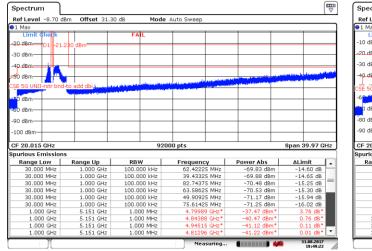
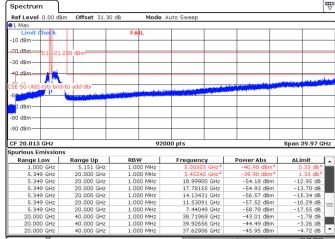
Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2



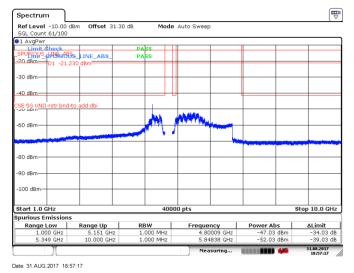




Date: 31.AUG.2017 18:49:21 Date: 1.SEP.2017 14:54:36

Figure 8.5-123: Spurious emissions within restricted bands, 20 MHz channel, high channel, 32 dBi antenna, cho

Figure 8.5-124: Spurious emissions within restricted bands, 20 MHz channel, high channel, 32 dBi antenna, ch1



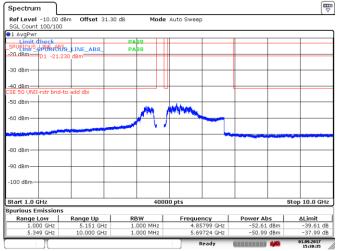


Figure 8.5-125: Spurious emissions within restricted bands (RMS zoomed), 20 MHz channel, high channel, 32 dBi antenna, cho

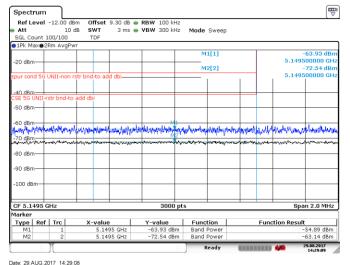
Figure 8.5-126: Spurious emissions within restricted bands (RMS zoomed), 20 MHz channel, high channel, 32 dBi antenna, ch1

Date: 1.SEP.2017 15:30:36

FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions Test name

Specification FCC Part 15 Subpart E and RSS-247 Issue 2





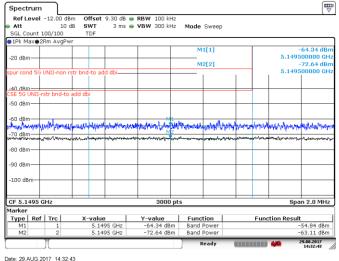
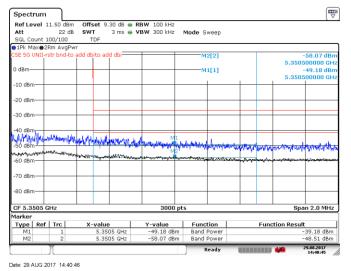


Figure 8.5-127: Lower band edge for FCC, 5 MHz channel, 10 dBi antenna, cho

Figure 8.5-128: Lower band edge for FCC, 5 MHz channel, 10 dBi antenna, ch1



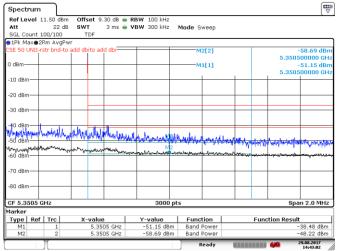


Figure 8.5-129: Upper band edge for FCC, 5 MHz channel, 10 dBi antenna, cho

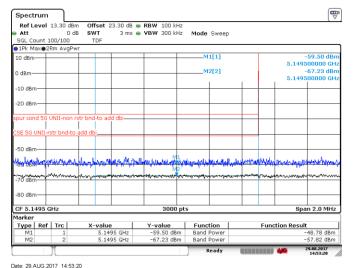
Figure 8.5-130: Upper band edge for FCC, 5 MHz channel, 10 dBi antenna, ch1

