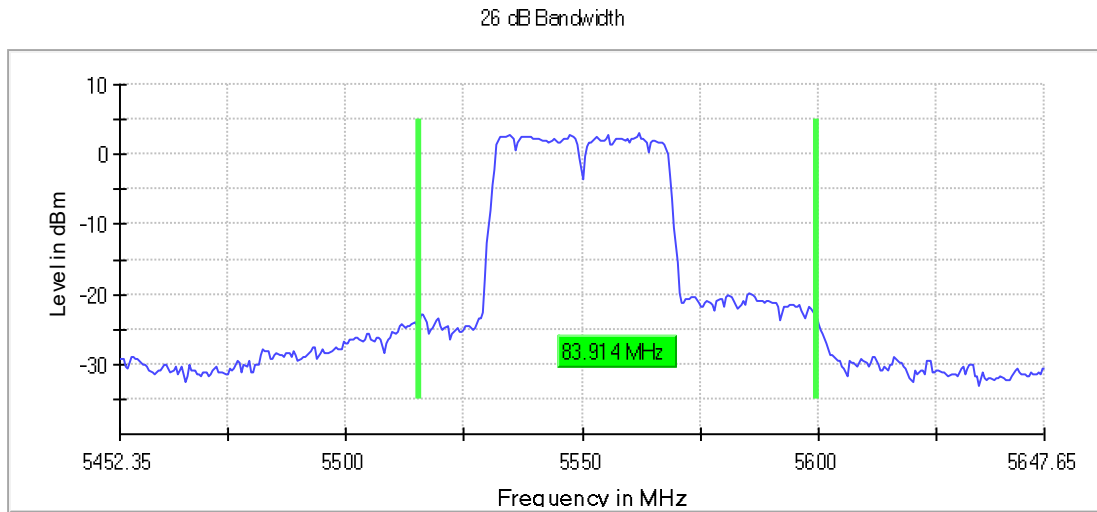
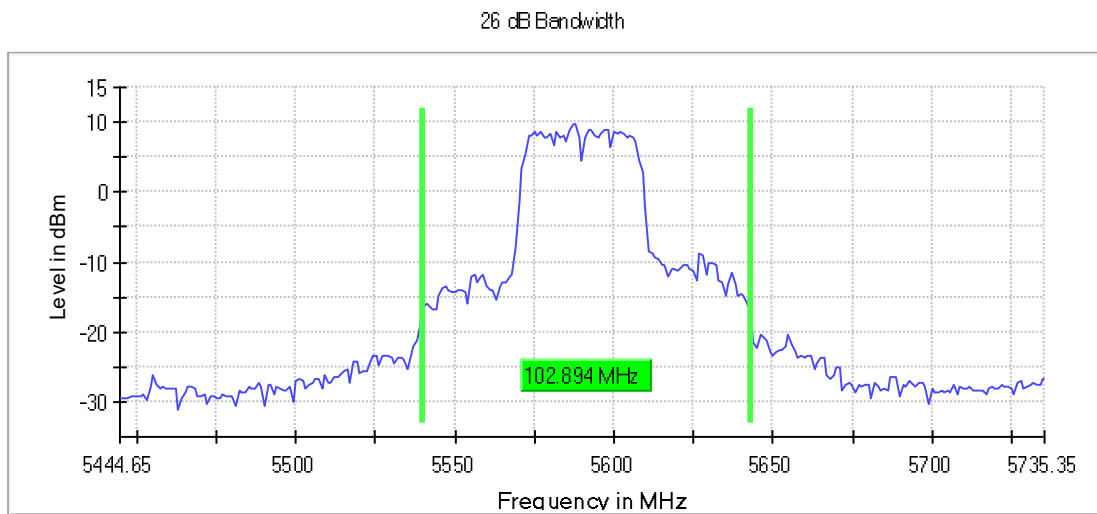
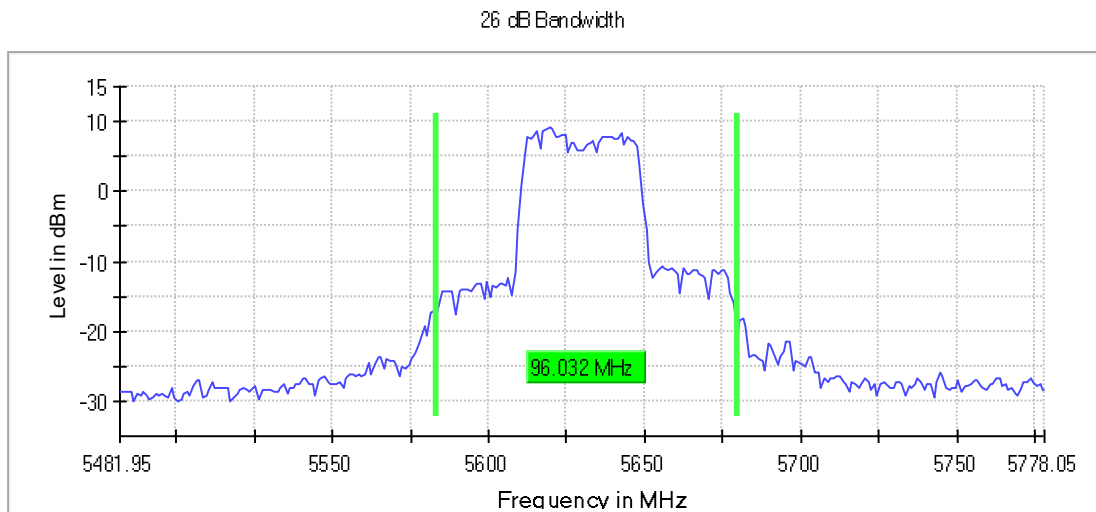




