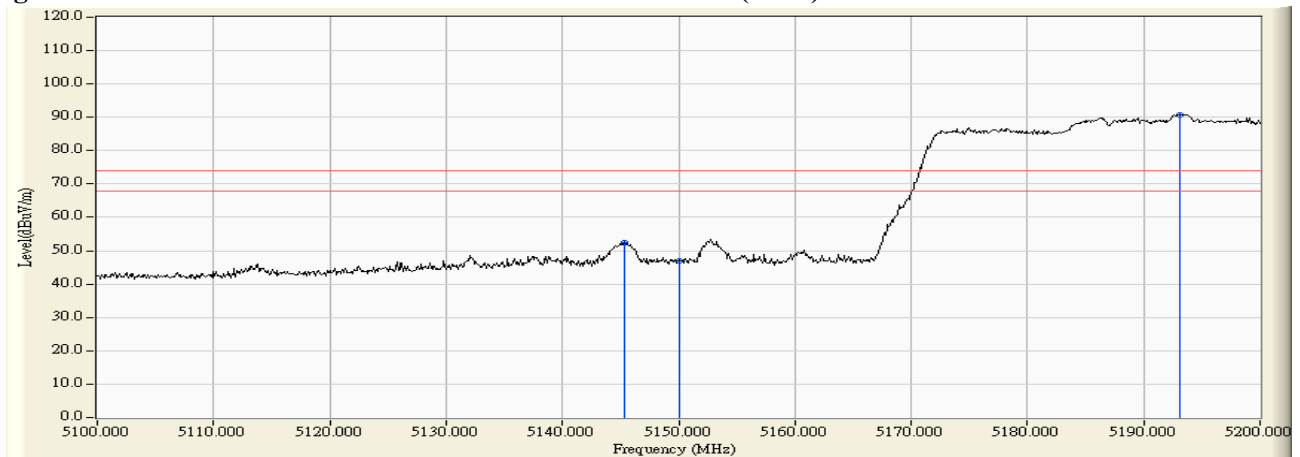
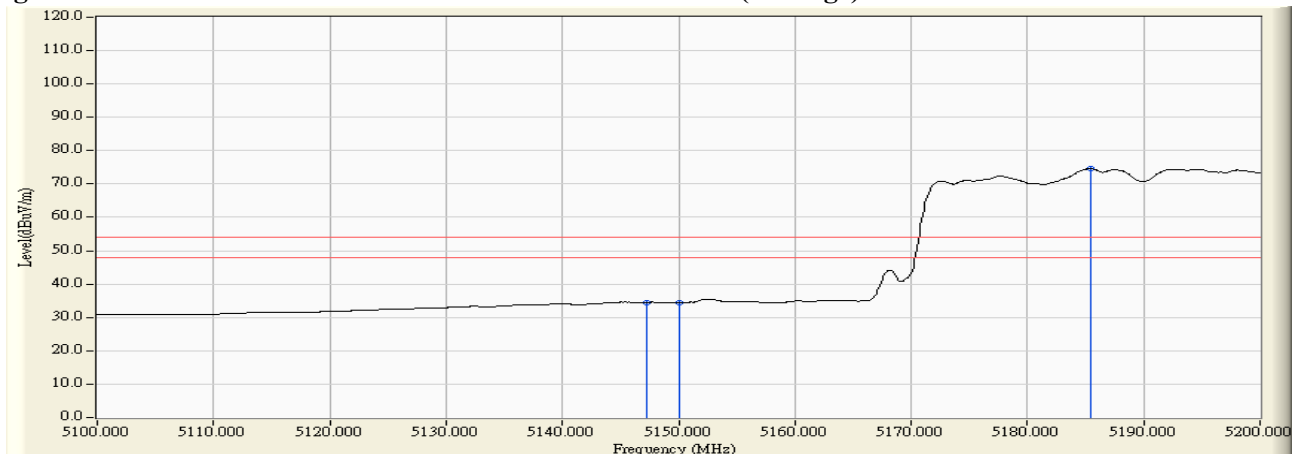


Figure Channel 42: Horizontal (Average)



- Note:1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 42

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
42 (Peak)	5145.300	10.355	54.340	64.695	74.00	54.00	Pass
42 (Peak)	5150.000	10.324	49.719	60.044	74.00	54.00	Pass
42 (Peak)	5198.300	10.740	93.282	104.022	--	--	--
42 (Average)	5147.900	10.325	36.667	46.991	74.00	54.00	Pass
42 (Average)	5150.000	10.324	36.542	46.867	74.00	54.00	Pass
42 (Average)	5198.700	10.743	77.076	87.819	--	--	--

Figure Channel 42: Vertical (Peak)

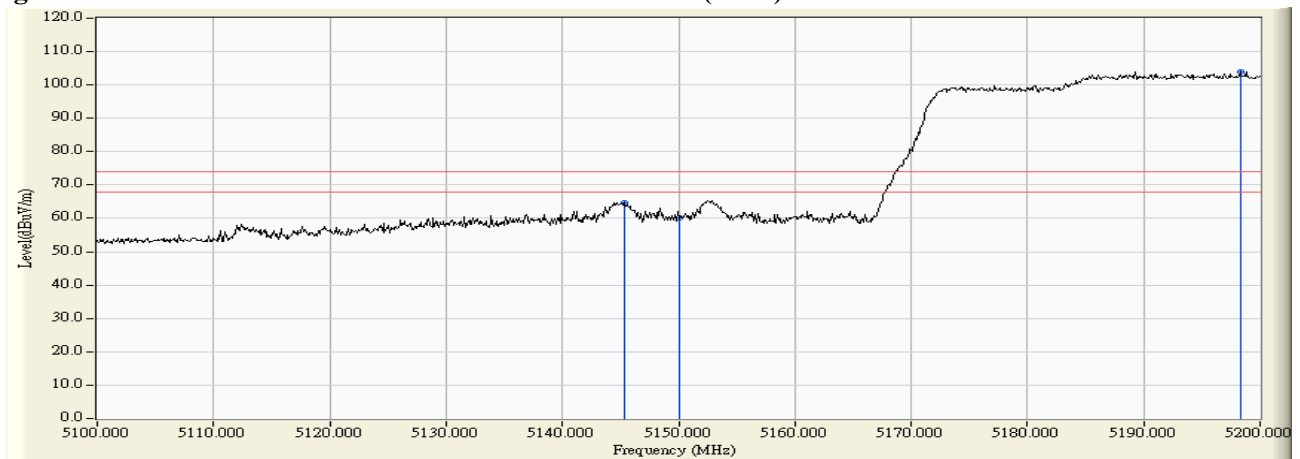
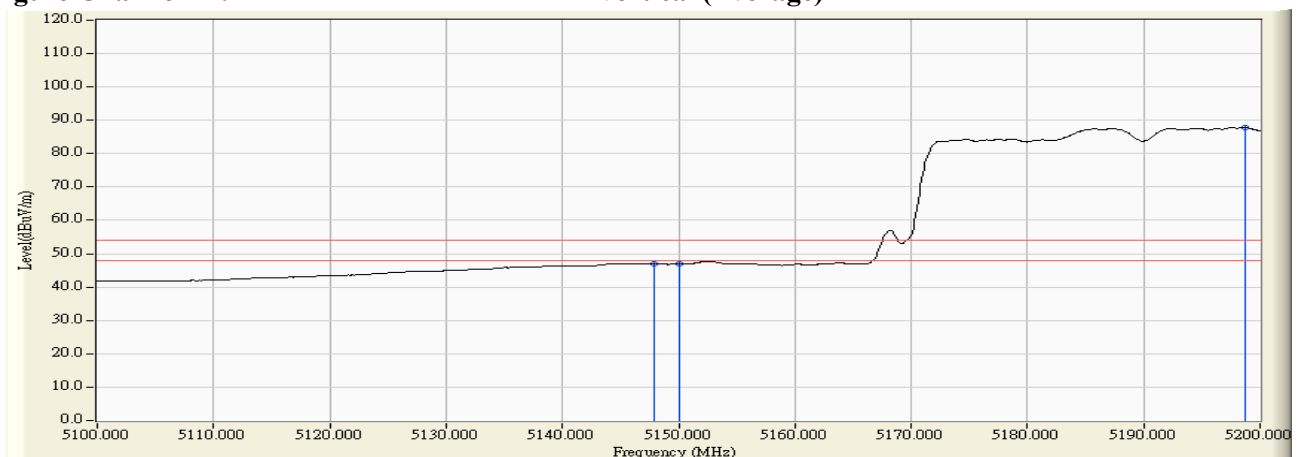


Figure Channel 42: Vertical (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 58

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
58 (Peak)	5300.100	-0.054	89.601	89.547	--	--	--
58 (Peak)	5350.000	0.262	50.542	50.804	74.00	54.00	Pass
58 (Peak)	5350.900	0.267	51.696	51.963	74.00	54.00	Pass
58 (Average)	5301.500	-0.052	74.575	74.522	--	--	--
58 (Average)	5350.000	0.262	37.170	37.432	74.00	54.00	Pass

Figure Channel 58: Horizontal (Peak)

