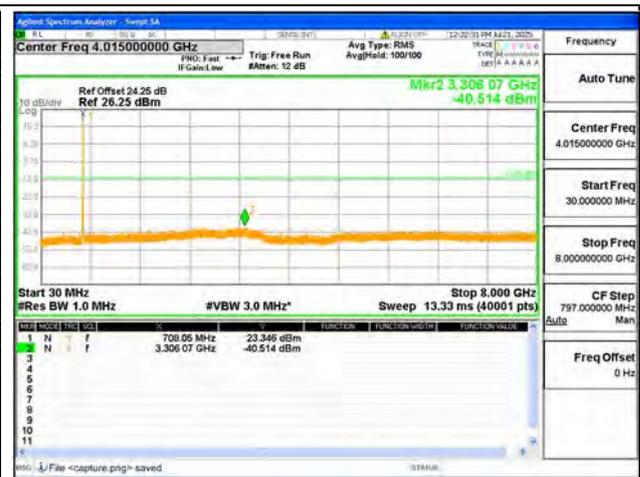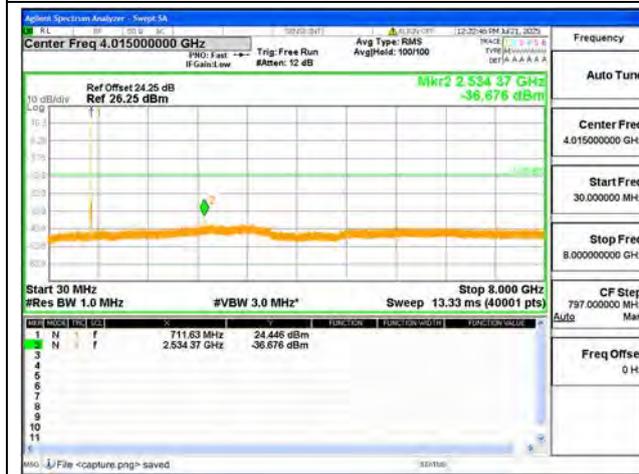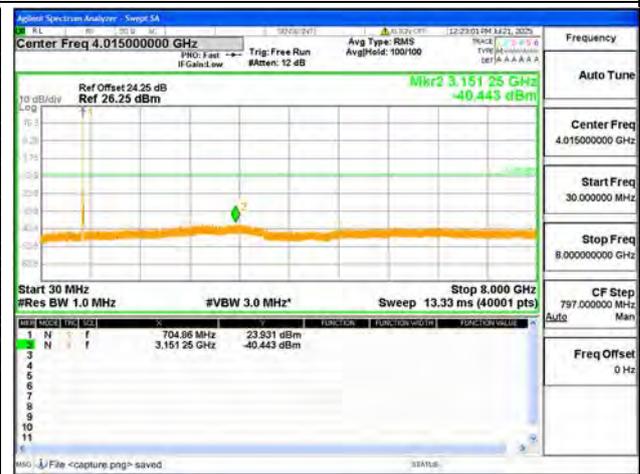B17 / 5MHz / Low CH / QPSK

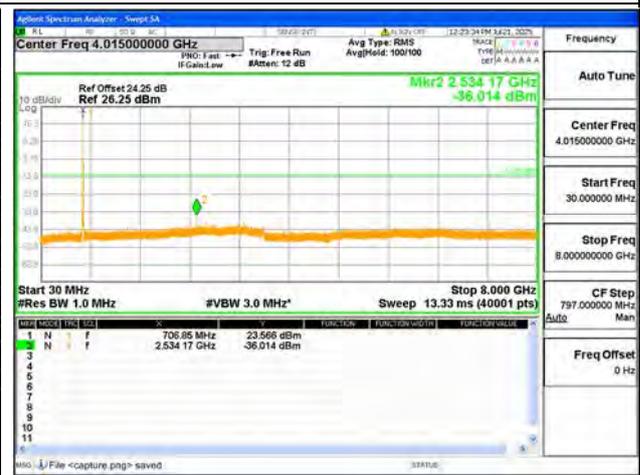B17 / 5MHz / Mid CH / QPSK

B17 / 5MHz / High CH / QPSK

B17 / 10MHz / Low CH / QPSK

B17 / 10MHz / Mid CH / QPSK

B17 / 10MHz / High CH / QPSK

B66 / 1.4MHz / Low CH / QPSK

B66 / 1.4MHz / Mid CH / QPSK

B66 / 1.4MHz / High CH / QPSK

B66 / 3MHz / Low CH / QPSK

B66 / 3MHz / Mid CH / QPSK

B66 / 3MHz / High CH / QPSK

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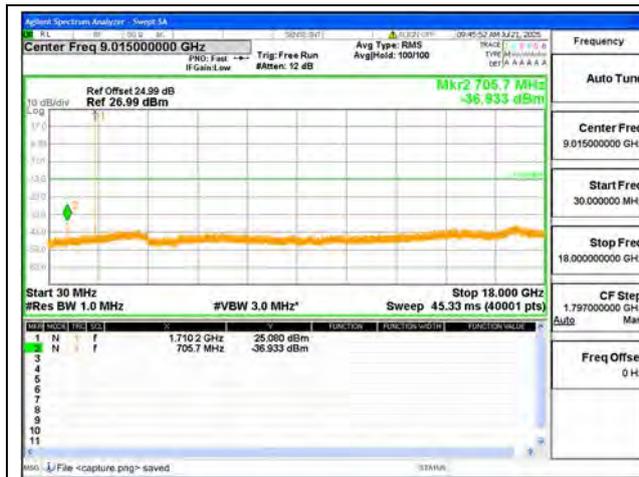
Page **214** of **360**

B66 / 5MHz / Low CH / QPSK

B66 / 5MHz / Mid CH / QPSK

B66 / 5MHz / High CH / QPSK

B66 / 10MHz / Low CH / QPSK

B66 / 10MHz / Mid CH / QPSK

B66 / 10MHz / High CH / QPSK

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B66 / 15MHz / Low CH / QPSK
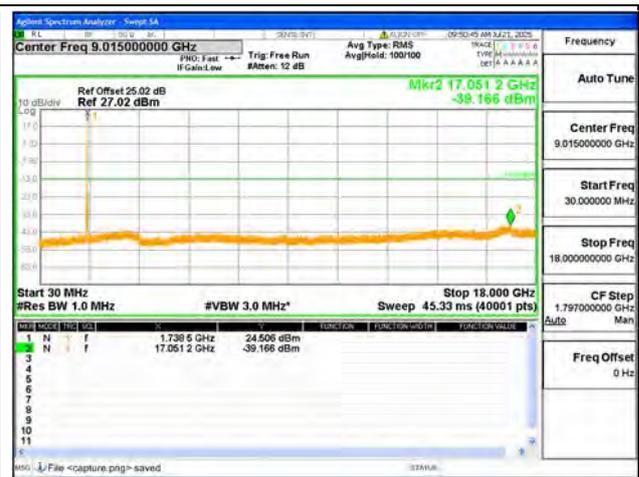
B66 / 15MHz / Mid CH / QPSK
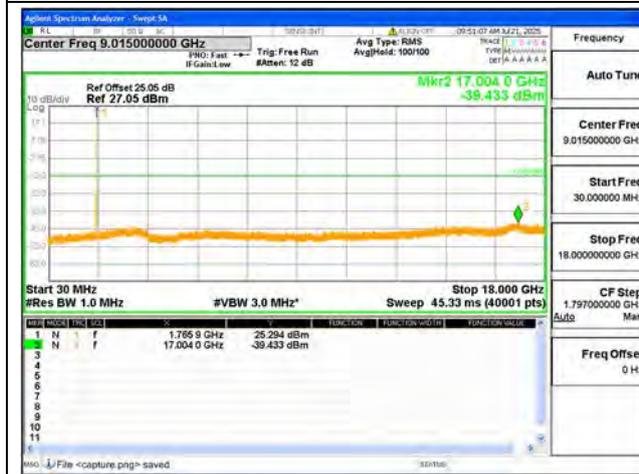
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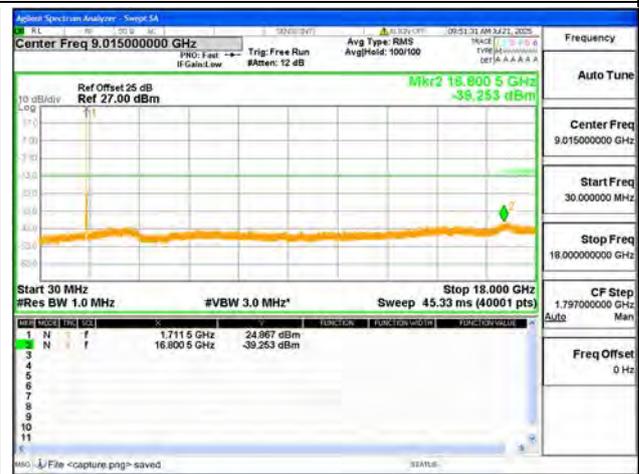
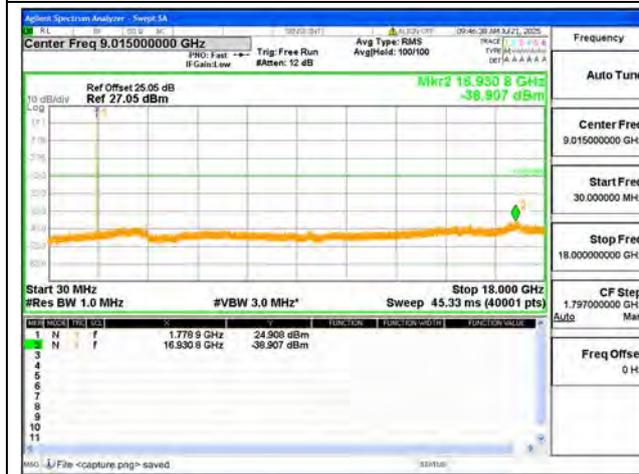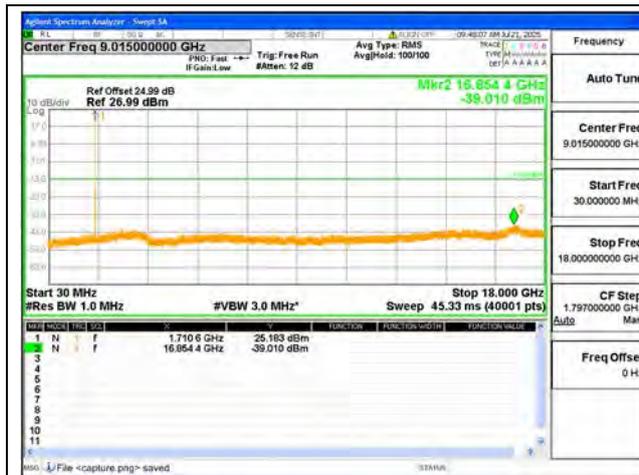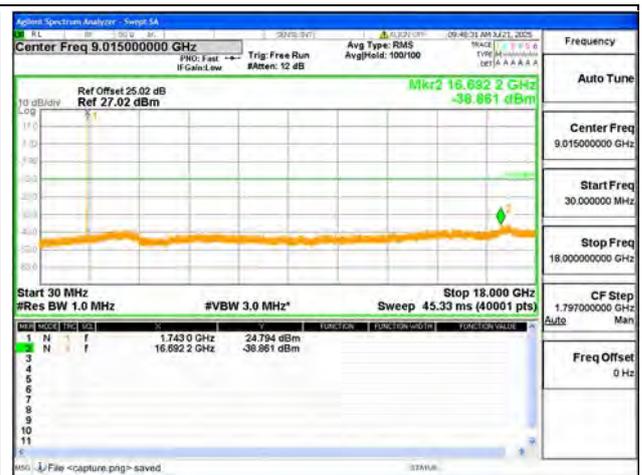
B66 / 20MHz / Low CH / QPSK

B66 / 20MHz / Mid CH / QPSK

B66 / 20MHz / High CH / QPSK

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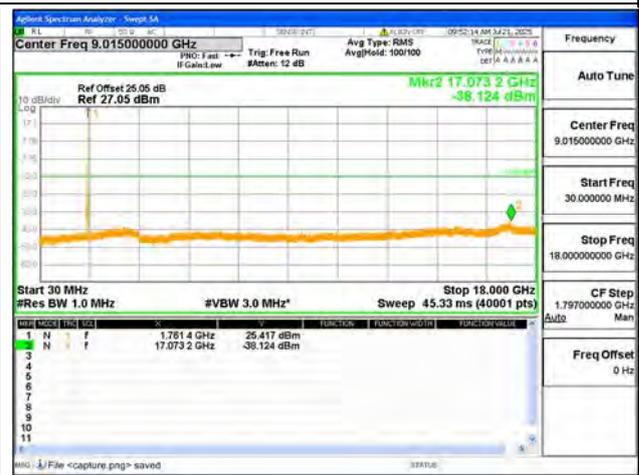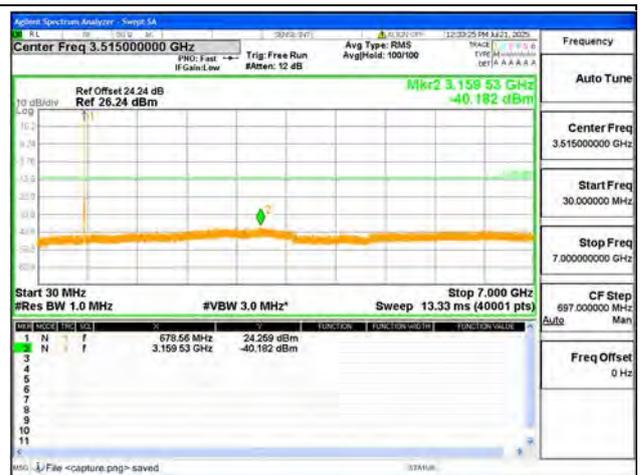
B71 / 5MHz / Low CH / QPSK
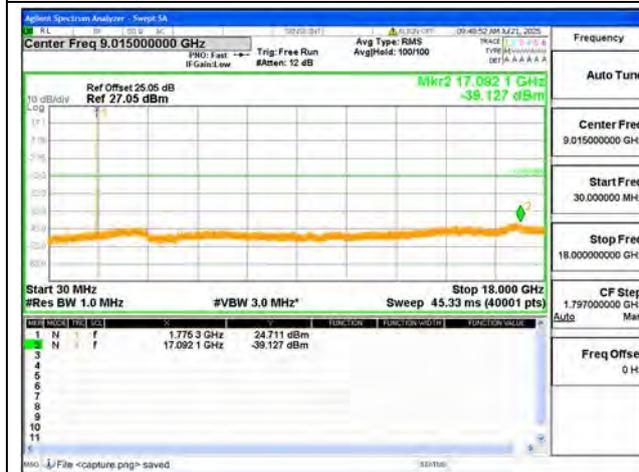
B71 / 5MHz / Mid CH / QPSK
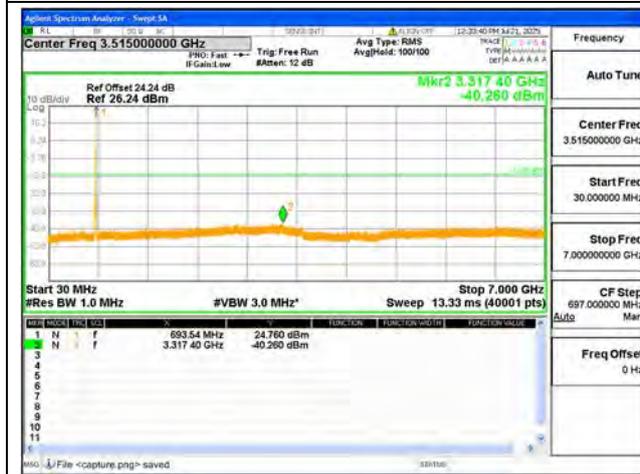
B71 / 5MHz / High CH / QPSK
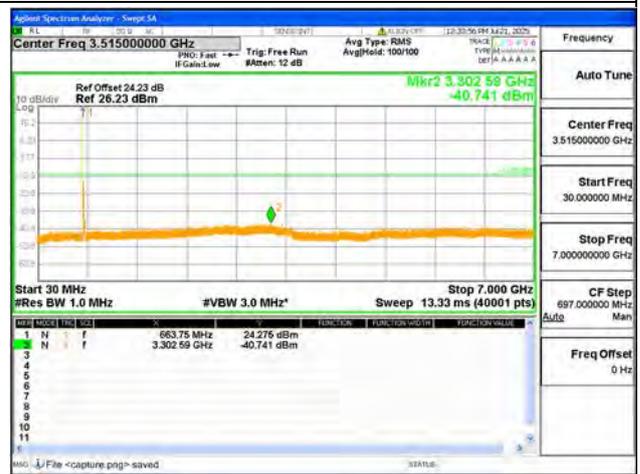
B71 / 10MHz / Low CH / QPSK

B71 / 10MHz / Mid CH / QPSK

B71 / 10MHz / High CH / QPSK

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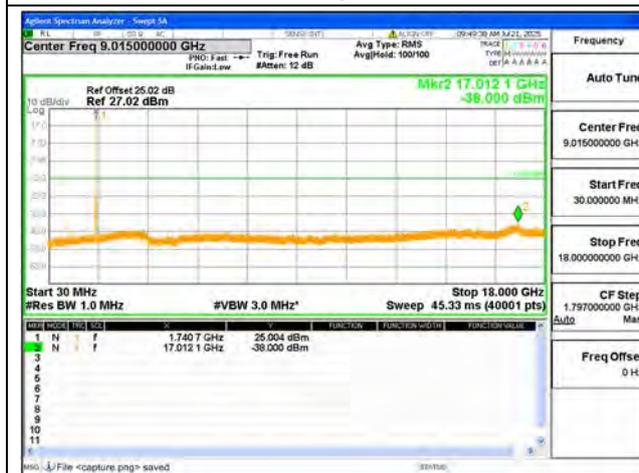Page **217** of **360**
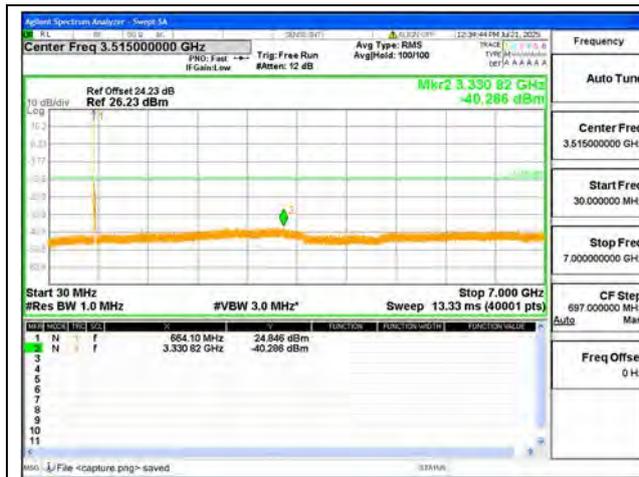
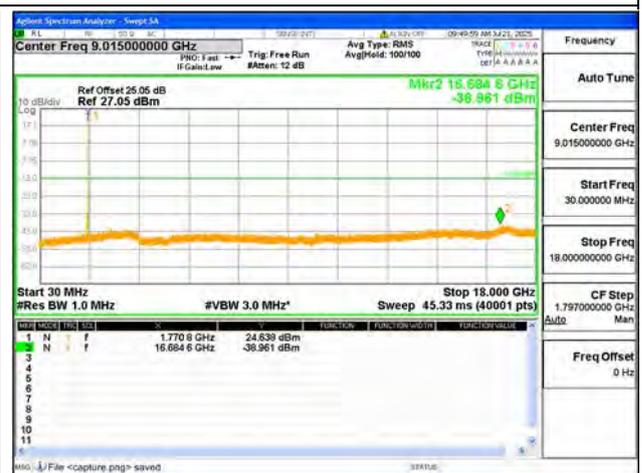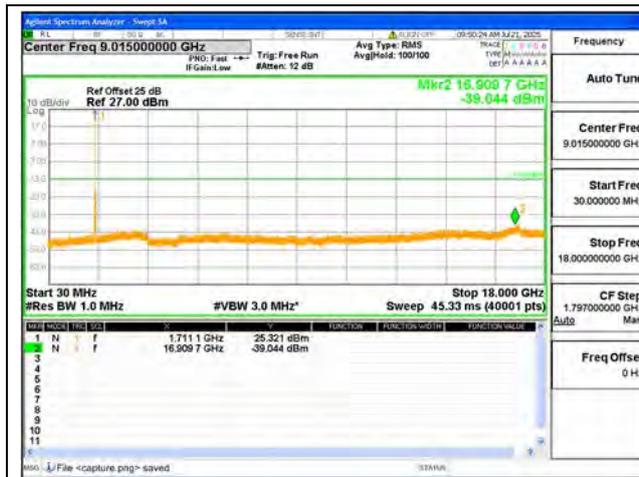B71 / 15MHz / Low CH / QPSK
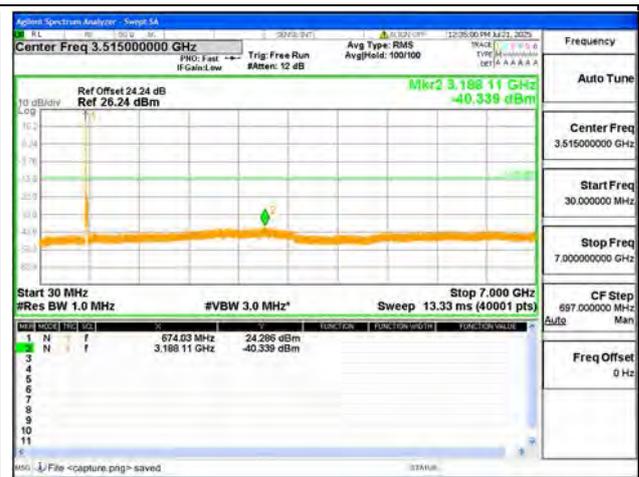
B71 / 15MHz / Mid CH / QPSK

B71 / 15MHz / High CH / QPSK
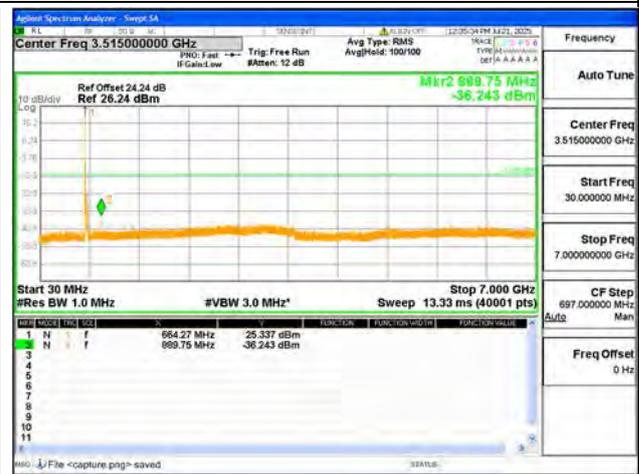
B71 / 20MHz / Low CH / QPSK

B71 / 20MHz / Mid CH / QPSK

B71 / 20MHz / High CH / QPSK

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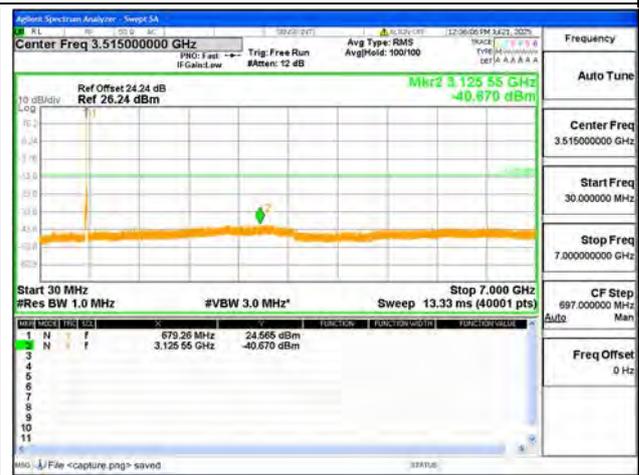
2.6. Band Edge

2.6.1. Requirement

Band 2

According to FCC section 24.238(a), for operations in the 1850–1910MHz bands, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB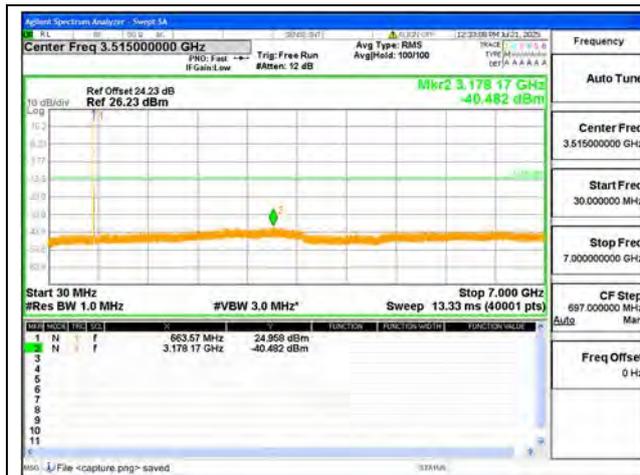 in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 4

According to FCC section 27.53(h), for operations in the 1710–1755MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 5

According to FCC section 22.917(a), for operations in the 824–849MHz bands, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB in a 100kHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

Band 12, 17, 71

According to FCC section 27.53(g), for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

Band 13

According to FCC section 27.53(c)(2), any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB in a 100kHz bandwidth. However, in the 100 kHz bands immediately outside and

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adjacent to the frequency block, a resolution bandwidth of at least 30 kHz may be employed.

2.6.2. Test Description
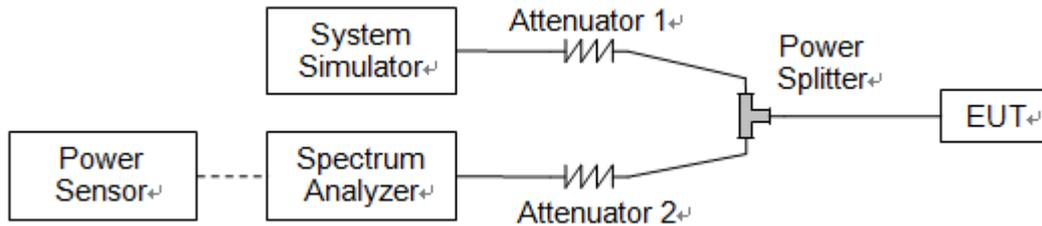
The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.6.3. Test Procedure

KDB 971168 D01v03 Section 6.0 and ANSI/TIA-603-E-2016.

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2.6.4. Test Result

B2 / 1.4MHz / Low CH / QPSK / 1 RB

B2 / 1.4MHz / Low CH / QPSK / FULL RB

B2 / 1.4MHz / High CH / QPSK / 1 RB

B2 / 1.4MHz / High CH / QPSK / FULL RB

B2 / 3MHz / Low CH / QPSK / 1 RB

B2 / 3MHz / Low CH / QPSK / FULL RB

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B2 / 3MHz / High CH / QPSK / 1 RB

B2 / 3MHz / High CH / QPSK / FULL RB

B2 / 5MHz / Low CH / QPSK / 1 RB

B2 / 5MHz / Low CH / QPSK / FULL RB

B2 / 5MHz / High CH / QPSK / 1 RB

B2 / 5MHz / High CH / QPSK / FULL RB

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B2 / 10MHz / Low CH / QPSK / 1 RB

B2 / 10MHz / Low CH / QPSK / FULL RB

B2 / 10MHz / High CH / QPSK / 1 RB

B2 / 10MHz / High CH / QPSK / FULL RB
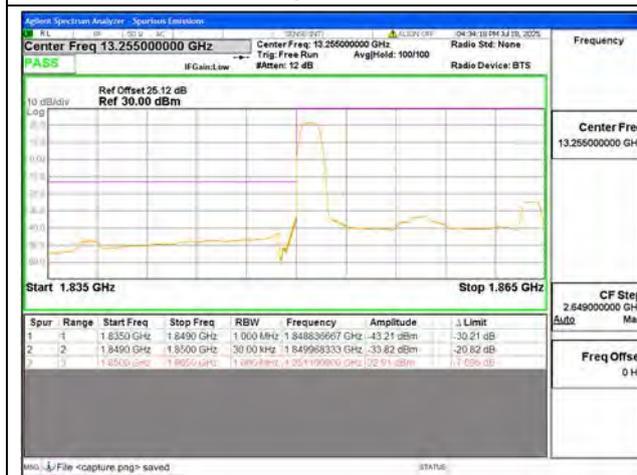
B2 / 15MHz / Low CH / QPSK / 1 RB

B2 / 15MHz / Low CH / QPSK / FULL RB

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B2 / 15MHz / High CH / QPSK / 1 RB

B2 / 15MHz / High CH / QPSK / FULL RB

B2 / 20MHz / Low CH / QPSK / 1 RB

B2 / 20MHz / Low CH / QPSK / FULL RB

B2 / 20MHz / High CH / QPSK / 1 RB

B2 / 20MHz / High CH / QPSK / FULL RB

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B4 / 1.4MHz / Low CH / QPSK / 1 RB

B4 / 1.4MHz / Low CH / QPSK / FULL RB

B4 / 1.4MHz / High CH / QPSK / 1 RB

B4 / 1.4MHz / High CH / QPSK / FULL RB

B4 / 3MHz / Low CH / QPSK / 1 RB

B4 / 3MHz / Low CH / QPSK / FULL RB

B4 / 3MHz / High CH / QPSK / 1 RB

B4 / 3MHz / High CH / QPSK / FULL RB

B4 / 5MHz / Low CH / QPSK / 1 RB

B4 / 5MHz / Low CH / QPSK / FULL RB

B4 / 5MHz / High CH / QPSK / 1 RB

B4 / 5MHz / High CH / QPSK / FULL RB

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B4 / 10MHz / Low CH / QPSK / 1 RB

B4 / 10MHz / Low CH / QPSK / FULL RB
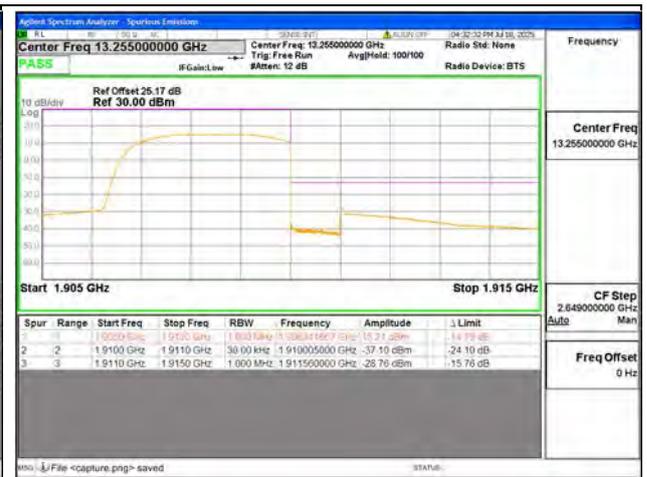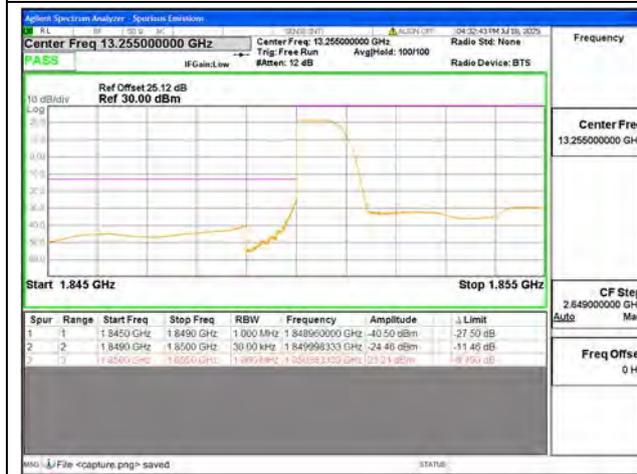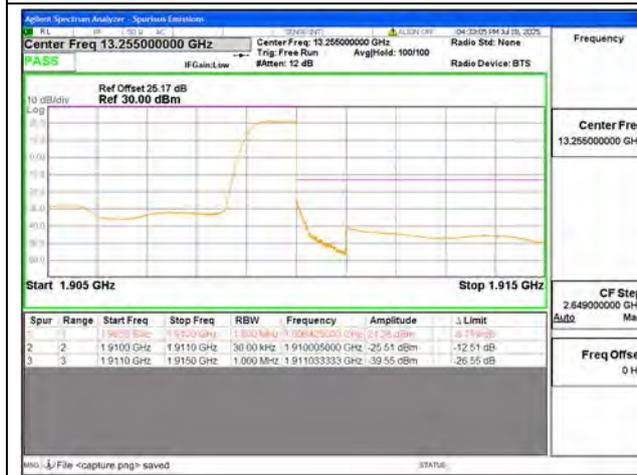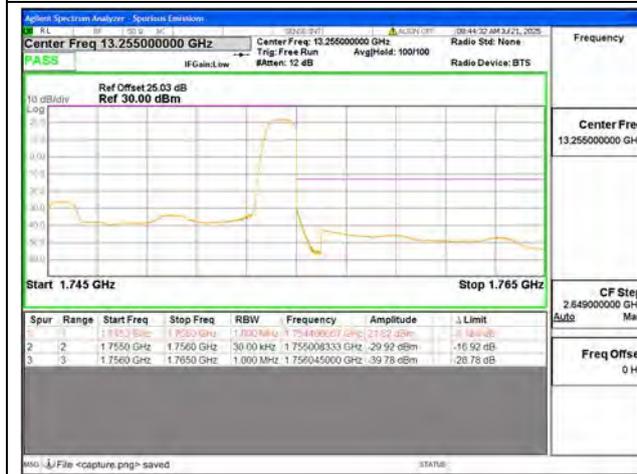

B4 / 10MHz / High CH / QPSK / 1 RB

B4 / 10MHz / High CH / QPSK / FULL RB

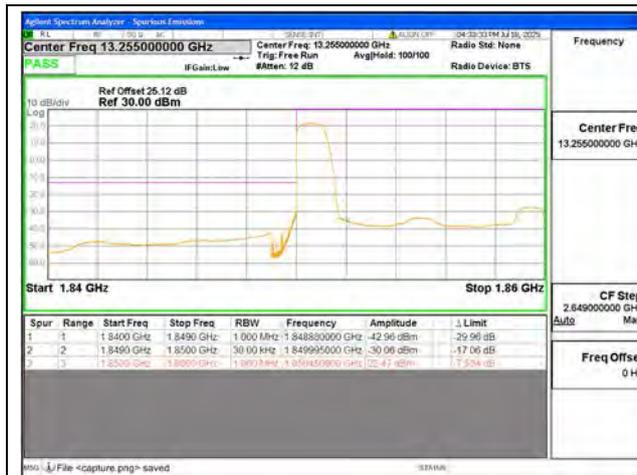B4 / 15MHz / Low CH / QPSK / 1 RB

B4 / 15MHz / Low CH / QPSK / FULL RB

B4 / 15MHz / High CH / QPSK / 1 RB

B4 / 15MHz / High CH / QPSK / FULL RB

B4 / 20MHz / Low CH / QPSK / 1 RB

B4 / 20MHz / Low CH / QPSK / FULL RB
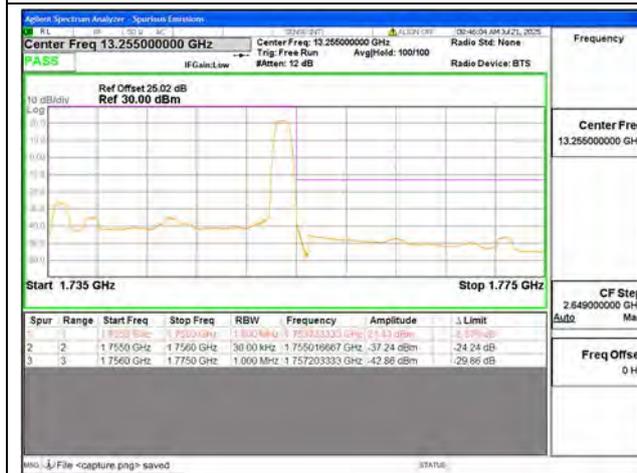
B4 / 20MHz / High CH / QPSK / 1 RB

B4 / 20MHz / High CH / QPSK / FULL RB

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B5 / 1.4MHz / Low CH / QPSK / 1 RB

B5 / 1.4MHz / Low CH / QPSK / FULL RB
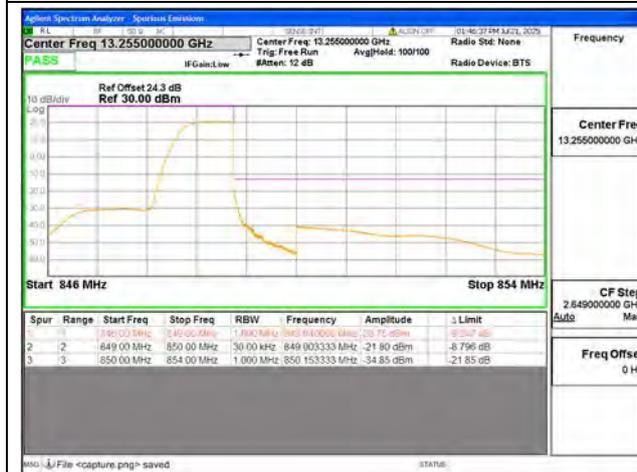
B5 / 1.4MHz / High CH / QPSK / 1 RB

B5 / 1.4MHz / High CH / QPSK / FULL RB

B5 / 3MHz / Low CH / QPSK / 1 RB

B5 / 3MHz / Low CH / QPSK / FULL RB

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B5 / 3MHz / High CH / QPSK / 1 RB

B5 / 3MHz / High CH / QPSK / FULL RB

B5 / 5MHz / Low CH / QPSK / 1 RB

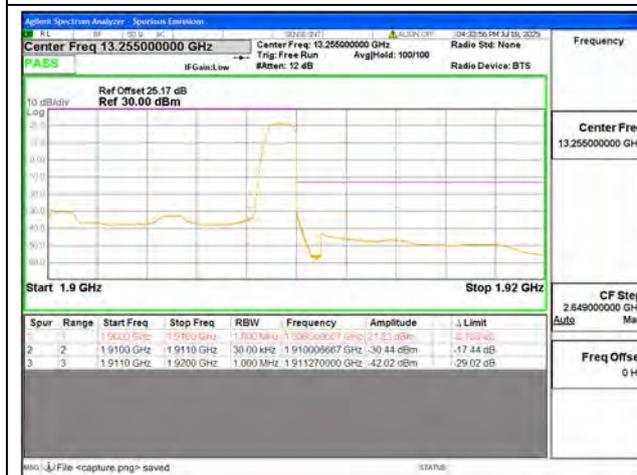B5 / 5MHz / Low CH / QPSK / FULL RB

B5 / 5MHz / High CH / QPSK / 1 RB

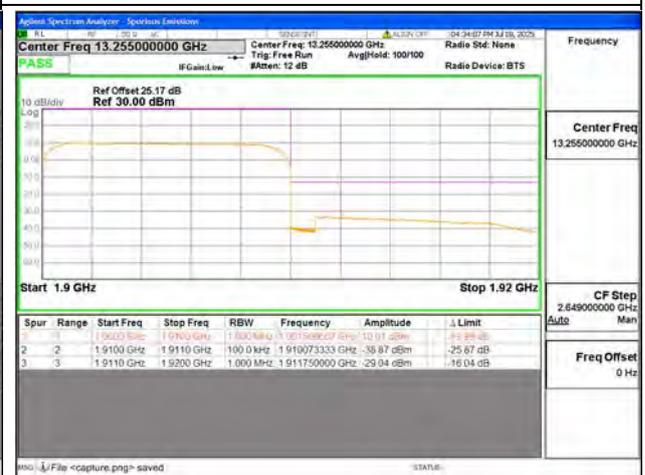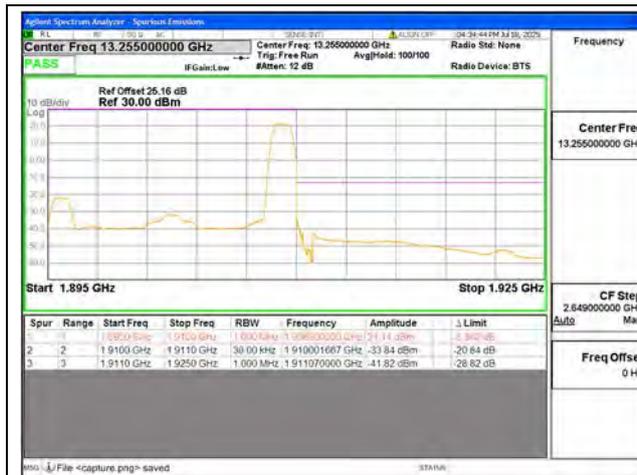B5 / 5MHz / High CH / QPSK / FULL RB

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B5 / 10MHz / Low CH / QPSK / 1 RB

B5 / 10MHz / Low CH / QPSK / FULL RB

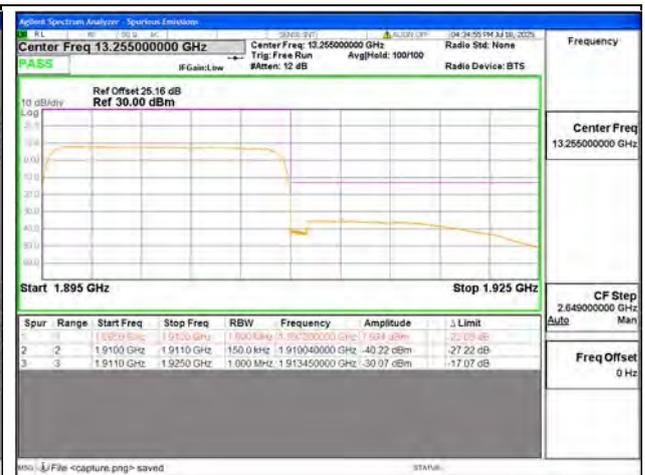B5 / 10MHz / High CH / QPSK / 1 RB

B5 / 10MHz / High CH / QPSK / FULL RB

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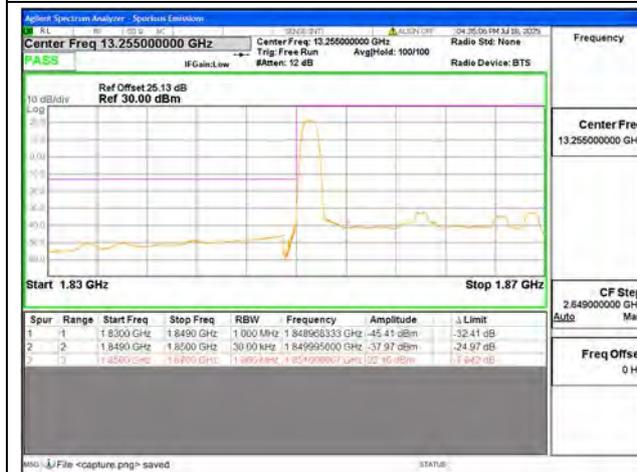Page **231** of **360**

B7 / 5MHz / Low CH / QPSK / 1 RB

B7 / 5MHz / Low CH / QPSK / FULL RB

B7 / 5MHz / High CH / QPSK / 1 RB

B7 / 5MHz / High CH / QPSK / FULL RB

B7 / 10MHz / Low CH / QPSK / 1 RB

B7 / 10MHz / Low CH / QPSK / FULL RB

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B7 / 10MHz / High CH / QPSK / 1 RB