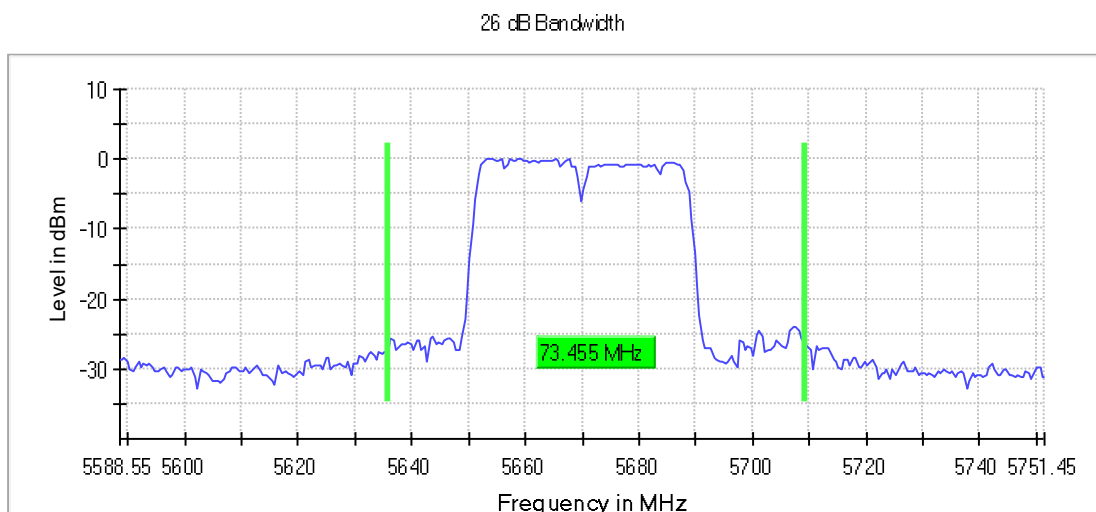
Graph 124: 26 dB Emissions Bandwidth Transmitting at 5550 MHz



Graph 125: 26 dB Emissions Bandwidth Transmitting at 5590 MHz



Graph 126: 26 dB Emissions Bandwidth Transmitting at 5630 MHz



Graph 127: 26 dB Emissions Bandwidth Transmitting at 5670 MHz

6.3.3.2 §15.407(a) Power Limits: Maximum Conducted Output Power (UNII 2)

Maximum conducted power limits for the UNII-2 band are adjusted based on the isotropic antenna gain and measured 26 dB bandwidth to a maximum limit of 24dBm. Transmitters exceeding 27 dBm must employ a transmit power control (TCP) mechanism.

