

7.5. Number of Hopping Channels Measurement

7.5.1. Test Limit

This frequency hopping system must employ a minimum of 15 hopping channels.

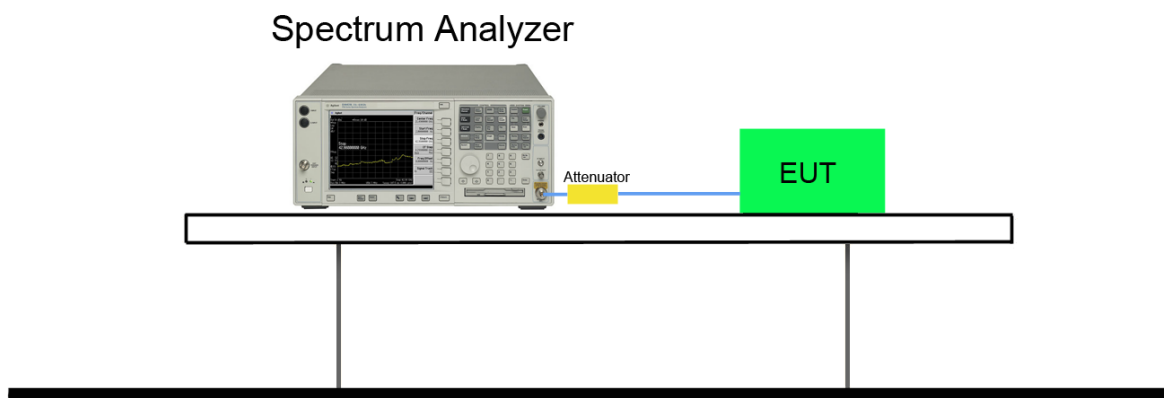
7.5.2. Test Procedure Used

ANSI C63.10-2009 - Section 7.7.3

7.5.3. Test Settling

1. Span = the frequency band of operation.
2. RBW ≥ 1 % of the span
3. VBW \geq RBW
4. Detector = Peak
5. Trace mode = max hold
6. Sweep time = auto couple
7. The trace was allowed to stabilize

7.5.4. Test Setup

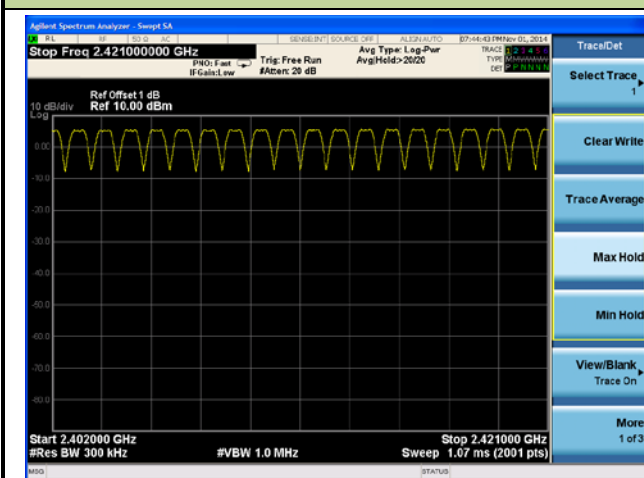


7.5.5. Test Result

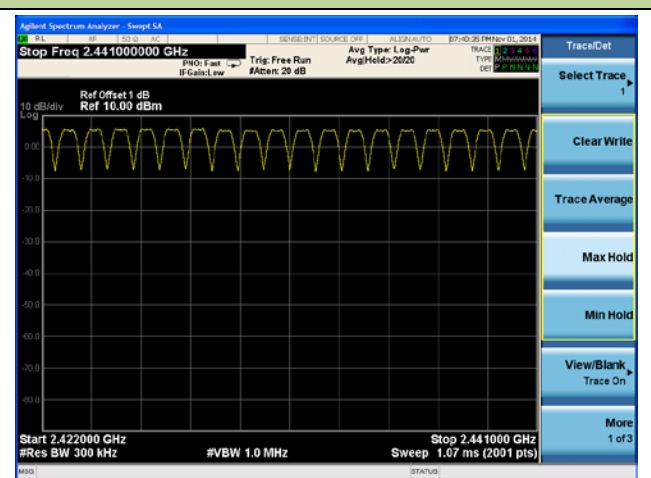
Test Mode (Hopping)	Channel Numbers	Frequency (MHz)	Limit (Hopping Channels)	Result
DH5	79	2402~2480	≥ 15	Pass
2DH5	79	2402~2480	≥ 15	Pass
3DH5	79	2402~2480	≥ 15	Pass

DH5 Number of Hopping Channels

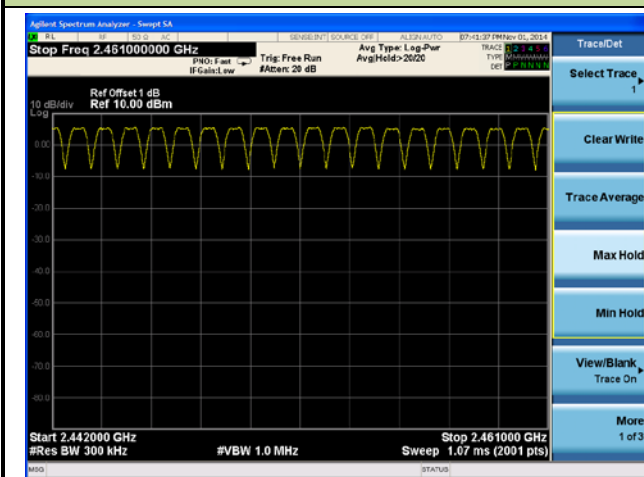
2402 ~ 2421MHz



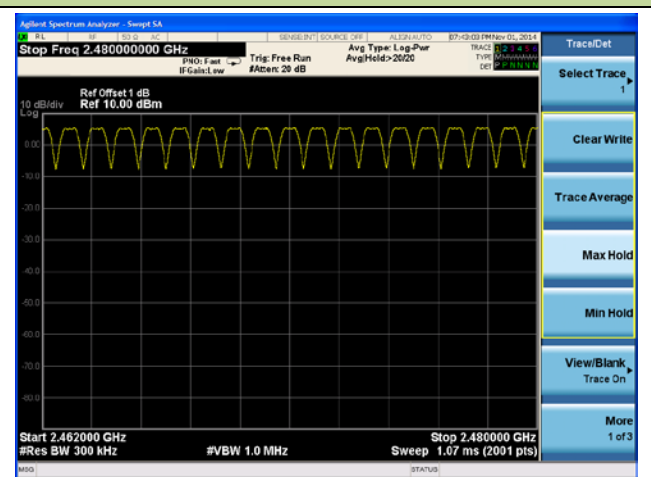
2422 ~ 2441MHz



2442 ~ 2461MHz

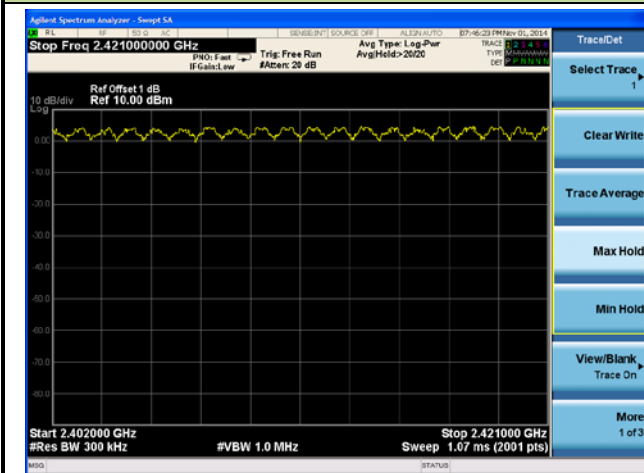


2462 ~ 2480MHz

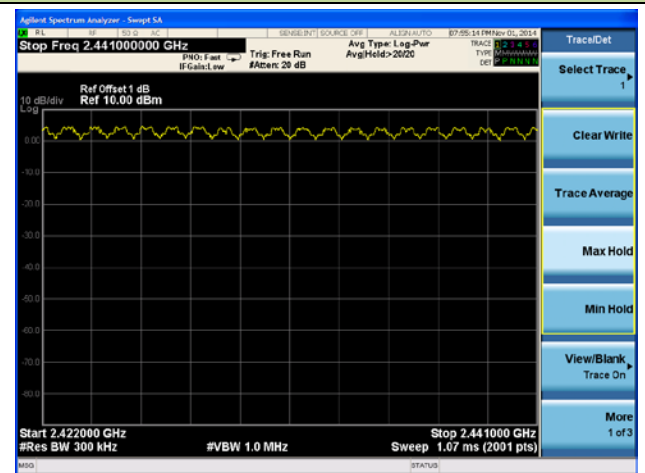


2DH5 Number of Hopping Channels

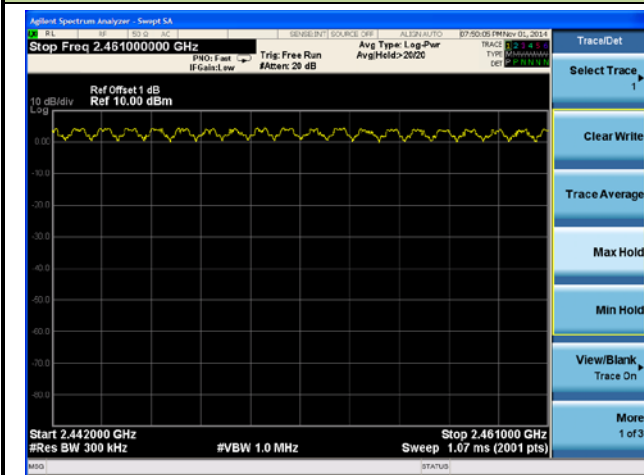
2402 ~ 2421MHz



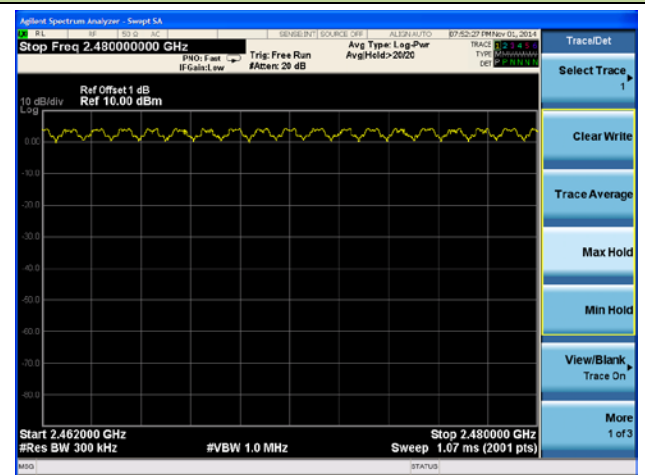
2422 ~ 2441MHz

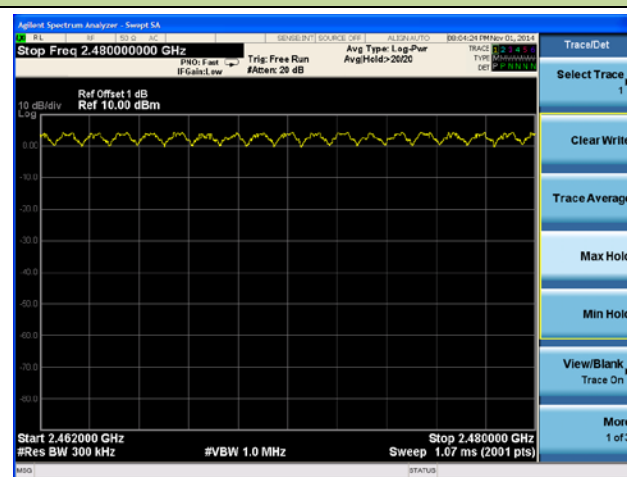
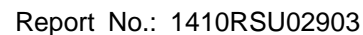


2442 ~ 2461MHz



2462 ~ 2480MHz





7.6. Time of Occupancy Measurement

7.6.1. Test Limit

The maximum permissible time of occupancy is 400ms within a period of 400ms multiplied by the number of hopping channels employed.

7.6.2. Test Procedure Used

ANSI C63.10-2009 - Section 7.7.4

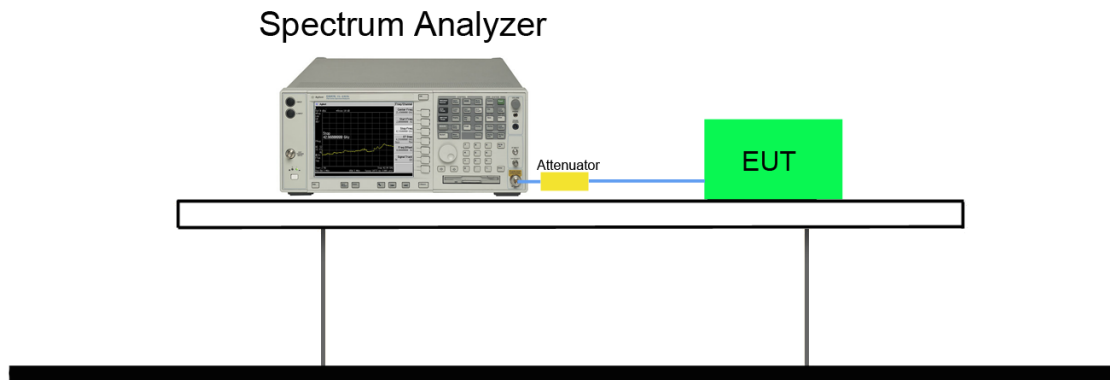
7.6.3. Test Settling

1. Span = zero span, centered on a hopping channel.
2. RBW = 1MHz
3. VBW \geq RBW
4. Sweep time = as necessary to capture the entire dwell time per hopping channel
5. Detector = Peak
6. Trace mode = max hold

If possible, use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (data rate, modulation format, etc.), repeat this test for each variation.