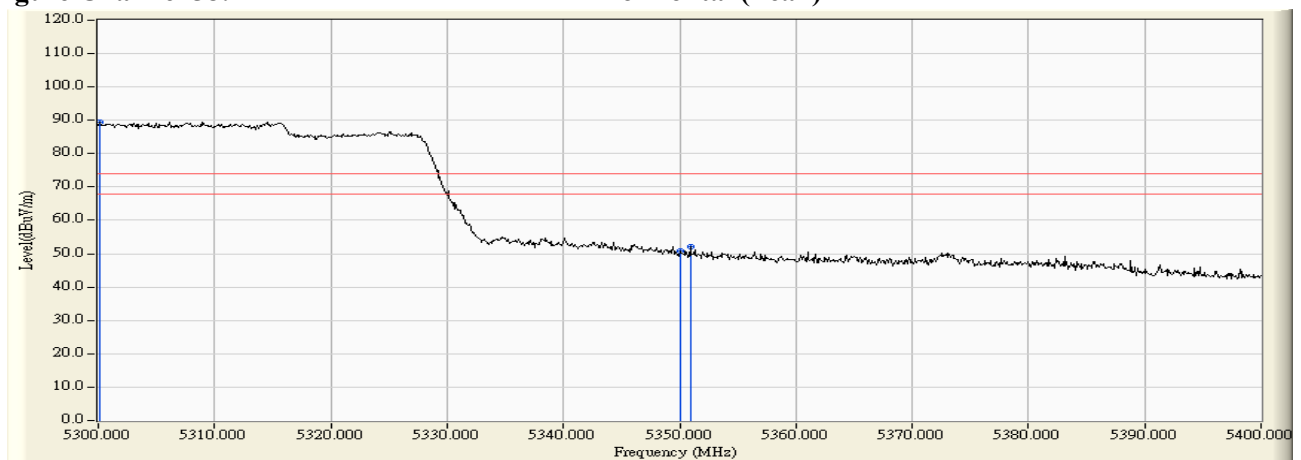
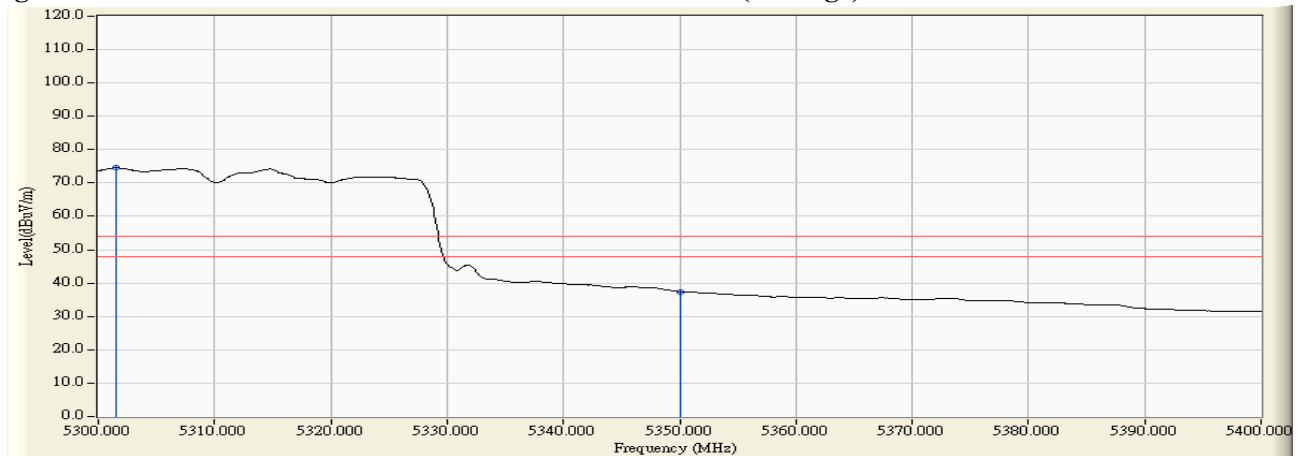


Figure Channel 58: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 58

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
58 (Peak)	5302.100	9.761	95.685	105.446	--	--	--
58 (Peak)	5350.000	9.923	54.011	63.935	74.00	54.00	Pass
58 (Peak)	5351.900	9.928	55.628	65.556	74.00	54.00	Pass
58 (Average)	5313.500	9.800	79.851	89.651	--	--	--
58 (Average)	5350.000	9.923	41.270	51.194	74.00	54.00	Pass

Figure Channel 58: Vertical (Peak)

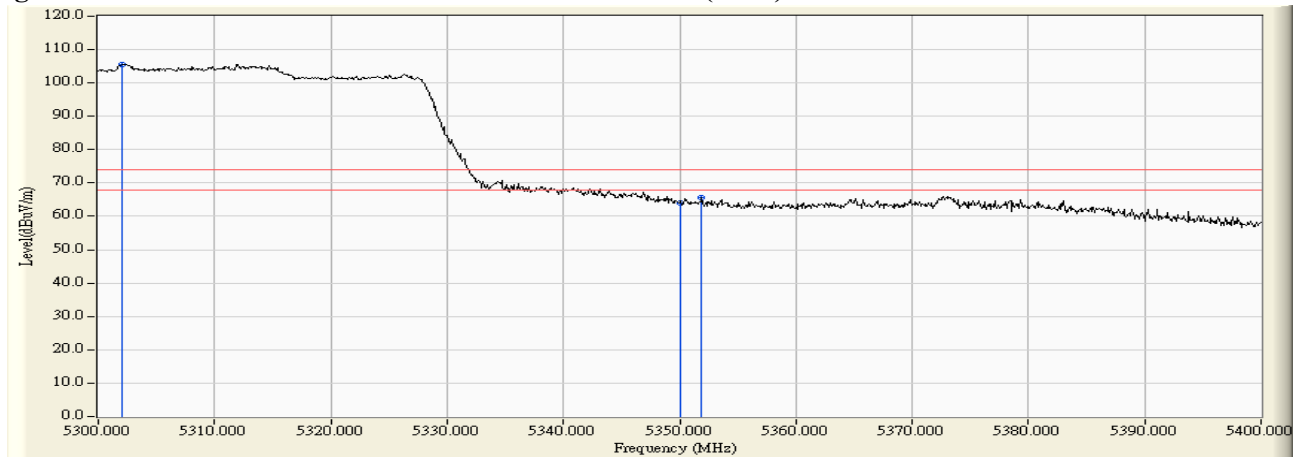
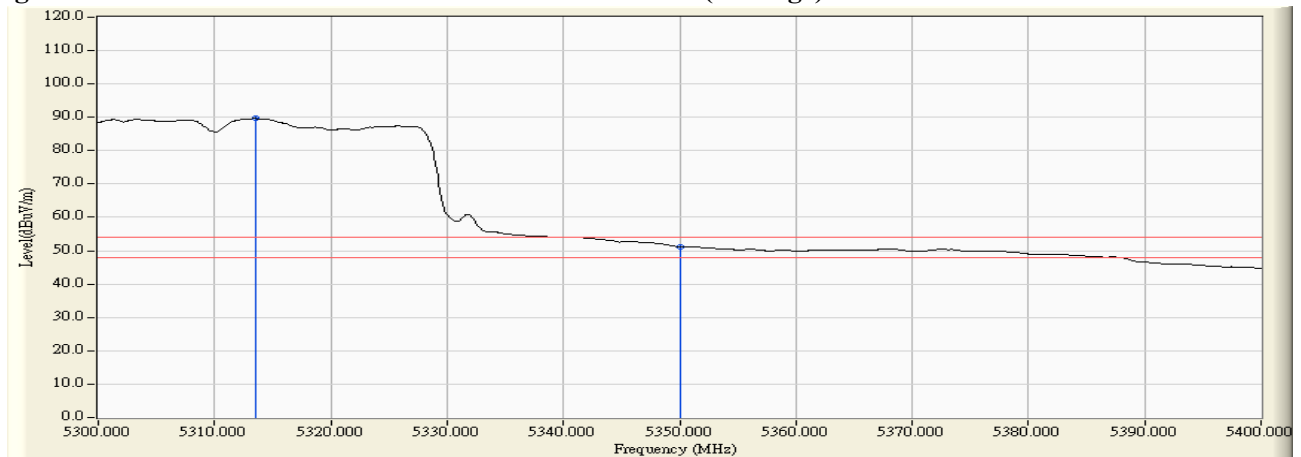


Figure Channel 58: Vertical (Average)



- Note: 1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 106

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
106 (Peak)	5456.700	0.135	45.271	45.406	74.00	54.00	Pass
106 (Peak)	5460.000	0.178	43.954	44.132	74.00	54.00	Pass
106 (Peak)	5506.300	0.620	88.817	89.438	--	--	--
106 (Average)	5460.000	0.178	31.734	31.912	74.00	54.00	Pass
106 (Average)	5507.100	0.615	73.486	74.101	--	--	--

Figure Channel 106: Horizontal (Peak)

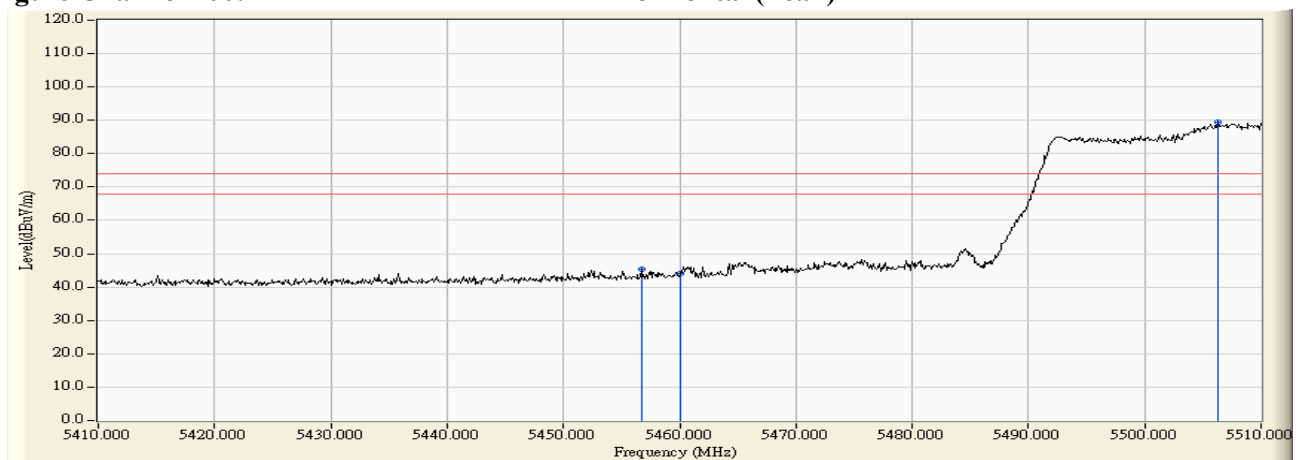
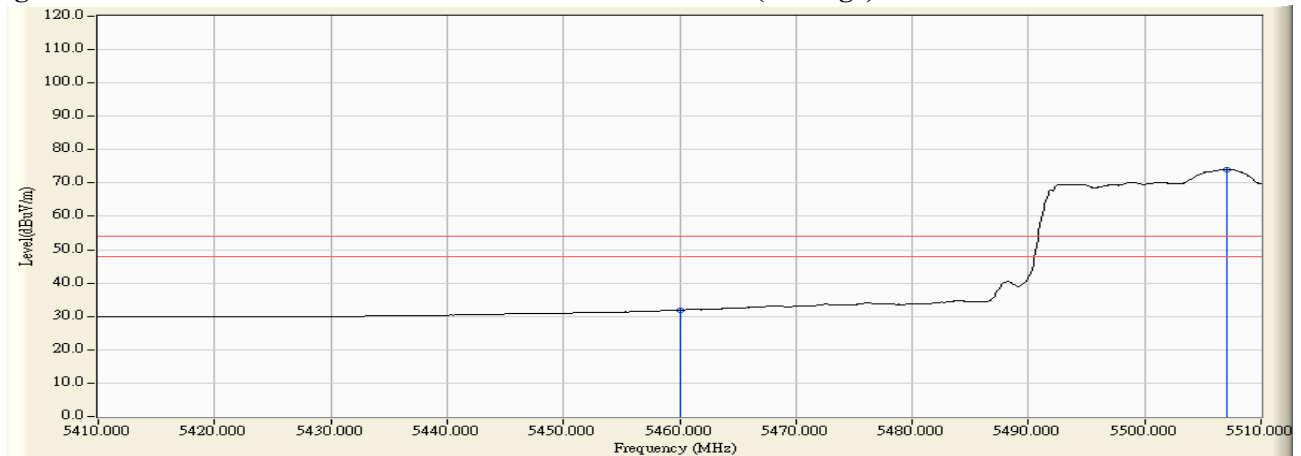


