

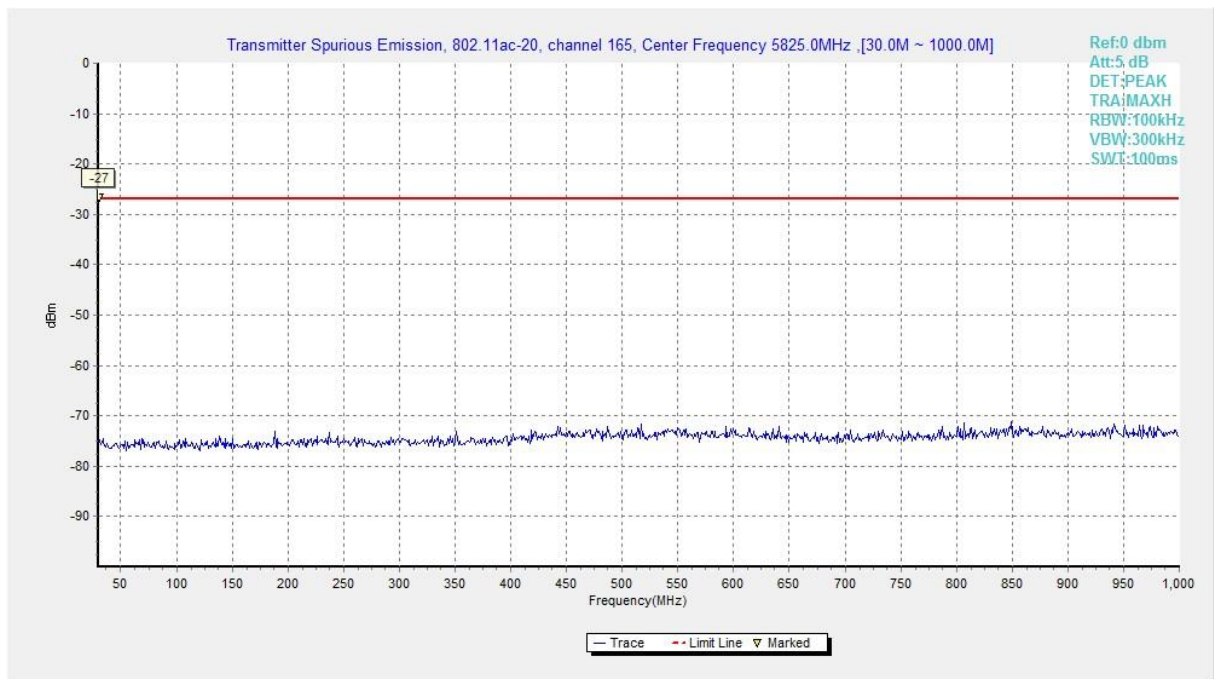


**Fig. 47 Conducted Spurious Emission (802.11ac-HT20, Ch165, 30 MHz-1 GHz)**

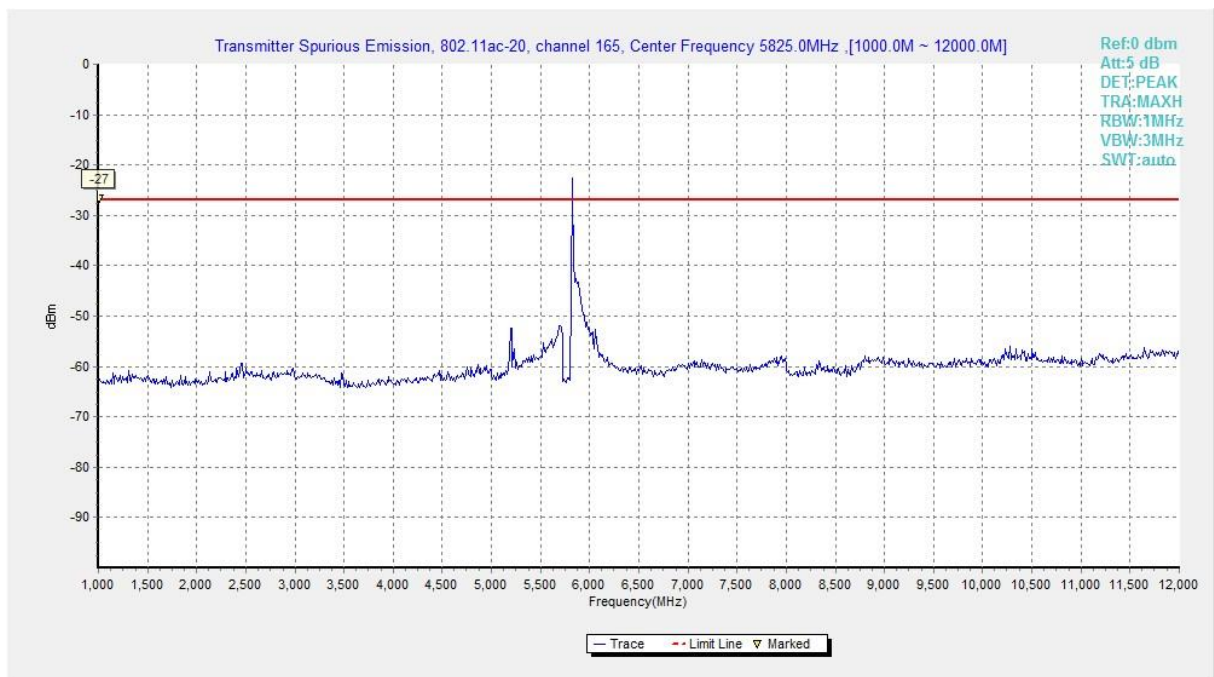


**Fig. 48 Conducted Spurious Emission (802.11ac-HT20, Ch165, 1 GHz -12 GHz)**

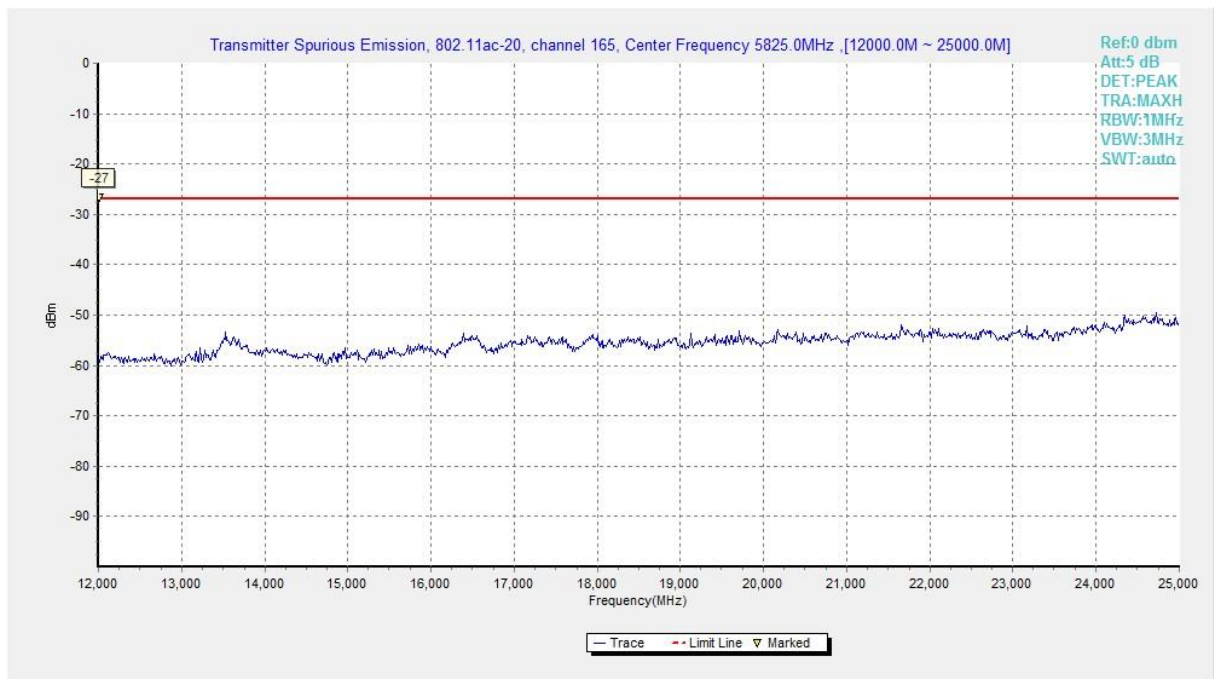


**Fig. 49 Conducted Spurious Emission (802.11ac-HT20, Ch165, 12 GHz-25 GHz)**

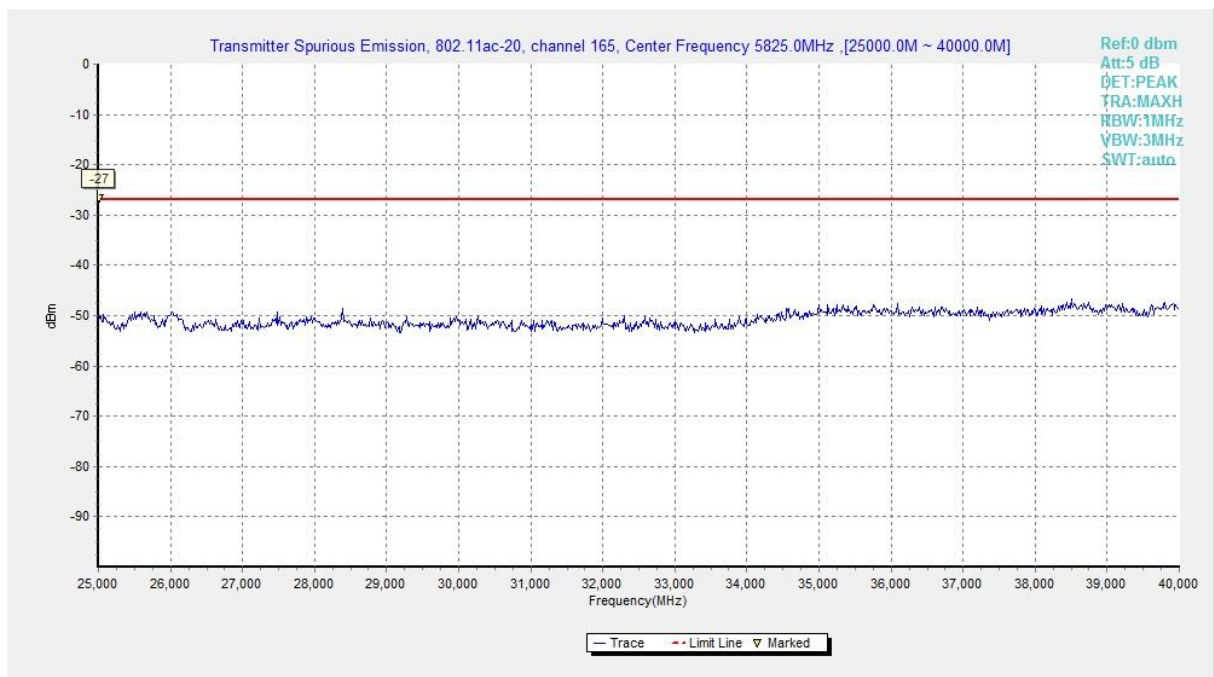


**Fig. 50 Conducted Spurious Emission (802.11ac-HT20, Ch165, 25 GHz-40 GHz)**

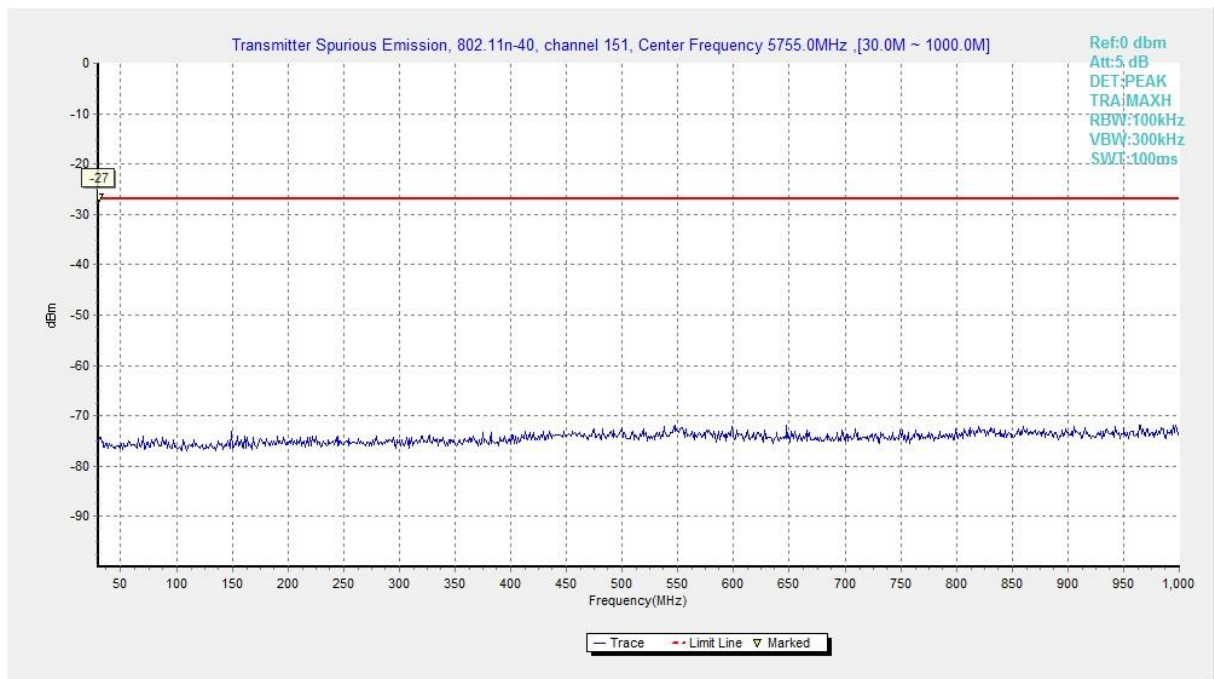


**Fig. 51 Conducted Spurious Emission (802.11n-HT40, Ch151, 30 MHz-1 GHz)**

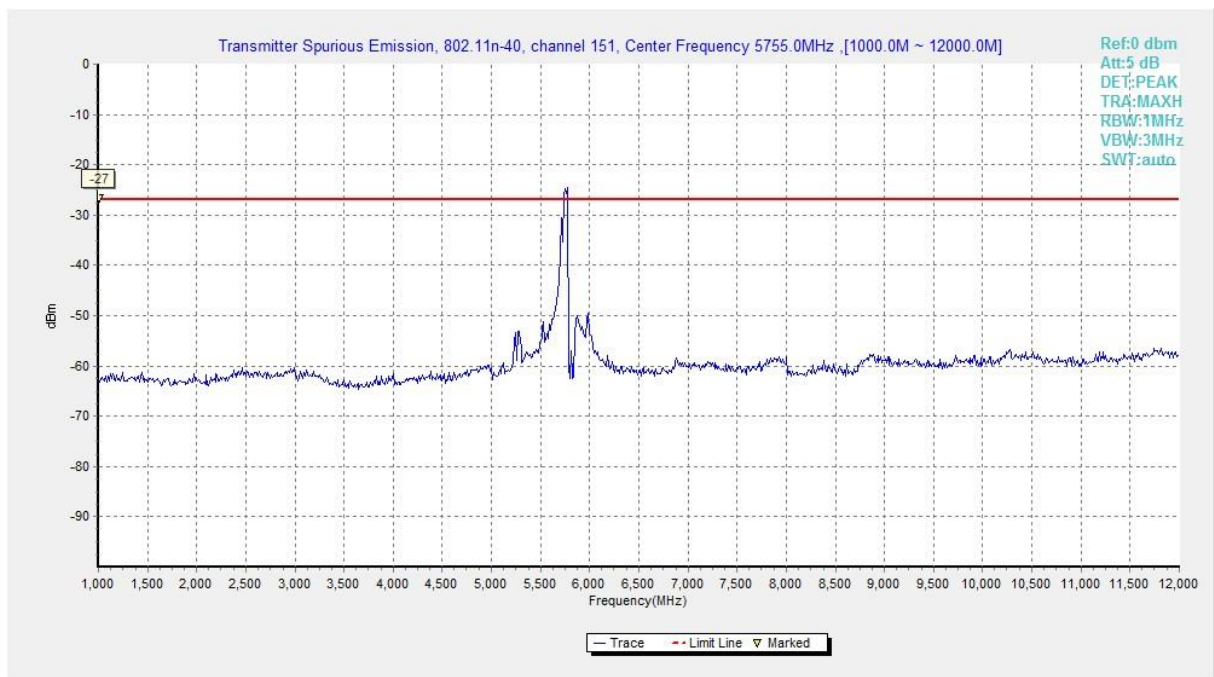


**Fig. 52 Conducted Spurious Emission (802.11n-HT40, Ch151, 1 GHz -12 GHz)**

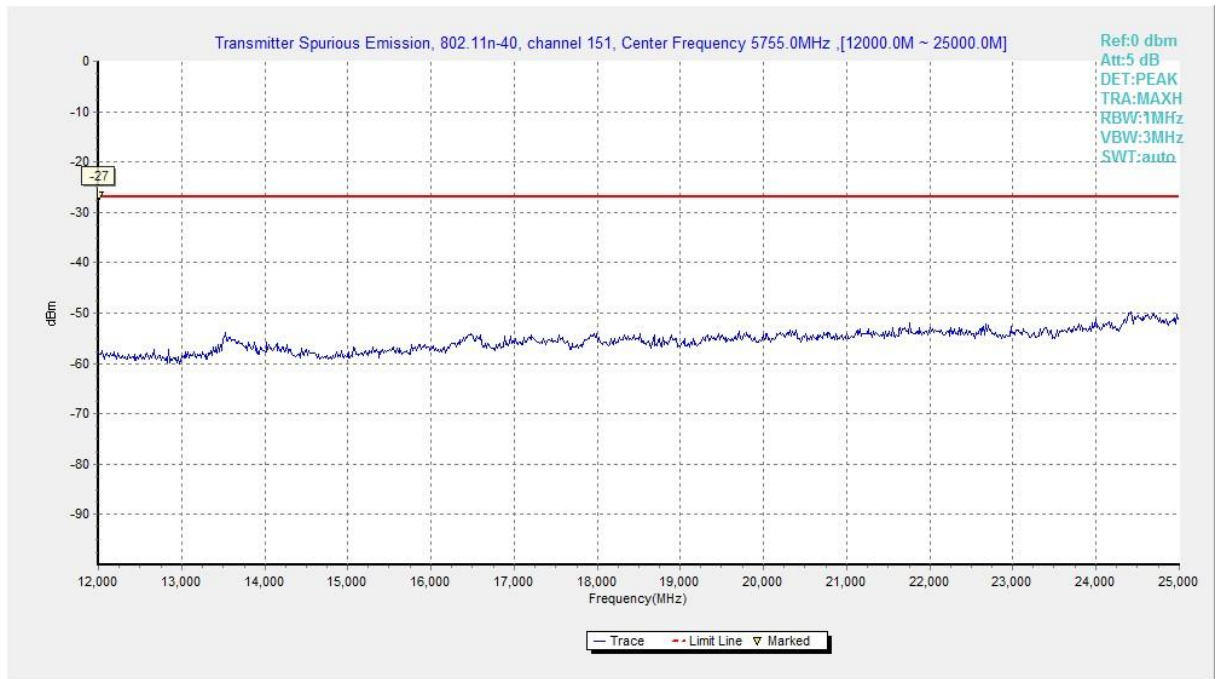


**Fig. 53 Conducted Spurious Emission (802.11n-HT40, Ch151, 12 GHz-25 GHz)**

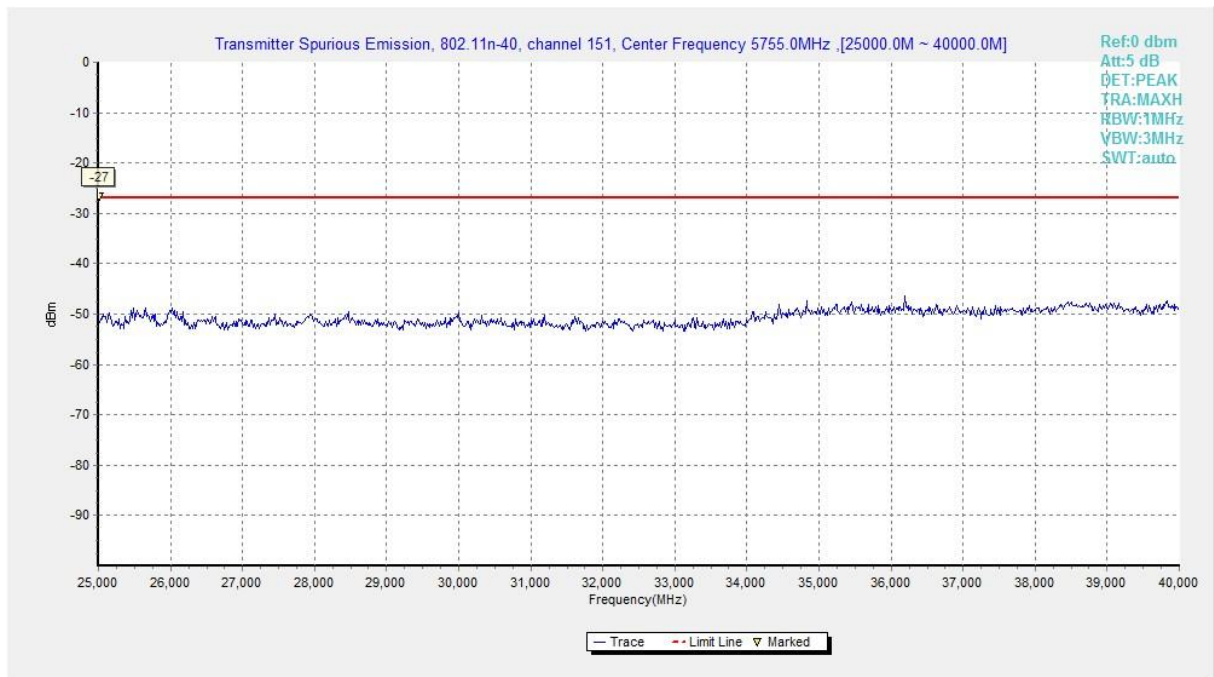


**Fig. 54 Conducted Spurious Emission (802.11n-HT40, Ch151, 25 GHz-40 GHz)**

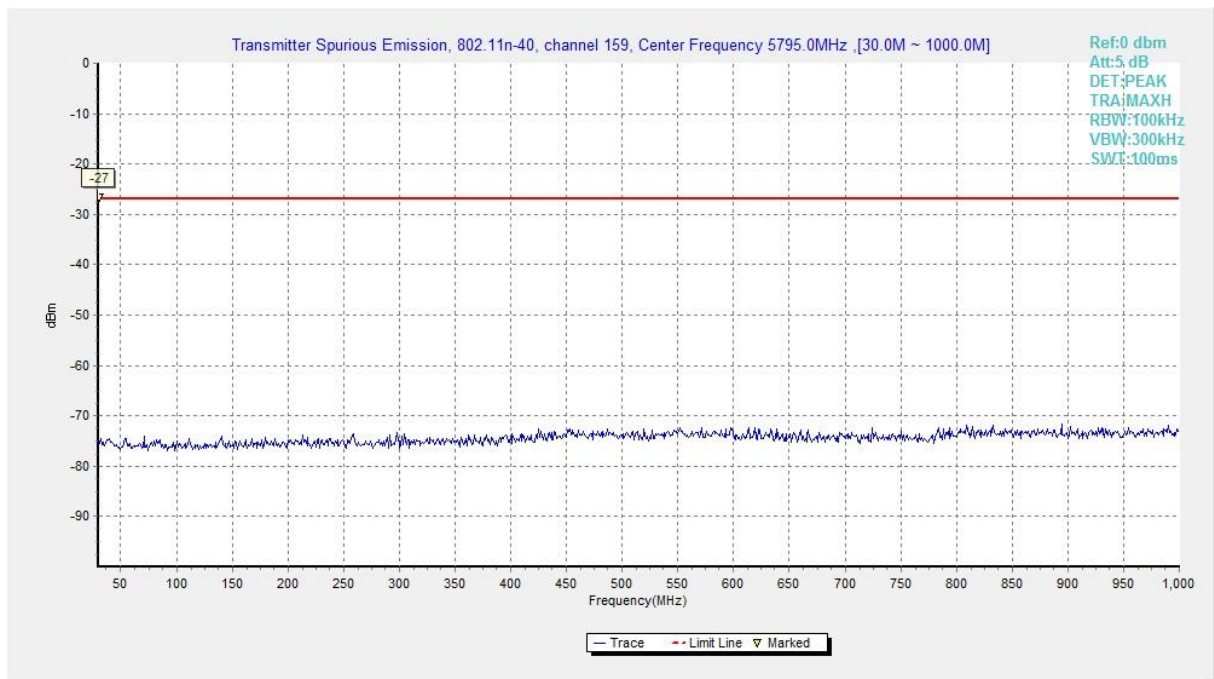


**Fig. 55 Conducted Spurious Emission (802.11n-HT40, Ch159, 30 MHz-1 GHz)**

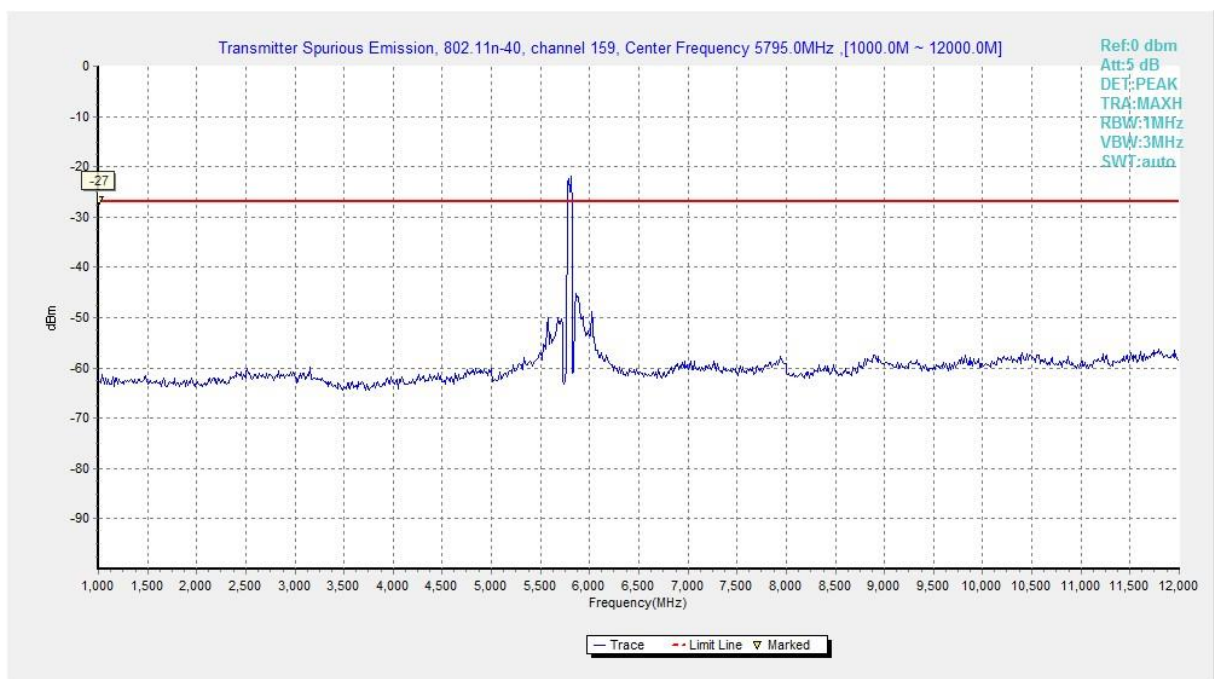


**Fig. 56 Conducted Spurious Emission (802.11n-HT40, Ch159, 1 GHz -12 GHz)**

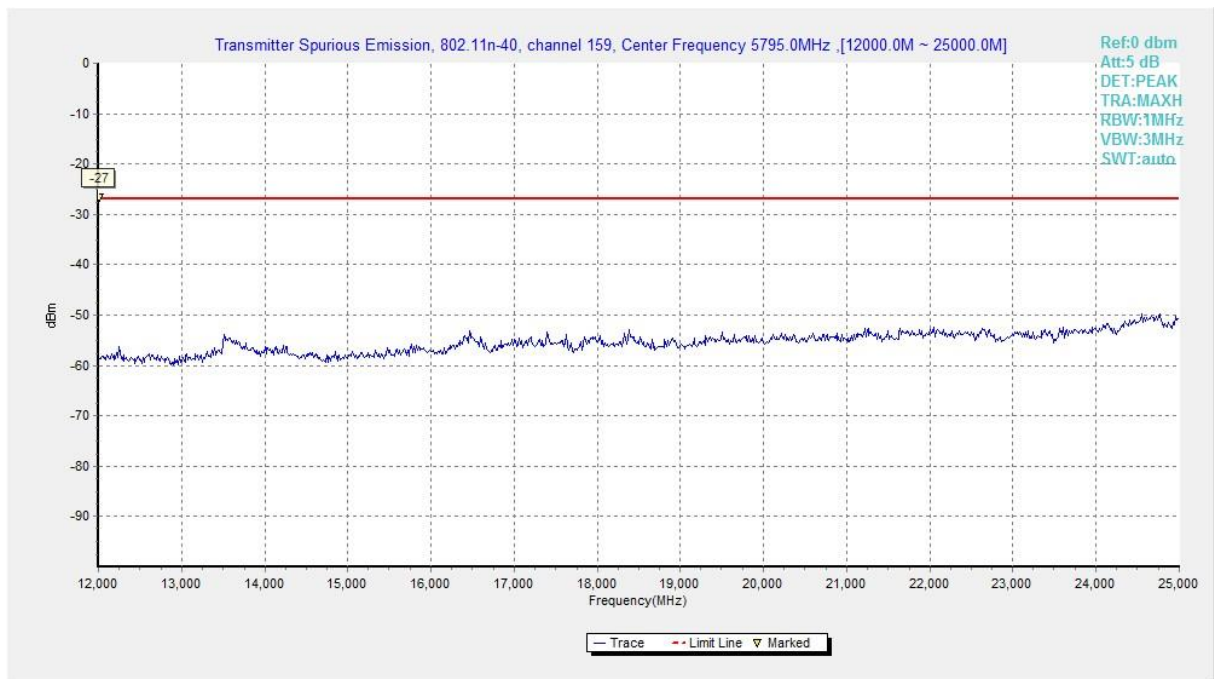


**Fig. 57 Conducted Spurious Emission (802.11n-HT40, Ch159, 12 GHz-25 GHz)**

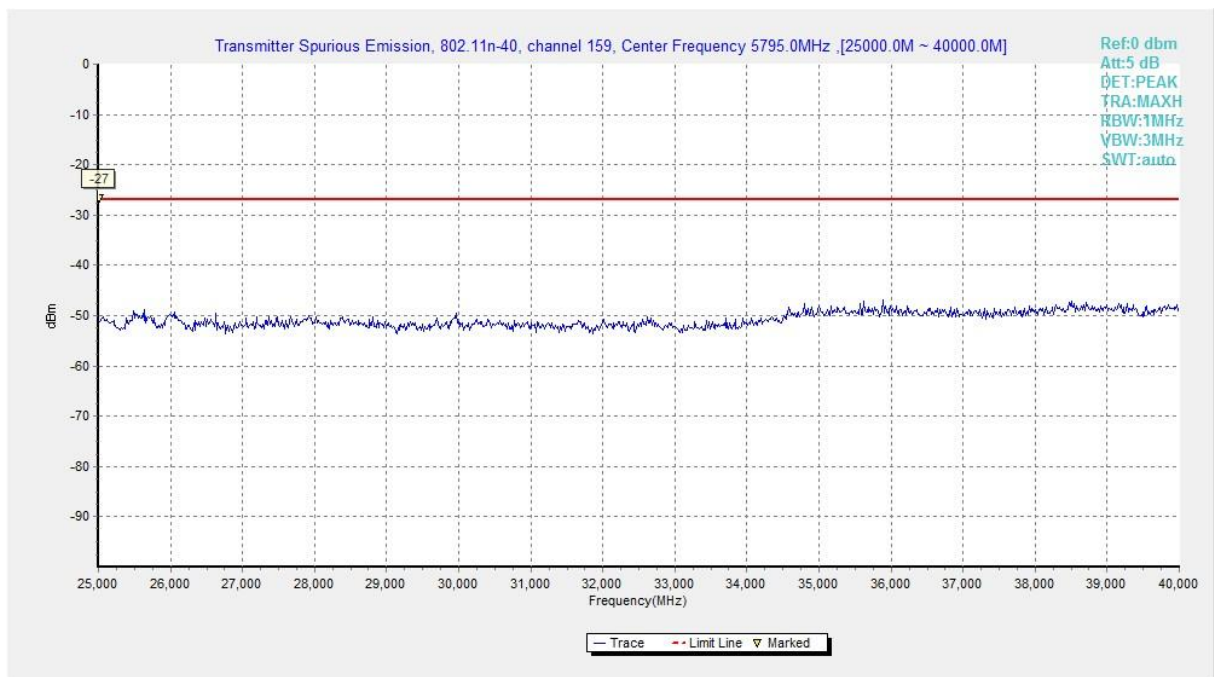


**Fig. 58 Conducted Spurious Emission (802.11n-HT40, Ch159, 25 GHz-40 GHz)**

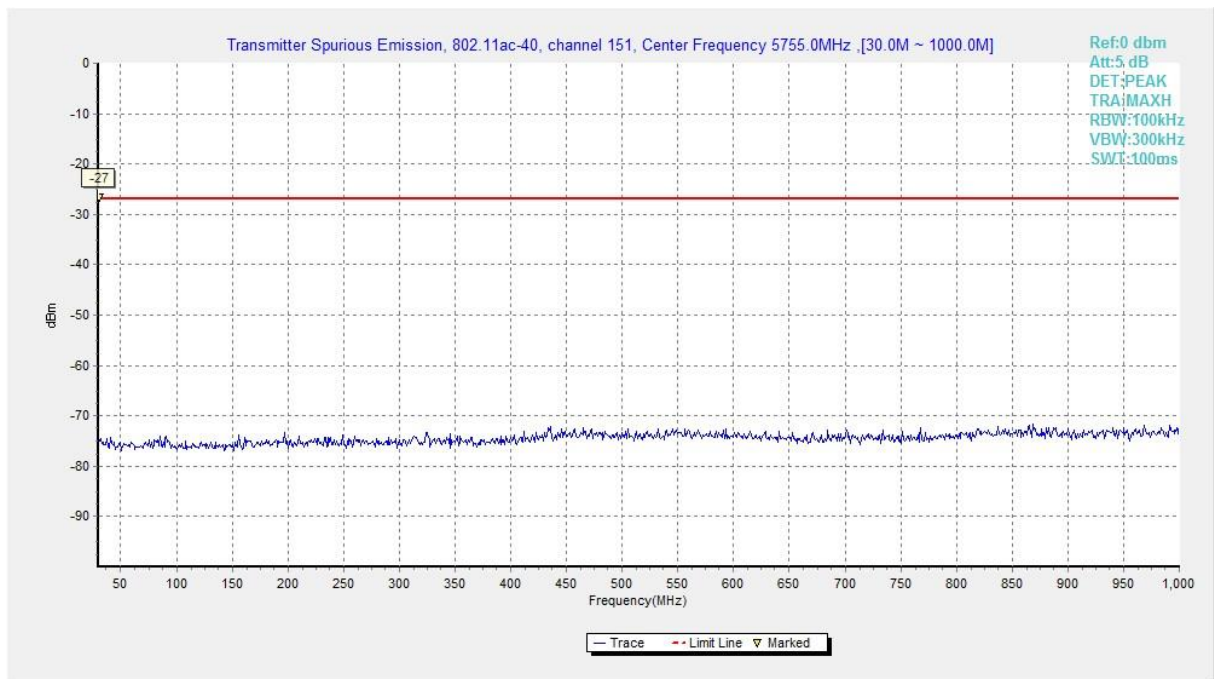


**Fig. 59 Conducted Spurious Emission (802.11ac-HT40, Ch151, 30 MHz-1 GHz)**

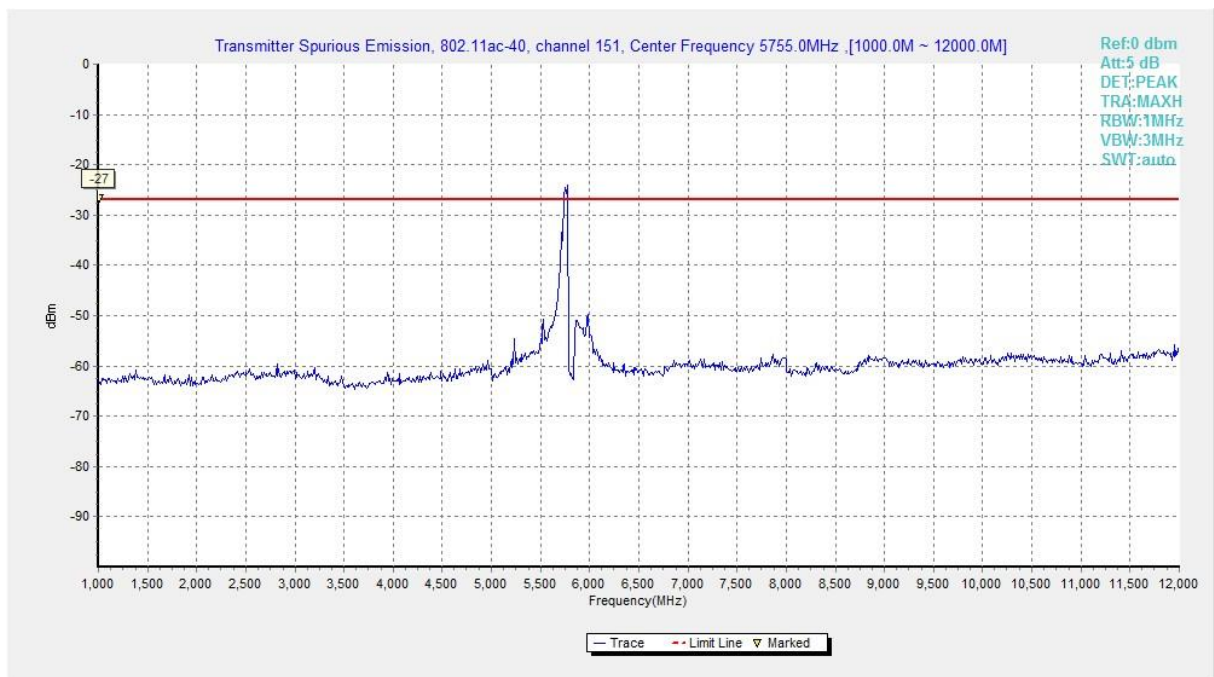


**Fig. 60 Conducted Spurious Emission (802.11ac-HT40, Ch151, 1 GHz -12 GHz)**

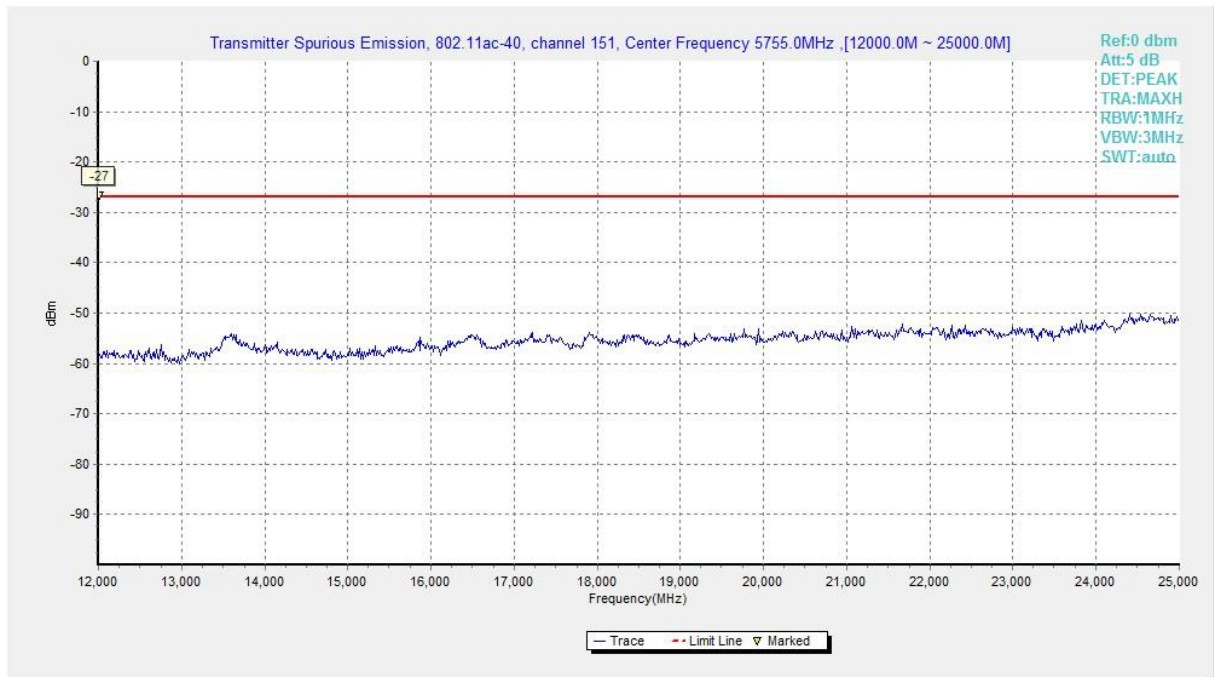


**Fig. 61 Conducted Spurious Emission (802.11ac-HT40, Ch151, 12 GHz-25 GHz)**

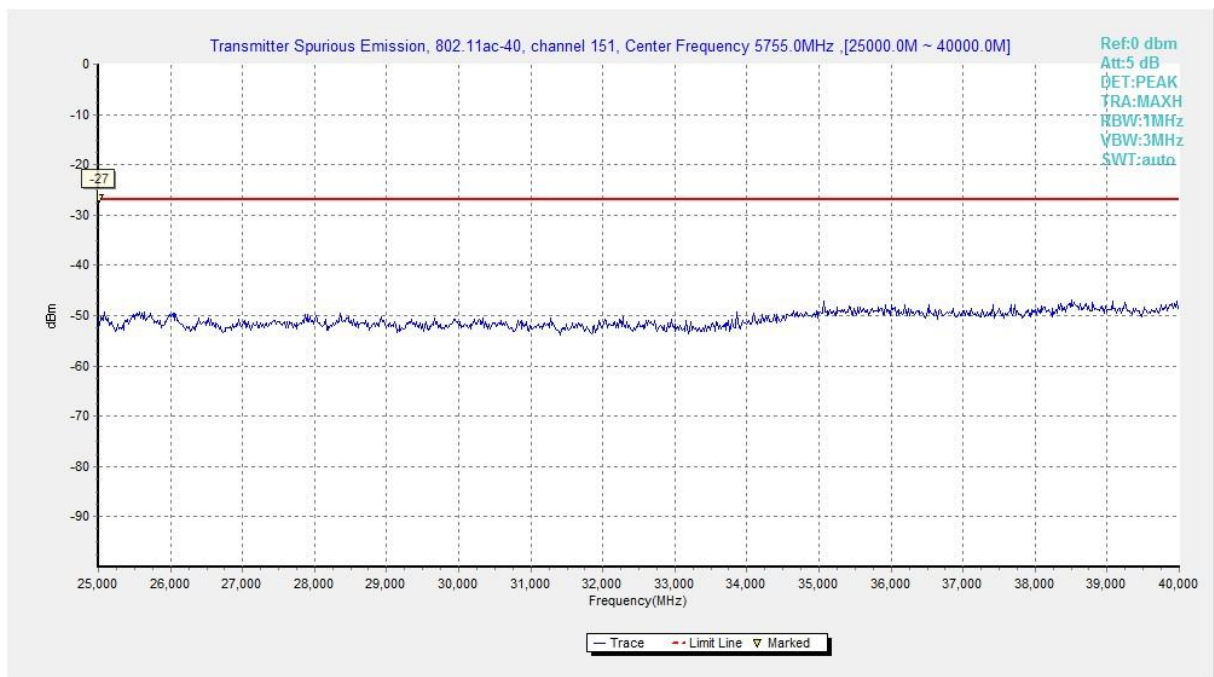


**Fig. 62 Conducted Spurious Emission (802.11ac-HT40, Ch151, 25 GHz-40 GHz)**

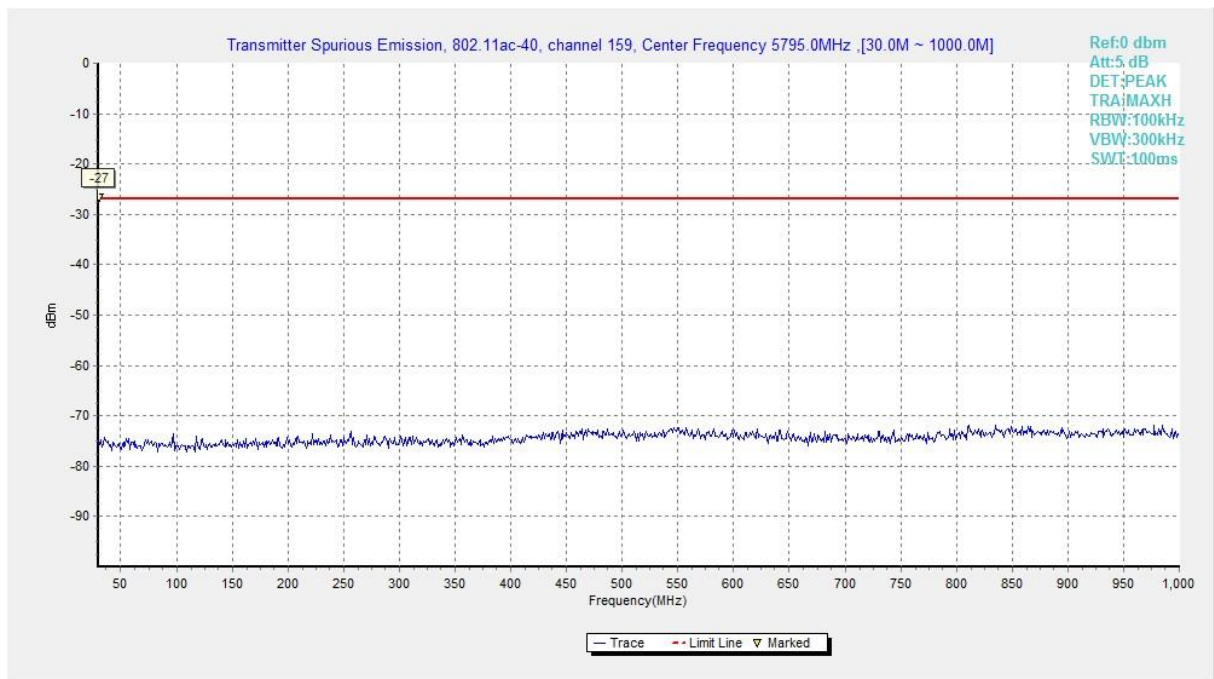


**Fig. 63 Conducted Spurious Emission (802.11ac-HT40, Ch159, 30 MHz-1 GHz)**

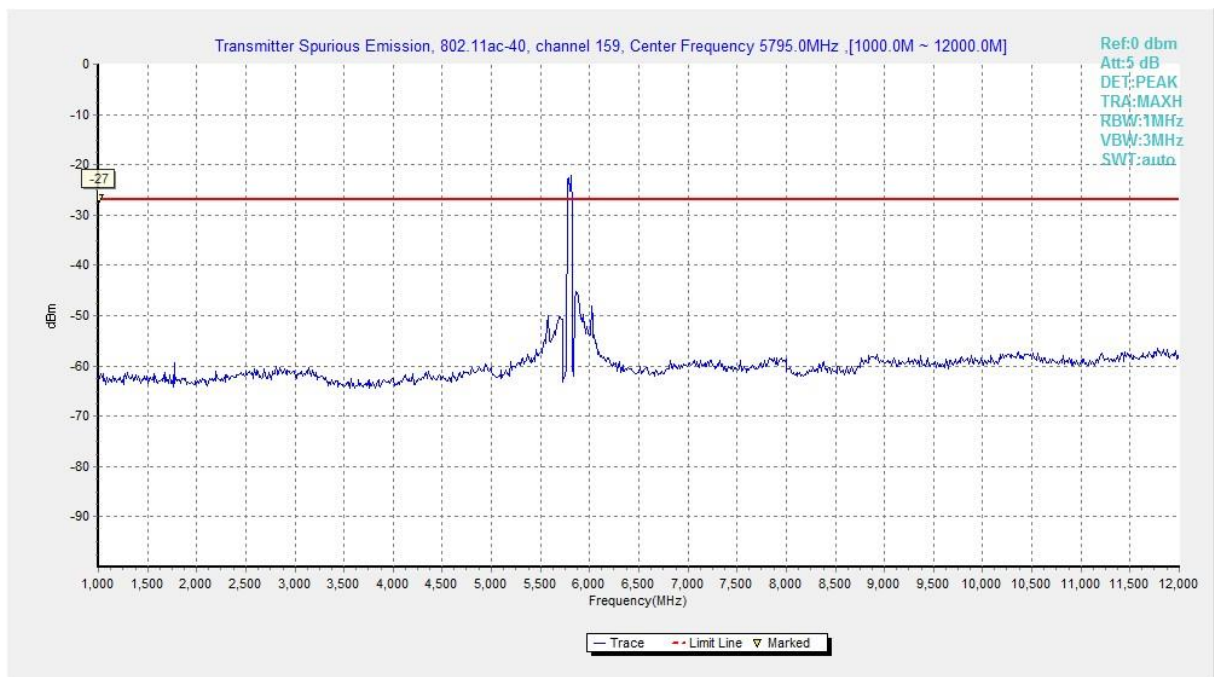


**Fig. 64 Conducted Spurious Emission (802.11ac-HT40, Ch159, 1 GHz -12 GHz)**

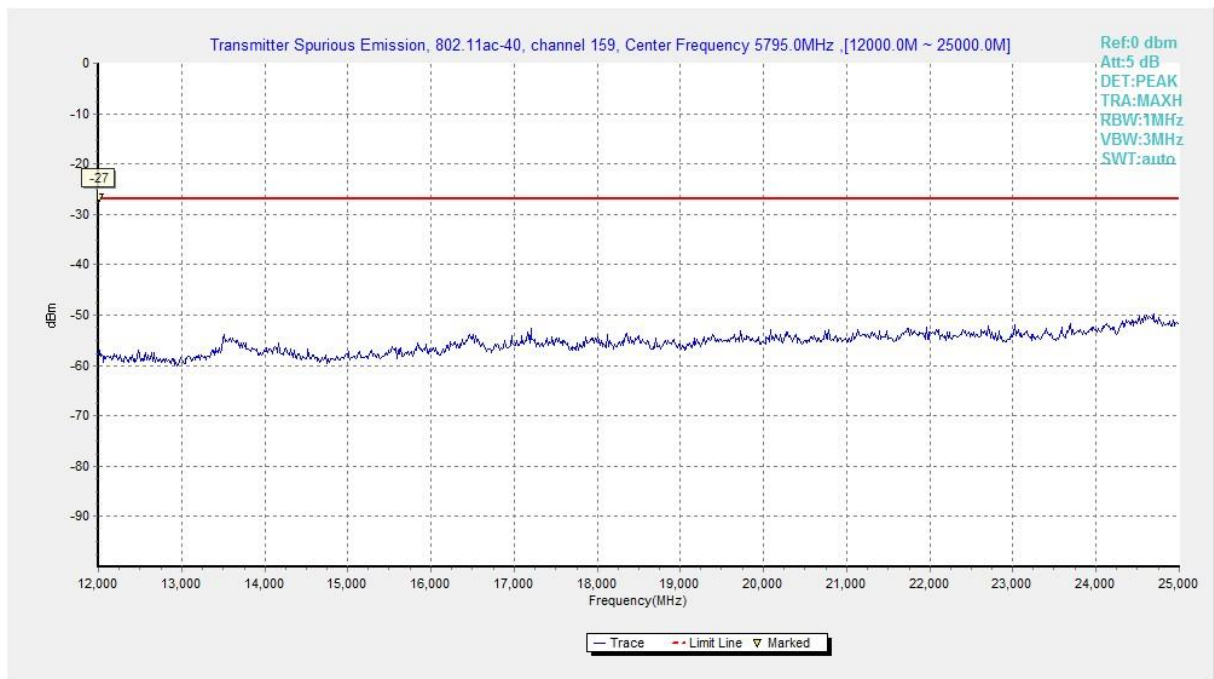


**Fig. 65 Conducted Spurious Emission (802.11ac-HT40, Ch159, 12 GHz-25 GHz)**

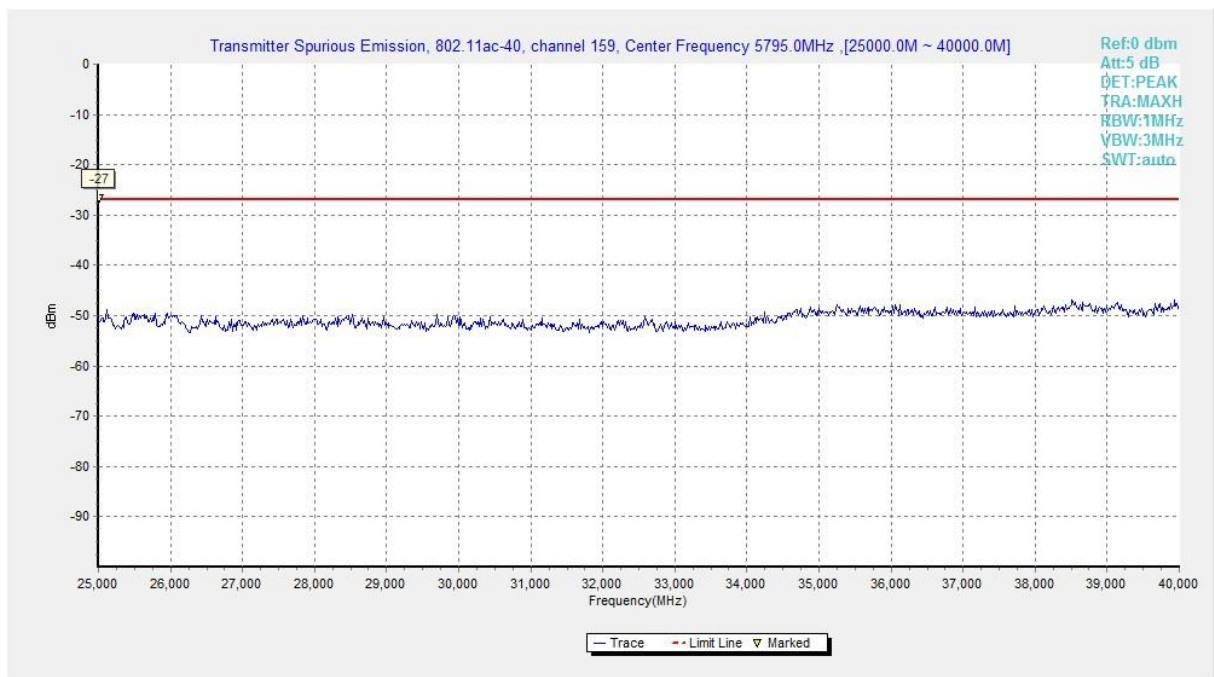


**Fig. 66 Conducted Spurious Emission (802.11ac-HT40, Ch159, 25 GHz-40 GHz)**

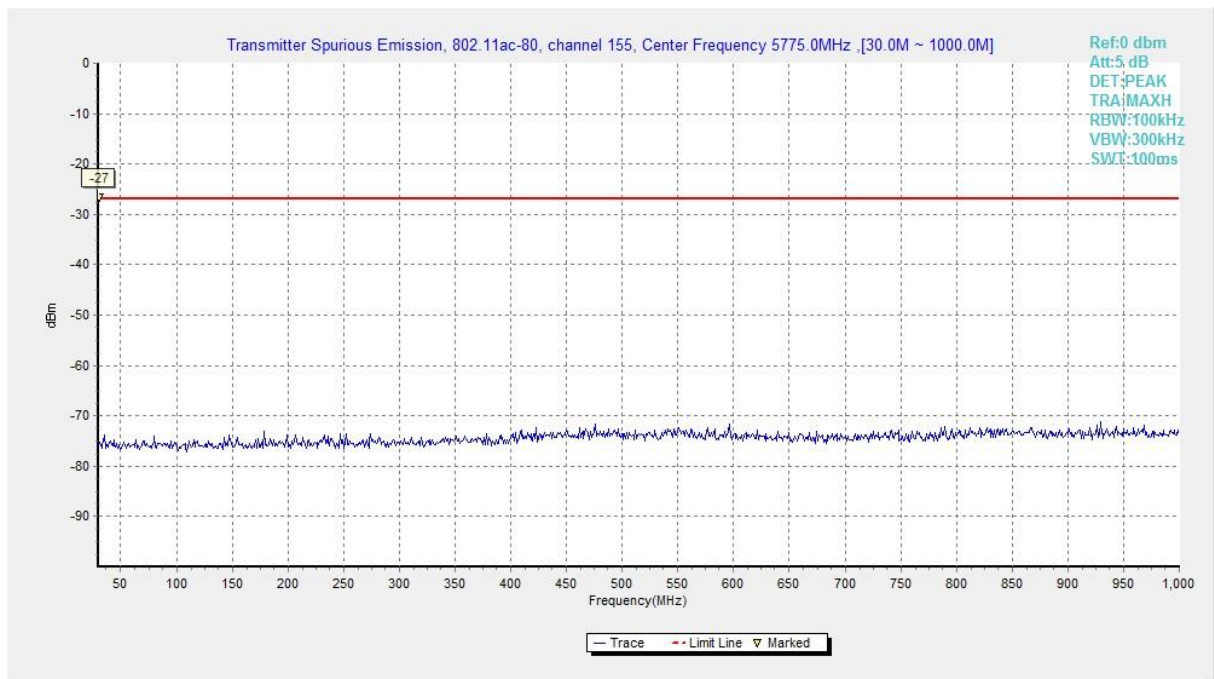


**Fig. 67 Conducted Spurious Emission (802.11ac-HT80, Ch155, 30 MHz-1 GHz)**

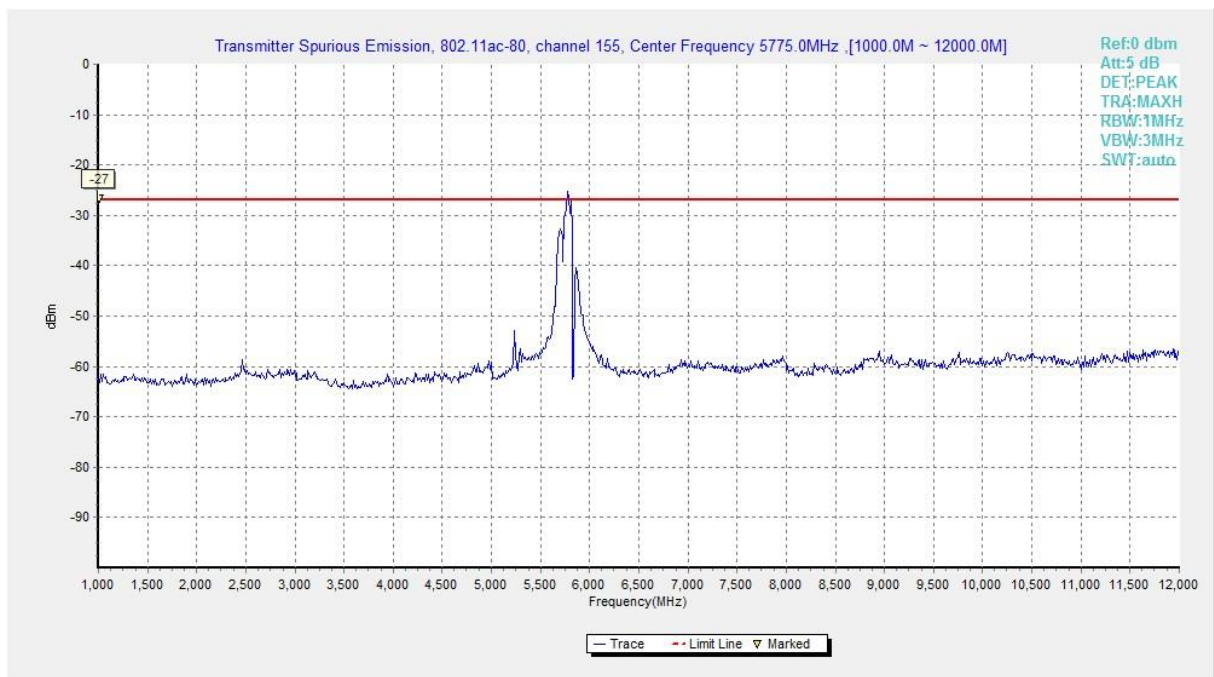


**Fig. 68 Conducted Spurious Emission (802.11ac-HT80, Ch155, 1 GHz -12 GHz)**

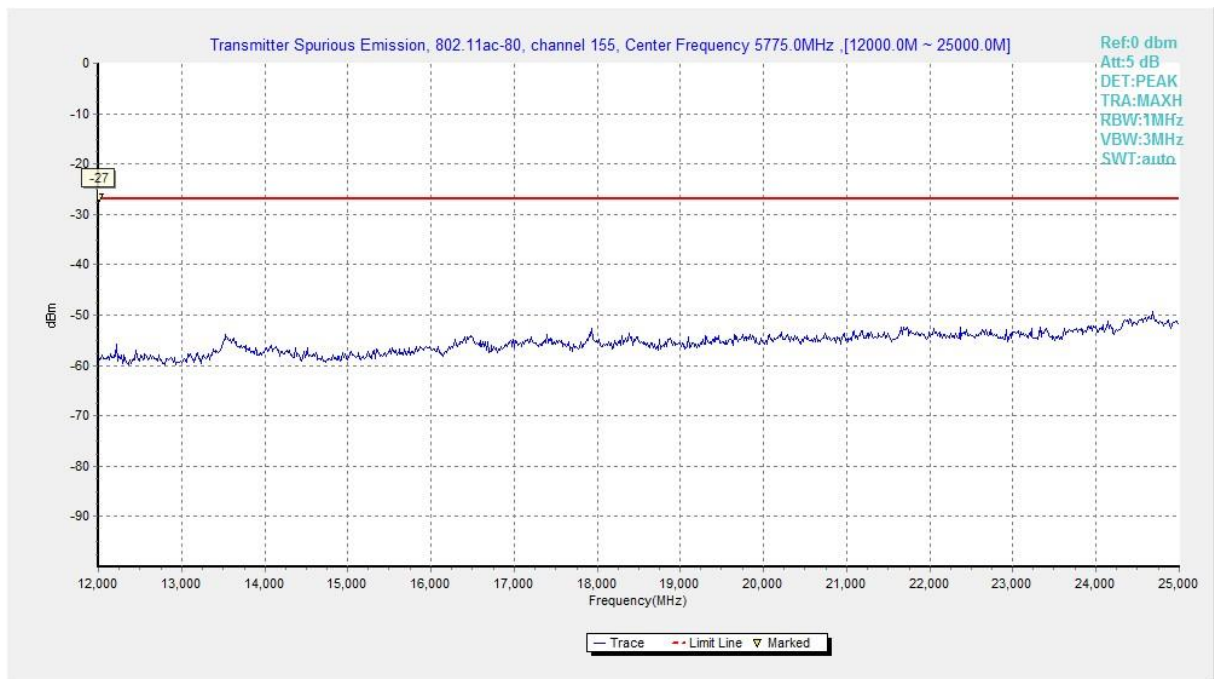


**Fig. 69 Conducted Spurious Emission (802.11ac-HT80, Ch155, 12 GHz-25 GHz)**

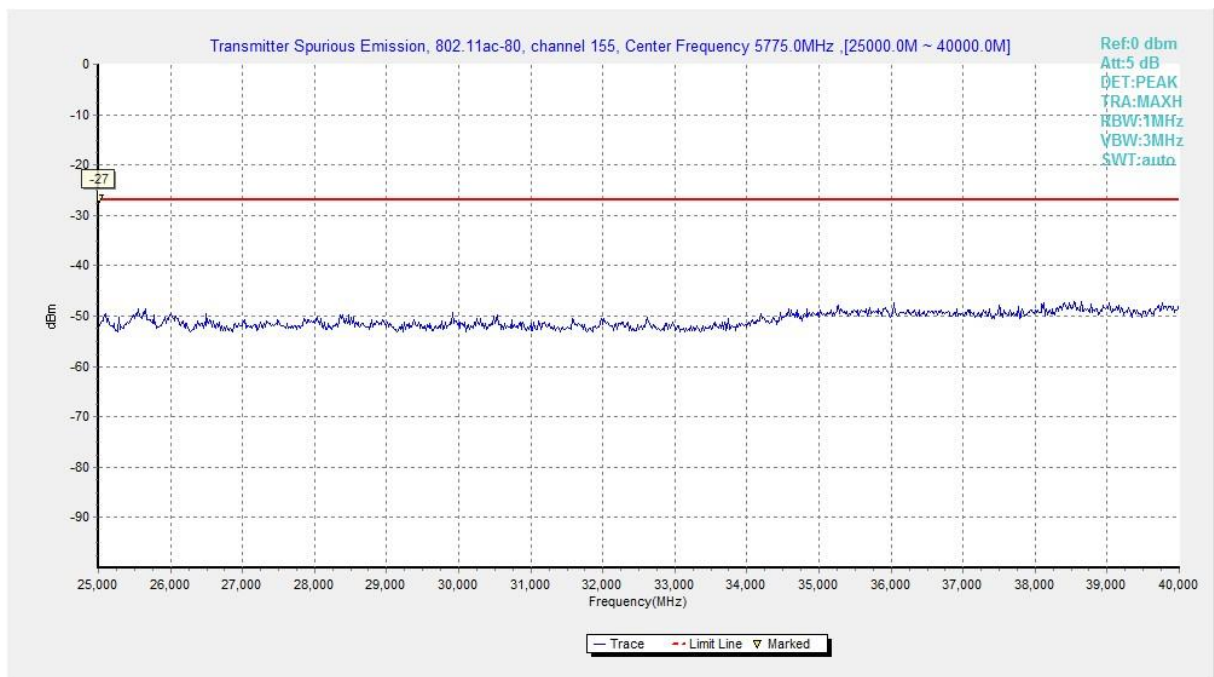


**Fig. 70 Conducted Spurious Emission (802.11ac-HT80, Ch155, 25 GHz-40 GHz)**

## A.5.2 Transmitter Spurious Emission - Radiated

### Measurement Limit:

| Standard               | Frequency (MHz) | Limit (dBm/MHz) |
|------------------------|-----------------|-----------------|
| FCC 47 CFR Part 15.407 | 5725MHz~5850MHz | < -27           |

The measurement is made according to ANSI C63.10 .

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

### Limit in restricted band:

| Frequency of emission (MHz) | Field strength (uV/m) | Field strength (dBμV/m) | Measurement distance(m) |
|-----------------------------|-----------------------|-------------------------|-------------------------|
| 30-88                       | 100                   | 40.0                    | 3                       |