Date: 29.AUG.2017 14:43:02

Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2





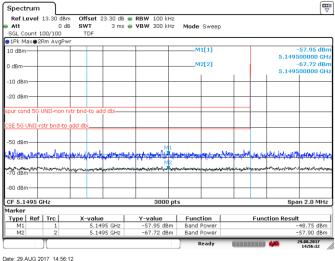
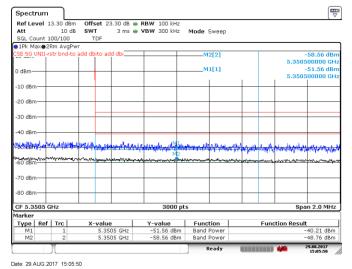


Figure 8.5-131: Lower band edge for FCC, 5 MHz channel, 24 dBi antenna, cho

Figure 8.5-132: Lower band edge for FCC, 5 MHz channel, 24 dBi antenna, ch1



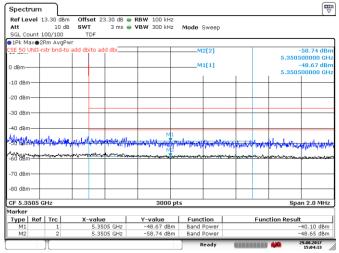


Figure 8.5-133: Upper band edge for FCC, 5 MHz channel, 24 dBi antenna, cho

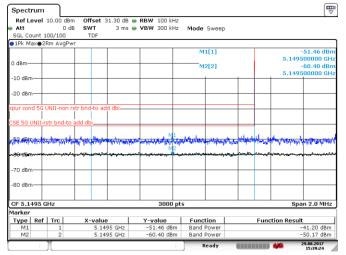
Figure 8.5-134: Upper band edge for FCC, 5 MHz channel, 24 dBi antenna, ch1

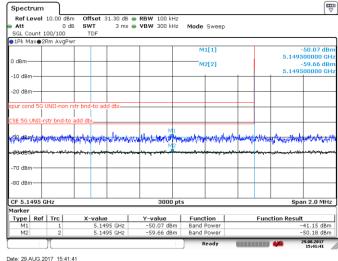
Date: 29.AUG.2017 15:04:12

FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions Test name

Specification FCC Part 15 Subpart E and RSS-247 Issue 2







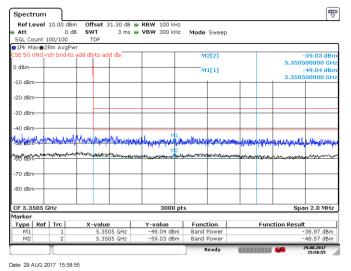
Spectrum

Date: 29.AUG.2017 15:59:29

Date: 29.AUG.2017 15:39:24

Figure 8.5-135: Lower band edge for FCC, 5 MHz channel, 32 dBi antenna, cho

Figure 8.5-136: Lower band edge for FCC, 5 MHz channel, 32 dBi antenna, ch1



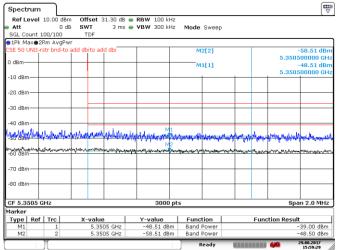


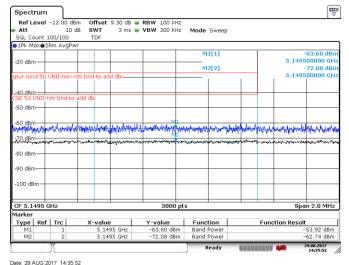
Figure 8.5-137: Upper band edge for FCC, 5 MHz channel, 32 dBi antenna, cho

Figure 8.5-138: Upper band edge for FCC, 5 MHz channel, 32 dBi antenna, ch1

FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions Test name

Specification FCC Part 15 Subpart E and RSS-247 Issue 2





Ref Level -12.00 dBm Att 10 dB 9.30 dB • RBW 100 kHz 3 ms • VBW 300 kHz 10 dB SWT Mode Sweep SGL Count 100/100 M1[1] -20 dBm :00000 G :72.20 dE M2[2] -50 dBm-70 dBm--80 dBm -90 dBm-CF 5.1495 GHz Span 2.0 MHz 3000 pts
 Y-value
 Function

 -63.05 dBm
 Band Power

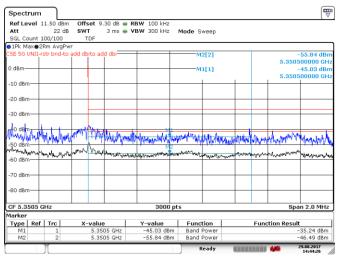
 -72.20 dBm
 Band Power
Type | Ref | Trc |