Figure Channel 106: Horizontal (Average)



Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 106

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Peak Limit (dBμV/m)	Average Limit (dBμV/m)	Result
106 (Peak)	5455.800	9.451	50.609	60.060	74.00	54.00	Pass
106 (Peak)	5460.000	9.497	48.785	58.281	74.00	54.00	Pass
106 (Peak)	5507.200	9.786	92.373	102.159	--	--	--
106 (Average)	5460.000	9.497	35.372	44.868	74.00	54.00	Pass
106 (Average)	5507.100	9.787	77.812	87.599	--	--	--

Figure Channel 106: Vertical (Peak)

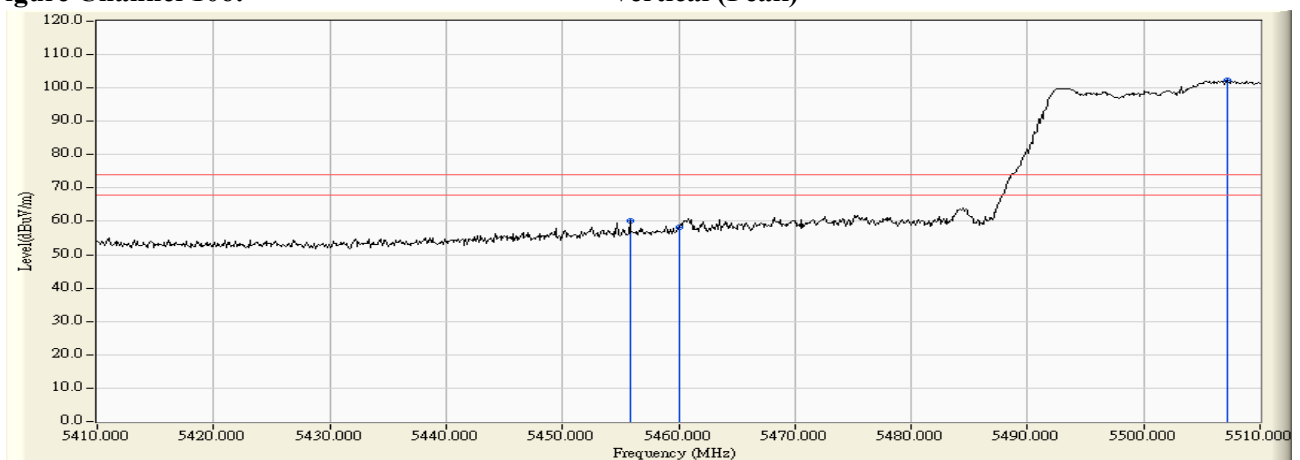
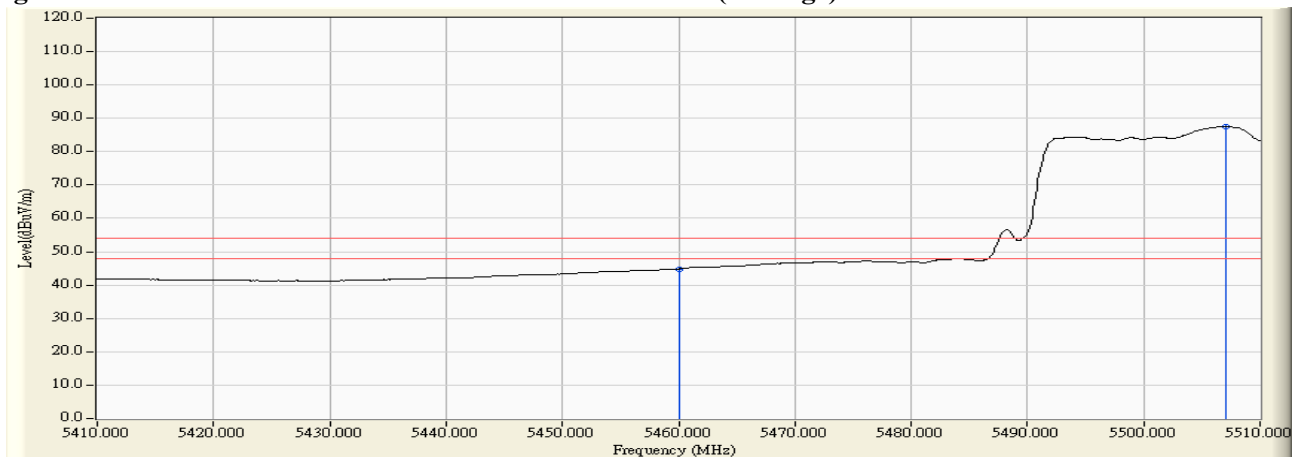


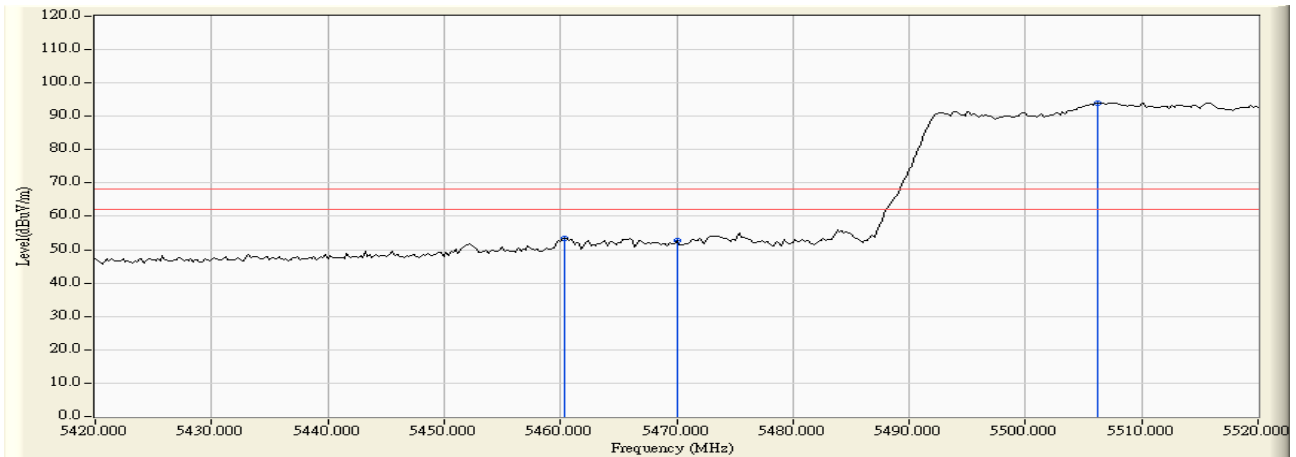
Figure Channel 106: Vertical (Average)



Note:

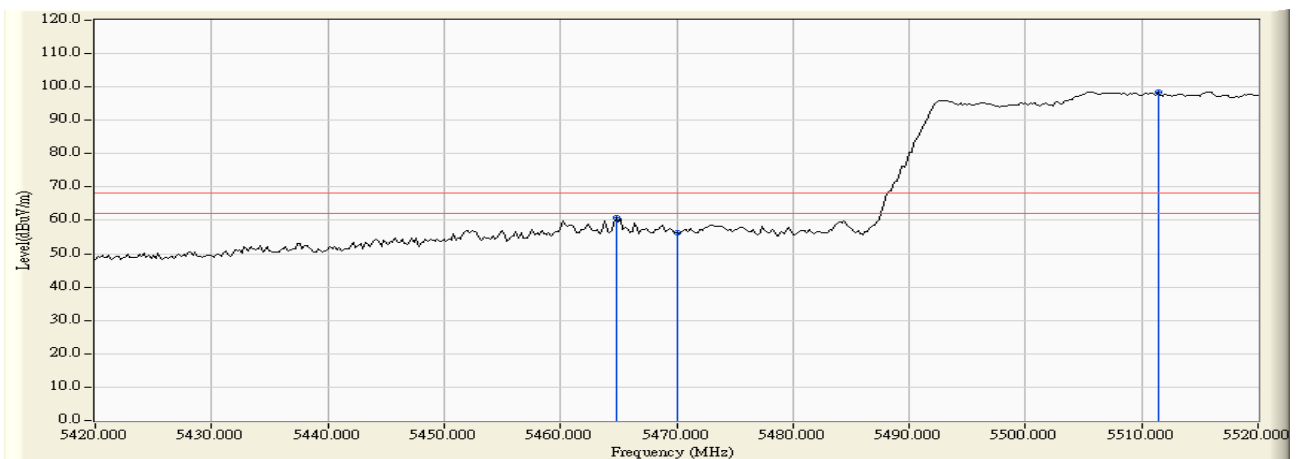
1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. “ * ”, means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) -Channel 106