An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

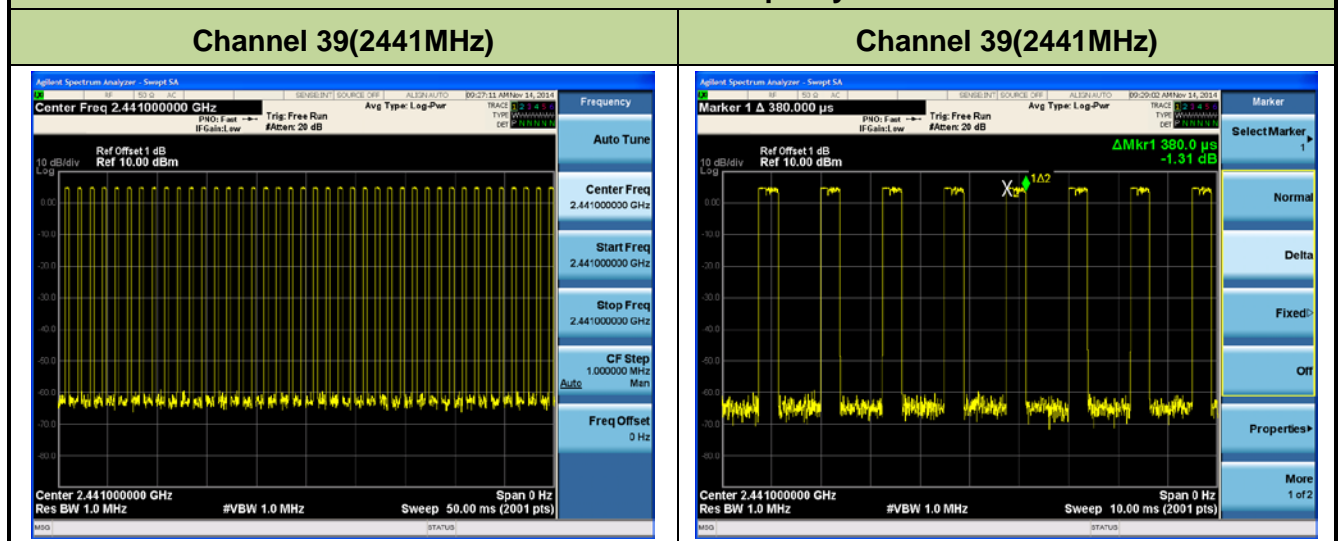
7.6.4. Test Setup



7.6.5. Test Result

Test Mode	Channel No.	Frequency (MHz)	Time of Occupancy (ms)	Limit (ms)	Result
3DH1	39	2441	121.60	< 400	Pass
3DH3	39	2441	259.20	< 400	Pass
3DH5	39	2441	298.48	< 400	Pass

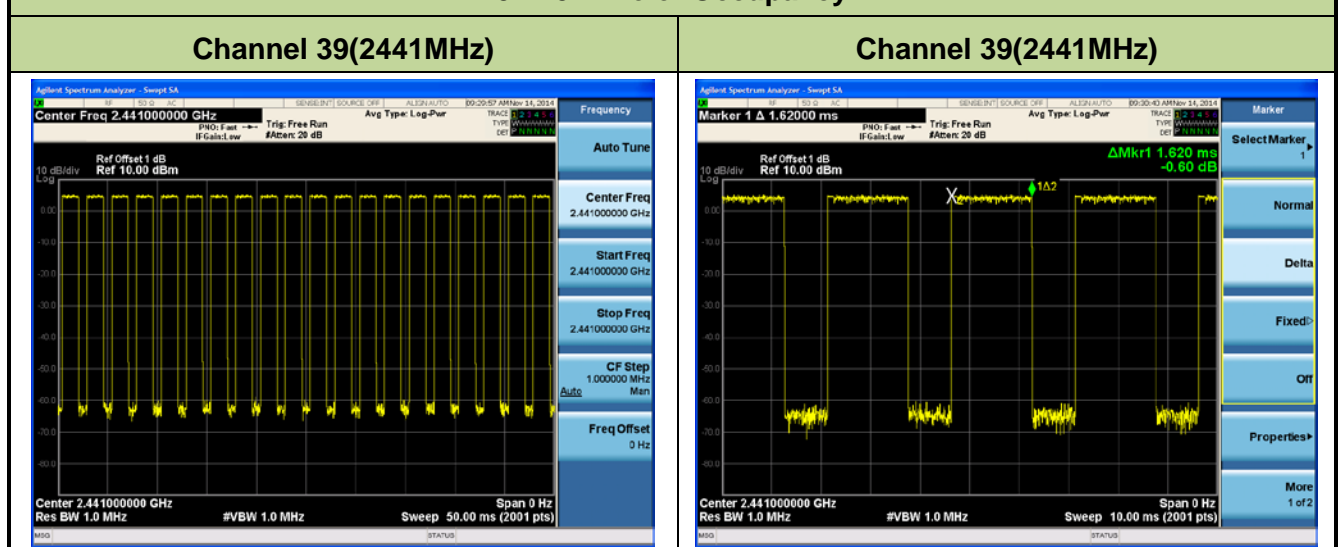
3DH1 Time of Occupancy



Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: $40/50$ msec=800 hops/sec.

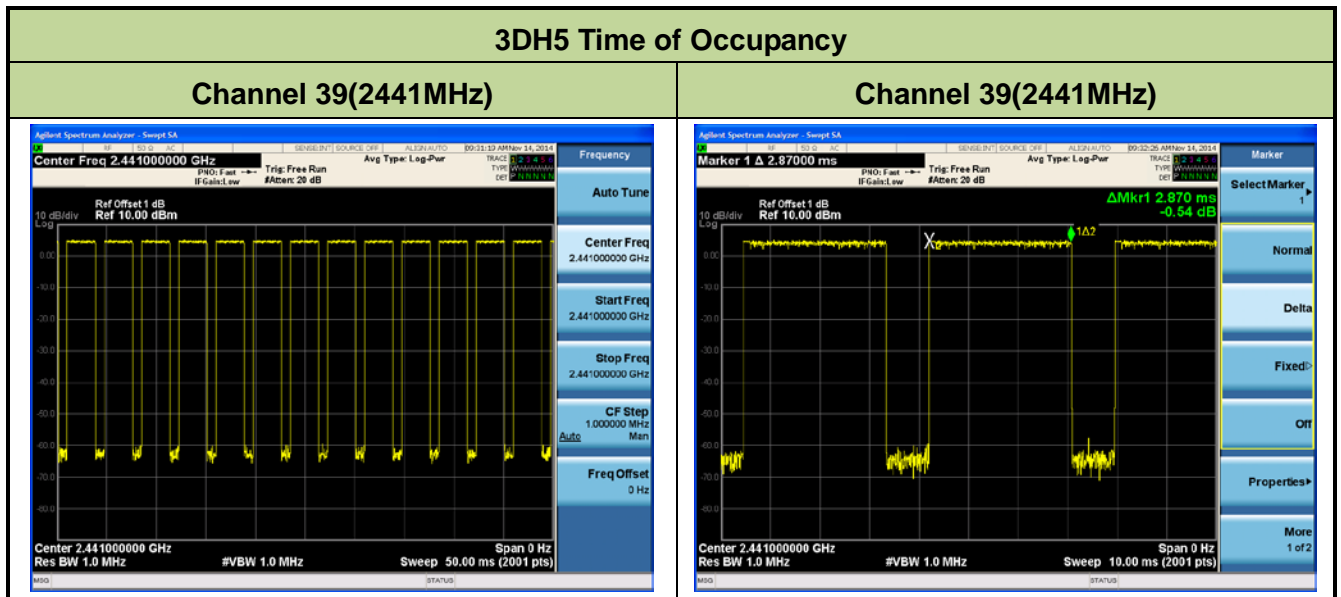
The Maximum Occupancy Time within 31.6sec: $[(0.380\text{ms} \times 800)/79] \times 31.6 = 121.60$ msec.

3DH3 Time of Occupancy



Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1sec: $20/50$ msec=400hops/sec.

The Maximum Occupancy Time within 31.6sec: $[(1.620\text{ms} \times 400)/79] \times 31.6 = 259.20$ msec.



Note: Test Time Period: $0.4 \times 79 = 31.6$ sec, Hopping Times Within 1 sec: $13/50 \text{ msec} = 260$ hops/sec.

The Maximum Occupancy Time within 31.6 sec: $[(2.870 \text{ ms} \times 260) / 79] \times 31.6 = 298.48 \text{ msec}$.

7.7. Band-edge Compliance Measurement

7.7.1. Test Limit

The maximum permissible emission level is 20dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

7.7.2. Test Procedure Used

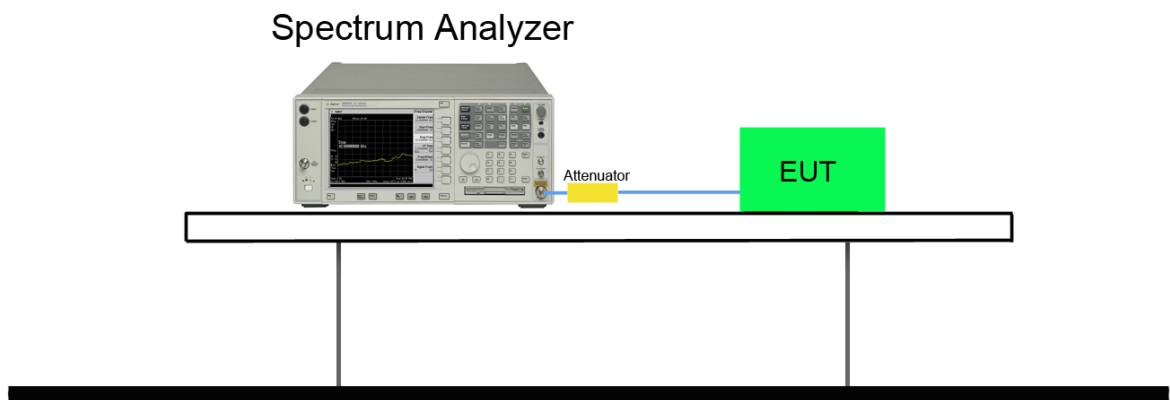
ANSI C63.10-2009 - Section 7.7.9

7.7.3. Test Setting

1. Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW \geq 1% of spectrum analyzer display span
3. VBW \geq RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission.