B7 / 10MHz / High CH / QPSK / FULL RB

B7 / 15MHz / Low CH / QPSK / 1 RB
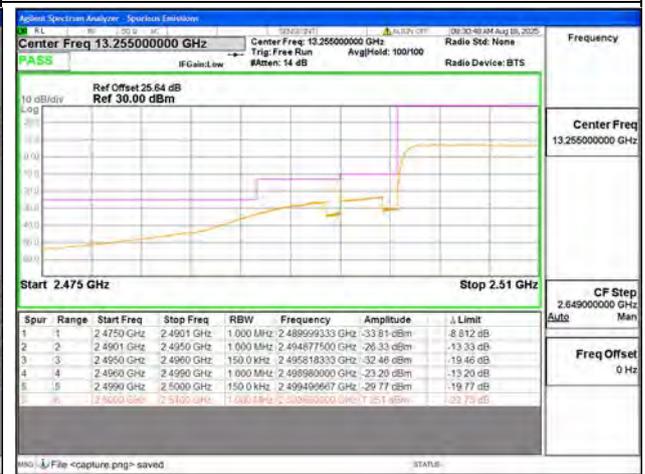
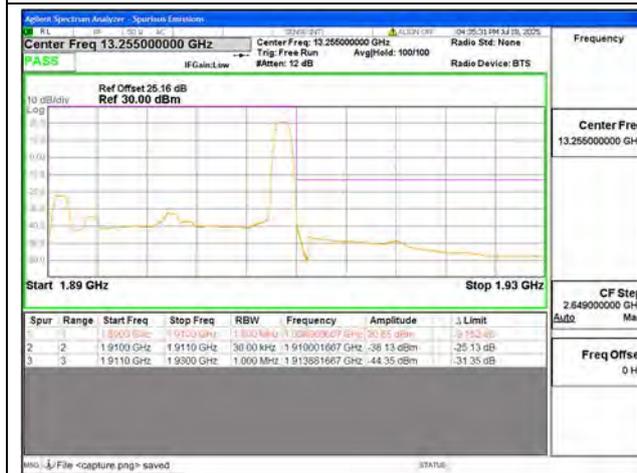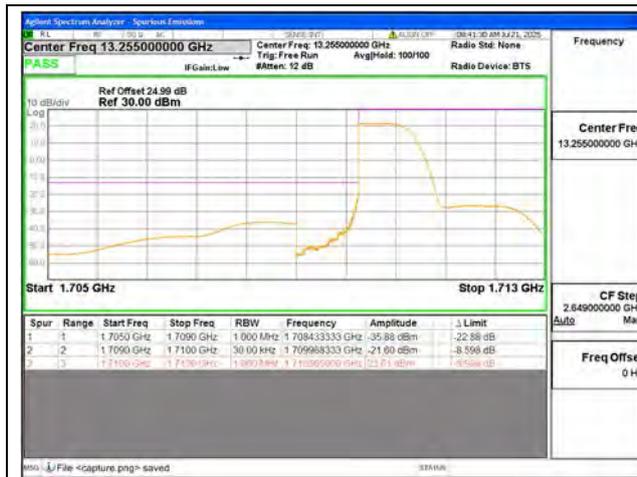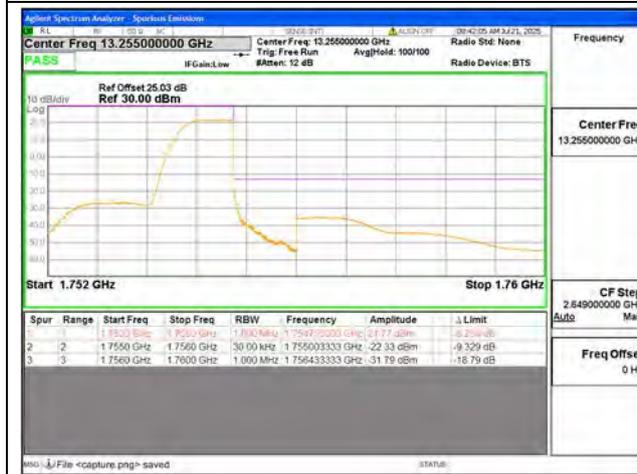B7 / 15MHz / Low CH / QPSK / FULL RB

B7 / 15MHz / High CH / QPSK / 1 RB

B7 / 15MHz / High CH / QPSK / FULL RB

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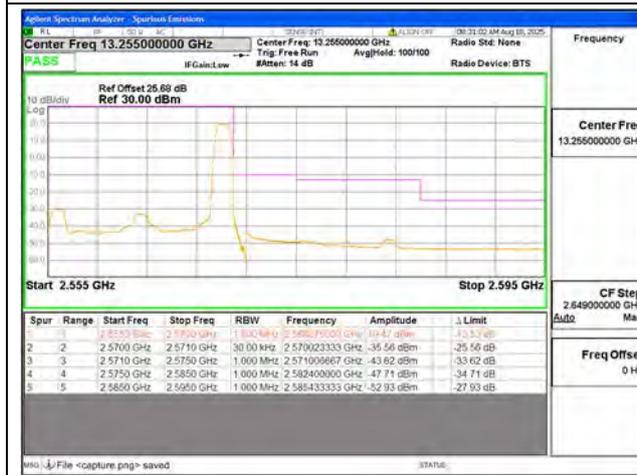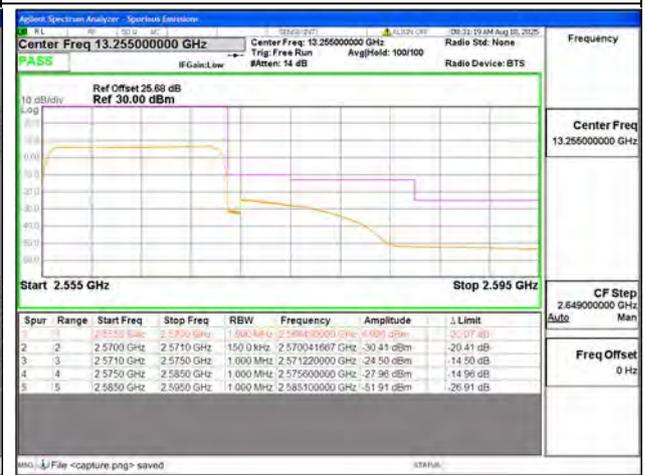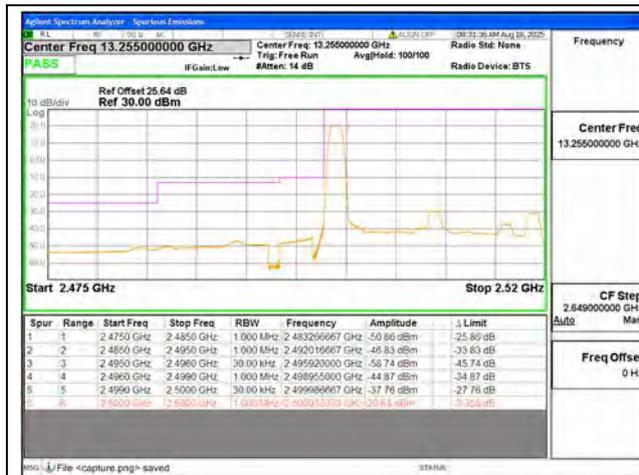
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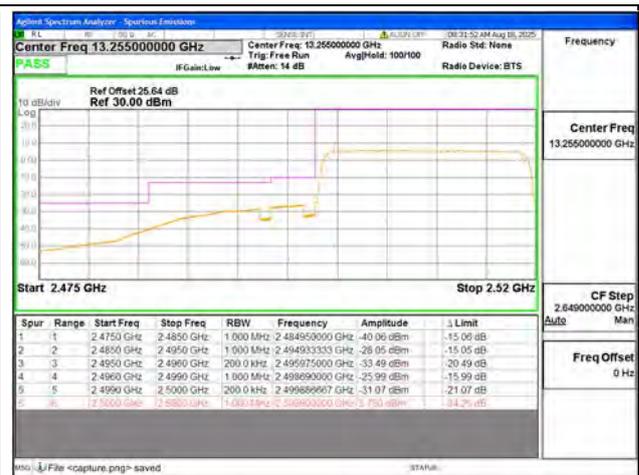
B7 / 20MHz / Low CH / QPSK / FULL RB

B7 / 20MHz / High CH / QPSK / 1 RB
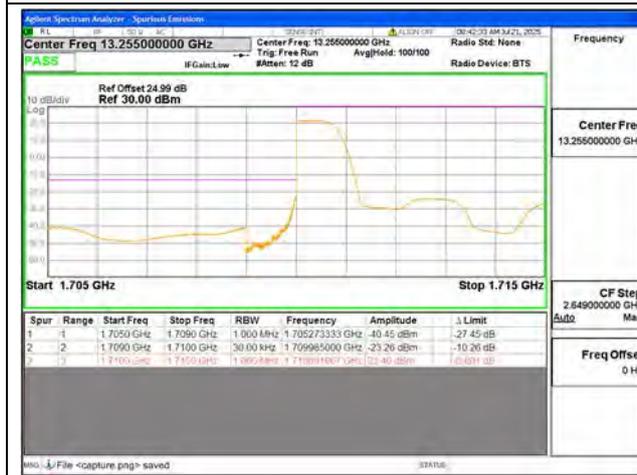

B7 / 20MHz / High CH / QPSK / FULL RB

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B12 / 1.4MHz / Low CH / QPSK / 1 RB

B12 / 1.4MHz / Low CH / QPSK / FULL RB
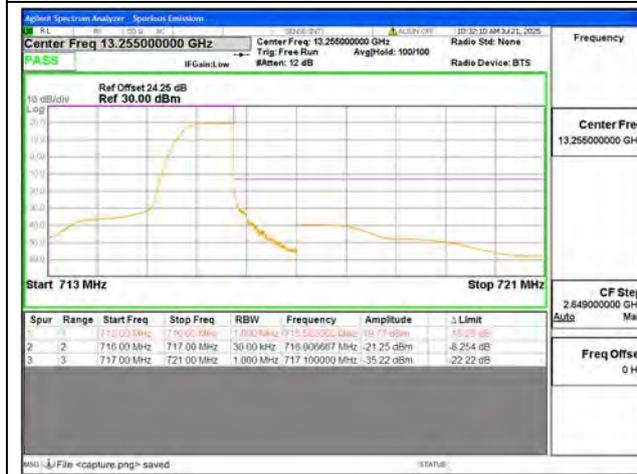
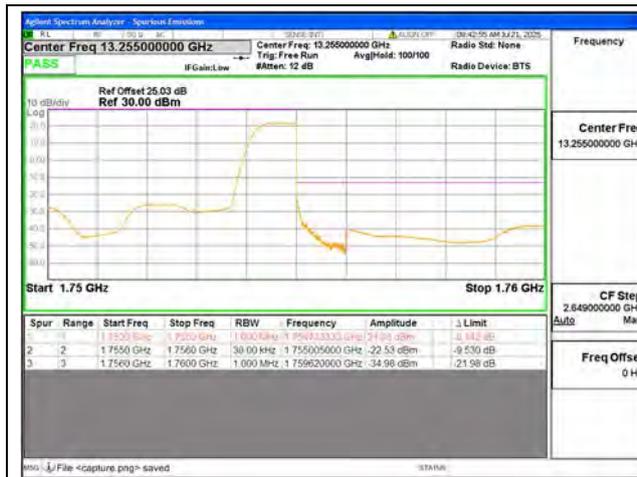B12 / 1.4MHz / High CH / QPSK / 1 RB
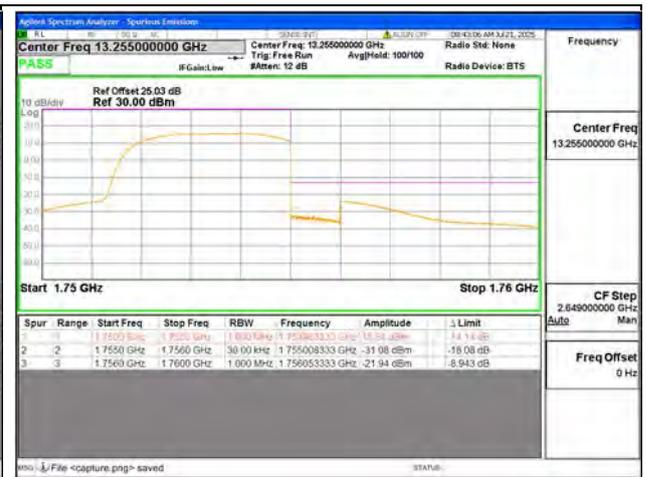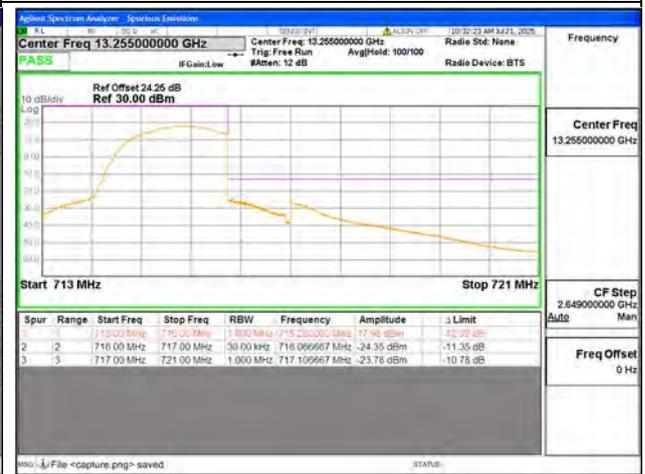

B12 / 1.4MHz / High CH / QPSK / FULL RB
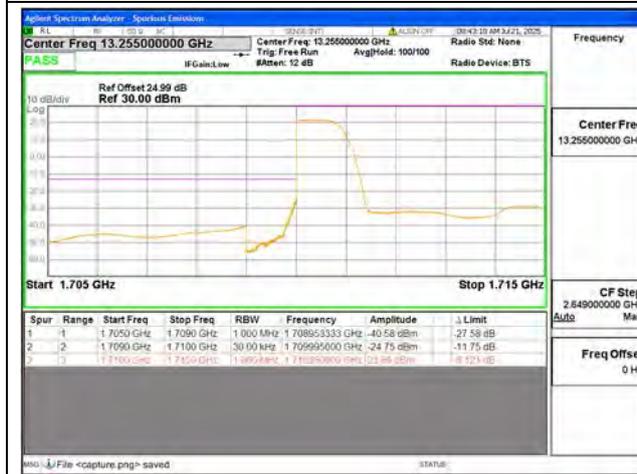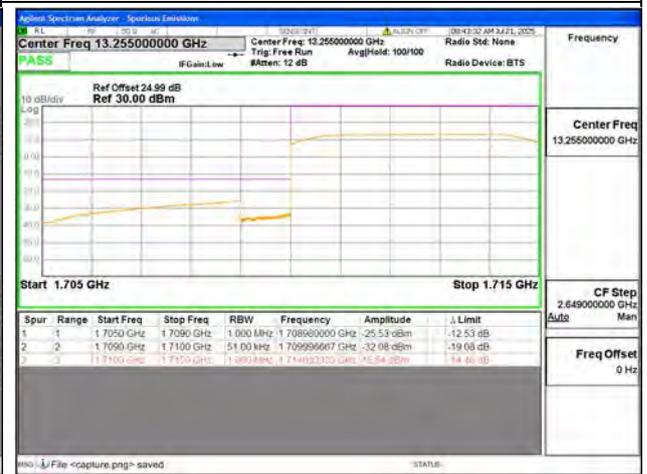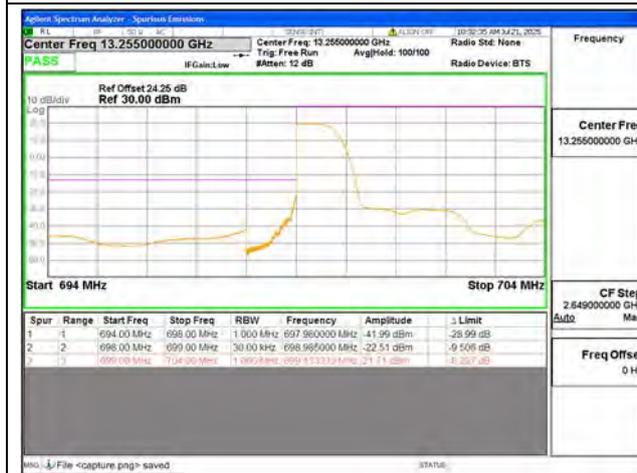

B12 / 3MHz / Low CH / QPSK / 1 RB

B12 / 3MHz / Low CH / QPSK / FULL RB

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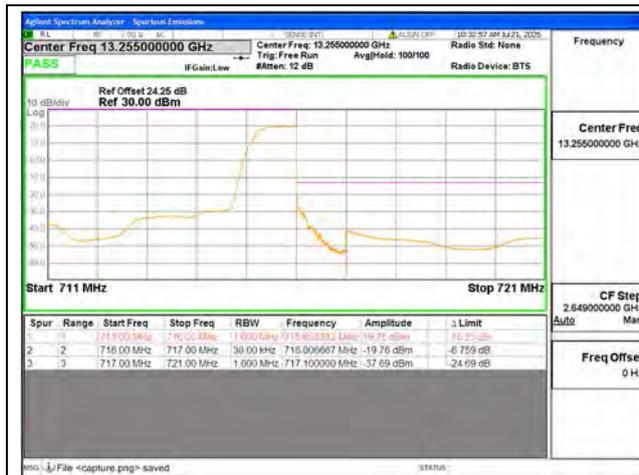
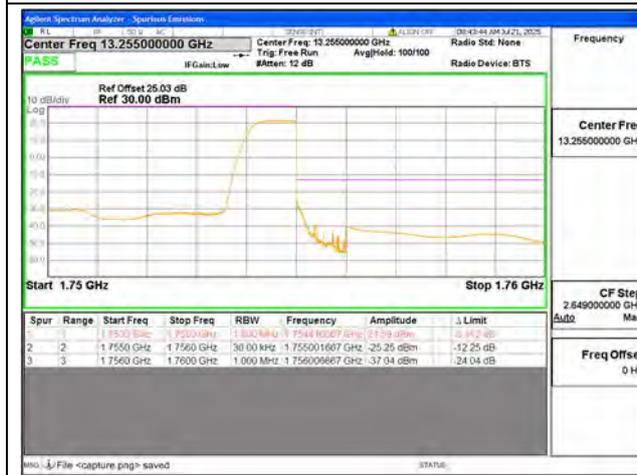B12 / 3MHz / High CH / QPSK / 1 RB
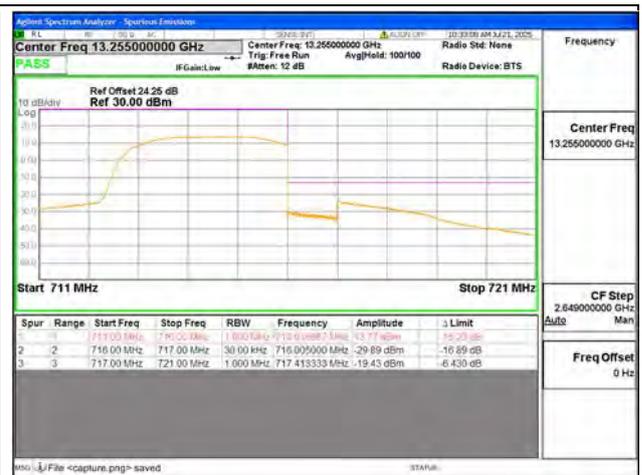
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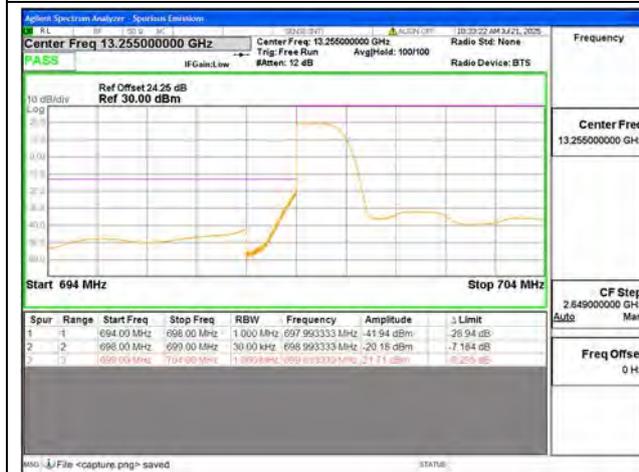
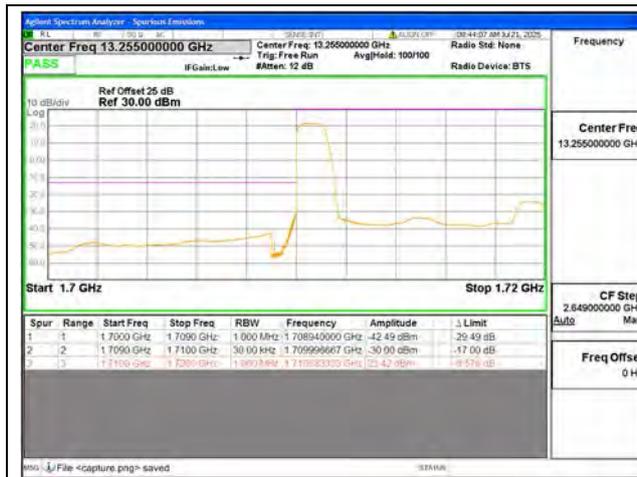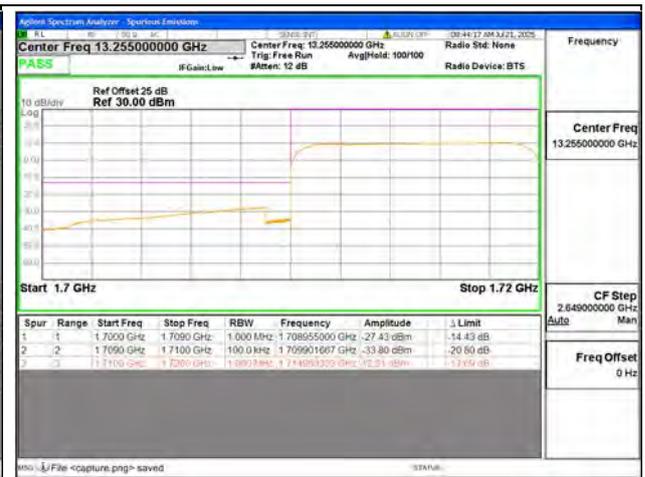B12 / 5MHz / Low CH / QPSK / 1 RB

B12 / 5MHz / Low CH / QPSK / FULL RB
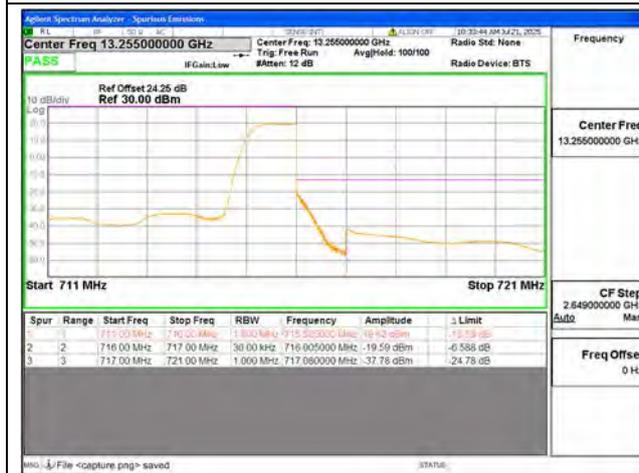
B12 / 5MHz / High CH / QPSK / 1 RB

B12 / 5MHz / High CH / QPSK / FULL RB

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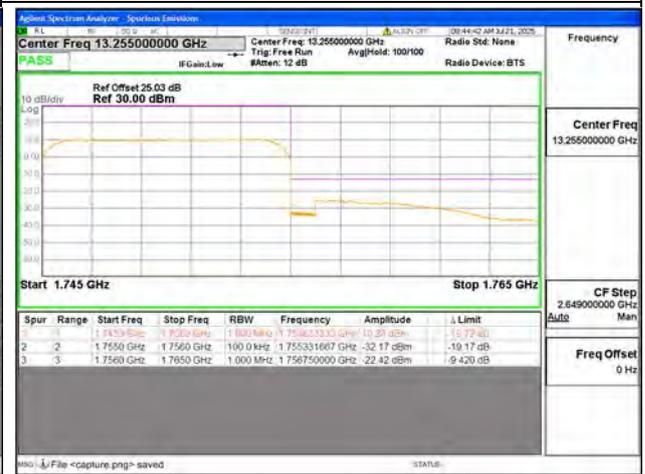
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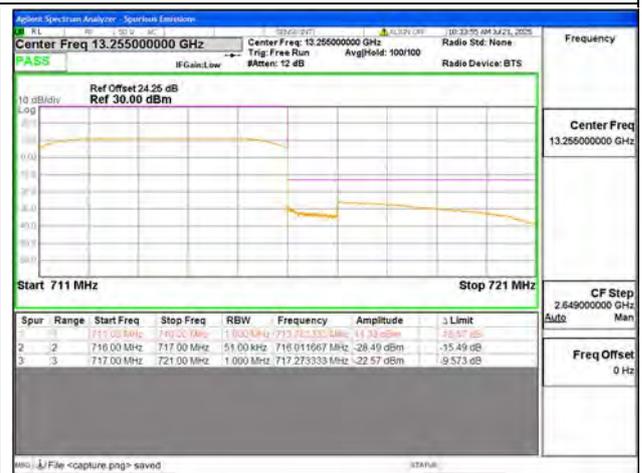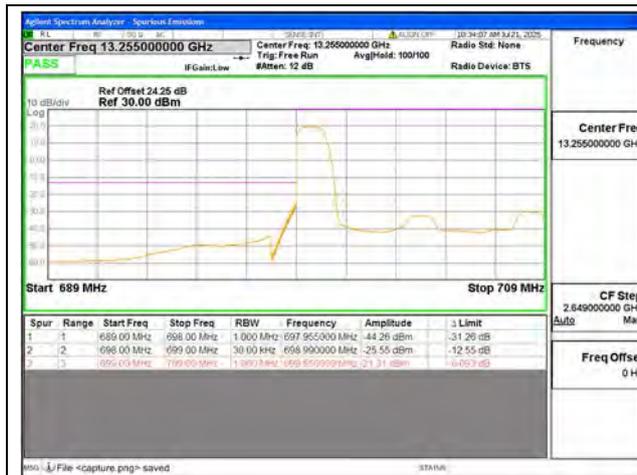
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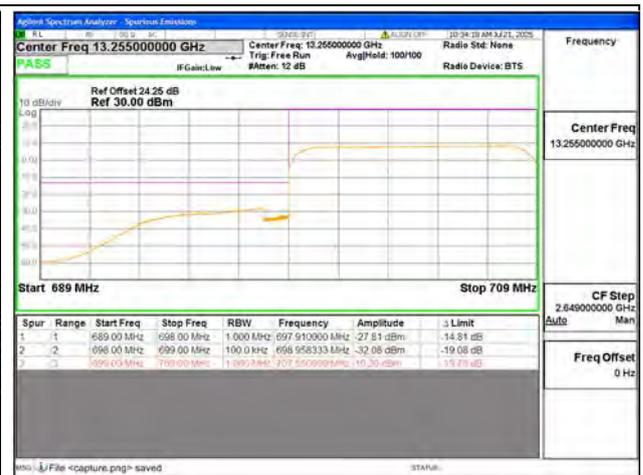
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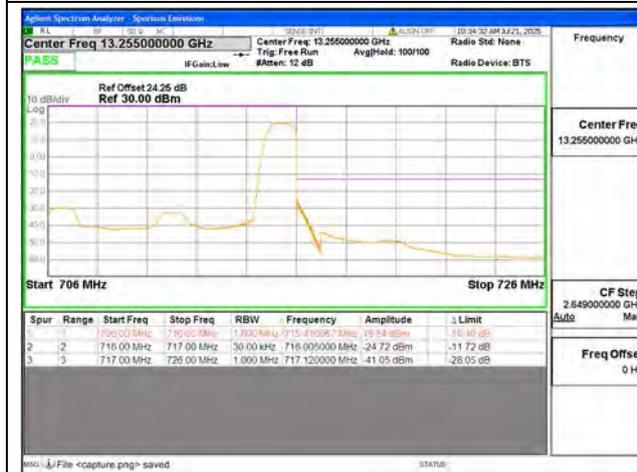
B12 / 10MHz / High CH / QPSK / 1 RB

B12 / 10MHz / High CH / QPSK / FULL RB

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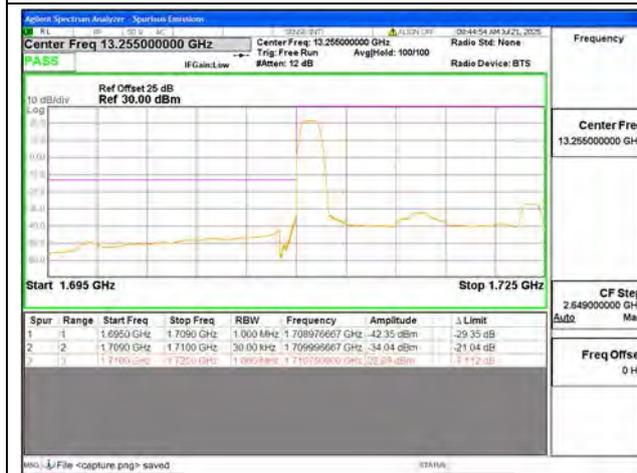Page **237** of **360**
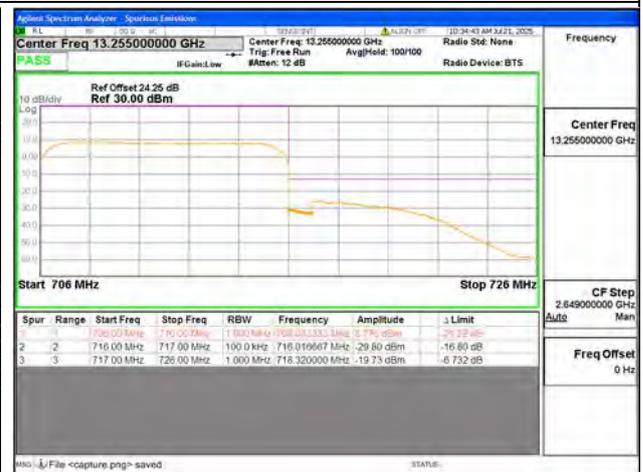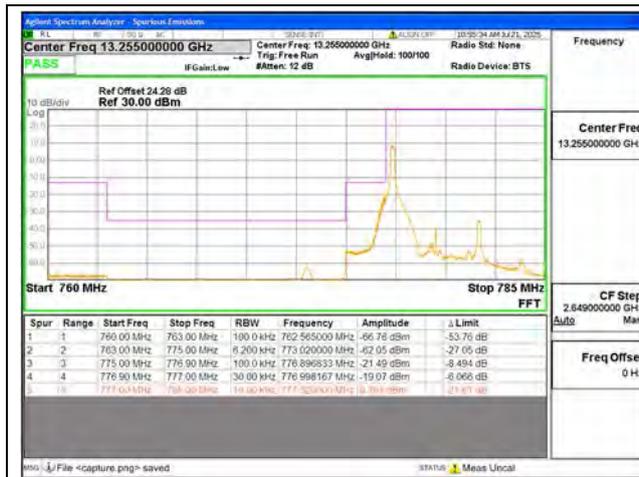
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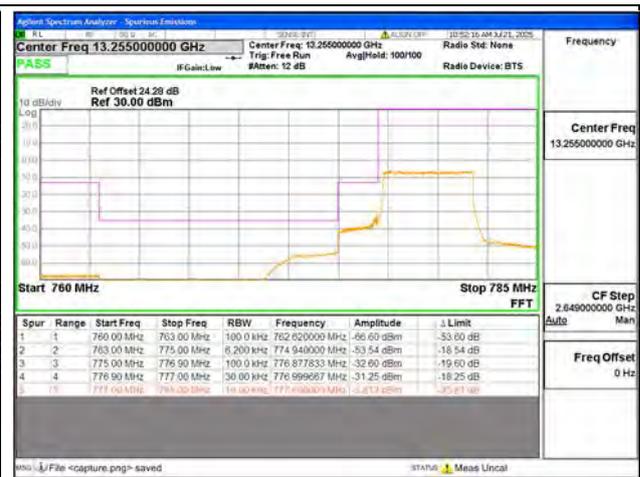
B13 / 5MHz / Low CH / QPSK / FULL RB
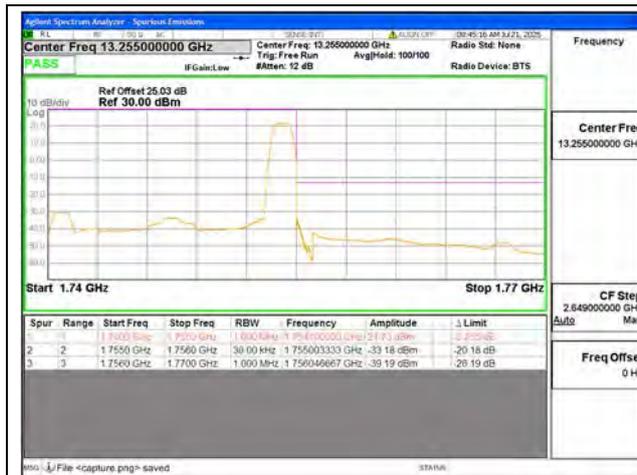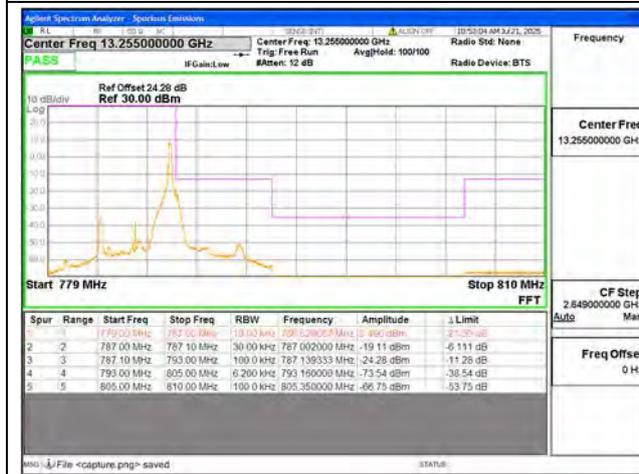
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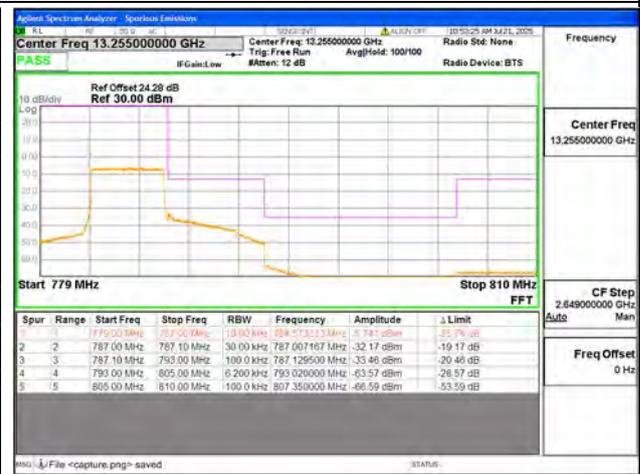
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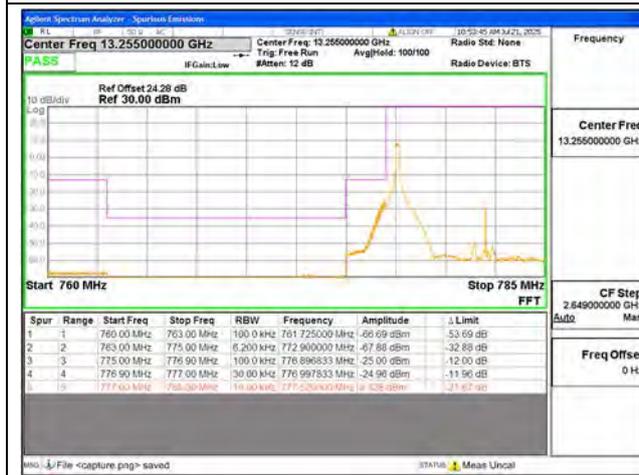
B13 / 10MHz / Low CH / QPSK / 1 RB

B13 / 10MHz / Low CH / QPSK / FULL RB

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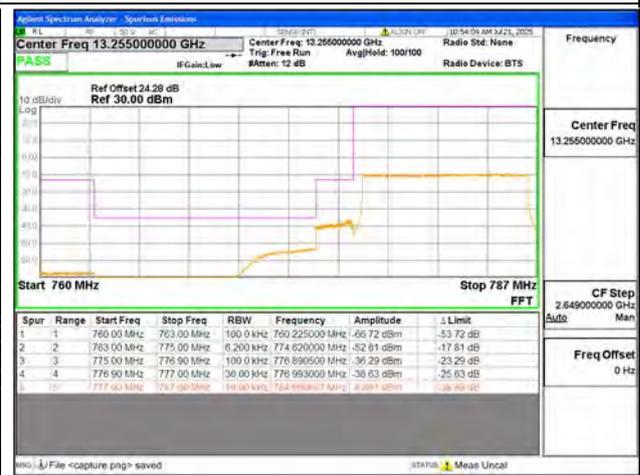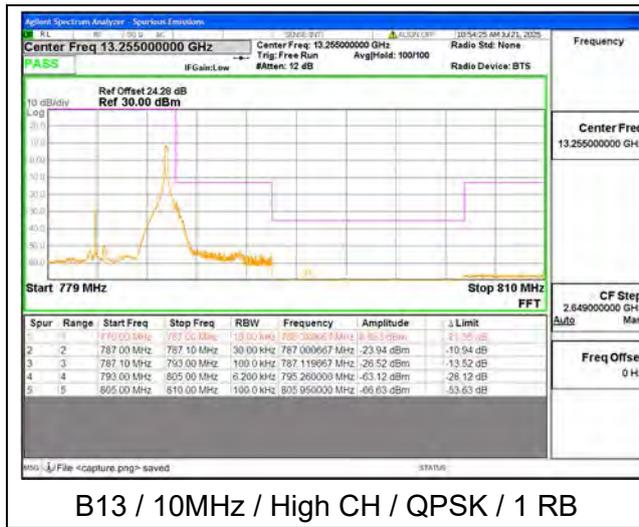
B13 / 10MHz / High CH / QPSK / 1 RB

B13 / 10MHz / High CH / QPSK / FULL RB

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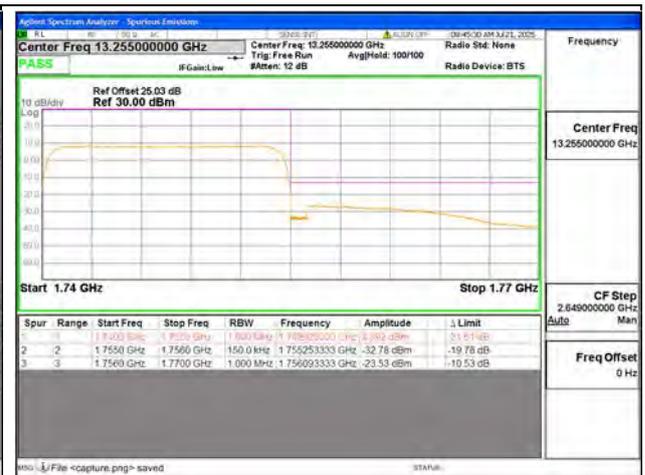
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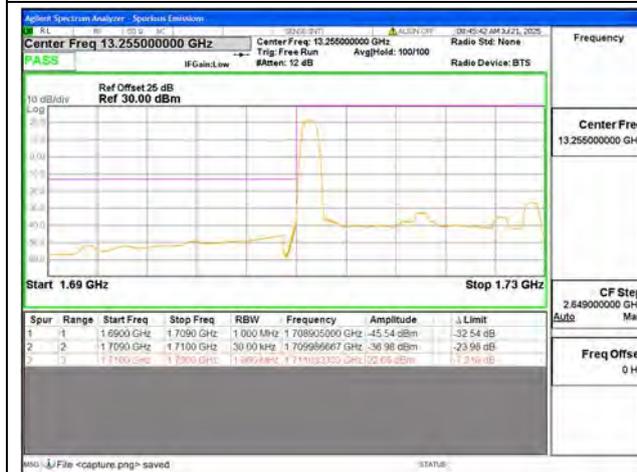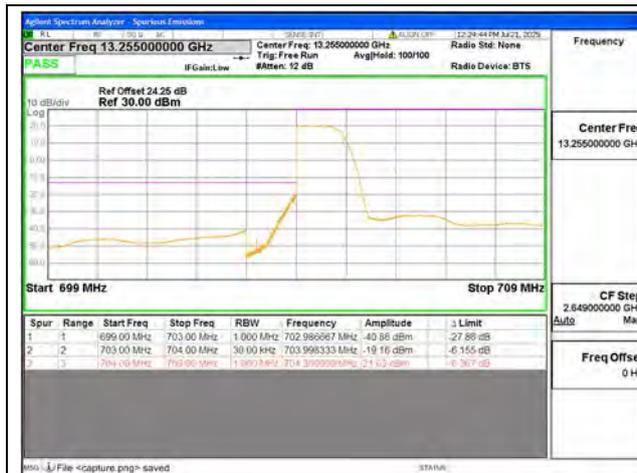
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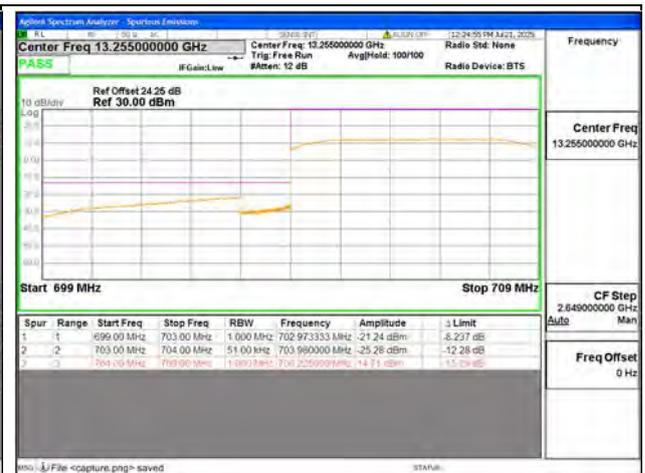
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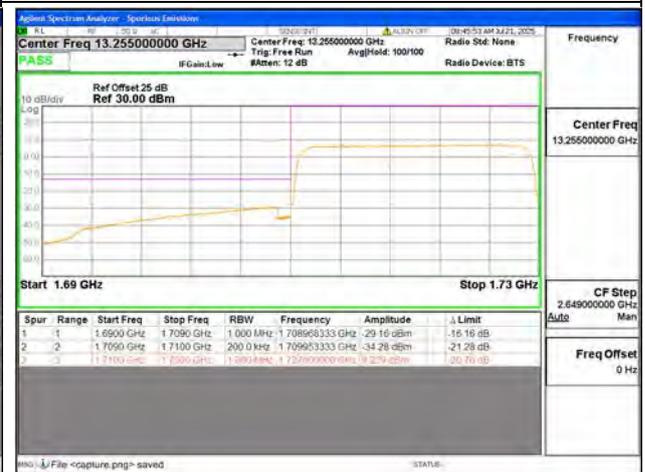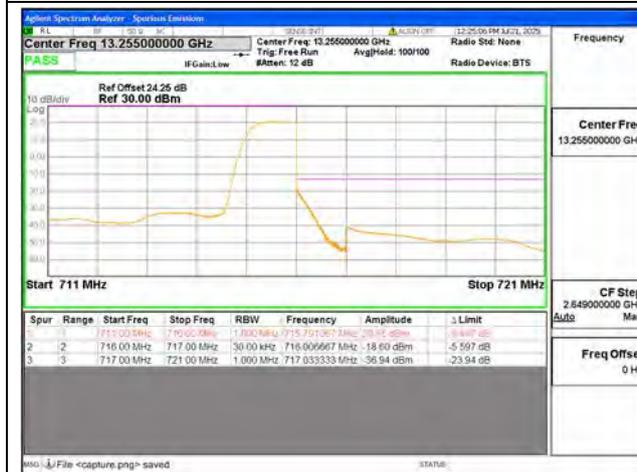

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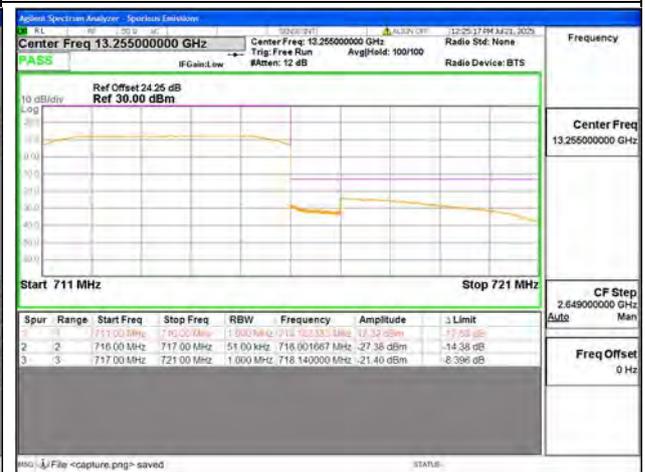
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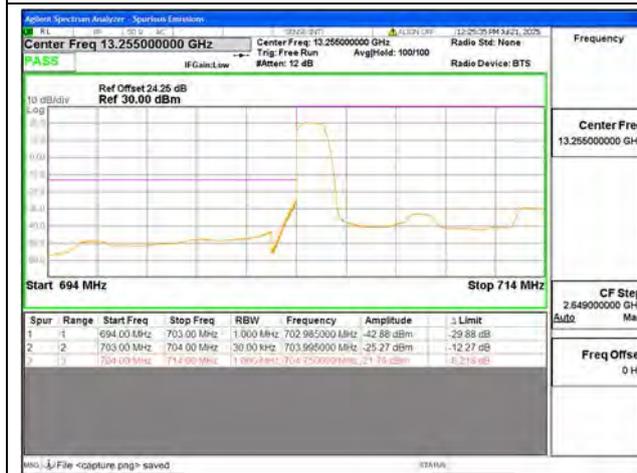
B17 / 10MHz / Low CH / QPSK / 1 RB