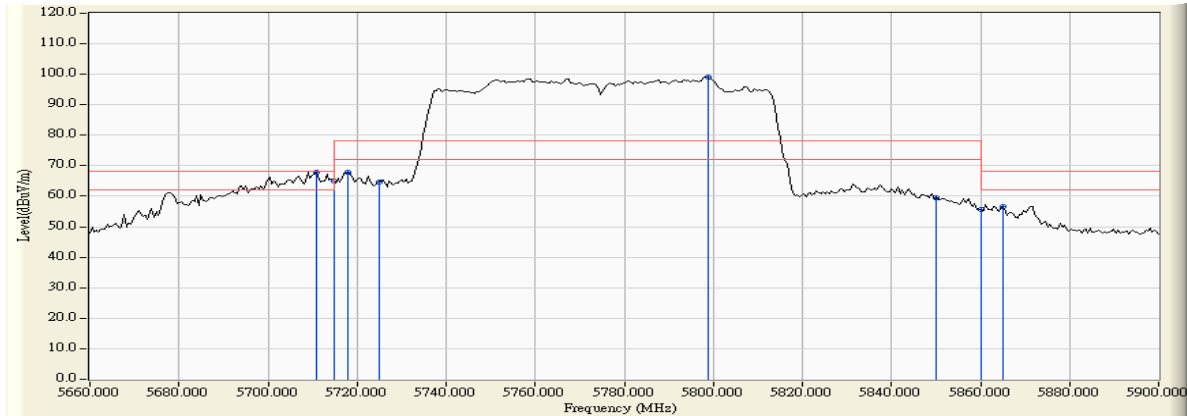
RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5460.400	3.784	49.580	53.363	-14.857	68.220	Pass
Horizontal	5470.000	3.970	48.946	52.916	-15.304	68.220	Pass
Horizontal	5506.200	4.545	89.533	94.078	25.858	68.220	Pass



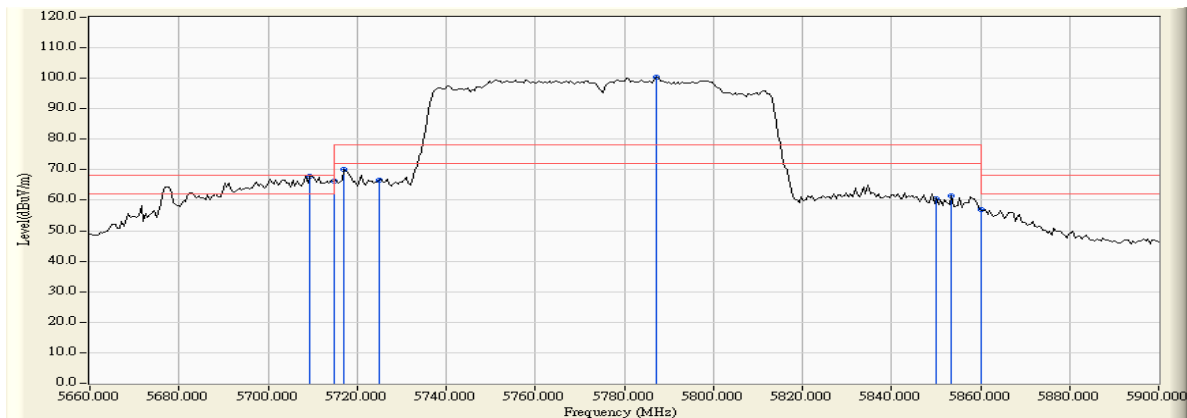
	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5464.800	4.005	56.675	60.679	-7.541	68.220	Pass
Vertical	5470.000	4.079	52.260	56.339	-11.881	68.220	Pass
Vertical	5511.400	4.512	94.085	98.596	30.376	68.220	Pass

Product : RUGGED TABLET COMPUTER
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps)-Channel 155



RF Radiated Measurement:

	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Horizontal	5710.880	5.046	62.978	68.024	-0.196	68.220	Pass
Horizontal	5715.000	5.063	59.781	64.844	-3.376	68.220	Pass
Horizontal	5718.080	5.075	62.696	67.771	-10.449	78.220	Pass
Horizontal	5725.000	5.104	59.706	64.809	-13.411	78.220	Pass
Horizontal	5798.720	5.379	93.652	99.030	--	--	--
Horizontal	5850.000	5.715	53.926	59.641	-18.579	78.220	Pass
Horizontal	5860.000	5.798	49.828	55.626	-12.594	68.220	Pass
Horizontal	5864.960	5.842	50.930	56.771	-11.449	68.220	Pass



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBm)	Measure Level (dBm/m)	Margin (dB)	Limit (dBm/m)	Result
Vertical	5709.440	4.170	63.753	67.923	-0.297	68.220	Pass
Vertical	5715.000	4.186	62.010	66.196	-2.024	68.220	Pass
Vertical	5717.120	4.192	65.873	70.065	-8.155	78.220	Pass
Vertical	5725.000	4.215	62.254	66.469	-11.751	78.220	Pass
Vertical	5787.200	4.371	95.885	100.256	--	--	--
Vertical	5850.000	4.194	56.241	60.435	-17.785	78.220	Pass
Vertical	5853.440	4.185	57.151	61.336	-16.884	78.220	Pass
Vertical	5860.000	4.168	52.671	56.839	-11.381	68.220	Pass

7. Occupied Bandwidth

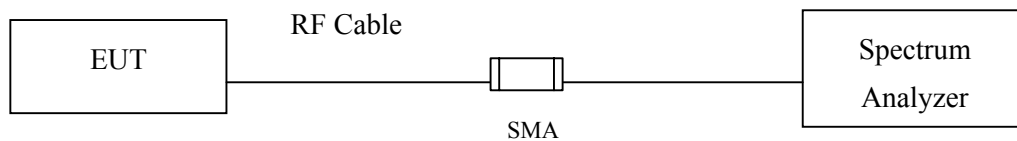
7.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

7.2. Test Setup



7.3. Limits

For the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz

7.4. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

7.5. Uncertainty

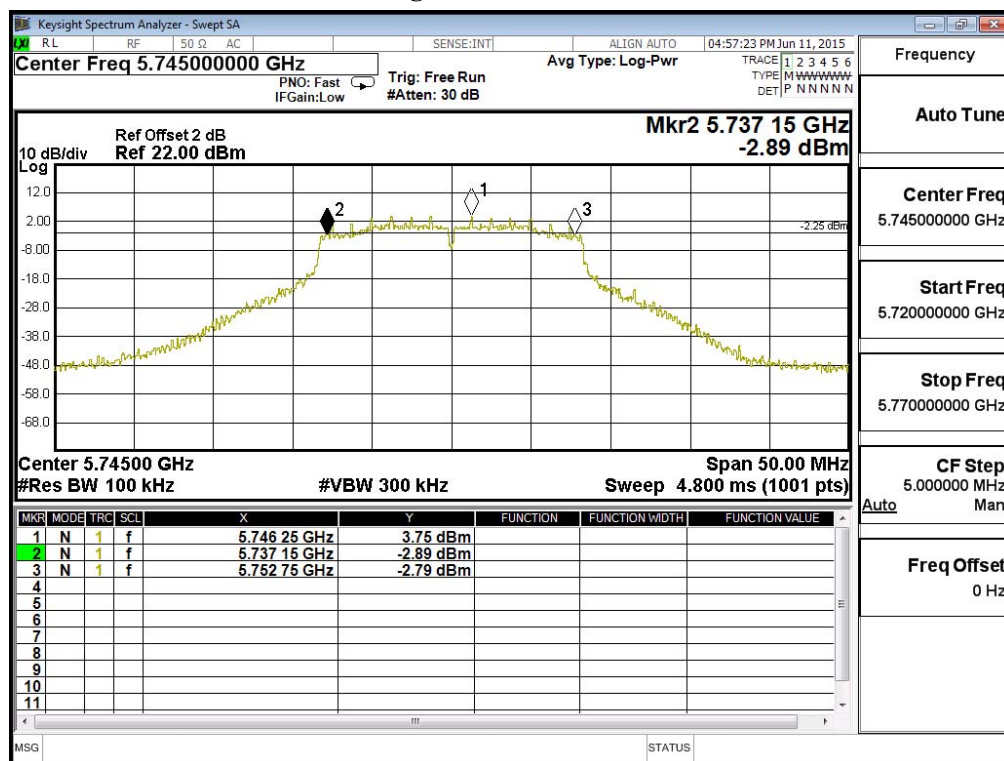
$\pm 150\text{Hz}$

7.6. Test Result of Occupied Bandwidth

Product : RUGGED TABLET COMPUTER
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5745MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	15600	>500	Pass

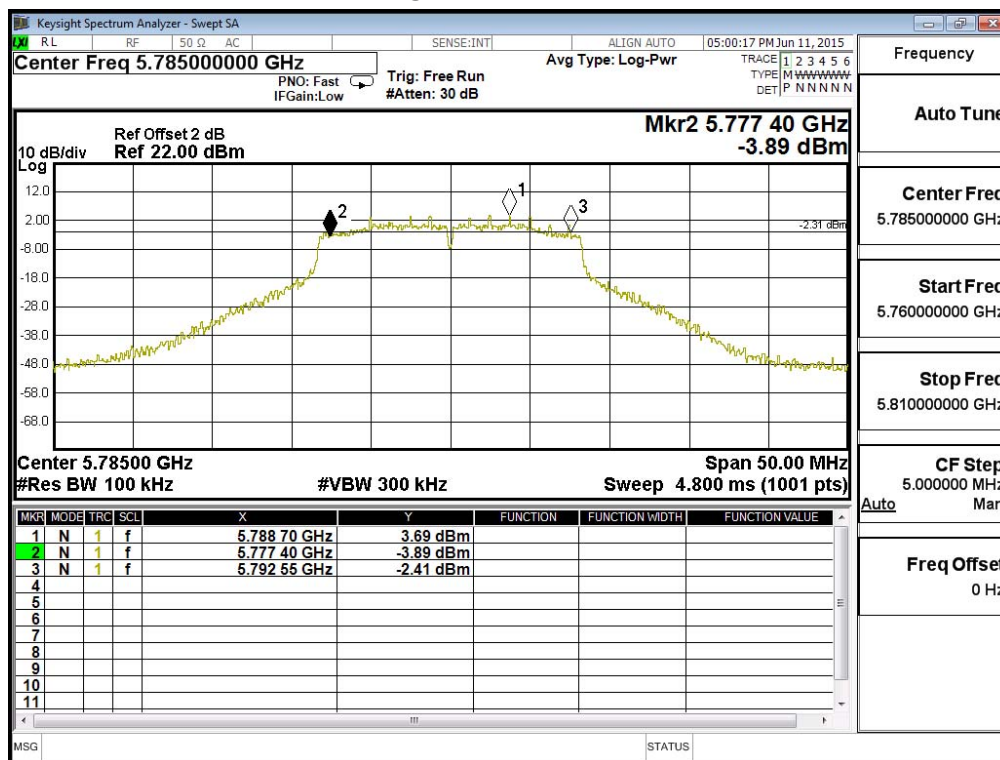
Figure Channel 149:



Product : RUGGED TABLET COMPUTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5785MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785	15150	>500	Pass

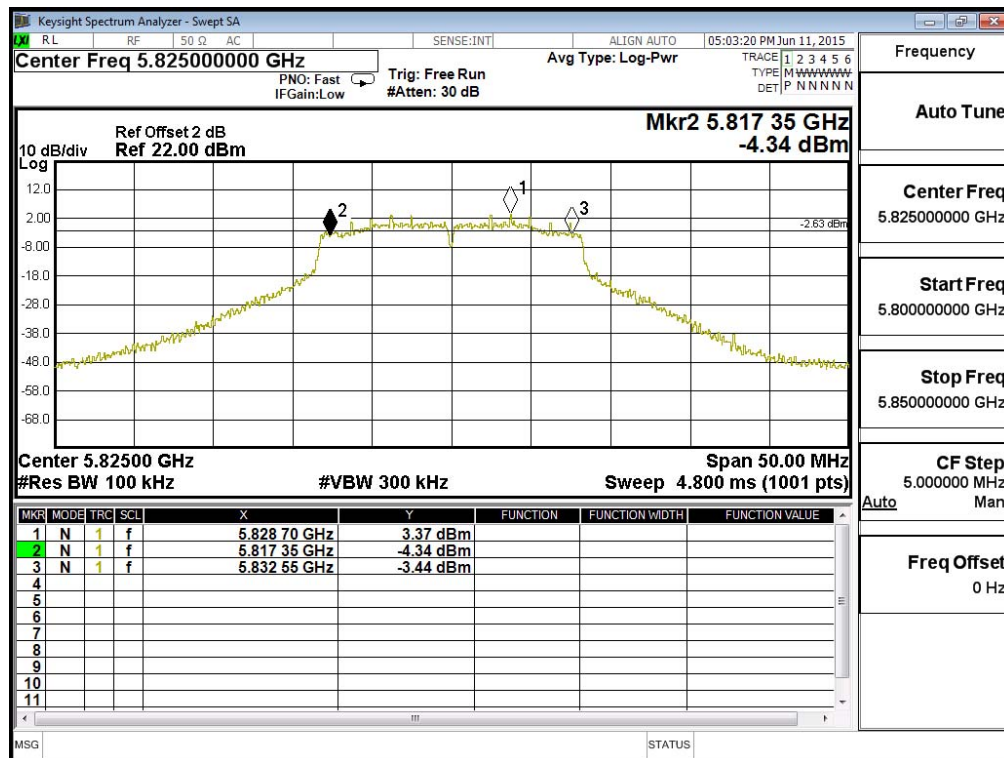
Figure Channel 157:



Product : RUGGED TABLET COMPUTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (5825MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	15200	>500	Pass

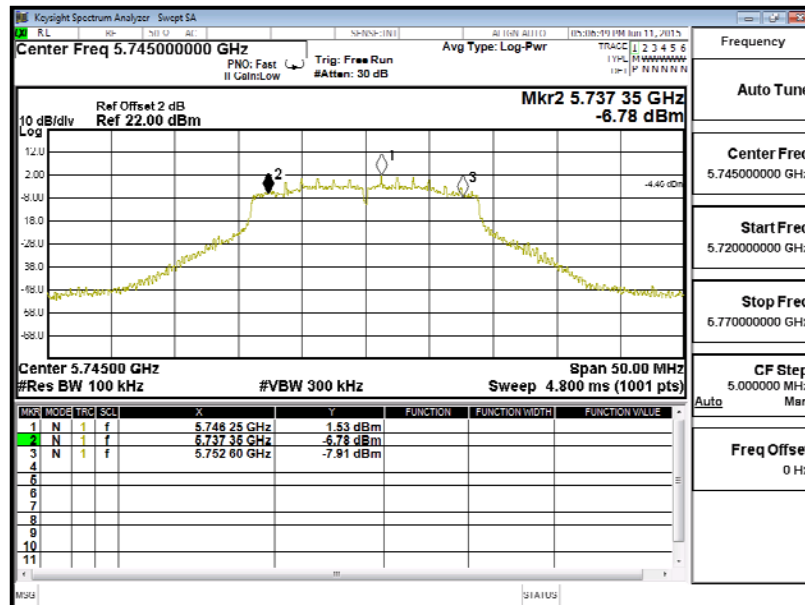
Figure Channel 165:



Product : RUGGED TABLET COMPUTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5745MHz)

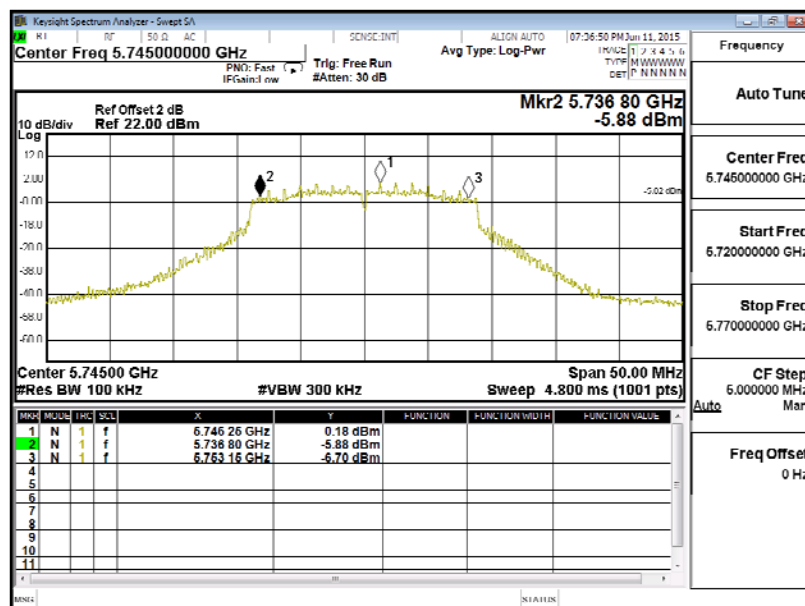
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	15250	>500	Pass

Figure Channel 149: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
149	5745.00	16350	>500	Pass

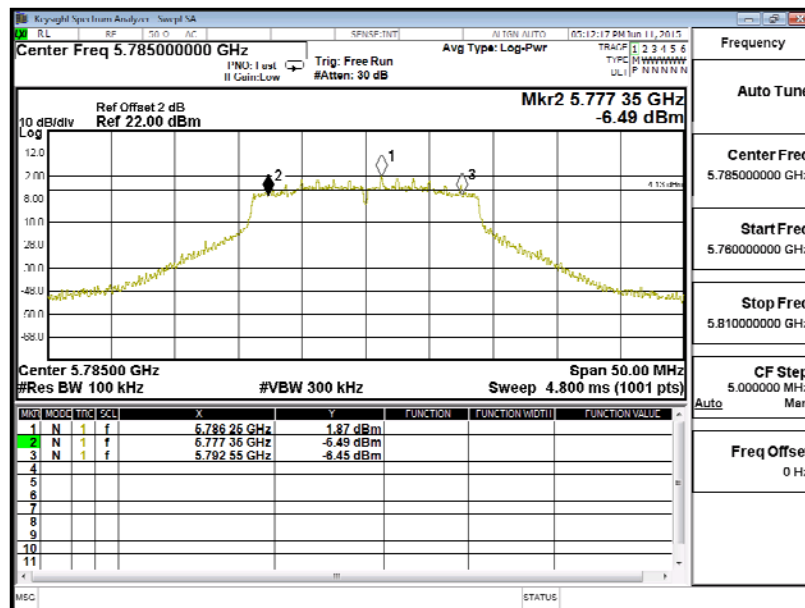
Figure Channel 149: (Chain B)



Product : RUGGED TABLET COMPUTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5785MHz)

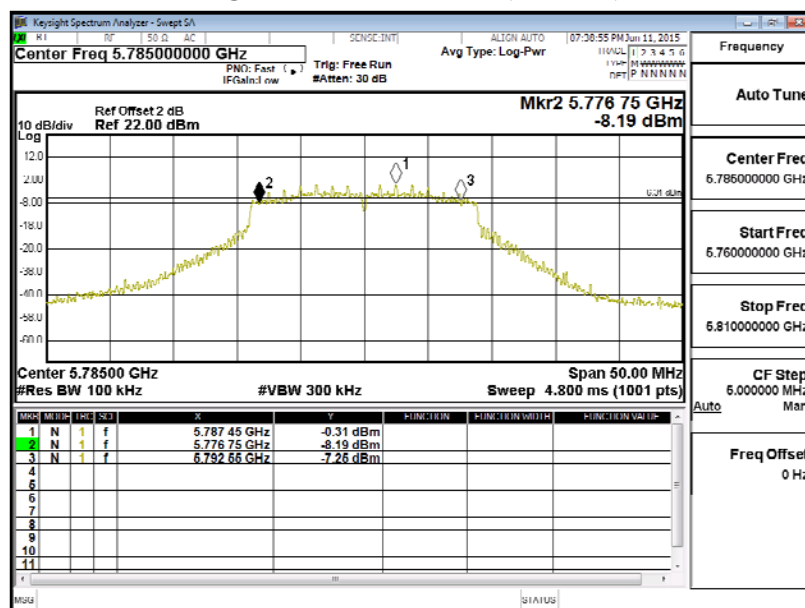
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	15200	>500	Pass