| 88-216                      | 150                   | 43.5                    | 3                       |
| 216-960                     | 200                   | 46.0                    | 3                       |
| Above 960                   | 500                   | 54.0                    | 3                       |

### Measurement Results:

#### Note:

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

### Average Results:

#### Ant0+Ant1:

#### 802.11a

#### Ch149

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17970.3         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17979.1         | 35.3                        | -25.5           | 43.4                  | 17.4                    | V                  |
| 17991.2         | 35.3                        | -25.5           | 43.4                  | 17.4                    | V                  |
| 17928.5         | 35.2                        | -25.5           | 43.4                  | 17.3                    | V                  |
| 17936.2         | 35.2                        | -25.5           | 43.4                  | 17.3                    | V                  |
| 5724.9          | 37.6                        | -16.3           | 34.2                  | 19.7                    | H                  |

## Ch157

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17987.9         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17958.2         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17985.7         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17874.6         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17962.6         | 35.4                        | -25.5           | 43.4                  | 17.5                    | H                  |
| 17973.6         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |

## Ch165

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17958.2         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17967.0         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17960.4         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17976.9         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17979.1         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 5851.2          | 36.8                        | -16.2           | 34.2                  | 18.8                    | H                  |

## 802.11n-HT20

## Ch149

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17987.9         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17962.6         | 35.5                        | -25.5           | 43.4                  | 17.6                    | H                  |
| 17972.5         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17971.4         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17973.6         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 5724.4          | 38.2                        | -16.3           | 34.2                  | 20.3                    | V                  |

## Ch157

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17980.2         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17868.0         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17974.7         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17979.1         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17985.7         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |
| 17994.5         | 35.4                        | -25.5           | 43.4                  | 17.5                    | V                  |