Transmitting Frequency (MHz)	Measured 26 dB BW (MHz)	11 dBm + 10 log EWB (dBm)	Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
5270	86.0		3.3	6	0	24.0	24.0
5310	42.0		3.3	6	0	24.0	24.0

Transmitting Frequency (MHz)	Measured 26 dB BW (MHz)	11 dBm + 10 log EWB (dBm)	Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
5510	42.6	30.3	3.3	6	0	24.0	24.0
5550	83.9	27.2	3.3	6	0	24.0	24.0
5590	102.9	27.3	3.3	6	0	24.0	24.0
5630	96.0	30.2	3.3	6	0	24.0	24.0
5670	73.5	31.1	3.3	6	0	24.0	24.0

Table 18: UNII-2 maximum conducted power limits based on antenna gain and measured 26 dB emissions bandwidth

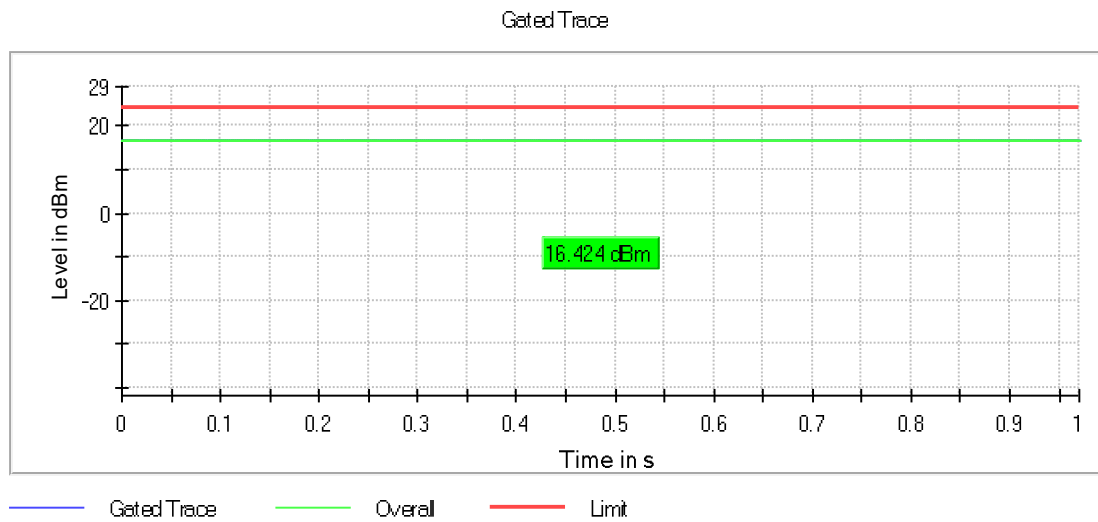
Power was measured for the low, middle, and high channel at the maximum power level possible (20) using KDB 789033 D02 method PM-G and a gated power meter which does not require an average correction factor.

UNII-2 Conducted Power Measurement

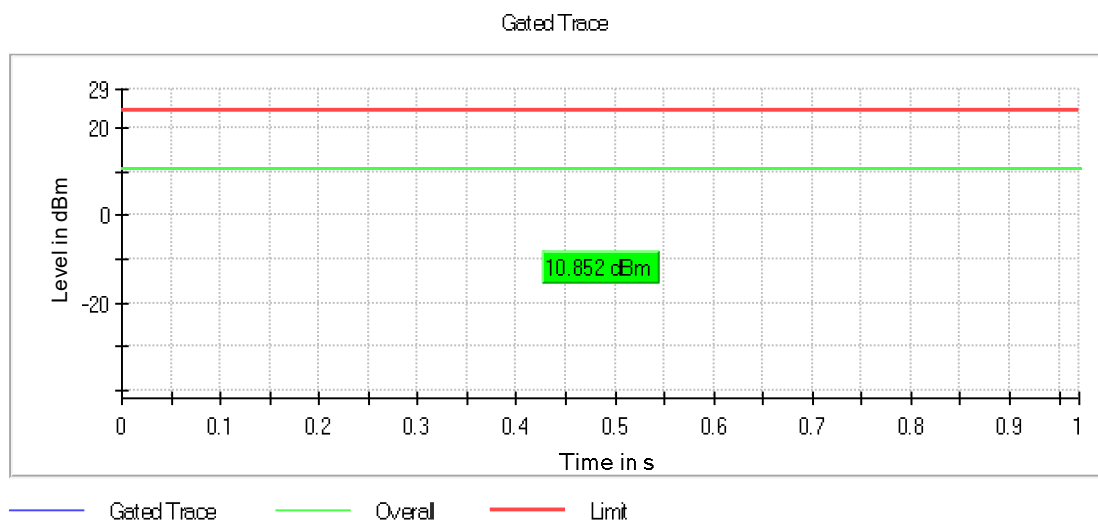
Frequency (MHz)	Conducted Power (dBm)	Conducted Power Limit (dBm)	Margin (dB)	TCP Required
5270	16.4	24.0	-7.6	No
5310	10.9	24.0	-13.1	No
5510	9.1	24.0	-14.9	No
5550	13.3	24.0	-10.7	No
5590	15.5	24.0	-8.5	No
5630	15.5	24.0	-8.5	No
5670	11.4	24.0	-12.6	No