Figure Channel 157: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
157	5785.00	15800	>500	Pass

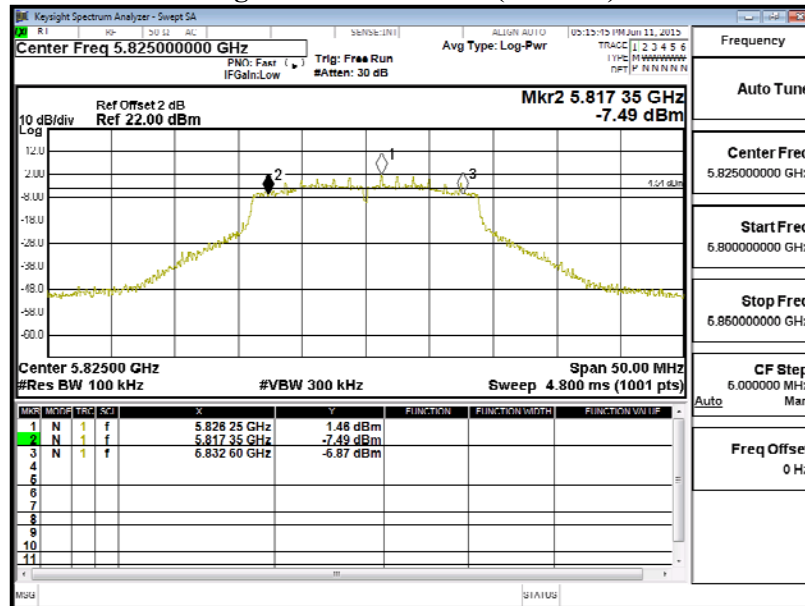
Figure Channel 157: (Chain B)



Product : RUGGED TABLET COMPUTER
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 2: Transmit (802.11n-20BW 14.4Mbps) (5825MHz)

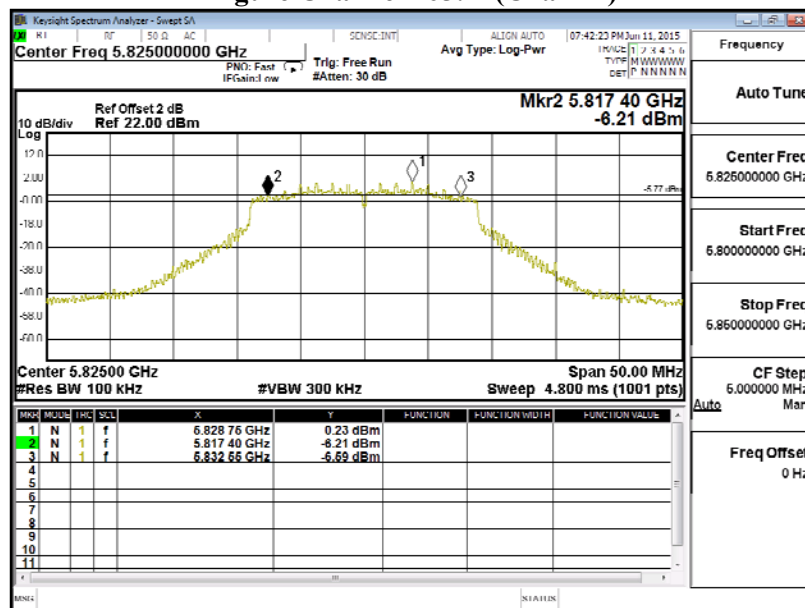
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	15250	>500	Pass

Figure Channel 165: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
165	5825.00	15150	>500	Pass

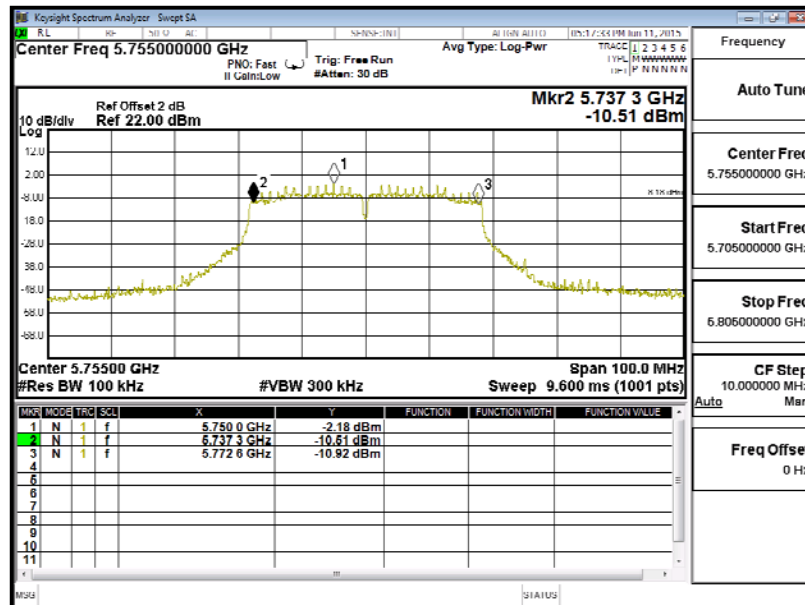
Figure Channel 165: (Chain B)



Product : RUGGED TABLET COMPUTER
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5755MHz)

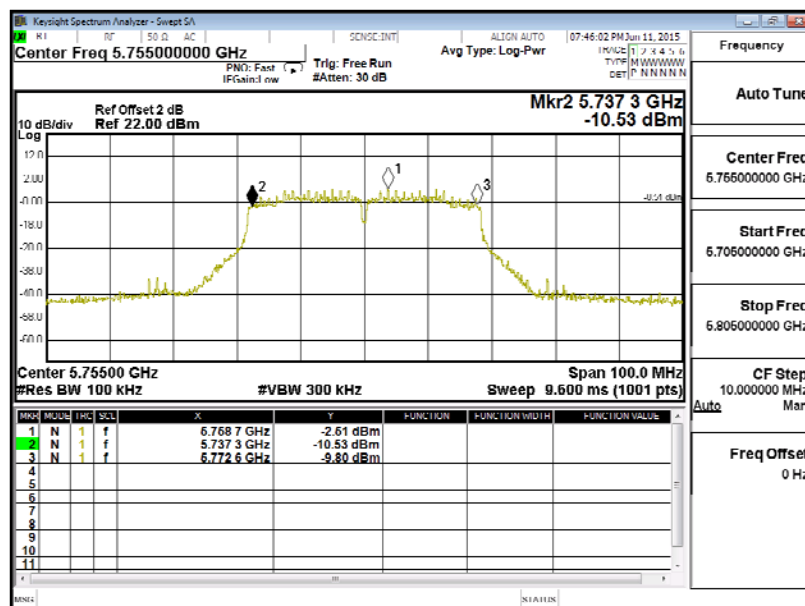
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	35300	>500	Pass

Figure Channel 151: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
151	5755.00	35300	>500	Pass

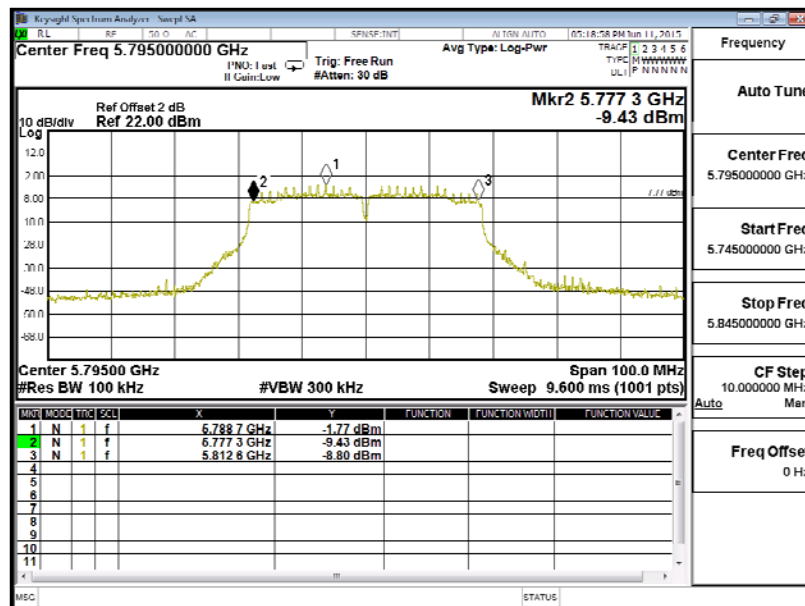
Figure Channel 151: (Chain B)



Product : RUGGED TABLET COMPUTER
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 3: Transmit (802.11n-40BW 30Mbps) (5795MHz)

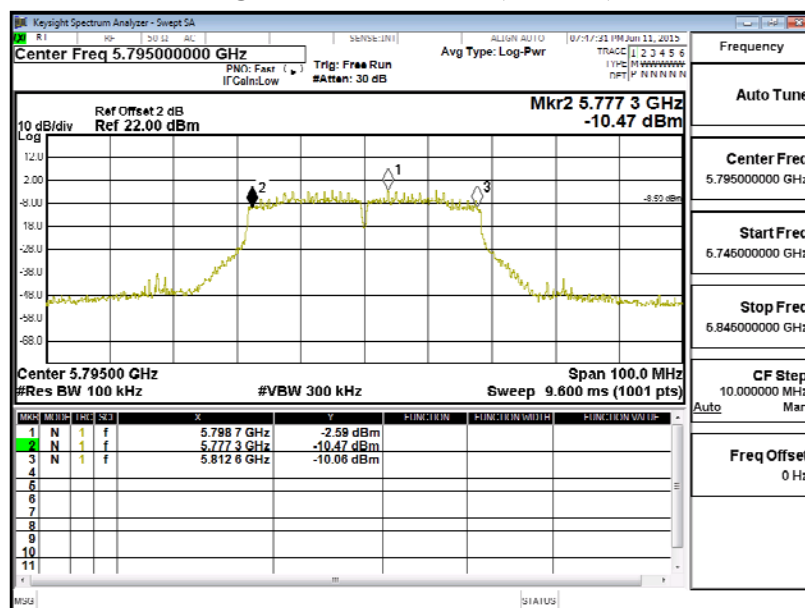
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35300	>500	Pass