B17 / 10MHz / Low CH / QPSK / FULL RB

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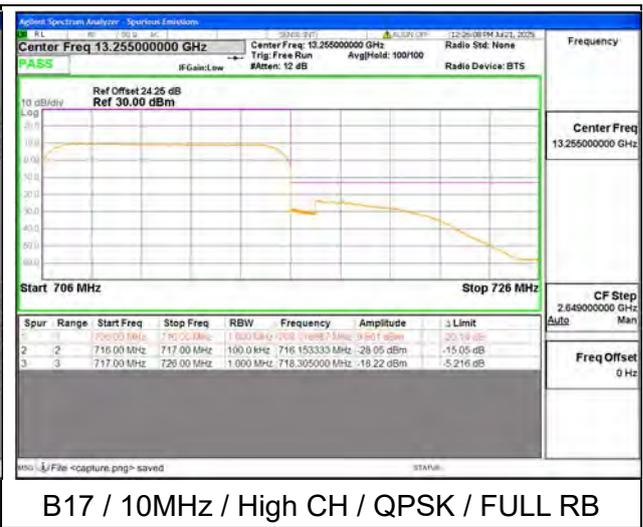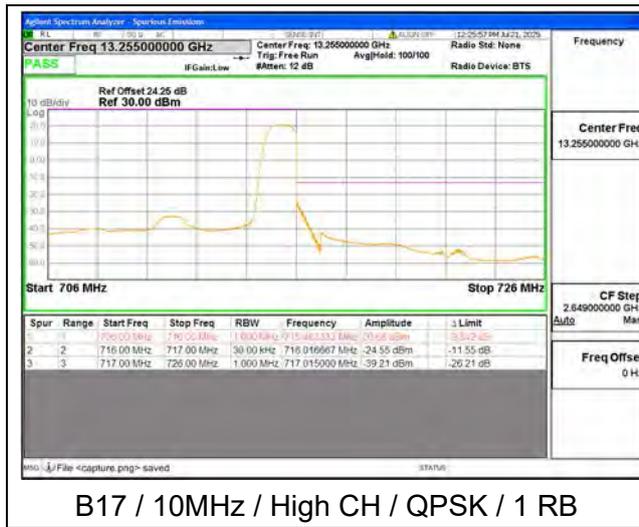
| B17 / 10MHz / High CH / QPSK / 1 RB | B17 / 10MHz / High CH / QPSK / FULL RB |

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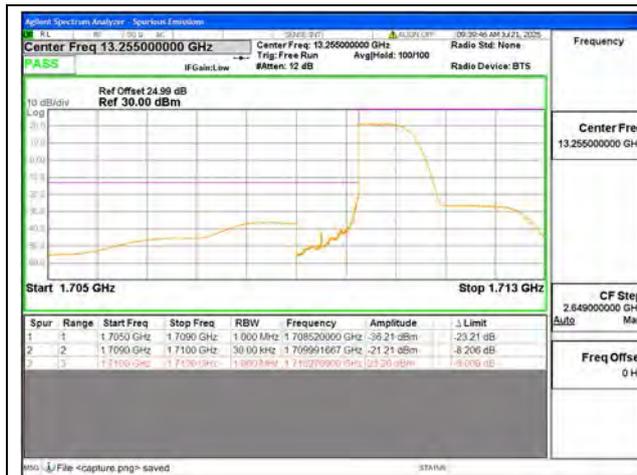
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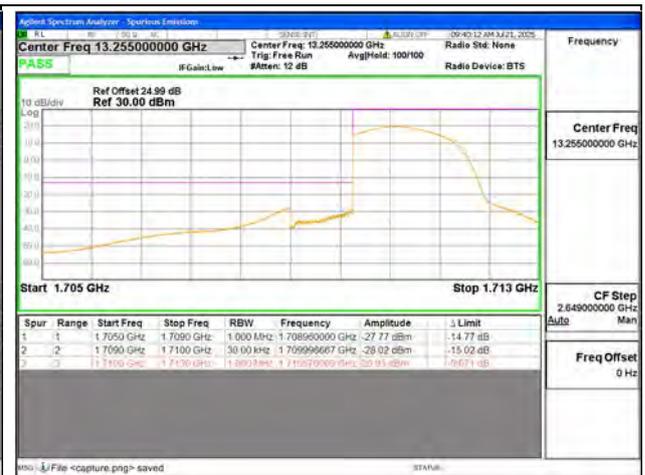
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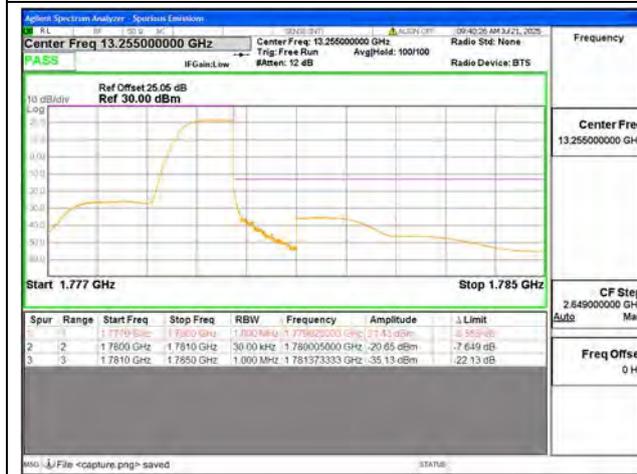
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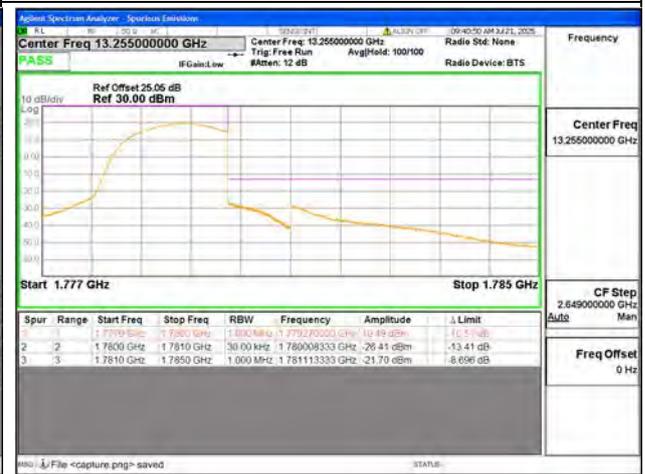
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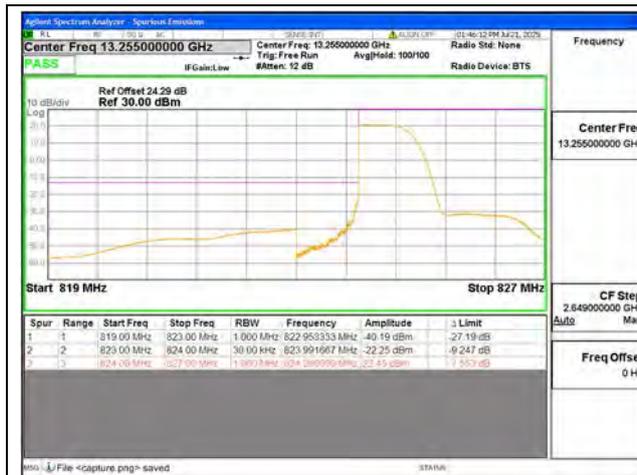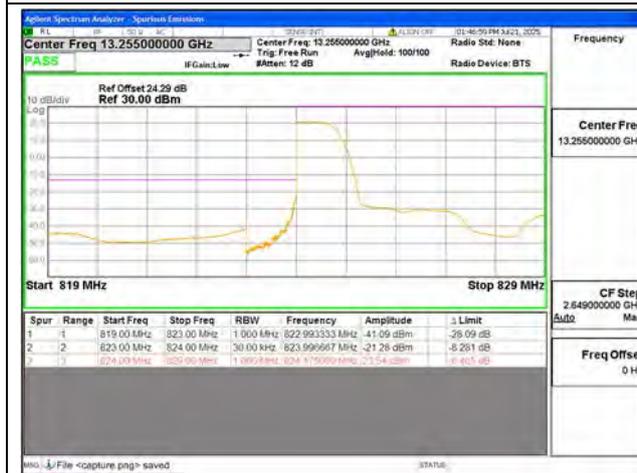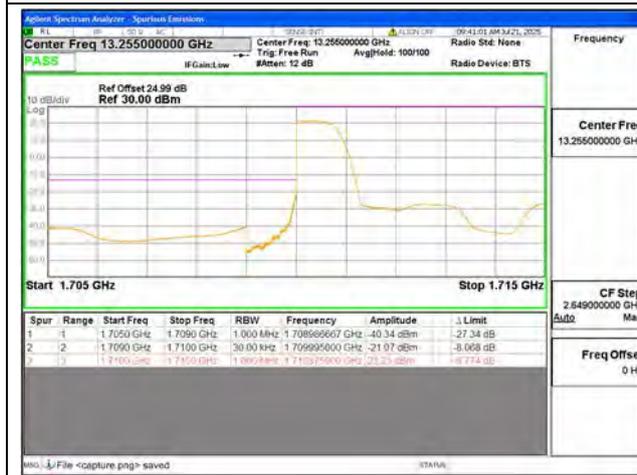

B66 / 3MHz / Low CH / QPSK / 1 RB

B66 / 3MHz / Low CH / QPSK / FULL RB

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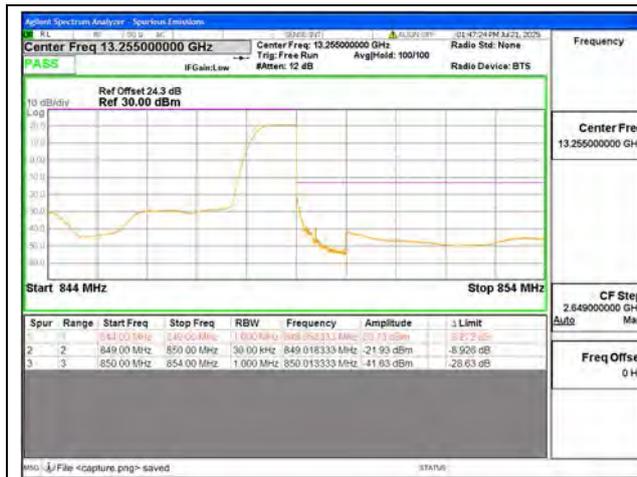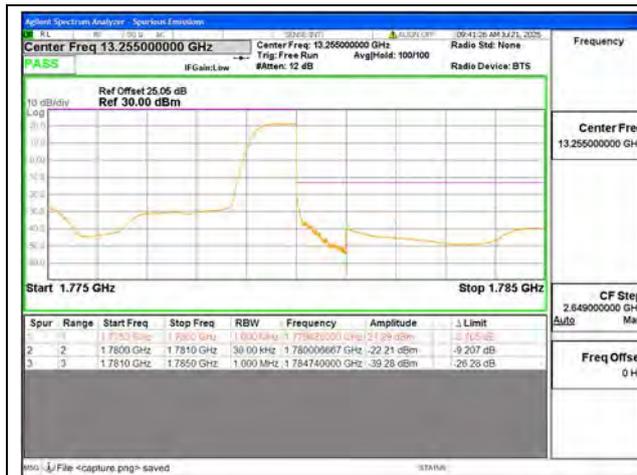
B66 / 3MHz / High CH / QPSK / 1 RB

B66 / 3MHz / High CH / QPSK / FULL RB
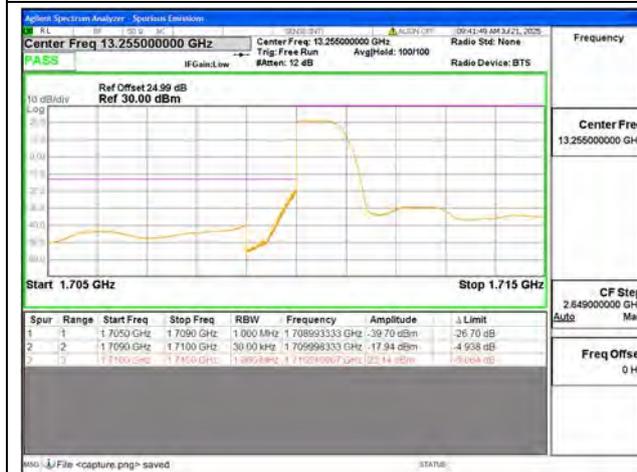
B66 / 5MHz / Low CH / QPSK / 1 RB

B66 / 5MHz / Low CH / QPSK / FULL RB
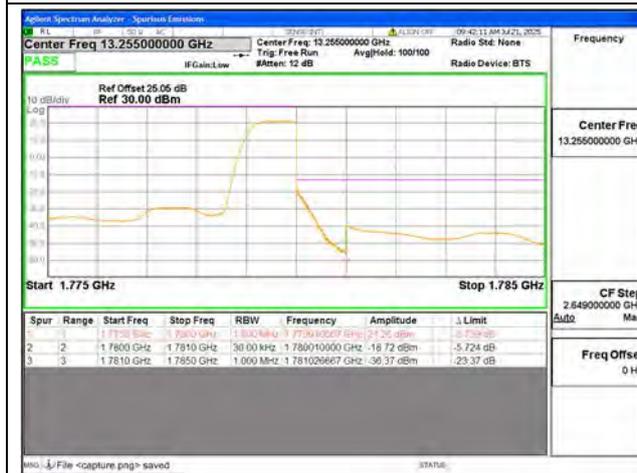
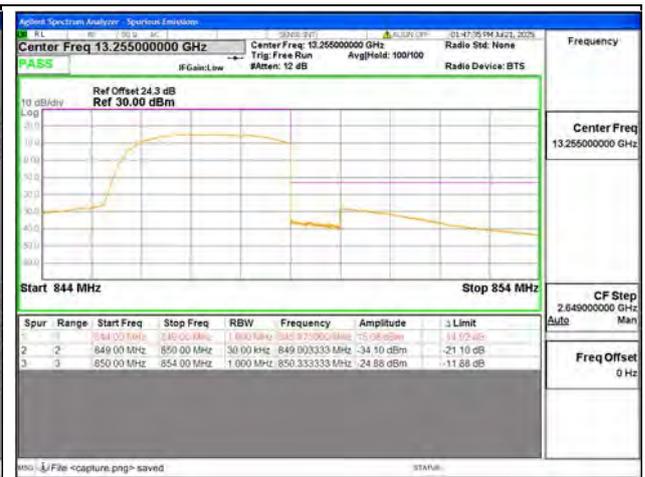B66 / 5MHz / High CH / QPSK / 1 RB

B66 / 5MHz / High CH / QPSK / FULL RB

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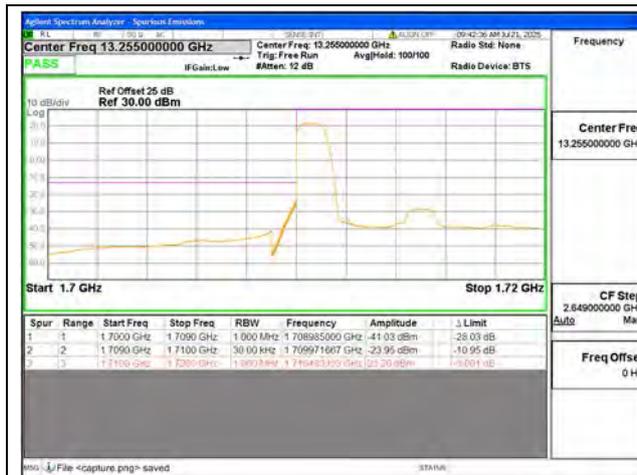
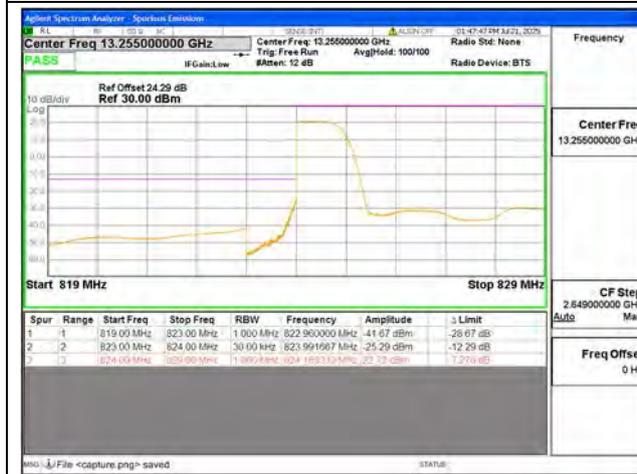B66 / 10MHz / Low CH / QPSK / 1 RB
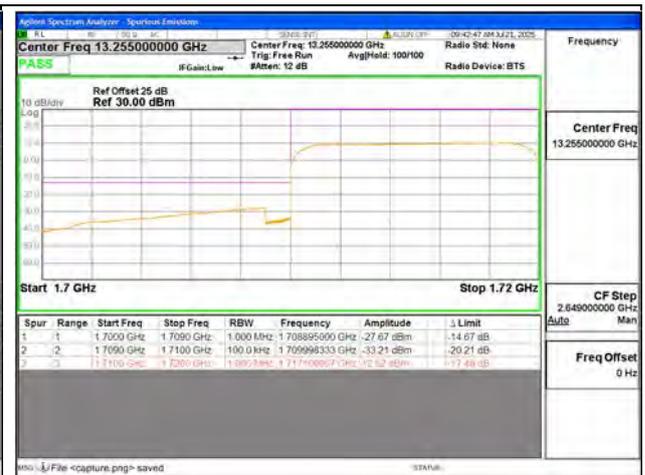
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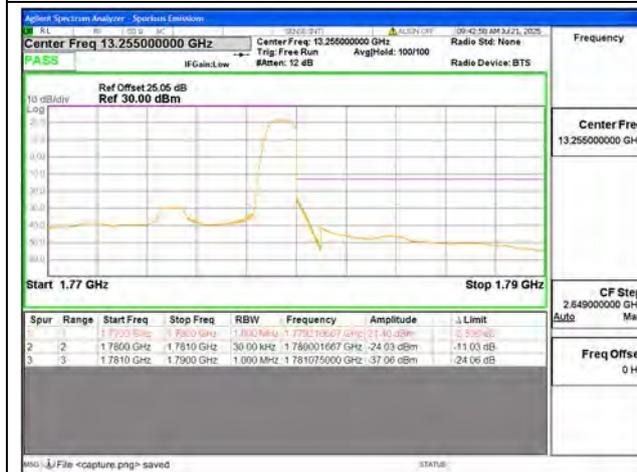
B66 / 10MHz / High CH / QPSK / 1 RB

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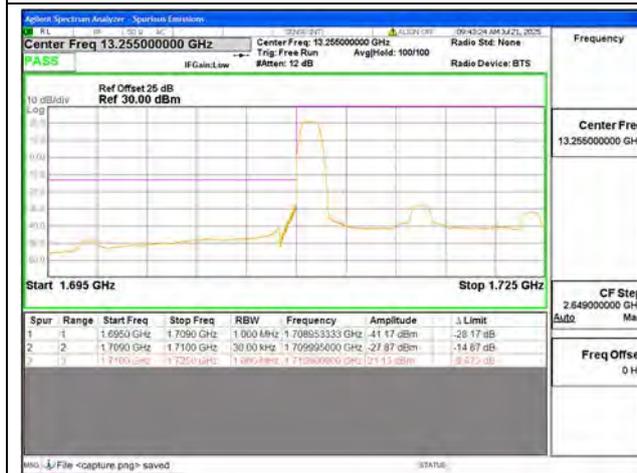
B66 / 15MHz / Low CH / QPSK / 1 RB

B66 / 15MHz / Low CH / QPSK / FULL RB

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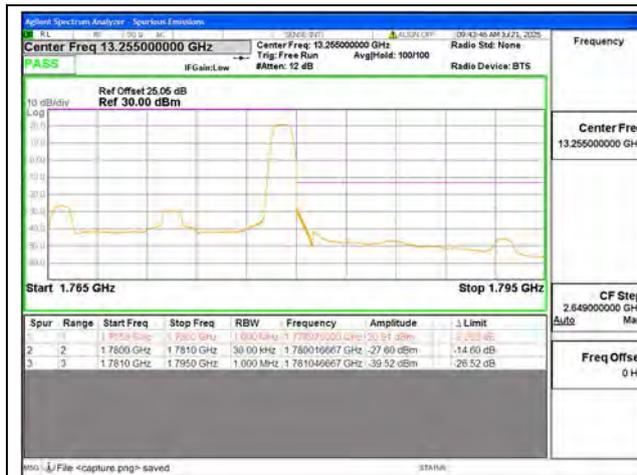
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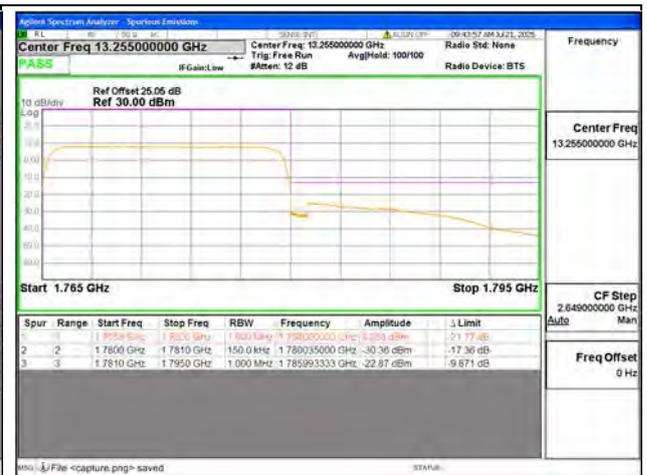
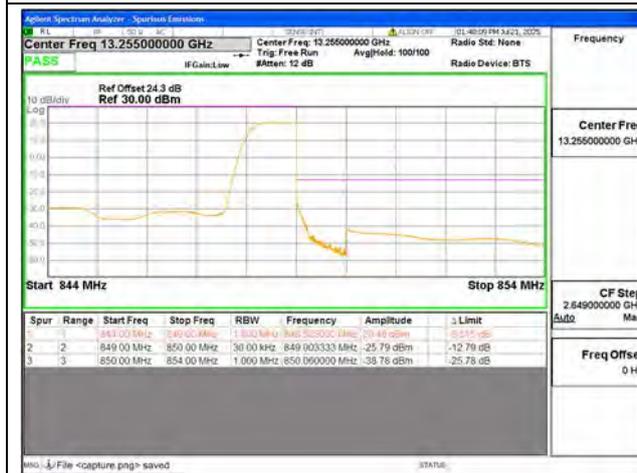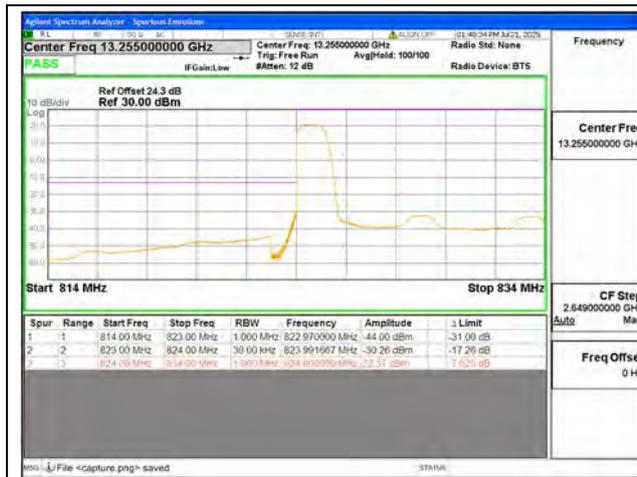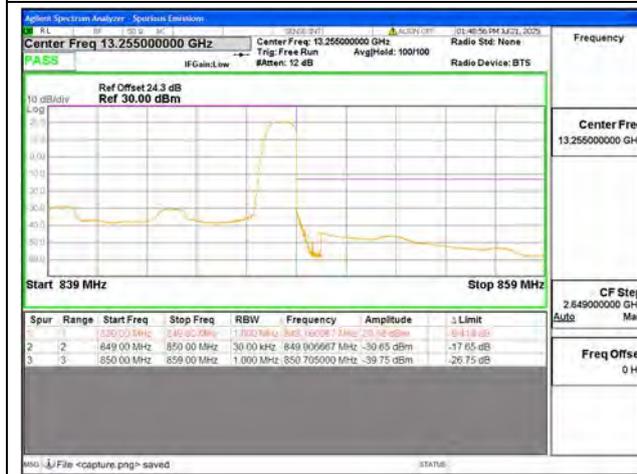B66 / 15MHz / High CH / QPSK / FULL RB
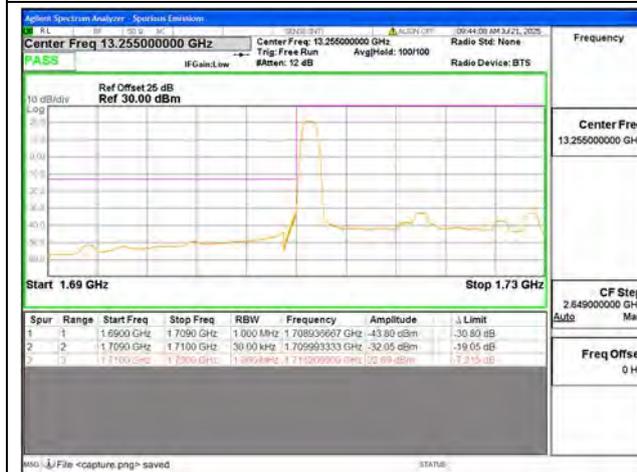
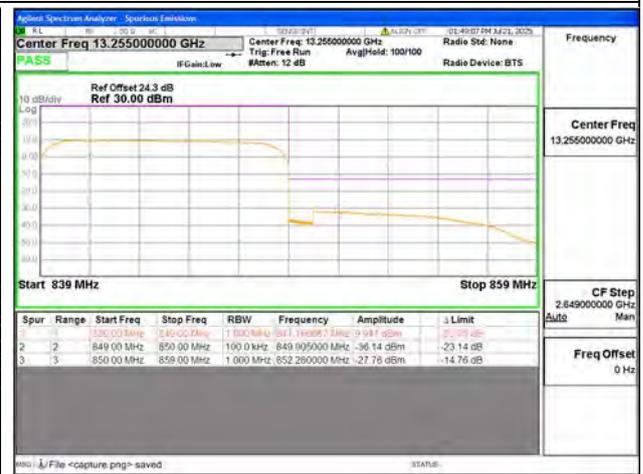B66 / 20MHz / Low CH / QPSK / 1 RB
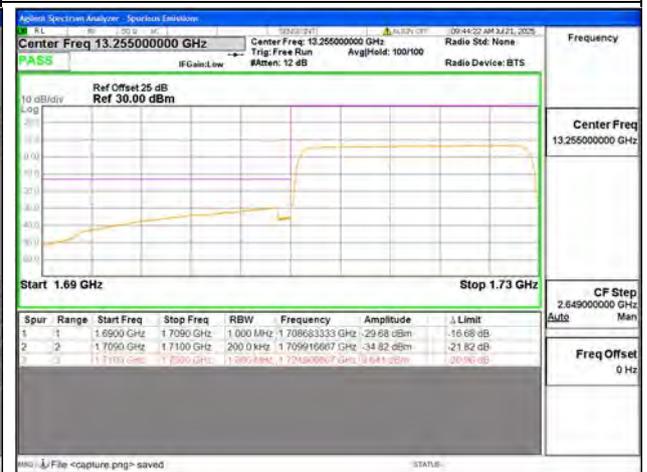
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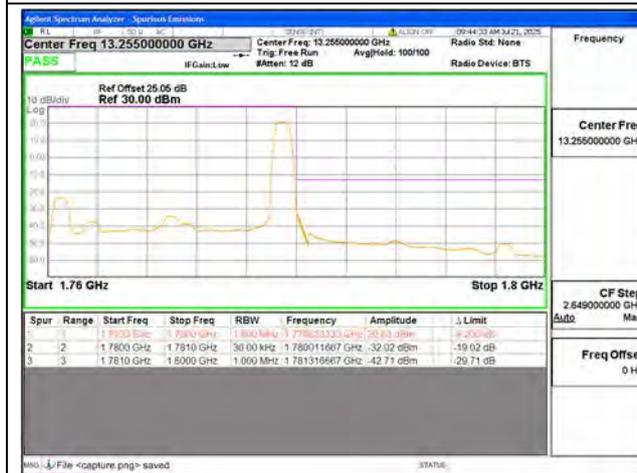
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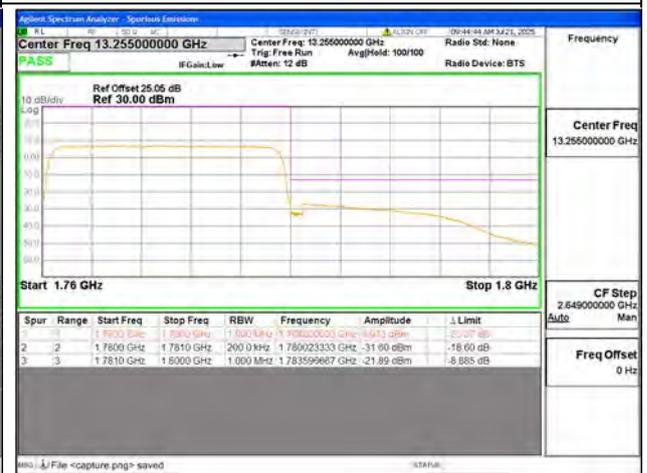
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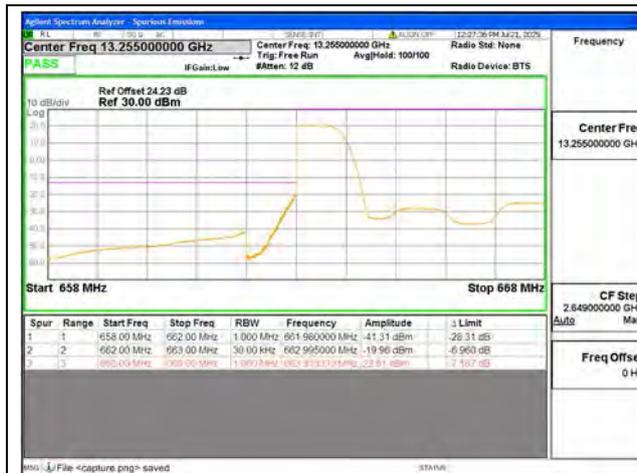
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B71 / 5MHz / Low CH / QPSK / 1 RB

B71 / 5MHz / Low CH / QPSK / FULL RB
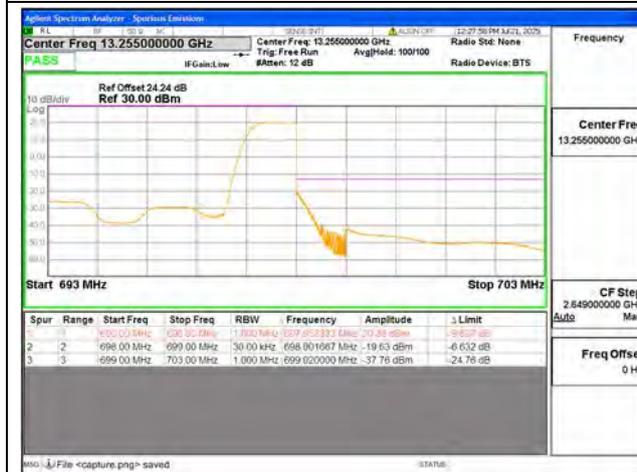
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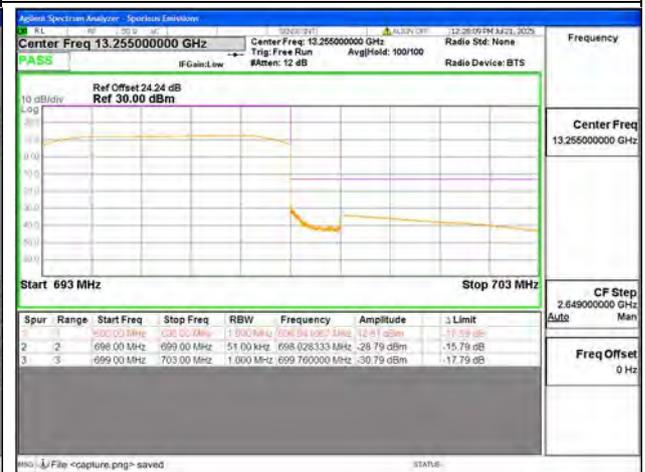
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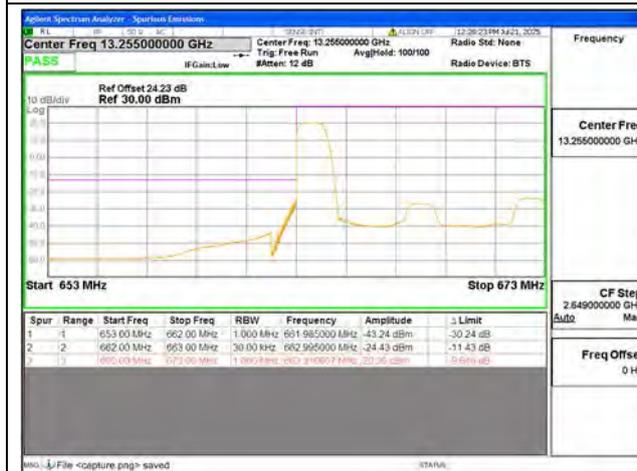
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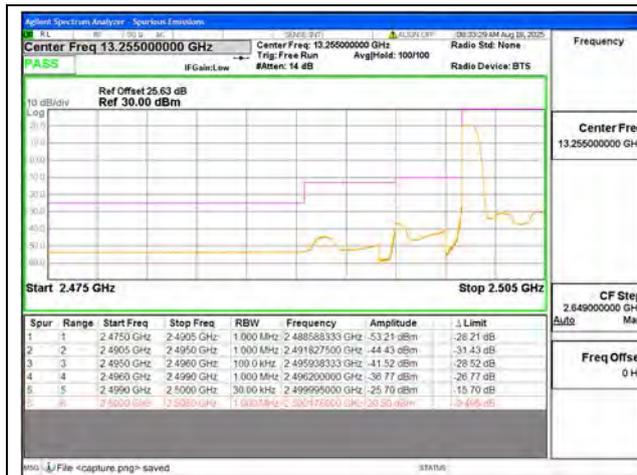

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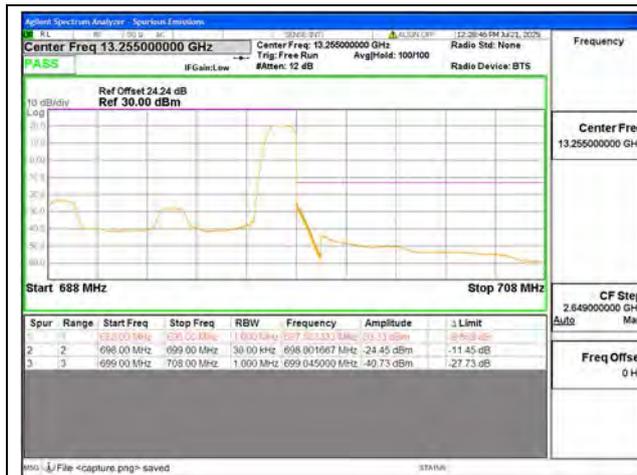
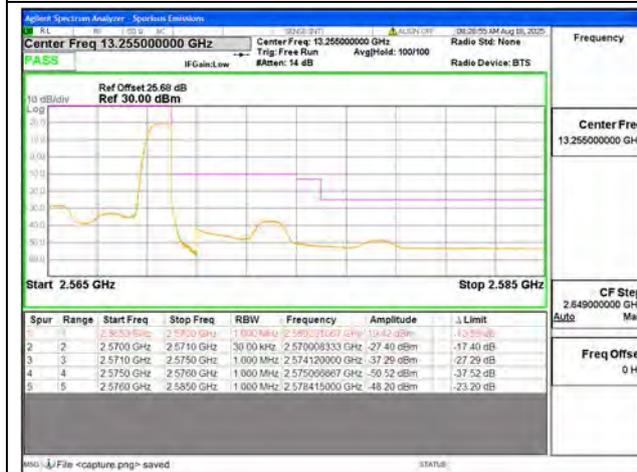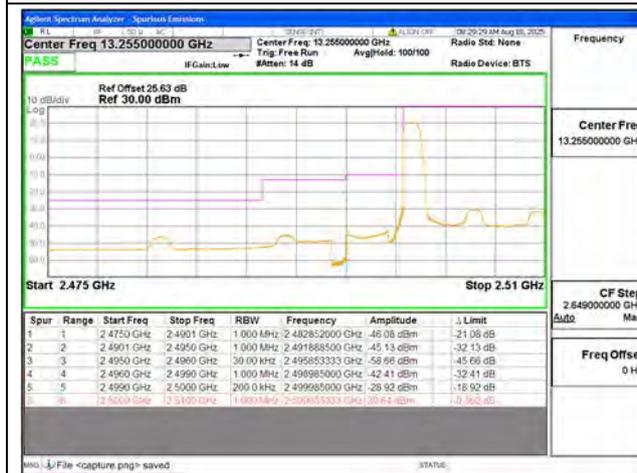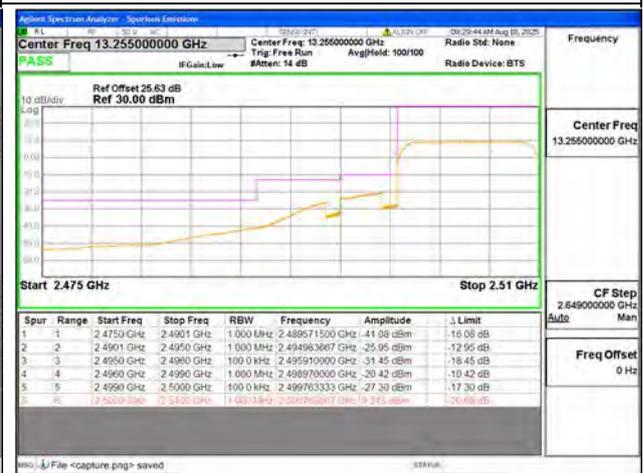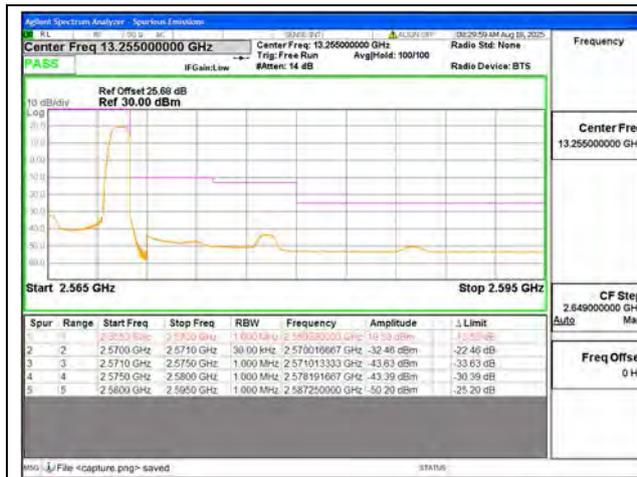B71 / 10MHz / High CH / QPSK / 1 RB

B71 / 10MHz / High CH / QPSK / FULL RB
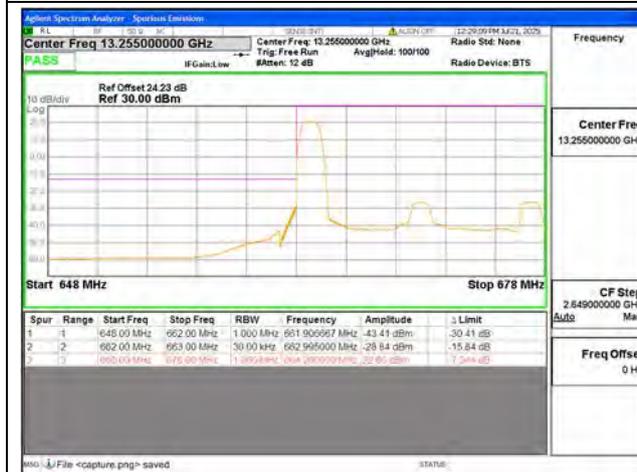
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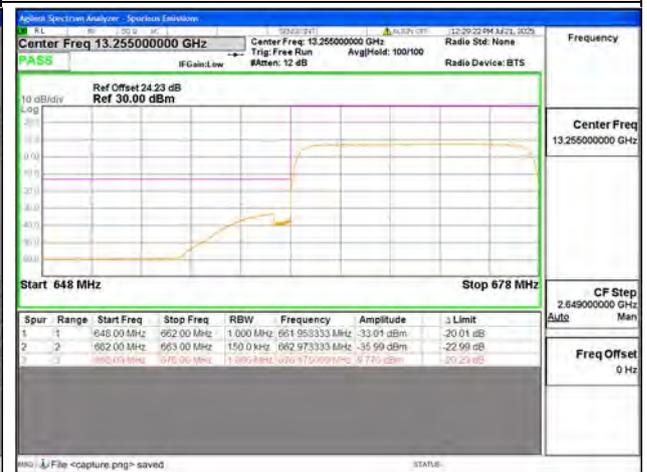
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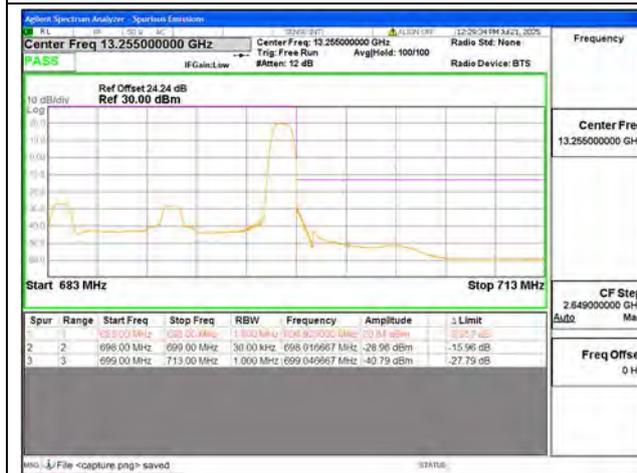
B71 / 15MHz / High CH / QPSK / 1 RB

B71 / 15MHz / High CH / QPSK / FULL RB

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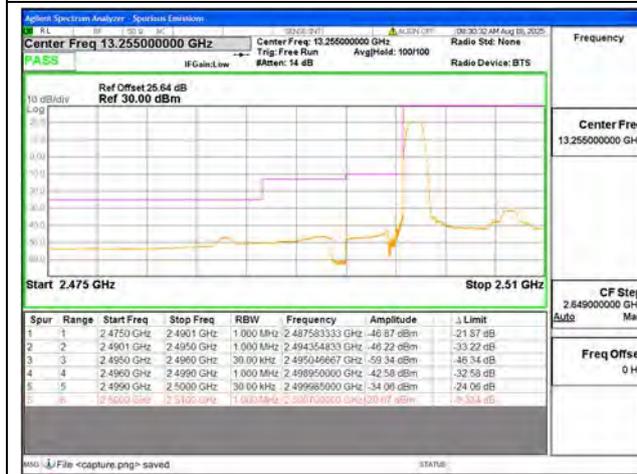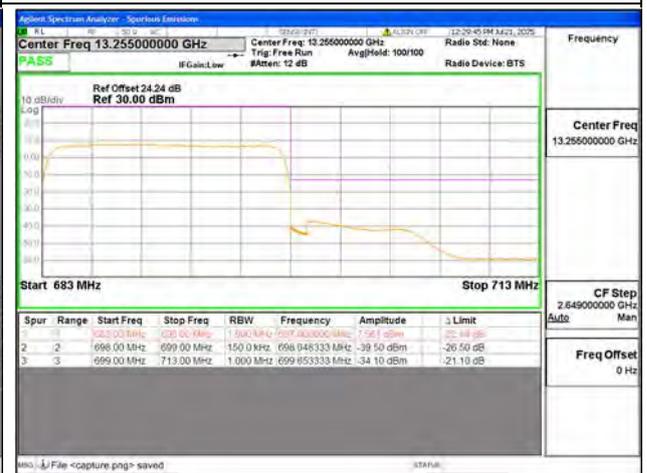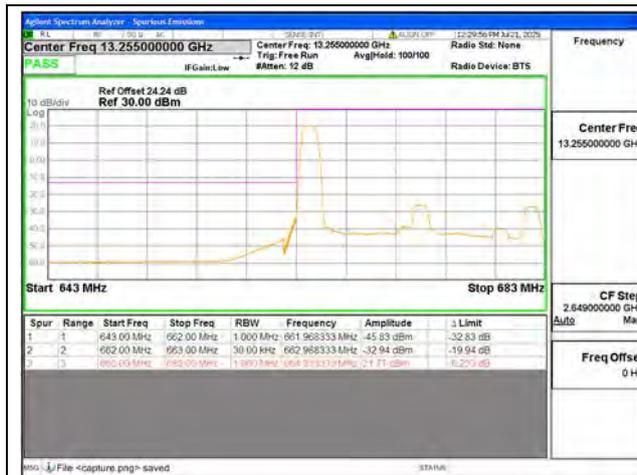
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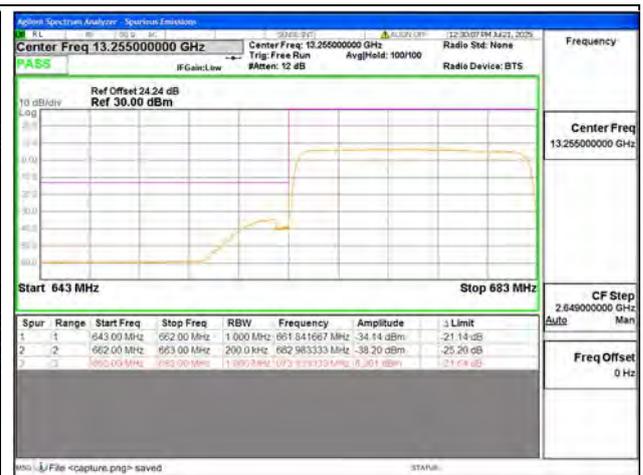
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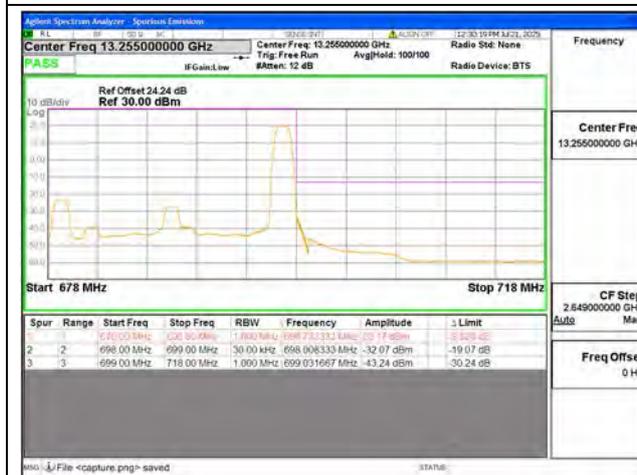
B71 / 20MHz / High CH / QPSK / 1 RB

B71 / 20MHz / High CH / QPSK / FULL RB

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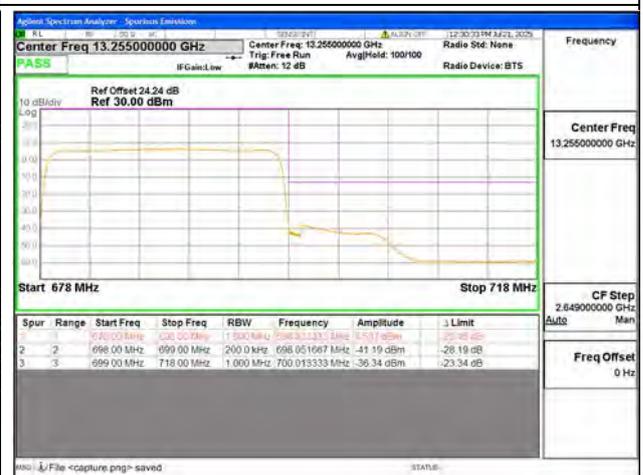
2.7. Radiated Spurious Emissions

2.7.1. Requirement

According to FCC section 2.1051, the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

Additional requirement for Band 13

For operations in the 746-758 MHz, 775-788 MHz, and 805-806 MHz bands, emissions in the band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (E.I.R.P.) for wideband signals, and −80 dBW E.I.R.P. for discrete emissions of less than 700 Hz bandwidth. This calculated to be -40dBm.