## Ch165

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17968.1         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17972.5         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17976.9         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17959.3         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17975.8         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 5850.0          | 36.6                        | -16.2           | 34.2                  | 18.6                    | H                  |

## 802.11n-HT40

## Ch151

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17973.6         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17950.5         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17979.1         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17982.4         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17994.5         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 5723.7          | 40.1                        | -16.3           | 34.2                  | 22.2                    | H                  |

## Ch159

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17975.8         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17967.0         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17983.5         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17994.5         | 35.5                        | -25.5           | 43.4                  | 17.6                    | H                  |
| 17964.8         | 35.4                        | -25.5           | 43.4                  | 17.5                    | H                  |
| 5853.1          | 36.5                        | -16.2           | 34.2                  | 18.5                    | H                  |

## 802.11ac-HT20

## Ch149

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17957.1         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17965.9         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17981.3         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17974.7         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 17976.9         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |
| 5724.9          | 38.5                        | -16.3           | 34.2                  | 20.6                    | H                  |

## Ch157

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17982.4         | 35.7                        | -25.5           | 43.4                  | 17.8                    | V                  |
| 17962.6         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17969.2         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17972.5         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17995.6         | 35.6                        | -25.5           | 43.4                  | 17.7                    | V                  |
| 17991.2         | 35.5                        | -25.5           | 43.4                  | 17.6                    | V                  |

## Ch165

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17970.3            | 36.0                              | -25.5                 | 43.4                        | 18.1                          | V                        |
| 17979.1            | 35.7                              | -25.5                 | 43.4                        | 17.8                          | V                        |
| 17987.9            | 35.7                              | -25.5                 | 43.4                        | 17.8                          | V                        |