7.7.4. Test Setup

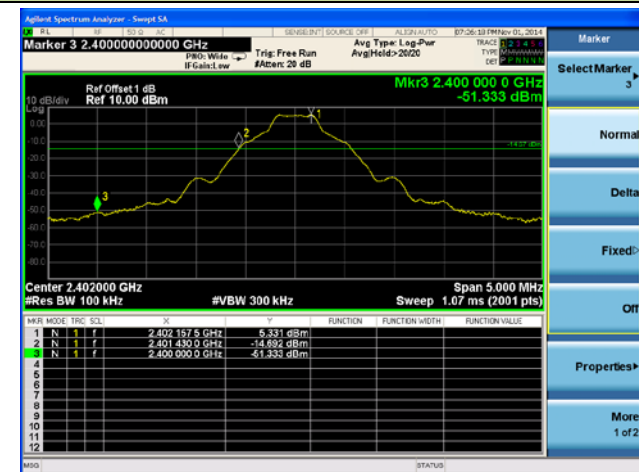


7.7.5. Test Result

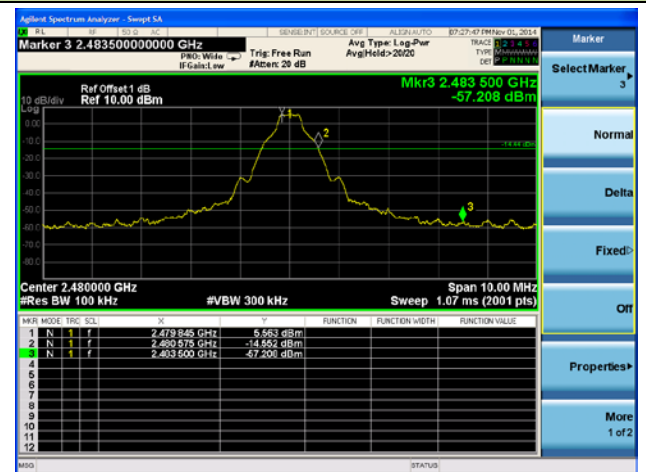
Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Band-edge Compliance

Channel 00 (2402MHz)



Channel 78 (2480MHz)

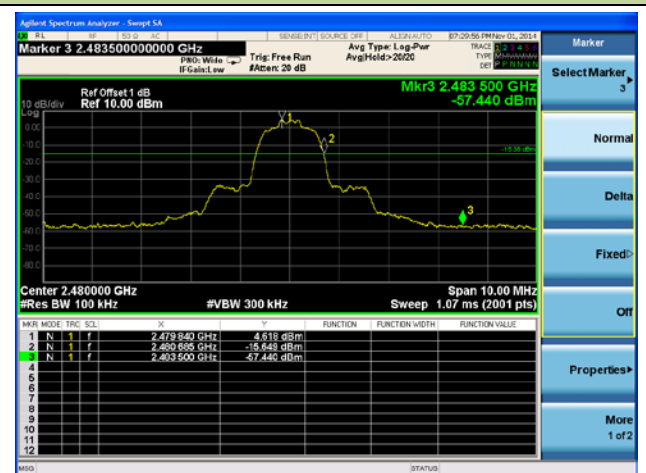


2DH5 Band-edge Compliance

Channel 00 (2402MHz)



Channel 78 (2480MHz)

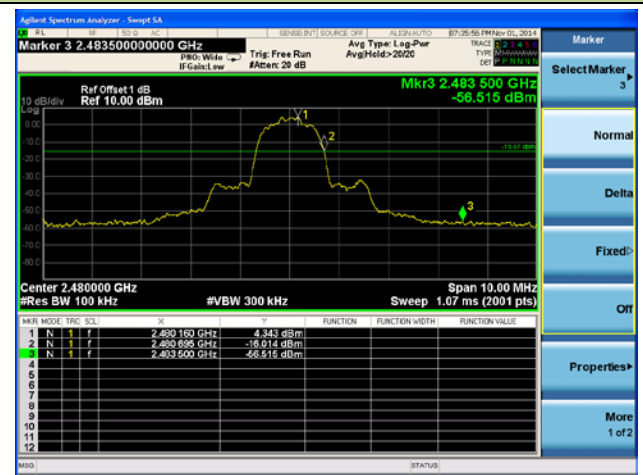


3DH5 Band-edge Compliance

Channel 00 (2402MHz)

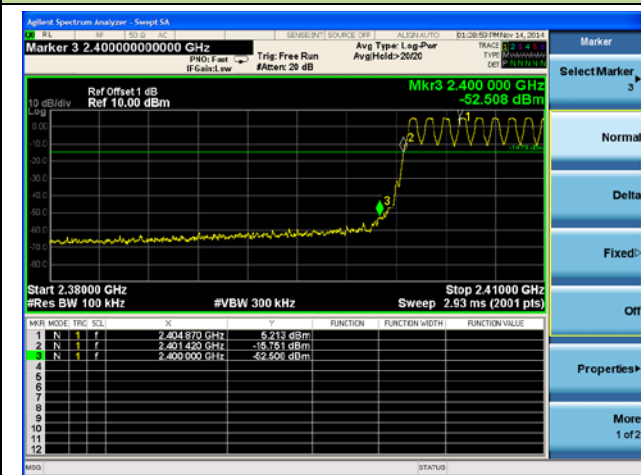


Channel 78 (2480MHz)

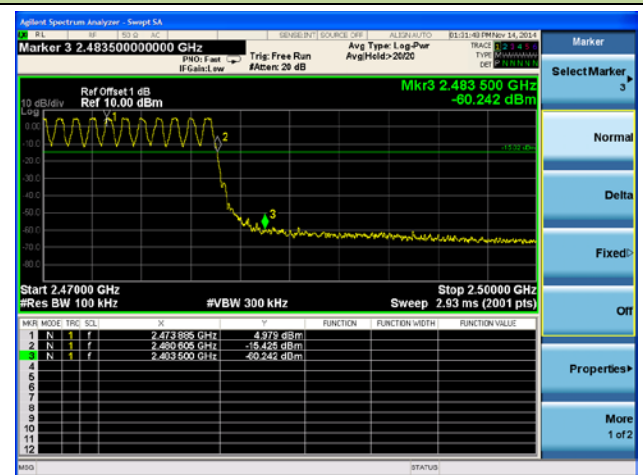


DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

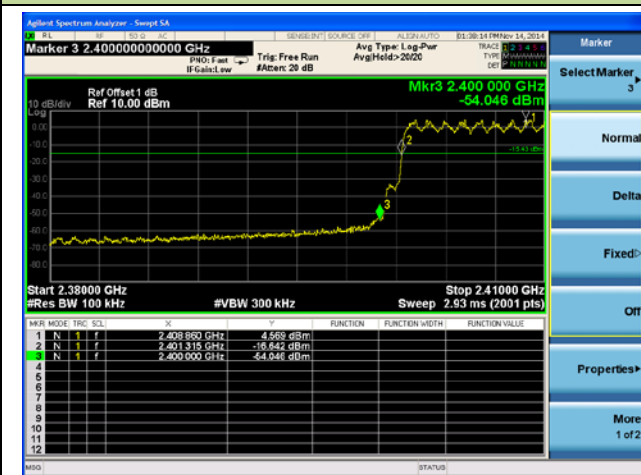


Channel 78 (2480MHz)



2DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)

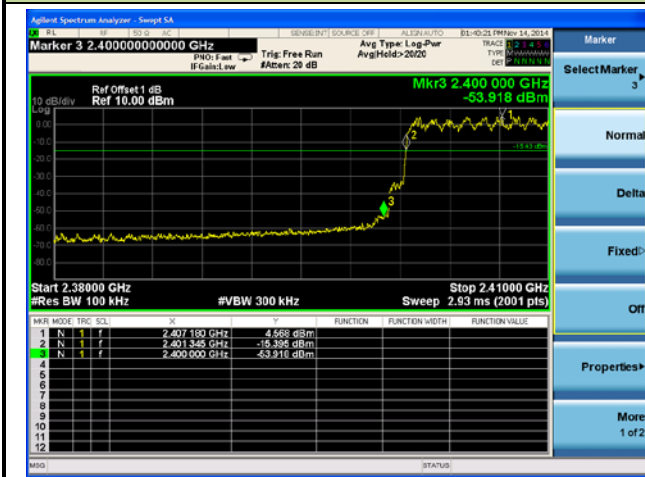


Channel 78 (2480MHz)

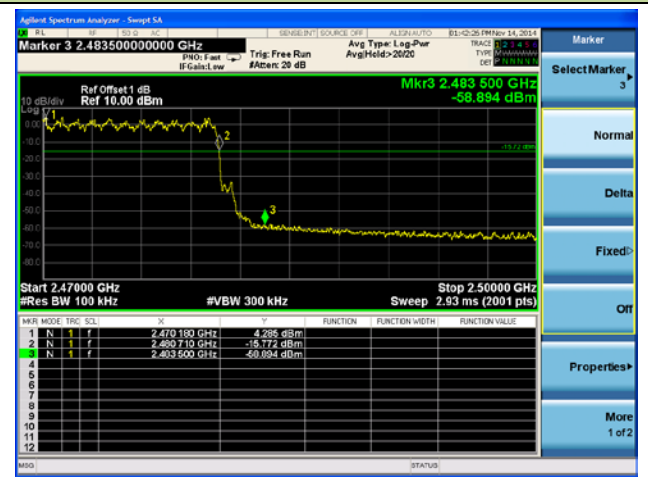


3DH5 Operation Frequency Range of 20dB Bandwidth within Hopping Mode

Channel 00 (2402MHz)



Channel 78 (2480MHz)



7.8. Conducted Spurious Emissions Measurement

7.8.1. Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

7.8.2. Test Procedure Used

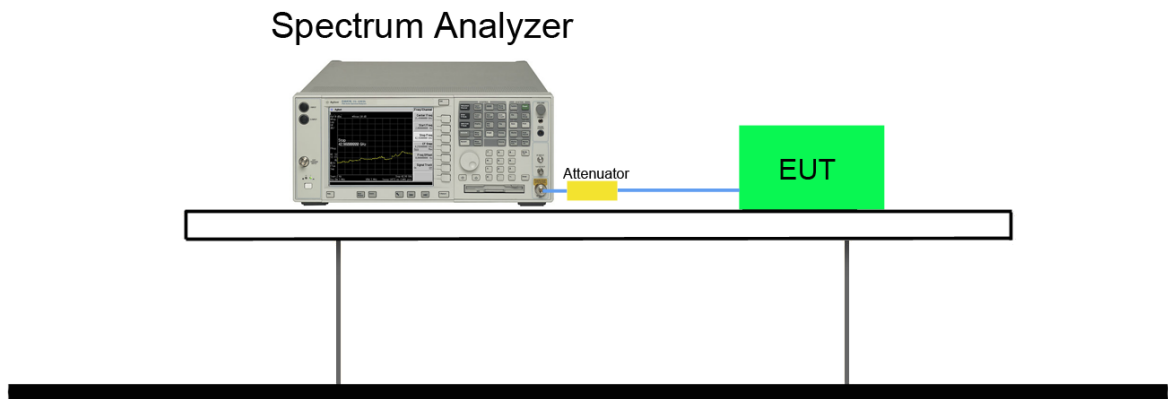
ANSI C63.10-2009 - Section 7.7.10

7.8.3. Test Setting

1. Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.
2. RBW = 100 KHz
3. VBW \geq RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Set the marker on the peak of any spurious emission recorded. The level displayed must comply with the limit specified in this section.

7.8.4. Test Setup

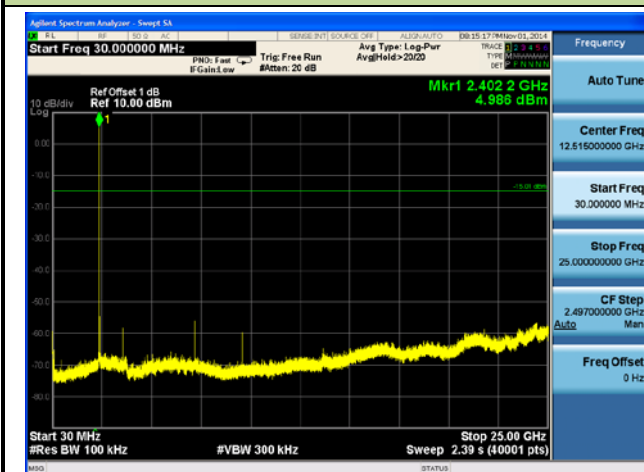


7.8.5. Test Result

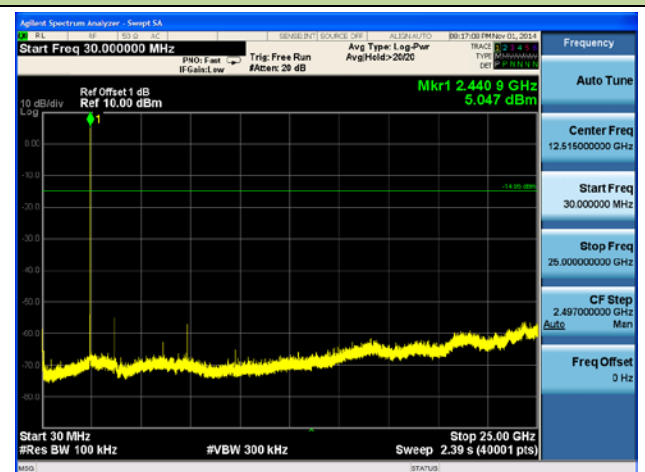
Test Mode	Channel No.	Frequency (MHz)	Limit (MHz)	Result
DH5	00	2402	20dBc	Pass
DH5	39	2441	20dBc	Pass
DH5	78	2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
2DH5	39	2441	20dBc	Pass
2DH5	78	2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
3DH5	39	2441	20dBc	Pass
3DH5	78	2480	20dBc	Pass

DH5 Conducted Spurious Emissions

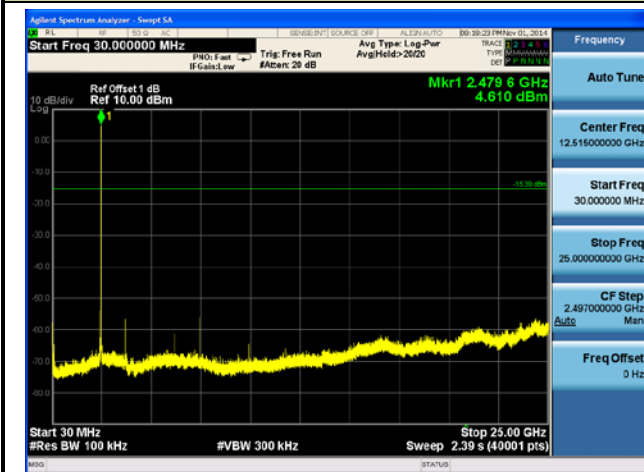
Channel 00 (2402MHz)