2.7.2. Test Description
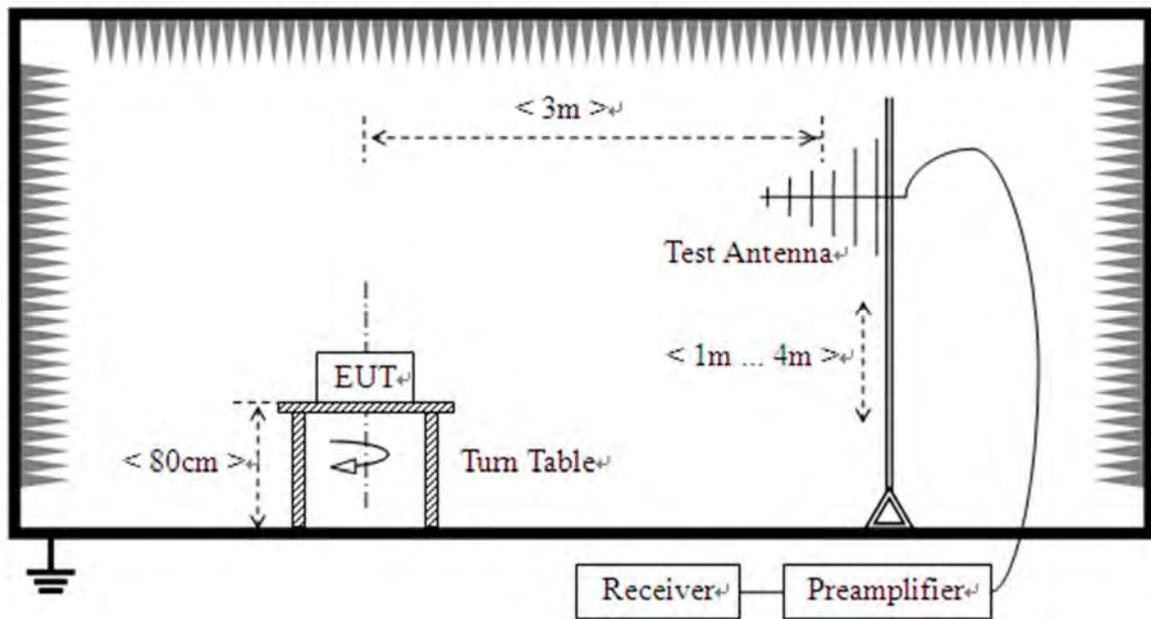
(For the test frequency from 30MHz to1GHz)
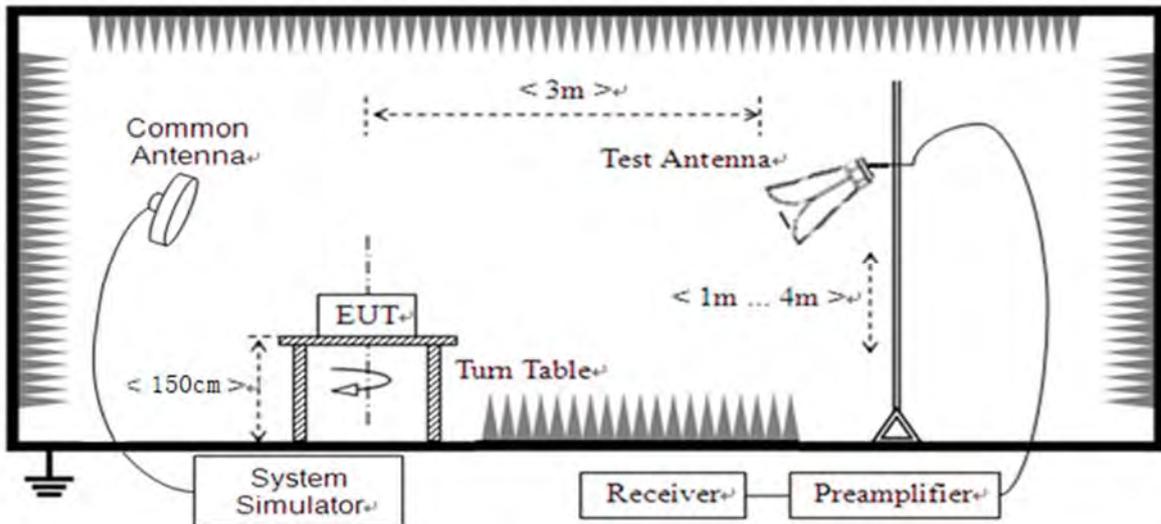
(For the test frequency above 1GHz)

The EUT is located in a 3m Full-Anechoic Chamber, the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power, and only the test result of the maximum output power was recorded.

In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground and the Turn Table is actuated to turn from 0° to 360°to determine the maximum value of the radiated power. The emission levels at both horizontal and vertical polarizations should be tested. The Filters consists of Notch Filters and High Pass Filter.

Note: When doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.7.3. Test Procedure

KDB 971168 D01v03 Section 5.8 and ANSI/TIA-603-E-2016.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements.

For measurements above 1GHz (exclude 1559-1610 MHz) the resolution bandwidth is set to 1MHz, the video band width is set to 3MHz for peak measurements.

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2.7.4. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

The substitution corrections are obtained as described below:

$A_{SUBST} = P_{SUBST\_TX} - P_{SUBST\_RX} - L_{SUBST\_CABLES} + G_{SUBST\_TX\_ANT}$

$A_{TOT} = L_{CABLES} + A_{SUBST}$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST\_TX\_ANT}$ is substitution antenna gain.

A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the test spectrum analyze, so spectrum analyze reading is the final values which contain the data of A_{TOT}.

Note1: The power of the EUT transmitting frequency should be ignored.

Note2: All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Note3: All bandwidth and modulation were considered and evaluated respectively by performing full test for each band, only the worst cases (Max Bandwidth and QPSK mode) were recorded in this test report.

Note4: N/A means the frequency is the basic frequency or the base station frequency, they are no need to verdict.

Note5: For the frequency, which started from 18GHz to 10th harmonic of the highest frequency, was pre-scanned and the result which was 20dB lower than the limit was not recorded.

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LTE Band 2

Plot for Low Channel
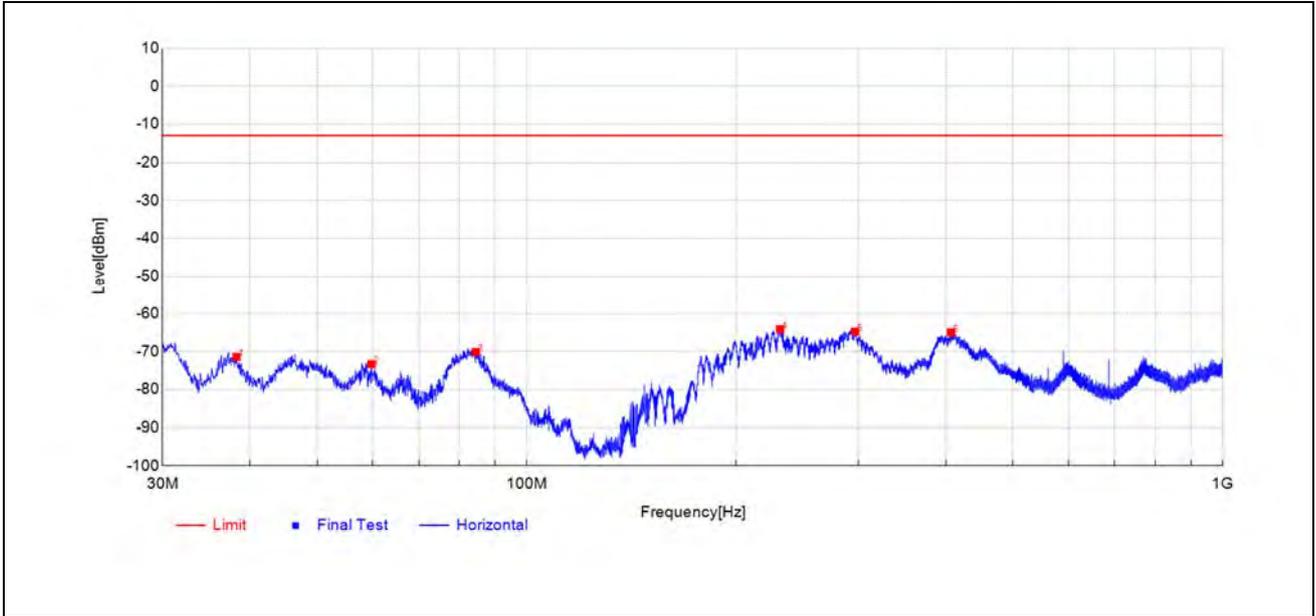
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
38.2939	-61.26	-71.50	-10.2	-13.0	58.5	Horizontal	PASS
59.926	-58.93	-73.40	-14.5	-13.0	60.4	Horizontal	PASS
84.4682	-48.30	-70.12	-21.8	-13.0	57.1	Horizontal	PASS
231.4306	-56.58	-64.08	-7.5	-13.0	51.1	Horizontal	PASS
296.8118	-46.72	-64.76	-18.0	-13.0	51.8	Horizontal	PASS
407.1549	-54.38	-65.08	-10.7	-13.0	52.1	Horizontal	PASS
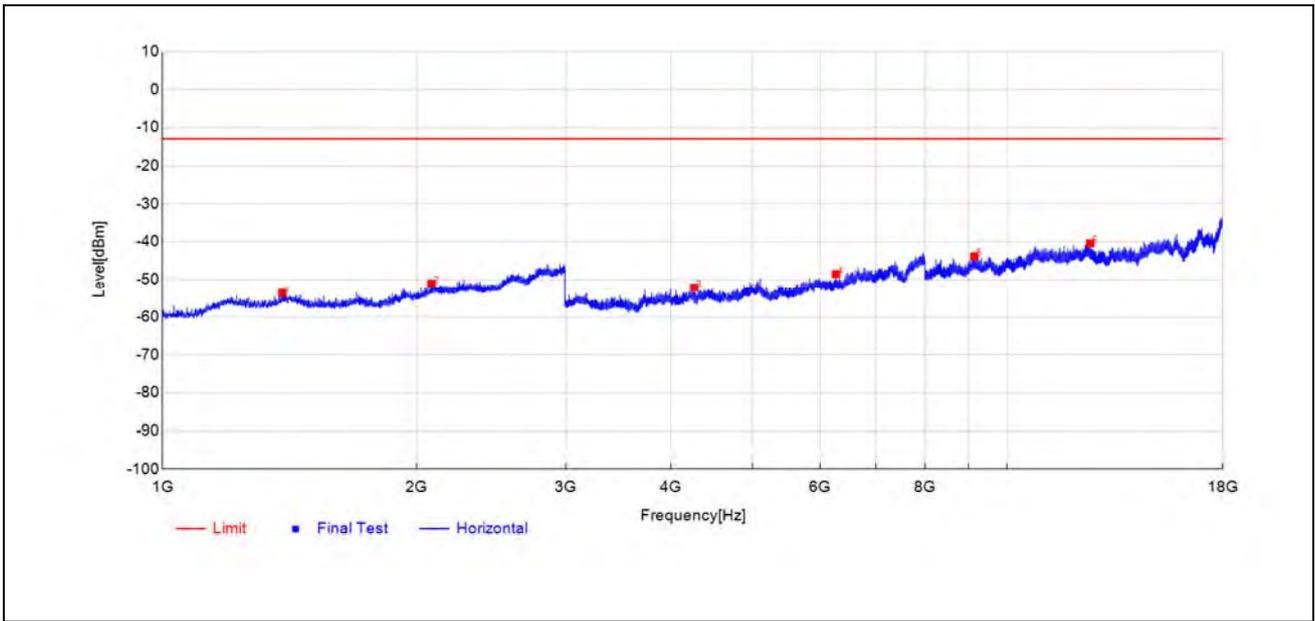
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(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1384.877	-55.16	-53.64	1.5	-13.0	40.6	Horizontal	PASS
2082.6165	-54.44	-51.06	3.4	-13.0	38.1	Horizontal	PASS
4259.042	-51.03	-52.20	-1.2	-13.0	39.2	Horizontal	PASS
6272.6091	-52.58	-48.46	4.1	-13.0	35.5	Horizontal	PASS
9148.2049	-53.35	-43.86	9.5	-13.0	30.9	Horizontal	PASS
12536.3179	-54.86	-40.41	14.5	-13.0	27.4	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.1784	-48.62	-67.36	-18.7	-13.0	54.4	Vertical	PASS
81.9946	-48.07	-69.42	-21.4	-13.0	56.4	Vertical	PASS
153.1962	-49.93	-69.68	-19.8	-13.0	56.7	Vertical	PASS
210.4775	-55.34	-74.63	-19.3	-13.0	61.6	Vertical	PASS
308.5979	-52.05	-66.98	-14.9	-13.0	54.0	Vertical	PASS
687.4989	-58.85	-67.60	-8.8	-13.0	54.6	Vertical	PASS

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(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
2519.1038	-38.47	-34.72	3.8	-13.0	21.7	Vertical	PASS
2575.115	-41.89	-37.26	4.6	-13.0	24.3	Vertical	PASS
4417.5473	-52.24	-52.45	-0.2	-13.0	39.5	Vertical	PASS
6663.6221	-53.18	-46.71	6.5	-13.0	33.7	Vertical	PASS
9300.21	-51.81	-43.57	8.2	-13.0	30.6	Vertical	PASS
12959.832	-55.19	-41.67	13.5	-13.0	28.7	Vertical	PASS

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Plot for Mid Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.5963	-61.46	-71.98	-10.5	-13.0	59.0	Horizontal	PASS
81.3641	-47.89	-69.48	-21.6	-13.0	56.5	Horizontal	PASS
204.0267	-48.99	-66.24	-17.3	-13.0	53.2	Horizontal	PASS
291.4281	-46.58	-63.87	-17.3	-13.0	50.9	Horizontal	PASS
412.1021	-54.04	-64.45	-10.4	-13.0	51.5	Horizontal	PASS
687.4989	-60.17	-71.17	-11.0	-13.0	58.2	Horizontal	PASS

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(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1196.8394	-55.59	-54.51	1.1	-13.0	41.5	Horizontal	PASS
2247.8496	-54.14	-50.36	3.8	-13.0	37.4	Horizontal	PASS
4988.5663	-52.22	-50.67	1.6	-13.0	37.7	Horizontal	PASS
7933.6645	-50.72	-43.36	7.4	-13.0	30.4	Horizontal	PASS
10825.7609	-53.86	-41.56	12.3	-13.0	28.6	Horizontal	PASS
14926.8976	-54.47	-38.04	16.4	-13.0	25.0	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.3239	-48.69	-67.39	-18.7	-13.0	54.4	Vertical	PASS
58.8104	-51.84	-70.19	-18.4	-13.0	57.2	Vertical	PASS
89.658	-44.78	-65.31	-20.5	-13.0	52.3	Vertical	PASS
150.5285	-49.79	-69.53	-19.7	-13.0	56.5	Vertical	PASS
199.2735	-53.13	-72.64	-19.5	-13.0	59.6	Vertical	PASS
270.2325	-52.00	-70.32	-18.3	-13.0	57.3	Vertical	PASS

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(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1223.2446	-54.70	-53.78	0.9	-13.0	40.8	Vertical	PASS
2110.6221	-54.38	-51.61	2.8	-13.0	38.6	Vertical	PASS
5087.5696	-52.42	-50.57	1.9	-13.0	37.6	Vertical	PASS
7885.1628	-50.53	-43.96	6.6	-13.0	31.0	Vertical	PASS
10809.7603	-53.79	-41.91	11.9	-13.0	28.9	Vertical	PASS
12917.8306	-54.43	-41.00	13.4	-13.0	28.0	Vertical	PASS
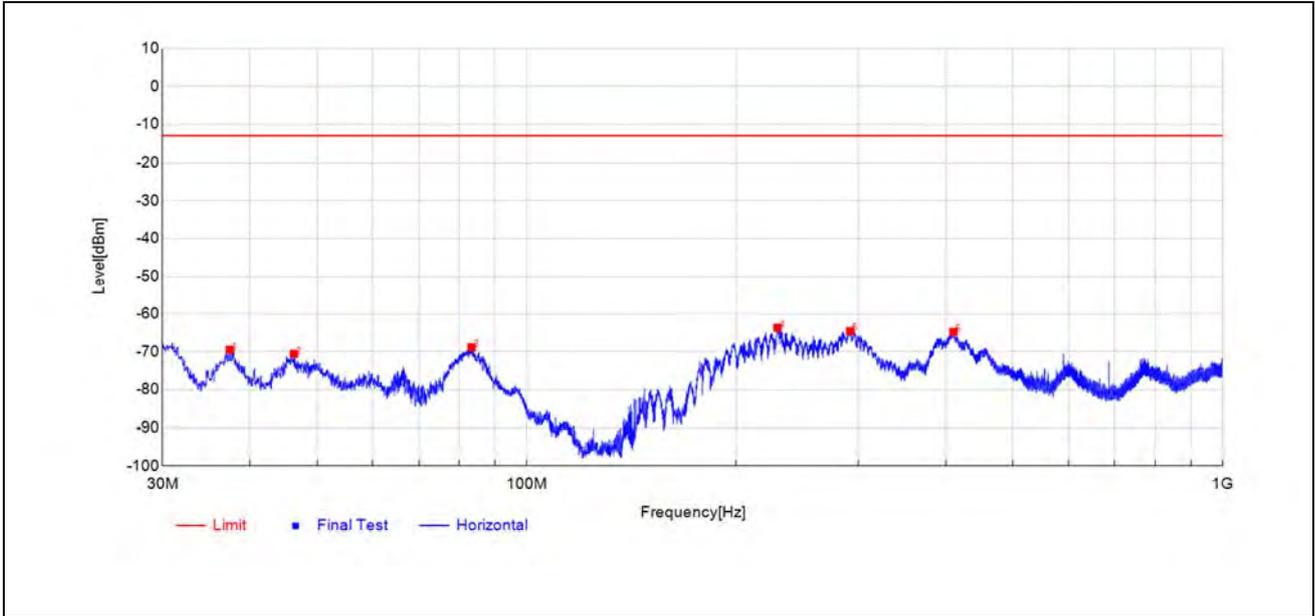
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Plot for High Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.4694	-59.21	-69.59	-10.4	-13.0	56.6	Horizontal	PASS
46.3453	-61.75	-70.70	-9.0	-13.0	57.7	Horizontal	PASS
83.4012	-47.12	-68.86	-21.7	-13.0	55.9	Horizontal	PASS
229.733	-56.54	-63.66	-7.1	-13.0	50.7	Horizontal	PASS
291.7191	-47.26	-64.59	-17.3	-13.0	51.6	Horizontal	PASS
411.0836	-54.50	-64.86	-10.4	-13.0	51.9	Horizontal	PASS
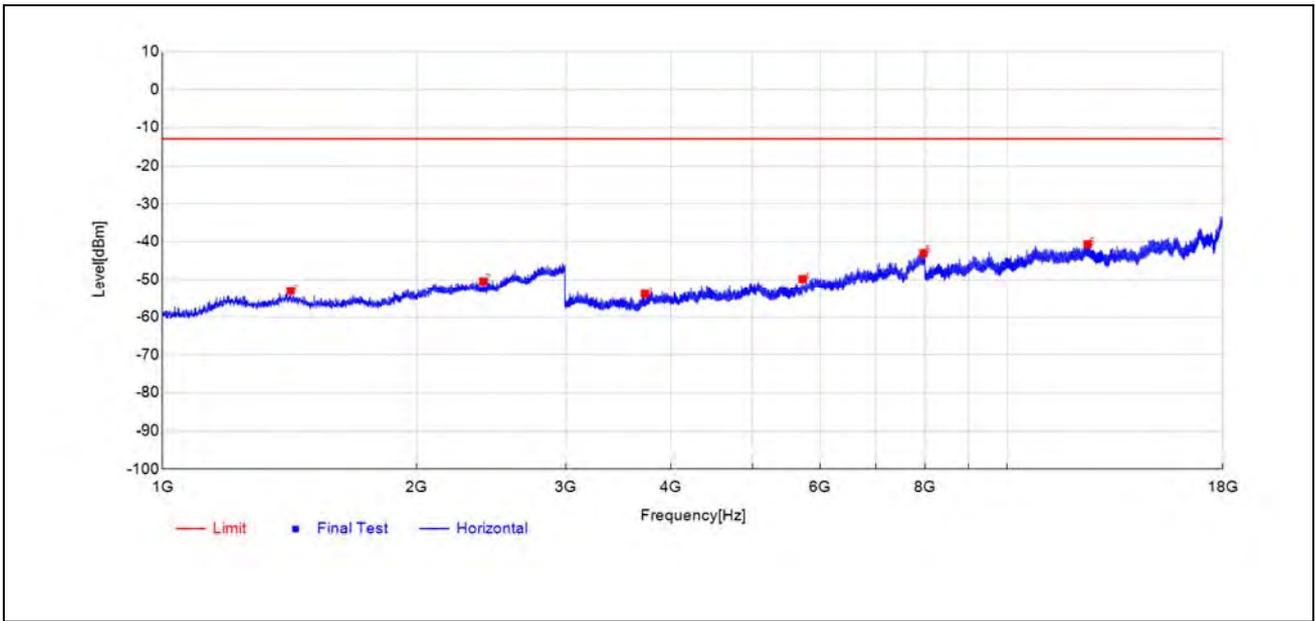
(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1418.4837	-54.90	-53.13	1.8	-13.0	40.1	Horizontal	PASS
2399.4799	-53.73	-50.40	3.3	-13.0	37.4	Horizontal	PASS
3723.5241	-50.71	-53.99	-3.3	-13.0	41.0	Horizontal	PASS
5732.5911	-52.86	-49.93	2.9	-13.0	36.9	Horizontal	PASS
7961.1654	-50.16	-42.89	7.3	-13.0	29.9	Horizontal	PASS
12471.3157	-55.35	-40.73	14.6	-13.0	27.7	Horizontal	PASS

(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.0329	-48.50	-67.28	-18.8	-13.0	54.3	Vertical	PASS
83.3527	-47.54	-68.74	-21.2	-13.0	55.7	Vertical	PASS
151.4016	-50.31	-70.06	-19.8	-13.0	57.1	Vertical	PASS
295.3083	-50.10	-65.78	-15.7	-13.0	52.8	Vertical	PASS
450.9525	-57.88	-70.44	-12.6	-13.0	57.4	Vertical	PASS
687.5474	-57.57	-66.32	-8.8	-13.0	53.3	Vertical	PASS

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(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1422.0844	-54.66	-53.98	0.7	-13.0	41.0	Vertical	PASS
2291.4583	-53.75	-50.50	3.3	-13.0	37.5	Vertical	PASS
4362.0454	-51.28	-51.85	-0.6	-13.0	38.9	Vertical	PASS
5947.5983	-53.13	-48.98	4.2	-13.0	36.0	Vertical	PASS
8636.6879	-52.55	-45.49	7.1	-13.0	32.5	Vertical	PASS
12105.3035	-54.66	-41.34	13.3	-13.0	28.3	Vertical	PASS

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LTE Band 4

Plot for Low Channel
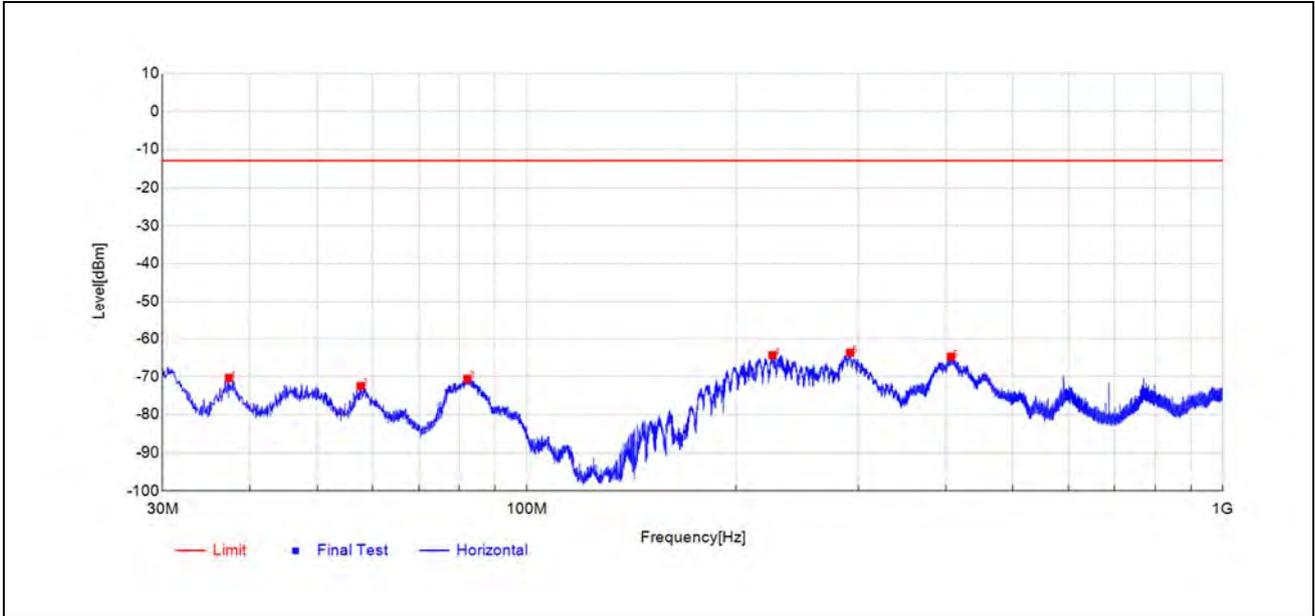
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.3239	-60.07	-70.47	-10.4	-13.0	57.5	Horizontal	PASS
57.7919	-59.35	-72.51	-13.2	-13.0	59.5	Horizontal	PASS
82.2856	-48.97	-70.63	-21.7	-13.0	57.6	Horizontal	PASS
225.5133	-55.44	-64.41	-9.0	-13.0	51.4	Horizontal	PASS
291.5736	-46.51	-63.82	-17.3	-13.0	50.8	Horizontal	PASS
407.6399	-54.26	-64.89	-10.6	-13.0	51.9	Horizontal	PASS
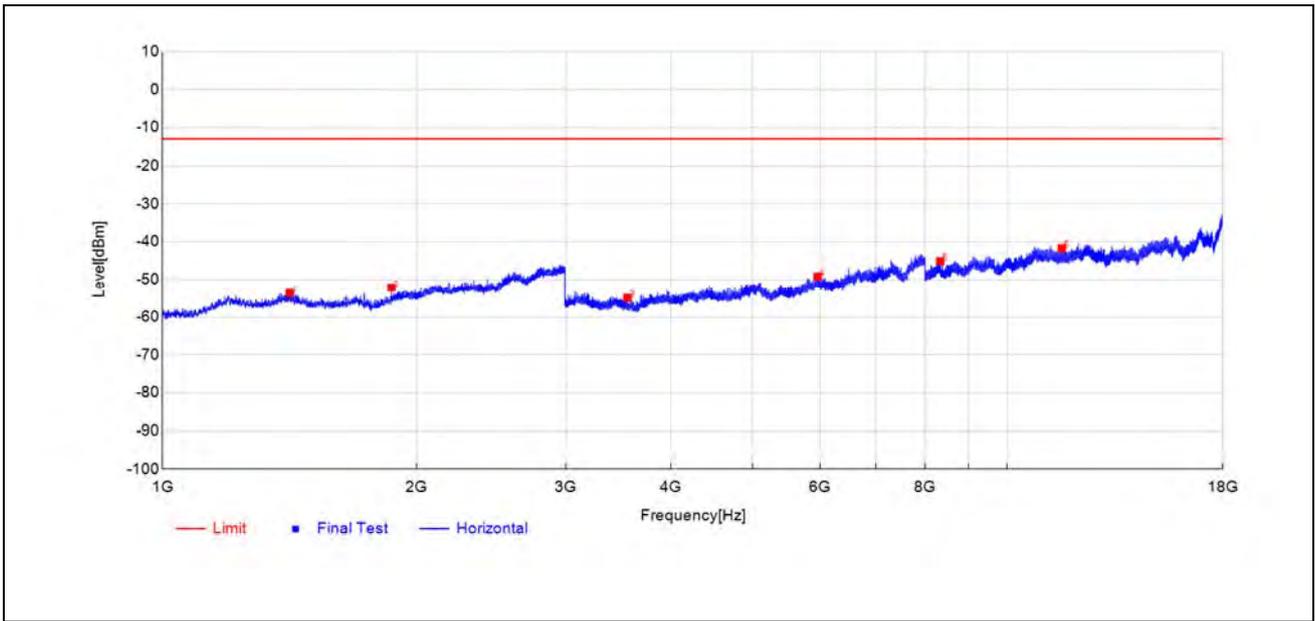
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(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1415.2831	-55.55	-53.73	1.8	-13.0	40.7	Horizontal	PASS
1868.5737	-53.51	-52.25	1.3	-13.0	39.3	Horizontal	PASS
3553.0184	-50.72	-54.93	-4.2	-13.0	41.9	Horizontal	PASS
5971.5991	-53.67	-49.14	4.5	-13.0	36.1	Horizontal	PASS
8330.6777	-52.69	-45.09	7.6	-13.0	32.1	Horizontal	PASS
11607.2869	-53.65	-41.63	12.0	-13.0	28.6	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.0143	-49.29	-68.37	-19.1	-13.0	55.4	Vertical	PASS
86.7478	-44.84	-65.68	-20.8	-13.0	52.7	Vertical	PASS
154.4572	-50.50	-70.27	-19.8	-13.0	57.3	Vertical	PASS
199.2735	-52.43	-71.94	-19.5	-13.0	58.9	Vertical	PASS
291.8646	-50.20	-66.06	-15.9	-13.0	53.1	Vertical	PASS
687.4989	-58.36	-67.11	-8.8	-13.0	54.1	Vertical	PASS
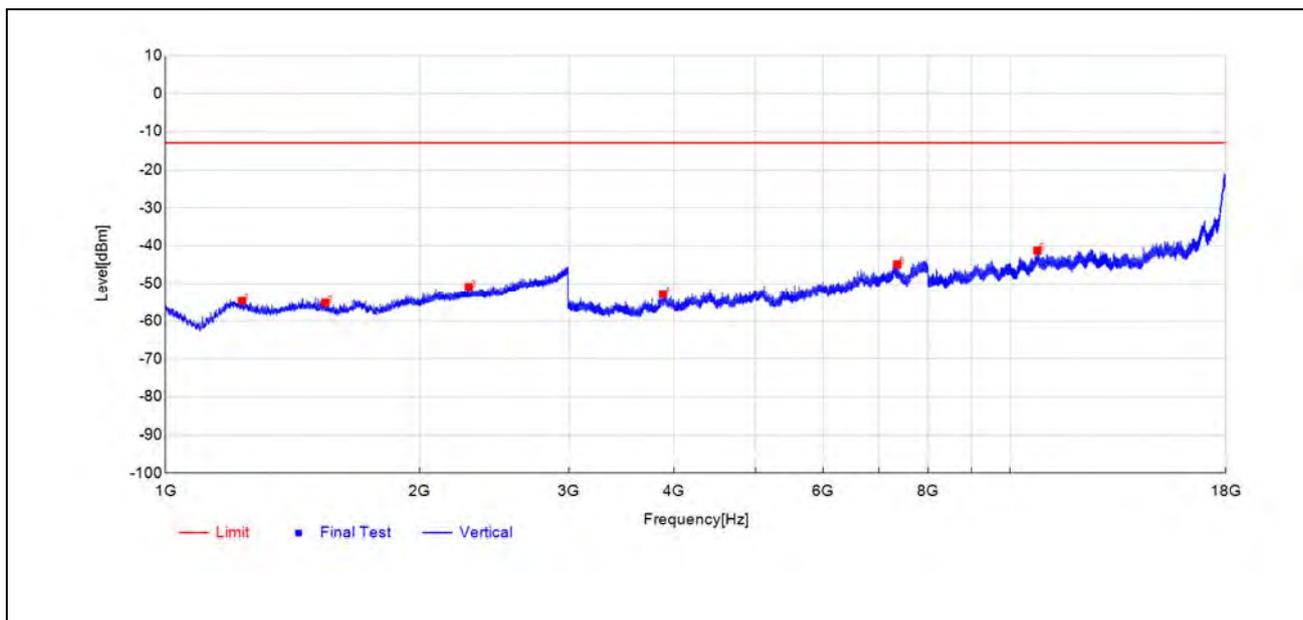
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(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1232.8466	-55.49	-54.71	0.8	-13.0	41.7	Vertical	PASS
1545.3091	-55.67	-55.28	0.4	-13.0	42.3	Vertical	PASS
2284.2569	-54.10	-50.98	3.1	-13.0	38.0	Vertical	PASS
3886.0295	-51.08	-52.87	-1.8	-13.0	39.9	Vertical	PASS
7346.1449	-52.32	-44.91	7.4	-13.0	31.9	Vertical	PASS
10774.7592	-53.09	-41.32	11.8	-13.0	28.3	Vertical	PASS
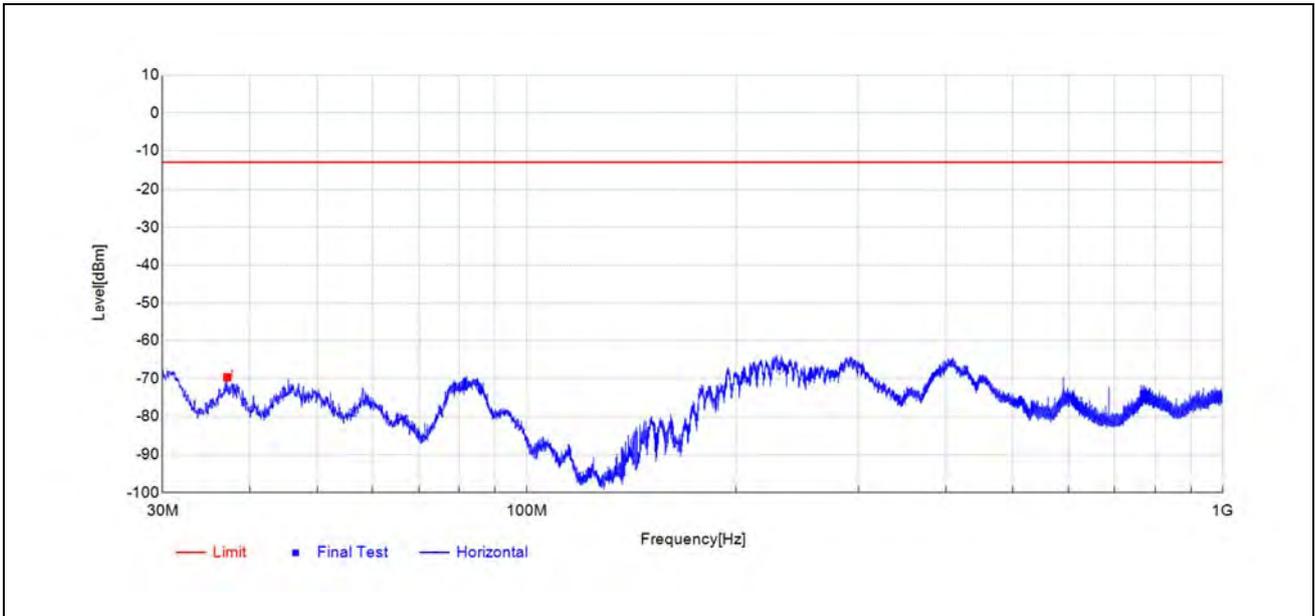
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Plot for Mid Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.1299	-59.34	-69.77	-10.4	-13.0	56.8	Horizontal	PASS
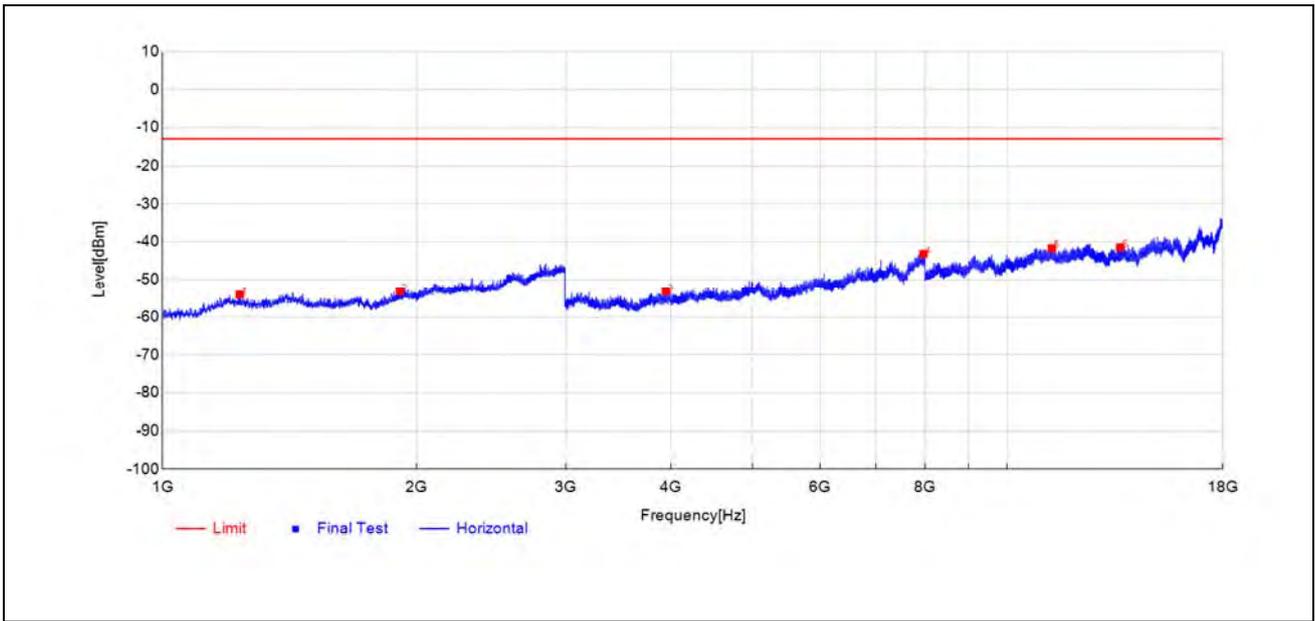
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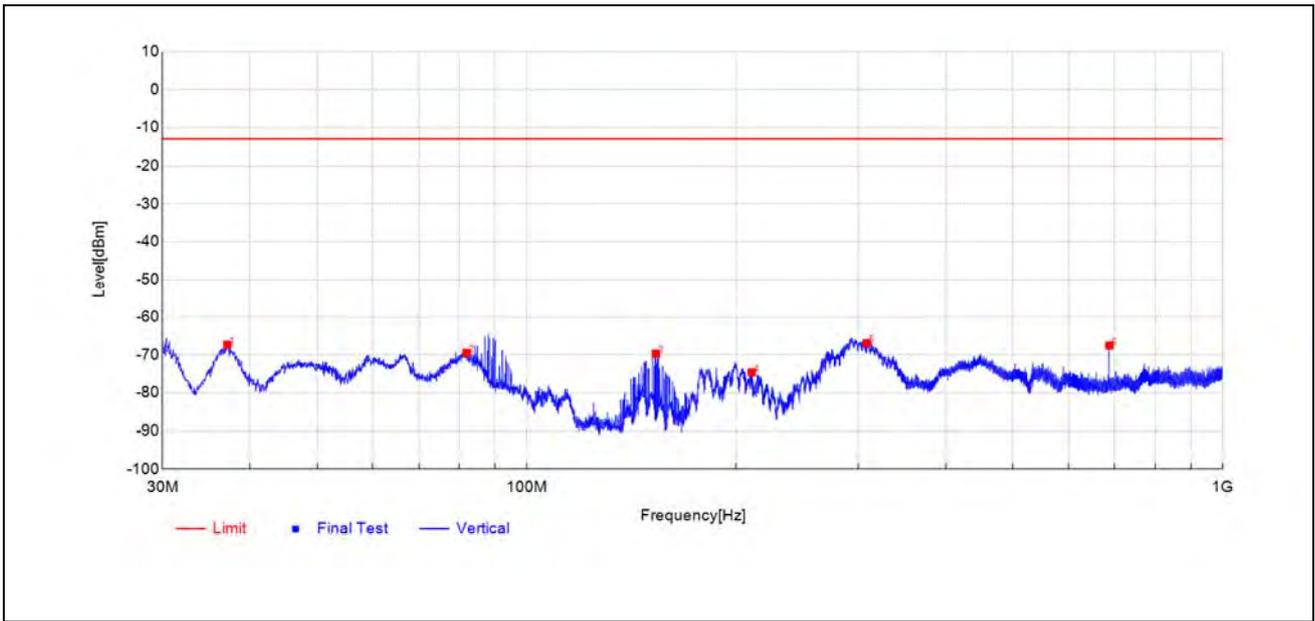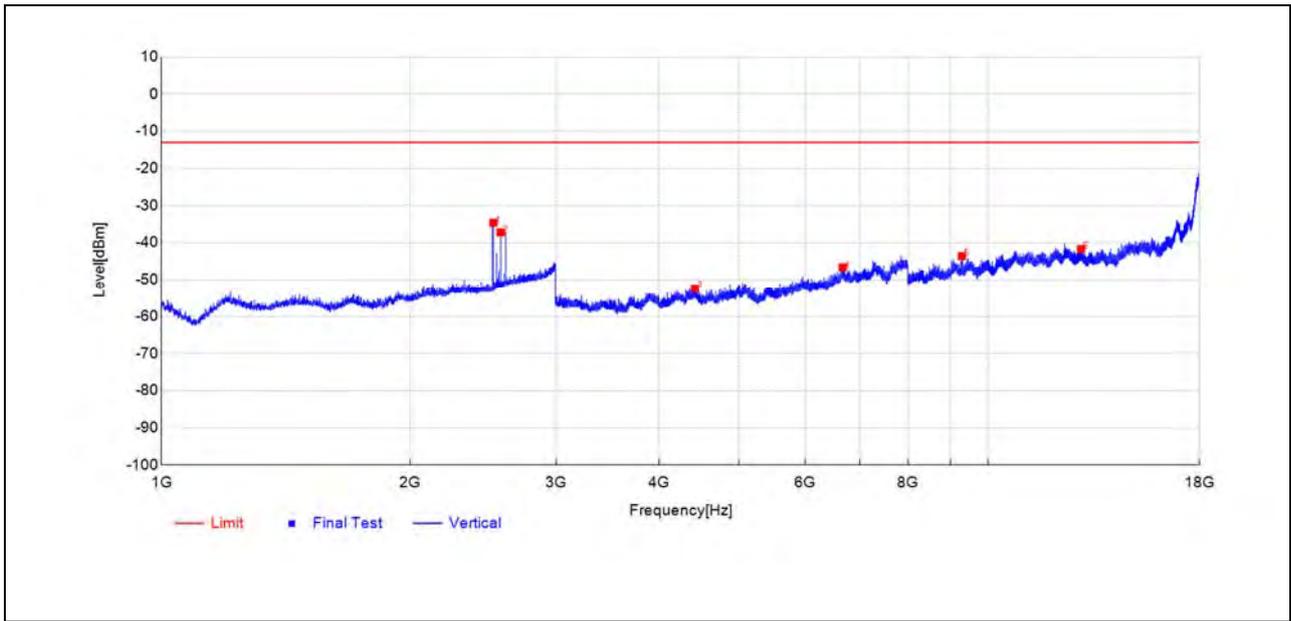Page **268** of **360**