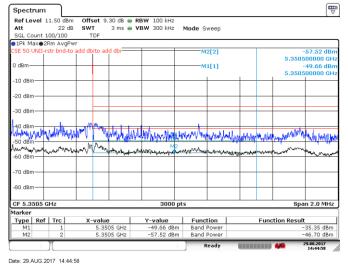
Spectrum

Date: 29.AUG.2017 14:37:04

Figure 8.5-139: Lower band edge for FCC, 10 MHz channel, 10 dBi antenna, cho

Figure 8.5-140: Lower band edge for FCC, 10 MHz channel, 10 dBi antenna, ch1





Date: 29.AUG.2017 14:44:27

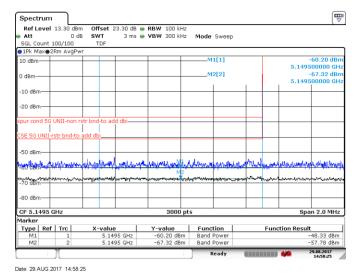
Figure 8.5-141: Upper band edge for FCC, 10 MHz channel, 10 dBi antenna, cho

Figure 8.5-142: Upper band edge for FCC, 10 MHz channel, 10 dBi antenna, ch1

Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2



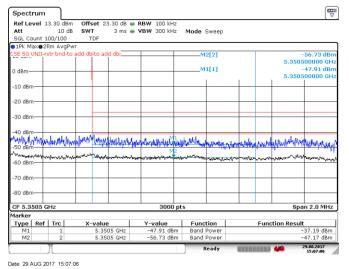


Spectrum

Date: 29.AUG.2017 15:08:11

Figure 8.5-143: Lower band edge for FCC, 10 MHz channel, 24 dBi antenna, ch0

Figure 8.5-144: Lower band edge for FCC, 10 MHz channel, 24 dBi antenna, ch1



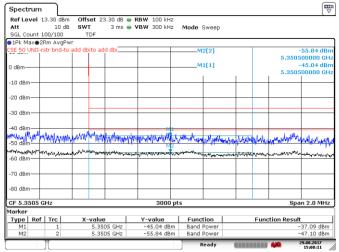


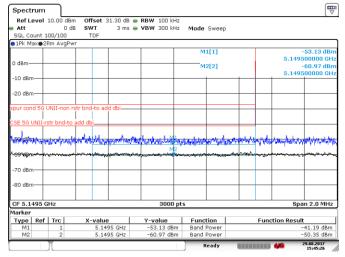
Figure 8.5-145: Upper band edge for FCC, 10 MHz channel, 24 dBi antenna, cho

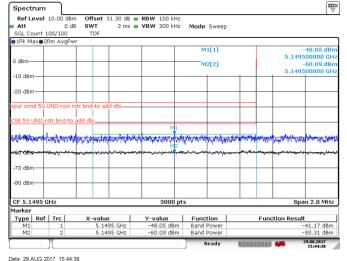
Figure 8.5-146: Upper band edge for FCC, 10 MHz channel, 24 dBi antenna, ch1

Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2



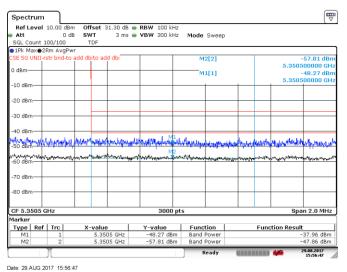


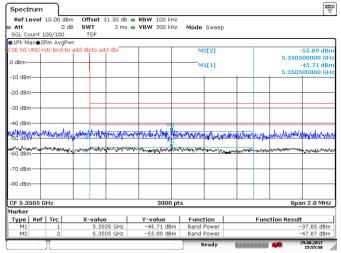


Date: 29.AUG.2017 15:45:26

Figure 8.5-147: Lower band edge for FCC, 10 MHz channel, 32 dBi antenna, cho

Figure 8.5-148: Lower band edge for FCC, 10 MHz channel, 32 dBi antenna, ch1





Date: 25:700:2017 10:00:47

Figure 8.5-149: Upper band edge for FCC, 10 MHz channel, 32 dBi antenna, cho

Figure 8.5-150: Upper band edge for FCC, 10 MHz channel, 32 dBi antenna, ch1

Date: 29.AUG.2017 15:55:57

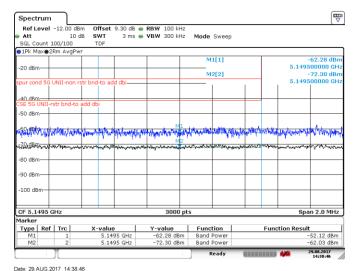
Test name

Spectrum

Date: 29.AUG.2017 14:38:14

Date: 29.AUG.2017 14:46:25





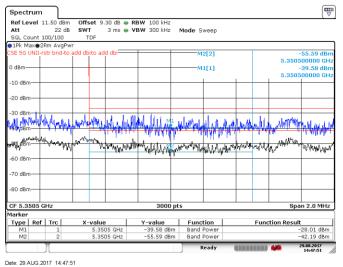
Ref Level -12.00 dBm 9.30 dB • RBW 100 kHz 3 ms • VBW 300 kHz Att 10 dB SWT Mode Sweep SGL Count 100/100 M1[1] -20 dBm -72.30 dE M2[2] -50 dBm-ZO dem... -80 dBm -90 dBm-CF 5.1495 GHz Span 2.0 MHz 3000 pts
 Y-value
 Function

 -61.60 dBm
 Band Power

 -72.30 dBm
 Band Power
Type | Ref | Trc |

Figure 8.5-151: Lower band edge for FCC, 20 MHz channel, 10 dBi antenna, ch0

Figure 8.5-152: Lower band edge for FCC, 20 MHz channel, 10 dBi antenna, ch1



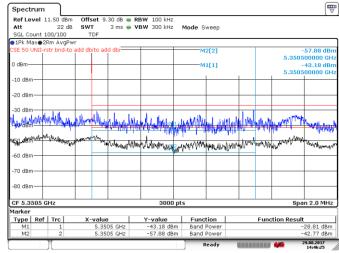


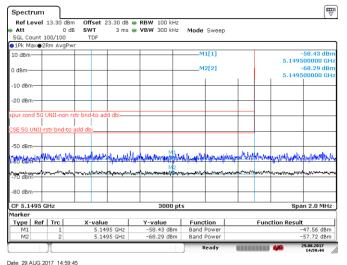
Figure 8.5-153: Upper band edge for FCC, 20 MHz channel, 10 dBi antenna, cho

Figure 8.5-154: Upper band edge for FCC, 20 MHz channel, 10 dBi antenna, ch1

FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions Test name

Specification FCC Part 15 Subpart E and RSS-247 Issue 2





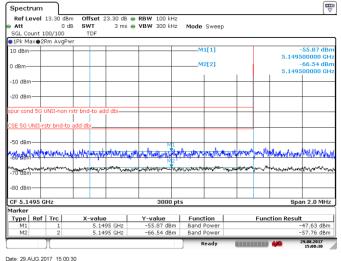
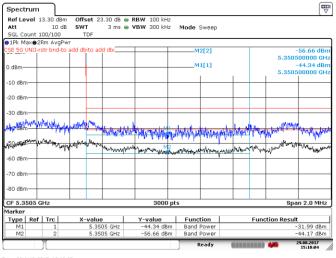
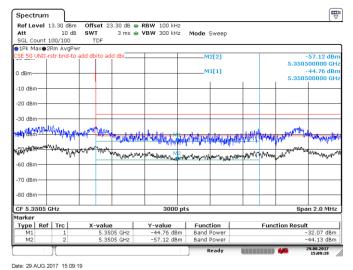


Figure 8.5-155: Lower band edge for FCC, 20 MHz channel, 24 dBi antenna, cho

Figure 8.5-156: Lower band edge for FCC, 20 MHz channel, 24 dBi antenna, ch1





Date: 29.AUG.2017 15:10:05

Figure 8.5-157: Upper band edge for FCC, 20 MHz channel, 24 dBi antenna, cho

Figure 8.5-158: Upper band edge for FCC, 20 MHz channel, 24 dBi antenna, ch1

Test name



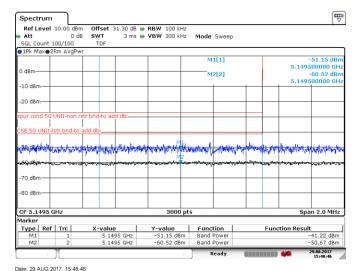
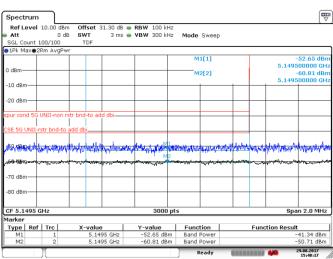