Channel 39 (2441MHz)

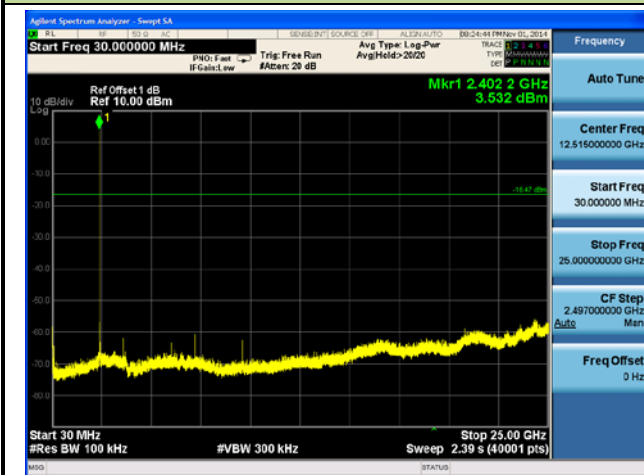


Channel 78 (2480MHz)

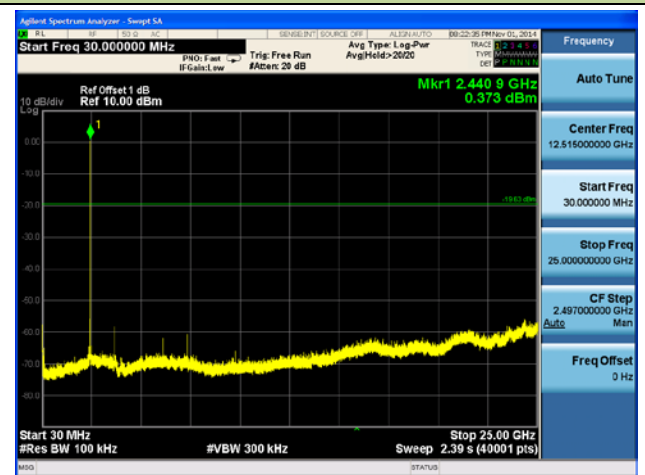


2DH5 Conducted Spurious Emissions

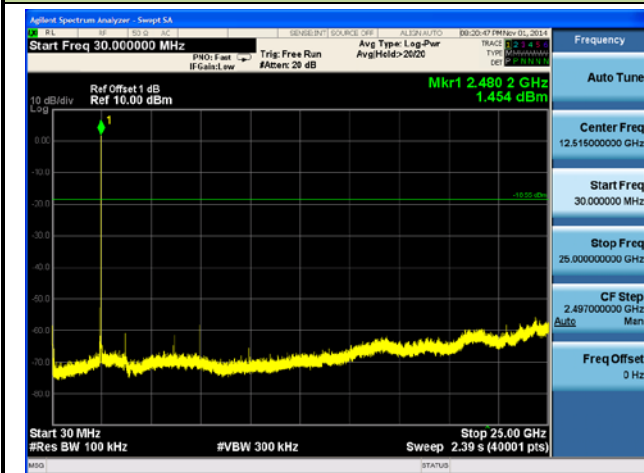
Channel 00 (2402MHz)



Channel 39 (2441MHz)

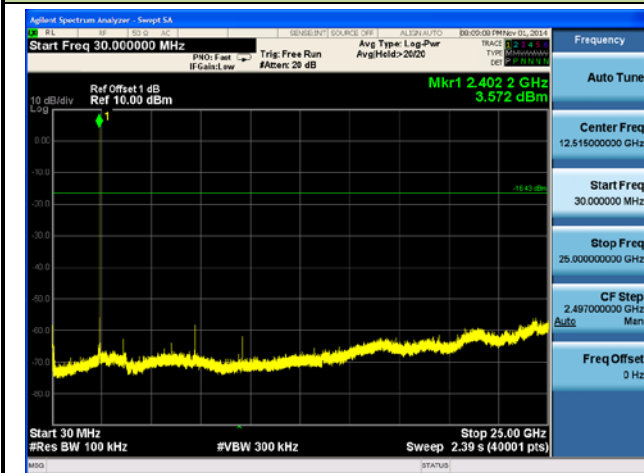


Channel 78 (2480MHz)

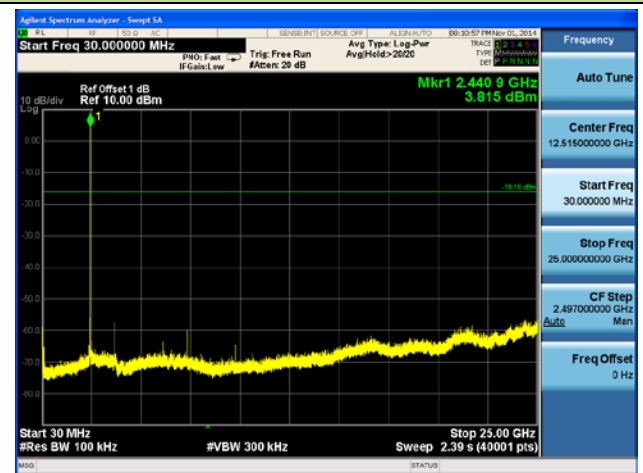


3DH5 Conducted Spurious Emissions

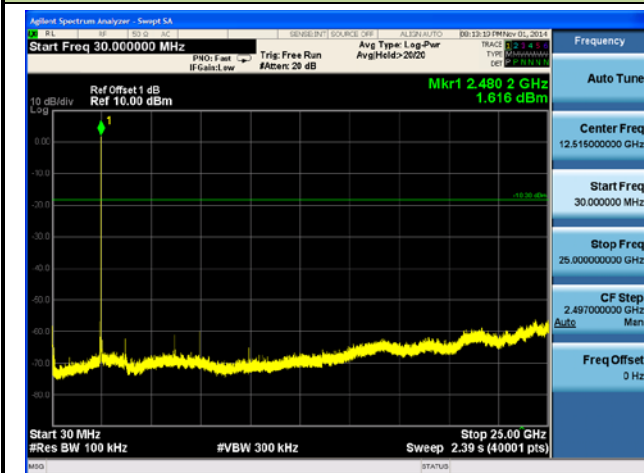
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



7.9. Radiated Spurious Emission Measurement

7.9.1. Test Limit

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR must not exceed the limits shown in Table per Section 15.209.

FCC Part 15 Subpart C Paragraph 15.209		
Frequency [MHz]	Field Strength [V/m]	Measured Distance [Meters]
0.009 - 0.490	2400/F (kHz)	300
0.490 - 1.705	24000/F (kHz)	30
1.705 – 30	30	30
30 – 88	100	3
88 – 216	150	3
216 – 960	200	3
Above 960	500	3

7.9.2. Test Procedure Used

ANSI C63.10-2009 - Section 7.10.1 & Section 7.10.2

7.9.3. Test Setting

Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = as specified in Table 1
3. VBW = 3 * RBW
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

Table 1 - RBW as a function of frequency

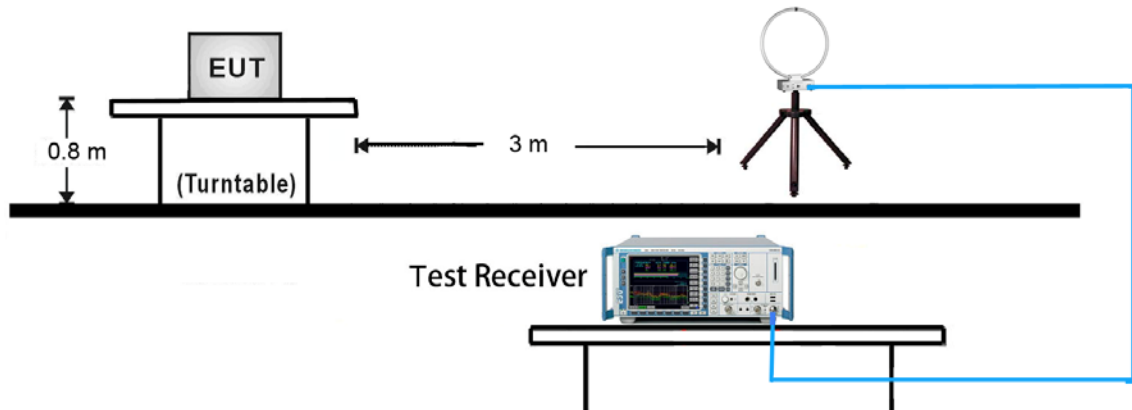
Frequency	RBW
9 ~ 150 kHz	200 ~ 300 Hz
0.15 ~ 30 MHz	9 ~ 10 kHz
30 ~ 1000 MHz	100 ~ 120 kHz
> 1000 MHz	1 MHz

Average Field Strength Measurements

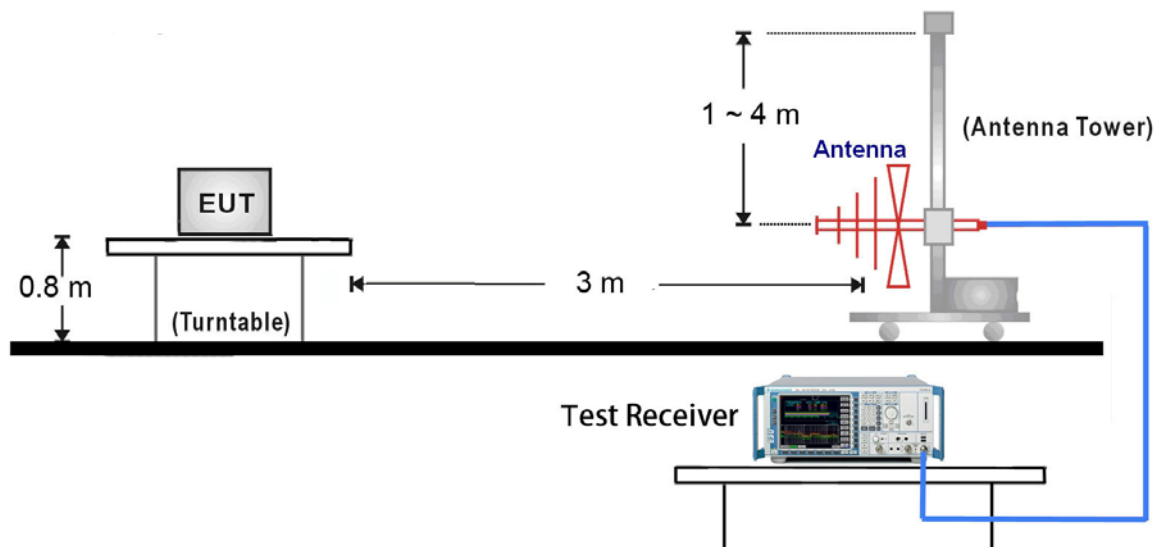
1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW $\geq 1/T$
4. De As an alternative, the instrument may be set to linear detector mode. Ensure that video filtering is applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode in order to accomplish this. Others have a setting for Average-VBW Type, which can be set to "Voltage" regardless of the display mode
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow max hold to run for at least 50 times (1/duty cycle) traces

7.9.4. Test Setup

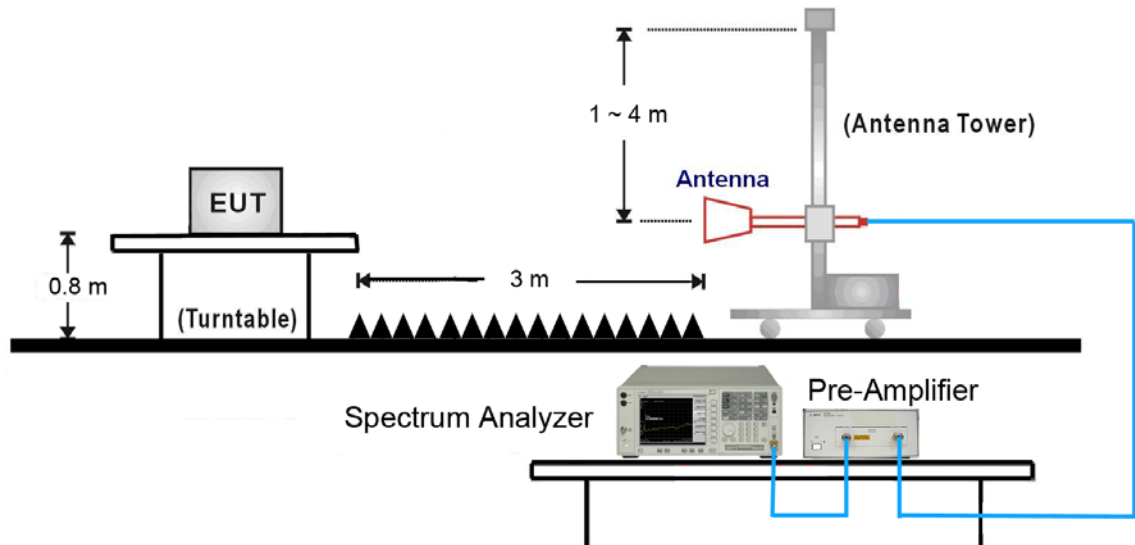
9kHz ~ 30MHz Test Setup:



30MHz ~ 1GHz Test Setup:



1GHz ~ 25GHz Test Setup:



7.9.5. Test Result

Test Mode:	3DH5	Test Site:	AC1
Test Channel:	78	Test Engineer:	Knight Lu
Remark:	1. Average measurement was not performed if peak level lower than average limit. 2. The worst case of Radiated Spurious Emission. 3. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
*	3241.0	36.9	3.4	40.3	67.8	-27.5	Peak	Horizontal
*	4418.0	37.6	5.5	43.1	67.8	-24.7	Peak	Horizontal
	4960.0	37.1	6.8	43.9	74.0	-30.1	Peak	Horizontal
	7440.0	35.6	14.2	49.8	74.0	-24.2	Peak	Horizontal
*	3131.0	36.9	3.6	40.5	67.8	-27.3	Peak	Vertical
*	4476.0	37.4	5.6	43.0	67.8	-24.8	Peak	Vertical
	4960.0	37.5	6.8	44.3	74.0	-29.7	Peak	Vertical
	7440.0	36.1	14.2	50.3	74.0	-23.7	Peak	Vertical

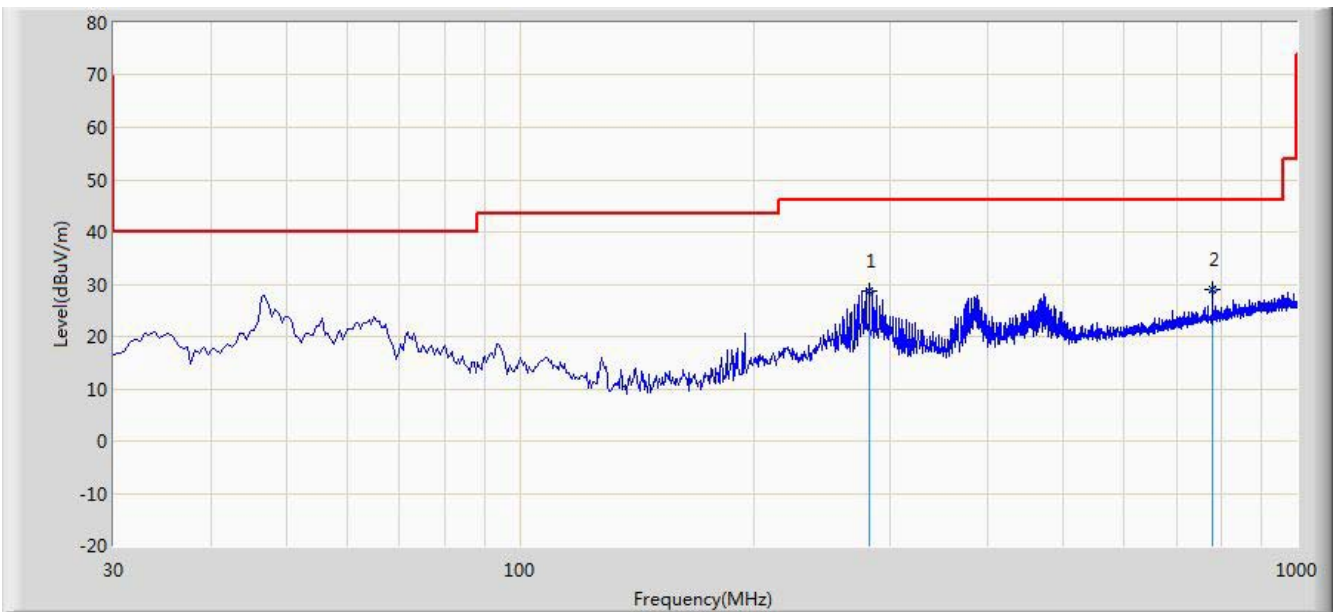
Note 1: "*" is not in restricted band, its limit is 20dBc of the fundamental emission level (87.8dBμV/m).

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The worst case of Radiated Emission 9KHz ~ 1GHz and 18GHz ~ 25GHz:

Site: AC1	Time: 2014/11/13 - 09:10
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

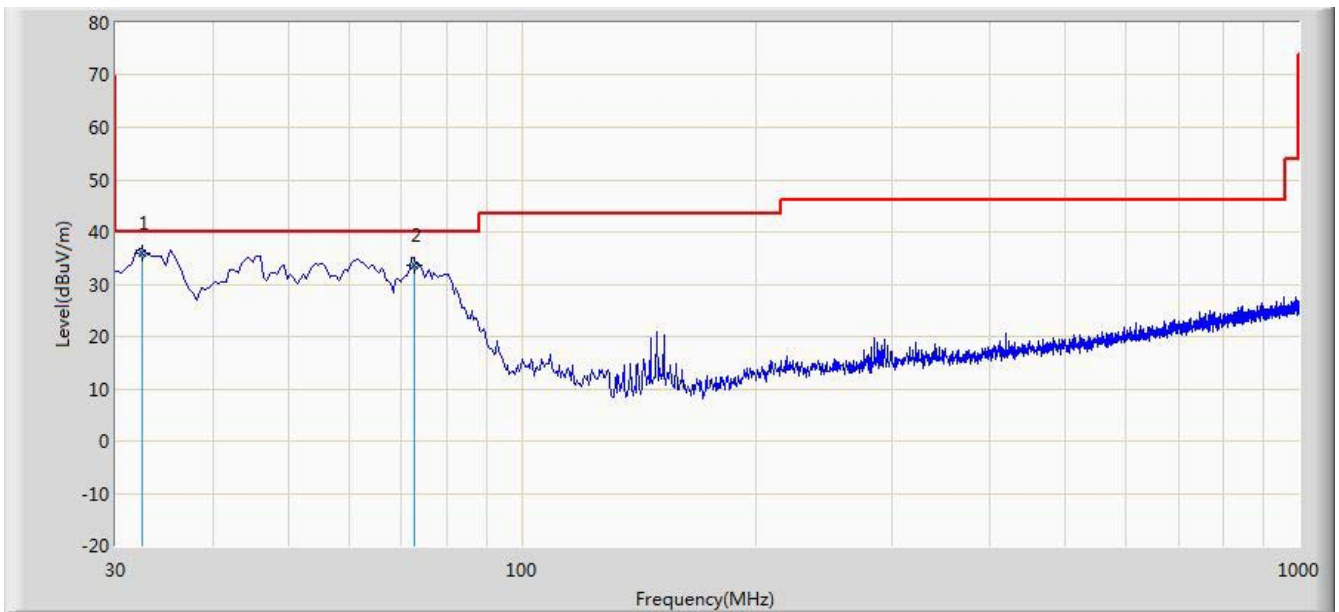


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			281.680	28.741	14.950	-17.259	46.000	13.791	QP
2		*	779.821	29.115	7.250	-16.885	46.000	21.865	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/13 - 09:12
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: VULB9162_0.03-8GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz
Worse Case Mode: DH5 at Channel 2402MHz	

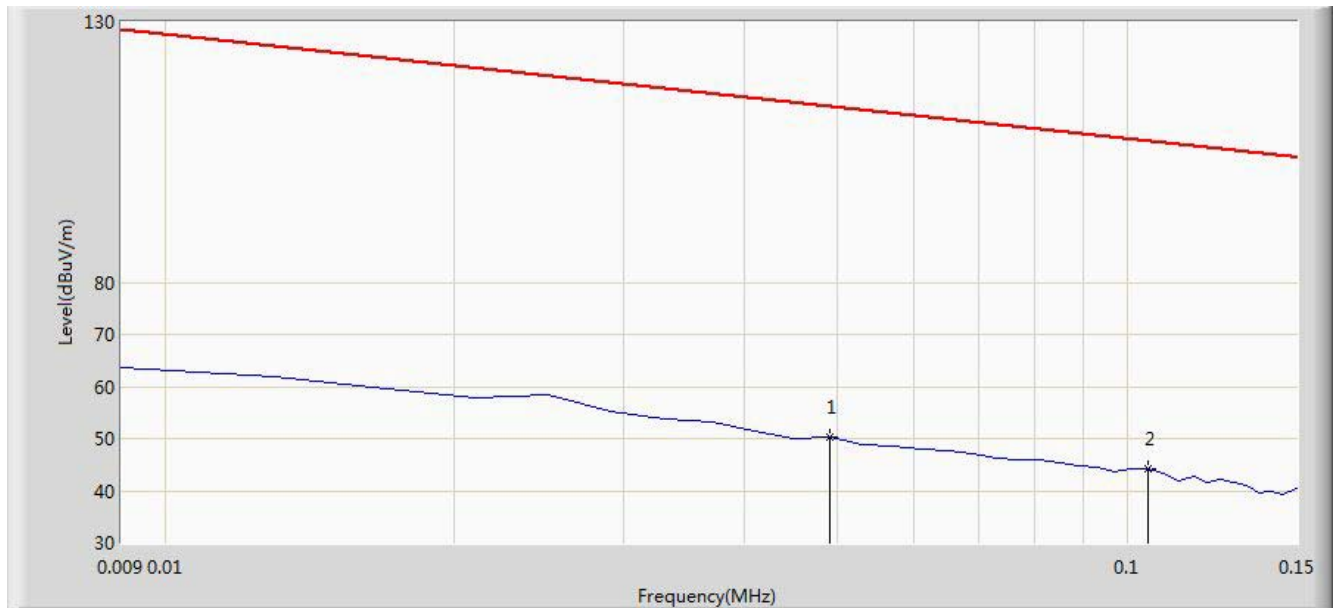


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	32.421	36.022	23.680	-3.978	40.000	12.341	QP
2			72.588	33.498	23.410	-6.502	40.000	10.088	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/13 - 15:34
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: S950SL	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

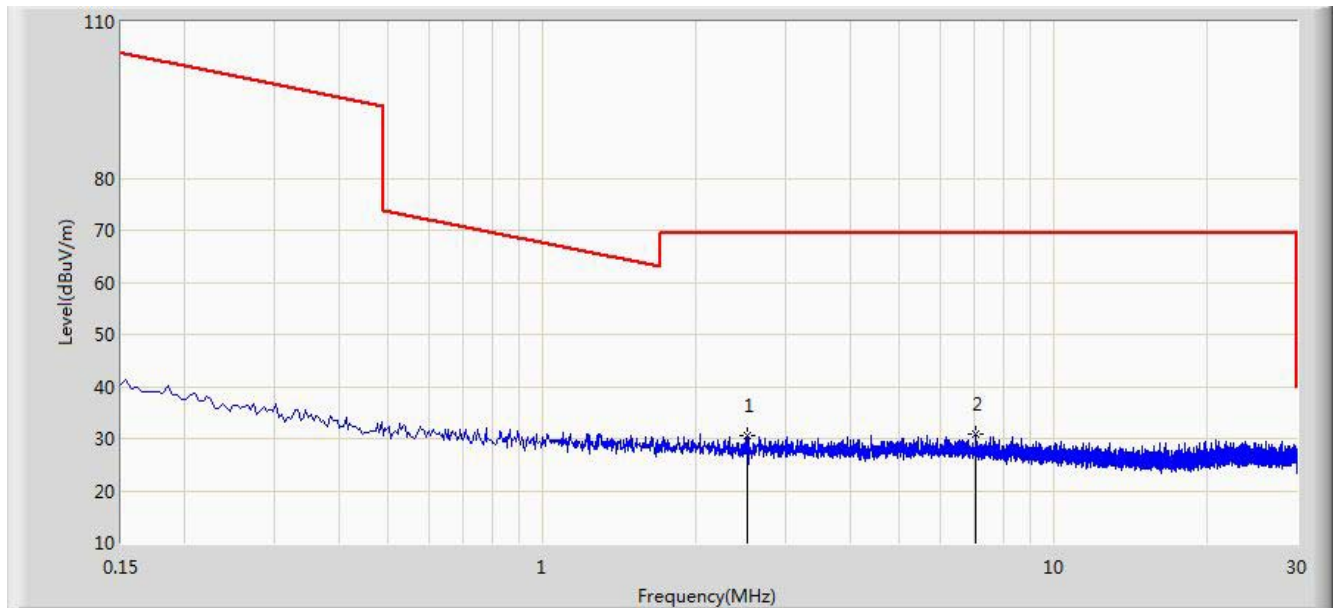


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			0.049	50.367	29.861	-63.422	113.789	20.505	QP
2		*	0.105	44.143	23.996	-63.029	107.173	20.147	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/13 - 15:45
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: FMZB1519_0.009-30MHz	Polarity: Face On
EUT: S950SL	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 9kHz~30MHz.	