(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1233.2466	-54.98	-54.19	0.8	-13.0	41.2	Horizontal	PASS
1908.5817	-55.11	-53.19	1.9	-13.0	40.2	Horizontal	PASS
3945.5315	-51.19	-53.26	-2.1	-13.0	40.3	Horizontal	PASS
7953.6651	-50.54	-43.25	7.3	-13.0	30.3	Horizontal	PASS
11309.277	-54.07	-41.59	12.5	-13.0	28.6	Horizontal	PASS
13602.3534	-55.77	-41.38	14.4	-13.0	28.4	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

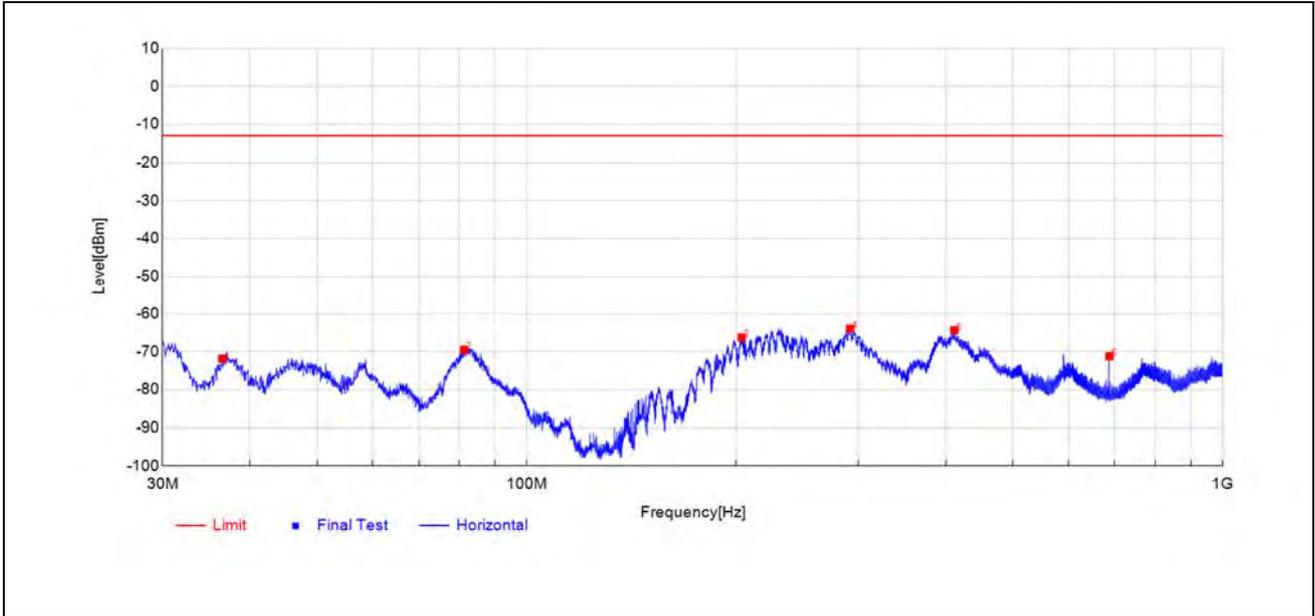| Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.9358	-50.85	-69.66	-18.8	-13.0	56.7	Vertical	PASS
87.2329	-43.11	-63.90	-20.8	-13.0	50.9	Vertical	PASS
155.1363	-50.36	-70.13	-19.8	-13.0	57.1	Vertical	PASS
194.8112	-53.37	-72.91	-19.5	-13.0	59.9	Vertical	PASS
303.5537	-50.61	-65.83	-15.2	-13.0	52.8	Vertical	PASS
687.4989	-58.00	-66.75	-8.8	-13.0	53.8	Vertical	PASS
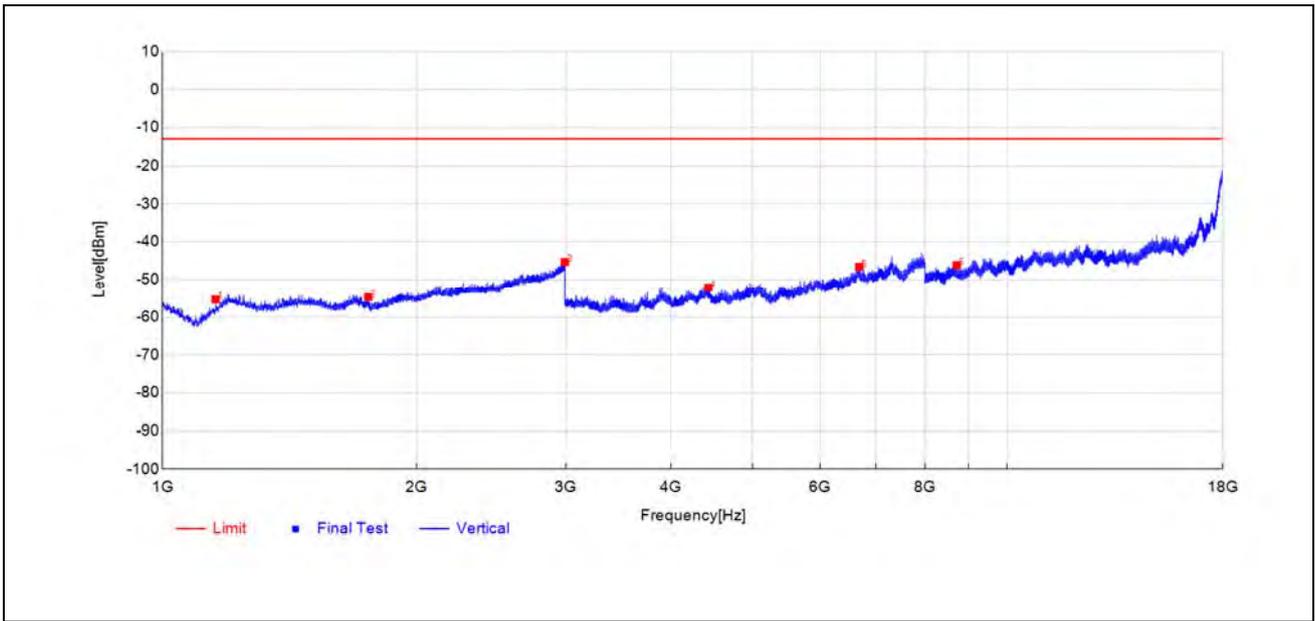
(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1156.8314	-54.26	-55.36	-1.1	-13.0	42.4	Vertical	PASS
1751.7504	-54.94	-54.86	0.1	-13.0	41.9	Vertical	PASS
2994.3989	-54.93	-45.36	9.6	-13.0	32.4	Vertical	PASS
4427.5476	-51.90	-52.23	-0.3	-13.0	39.2	Vertical	PASS
6685.1228	-53.23	-46.70	6.5	-13.0	33.7	Vertical	PASS
8710.6904	-53.31	-46.16	7.2	-13.0	33.2	Vertical	PASS

Plot for High Channel
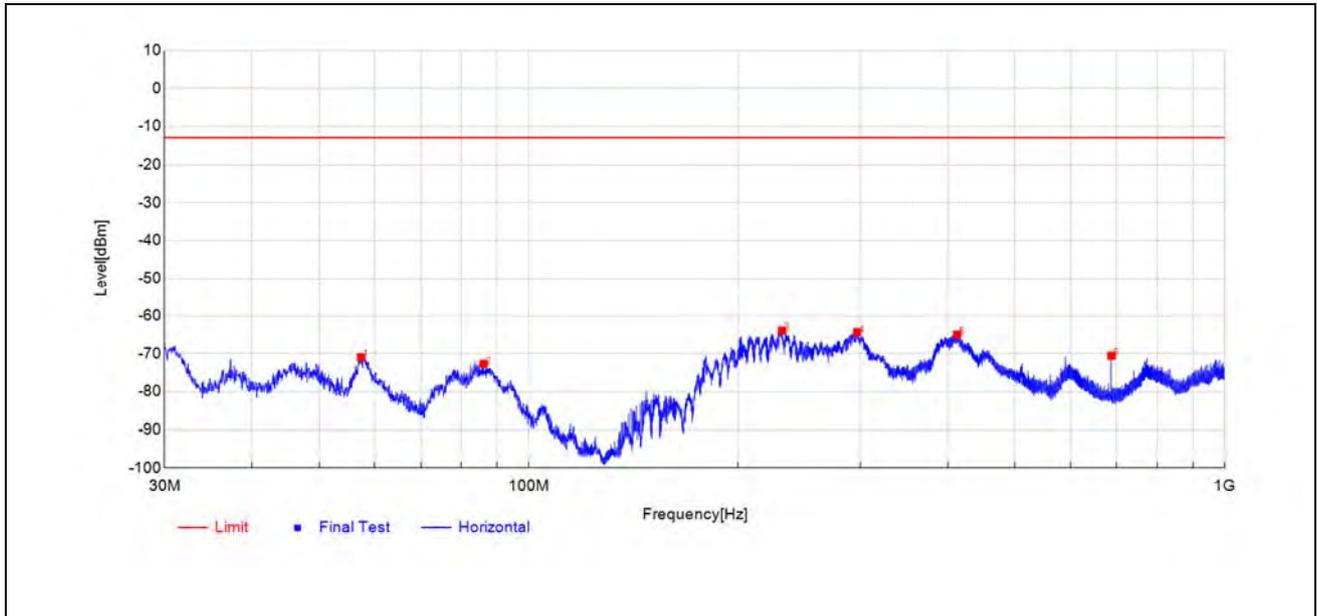
(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
57.5009	-58.05	-71.03	-13.0	-13.0	58.0	Horizontal	PASS
86.2143	-50.83	-72.80	-22.0	-13.0	59.8	Horizontal	PASS
231.1881	-56.54	-63.96	-7.4	-13.0	51.0	Horizontal	PASS
296.6178	-46.46	-64.47	-18.0	-13.0	51.5	Horizontal	PASS
412.7811	-54.55	-64.99	-10.4	-13.0	52.0	Horizontal	PASS
687.5474	-59.57	-70.57	-11.0	-13.0	57.6	Horizontal	PASS
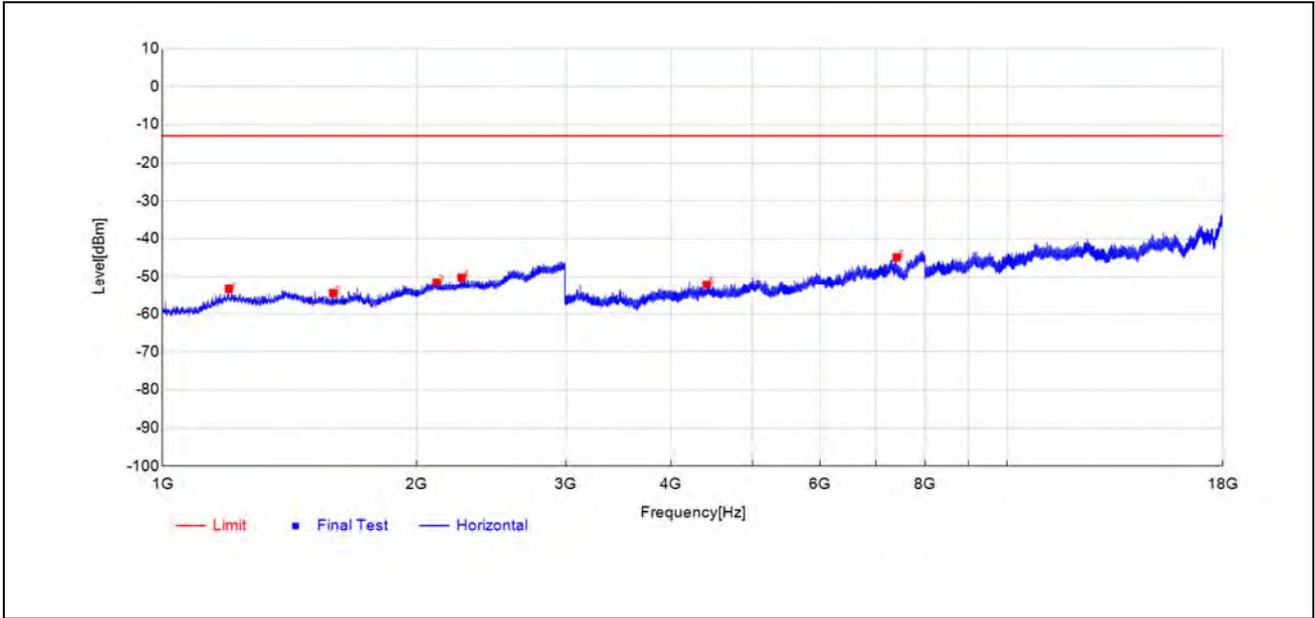
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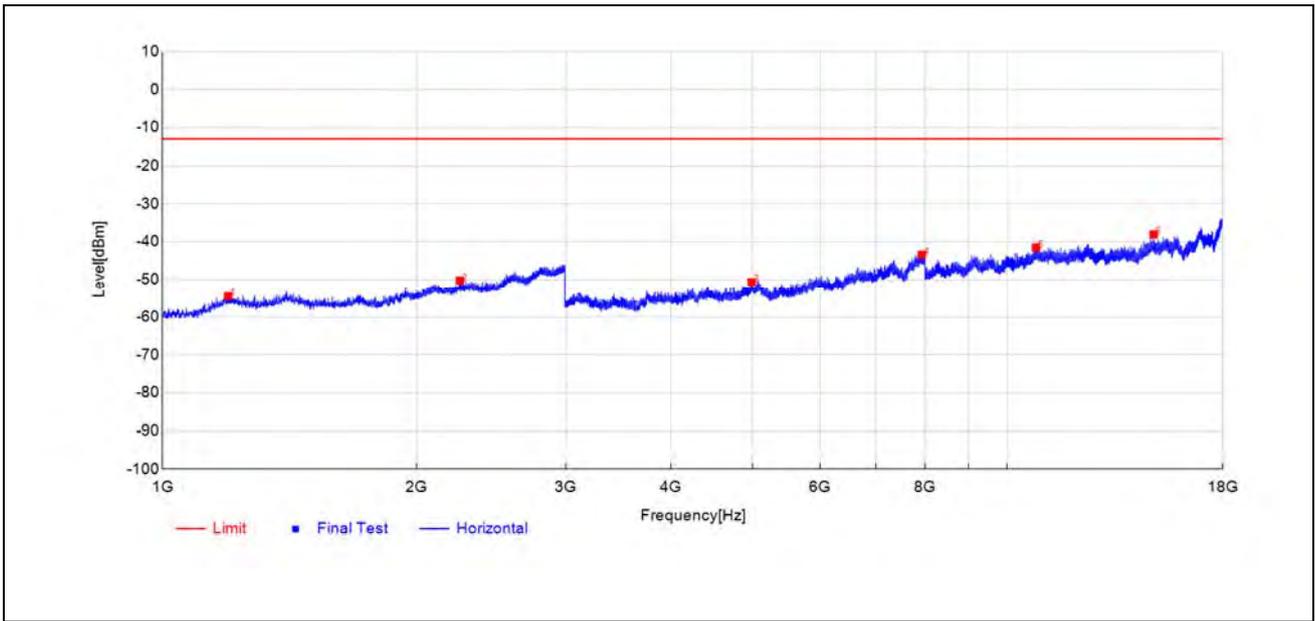Http://www.morlab.cn   E-mail: service@morlab.cn
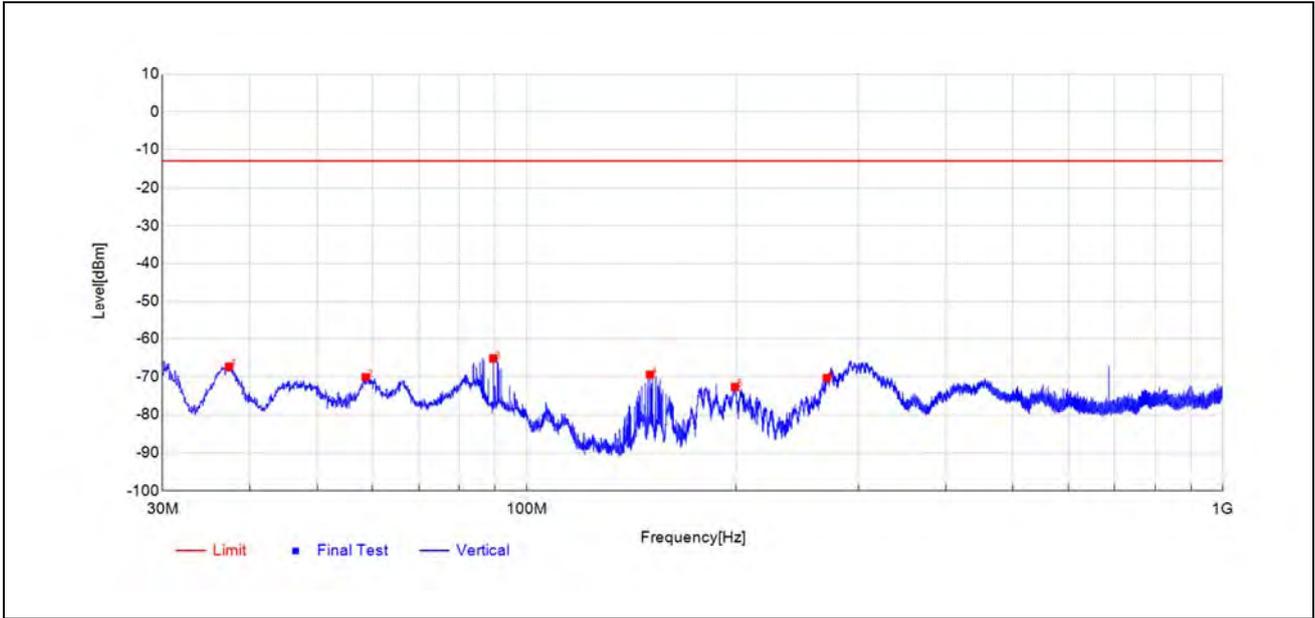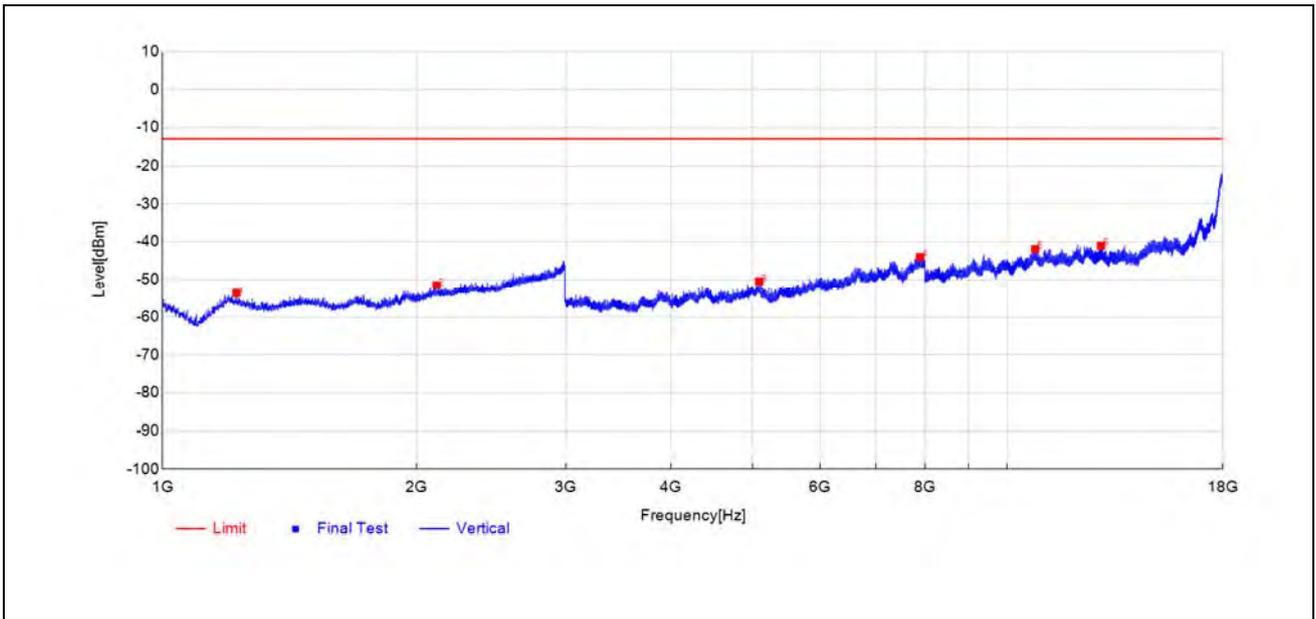
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(Antenna Horizontal, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1198.4397	-54.57	-53.47	1.1	-13.0	40.5	Horizontal	PASS
1592.5185	-54.64	-54.64	0.0	-13.0	41.6	Horizontal	PASS
2112.2224	-55.21	-51.55	3.7	-13.0	38.6	Horizontal	PASS
2259.4519	-54.02	-50.30	3.7	-13.0	37.3	Horizontal	PASS
4409.547	-51.88	-52.22	-0.3	-13.0	39.2	Horizontal	PASS
7396.1465	-52.08	-44.88	7.2	-13.0	31.9	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
46.9758	-55.21	-71.10	-15.9	-13.0	58.1	Vertical	PASS
89.076	-45.01	-65.60	-20.6	-13.0	52.6	Vertical	PASS
152.6626	-50.18	-69.93	-19.8	-13.0	56.9	Vertical	PASS
197.5759	-52.53	-72.05	-19.5	-13.0	59.1	Vertical	PASS
303.1657	-50.88	-66.12	-15.2	-13.0	53.1	Vertical	PASS
687.4989	-58.71	-67.46	-8.8	-13.0	54.5	Vertical	PASS

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(Antenna Vertical, 1GHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1186.0372	-55.04	-54.35	0.7	-13.0	41.4	Vertical	PASS
2085.8172	-55.51	-52.91	2.6	-13.0	39.9	Vertical	PASS
2782.7566	-53.74	-47.68	6.1	-13.0	34.7	Vertical	PASS
4607.5536	-52.13	-52.62	-0.5	-13.0	39.6	Vertical	PASS
7877.6626	-50.41	-43.91	6.5	-13.0	30.9	Vertical	PASS
11636.7879	-53.87	-42.05	11.8	-13.0	29.1	Vertical	PASS

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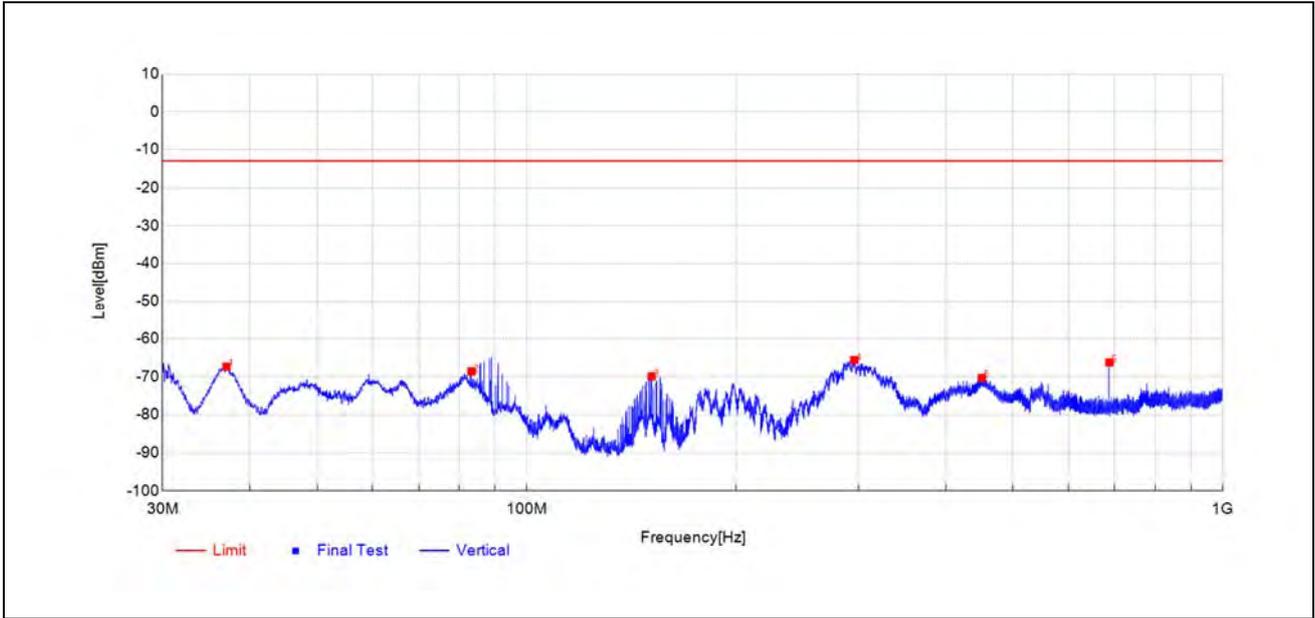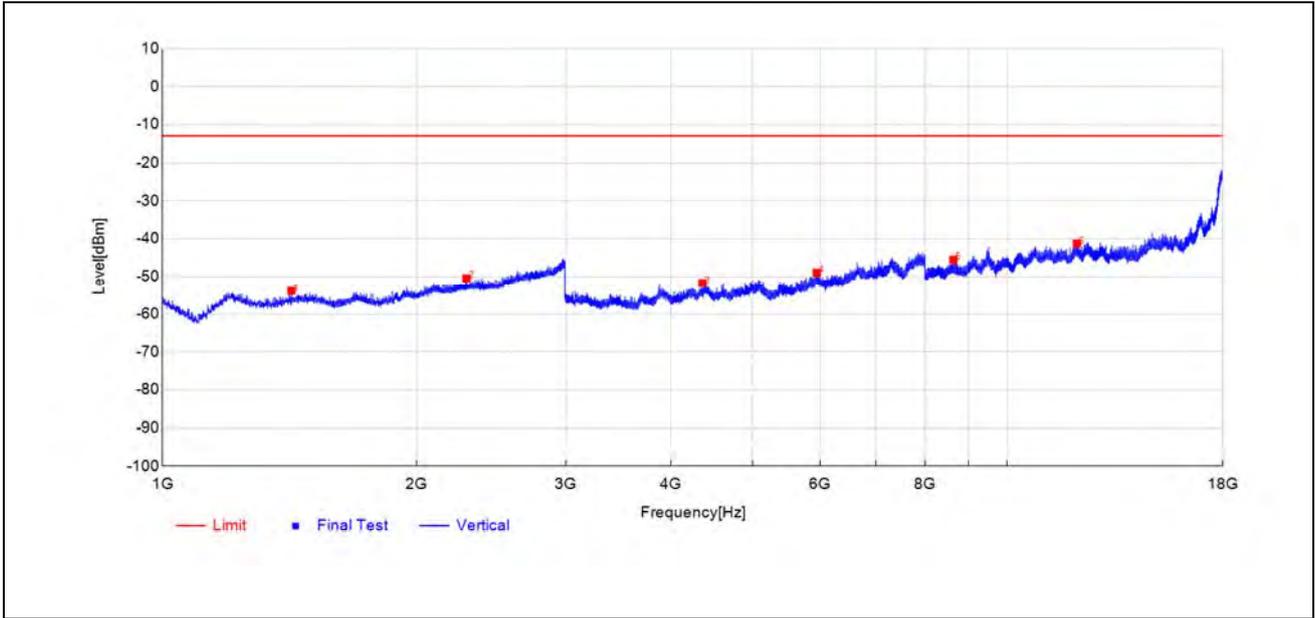
LTE Band 5

Plot for Low Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
83.1102	-48.00	-69.42	-21.4	-13.0	56.4	Horizontal	PASS
202.7171	-48.92	-66.11	-17.2	-13.0	53.1	Horizontal	PASS
275.1798	-49.18	-64.98	-15.8	-13.0	52.0	Horizontal	PASS
705.4933	-48.09	-58.84	-10.8	-13.0	45.8	Horizontal	PASS
826.6523	-40.90	-46.48	-5.6	-13.0	33.5	Horizontal	PASS
876.7068	-48.82	-56.46	-7.6	-13.0	43.5	Horizontal	PASS
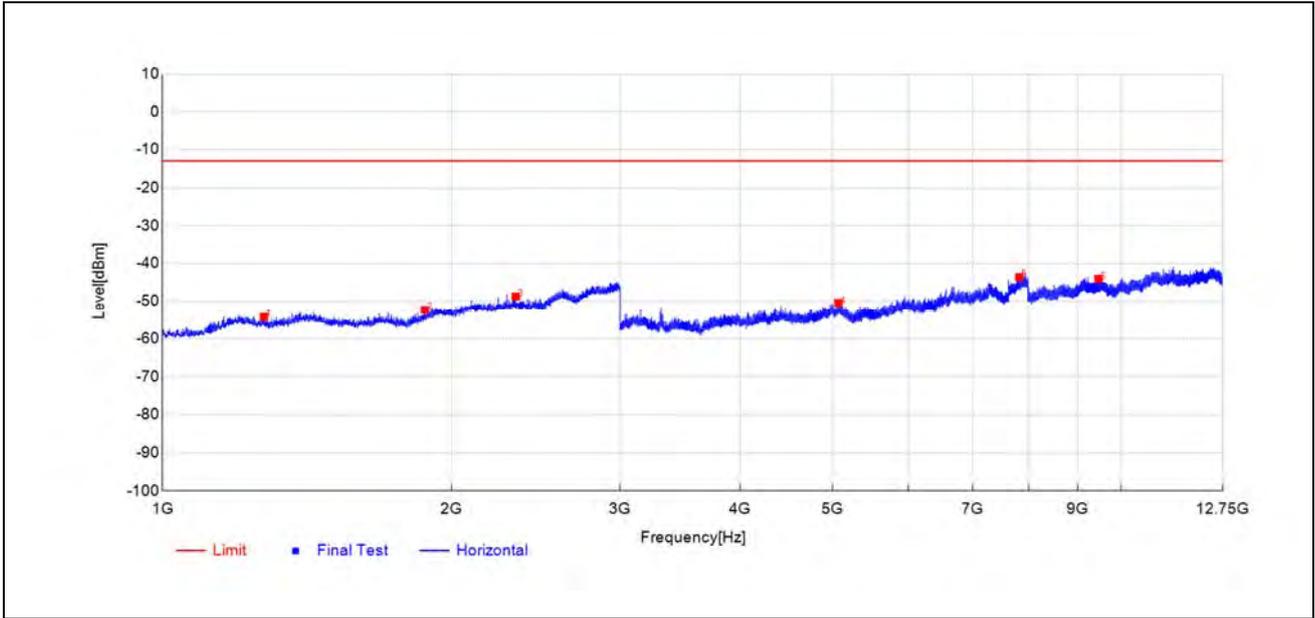
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(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1276.0552	-55.13	-54.22	0.9	-13.0	41.2	Horizontal	PASS
1877.7756	-54.76	-52.45	2.3	-13.0	39.5	Horizontal	PASS
2334.2669	-53.77	-48.77	5.0	-13.0	35.8	Horizontal	PASS
5070.644	-52.83	-50.55	2.3	-13.0	37.6	Horizontal	PASS
7829.661	-50.44	-43.55	6.9	-13.0	30.6	Horizontal	PASS
9461.5404	-53.33	-44.13	9.2	-13.0	31.1	Horizontal	PASS
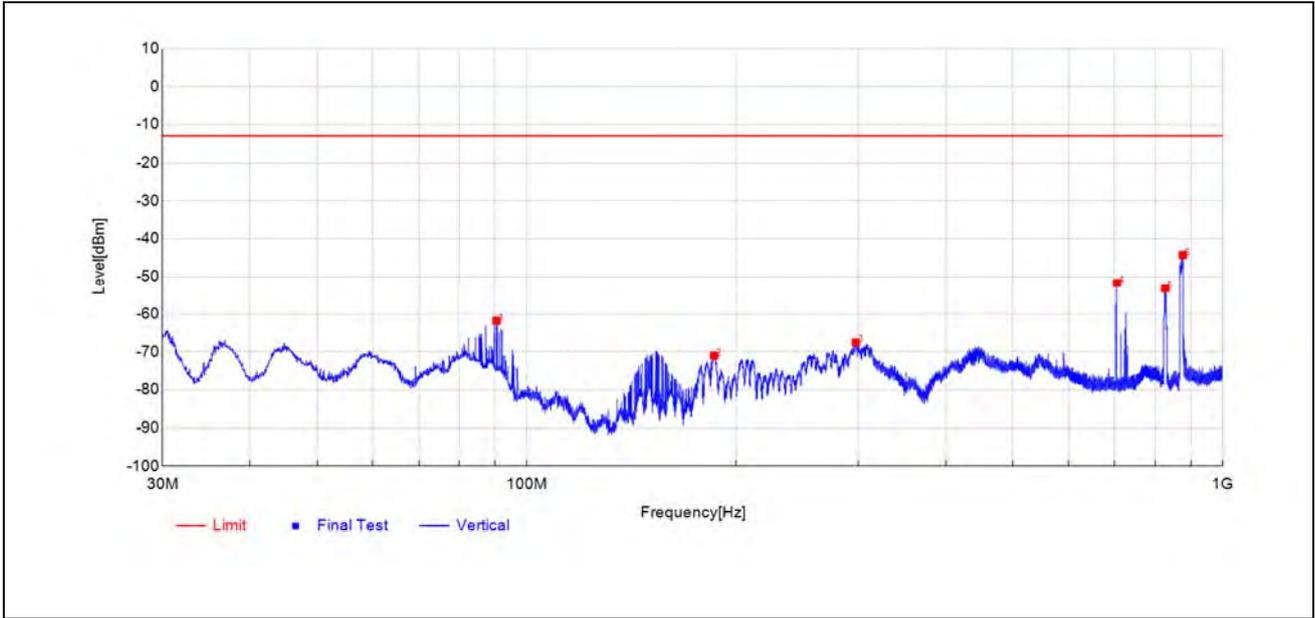
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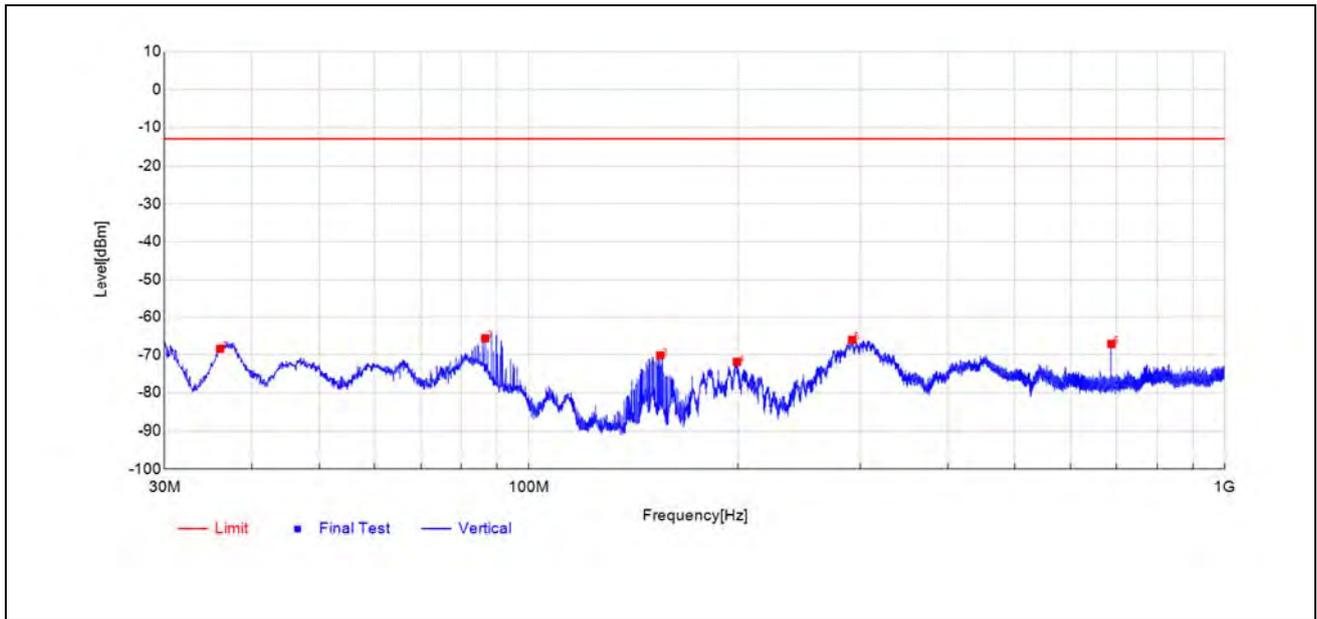
(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
90.6765	-41.82	-61.89	-20.1	-13.0	48.9	Vertical	PASS
185.9838	-51.76	-71.10	-19.3	-13.0	58.1	Vertical	PASS
297.5879	-52.39	-67.63	-15.2	-13.0	54.6	Vertical	PASS
705.2023	-42.93	-51.68	-8.8	-13.0	38.7	Vertical	PASS
826.6038	-47.99	-53.25	-5.3	-13.0	40.3	Vertical	PASS
876.7068	-38.23	-44.33	-6.1	-13.0	31.3	Vertical	PASS

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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1674.5349	-55.84	-54.69	1.2	-13.0	41.7	Vertical	PASS
2278.2557	-54.36	-50.19	4.2	-13.0	37.2	Vertical	PASS
2815.5631	-54.84	-47.52	7.3	-13.0	34.5	Vertical	PASS
4630.2543	-51.95	-52.56	-0.6	-13.0	39.6	Vertical	PASS
6684.6478	-52.98	-46.44	6.5	-13.0	33.4	Vertical	PASS
8618.4623	-53.37	-46.19	7.2	-13.0	33.2	Vertical	PASS
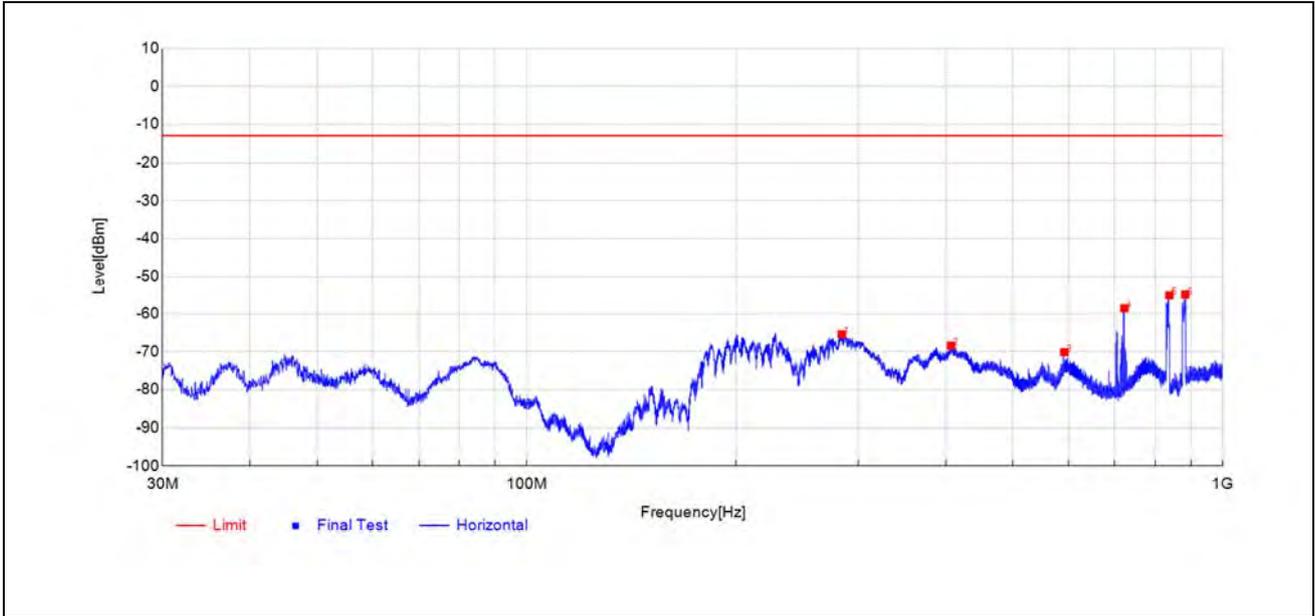
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Plot for Mid Channel

(Antenna Horizontal, 30MHz to 1GHz)