Figure 8.5-159: Lower band edge for FCC, 20 MHz channel, 32 dBi antenna, cho



Date: 29.AUG.2017 15:48:18

Figure 8.5-160: Lower band edge for FCC, 20 MHz channel, 32 dBi antenna, ch1

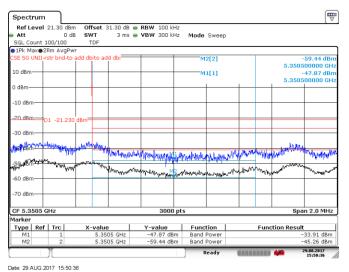
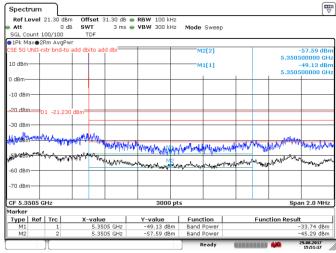


Figure 8.5-161: Upper band edge for FCC, 20 MHz channel, 32 dBi antenna, cho



Date: 29.AUG.2017 15:51:17

Figure 8.5-162: Upper band edge for FCC, 20 MHz channel, 32 dBi antenna, ch1



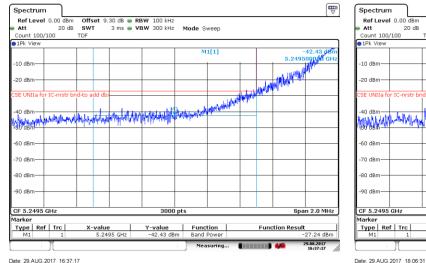
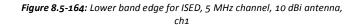
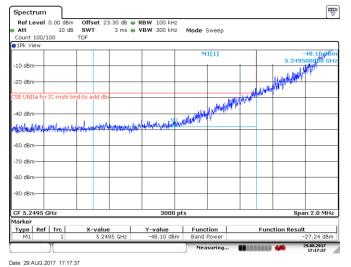


Figure 8.5-163: Lower band edge for ISED, 5 MHz channel, 10 dBi antenna, cho





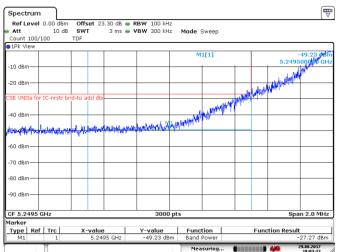


Figure 8.5-165: Lower band edge for ISED, 5 MHz channel, 24 dBi antenna, cho

Figure 8.5-166: Lower band edge for ISED, 5 MHz channel, 24 dBi antenna, ch1

Date: 29.AUG.2017 18:03:23



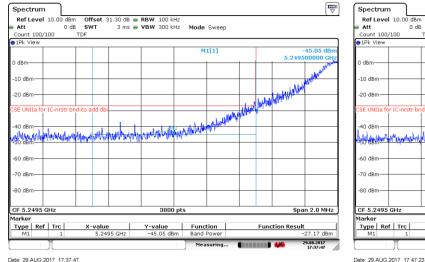
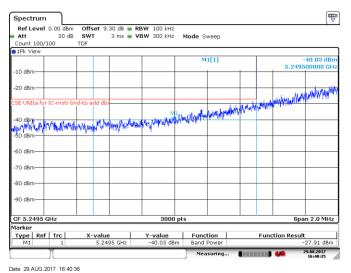