| 17872.4            | 35.5                              | -25.5                 | 43.4                        | 17.6                          | V                        |
| 17956.0            | 35.5                              | -25.5                 | 43.4                        | 17.6                          | V                        |
| 5850.0             | 36.7                              | -16.2                 | 34.2                        | 18.7                          | V                        |

## 802.11ac-HT40

## Ch151

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17987.9            | 35.8                              | -25.5                 | 43.4                        | 17.9                          | V                        |
| 17974.7            | 35.7                              | -25.5                 | 43.4                        | 17.8                          | H                        |
| 17936.2            | 35.5                              | -25.5                 | 43.4                        | 17.6                          | V                        |
| 17989.0            | 35.5                              | -25.5                 | 43.4                        | 17.6                          | V                        |
| 17964.8            | 35.4                              | -25.5                 | 43.4                        | 17.5                          | V                        |
| 5723.3             | 40.7                              | -16.3                 | 34.2                        | 22.8                          | H                        |

## Ch159

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17996.7            | 35.8                              | -25.5                 | 43.4                        | 17.9                          | V                        |
| 17987.9            | 35.7                              | -25.5                 | 43.4                        | 17.8                          | H                        |
| 17991.2            | 35.6                              | -25.5                 | 43.4                        | 17.7                          | H                        |
| 17993.4            | 35.6                              | -25.5                 | 43.4                        | 17.7                          | H                        |
| 17989.0            | 35.5                              | -25.5                 | 43.4                        | 17.6                          | H                        |
| 5851.1             | 36.7                              | -16.2                 | 34.2                        | 18.7                          | H                        |

**802.11ac-HT80**

Ch155

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 5725.0          | 38.3                        | -33.8           | 34.2                  | 22.2                    | H                  |
| 17982.4         | 35.6                        | -17.7           | 43.4                  | 17.8                    | H                  |
| 17983.5         | 35.6                        | -17.7           | 43.4                  | 17.7                    | V                  |
| 17962.6         | 35.4                        | -17.7           | 43.4                  | 17.6                    | H                  |
| 17980.2         | 35.4                        | -17.7           | 43.4                  | 17.6                    | H                  |
| 17957.1         | 35.4                        | -17.7           | 43.4                  | 17.5                    | H                  |