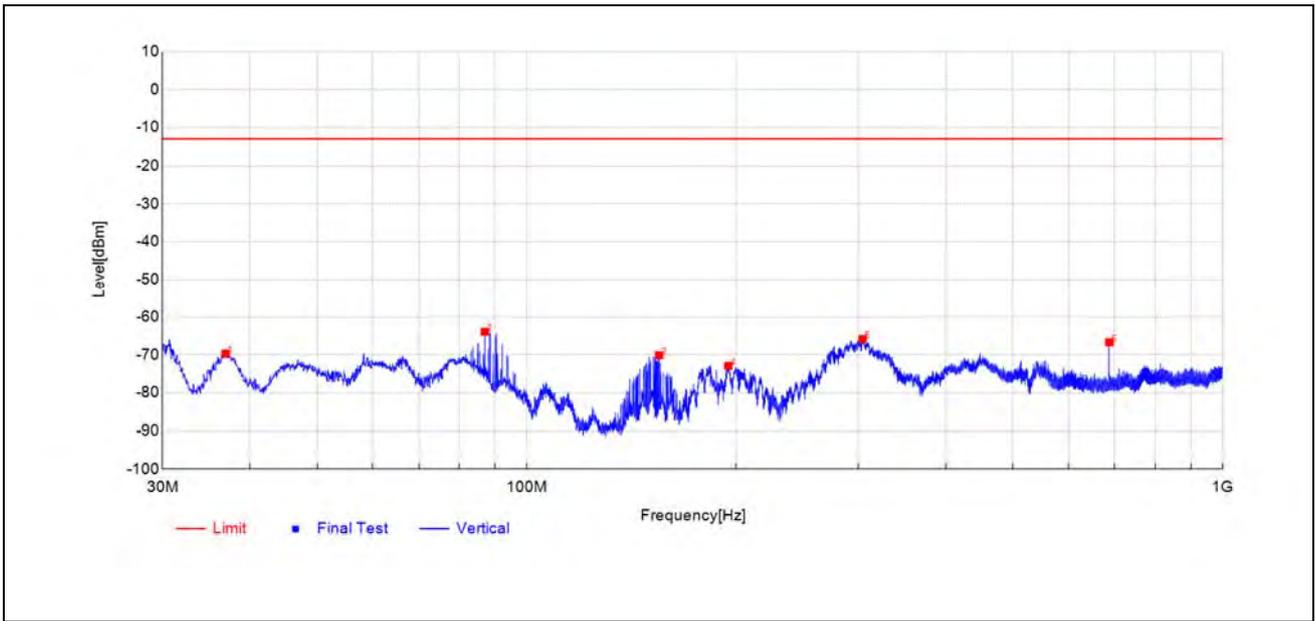| Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
283.4737	-49.16	-65.46	-16.3	-13.0	52.5	Horizontal	PASS
407.5429	-58.22	-68.47	-10.3	-13.0	55.5	Horizontal	PASS
591.9976	-61.30	-70.22	-8.9	-13.0	57.2	Horizontal	PASS
721.8386	-49.24	-58.65	-9.4	-13.0	45.7	Horizontal	PASS
837.5654	-48.60	-55.09	-6.5	-13.0	42.1	Horizontal	PASS
884.5157	-47.88	-55.04	-7.2	-13.0	42.0	Horizontal	PASS
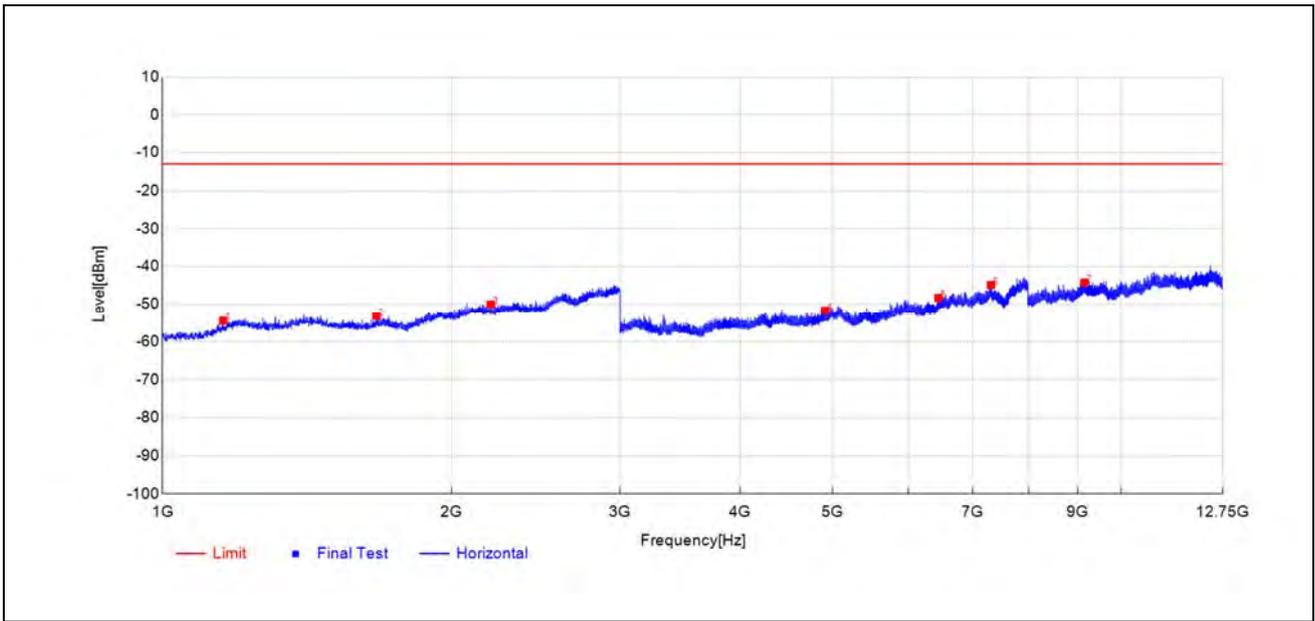
(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1156.0312	-55.05	-54.58	0.5	-13.0	41.6	Horizontal	PASS
1671.7343	-54.56	-53.26	1.3	-13.0	40.3	Horizontal	PASS
2201.0402	-54.20	-50.05	4.2	-13.0	37.1	Horizontal	PASS
4908.1386	-52.63	-51.72	0.9	-13.0	38.7	Horizontal	PASS
6444.4648	-53.00	-48.31	4.7	-13.0	35.3	Horizontal	PASS
7317.7689	-52.84	-44.96	7.9	-13.0	32.0	Horizontal	PASS
9142.0547	-53.64	-44.25	9.4	-13.0	31.3	Horizontal	PASS

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.3053	-46.47	-65.25	-18.8	-13.0	52.3	Vertical	PASS
298.1699	-52.91	-68.12	-15.2	-13.0	55.1	Vertical	PASS
551.6436	-59.28	-70.78	-11.5	-13.0	57.8	Vertical	PASS
703.7472	-48.66	-57.40	-8.7	-13.0	44.4	Vertical	PASS
836.4498	-53.00	-58.58	-5.6	-13.0	45.6	Vertical	PASS
877.3859	-38.23	-44.31	-6.1	-13.0	31.3	Vertical	PASS

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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1204.4409	-55.46	-53.46	2.0	-13.0	40.5	Vertical	PASS
1883.7768	-54.91	-53.01	1.9	-13.0	40.0	Vertical	PASS
2264.2529	-53.82	-49.67	4.2	-13.0	36.7	Vertical	PASS
5103.1451	-53.12	-51.23	1.9	-13.0	38.2	Vertical	PASS
7319.069	-52.34	-44.53	7.8	-13.0	31.5	Vertical	PASS
10256.8419	-52.83	-43.30	9.5	-13.0	30.3	Vertical	PASS
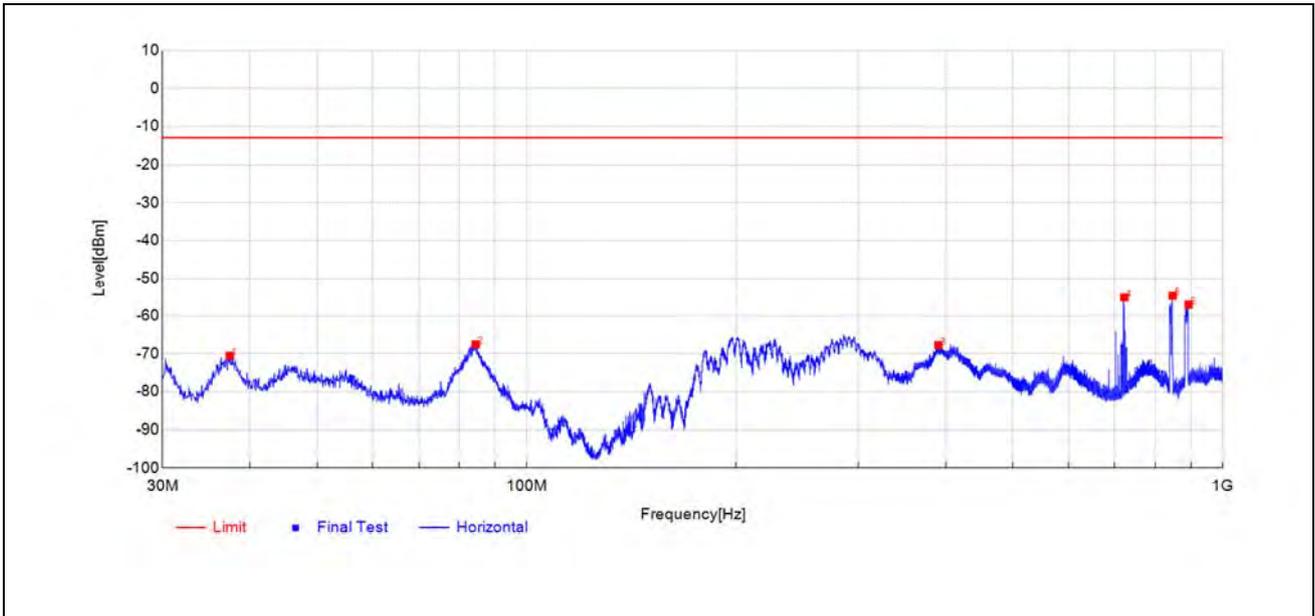
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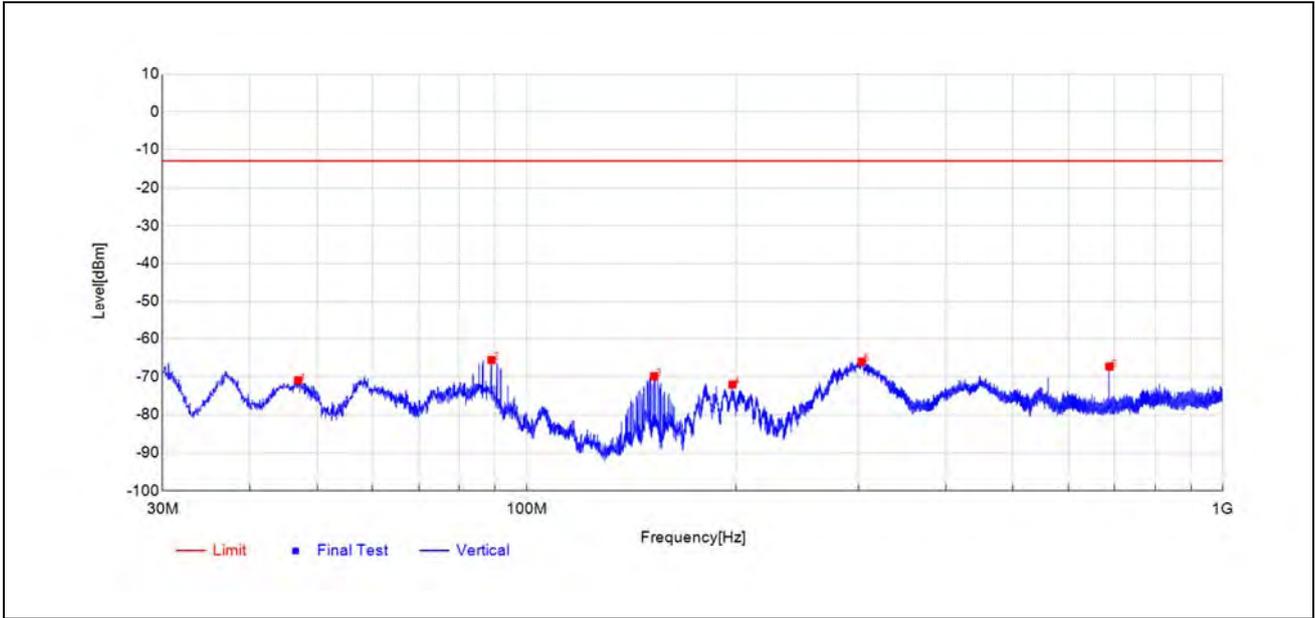
Plot for High Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.4694	-60.45	-70.61	-10.2	-13.0	57.6	Horizontal	PASS
84.5167	-46.08	-67.61	-21.5	-13.0	54.6	Horizontal	PASS
390.8095	-55.53	-67.85	-12.3	-13.0	54.9	Horizontal	PASS
721.8386	-45.81	-55.22	-9.4	-13.0	42.2	Horizontal	PASS
847.9449	-47.15	-54.76	-7.6	-13.0	41.8	Horizontal	PASS
892.7126	-50.37	-57.03	-6.7	-13.0	44.0	Horizontal	PASS
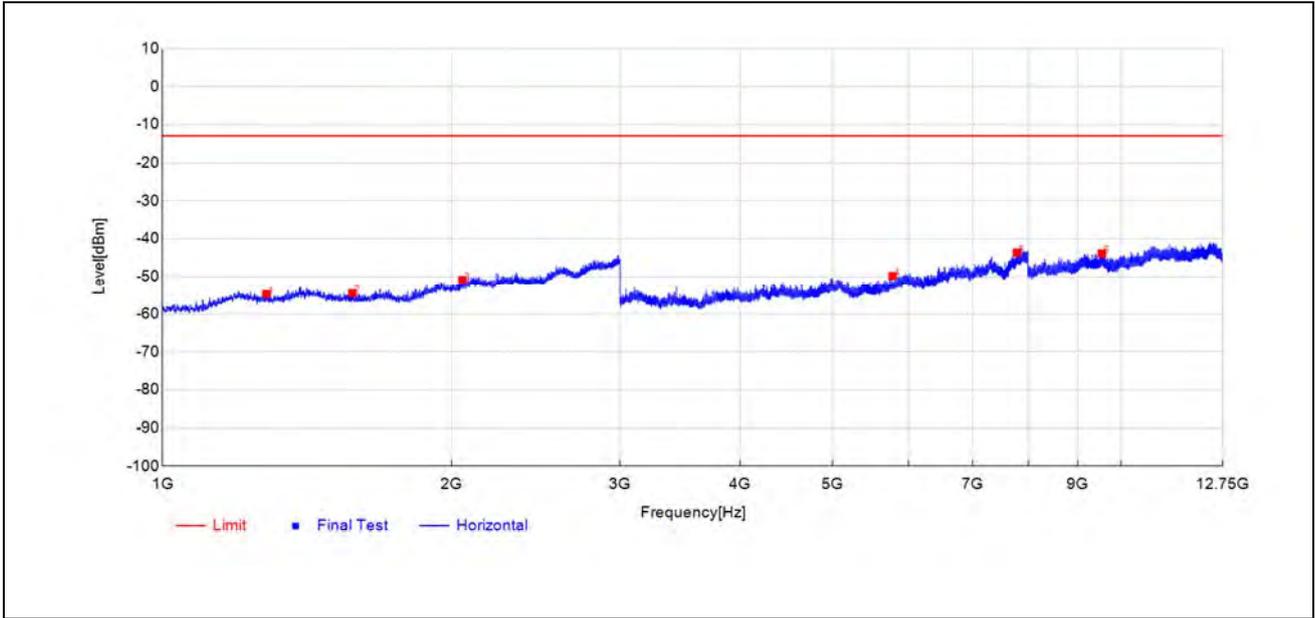
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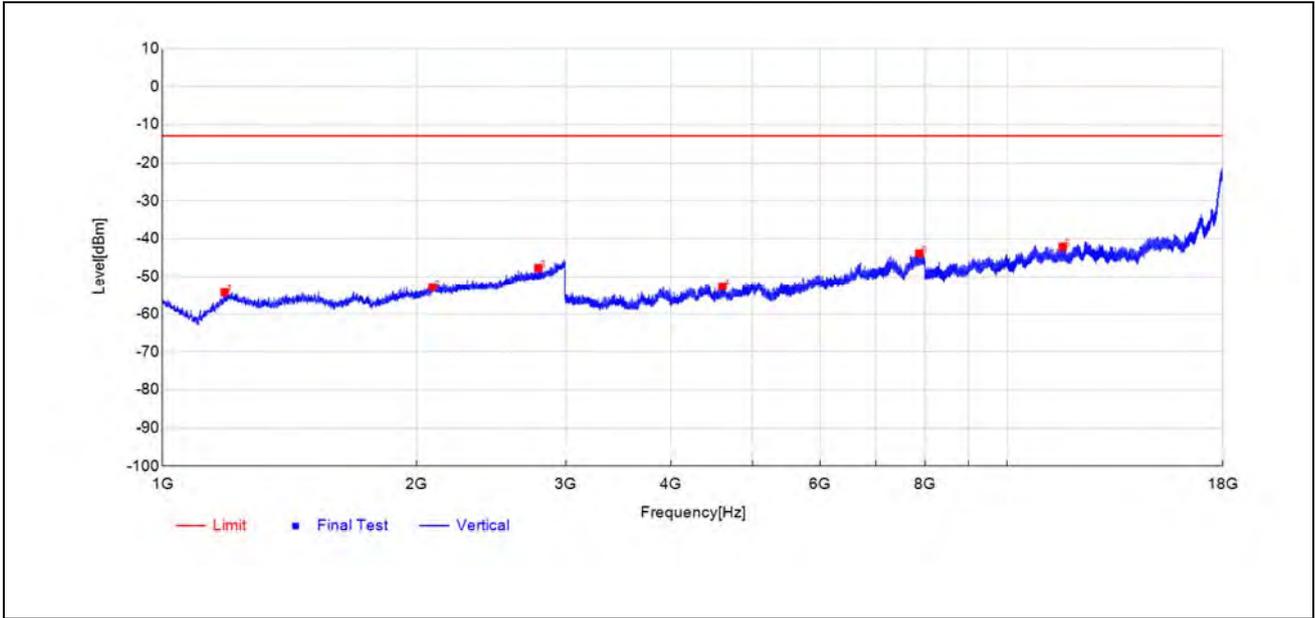
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(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1282.4565	-55.71	-54.84	0.9	-13.0	41.8	Horizontal	PASS
1577.7155	-55.52	-54.59	0.9	-13.0	41.6	Horizontal	PASS
2055.011	-54.67	-50.92	3.8	-13.0	37.9	Horizontal	PASS
5767.4672	-53.05	-49.84	3.2	-13.0	36.8	Horizontal	PASS
7775.7092	-50.28	-43.71	6.6	-13.0	30.7	Horizontal	PASS
9550.5934	-53.64	-43.74	9.9	-13.0	30.7	Horizontal	PASS
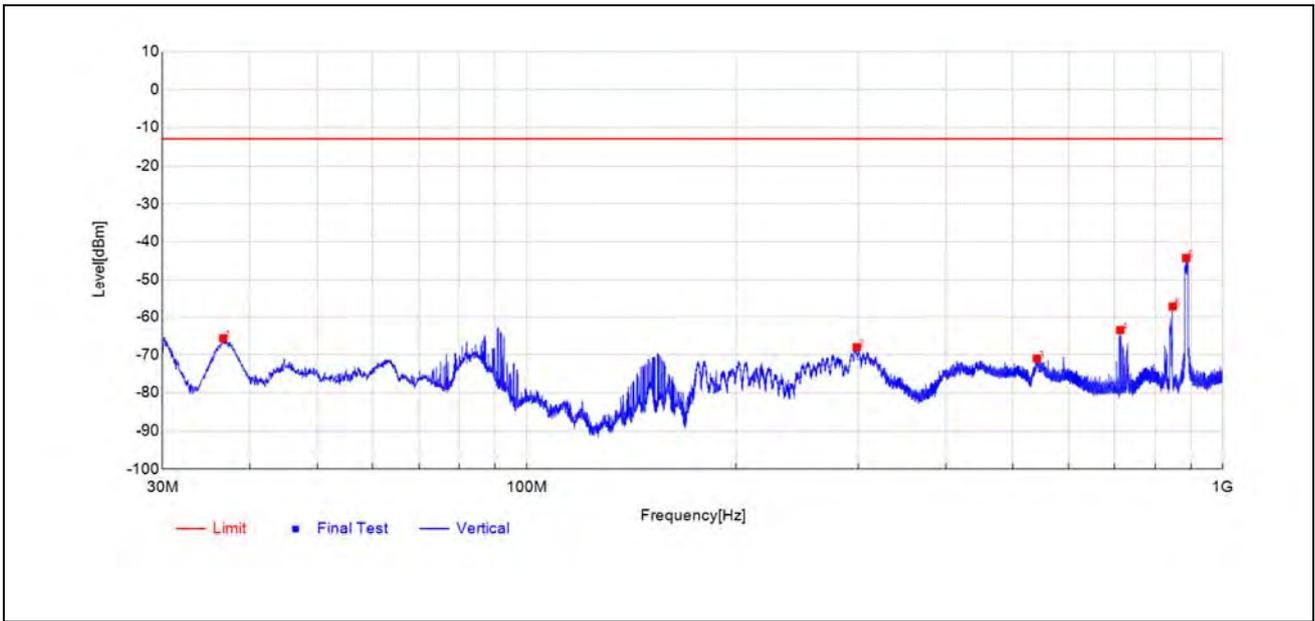
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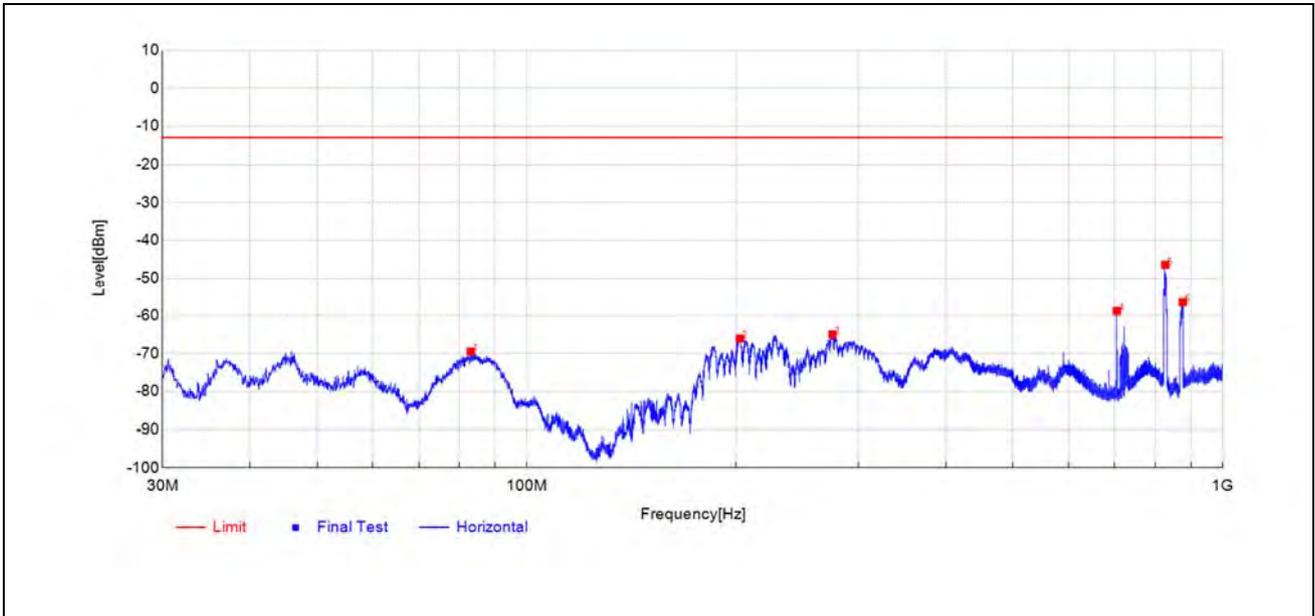Http://www.morlab.cn   E-mail: service@morlab.cn

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.6933	-47.07	-65.73	-18.7	-13.0	52.7	Vertical	PASS
297.9274	-52.84	-68.06	-15.2	-13.0	55.1	Vertical	PASS
541.2156	-58.84	-71.08	-12.2	-13.0	58.1	Vertical	PASS
712.7686	-54.90	-63.55	-8.7	-13.0	50.6	Vertical	PASS
847.7024	-50.98	-57.29	-6.3	-13.0	44.3	Vertical	PASS
886.2133	-38.48	-44.27	-5.8	-13.0	31.3	Vertical	PASS
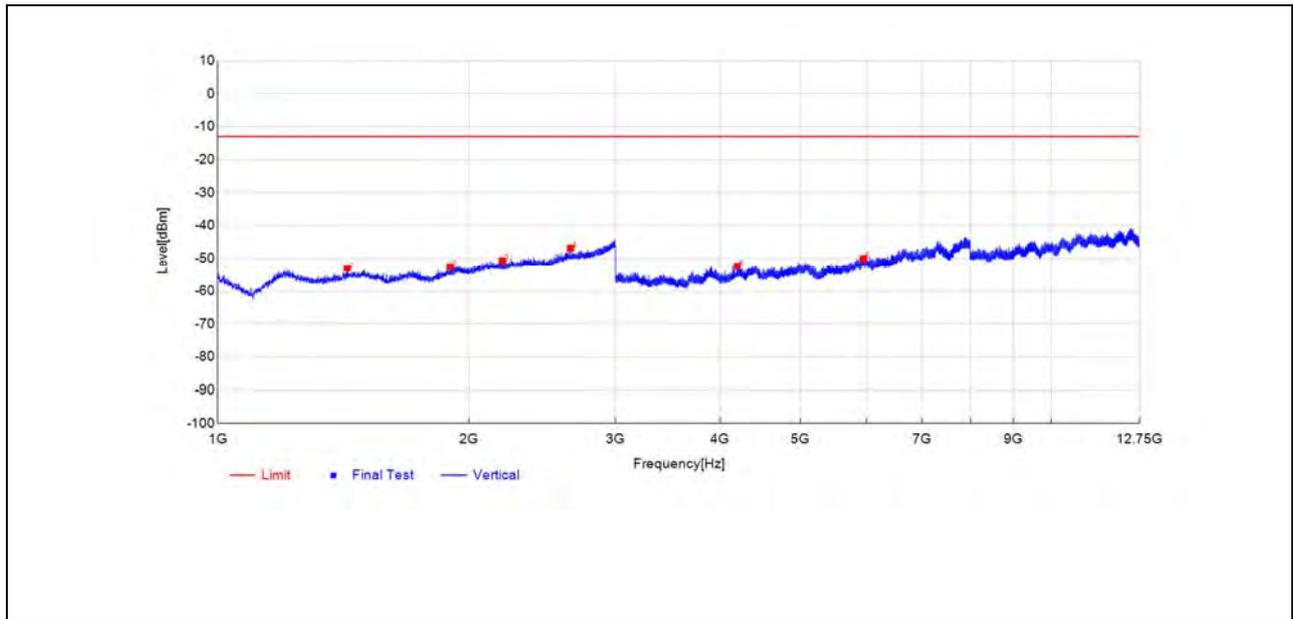
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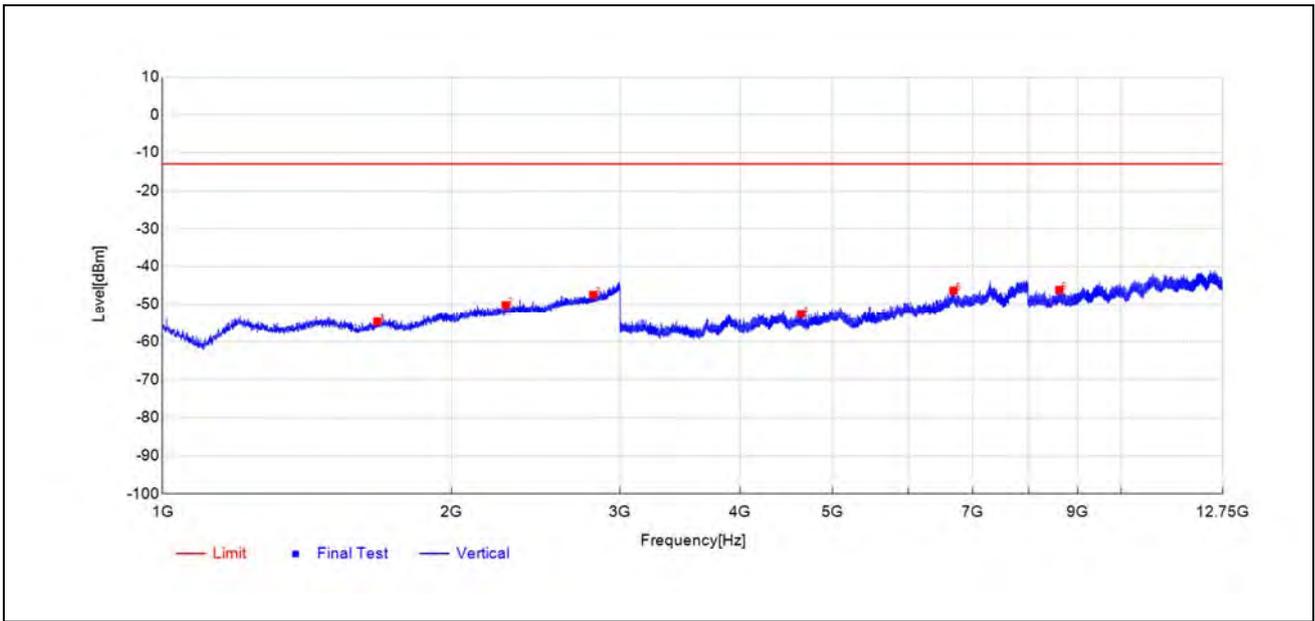
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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1429.6859	-54.69	-53.14	1.6	-13.0	40.1	Vertical	PASS
1900.18	-54.84	-52.60	2.2	-13.0	39.6	Vertical	PASS
2193.4387	-54.28	-50.64	3.6	-13.0	37.6	Vertical	PASS
2649.5299	-53.51	-46.88	6.6	-13.0	33.9	Vertical	PASS
4197.9899	-51.32	-52.49	-1.2	-13.0	39.5	Vertical	PASS
5949.1483	-54.19	-50.01	4.2	-13.0	37.0	Vertical	PASS

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LTE Band 7

Plot for Low Channel

(Antenna Horizontal, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
31.3581	-58.96	-74.09	-15.1	-25.0	49.1	Horizontal	PASS
90.434	-51.77	-75.08	-23.3	-25.0	50.1	Horizontal	PASS
1841.7684	-58.01	-53.91	4.1	-25.0	28.9	Horizontal	PASS
2486.6973	-36.17	-26.20	10.0	-	-	Horizontal	NA
5008.144	-59.62	-53.53	6.1	-25.0	28.5	Horizontal	PASS
12580.1032	-68.96	-46.00	23.0	-25.0	21.0	Horizontal	PASS
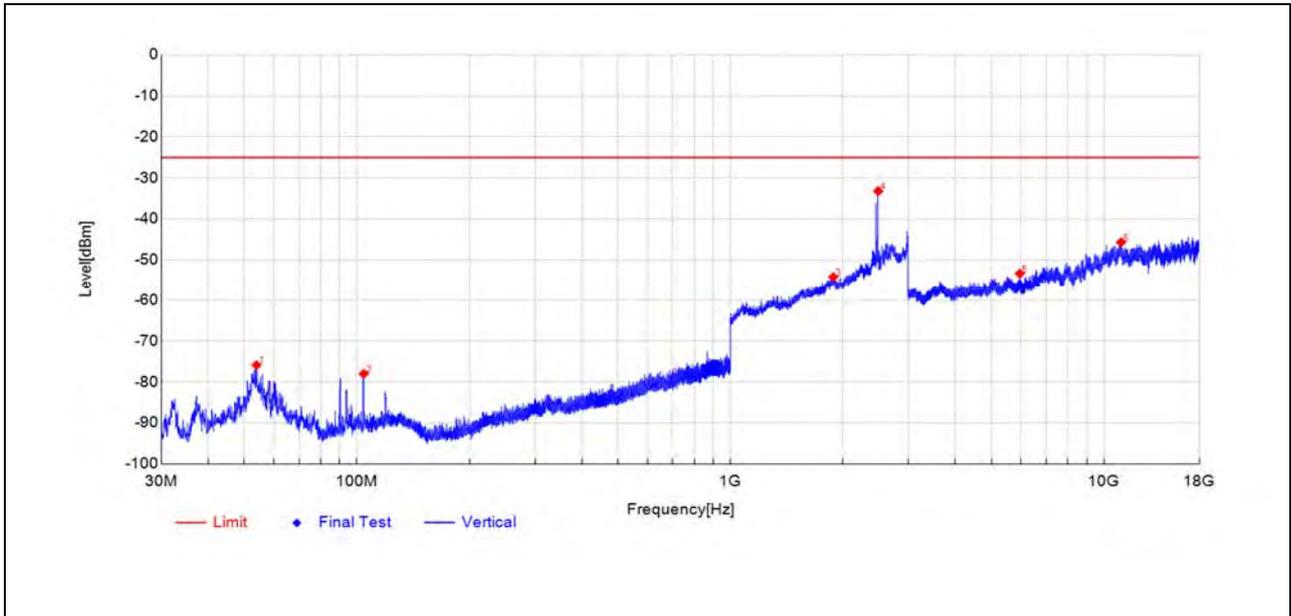
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(Antenna Vertical, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
53.8632	-58.56	-75.85	-17.3	-25.0	50.9	Vertical	PASS
104.3057	-56.98	-77.98	-21.0	-25.0	53.0	Vertical	PASS
1884.977	-59.29	-54.12	5.2	-25.0	29.1	Vertical	PASS
2487.4975	-43.25	-33.16	10.1	-	-	Vertical	NA
5955.4222	-60.39	-53.28	7.1	-25.0	28.3	Vertical	PASS
11116.5247	-67.50	-45.64	21.9	-25.0	20.6	Vertical	PASS
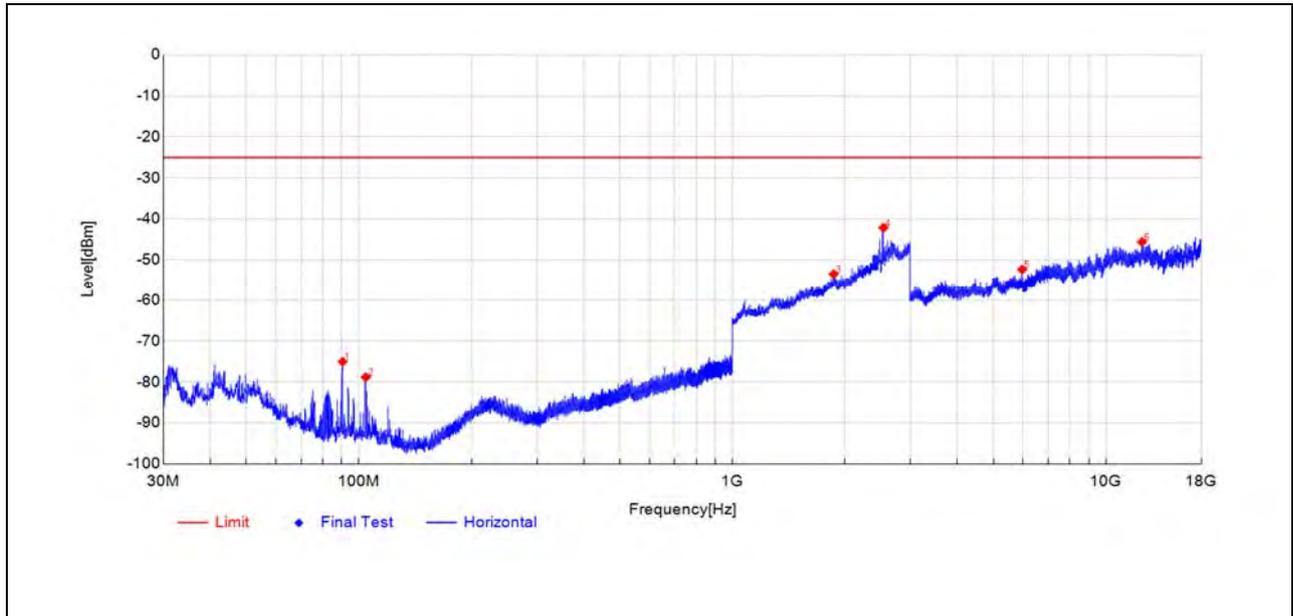
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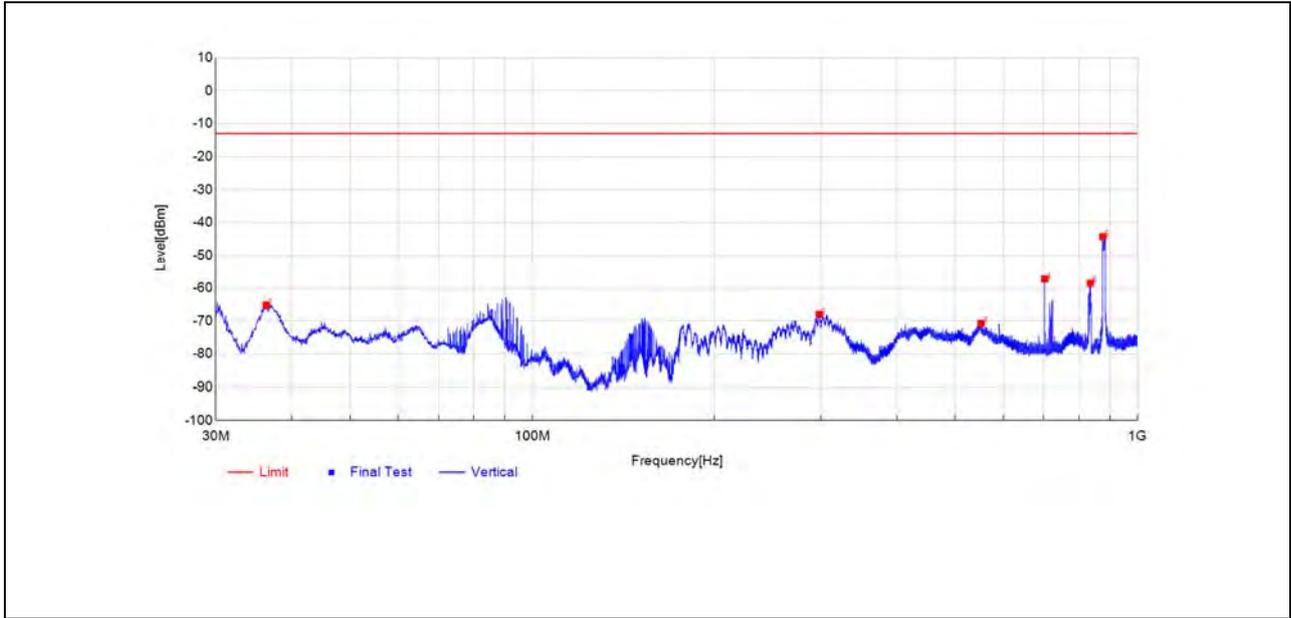
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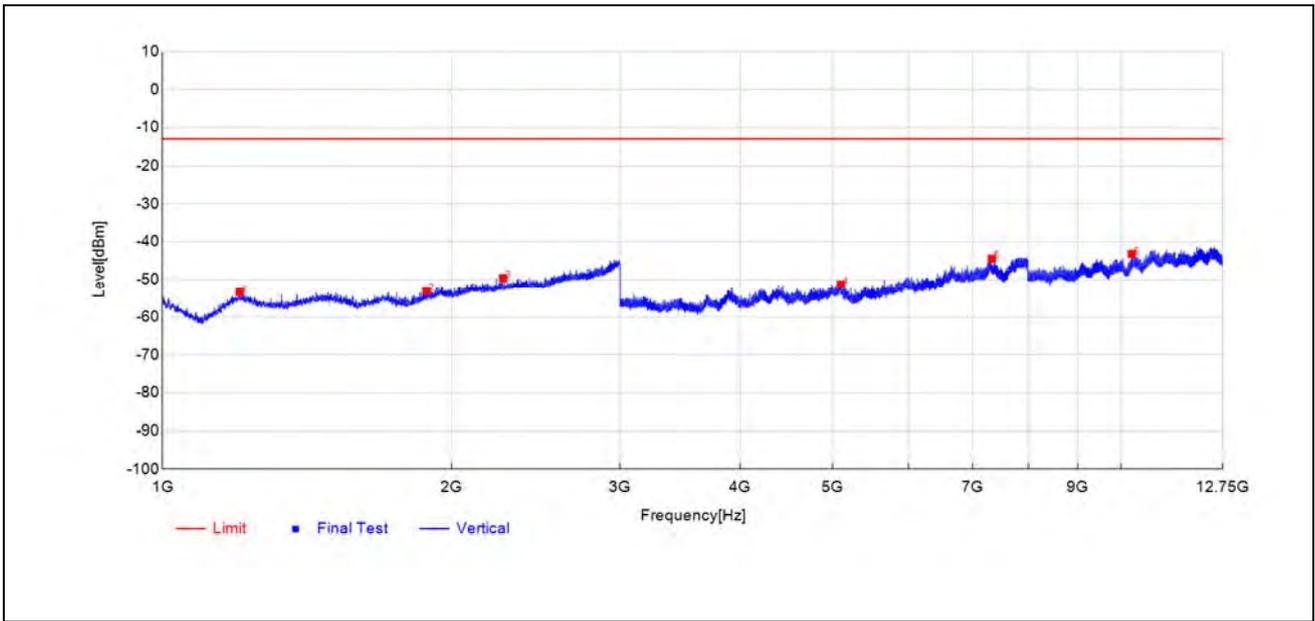
Plot for Mid Channel

(Antenna Horizontal, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
90.4825	-51.73	-75.04	-23.3	-25.0	50.0	Horizontal	PK
104.3542	-56.12	-78.80	-22.7	-25.0	53.8	Horizontal	PK
1866.5733	-58.26	-53.42	4.8	-25.0	28.4	Horizontal	PK
2537.5075	-53.44	-42.10	11.3	-	-	Horizontal	PK
5970.853	-60.16	-52.29	7.9	-25.0	27.3	Horizontal	PK
12491.2997	-68.70	-45.55	23.2	-25.0	20.6	Horizontal	PK
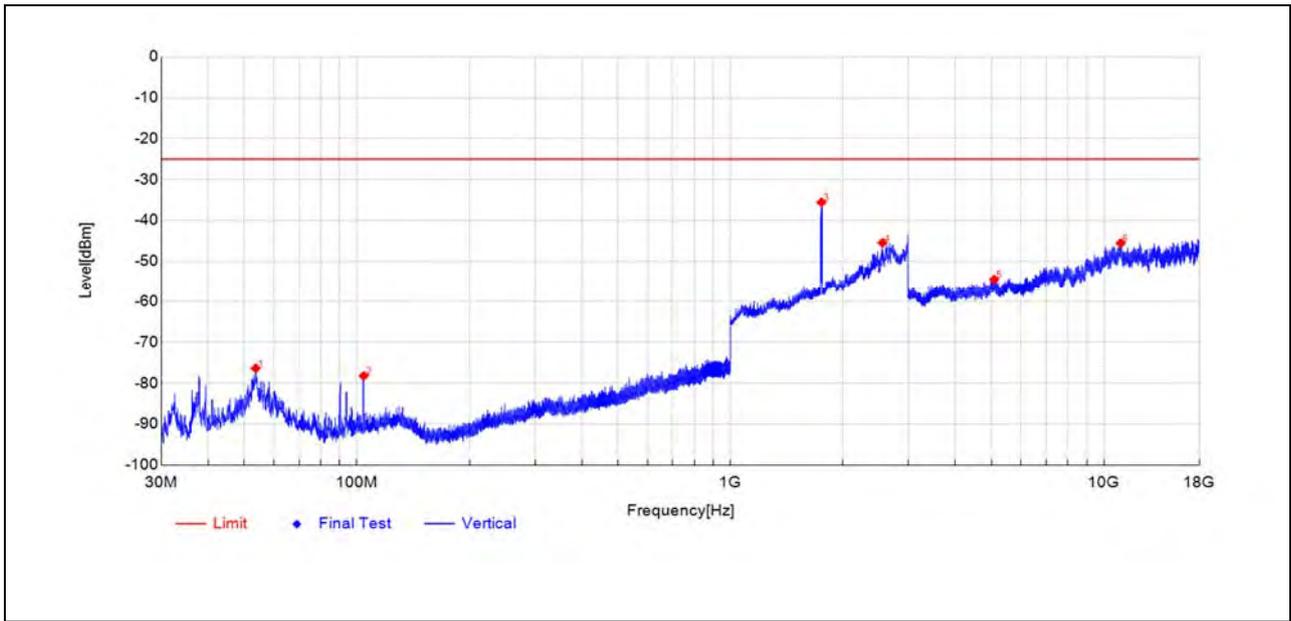
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(Antenna Vertical, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
53.5722	-58.95	-76.33	-17.4	-25.0	51.3	Vertical	PASS
104.3057	-57.22	-78.22	-21.0	-25.0	53.2	Vertical	PASS
1753.3507	-38.31	-35.55	2.8	-	-	Vertical	NA
2554.7109	-58.11	-45.44	12.7	-	-	Vertical	NA
5084.012	-59.88	-54.41	5.5	-25.0	29.4	Vertical	PASS
11087.2435	-67.44	-45.53	21.9	-25.0	20.5	Vertical	PASS
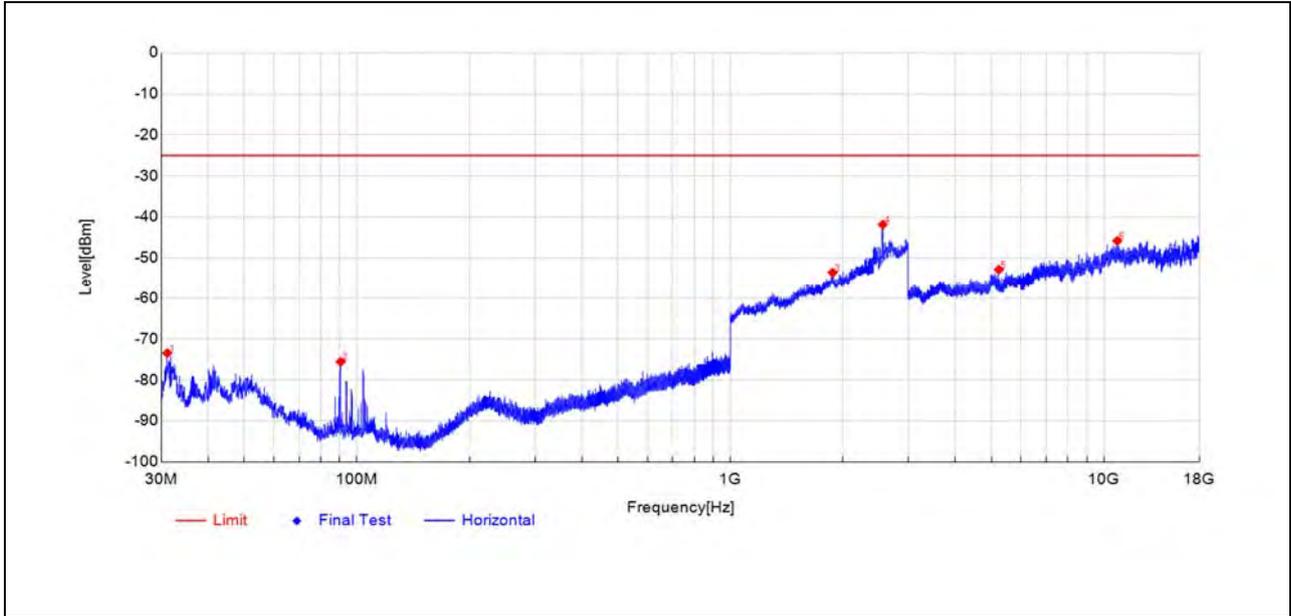
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Plot for High Channel