Figure 8.5-167: Lower band edge for ISED, 5 MHz channel, 32 dBi antenna,

cho

Figure 8.5-168: Lower band edge for ISED, 5 MHz channel, 32 dBi antenna, ch1



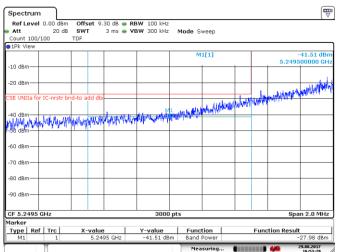


Figure 8.5-169: Lower band edge for ISED, 10 MHz channel, 10 dBi antenna, cho

Figure 8.5-170: Lower band edge for ISED, 10 MHz channel, 10 dBi antenna, ch1

Date: 29.AUG.2017 16:53:29



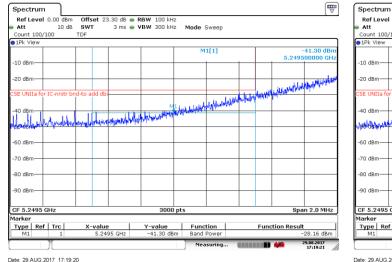
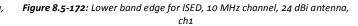
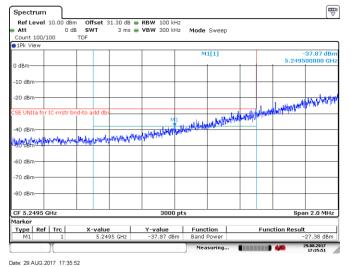