Result

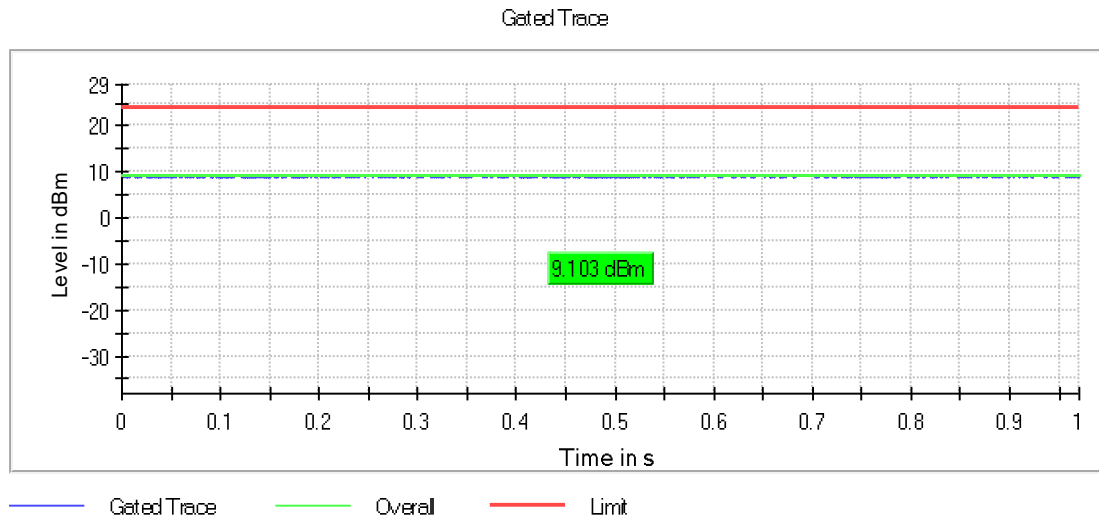
In the configurations tested the EUT complied with the requirements of the specification with a margin of 7.6 dB and does not require a transmit power control mechanism.



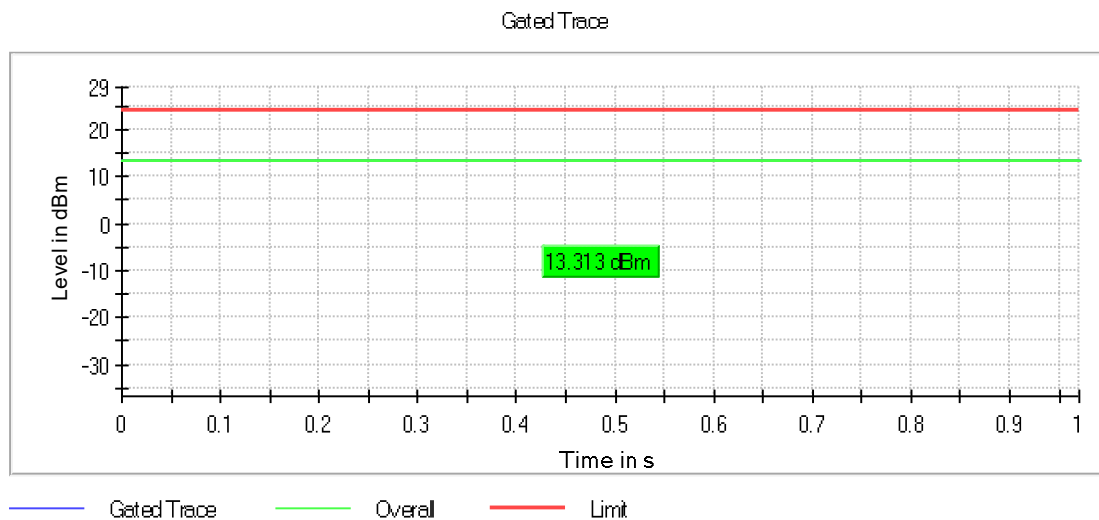
Graph 128: PM-G Power Transmitting at 5270 MHz (Power Level 18)



Graph 129: PM-G Power Transmitting at 5310 MHz (Power Level 12)