(Antenna Horizontal, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
31.0671	-58.29	-73.42	-15.1	-25.0	48.4	Horizontal	PASS
90.4825	-52.22	-75.53	-23.3	-25.0	50.5	Horizontal	PASS
1878.9758	-58.93	-53.51	5.4	-25.0	28.5	Horizontal	PASS
2557.9116	-53.12	-41.82	11.3	-	-	Horizontal	NA
5232.7475	-58.01	-52.79	5.2	-25.0	27.8	Horizontal	PASS
10863.0745	-66.45	-45.79	20.7	-25.0	20.8	Horizontal	PASS
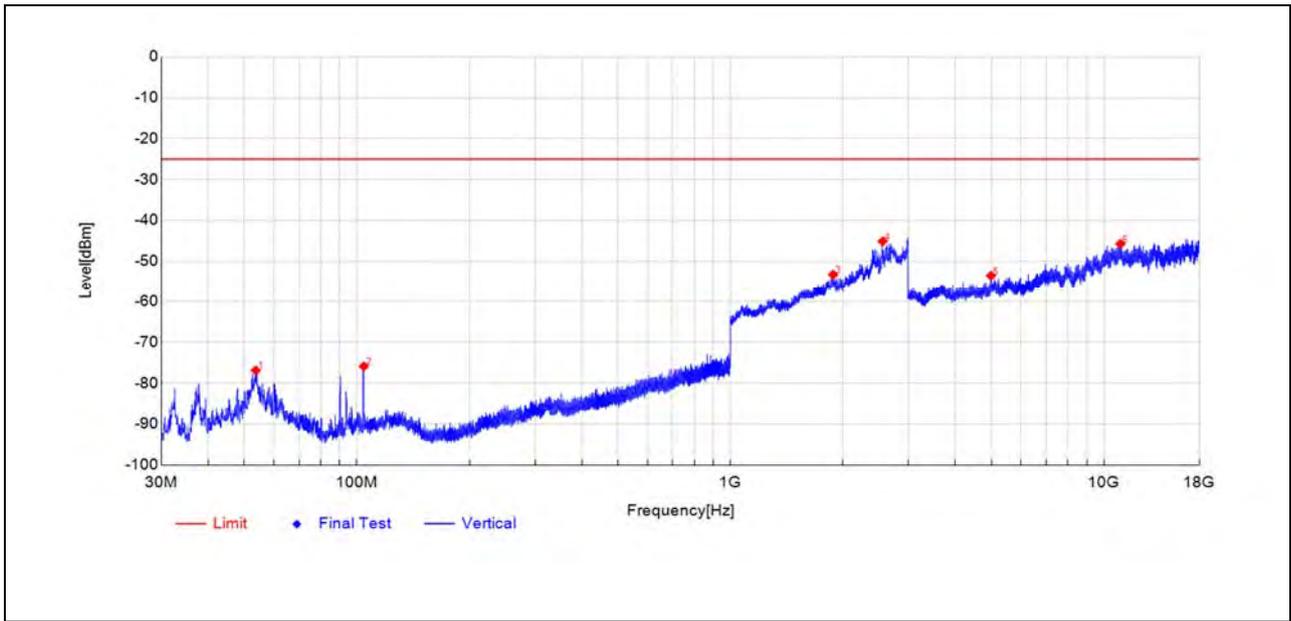
(Antenna Vertical, 30MHz to 18GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
53.6207	-59.52	-76.88	-17.4	-25.0	51.9	Vertical	PASS
104.3542	-54.89	-75.89	-21.0	-25.0	50.9	Vertical	PASS
1883.3767	-58.45	-53.24	5.2	-25.0	28.2	Vertical	PASS
2557.9116	-57.62	-45.07	12.6	-	-	Vertical	NA
4985.4265	-58.81	-53.50	5.3	-25.0	28.5	Vertical	PASS
11070.4428	-67.54	-45.68	21.9	-25.0	20.7	Vertical	PASS

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LTE Band 12

Plot for Low Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
46.4423	-65.07	-73.64	-8.6	-13.0	60.6	Horizontal	PASS
56.3853	-62.81	-74.73	-11.9	-13.0	61.7	Horizontal	PASS
91.3556	-58.04	-80.07	-22.0	-13.0	67.1	Horizontal	PASS
147.0849	-55.55	-82.09	-26.5	-13.0	69.1	Horizontal	PASS
226.5318	-56.84	-64.75	-7.9	-13.0	51.8	Horizontal	PASS
707.9184	-30.80	-40.81	-10.0	-13.0	27.8	Horizontal	PASS
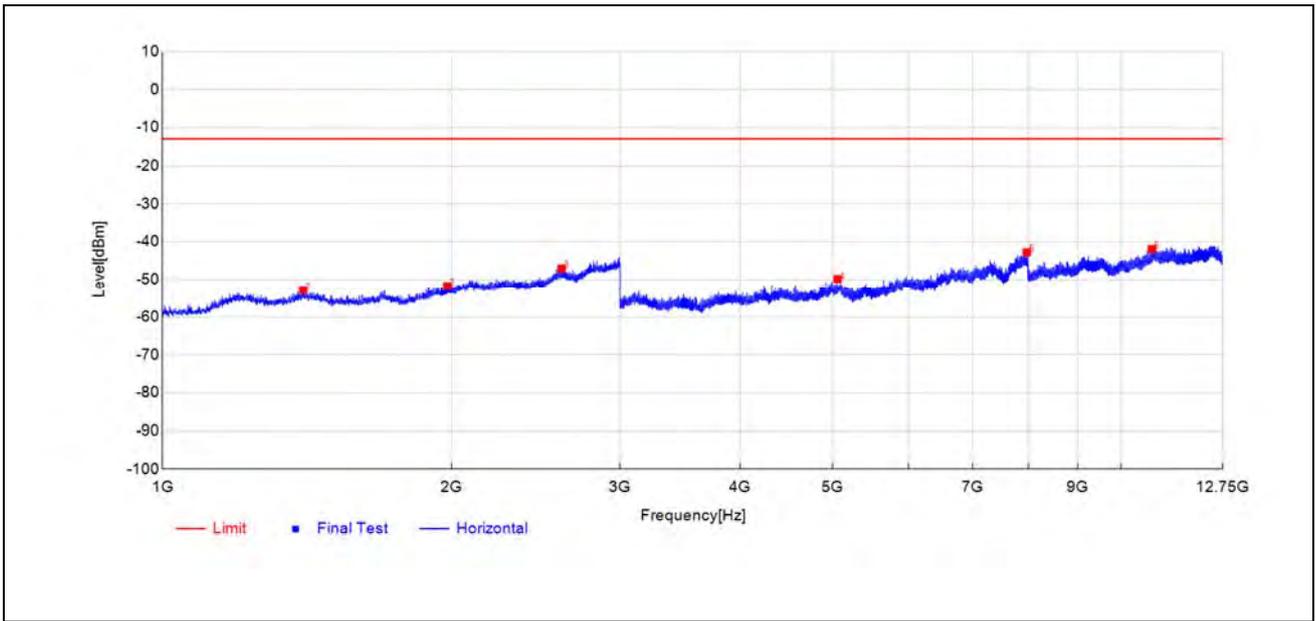
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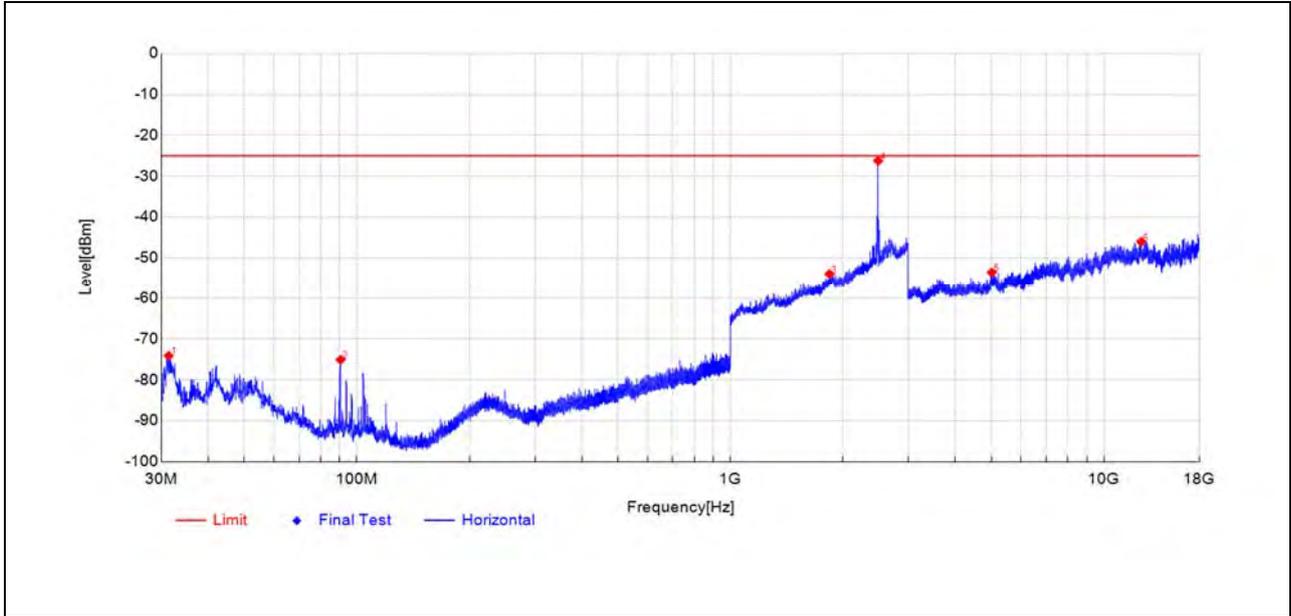
Page **294** of **360**

(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1402.4805	-55.42	-52.84	2.6	-13.0	39.8	Horizontal	PASS
1980.196	-54.93	-51.80	3.1	-13.0	38.8	Horizontal	PASS
2608.7217	-54.34	-47.09	7.3	-13.0	34.1	Horizontal	PASS
5060.2437	-52.13	-49.93	2.2	-13.0	36.9	Horizontal	PASS
7976.2409	-49.97	-42.74	7.2	-13.0	29.7	Horizontal	PASS
10764.1838	-53.89	-41.93	12.0	-13.0	28.9	Horizontal	PASS

(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
48.4794	-63.73	-78.80	-15.1	-13.0	65.8	Vertical	PASS
58.5194	-58.37	-76.25	-17.9	-13.0	63.3	Vertical	PASS
90.531	-42.26	-62.33	-20.1	-13.0	49.3	Vertical	PASS
154.1662	-50.36	-69.88	-19.5	-13.0	56.9	Vertical	PASS
312.6721	-60.09	-74.34	-14.3	-13.0	61.3	Vertical	PASS
708.3064	-41.22	-49.31	-8.1	-13.0	36.3	Vertical	PASS

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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1256.8514	-55.38	-54.42	1.0	-13.0	41.4	Vertical	PASS
1724.945	-55.58	-53.97	1.6	-13.0	41.0	Vertical	PASS
2730.3461	-54.73	-47.93	6.8	-13.0	34.9	Vertical	PASS
5000.4417	-51.77	-50.66	1.1	-13.0	37.7	Vertical	PASS
7247.2416	-52.13	-45.78	6.4	-13.0	32.8	Vertical	PASS
10722.9074	-54.54	-43.22	11.3	-13.0	30.2	Vertical	PASS
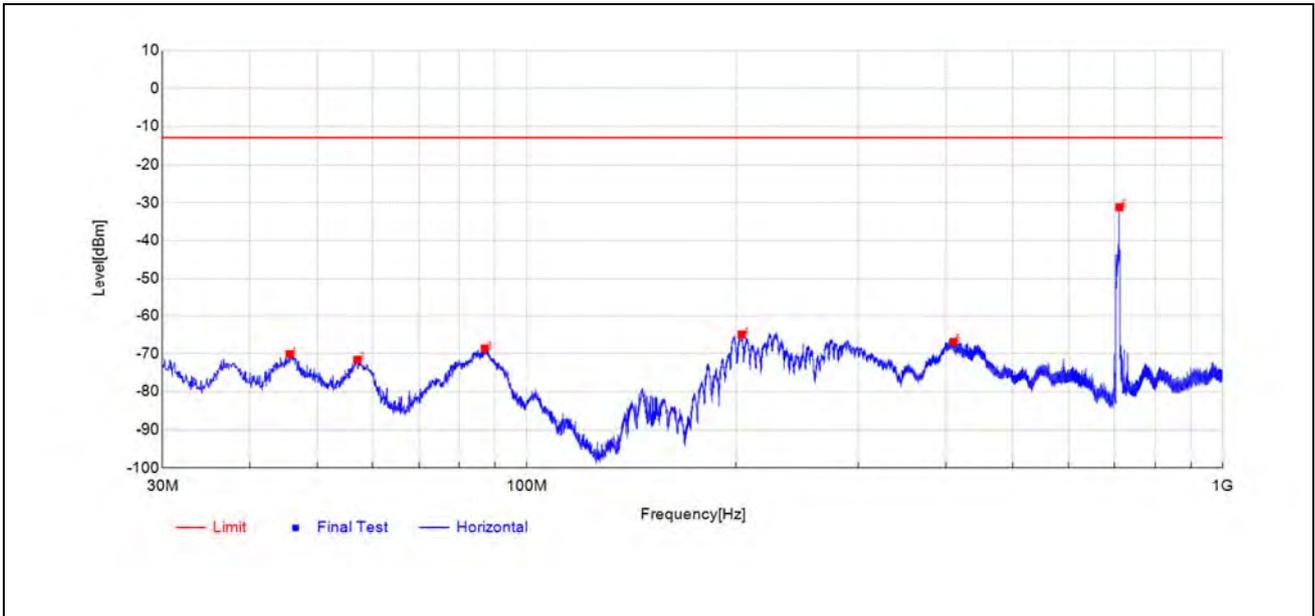
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Plot for Mid Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
45.7148	-61.54	-70.23	-8.7	-13.0	57.2	Horizontal	PASS
57.1129	-59.21	-71.58	-12.4	-13.0	58.6	Horizontal	PASS
87.1844	-47.03	-68.76	-21.7	-13.0	55.8	Horizontal	PASS
203.7357	-48.60	-65.03	-16.4	-13.0	52.0	Horizontal	PASS
410.8895	-57.23	-66.96	-9.7	-13.0	54.0	Horizontal	PASS
711.5076	-21.38	-31.26	-9.9	-13.0	18.3	Horizontal	PASS
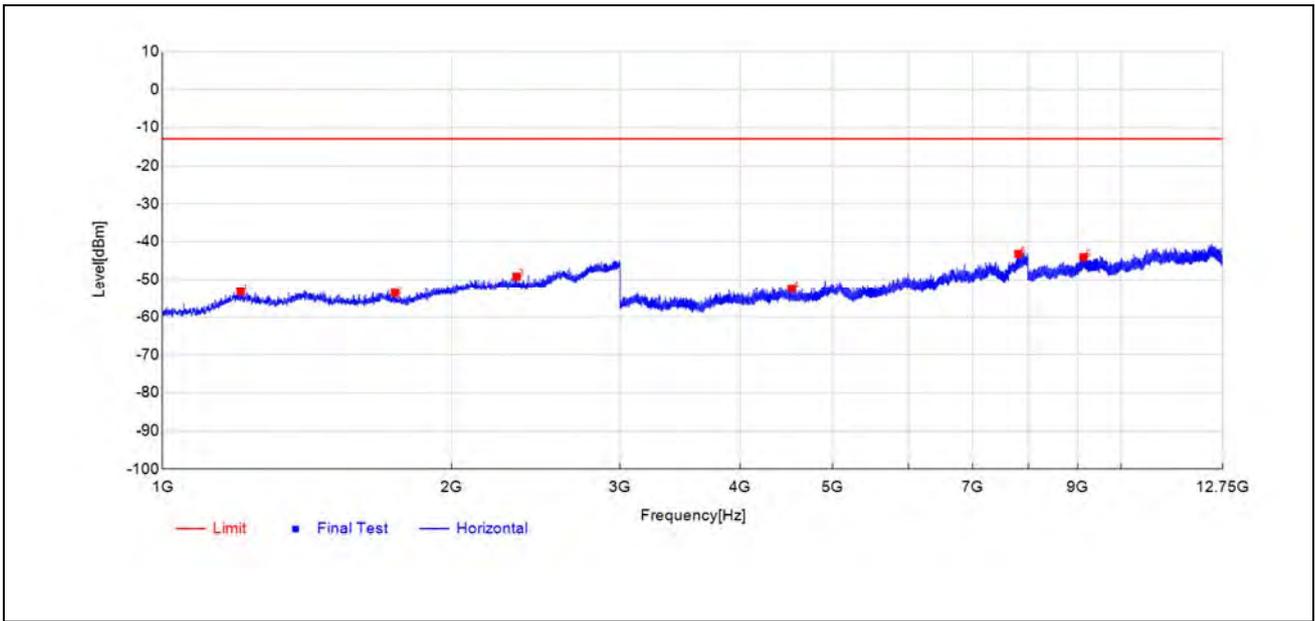
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(Antenna Horizontal, 1GHz to 12.75GHz)

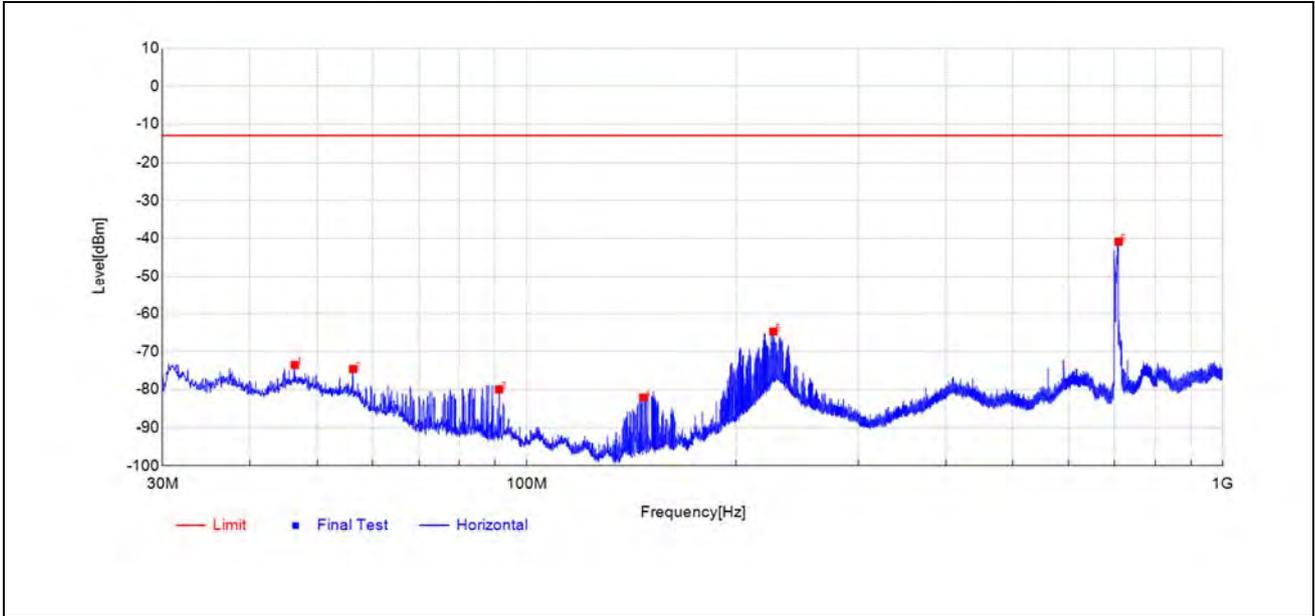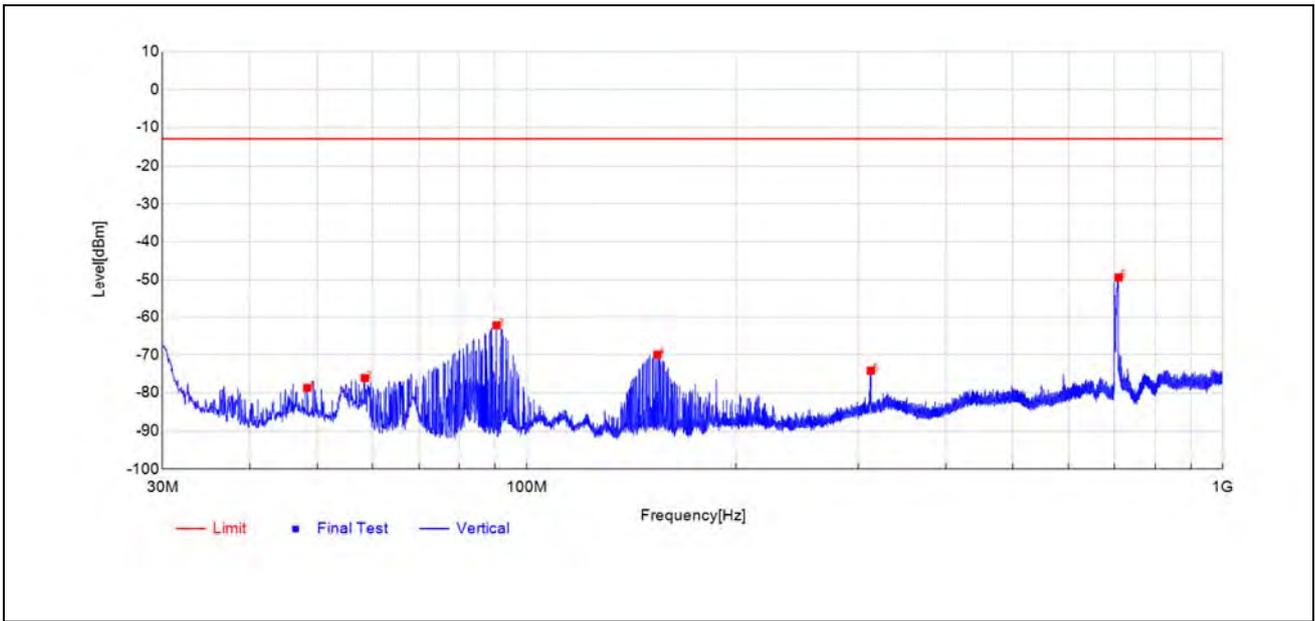| Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1205.241	-55.27	-53.19	2.1	-13.0	40.2	Horizontal	PASS
1746.9494	-55.08	-53.79	1.3	-13.0	40.8	Horizontal	PASS
2339.868	-53.71	-49.16	4.6	-13.0	36.2	Horizontal	PASS
4529.501	-51.82	-52.37	-0.6	-13.0	39.4	Horizontal	PASS
7803.0101	-50.23	-43.30	6.9	-13.0	30.3	Horizontal	PASS
9123.5291	-53.15	-44.05	9.1	-13.0	31.1	Horizontal	PASS

(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
45.4238	-50.82	-66.80	-16.0	-13.0	53.8	Vertical	PASS
89.27	-43.16	-63.41	-20.3	-13.0	50.4	Vertical	PASS
154.3602	-49.65	-69.18	-19.5	-13.0	56.2	Vertical	PASS
199.2735	-54.69	-73.27	-18.6	-13.0	60.3	Vertical	PASS
310.6835	-51.83	-66.20	-14.4	-13.0	53.2	Vertical	PASS
709.4705	-38.21	-46.33	-8.1	-13.0	33.3	Vertical	PASS
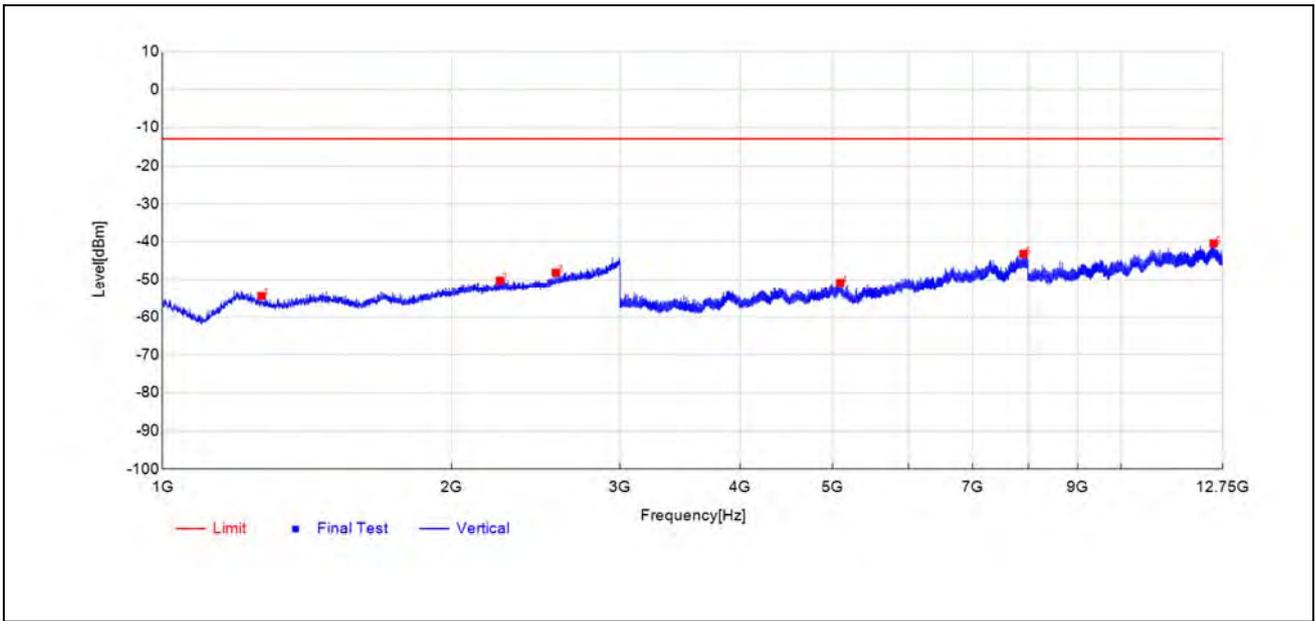
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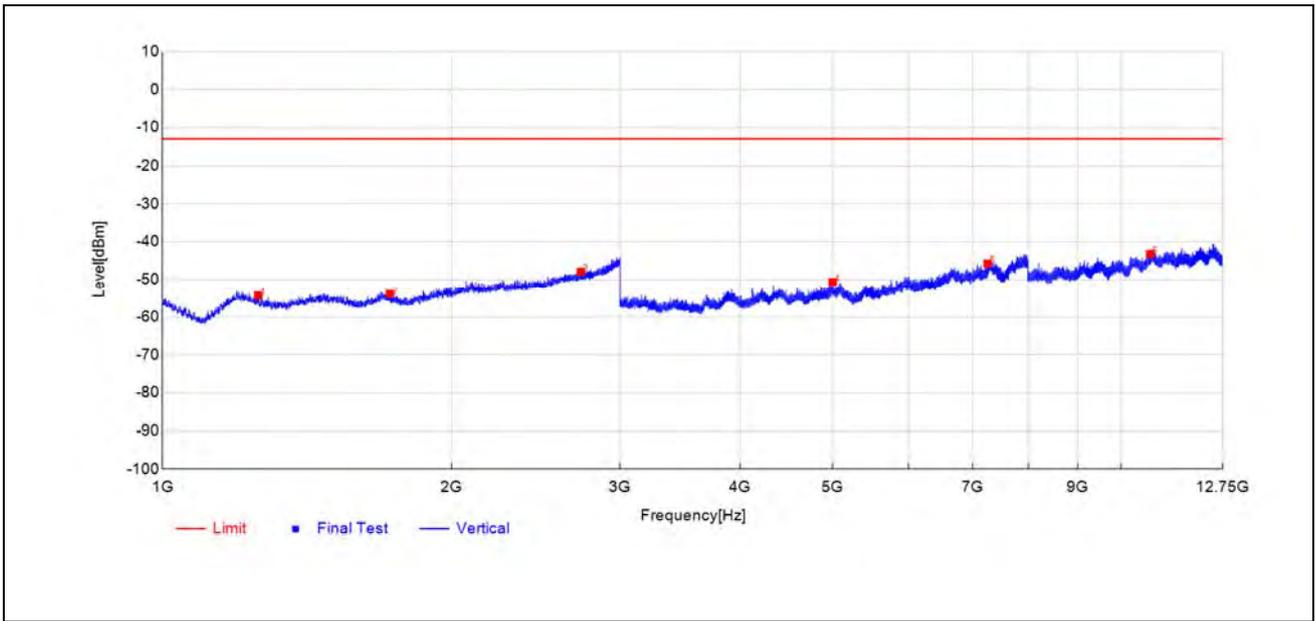
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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1267.2535	-55.33	-54.58	0.8	-13.0	41.6	Vertical	PASS
2247.4495	-54.29	-50.16	4.1	-13.0	37.2	Vertical	PASS
2572.3145	-53.67	-48.15	5.5	-13.0	35.2	Vertical	PASS
5093.3948	-52.84	-50.94	1.9	-13.0	37.9	Vertical	PASS
7905.3885	-49.95	-43.28	6.7	-13.0	30.3	Vertical	PASS
12470.1657	-54.45	-40.51	13.9	-13.0	27.5	Vertical	PASS
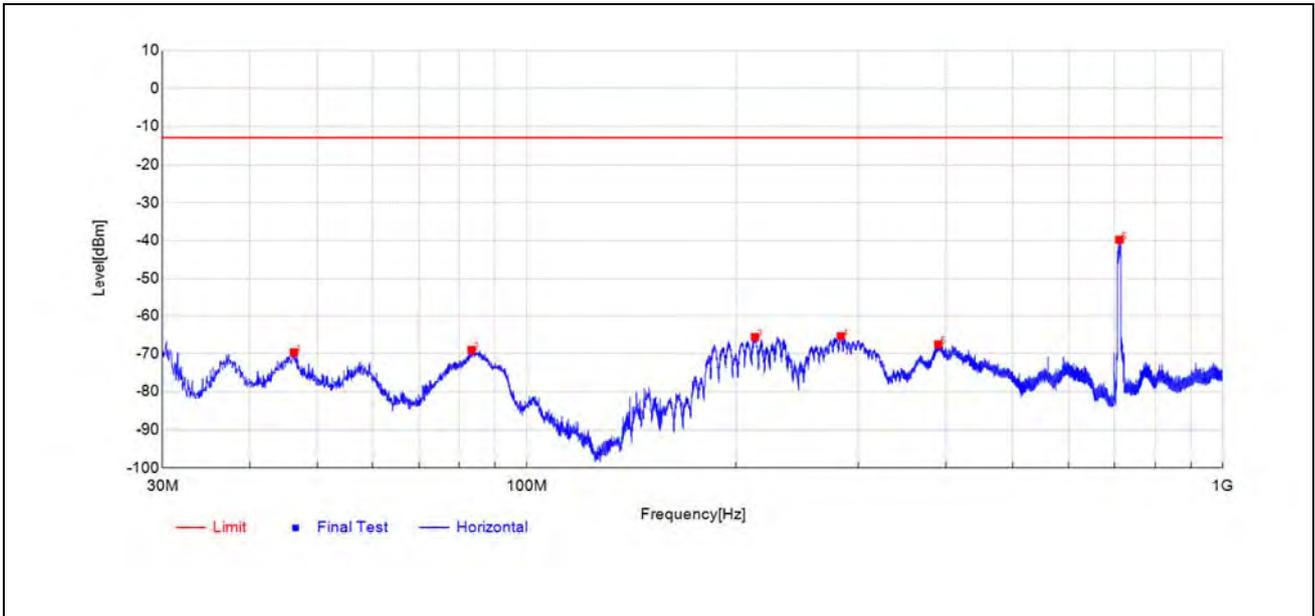
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Plot for High Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
46.2968	-61.10	-69.69	-8.6	-13.0	56.7	Horizontal	PASS
83.4012	-47.59	-69.04	-21.5	-13.0	56.0	Horizontal	PASS
212.9511	-51.90	-65.58	-13.7	-13.0	52.6	Horizontal	PASS
282.6976	-49.00	-65.39	-16.4	-13.0	52.4	Horizontal	PASS
391.1491	-55.27	-67.52	-12.3	-13.0	54.5	Horizontal	PASS
711.1196	-29.85	-39.77	-9.9	-13.0	26.8	Horizontal	PASS
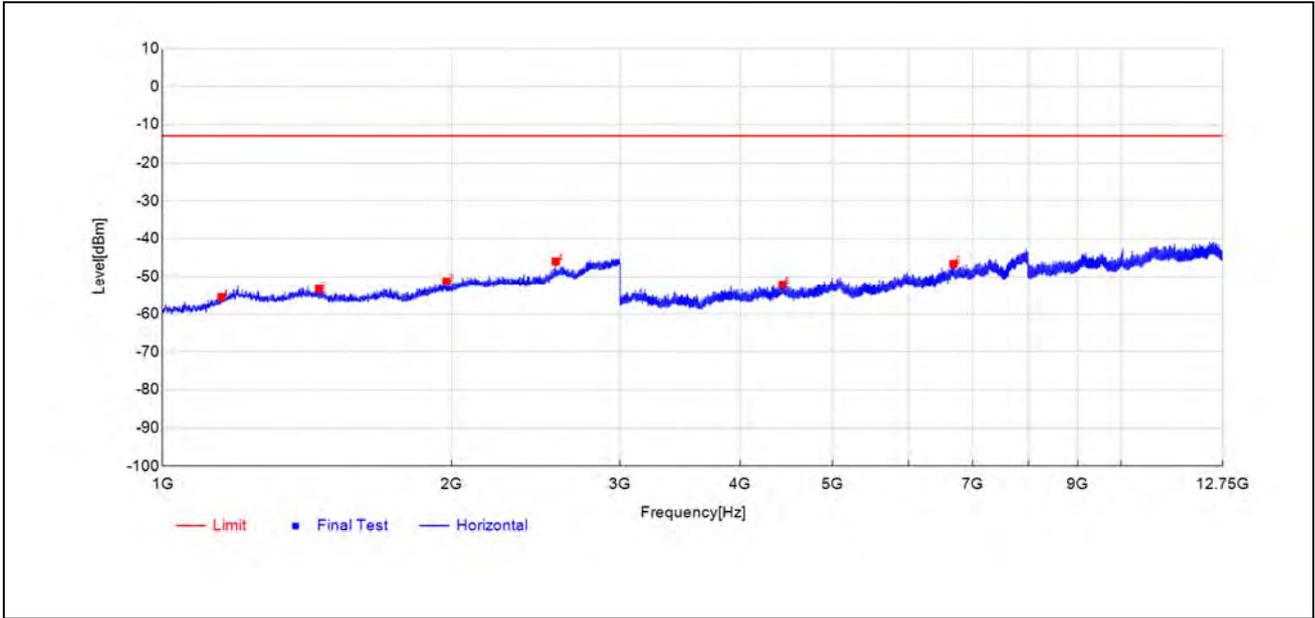
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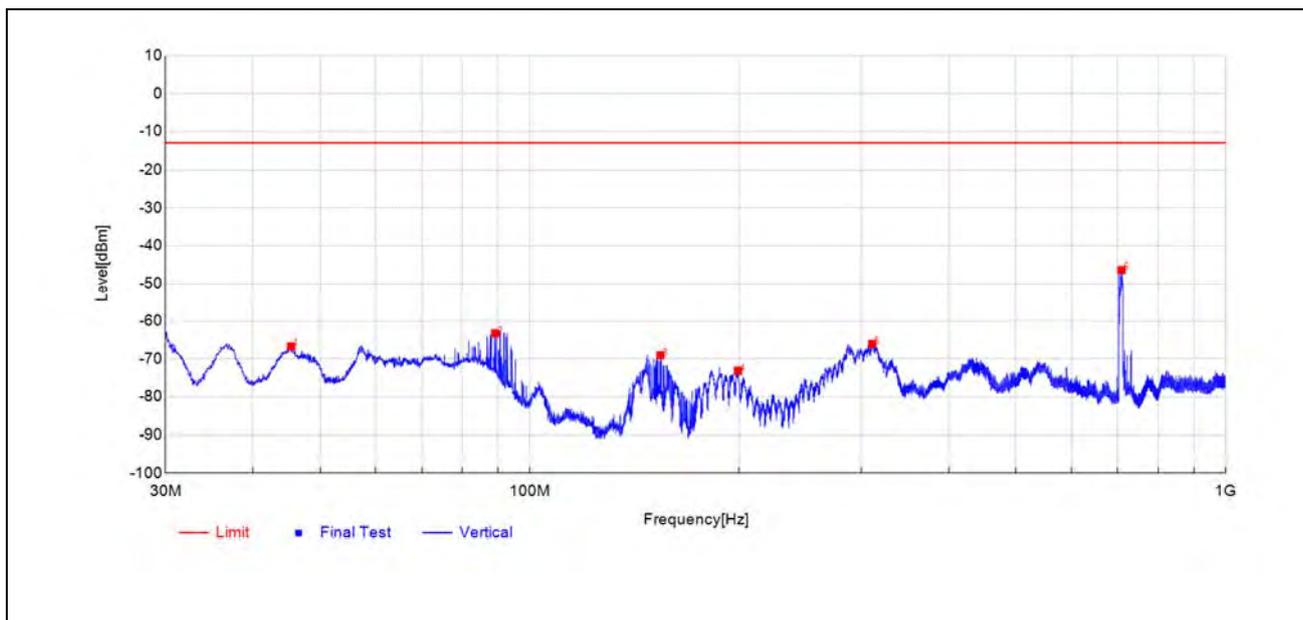
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(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1151.2302	-56.08	-55.55	0.5	-13.0	42.6	Horizontal	PASS
1456.4913	-55.43	-53.40	2.0	-13.0	40.4	Horizontal	PASS
1977.7956	-54.46	-51.32	3.1	-13.0	38.3	Horizontal	PASS
2571.1142	-52.63	-45.95	6.7	-13.0	33.0	Horizontal	PASS
4431.3477	-51.85	-52.10	-0.3	-13.0	39.1	Horizontal	PASS
6685.9479	-53.07	-46.67	6.4	-13.0	33.7	Horizontal	PASS

(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.8388	-46.34	-64.90	-18.6	-13.0	51.9	Vertical	PASS
90.2885	-43.38	-63.50	-20.1	-13.0	50.5	Vertical	PASS
154.4087	-49.34	-68.87	-19.5	-13.0	55.9	Vertical	PASS
295.9873	-53.13	-68.33	-15.2	-13.0	55.3	Vertical	PASS
446.5873	-56.38	-68.41	-12.0	-13.0	55.4	Vertical	PASS
714.4177	-36.90	-44.85	-8.0	-13.0	31.9	Vertical	PASS

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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1199.6399	-55.04	-52.59	2.5	-13.0	39.6	Vertical	PASS
1737.3475	-55.15	-53.82	1.3	-13.0	40.8	Vertical	PASS
2409.0818	-53.73	-49.50	4.2	-13.0	36.5	Vertical	PASS
4842.1614	-51.57	-51.71	-0.1	-13.0	38.7	Vertical	PASS
6861.4537	-51.32	-45.90	5.4	-13.0	32.9	Vertical	PASS
7920.014	-50.43	-43.81	6.6	-13.0	30.8	Vertical	PASS

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LTE Band 13

Plot for Low Channel

(Antenna Horizontal, 30MHz to 1GHz)