Figure 8.5-171: Lower band edge for ISED, 10 MHz channel, 24 dBi antenna, cho





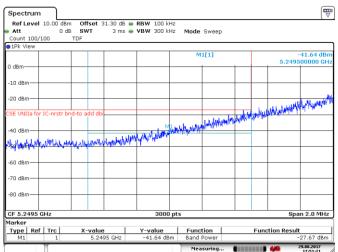


Figure 8.5-173: Lower band edge for ISED, 10 MHz channel, 32 dBi antenna, cho

Figure 8.5-174: Lower band edge for ISED, 10 MHz channel, 32 dBi antenna, ch1

Date: 29.AUG.2017 17:51:21

Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2



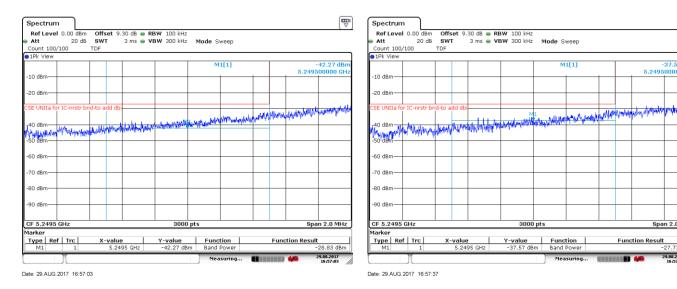


Figure 8.5-175: Lower band edge for ISED, 20 MHz channel, 10 dBi antenna, cho

Figure 8.5-176: Lower band edge for ISED, 20 MHz channel, 10 dBi antenna, ch1

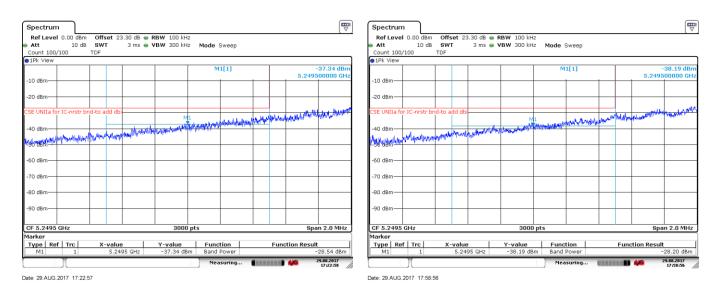


Figure 8.5-177: Lower band edge for ISED, 20 MHz channel, 24 dBi antenna, cho

Figure 8.5-178: Lower band edge for ISED, 20 MHz channel, 24 dBi antenna, ch1

Date: 29.AUG.2017 17:26:47

Test name FCC 15.407(b) and RSS-247 6.2.2.2 Spurious (out-of-band) emissions

Specification FCC Part 15 Subpart E and RSS-247 Issue 2



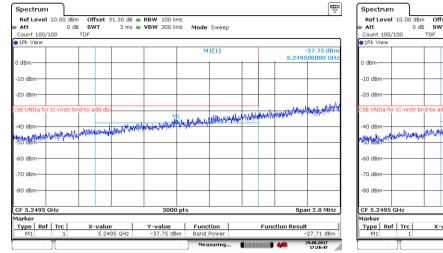


Figure 8.5-179: Lower band edge for ISED, 20 MHz channel, 32 dBi antenna, cho

Figure 8.5-180: Lower band edge for ISED, 20 MHz channel, 32 dBi antenna, ch1

Date: 29.AUG.2017 17:54:50



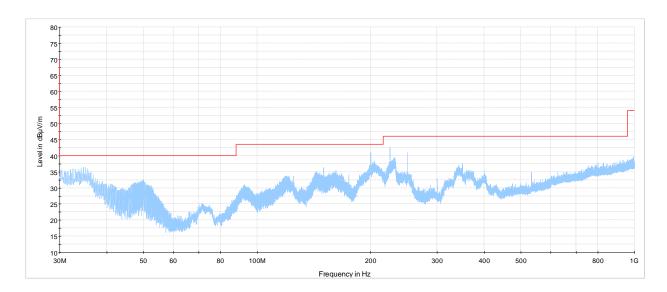


Figure 8.5-181: Radiated spurious emissions below 1 GHz, low channel

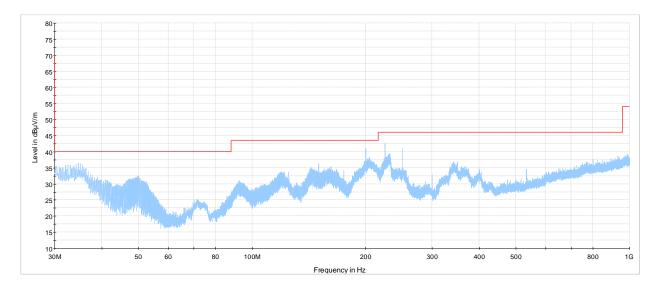


Figure 8.5-182: Radiated spurious emissions below 1 GHz, mid channel





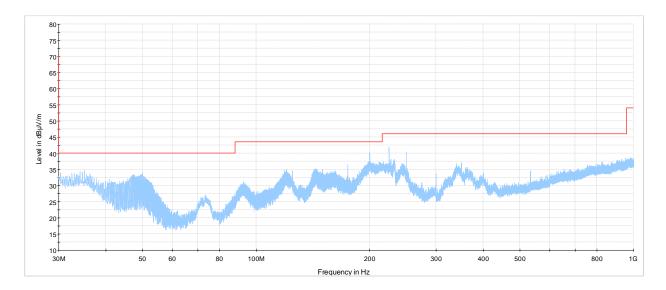


Figure 8.5-183: Radiated spurious emissions below 1 GHz, high channel

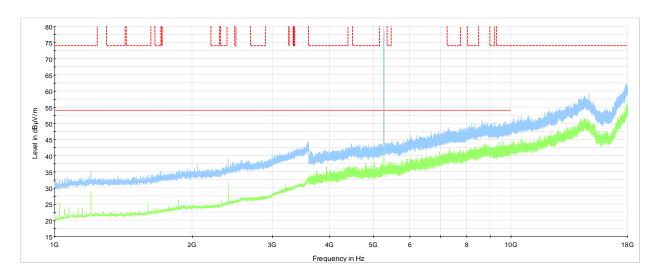


Figure 8.5-184: Radiated spurious emissions within 1–18 GHz, low channel



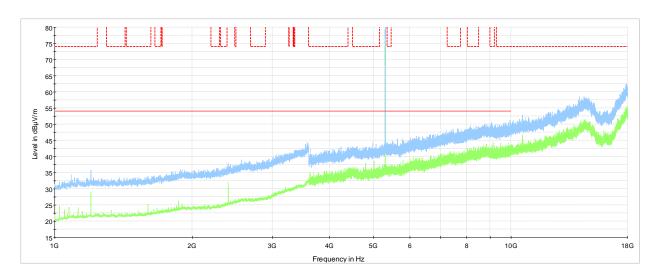


Figure 8.5-185: Radiated spurious emissions within 1–18 GHz, mid channel

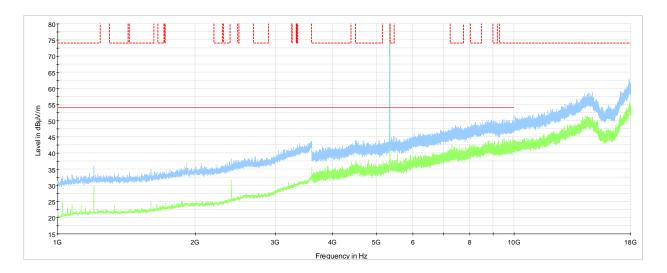


Figure 8.5-186: Radiated spurious emissions within 1–18 GHz, high channel

Note: spurious cabinet radiation scans were performed at the frequencies up to 40 GHz. No emissions were detected at the frequencies above 18 GHz.