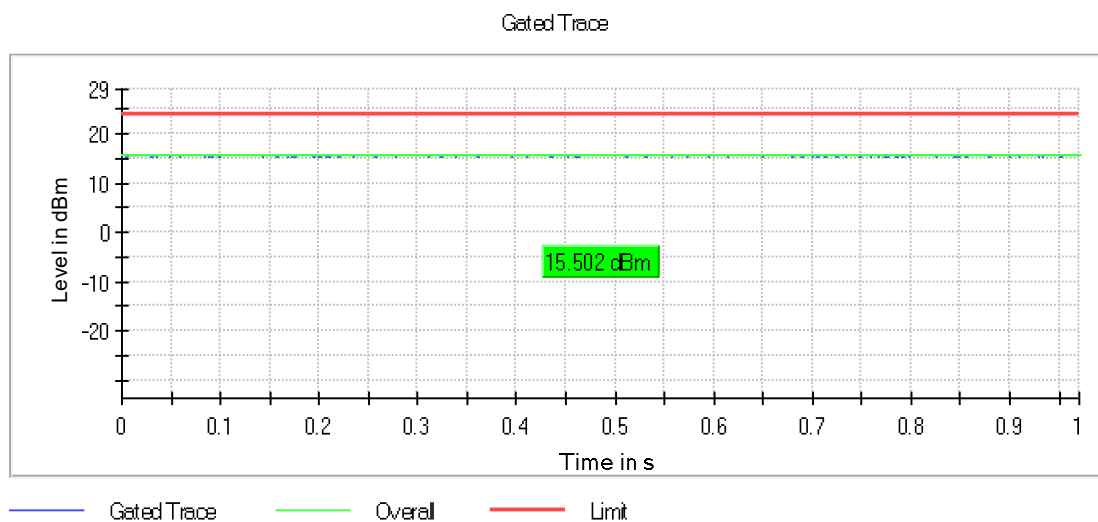
Graph 130: PM-G Power Transmitting at 5510 MHz (Power Level 12)



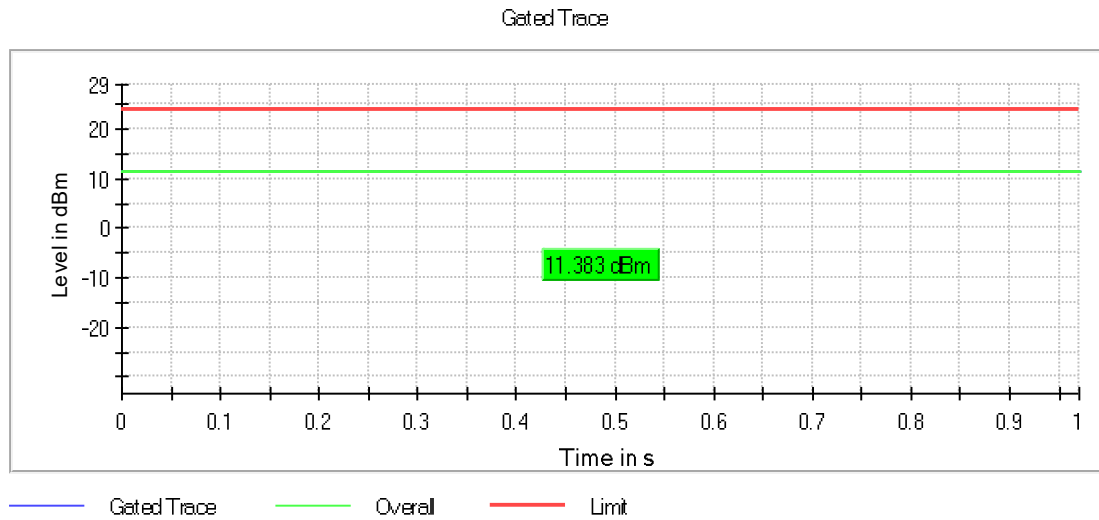
Graph 131: PM-G Power Transmitting at 5550 MHz (Power Level 17)



Graph 132: PM-G Power Transmitting at 5590 MHz (Power Level 20)



Graph 133: PM-G Power Transmitting at 5630 MHz (Power Level 20)



Graph 134: PM-G Power Transmitting at 5670 MHz (Power Level 15)

6.3.3.3 §15.407(a) Power Limits: Maximum Power Spectral Density (UNII 2)

The following tables show the adjusted power spectral density limits.

UNII-2 Power Spectral Density Limits

Power spectral density limits for the UNII-2 band are adjusted based on isotropic antenna gain.

Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
3.3	6	0	11	11

Table 19: UNII-2 Power spectral density limits based upon antenna gain

PSD was measured at the intended power set level per channel using Method SA-1 Alternative. See Section 6.2.3 for measurement graphics.