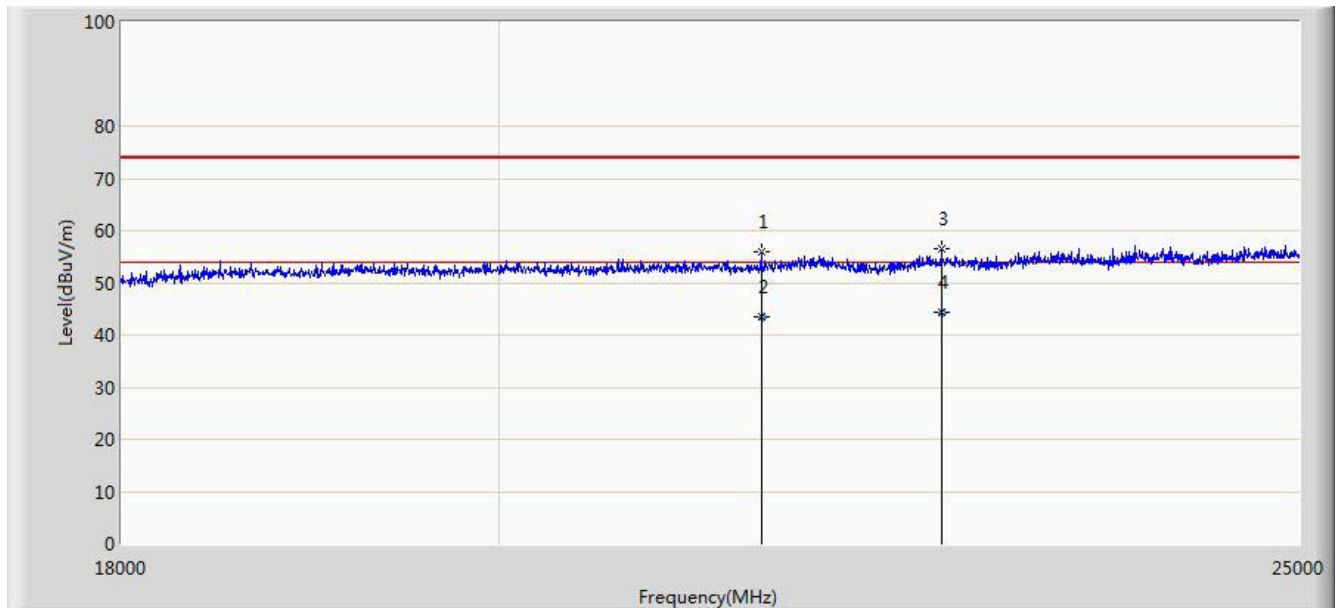


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2.513	30.495	10.336	-39.005	69.500	20.159	QP
2		*	7.041	30.974	10.579	-38.526	69.500	20.395	QP

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/13 - 15:59
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9170_18-40GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	

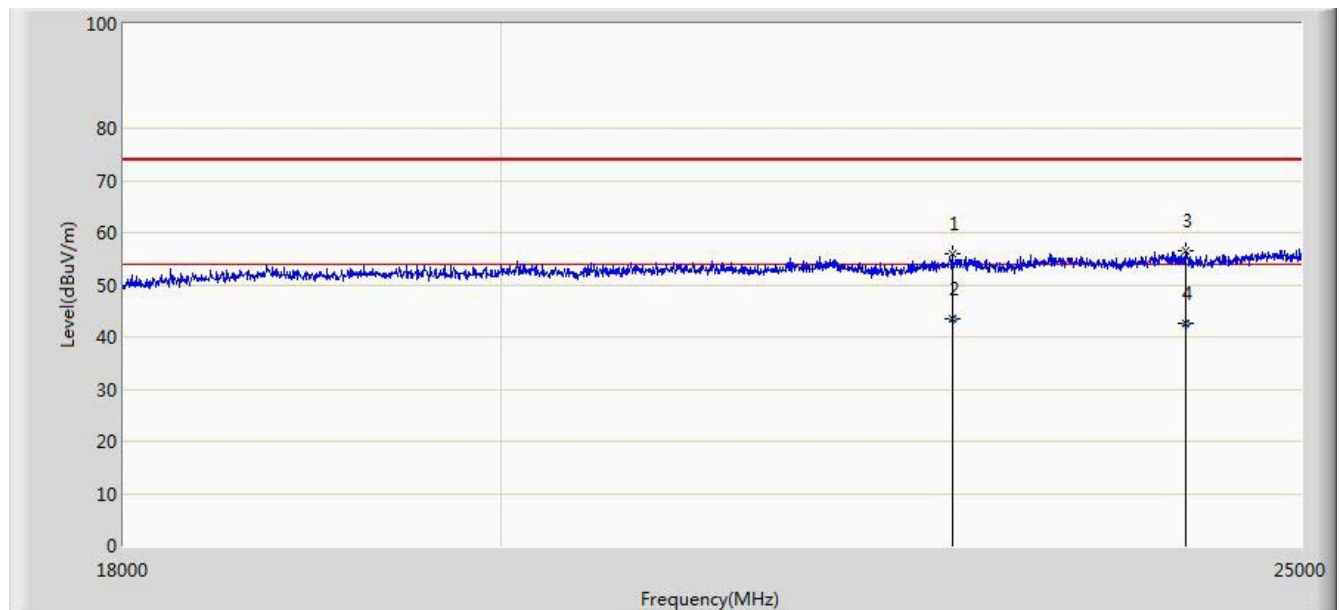


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			21517.500	55.869	17.883	-18.131	74.000	37.986	PK
2			21517.650	43.351	5.365	-10.649	54.000	37.986	AV
3			22630.500	56.509	18.223	-17.491	74.000	38.286	PK
4		*	22630.540	44.310	6.024	-9.690	54.000	38.286	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/13 - 16:05
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9170_18-40GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz
Note: There is the ambient noise within frequency range 18GHz~25GHz.	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			22686.500	55.811	17.457	-18.189	74.000	38.354	PK
2			22686.540	43.598	5.244	-10.402	54.000	38.354	AV
3			24205.500	56.430	17.607	-17.570	74.000	38.823	PK
4		*	24205.658	42.518	3.695	-11.482	54.000	38.823	AV

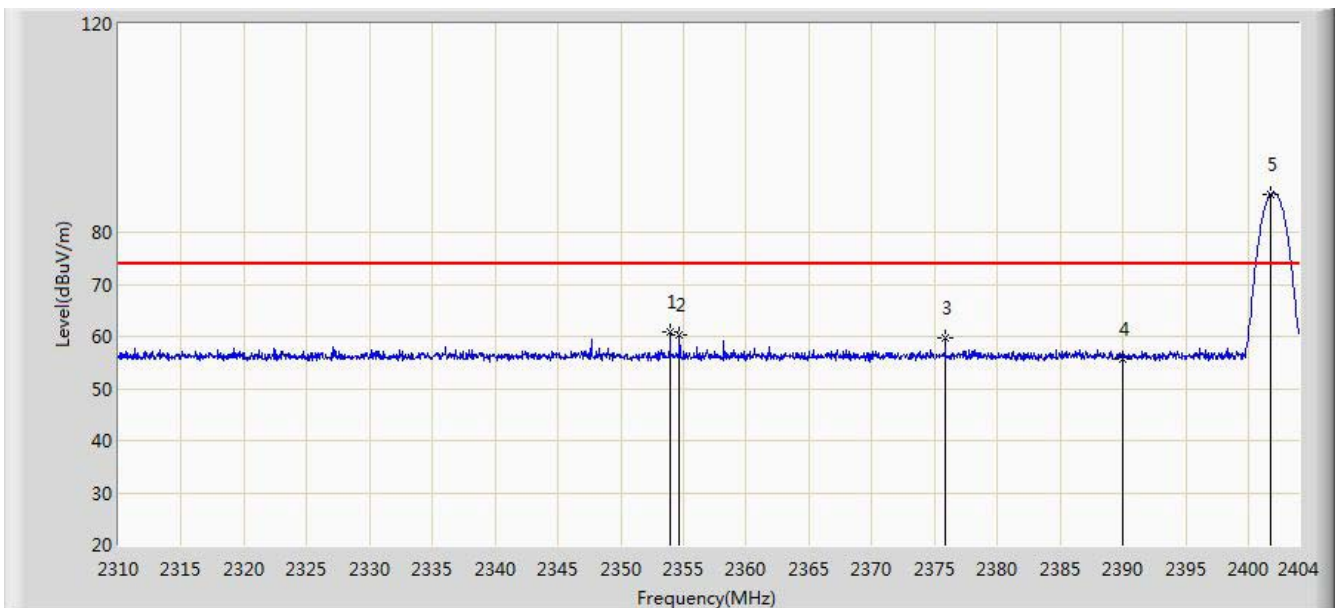
Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.10. Radiated Restricted Band Edge Measurement

7.10.1. Test Result

Site: AC1	Time: 2014/11/04 - 10:15
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2402MHz	

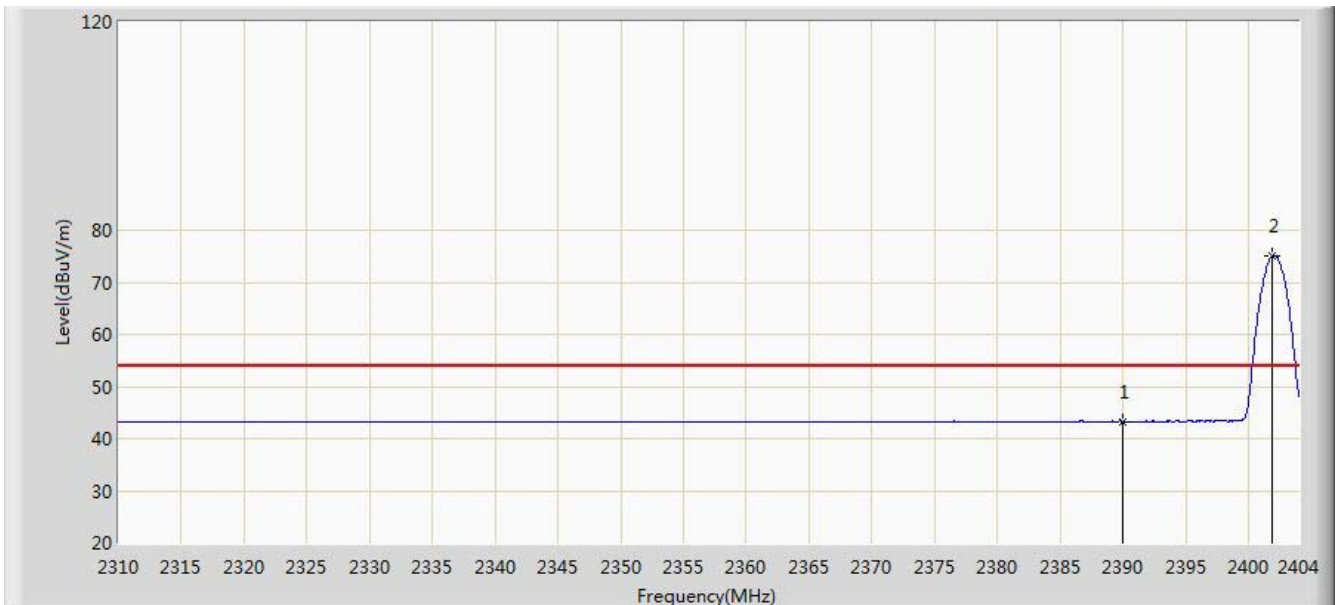


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2353.945	60.831	30.061	-13.169	74.000	30.769	PK
2			2354.697	60.261	29.494	-13.739	74.000	30.767	PK
3			2375.847	59.598	28.882	-14.402	74.000	30.717	PK
4			2390.000	55.725	25.041	-18.275	74.000	30.684	PK
5		*	2401.791	87.286	56.624	N/A	N/A	30.661	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 10:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2402MHz	

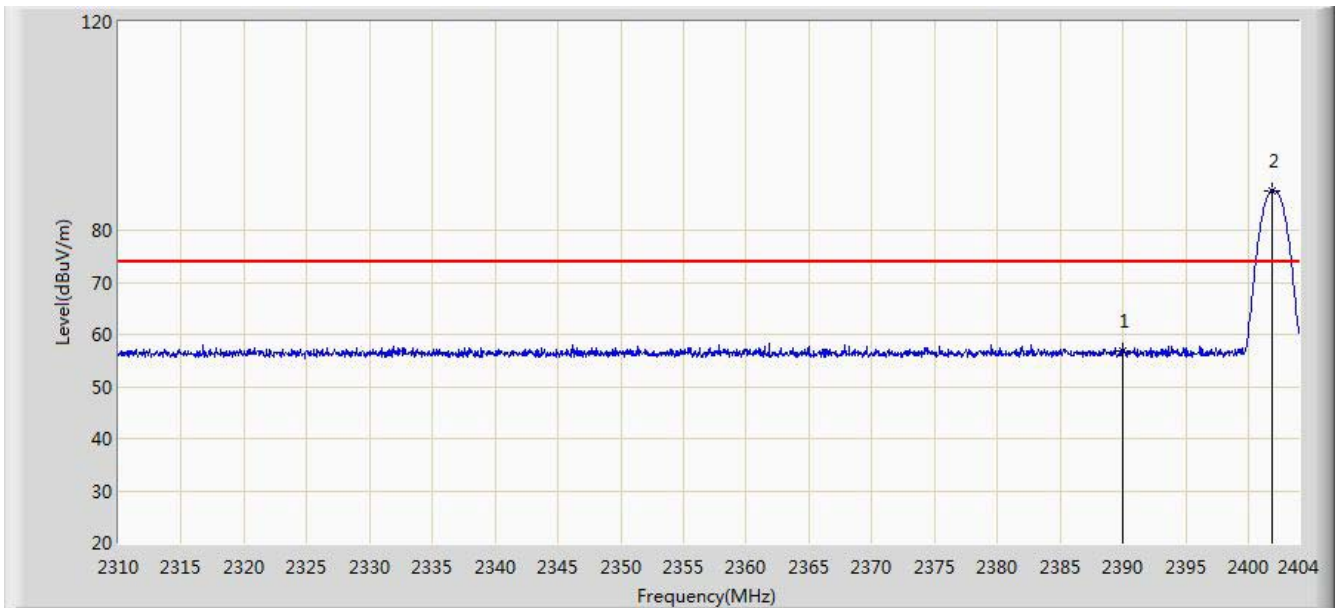


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	43.321	12.637	-10.679	54.000	30.684	AV
2		*	2401.932	75.162	44.501	N/A	N/A	30.662	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 10:19
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2402MHz	