8.6 FCC 15.407(g) and RSS-Gen 8.11 Frequency stability

8.6.1 Definitions and limits

Manufacturers of U-NII (IC: LE-LAN) devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

8.6.2 Test summary

| Test date: | September 27, 2017 |
|----------------|--------------------|
| Test engineer: | Yong Huang |
| Verdict: | Pass |

8.6.3 Observations, settings and special notes

Spectrum analyser settings:

| Resolution bandwidth: | 10 Hz |
|-----------------------|----------|
| Video bandwidth: | 10 Hz |
| Detector mode: | Peak |
| Trace mode: | Max Hold |

8.6.4 Test data

Table 8.6-1: Frequency drift measurement

| Test conditions | Frequency, Hz | Drift, Hz |
|-----------------|---------------|-----------|
| +50 °C, Nominal | 5300054618 | 17782 |
| +40 °C, Nominal | 5300057256 | 15144 |
| +30 °C, Nominal | 5300061753 | 10647 |
| +20 °C, +15 % | 5300067077 | 5323.5 |
| +20 °C, Nominal | 5300072400 | reference |
| +20 °C, −15 % | 5300076780 | -4380 |
| +10 °C, Nominal | 5300081160 | -8760 |
| 0 °C, Nominal | 5300090410 | -18010 |
| −10 °C, Nominal | 5300094288 | -21888 |
| −20 °C, Nominal | 5300091840 | -19440 |
| −30 °C, Nominal | 5300086112 | -13712 |

Note: Minimum lower band edge margin is more than 160 kHz.

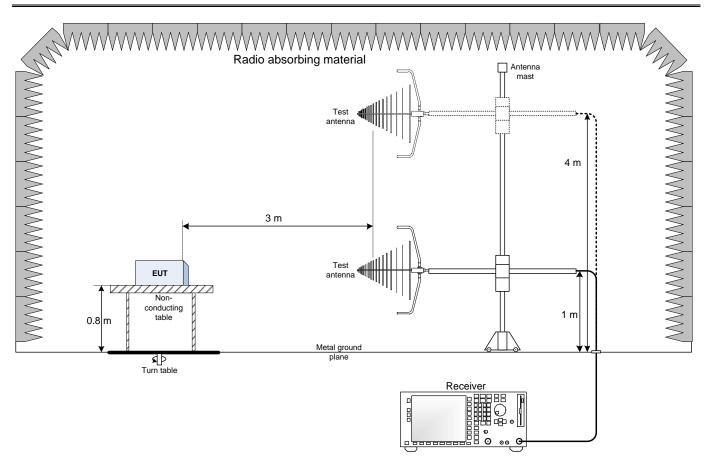
Minimum upper band edge margin is more than 2.67 MHz

The frequency drifts in above table are within these minimum margins, the emissions are deemed to maintain within the band of operation.



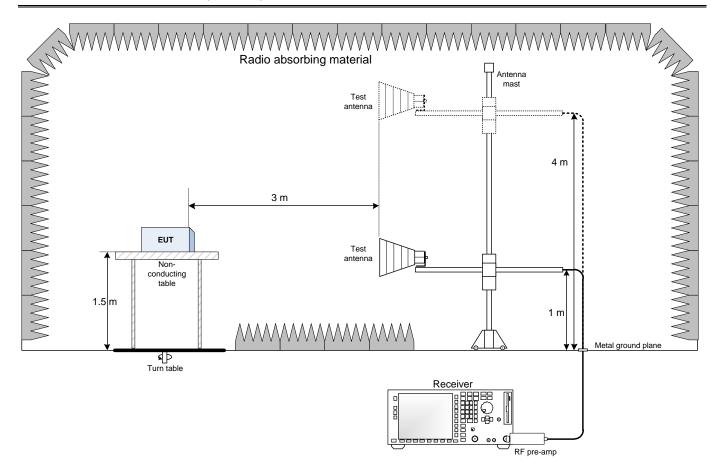
Section 9. Block diagrams of test set-ups

9.1 Radiated emissions set-up for frequencies below 1 GHz

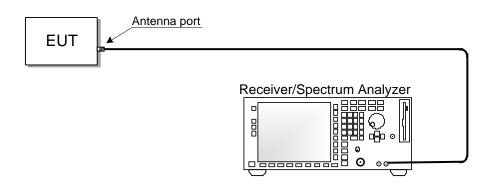




9.2 Radiated emissions set-up for frequencies above 1 GHz



9.3 Conducted antenna port set-up





9.4 Conducted emissions on AC line set-up