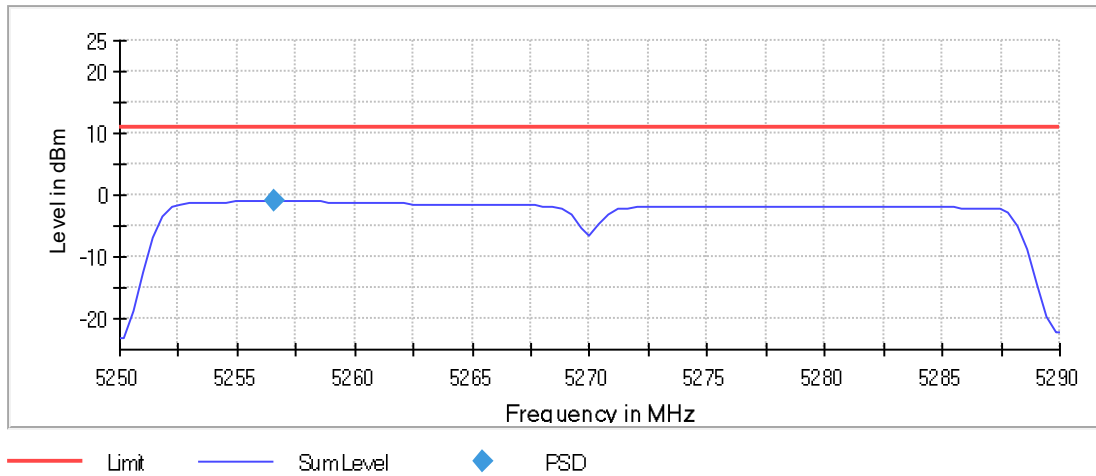
UNII-2 Power Spectral Density Measurements

Frequency (MHz)	Conducted Power Density (dBm/MHz)	Conducted Power Density Limit (dBm/MHz)	Margin (dB)
5270	-1.0	11	-12.0
5310	-6.7	11	-17.7
5510	-8.3	11	-19.3
5550	-4.3	11	-15.3
5590	-2.3	11	-13.3
5630	-2.3	11	-13.3
5670	-6.2	11	-17.2

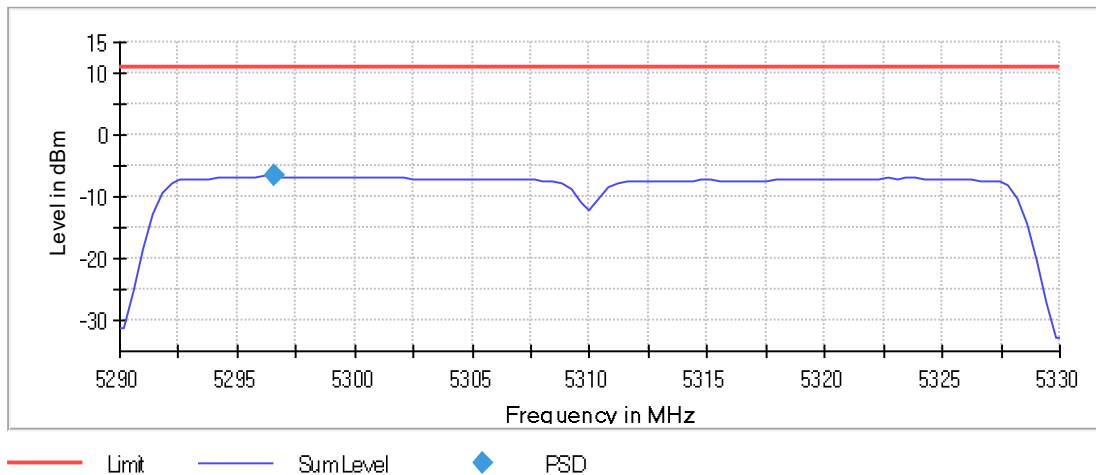
Result: UNII-2

In the configurations tested the EUT complied with the requirements of the specification with a margin of 12.0 dB.