**Peak Results:**
**802.11a**

Ch149

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17945.0         | 48.6                        | -25.5           | 43.4                  | 30.7                    | V                  |
| 17338.9         | 47.3                        | -25.9           | 40.1                  | 33.1                    | V                  |
| 17928.5         | 47.3                        | -25.5           | 43.4                  | 29.4                    | V                  |
| 17308.1         | 47.1                        | -25.9           | 40.1                  | 32.9                    | V                  |
| 17985.7         | 46.8                        | -25.5           | 43.4                  | 28.9                    | V                  |
| 5723.4          | 50.1                        | -16.3           | 34.2                  | 32.2                    | H                  |

Ch157

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17907.6         | 48.7                        | -25.5           | 43.4                  | 30.8                    | V                  |
| 17576.5         | 47.7                        | -25.7           | 43.4                  | 30                      | V                  |
| 17865.8         | 47.7                        | -25.5           | 43.4                  | 29.8                    | V                  |
| 17925.2         | 47.2                        | -25.5           | 43.4                  | 29.3                    | V                  |
| 17976.9         | 47.2                        | -25.5           | 43.4                  | 29.3                    | V                  |
| 17979.1         | 47.2                        | -25.5           | 43.4                  | 29.3                    | V                  |

## Ch165

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17928.5         | 47.4                        | -25.5           | 43.4                  | 29.5                    | V                  |
| 17783.3         | 47.3                        | -25.5           | 43.4                  | 29.4                    | V                  |
| 17961.5         | 47.3                        | -25.5           | 43.4                  | 29.4                    | V                  |
| 17854.8         | 47.2                        | -25.5           | 43.4                  | 29.3                    | H                  |
| 17880.1         | 47.1                        | -25.5           | 43.4                  | 29.2                    | H                  |
| 5868.4          | 49.1                        | -16.2           | 34.2                  | 31.1                    | V                  |

## 802.11n-HT20

## Ch149

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17894.4         | 48.7                        | -25.5           | 43.4                  | 30.8                    | V                  |
| 17905.4         | 47.4                        | -25.5           | 43.4                  | 29.5                    | H                  |
| 17949.4         | 47.4                        | -25.5           | 43.4                  | 29.5                    | H                  |
| 17947.2         | 47.3                        | -25.5           | 43.4                  | 29.4                    | H                  |
| 17855.9         | 47.2                        | -25.5           | 43.4                  | 29.3                    | V                  |
| 5724.4          | 49.9                        | -16.3           | 34.2                  | 32                      | V                  |

## Ch157

| Frequency (MHz) | Measurement Result (dBμV/m) | Cable loss (dB) | Antenna Factor (dB/m) | Receiver Reading (dBμV) | Antenna Pol. (H/V) |
|-----------------|-----------------------------|-----------------|-----------------------|-------------------------|--------------------|
| 17991.2         | 47.4                        | -25.5           | 43.4                  | 29.5                    | V                  |
| 17982.4         | 47.3                        | -25.5           | 43.4                  | 29.4                    | H                  |
| 17961.5         | 47.2                        | -25.5           | 43.4                  | 29.3                    | H                  |
| 17939.5         | 47.1                        | -25.5           | 43.4                  | 29.2                    | H                  |
| 17704.1         | 47.0                        | -25.7           | 43.4                  | 29.3                    | V                  |
| 17919.7         | 47.0                        | -25.5           | 43.4                  | 29.1                    | V                  |

## Ch165

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17913.1            | 47.6                              | -25.5                 | 43.4                        | 29.7                          | V                        |
| 17826.2            | 47.5                              | -25.5                 | 43.4                        | 29.6                          | V                        |
| 17861.4            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | V                        |
| 17883.4            | 47.2                              | -25.5                 | 43.4                        | 29.3                          | H                        |
| 17926.3            | 47.2                              | -25.5                 | 43.4                        | 29.3                          | V                        |
| 5853.3             | 49.1                              | -16.2                 | 34.2                        | 31.1                          | H                        |

## 802.11n-HT40

## Ch151

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17439.0            | 47.6                              | -26.9                 | 43.4                        | 31.1                          | V                        |
| 17870.2            | 47.5                              | -25.5                 | 43.4                        | 29.6                          | H                        |
| 17973.6            | 47.5                              | -25.5                 | 43.4                        | 29.6                          | V                        |
| 17980.2            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | H                        |
| 17486.3            | 47.0                              | -26.9                 | 43.4                        | 30.5                          | V                        |
| 5723.4             | 52.4                              | -16.3                 | 34.2                        | 34.5                          | H                        |

## Ch159

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17980.2            | 47.7                              | -25.5                 | 43.4                        | 29.8                          | H                        |
| 17895.5            | 47.6                              | -25.5                 | 43.4                        | 29.7                          | H                        |
| 17996.7            | 47.5                              | -25.5                 | 43.4                        | 29.6                          | H                        |
| 17975.8            | 47.4                              | -25.5                 | 43.4                        | 29.5                          | V                        |
| 17978.0            | 47.2                              | -25.5                 | 43.4                        | 29.3                          | V                        |
| 5864.1             | 48.7                              | -16.2                 | 34.2                        | 30.7                          | H                        |

**802.11ac-HT20**
**Ch149**

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17407.1            | 48.0                              | -26.9                 | 43.4                        | 31.5                          | H                        |
| 17997.8            | 47.9                              | -25.5                 | 43.4                        | 30                            | V                        |
| 17980.2            | 47.7                              | -25.5                 | 43.4                        | 29.8                          | V                        |
| 17965.9            | 47.4                              | -25.5                 | 43.4                        | 29.5                          | V                        |
| 17975.8            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | H                        |
| 5724.7             | 50.7                              | -16.3                 | 34.2                        | 32.8                          | H                        |

**Ch157**

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17879.0            | 47.9                              | -25.5                 | 43.4                        | 30                            | V                        |
| 17541.3            | 47.6                              | -26.9                 | 43.4                        | 31.1                          | V                        |
| 17980.2            | 47.4                              | -25.5                 | 43.4                        | 29.5                          | V                        |
| 17895.5            | 47.2                              | -25.5                 | 43.4                        | 29.3                          | V                        |
| 17995.6            | 47.2                              | -25.5                 | 43.4                        | 29.3                          | V                        |
| 17597.4            | 47.1                              | -25.7                 | 43.4                        | 29.4                          | H                        |

**Ch165**

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17958.2            | 48.2                              | -25.5                 | 43.4                        | 30.3                          | V                        |
| 17824.0            | 47.0                              | -25.5                 | 43.4                        | 29.1                          | V                        |
| 17972.5            | 46.9                              | -25.5                 | 43.4                        | 29                            | V                        |
| 17853.7            | 46.8                              | -25.5                 | 43.4                        | 28.9                          | H                        |
| 17531.4            | 46.7                              | -26.9                 | 43.4                        | 30.2                          | H                        |
| 5863.4             | 49.5                              | -16.2                 | 34.2                        | 31.5                          | H                        |

**802.11ac-HT40**

## Ch151

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17986.8            | 48.2                              | -25.5                 | 43.4                        | 30.3                          | V                        |
| 17995.6            | 47.9                              | -25.5                 | 43.4                        | 30                            | H                        |
| 17962.6            | 47.7                              | -25.5                 | 43.4                        | 29.8                          | H                        |
| 17929.6            | 47.5                              | -25.5                 | 43.4                        | 29.6                          | V                        |
| 17935.1            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | V                        |
| 5724.3             | 53.0                              | -16.3                 | 34.2                        | 35.1                          | H                        |

## Ch159

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 17967.0            | 47.6                              | -25.5                 | 43.4                        | 29.7                          | V                        |
| 17805.3            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | V                        |
| 17936.2            | 47.3                              | -25.5                 | 43.4                        | 29.4                          | V                        |
| 17952.7            | 47.1                              | -25.5                 | 43.4                        | 29.2                          | H                        |
| 17830.6            | 47.0                              | -25.5                 | 43.4                        | 29.1                          | H                        |
| 5851.1             | 49.2                              | -16.2                 | 34.2                        | 31.2                          | V                        |

**802.11ac-HT80**

## Ch155

| Frequency<br>(MHz) | Measurement<br>Result<br>(dBμV/m) | Cable<br>loss<br>(dB) | Antenna<br>Factor<br>(dB/m) | Receiver<br>Reading<br>(dBμV) | Antenna<br>Pol.<br>(H/V) |
|--------------------|-----------------------------------|-----------------------|-----------------------------|-------------------------------|--------------------------|
| 5724.69            | 49.9                              | -33.8                 | 34.2                        | 34.5                          | H                        |
| 17960.4            | 48.4                              | -17.7                 | 43.4                        | 29.8                          | H                        |
| 17477.5            | 47.5                              | -19.2                 | 43.4                        | 29.7                          | V                        |
| 17858.1            | 47.2                              | -18.5                 | 43.4                        | 29.6                          | H                        |
| 17939.5            | 47.2                              | -17.7                 | 43.4                        | 29.5                          | H                        |
| 17600.7            | 47.1                              | -18.9                 | 43.4                        | 29.3                          | H                        |

**Conclusion: PASS**

## A.6. Band Edges Compliance

### A6.1 Band Edges - conducted

#### Measurement Limit:

| Standard                     | Limit (dBm/MHz)                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FCC 47 CFR Part 15.407(b)(4) | All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. |

The measurement is made according to KDB 789033 D02

#### Measurement Uncertainty:

|                         |        |
|-------------------------|--------|
| Measurement Uncertainty | 0.75dB |
|-------------------------|--------|

#### Measurement Result:

The Ant0 is selected as worse condition of Ant0+Ant1.

#### Ant0+Ant1:

| Mode             | Channel  | Test Results | Conclusion |
|------------------|----------|--------------|------------|
| 802.11a          | 5745 MHz | Fig.71       | P          |
|                  | 5825 MHz | Fig.72       | P          |
| 802.11n<br>HT20  | 5745 MHz | Fig.73       | P          |
|                  | 5825 MHz | Fig.74       | P          |
| 802.11ac<br>HT20 | 5745 MHz | Fig.75       | P          |
|                  | 5825 MHz | Fig.76       | P          |
| 802.11n<br>HT40  | 5755 MHz | Fig.77       | P          |
|                  | 5795 MHz | Fig.78       | P          |
| 802.11ac<br>HT40 | 5755 MHz | Fig.79       | P          |
|                  | 5795 MHz | Fig.80       | P          |
| 802.11ac HT80    | 5775 MHz | Fig.81       | P          |
|                  | 5775 MHz | Fig.82       | P          |

**Conclusion: PASS**

**Test graphs as below:**



Fig. 71 Band Edges (802.11a, 5745MHz)

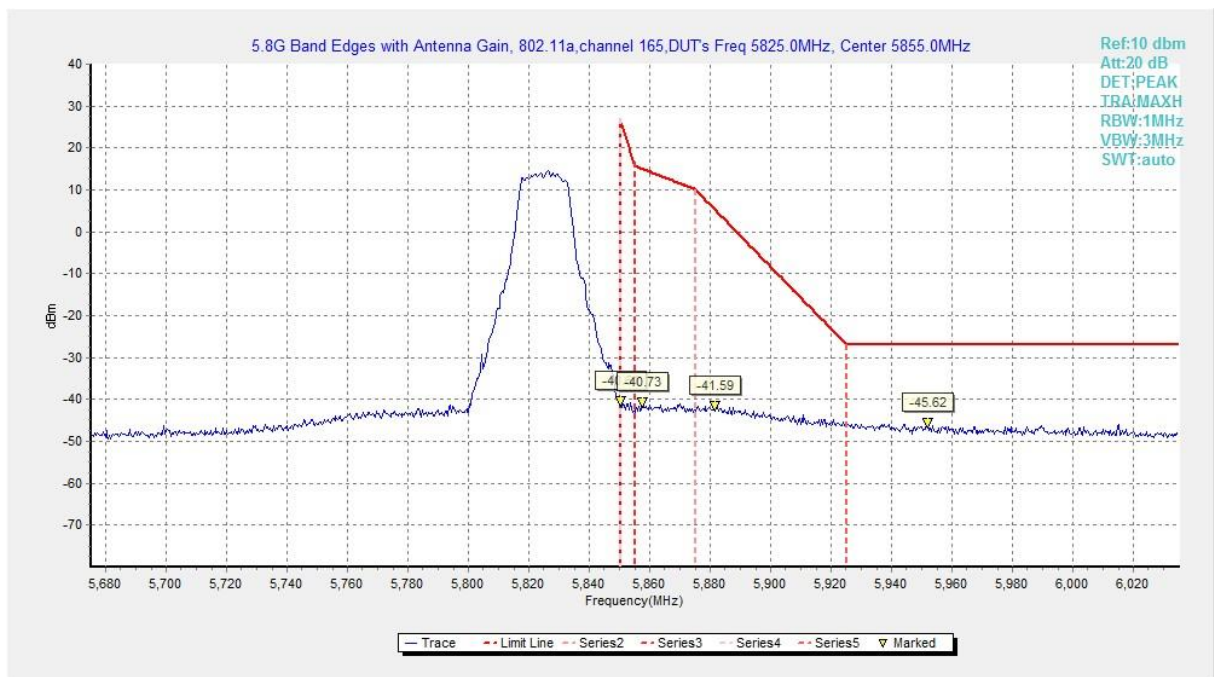


Fig. 72 Band Edges (802.11a, 5825MHz)

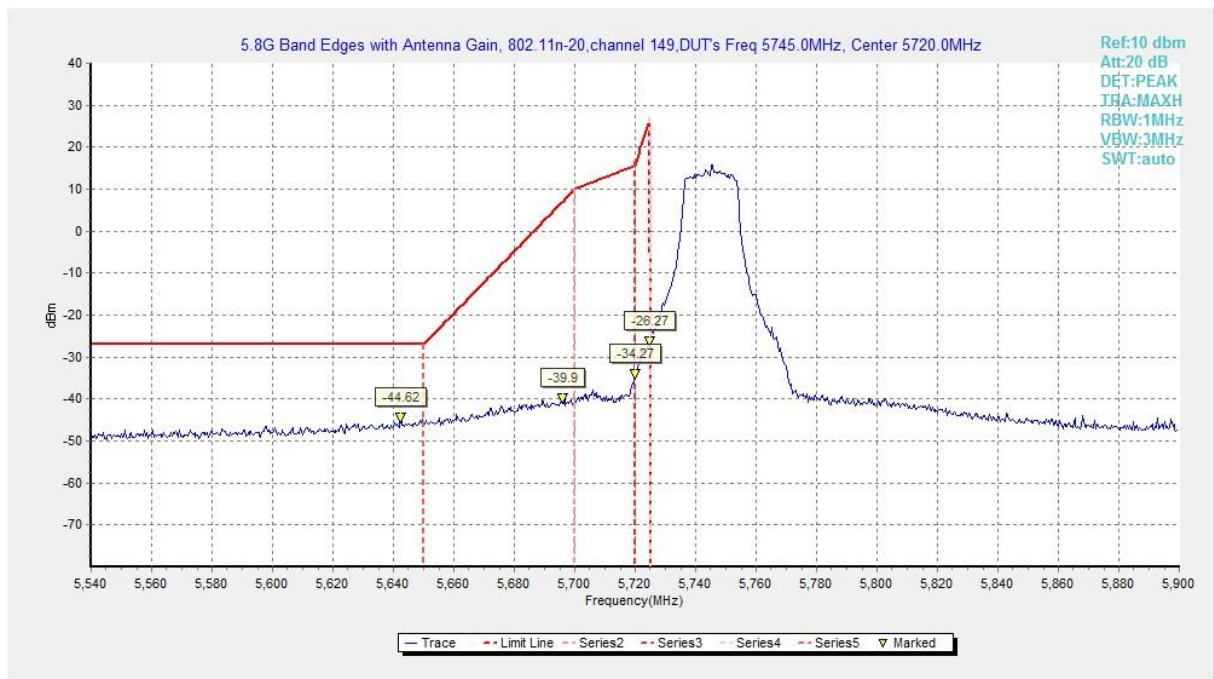


Fig. 73 Band Edges (802.11n-HT20, 5745MHz)

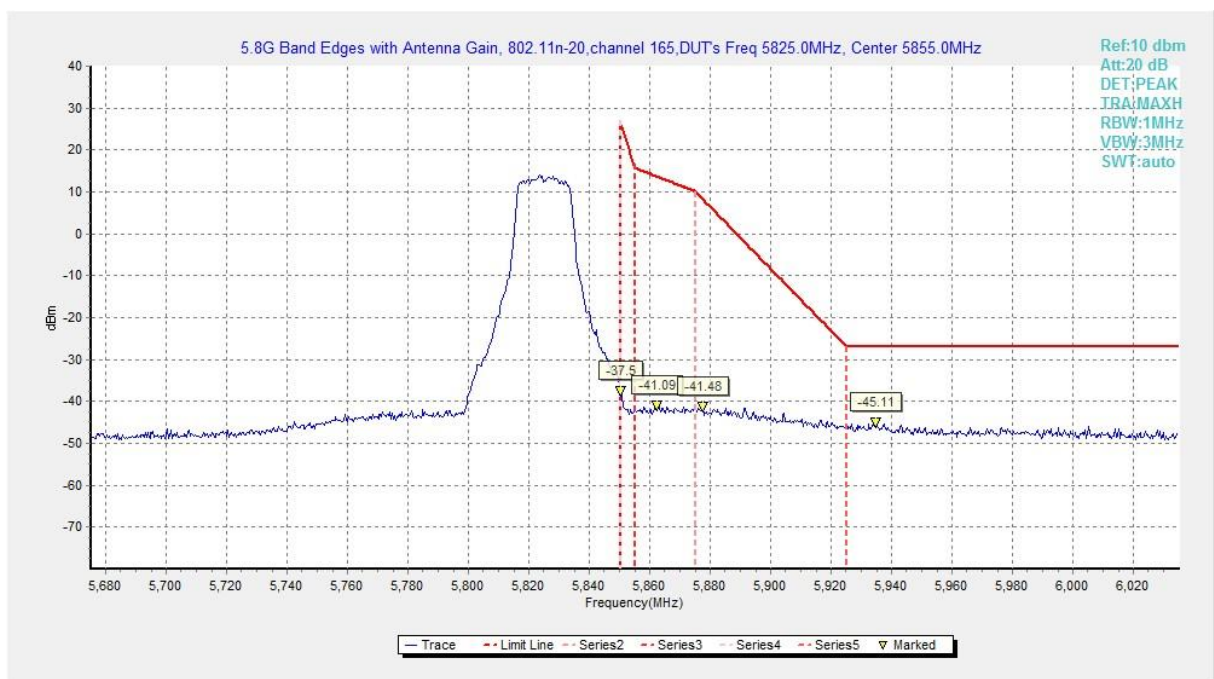


Fig. 74 Band Edges (802.11n-HT20, 5825MHz)