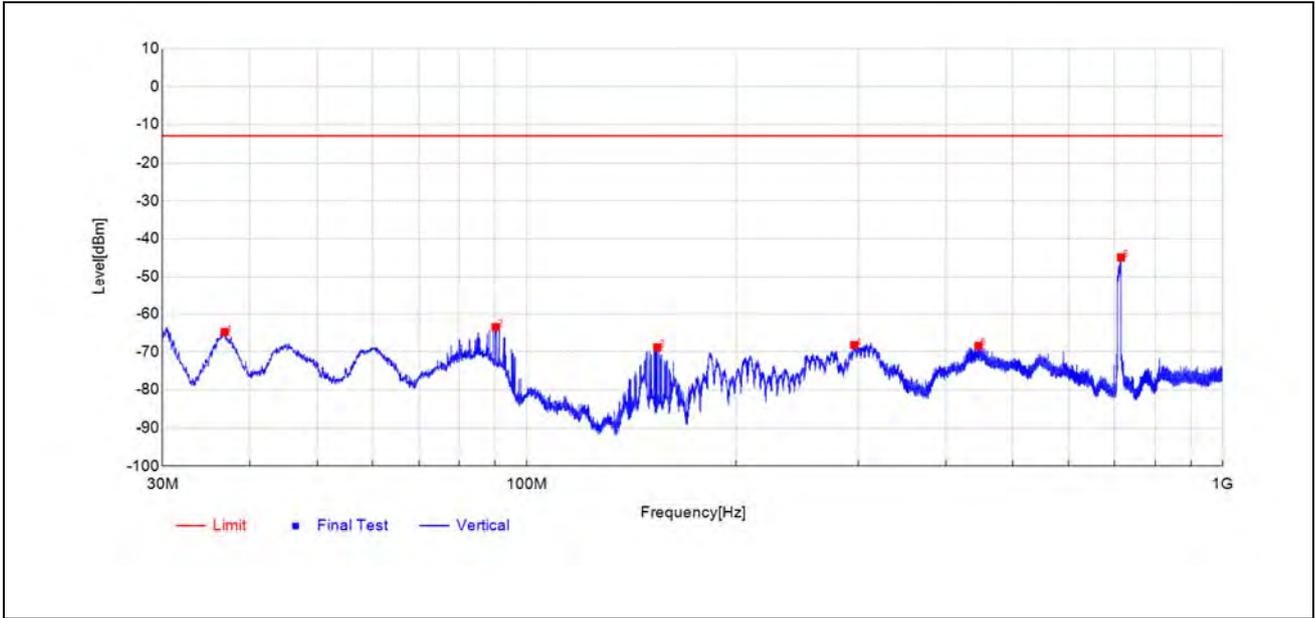| Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.2269	-60.22	-70.35	-10.1	-13.0	57.4	Horizontal	PASS
84.2742	-49.04	-70.55	-21.5	-13.0	57.6	Horizontal	PASS
288.5179	-48.29	-64.92	-16.6	-13.0	51.9	Horizontal	PASS
392.4586	-56.33	-68.41	-12.1	-13.0	55.4	Horizontal	PASS
591.9976	-60.60	-69.42	-8.8	-13.0	56.4	Horizontal	PASS
778.5379	-29.78	-34.18	-4.4	-13.0	21.2	Horizontal	PASS
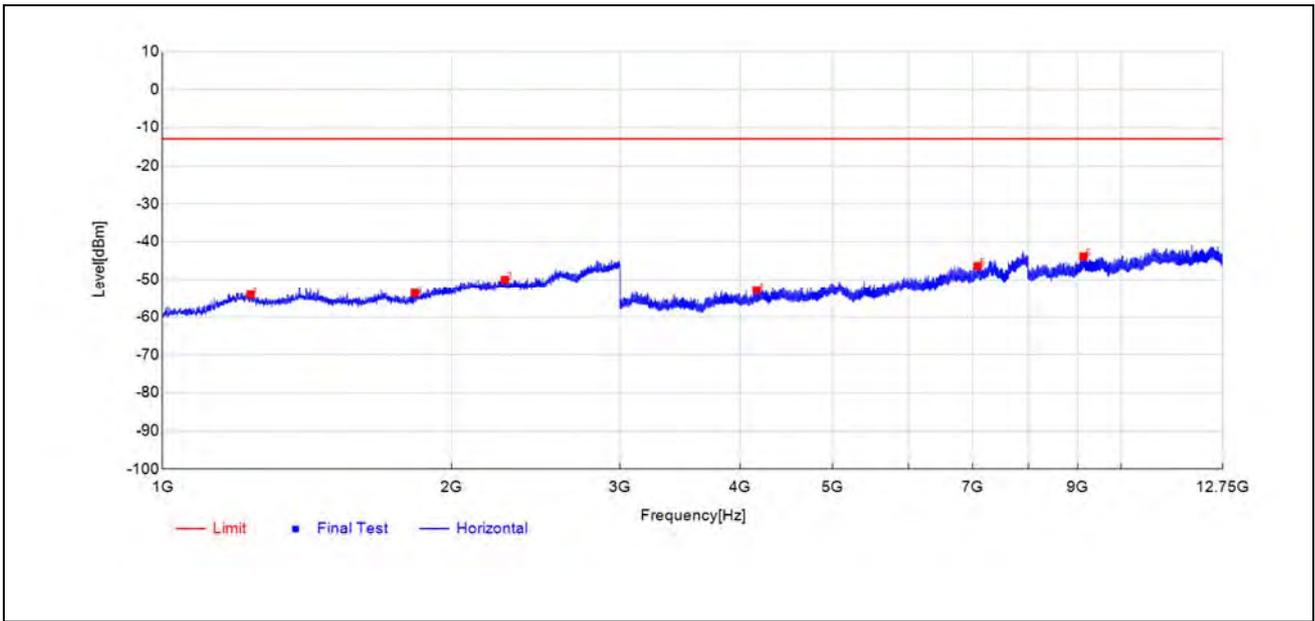
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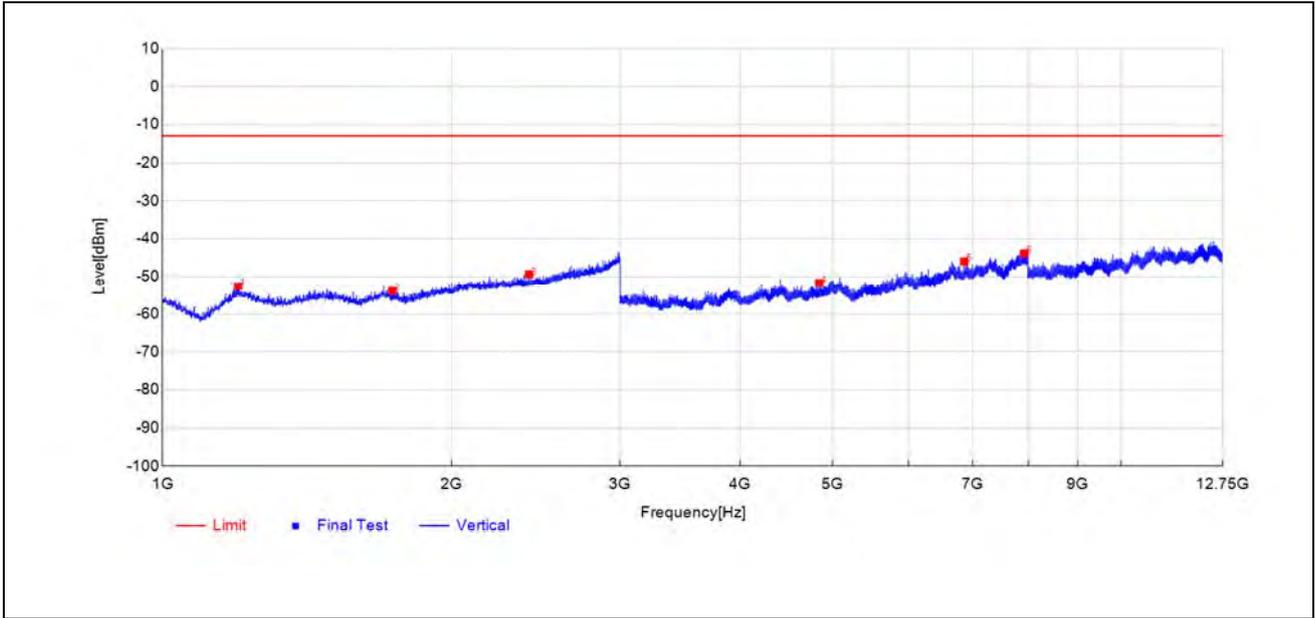Http://www.morlab.cn   E-mail: service@morlab.cn

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(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1235.6471	-55.62	-54.05	1.6	-13.0	41.1	Horizontal	PASS
1832.5665	-55.17	-53.76	1.4	-13.0	40.8	Horizontal	PASS
2276.2553	-54.62	-49.96	4.7	-13.0	37.0	Horizontal	PASS
4164.8388	-51.34	-52.80	-1.5	-13.0	39.8	Horizontal	PASS
7085.7112	-52.84	-46.45	6.4	-13.0	33.5	Horizontal	PASS
9133.2794	-53.07	-43.81	9.3	-13.0	30.8	Horizontal	PASS

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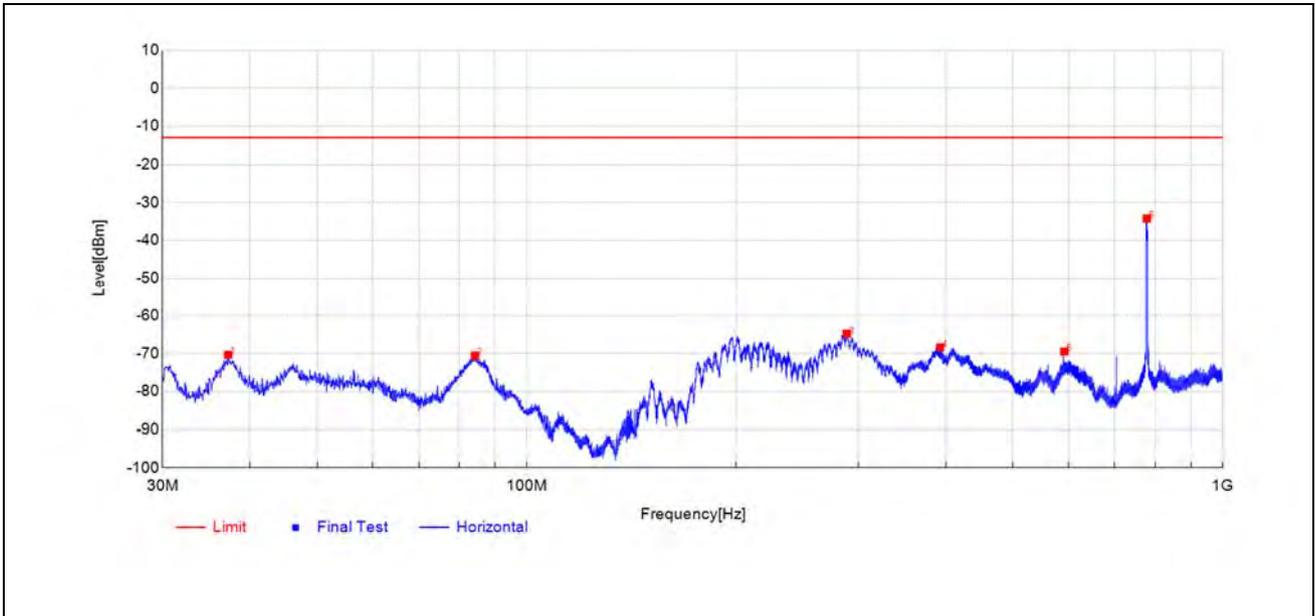
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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.0814	-46.45	-64.94	-18.5	-13.0	51.9	Vertical	PASS
90.2885	-44.67	-64.79	-20.1	-13.0	51.8	Vertical	PASS
182.8796	-53.29	-72.38	-19.1	-13.0	59.4	Vertical	PASS
306.5123	-53.69	-68.28	-14.6	-13.0	55.3	Vertical	PASS
509.495	-62.21	-73.18	-11.0	-13.0	60.2	Vertical	PASS
777.6164	-33.59	-39.95	-6.4	-13.0	27.0	Vertical	PASS

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(Antenna Vertical, 1GHz to 12.75GHz)

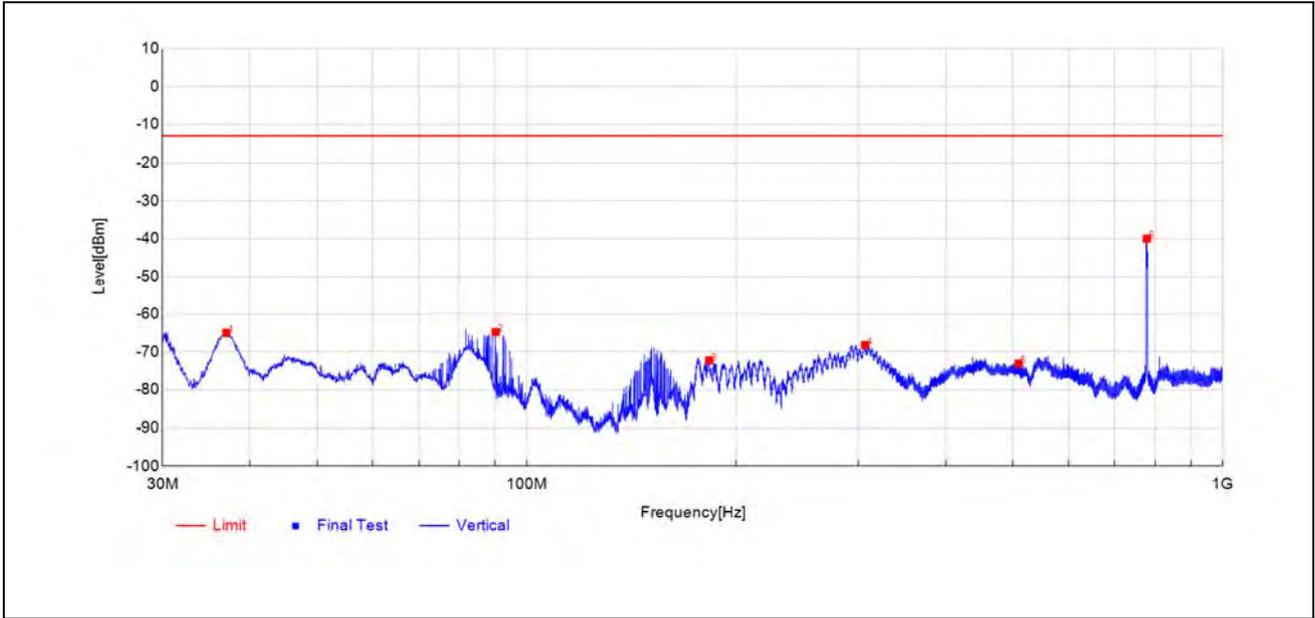| Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1221.6443	-55.40	-53.44	2.0	-13.0	40.4	Vertical	PASS
2108.6217	-55.41	-51.59	3.8	-13.0	38.6	Vertical	PASS
2770.3541	-54.61	-47.58	7.0	-13.0	34.6	Vertical	PASS
4148.2633	-51.52	-53.51	-2.0	-13.0	40.5	Vertical	PASS
7309.9687	-52.50	-44.55	8.0	-13.0	31.6	Vertical	PASS
7937.2396	-49.91	-43.35	6.6	-13.0	30.4	Vertical	PASS

Plot for Mid Channel
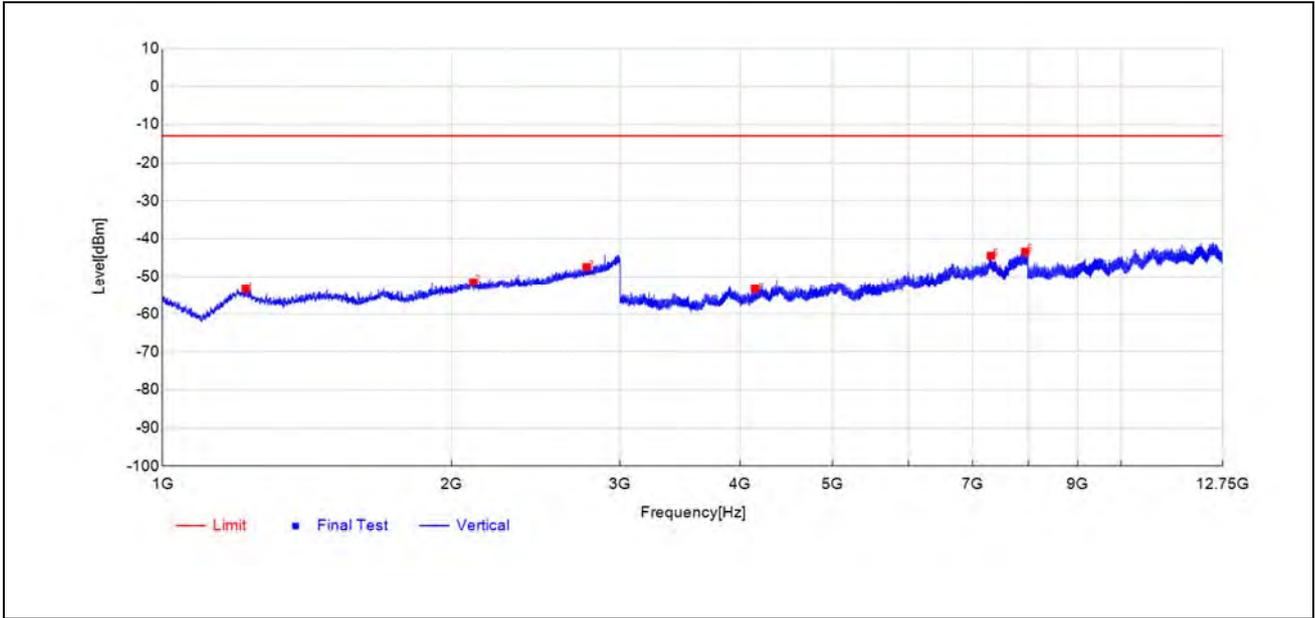

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.9059	-61.06	-71.08	-10.0	-13.0	58.1	Horizontal	PASS
46.2483	-63.38	-71.98	-8.6	-13.0	59.0	Horizontal	PASS
84.2742	-47.36	-68.87	-21.5	-13.0	55.9	Horizontal	PASS
408.6584	-58.13	-68.01	-9.9	-13.0	55.0	Horizontal	PASS
592.0461	-60.89	-69.70	-8.8	-13.0	56.7	Horizontal	PASS
782.6606	-28.87	-33.35	-4.5	-13.0	20.4	Horizontal	PASS
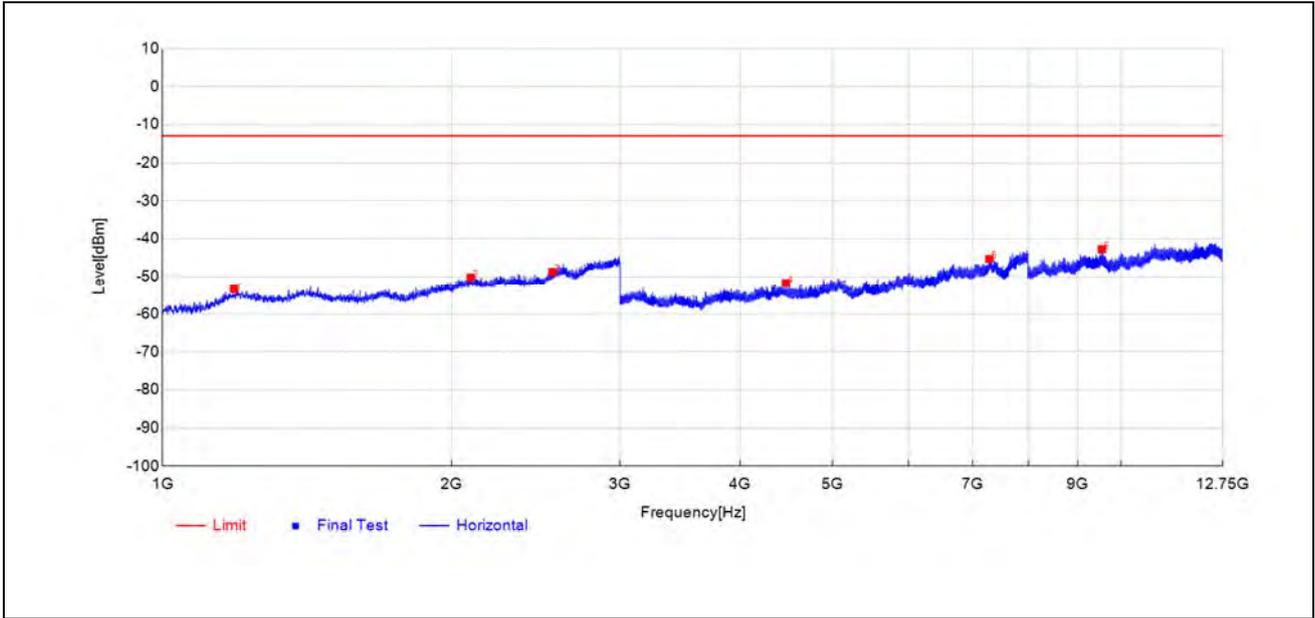
(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1186.0372	-55.26	-53.57	1.7	-13.0	40.6	Horizontal	PASS
2097.8196	-55.00	-50.19	4.8	-13.0	37.2	Horizontal	PASS
2552.3105	-54.96	-48.70	6.3	-13.0	35.7	Horizontal	PASS
4466.7739	-51.49	-51.75	-0.3	-13.0	38.8	Horizontal	PASS
7284.2928	-52.92	-45.30	7.6	-13.0	32.3	Horizontal	PASS
9549.2933	-52.64	-42.75	9.9	-13.0	29.8	Horizontal	PASS
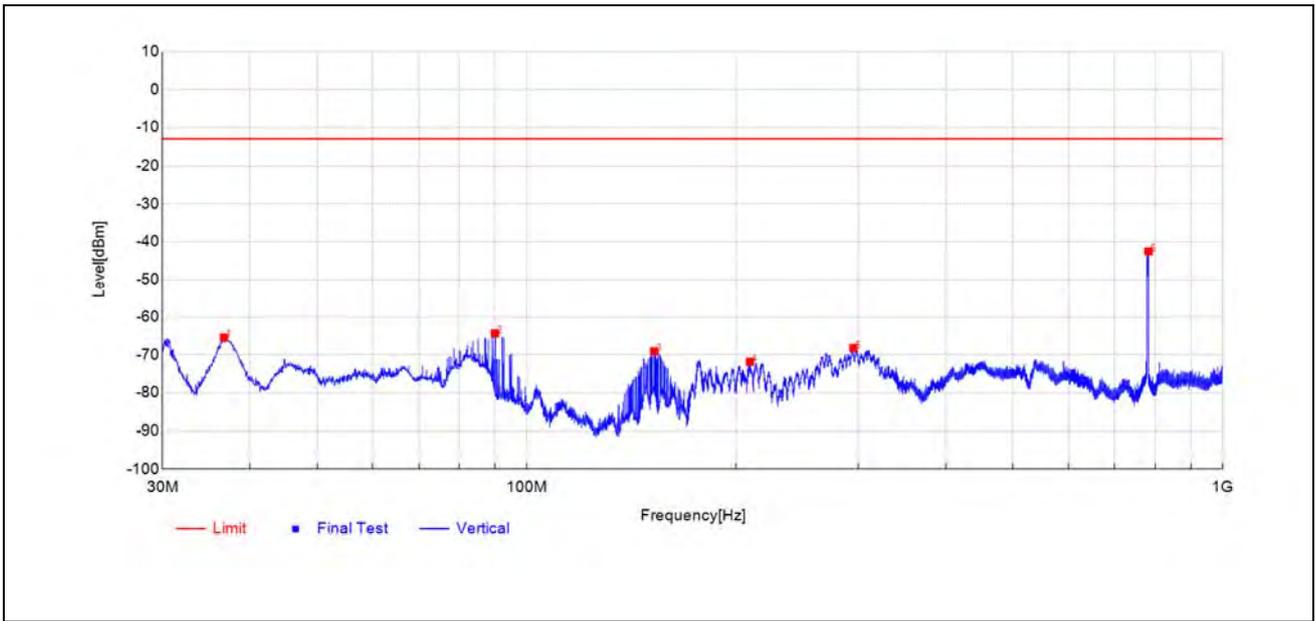
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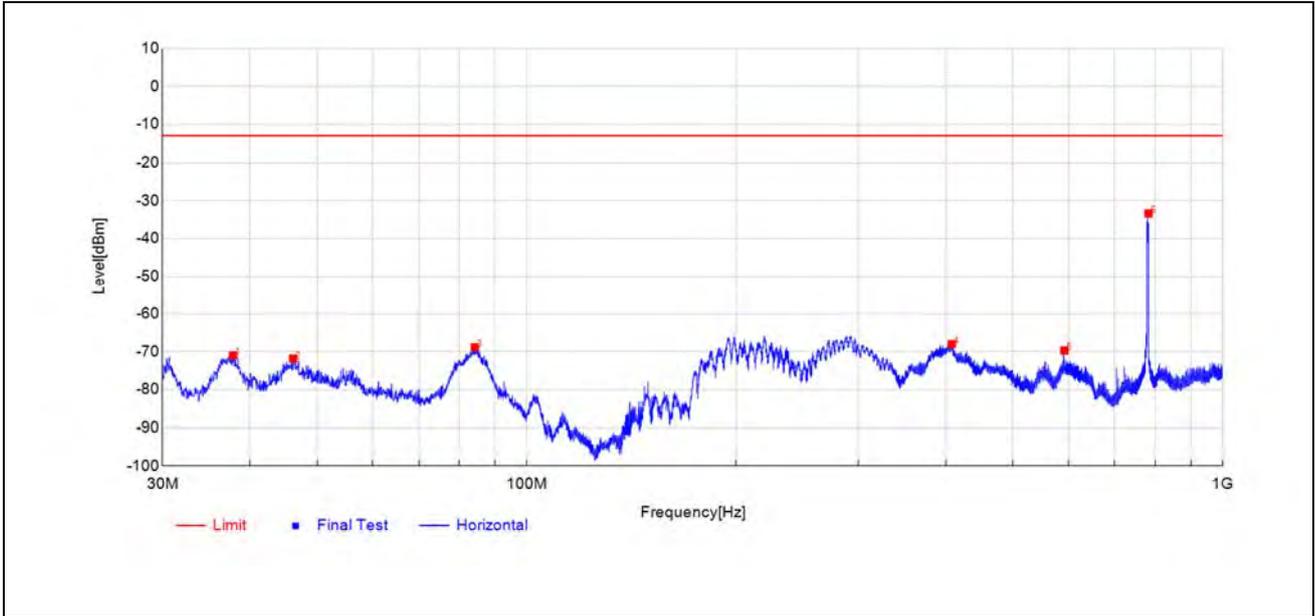Http://www.morlab.cn   E-mail: service@morlab.cn

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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.7418	-46.88	-65.47	-18.6	-13.0	52.5	Vertical	PASS
90.1915	-44.20	-64.33	-20.1	-13.0	51.3	Vertical	PASS
152.6141	-49.58	-69.10	-19.5	-13.0	56.1	Vertical	PASS
209.75	-53.36	-71.83	-18.5	-13.0	58.8	Vertical	PASS
294.6292	-53.04	-68.32	-15.3	-13.0	55.3	Vertical	PASS
782.2726	-36.07	-42.52	-6.5	-13.0	29.5	Vertical	PASS
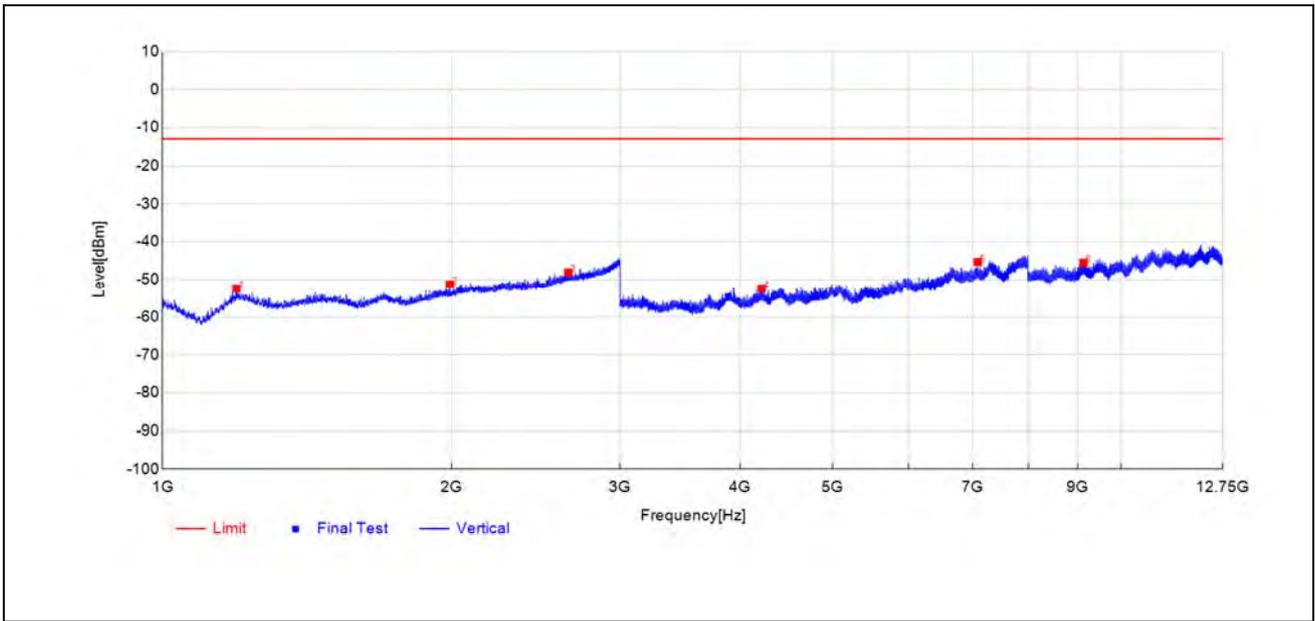
(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1194.0388	-54.40	-52.30	2.1	-13.0	39.3	Vertical	PASS
1993.7988	-53.73	-51.27	2.5	-13.0	38.3	Vertical	PASS
2647.5295	-54.58	-48.16	6.4	-13.0	35.2	Vertical	PASS
4213.5905	-51.13	-52.31	-1.2	-13.0	39.3	Vertical	PASS
7078.886	-51.41	-45.44	6.0	-13.0	32.4	Vertical	PASS
9138.4796	-54.07	-45.50	8.6	-13.0	32.5	Vertical	PASS
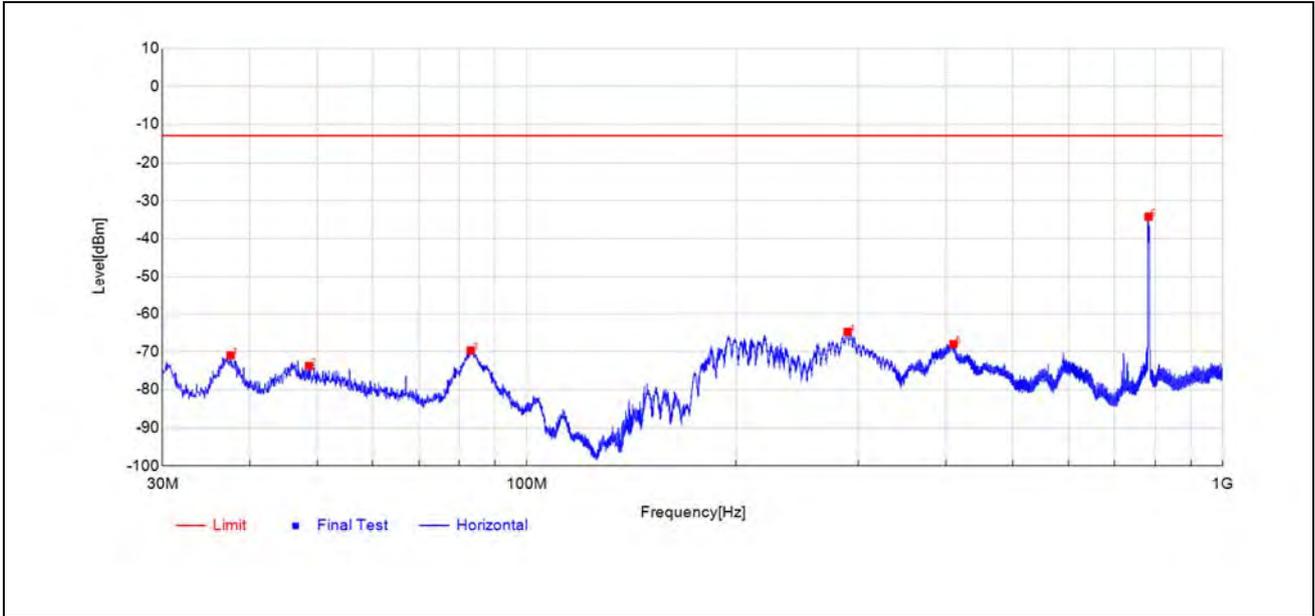
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Plot for High Channel

(Antenna Horizontal, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
37.5664	-60.99	-71.07	-10.1	-13.0	58.1	Horizontal	PASS
48.6734	-65.64	-73.82	-8.2	-13.0	60.8	Horizontal	PASS
83.2557	-48.30	-69.74	-21.4	-13.0	56.7	Horizontal	PASS
289.488	-48.14	-64.81	-16.7	-13.0	51.8	Horizontal	PASS
410.065	-58.36	-68.06	-9.7	-13.0	55.1	Horizontal	PASS
782.5151	-29.65	-34.13	-4.5	-13.0	21.1	Horizontal	PASS
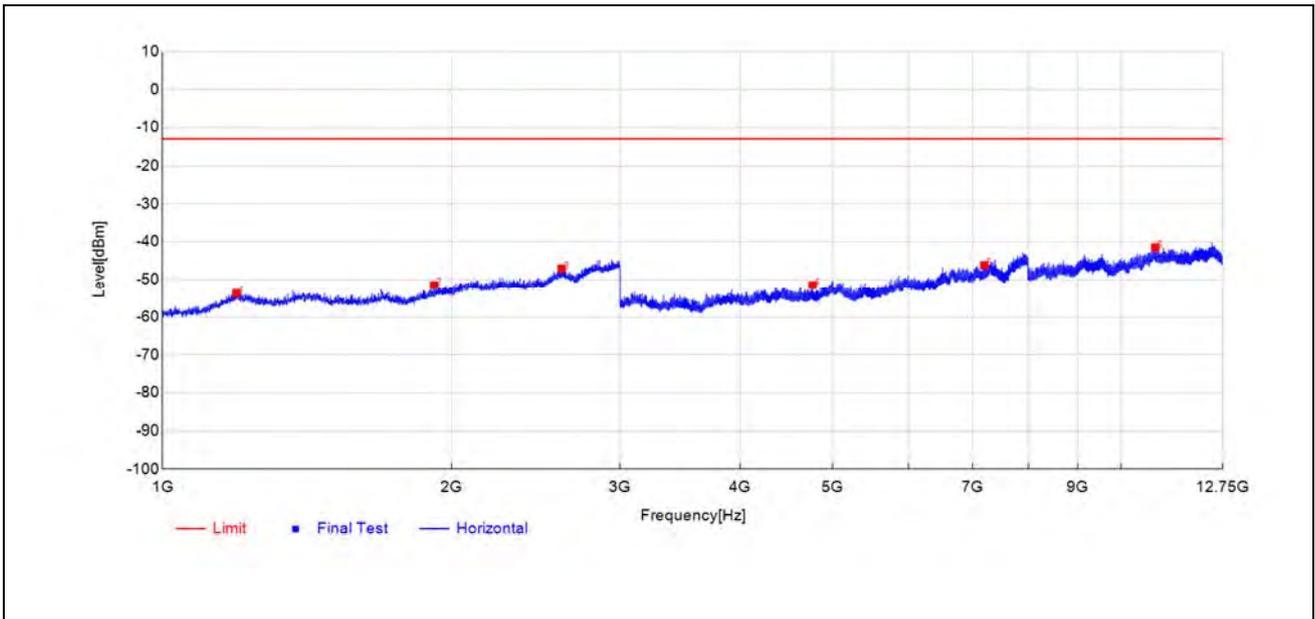
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(Antenna Horizontal, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1194.4389	-55.56	-53.60	2.0	-13.0	40.6	Horizontal	PASS
1920.184	-54.23	-51.47	2.8	-13.0	38.5	Horizontal	PASS
2608.3217	-54.37	-47.12	7.3	-13.0	34.1	Horizontal	PASS
4765.7839	-51.44	-51.51	-0.1	-13.0	38.5	Horizontal	PASS
7199.465	-52.25	-46.26	6.0	-13.0	33.3	Horizontal	PASS
10851.9367	-53.82	-41.56	12.3	-13.0	28.6	Horizontal	PASS
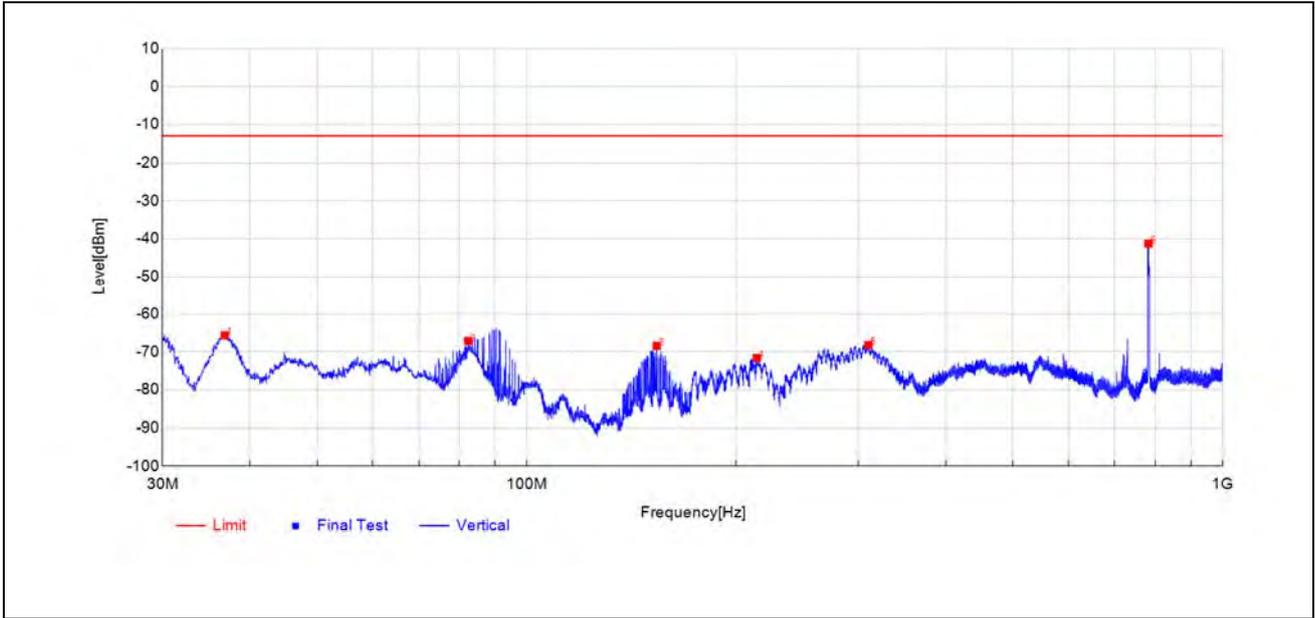
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(Antenna Vertical, 30MHz to 1GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
36.8873	-47.07	-65.61	-18.5	-13.0	52.6	Vertical	PASS
82.5766	-46.26	-67.26	-21.0	-13.0	54.3	Vertical	PASS
153.8267	-48.95	-68.48	-19.5	-13.0	55.5	Vertical	PASS
213.9697	-53.05	-71.60	-18.6	-13.0	58.6	Vertical	PASS
310.0045	-53.74	-68.15	-14.4	-13.0	55.2	Vertical	PASS
782.6606	-34.77	-41.23	-6.5	-13.0	28.2	Vertical	PASS
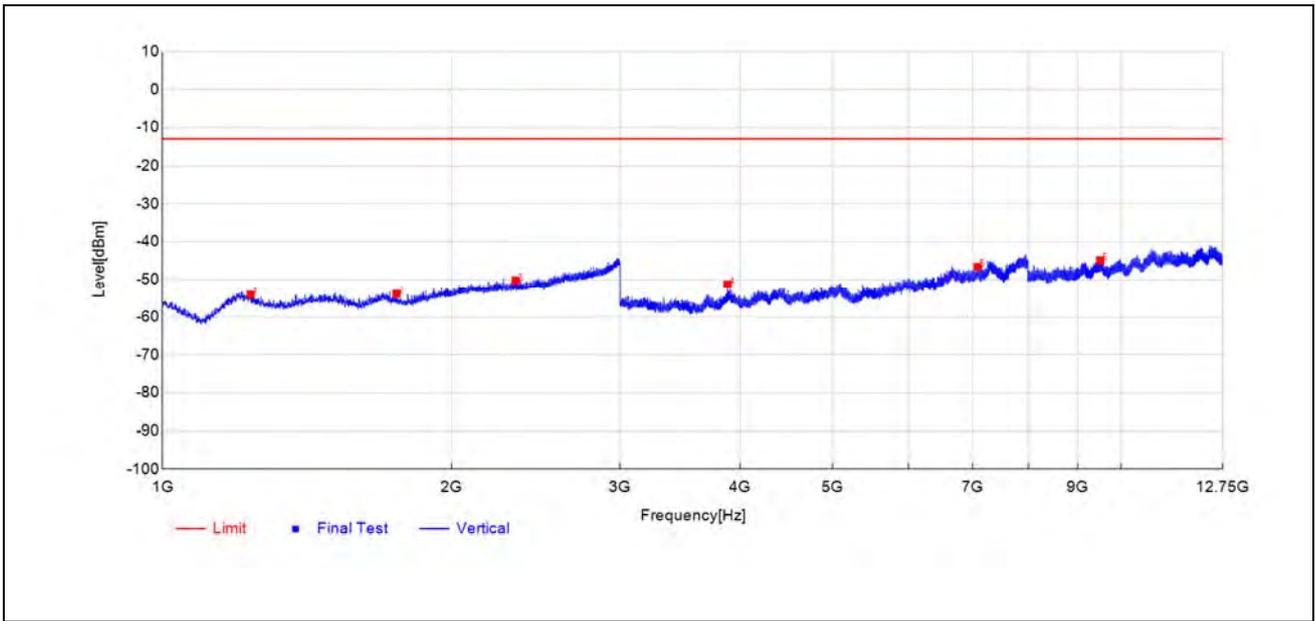
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(Antenna Vertical, 1GHz to 12.75GHz)

Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Verdict
1235.247	-55.62	-54.07	1.6	-13.0	41.1	Vertical	PASS
1755.3511	-54.84	-53.86	1.0	-13.0	40.9	Vertical	PASS
2337.4675	-54.43	-50.32	4.1	-13.0	37.3	Vertical	PASS
3884.0295	-49.42	-51.25	-1.8	-13.0	38.3	Vertical	PASS
7082.4611	-52.66	-46.65	6.0	-13.0	33.7	Vertical	PASS
9503.4668	-53.99	-44.94	9.1	-13.0	31.9	Vertical	PASS

Plot for 1559MHz-1610MHz
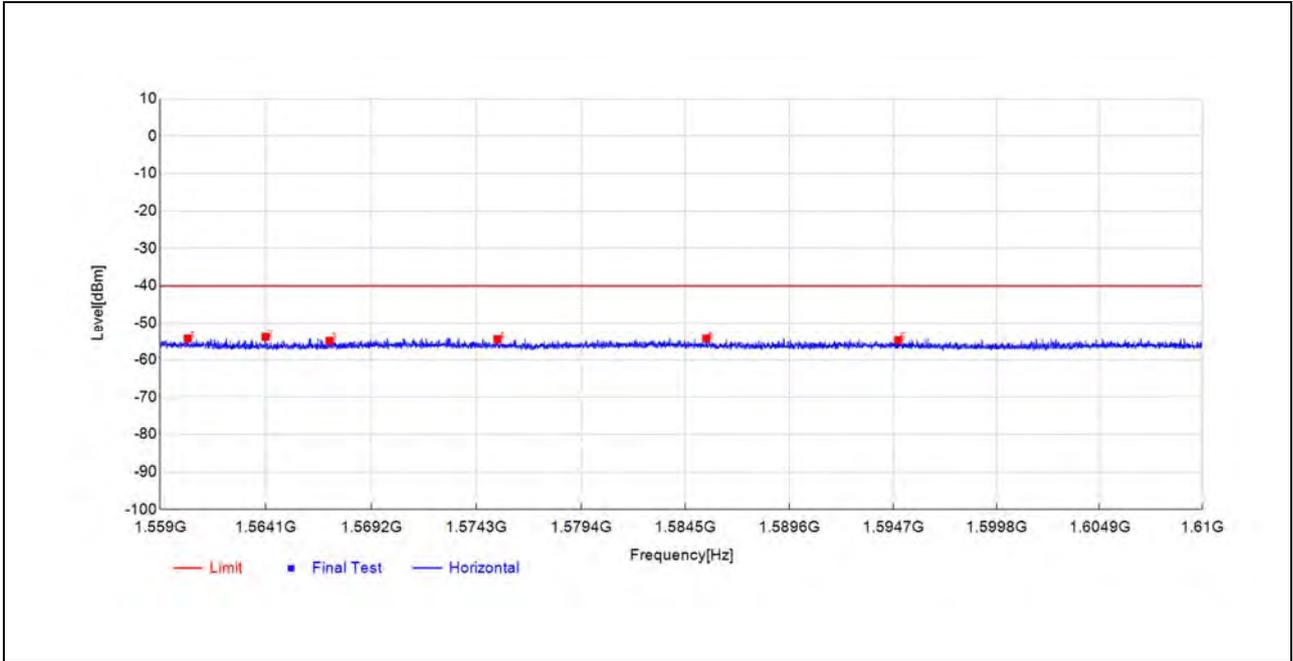
Frequency [MHz]	Reading [dBm]	Level [dBm]	Factor [dB]	Limit [dBm]	Margin [dB]	Polarity	Detector	Verdict
1560.3263	-55.26	-54.24	1.0	-40.0	14.2	Horizontal	PK	PASS
1564.0908	-54.80	-53.80	1.0	-40.0	13.8	Horizontal	PK	PASS
1567.1922	-55.87	-54.90	1.0	-40.0	14.9	Horizontal	PK	PASS
1575.3437	-55.40	-54.48	0.9	-40.0	14.5	Horizontal	PK	PASS
1585.5253	-55.20	-54.36	0.8	-40.0	14.4	Horizontal	PK	PASS
1594.9622	-55.53	-54.75	0.8	-40.0	14.8	Horizontal	PK	PASS

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