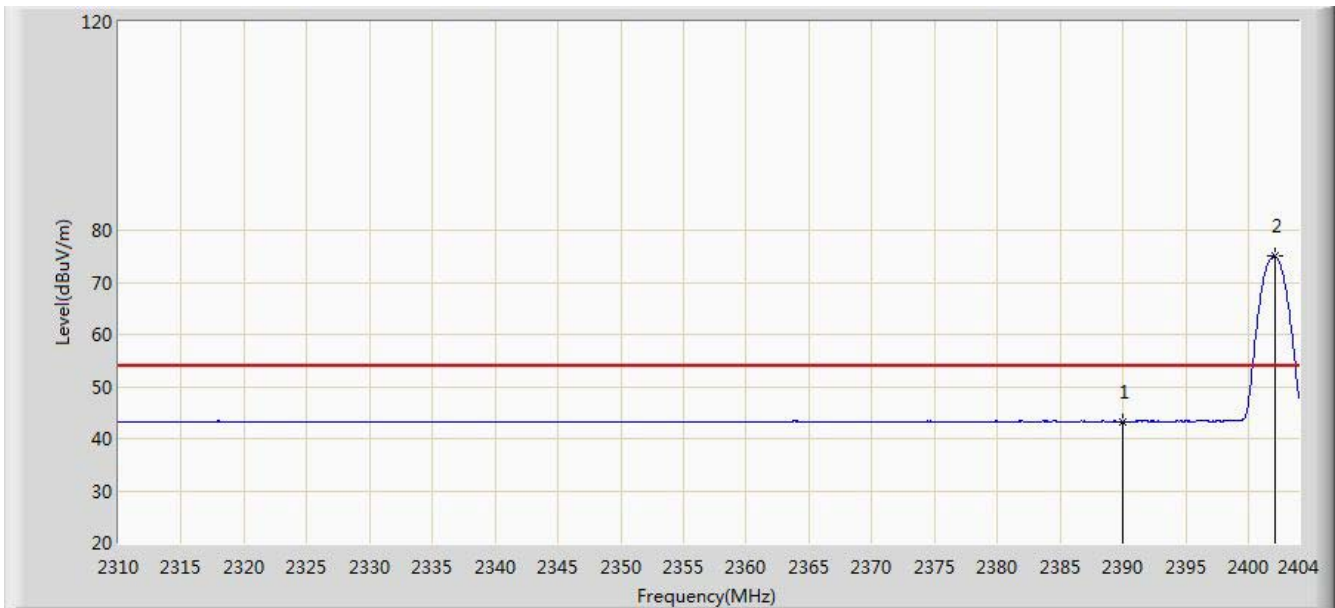


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	56.680	25.996	-17.320	74.000	30.684	PK
2		*	2401.885	87.679	57.018	N/A	N/A	30.661	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 10:23
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Vertical
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2402MHz	

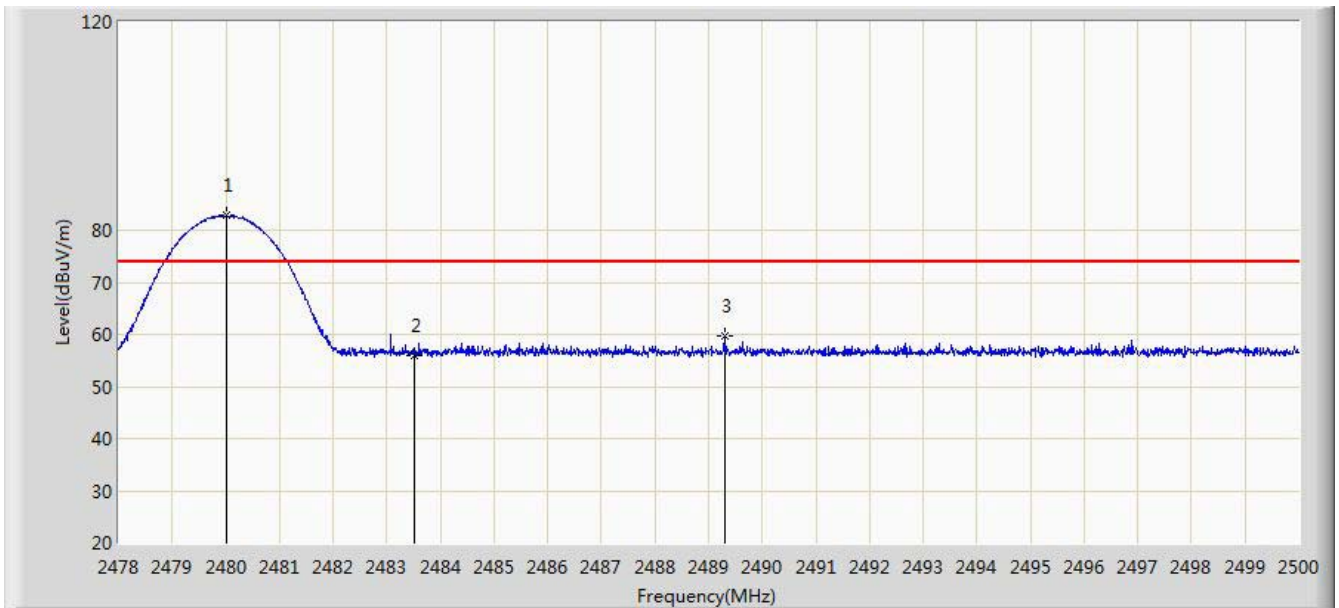


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	43.317	12.633	-10.683	54.000	30.684	AV
2		*	2402.073	75.096	44.435	N/A	N/A	30.661	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 11:25
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2480MHz	

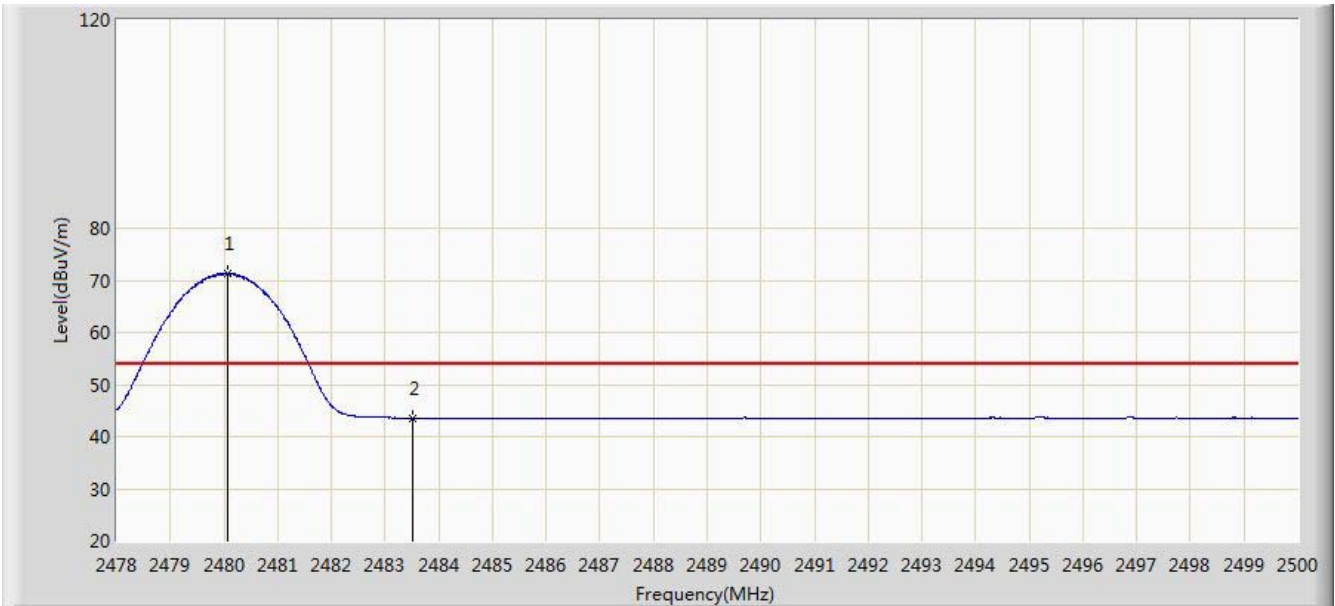


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.002	82.775	52.113	N/A	N/A	30.662	PK
2			2483.500	56.081	25.408	-17.919	74.000	30.673	PK
3			2489.308	59.683	28.993	-14.317	74.000	30.690	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 11:27
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2480MHz	

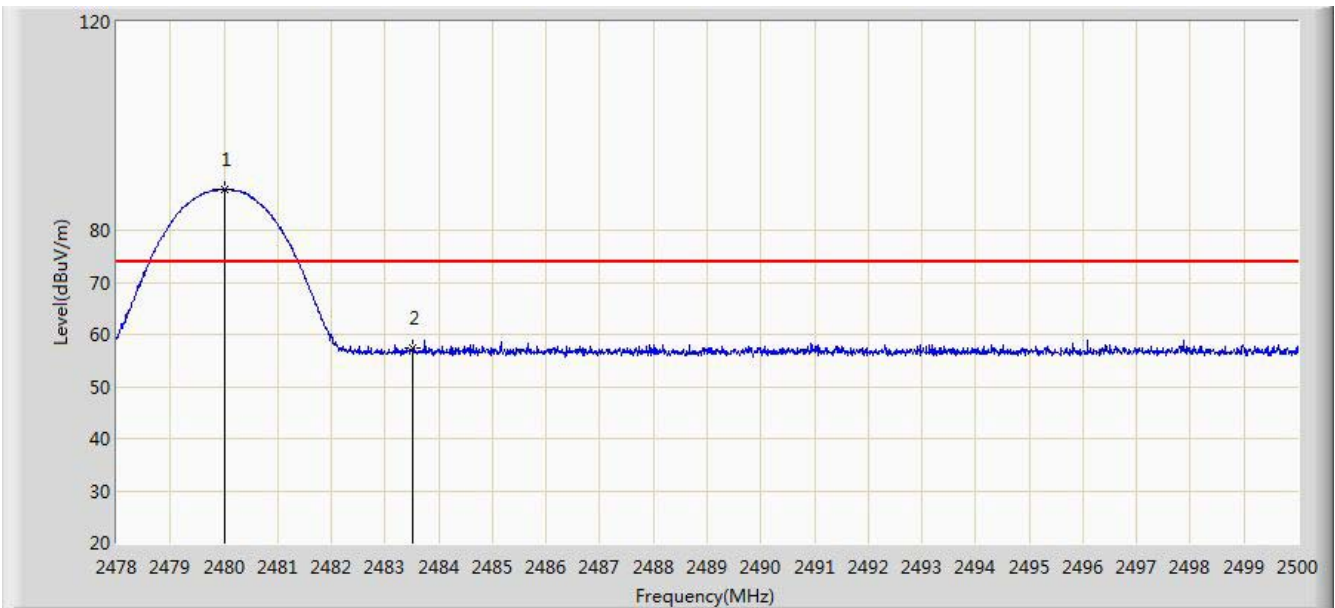


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.079	71.364	40.701	N/A	N/A	30.662	AV
2			2483.500	43.576	12.903	-10.424	54.000	30.673	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 11:28
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2480MHz	