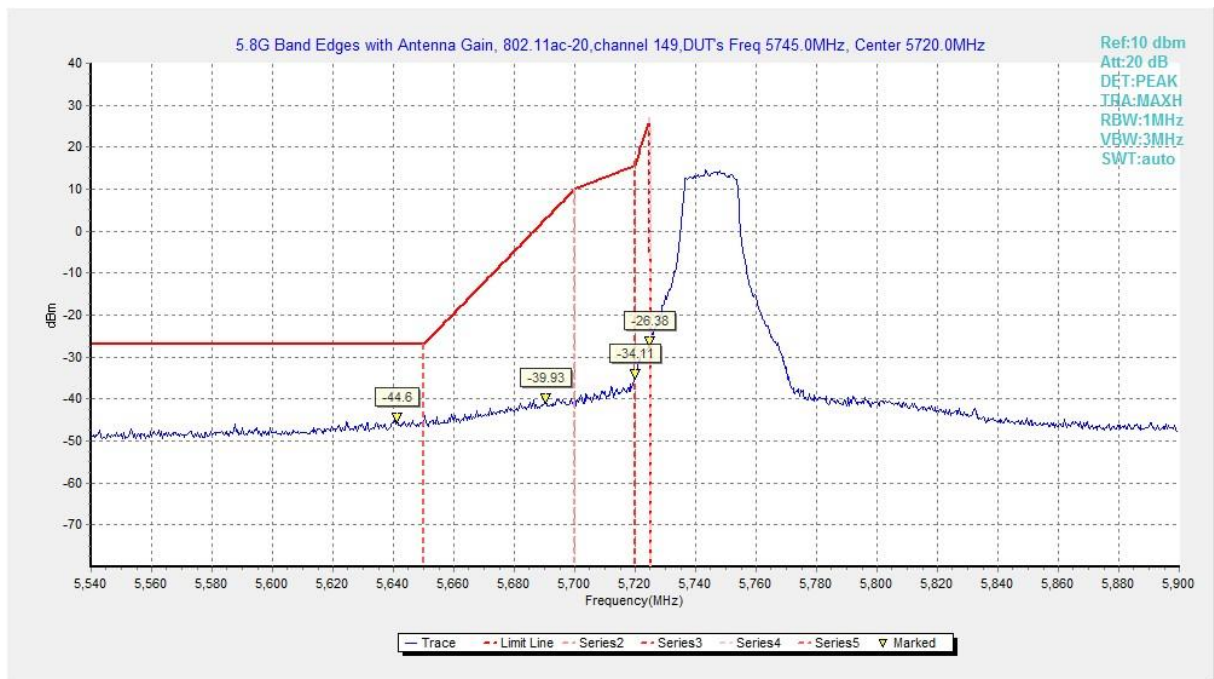


Fig. 75 Band Edges (802.11ac-HT20, 5745MHz)

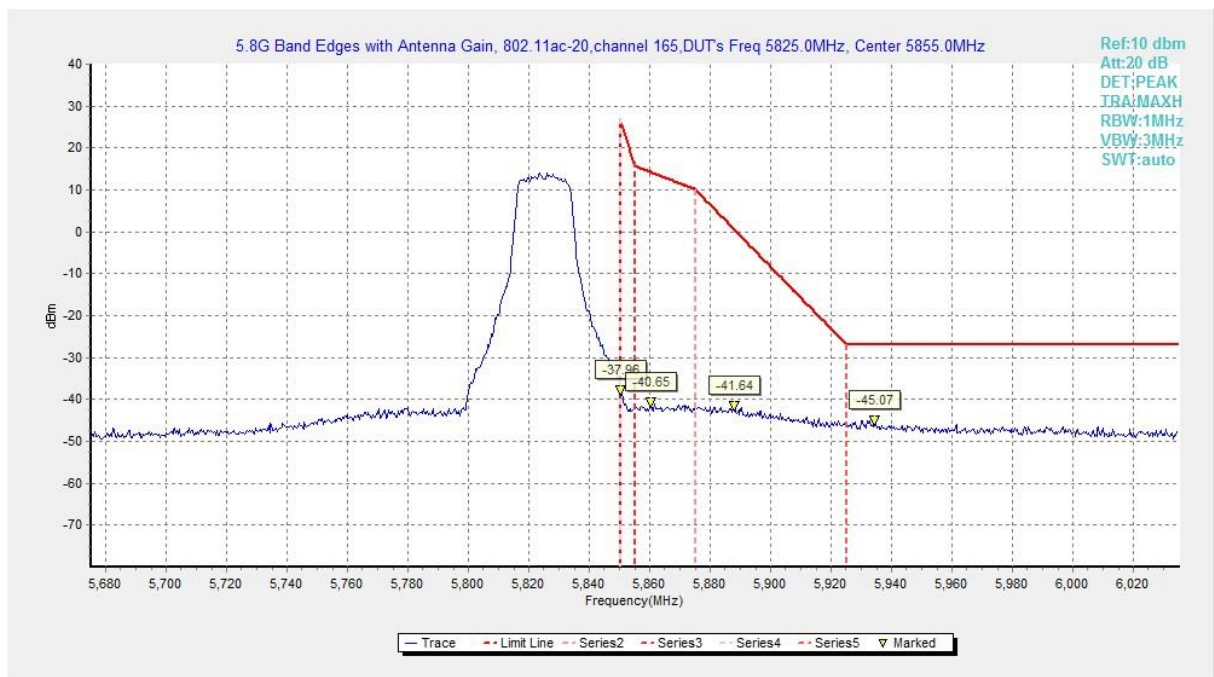


Fig. 76 Band Edges (802.11ac-HT20, 5825MHz)

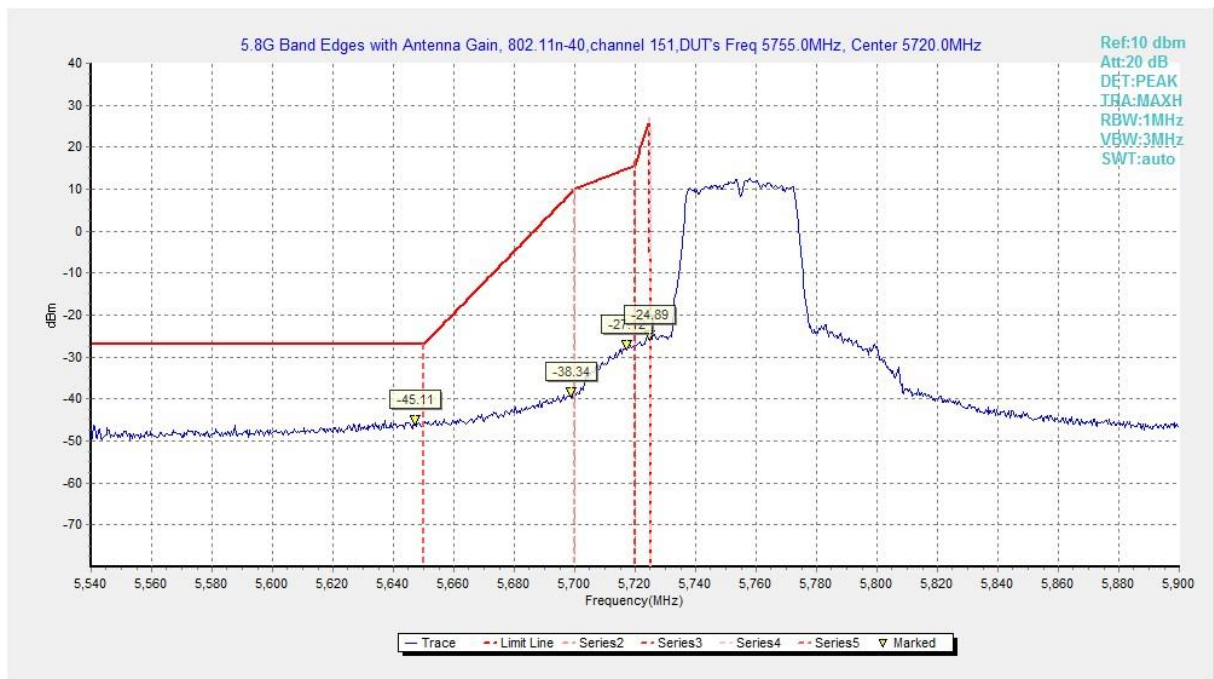


Fig. 77 Band Edges (802.11n-HT40, 5755MHz)

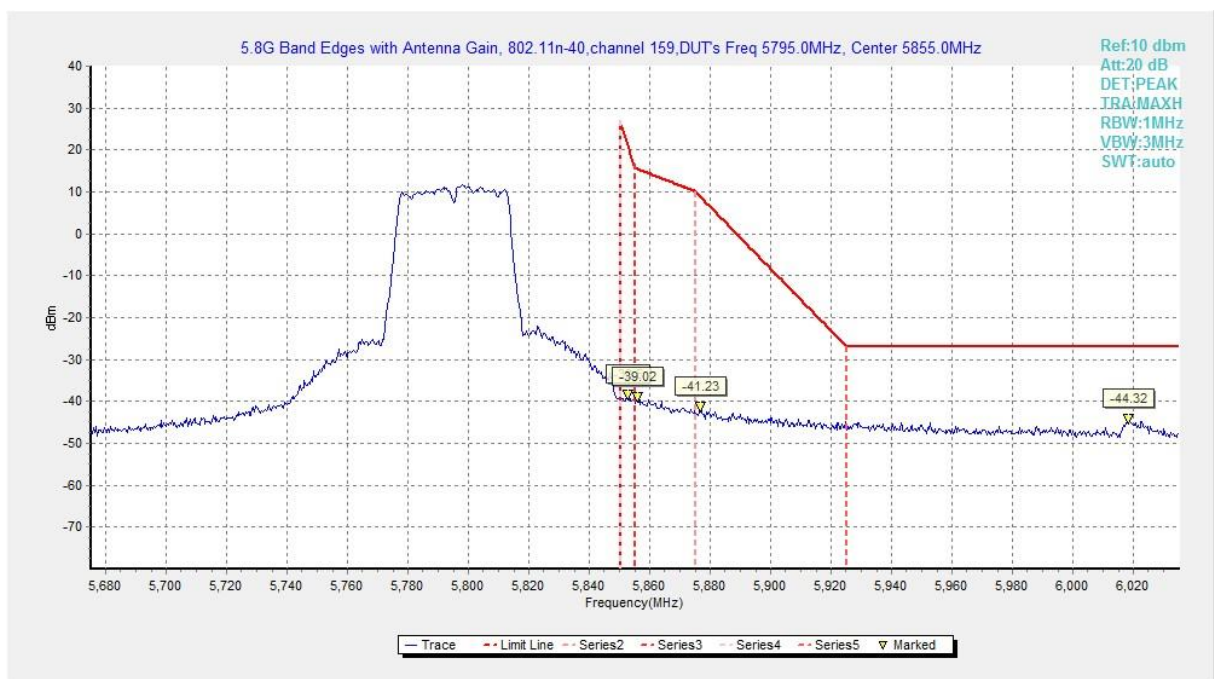


Fig. 78 Band Edges (802.11n-HT40, 5795MHz)



**Fig. 79 Band Edges (802.11ac-HT40, 5755MHz)**

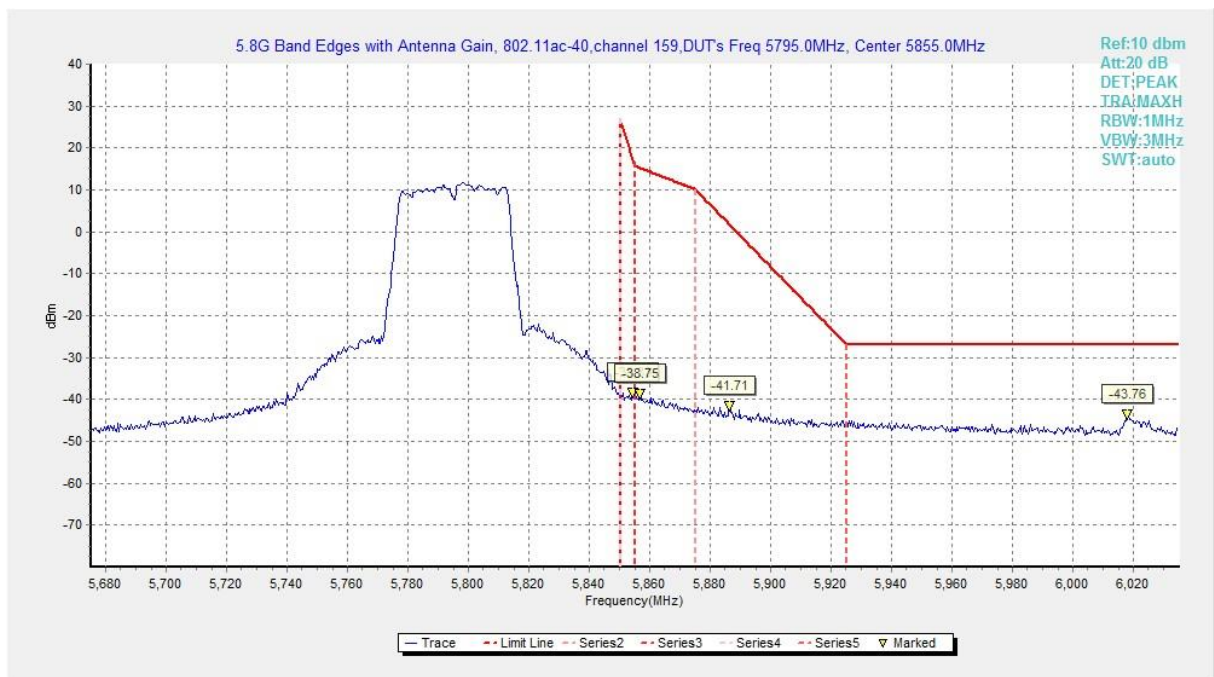


**Fig. 80 Band Edges (802.11ac-HT40, 5795MHz)**



Fig. 81 Band Edges (802.11ac-HT80, 5775MHz)



Fig. 82 Band Edges (802.11ac-HT80, 5775MHz)

## A6.2 Band Edges - Radiated

### Measurement Limit:

| Standard                  | Limit (dBm/MHz)                                |      |
|---------------------------|------------------------------------------------|------|
| FCC 47 CFR<br>Part 15.407 | at the band edge                               | 27   |
|                           | at 5 MHz above or below the band edge          | 15.6 |
|                           | at 25 MHz above or below the band edge         | 10   |
|                           | at 75 MHz or more above or below the band edge | -27  |
|                           | Note: increasing linearly from point to point. |      |

The measurement is made according to KDB 789033 D02

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

### Measurement Result:

#### Ant0+Ant1:

| Mode             | Channel  | Test Results | Conclusion |
|------------------|----------|--------------|------------|
| 802.11a          | 5745 MHz | Fig.83       | P          |
|                  | 5825 MHz | Fig.84       | P          |
| 802.11n<br>HT20  | 5745 MHz | Fig.85       | P          |
|                  | 5825 MHz | Fig.86       | P          |
| 802.11ac<br>HT20 | 5745 MHz | Fig.87       | P          |
|                  | 5825 MHz | Fig.88       | P          |
| 802.11n<br>HT40  | 5755 MHz | Fig.89       | P          |
|                  | 5795 MHz | Fig.90       | P          |
| 802.11ac<br>HT40 | 5755 MHz | Fig.91       | P          |
|                  | 5795 MHz | Fig.92       | P          |
| 802.11ac HT80    | 5775 MHz | Fig.93       | P          |