Figure Channel 159: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
159	5795.00	35300	>500	Pass

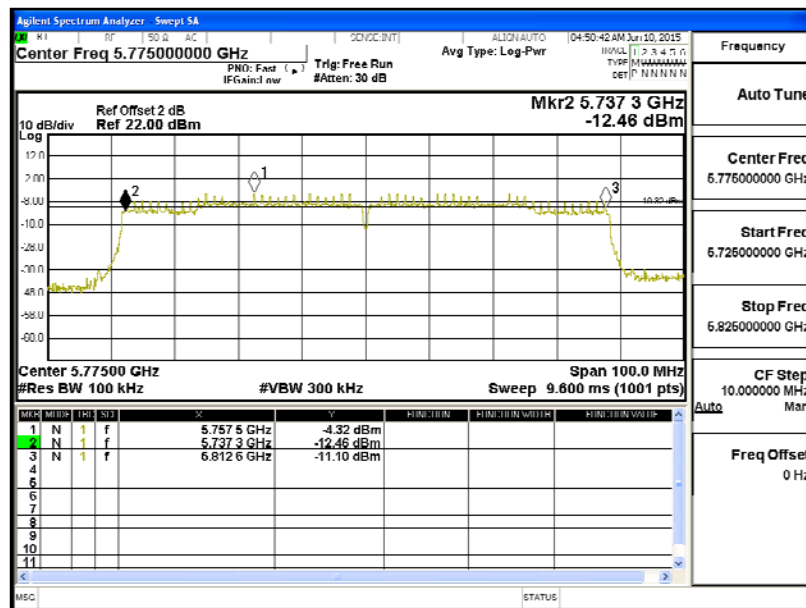
Figure Channel 159: (Chain B)



Product : RUGGED TABLET COMPUTER
 Test Item : Occupied Bandwidth Data
 Test Site : No.3 OATS
 Test Mode : Mode 6: Transmit (802.11ac-80BW-65Mbps) (5775MHz)

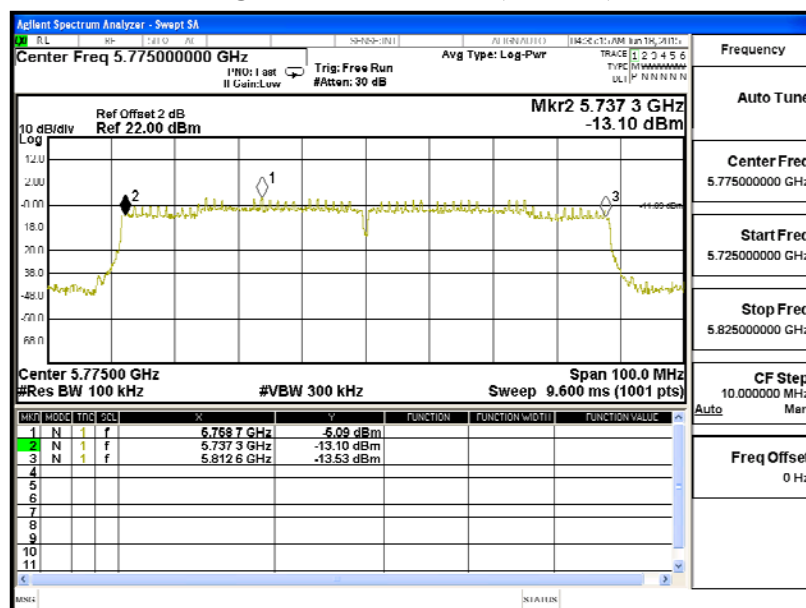
Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	75300	>500	Pass

Figure Channel 155: (Chain A)



Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
155	5775.00	75300	>500	Pass

Figure Channel 155: (Chain B)



8. Frequency Stability

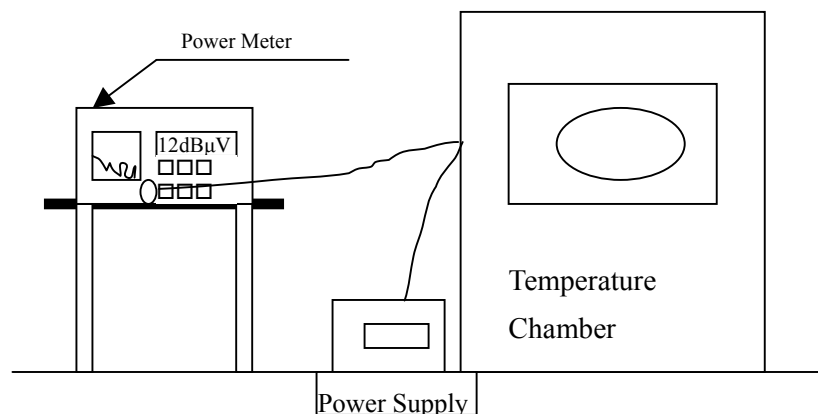
8.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun., 2015
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun., 2015
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2015

Note:

1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

8.2. Test Setup



8.3. Limits

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified

8.4. Test Procedure

The EUT was setup to ANSI C63.10, 2013; tested to UNII test procedure of FCC KDB-789033 for compliance to FCC 47CFR Subpart E requirements.

8.5. Uncertainty

± 150 Hz

8.6. Test Result of Frequency Stability

Product : RUGGED TABLET COMPUTER
Test Item : Frequency Stability
Test Site : Temperature Chamber
Test Mode : Carrier Wave

Chain A

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tnom (20) oC	Vnom (120)V	36	5180.0000	5180.0032	-0.0032
		38	5190.0000	5190.0019	-0.0019
		44	5220.0000	5220.0051	-0.0051
		46	5230.0000	5230.0033	-0.0033
		48	5240.0000	5240.0015	-0.0015
		52	5260.0000	5260.0026	-0.0026
		54	5270.0000	5270.0014	-0.0014
		60	5300.0000	5300.0088	-0.0088
		62	5310.0000	5310.0069	-0.0069
		64	5320.0000	5320.0081	-0.0081
		100	5500.0000	5500.0089	-0.0089
		102	5510.0000	5510.0062	-0.0062
		110	5550.0000	5550.0051	-0.0051
		116	5580.0000	5580.0049	-0.0049
		134	5670.0000	5670.0012	-0.0012
		140	5700.0000	5700.0035	-0.0035
		149	5745.0000	5745.0042	-0.0042
		151	5755.0000	5755.0016	-0.0016
		157	5785.0000	5785.0028	-0.0028
		159	5795.0000	5795.0053	-0.0053
		165	5825.0000	5825.0042	-0.0042

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmax (50) oC	Vmax (138)V	36	5180.0000	5180.0077	-0.0077
		38	5190.0000	5190.0088	-0.0088
		44	5220.0000	5220.0075	-0.0075
		46	5230.0000	5230.0086	-0.0086
		48	5240.0000	5240.0075	-0.0075
		52	5260.0000	5260.0082	-0.0082
		54	5270.0000	5270.0073	-0.0073
		60	5300.0000	5300.0093	-0.0093
		62	5310.0000	5310.0032	-0.0032
		64	5320.0000	5320.0058	-0.0058
		100	5500.0000	5500.0011	-0.0011
		102	5510.0000	5510.0065	-0.0065
		110	5550.0000	5550.0090	-0.0090
		116	5580.0000	5580.0062	-0.0062
		134	5670.0000	5670.0074	-0.0074
		140	5700.0000	5700.0095	-0.0095
		149	5745.0000	5745.0022	-0.0022
		151	5755.0000	5755.0072	-0.0072
		157	5785.0000	5785.0066	-0.0066
		159	5795.0000	5795.0071	-0.0071
		165	5825.0000	5825.0152	-0.0152

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmax (50) °C	Vmin (102)V	36	5180.0000	5180.0032	-0.0032
		38	5190.0000	5190.0093	-0.0093
		44	5220.0000	5220.0102	-0.0102
		46	5230.0000	5230.0097	-0.0097
		48	5240.0000	5240.0082	-0.0082
		52	5260.0000	5260.0065	-0.0065
		54	5270.0000	5270.0071	-0.0071
		60	5300.0000	5300.0038	-0.0038
		62	5310.0000	5310.0062	-0.0062
		64	5320.0000	5320.0053	-0.0053
		100	5500.0000	5500.0011	-0.0011
		102	5510.0000	5510.0052	-0.0052
		110	5550.0000	5550.0080	-0.0080
		116	5580.0000	5580.0067	-0.0067
		134	5670.0000	5670.0099	-0.0099
		140	5700.0000	5700.0013	-0.0013
		149	5745.0000	5745.0047	-0.0047
		151	5755.0000	5755.0095	-0.0095
		157	5785.0000	5785.0064	-0.0064
		159	5795.0000	5795.0055	-0.0055
		165	5825.0000	5825.0060	-0.0060

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmin (-20) oC	Vmax (138)V	36	5180.0000	5180.0101	-0.0101
		38	5190.0000	5190.0039	-0.0039
		44	5220.0000	5220.0053	-0.0053
		46	5230.0000	5230.0042	-0.0042
		48	5240.0000	5240.0017	-0.0017
		52	5260.0000	5260.0051	-0.0051
		54	5270.0000	5270.0079	-0.0079
		60	5300.0000	5300.0050	-0.0050
		62	5310.0000	5310.0082	-0.0082
		64	5320.0000	5320.0017	-0.0017
		100	5500.0000	5500.0037	-0.0037
		102	5510.0000	5510.0058	-0.0058
		110	5550.0000	5550.0067	-0.0067
		116	5580.0000	5580.0089	-0.0089
		134	5670.0000	5670.0094	-0.0094
		140	5700.0000	5700.0082	-0.0082
		149	5745.0000	5745.0063	-0.0063
		151	5755.0000	5755.0084	-0.0084
		157	5785.0000	5785.0088	-0.0088
		159	5795.0000	5795.0005	-0.0005
		165	5825.0000	5825.0036	-0.0036