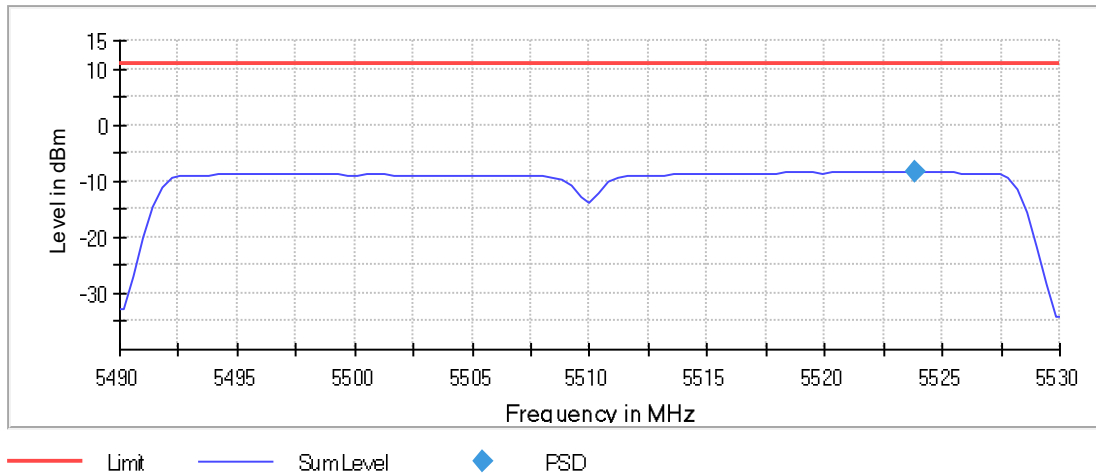
Power Spectral Density


Graph 135: PSD Transmitting at 5270 MHz (Power Level 18)

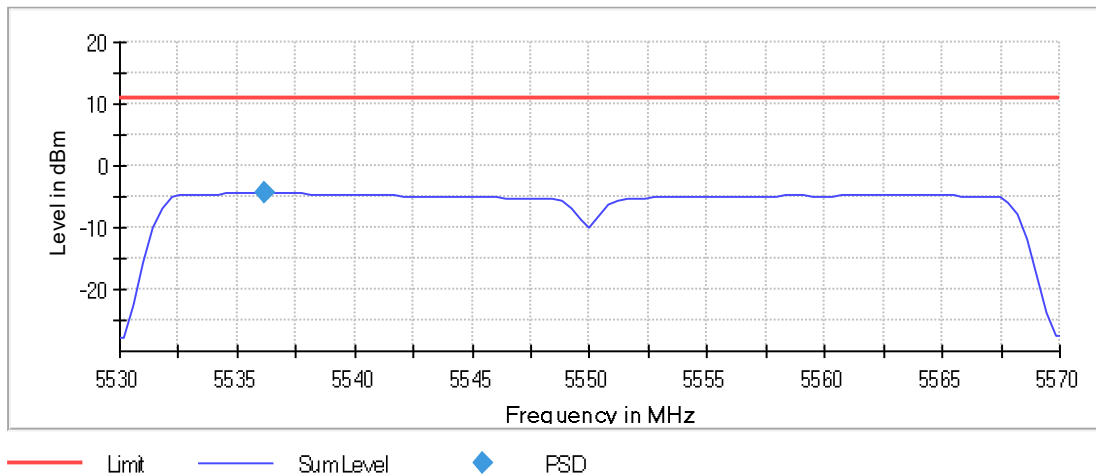
Power Spectral Density


Graph 136: PSD Transmitting at 5310 MHz (Power Level 12)

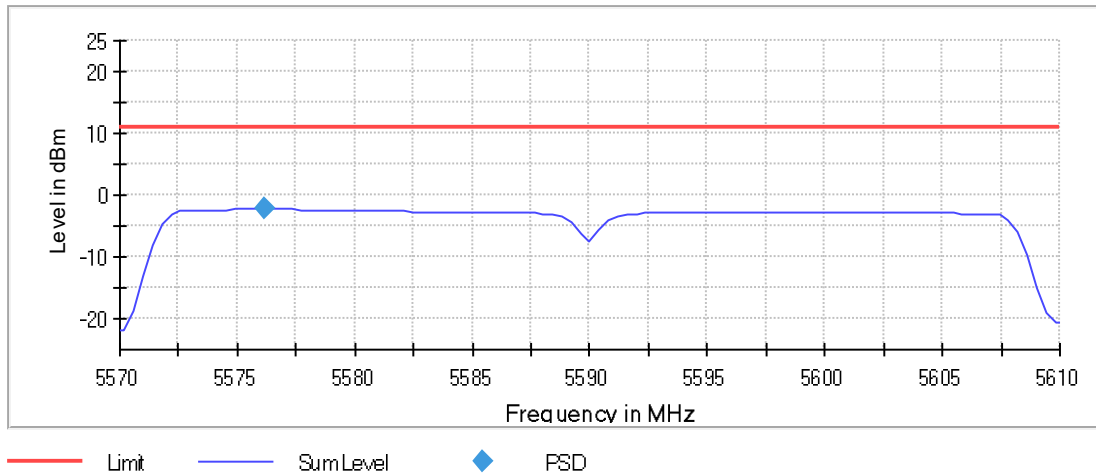
Power Spectral Density


Graph 137: PSD Transmitting at 5510 MHz (Power Level 12)