**Conclusion: PASS**

**Test graphs as below:**

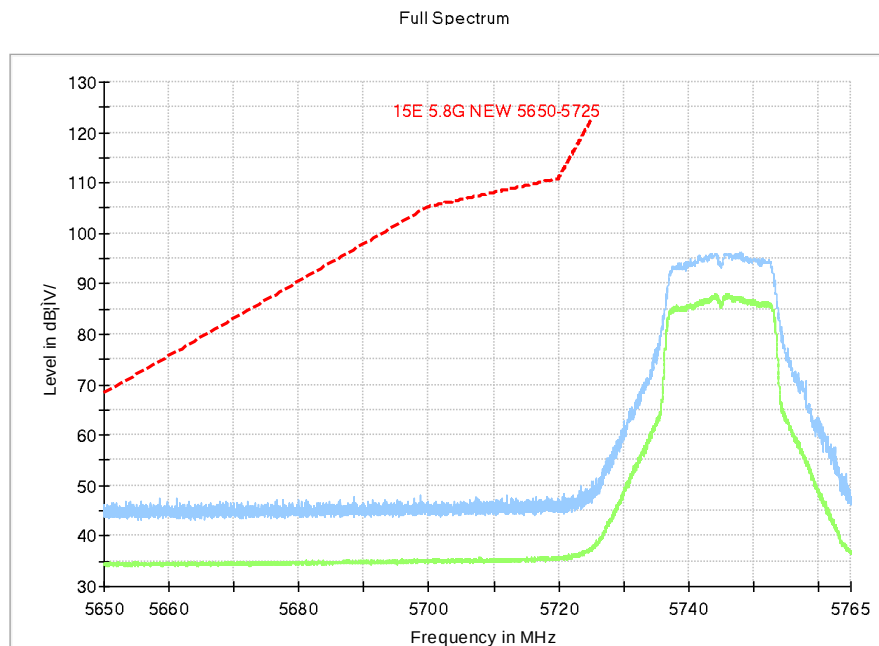


**Fig. 83 Band Edges (802.11a, 5745MHz)**

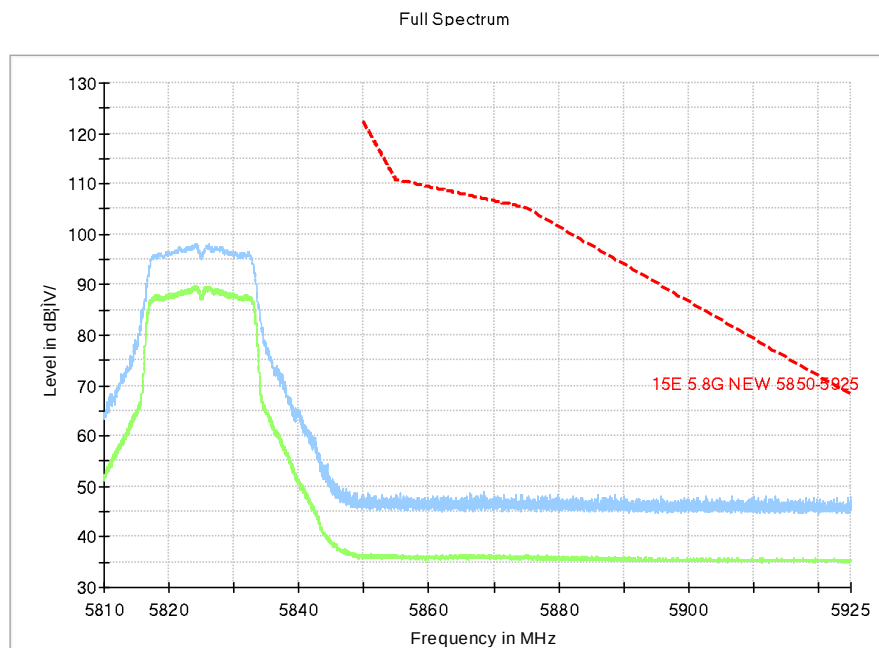


**Fig. 84 Band Edges (802.11a, 5825MHz)**

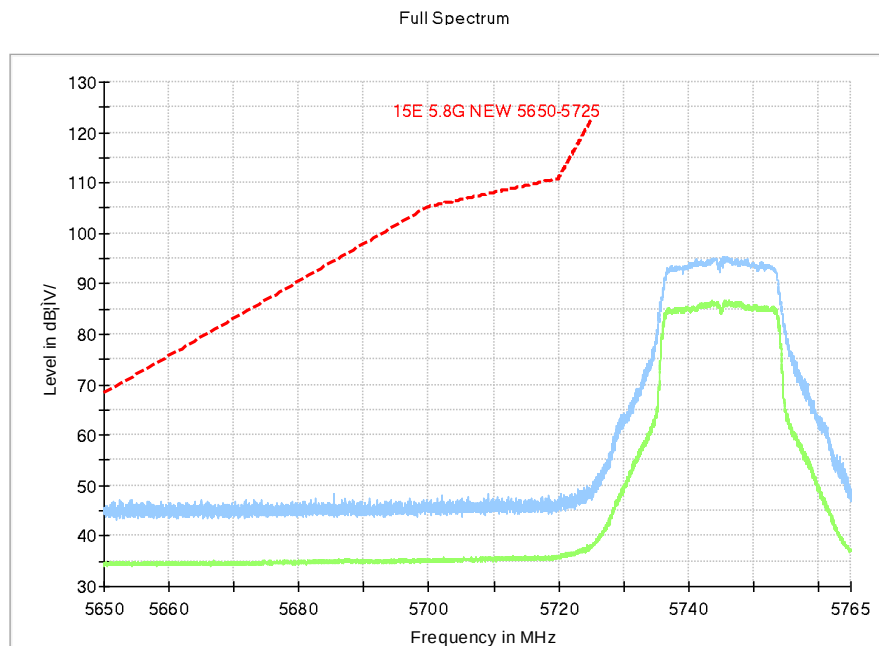


**Fig. 85 Band Edges (802.11n-HT20, 5745MHz)**

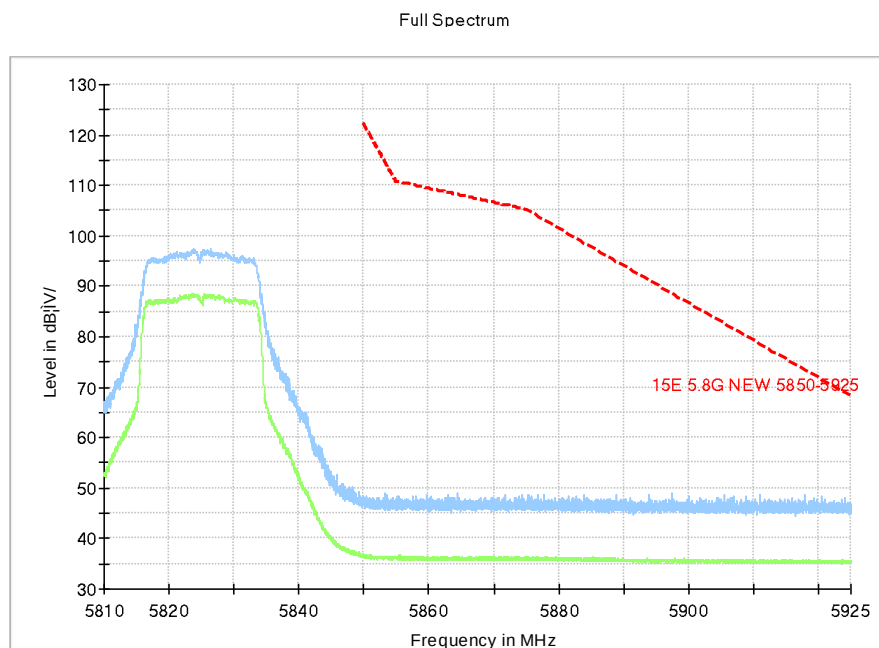


**Fig. 86 Band Edges (802.11n-HT20, 5825MHz)**

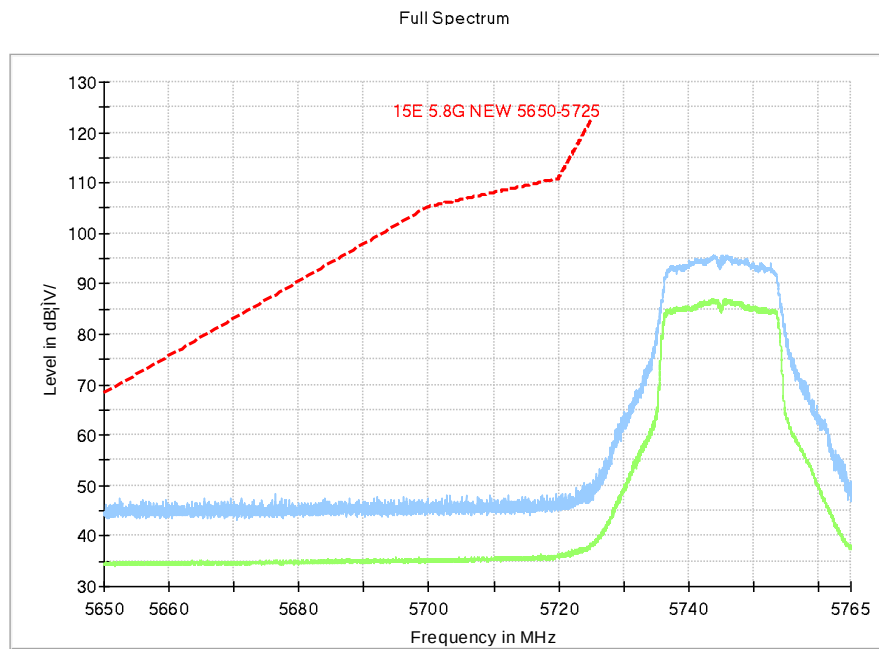


**Fig. 87 Band Edges (802.11ac-HT20, 5745MHz)**

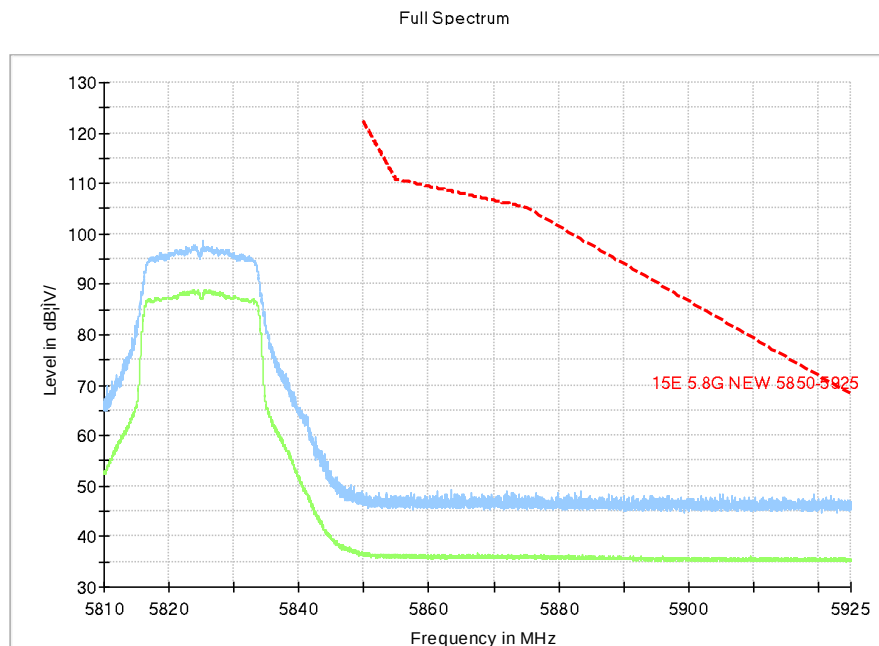


**Fig. 88 Band Edges (802.11ac-HT20, 5825MHz)**

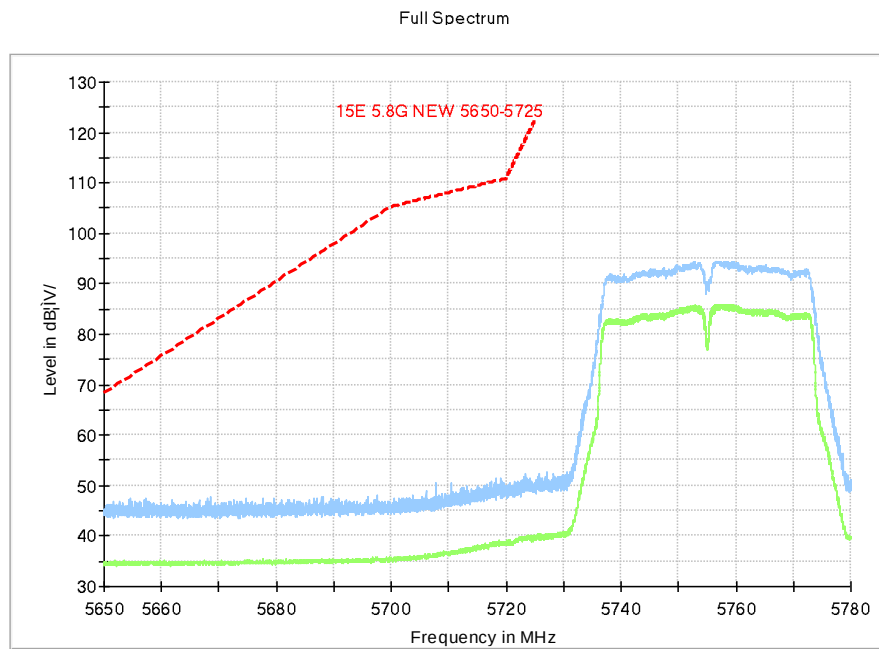


**Fig. 89 Band Edges (802.11n-HT40, 5755MHz)**

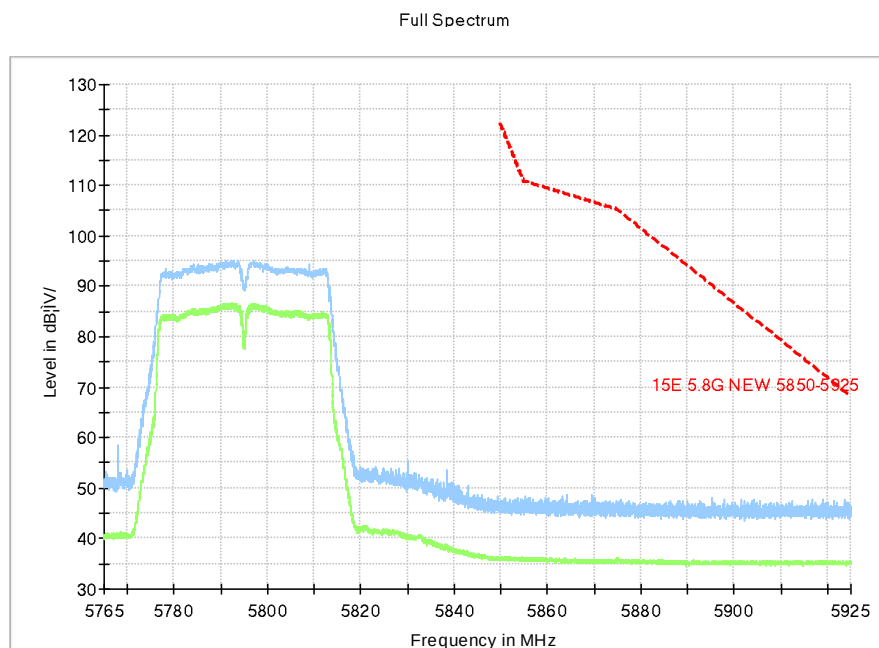


**Fig. 90 Band Edges (802.11n-HT40, 5795MHz)**

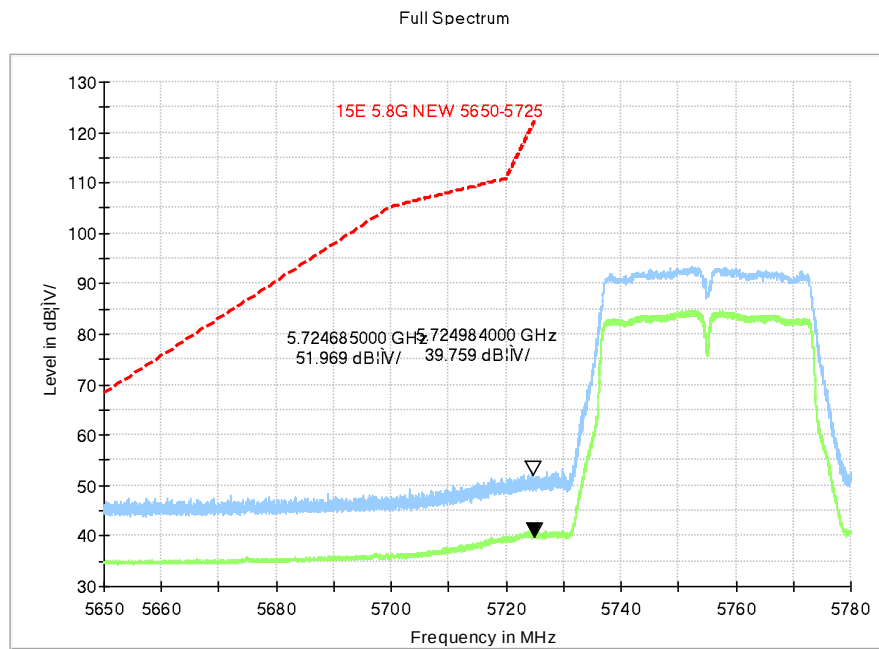


**Fig. 91 Band Edges (802.11ac-HT40, 5755MHz)**

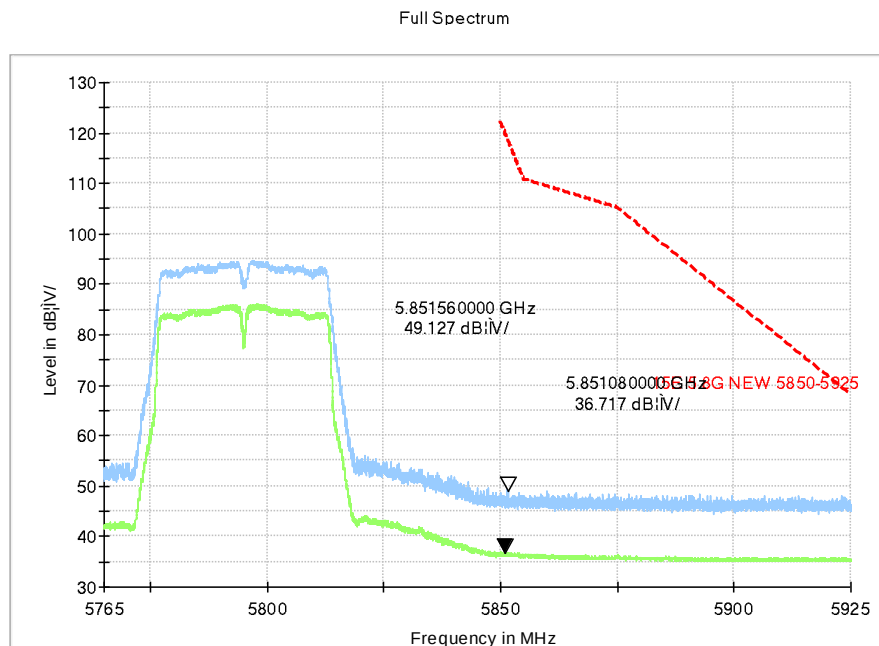


**Fig. 92 Band Edges (802.11ac-HT40, 5795MHz)**

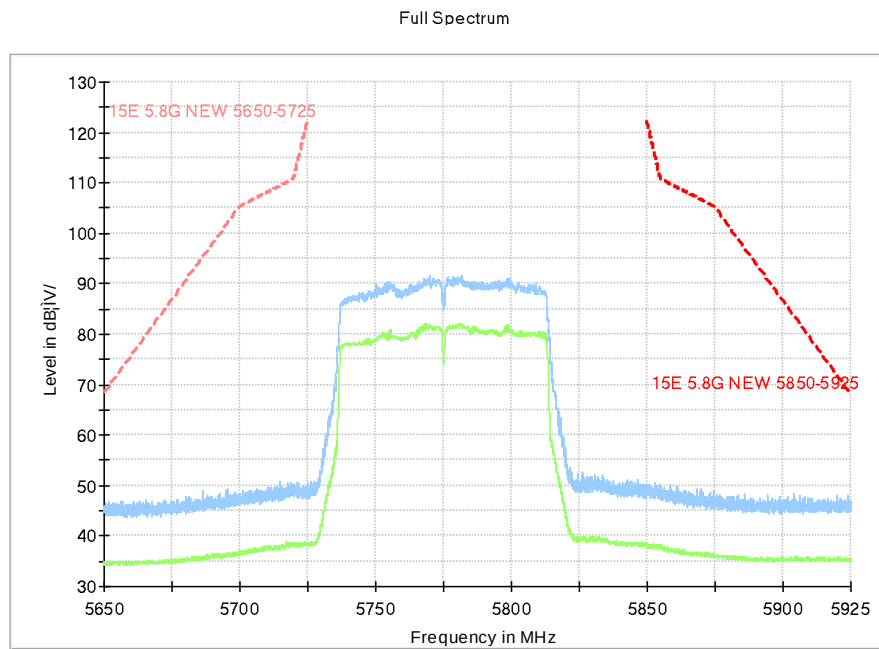


**Fig. 93 Band Edges (802.11ac-HT80, 5775MHz)**

## A.7. AC Powerline Conducted Emission

### Test Condition:

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 110         | 60             |

### Measurement uncertainty:

Expanded measurement uncertainty for this test item is  $U = 3.2\text{dB}$ ,  $k=2$ .