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmin (-20) oC	Vmin (102)V	36	5180.0000	5180.0101	-0.0101
		38	5190.0000	5190.0039	-0.0039
		44	5220.0000	5220.0053	-0.0053
		46	5230.0000	5230.0042	-0.0042
		48	5240.0000	5240.0017	-0.0017
		52	5260.0000	5260.0051	-0.0051
		54	5270.0000	5270.0079	-0.0079
		60	5300.0000	5300.0050	-0.0050
		62	5310.0000	5310.0082	-0.0082
		64	5320.0000	5320.0017	-0.0017
		100	5500.0000	5500.0037	-0.0037
		102	5510.0000	5510.0058	-0.0058
		110	5550.0000	5550.0067	-0.0067
		116	5580.0000	5580.0089	-0.0089
		134	5670.0000	5670.0094	-0.0094
		140	5700.0000	5700.0082	-0.0082
		149	5745.0000	5745.0063	-0.0063
		151	5755.0000	5755.0084	-0.0084
		157	5785.0000	5785.0088	-0.0088
		159	5795.0000	5795.0005	-0.0005
		165	5825.0000	5825.0036	-0.0036

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle F$ (MHz)
Tnom (20) °C	Vnom (120)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0024	-0.0024
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0046	-0.0046
		142	5710.0000	5710.0029	-0.0029
		144	5720.0000	5720.0064	-0.0064
		155	5775.0000	5775.0034	-0.0034
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle F$ (MHz)
Tmax (50) °C	Vmax (138)V	42	5210.0000	5210.0024	-0.0024
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0016	-0.0016
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0064	-0.0064
		142	5710.0000	5710.0044	-0.0044
		144	5720.0000	5720.0037	-0.0037
		155	5775.0000	5775.0029	-0.0029
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle F$ (MHz)
Tmax (50) °C	Vmin (102)V	42	5210.0000	5210.0024	-0.0024
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0036	-0.0036
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0027	-0.0027
		142	5710.0000	5710.0046	-0.0046
		144	5720.0000	5720.0033	-0.0033
		155	5775.0000	5775.0016	-0.0016

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmin (-20) °C	Vmax (138)V	42	5210.0000	5210.0024	-0.0024
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0025	-0.0025
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0017	-0.0017
		142	5710.0000	5710.0039	-0.0039
		144	5720.0000	5720.0047	-0.0047
		155	5775.0000	5775.0046	-0.0046
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmin (-20) °C	Vmin (102)V	42	5210.0000	5210.0024	-0.0024
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0026	-0.0026
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0021	-0.0021
		142	5710.0000	5710.0036	-0.0036
		144	5720.0000	5720.0039	-0.0039
		155	5775.0000	5775.0045	-0.0045

Chain B

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tnom (20) oC	Vnom (120)V	36	5180.0000	5180.0040	-0.0040
		38	5190.0000	5190.0077	-0.0077
		44	5220.0000	5220.0071	-0.0071
		46	5230.0000	5230.0052	-0.0052
		48	5240.0000	5240.0097	-0.0097
		52	5260.0000	5260.0044	-0.0044
		54	5270.0000	5270.0039	-0.0039
		60	5300.0000	5300.0102	-0.0102
		62	5310.0000	5310.0112	-0.0112
		64	5320.0000	5320.0047	-0.0047
		100	5500.0000	5500.0075	-0.0075
		102	5510.0000	5510.0152	-0.0152
		110	5550.0000	5550.0054	-0.0054
		116	5580.0000	5580.0056	-0.0056
		134	5670.0000	5670.0012	-0.0012
		140	5700.0000	5700.0049	-0.0049
		149	5745.0000	5745.0011	-0.0011
		151	5755.0000	5755.0022	-0.0022
		157	5785.0000	5785.0031	-0.0031
		159	5795.0000	5795.0055	-0.0055
		165	5825.0000	5825.0009	-0.0009

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmax (50) oC	Vmax (138)V	36	5180.0000	5180.0056	-0.0056
		38	5190.0000	5190.0012	-0.0012
		44	5220.0000	5220.0054	-0.0054
		46	5230.0000	5230.0005	-0.0005
		48	5240.0000	5240.0099	-0.0099
		52	5260.0000	5260.0052	-0.0052
		54	5270.0000	5270.0124	-0.0124
		60	5300.0000	5300.0027	-0.0027
		62	5310.0000	5310.0017	-0.0017
		64	5320.0000	5320.0028	-0.0028
		100	5500.0000	5500.0033	-0.0033
		102	5510.0000	5510.0027	-0.0027
		110	5550.0000	5550.0099	-0.0099
		116	5580.0000	5580.0041	-0.0041
		134	5670.0000	5670.0036	-0.0036
		140	5700.0000	5700.0152	-0.0152
		149	5745.0000	5745.0031	-0.0031
		151	5755.0000	5755.0016	-0.0016
		157	5785.0000	5785.0059	-0.0059
		159	5795.0000	5795.0074	-0.0074
		165	5825.0000	5825.0066	-0.0066

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmax (50) °C	Vmin (102)V	36	5180.0000	5180.0017	-0.0017
		38	5190.0000	5190.0023	-0.0023
		44	5220.0000	5220.0079	-0.0079
		46	5230.0000	5230.0088	-0.0088
		48	5240.0000	5240.0066	-0.0066
		52	5260.0000	5260.0018	-0.0018
		54	5270.0000	5270.0059	-0.0059
		60	5300.0000	5300.0021	-0.0021
		62	5310.0000	5310.0056	-0.0056
		64	5320.0000	5320.0054	-0.0054
		100	5500.0000	5500.0073	-0.0073
		102	5510.0000	5510.0065	-0.0065
		110	5550.0000	5550.0032	-0.0032
		116	5580.0000	5580.0021	-0.0021
		134	5670.0000	5670.0058	-0.0058
		140	5700.0000	5700.0016	-0.0016
		149	5745.0000	5745.0052	-0.0052
		151	5755.0000	5755.0051	-0.0051
		157	5785.0000	5785.0088	-0.0088
		159	5795.0000	5795.0032	-0.0032
		165	5825.0000	5825.0100	-0.0100

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
T _i in (-20) °C	V _{max} (138)V	36	5180.0000	5180.0021	-0.0021
		38	5190.0000	5190.0095	-0.0095
		44	5220.0000	5220.0062	-0.0062
		46	5230.0000	5230.0071	-0.0071
		48	5240.0000	5240.0095	-0.0095
		52	5260.0000	5260.0034	-0.0034
		54	5270.0000	5270.0085	-0.0085
		60	5300.0000	5300.0099	-0.0099
		62	5310.0000	5310.0017	-0.0017
		64	5320.0000	5320.0080	-0.0080
		100	5500.0000	5500.0082	-0.0082
		102	5510.0000	5510.0014	-0.0014
		110	5550.0000	5550.0089	-0.0089
		116	5580.0000	5580.0056	-0.0056
		134	5670.0000	5670.0013	-0.0013
		140	5700.0000	5700.0027	-0.0027
		149	5745.0000	5745.0063	-0.0063
		151	5755.0000	5755.0082	-0.0082
		157	5785.0000	5785.0046	-0.0046
		159	5795.0000	5795.0058	-0.0058
		165	5825.0000	5825.0094	-0.0094

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	ΔF (MHz)
Tmin (-20) oC	Vmin (102)V	36	5180.0000	5180.0062	-0.0062
		38	5190.0000	5190.0057	-0.0057
		44	5220.0000	5220.0060	-0.0060
		46	5230.0000	5230.0072	-0.0072
		48	5240.0000	5240.0072	-0.0072
		52	5260.0000	5260.0097	-0.0097
		54	5270.0000	5270.0077	-0.0077
		60	5300.0000	5300.0056	-0.0056
		62	5310.0000	5310.0099	-0.0099
		64	5320.0000	5320.0086	-0.0086
		100	5500.0000	5500.0036	-0.0036
		102	5510.0000	5510.0058	-0.0058
		110	5550.0000	5550.0075	-0.0075
		116	5580.0000	5580.0084	-0.0084
		134	5670.0000	5670.0080	-0.0080
		140	5700.0000	5700.0046	-0.0046
		149	5745.0000	5745.0053	-0.0053
		151	5755.0000	5755.0087	-0.0087
		157	5785.0000	5785.0034	-0.0034
		159	5795.0000	5795.0099	-0.0099
		165	5825.0000	5825.0103	-0.0103

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tnom (20) °C	Vnom (120)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0024	-0.0024
		122	5610.0000	5610.0046	-0.0046
		138	5710.0000	5710.0029	-0.0029
		142	5720.0000	5720.0064	-0.0064
		144	5775.0000	5775.0034	-0.0034
		155	5210.0000	5210.0220	-0.0220
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmax (50) °C	Vmax (138)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0016	-0.0016
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0064	-0.0064
		142	5710.0000	5710.0044	-0.0044
		144	5720.0000	5720.0037	-0.0037
		155	5775.0000	5775.0029	-0.0029
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmax (50) °C	Vmin (102)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0036	-0.0036
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0027	-0.0027
		142	5710.0000	5710.0046	-0.0046
		144	5720.0000	5720.0033	-0.0033
		155	5775.0000	5775.0016	-0.0016

Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmin (-20) °C	Vmax (138)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0025	-0.0025
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0017	-0.0017
		142	5710.0000	5710.0039	-0.0039
		144	5720.0000	5720.0047	-0.0047
		155	5775.0000	5775.0046	-0.0046
Test Conditions		Channel	Frequency (MHz)	Frequency (MHz)	$\triangle$ F (MHz)
Tmin (-20) °C	Vmin (102)V	42	5210.0000	5210.0220	-0.0220
		58	5290.0000	5290.0046	-0.0046
		106	5530.0000	5530.0026	-0.0026
		122	5610.0000	5610.0046	-0.0046
		138	5690.0000	5690.0021	-0.0021
		142	5710.0000	5710.0036	-0.0036
		144	5720.0000	5720.0039	-0.0039
		155	5775.0000	5775.0045	-0.0045

9. EMI Reduction Method During Compliance Testing

No modification was made during testing.