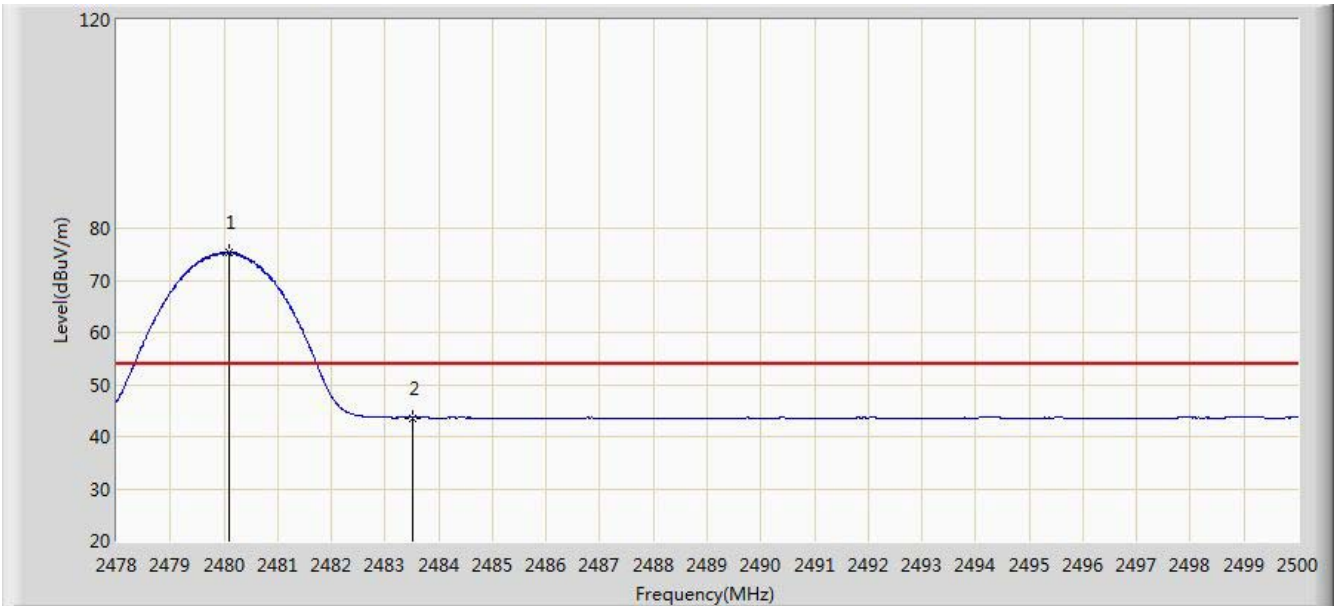


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.002	87.848	57.186	N/A	N/A	30.662	PK
2			2483.500	57.499	26.826	-16.501	74.000	30.673	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2014/11/04 - 11:31
Limit: FCC_Part15.209_RE(3m)	Engineer: Knight Lu
Probe: BBHA9120D_1-18GHz	Polarity: Horizontal
EUT: S950SL	Power: AC 120V/60Hz
Test Mode : 3DH5 at Channel 2480MHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2480.090	75.348	44.685	N/A	N/A	30.662	AV
2			2483.500	43.620	12.947	-10.380	54.000	30.673	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

7.11. AC Conducted Emissions Measurement

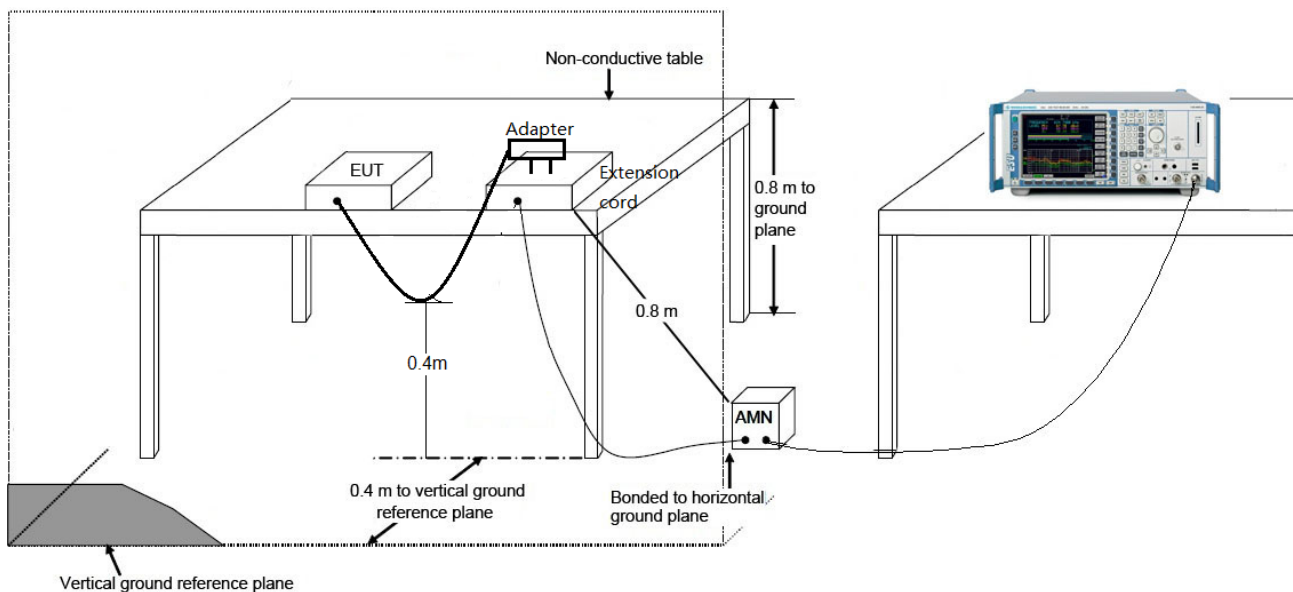
7.11.1. Test Limit

FCC Part 15 Subpart C Paragraph 15.207 Limits		
Frequency (MHz)	QP (dB μ V)	Average (dB μ V)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Note 1: The lower limit shall apply at the transition frequencies.

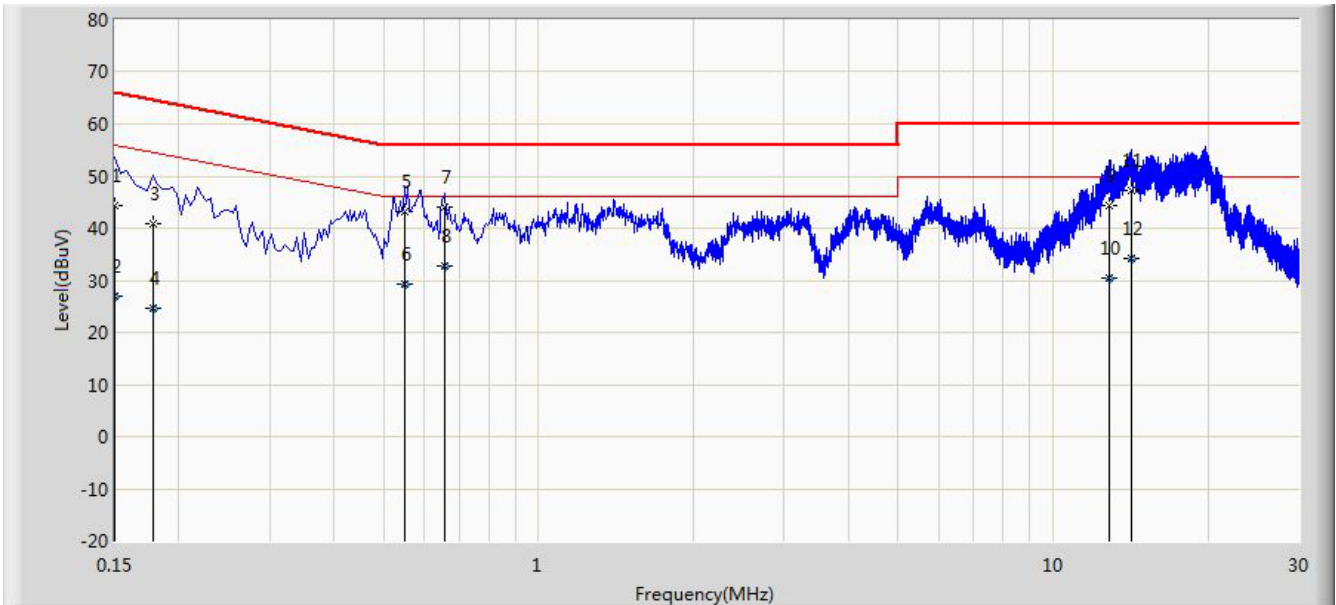
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.5MHz.

7.11.2. Test Setup



7.11.3. Test Result

Site: SR2	Time: 2014/10/31 - 17:22
Limit: FCC_Part15.207_CE_AC Power	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Line
EUT: S950SL	Power: AC 120V/60Hz
Mode : Normal Operation	

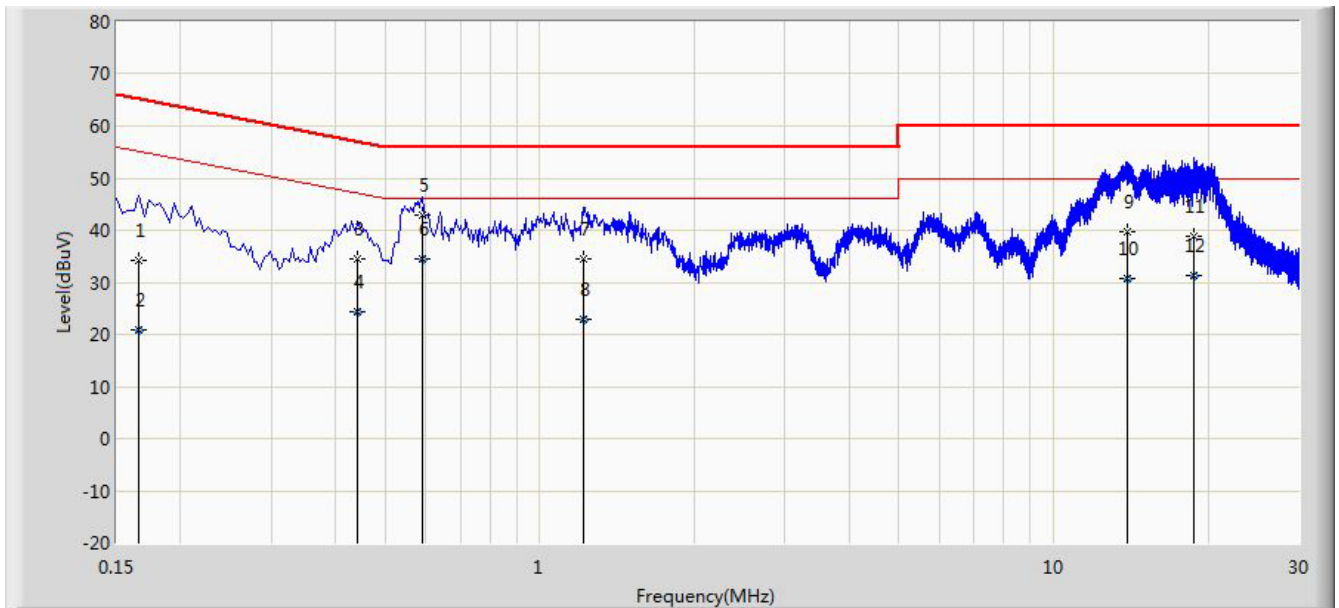


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.150	44.383	33.214	-21.617	66.000	11.168	QP
2			0.150	27.018	15.850	-28.982	56.000	11.168	AV
3			0.178	40.873	30.815	-23.705	64.578	10.058	QP
4			0.178	24.554	14.496	-30.024	54.578	10.058	AV
5			0.550	43.049	32.908	-12.951	56.000	10.141	QP
6			0.550	29.417	19.276	-16.583	46.000	10.141	AV
7		*	0.658	43.921	33.836	-12.079	56.000	10.085	QP
8			0.658	32.687	22.602	-13.313	46.000	10.085	AV
9			12.878	44.264	34.202	-15.736	60.000	10.062	QP
10			12.878	30.441	20.379	-19.559	50.000	10.062	AV
11			14.198	47.344	37.276	-12.656	60.000	10.068	QP
12			14.198	34.078	24.010	-15.922	50.000	10.068	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

Site: SR2	Time: 2014/10/31 - 17:49
Limit: FCC_Part15.207_CE_AC Power	Engineer: Knight Lu
Probe: ENV216_101683_Filter On	Polarity: Neutral
EUT: S950SL	Power: AC 120V/60Hz
Mode : Normal Operation	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.166	34.106	24.035	-31.052	65.158	10.071	QP
2			0.166	20.915	10.844	-34.243	55.158	10.071	AV
3			0.442	34.454	24.310	-22.570	57.024	10.144	QP
4			0.442	24.362	14.218	-22.662	47.024	10.144	AV
5			0.590	42.890	32.754	-13.110	56.000	10.137	QP
6		*	0.590	34.402	24.265	-11.598	46.000	10.137	AV
7			1.218	34.559	24.658	-21.441	56.000	9.901	QP
8			1.218	22.950	13.048	-23.050	46.000	9.901	AV
9			13.934	39.694	29.584	-20.306	60.000	10.110	QP
10			13.934	30.747	20.637	-19.253	50.000	10.110	AV
11			18.758	38.863	28.729	-21.137	60.000	10.134	QP
12			18.758	31.445	21.312	-18.555	50.000	10.134	AV

Note: Measure Level (dBμV) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + LISN Factor (dB)

8. CONCLUSION

The data collected relate only the item(s) tested and show that the **S950SL FCC ID: 2AAA6S950SL** is in compliance with Part 15C of the FCC Rules.

The End