### Measurement Result and limit:

#### Ant0+Ant1:

WLAN (Quasi-peak Limit)

| Frequency range<br>(MHz) | Quasi-peak<br>Limit (dBμV) | Result (dBμV)    |                  | Conclusion |
|--------------------------|----------------------------|------------------|------------------|------------|
|                          |                            | With charger     |                  |            |
|                          |                            | 802.11a          | Idle             |            |
| 0.15 to 0.5              | 66 to 56                   | Fig.94<br>Fig.96 | Fig.95<br>Fig.97 | P          |
| 0.5 to 5                 | 56                         |                  |                  |            |
| 5 to 30                  | 60                         |                  |                  |            |

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

WLAN (Average Limit)

| Frequency range<br>(MHz) | Average Limit<br>(dBμV) | Result (dBμV)    |                  | Conclusion |
|--------------------------|-------------------------|------------------|------------------|------------|
|                          |                         | With charger     |                  |            |
|                          |                         | 802.11a          | Idle             |            |
| 0.15 to 0.5              | 56 to 46                | Fig.94<br>Fig.96 | Fig.95<br>Fig.97 | P          |
| 0.5 to 5                 | 46                      |                  |                  |            |
| 5 to 30                  | 50                      |                  |                  |            |

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

The measurement is made according to ANSI C63.10 .

**Conclusion: PASS**

Test graphs as below:

# Result for Set.11-Traffic:

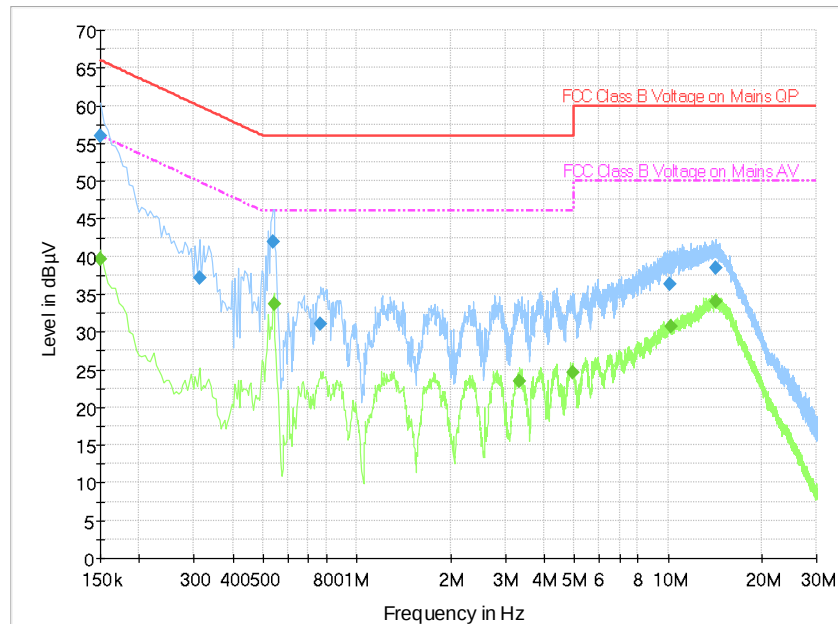


Fig. 94 AC Powerline Conducted Emission-802.11a

## Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|------------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 55.9             | 2000.0          | 9.000           | On     | L1   | 30.7       | 10.1        | 66.0         |         |
| 0.312000        | 37.1             | 2000.0          | 9.000           | On     | L1   | 19.8       | 22.8        | 59.9         |         |
| 0.537000        | 41.9             | 2000.0          | 9.000           | On     | L1   | 19.8       | 14.1        | 56.0         |         |
| 0.766500        | 31.0             | 2000.0          | 9.000           | On     | N    | 19.7       | 25.0        | 56.0         |         |
| 10.162500       | 36.3             | 2000.0          | 9.000           | On     | N    | 19.7       | 23.7        | 60.0         |         |
| 14.253000       | 38.5             | 2000.0          | 9.000           | On     | N    | 19.8       | 21.5        | 60.0         |         |

## Final Result 2

| Frequency (MHz) | Average (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 39.6           | 2000.0          | 9.000           | On     | L1   | 30.7       | 16.4        | 56.0         |         |
| 0.541500        | 33.6           | 2000.0          | 9.000           | On     | N    | 19.8       | 12.4        | 46.0         |         |
| 3.331500        | 23.4           | 2000.0          | 9.000           | On     | N    | 19.6       | 22.6        | 46.0         |         |
| 4.965000        | 24.6           | 2000.0          | 9.000           | On     | N    | 19.6       | 21.4        | 46.0         |         |
| 10.194000       | 30.7           | 2000.0          | 9.000           | On     | N    | 19.7       | 19.3        | 50.0         |         |
| 14.239500       | 34.0           | 2000.0          | 9.000           | On     | N    | 19.8       | 16.0        | 50.0         |         |

### Result for Set.11-Idle:

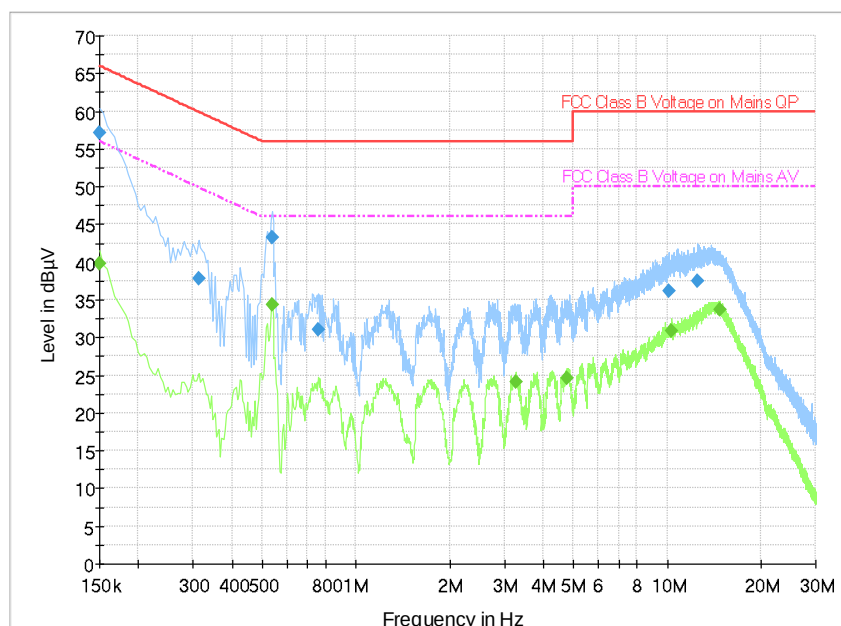


Fig. 95 AC Powerline Conducted Emission-Idle

### Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|------------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 57.2             | 2000.0          | 9.000           | On     | N    | 30.6       | 8.8         | 66.0         |         |
| 0.312000        | 37.8             | 2000.0          | 9.000           | On     | N    | 19.8       | 22.1        | 59.9         |         |
| 0.537000        | 43.2             | 2000.0          | 9.000           | On     | N    | 19.8       | 12.8        | 56.0         |         |
| 0.757500        | 31.0             | 2000.0          | 9.000           | On     | L1   | 19.8       | 25.0        | 56.0         |         |
| 10.095000       | 36.2             | 2000.0          | 9.000           | On     | N    | 19.7       | 23.8        | 60.0         |         |
| 12.475500       | 37.6             | 2000.0          | 9.000           | On     | N    | 19.8       | 22.4        | 60.0         |         |

### Final Result 2

| Frequency (MHz) | Average (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 39.8           | 2000.0          | 9.000           | On     | N    | 30.6       | 16.2        | 56.0         |         |
| 0.537000        | 34.4           | 2000.0          | 9.000           | On     | N    | 19.8       | 11.6        | 46.0         |         |
| 3.273000        | 24.1           | 2000.0          | 9.000           | On     | N    | 19.6       | 21.9        | 46.0         |         |
| 4.758000        | 24.6           | 2000.0          | 9.000           | On     | N    | 19.6       | 21.4        | 46.0         |         |
| 10.365000       | 30.9           | 2000.0          | 9.000           | On     | N    | 19.7       | 19.1        | 50.0         |         |
| 14.770500       | 33.8           | 2000.0          | 9.000           | On     | N    | 19.8       | 16.2        | 50.0         |         |

## Result for Set.12-Traffic:

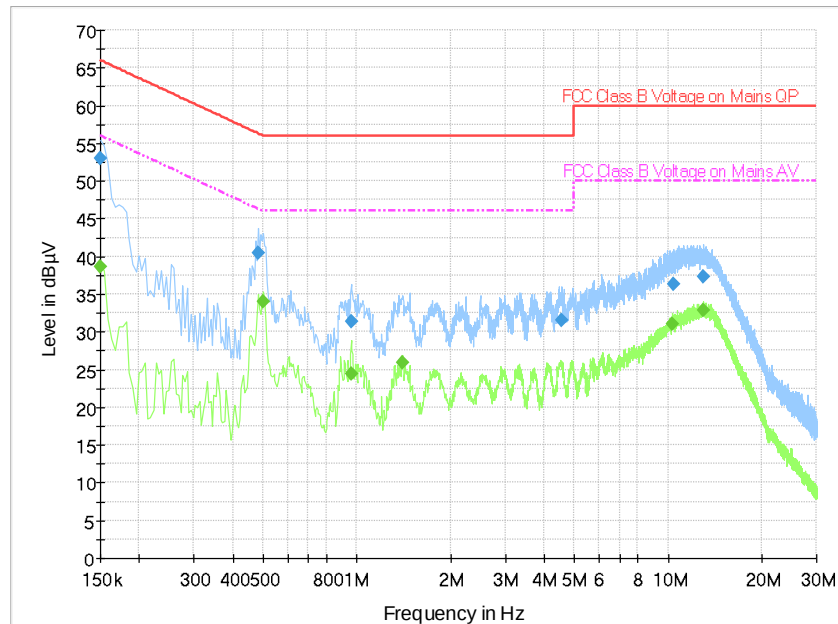


Fig. 96 AC Powerline Conducted Emission-802.11a

## Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|------------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 52.9             | 2000.0          | 9.000           | On     | L1   | 30.7       | 13.1        | 66.0         |         |
| 0.483000        | 40.4             | 2000.0          | 9.000           | On     | N    | 19.8       | 15.9        | 56.3         |         |
| 0.960000        | 31.3             | 2000.0          | 9.000           | On     | N    | 19.7       | 24.7        | 56.0         |         |
| 4.551000        | 31.5             | 2000.0          | 9.000           | On     | N    | 19.6       | 24.5        | 56.0         |         |
| 10.387500       | 36.3             | 2000.0          | 9.000           | On     | N    | 19.7       | 23.7        | 60.0         |         |
| 13.042500       | 37.3             | 2000.0          | 9.000           | On     | N    | 19.8       | 22.7        | 60.0         |         |

## Final Result 2

| Frequency (MHz) | Average (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 38.6           | 2000.0          | 9.000           | On     | N    | 30.6       | 17.4        | 56.0         |         |
| 0.501000        | 34.1           | 2000.0          | 9.000           | On     | N    | 19.8       | 11.9        | 46.0         |         |
| 0.960000        | 24.4           | 2000.0          | 9.000           | On     | N    | 19.7       | 21.6        | 46.0         |         |
| 1.401000        | 25.9           | 2000.0          | 9.000           | On     | N    | 19.6       | 20.1        | 46.0         |         |
| 10.365000       | 31.0           | 2000.0          | 9.000           | On     | N    | 19.7       | 19.0        | 50.0         |         |
| 12.939000       | 32.8           | 2000.0          | 9.000           | On     | N    | 19.8       | 17.2        | 50.0         |         |

### Result for Set.12-Idle:

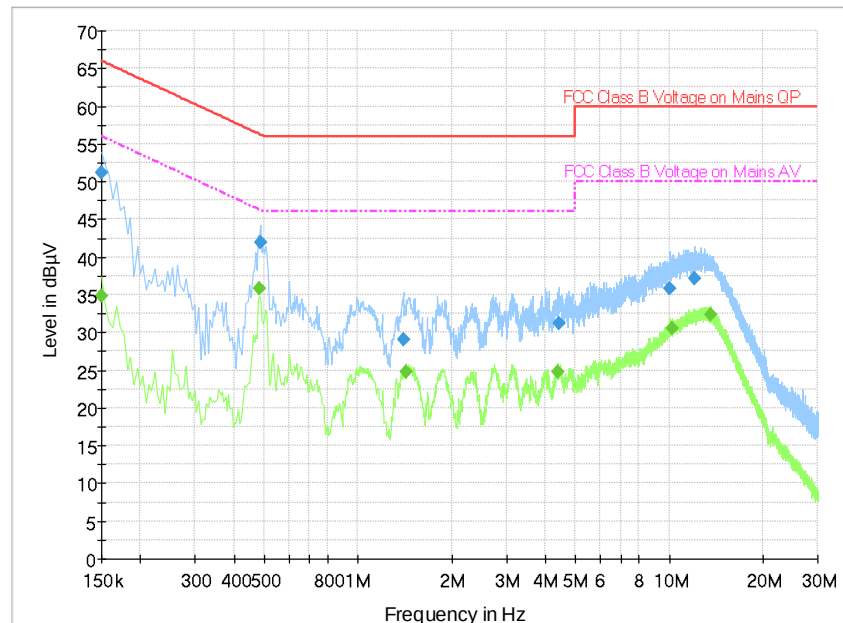


Fig. 97 AC Powerline Conducted Emission-Idle

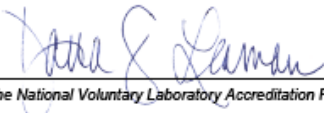
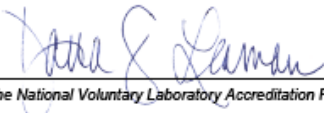
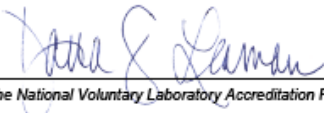
### Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|------------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 51.1             | 2000.0          | 9.000           | On     | L1   | 30.7       | 14.9        | 66.0         |         |
| 0.487500        | 41.9             | 2000.0          | 9.000           | On     | N    | 19.8       | 14.3        | 56.2         |         |
| 1.396500        | 29.0             | 2000.0          | 9.000           | On     | L1   | 19.6       | 27.0        | 56.0         |         |
| 4.425000        | 31.2             | 2000.0          | 9.000           | On     | N    | 19.6       | 24.8        | 56.0         |         |
| 10.086000       | 35.8             | 2000.0          | 9.000           | On     | N    | 19.7       | 24.2        | 60.0         |         |
| 12.039000       | 37.1             | 2000.0          | 9.000           | On     | N    | 19.8       | 22.9        | 60.0         |         |

### Final Result 2

| Frequency (MHz) | Average (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) | Comment |
|-----------------|----------------|-----------------|-----------------|--------|------|------------|-------------|--------------|---------|
| 0.150000        | 34.8           | 2000.0          | 9.000           | On     | L1   | 30.7       | 21.2        | 56.0         |         |
| 0.483000        | 35.8           | 2000.0          | 9.000           | On     | N    | 19.8       | 10.4        | 46.3         |         |
| 1.432500        | 24.7           | 2000.0          | 9.000           | On     | N    | 19.6       | 21.3        | 46.0         |         |
| 4.402500        | 24.8           | 2000.0          | 9.000           | On     | N    | 19.6       | 21.2        | 46.0         |         |
| 10.221000       | 30.6           | 2000.0          | 9.000           | On     | N    | 19.7       | 19.4        | 50.0         |         |
| 13.542000       | 32.4           | 2000.0          | 9.000           | On     | N    | 19.8       | 17.6        | 50.0         |         |

## ANNEX B: Accreditation Certificate

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |                                                                                                                                                                    |                                                                                     |                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>United States Department of Commerce<br/>National Institute of Standards and Technology</p> <p><b>NVLAP</b><sup>®</sup></p> <hr/> <p><b>Certificate of Accreditation to ISO/IEC 17025:2005</b></p> <hr/> <p>NVLAP LAB CODE: 600118-0</p> <p><b>Telecommunication Technology Labs, CAICT</b><br/>Beijing<br/>China</p> <p><i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services,<br/>listed on the Scope of Accreditation, for:</i></p> <p><b>Electromagnetic Compatibility &amp; Telecommunications</b></p> <p><i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.<br/>This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality<br/>management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).</i></p> <table><tr><td><p>2019-09-26 through 2020-09-30<br/><i>Effective Dates</i></p></td><td></td><td><p><br/><i>For the National Voluntary Laboratory Accreditation Program</i></p></td></tr></table> |                                                                                     | <p>2019-09-26 through 2020-09-30<br/><i>Effective Dates</i></p>                                                                                                    |  | <p><br/><i>For the National Voluntary Laboratory Accreditation Program</i></p> |
| <p>2019-09-26 through 2020-09-30<br/><i>Effective Dates</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <p><br/><i>For the National Voluntary Laboratory Accreditation Program</i></p> |                                                                                     |                                                                                                                                                                    |

\*\*\* END OF REPORT BODY \*\*\*