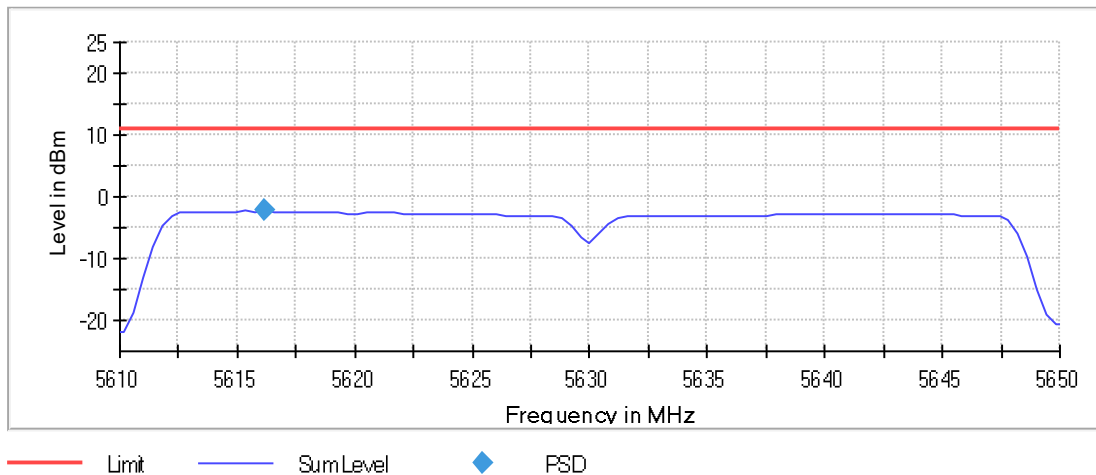
Power Spectral Density

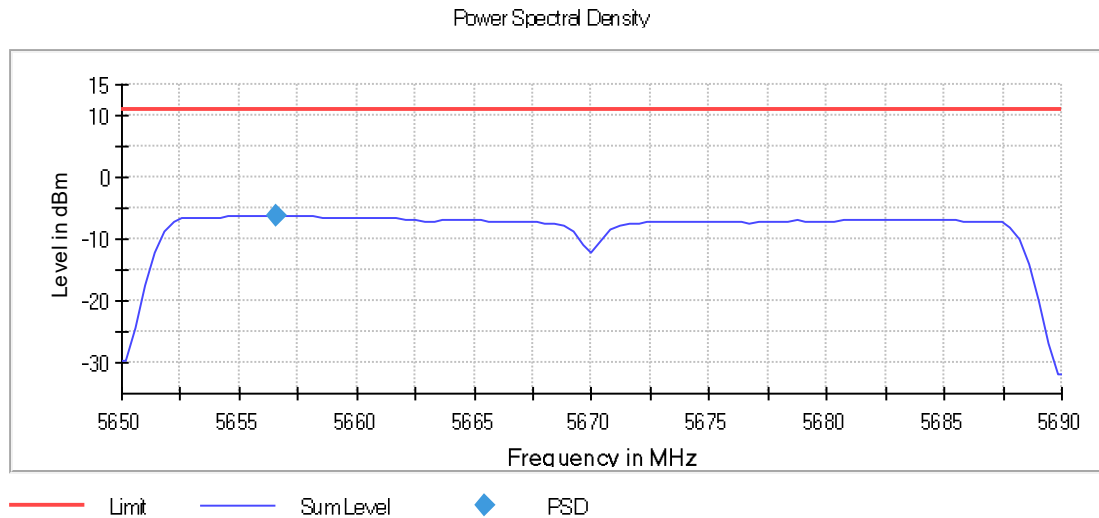

Graph 138: PSD Transmitting at 5550 MHz (Power Level 17)

Power Spectral Density


Graph 139: PSD Transmitting at 5590 MHz (Power Level 20)

Power Spectral Density


Graph 140: PSD Transmitting at 5630 MHz (Power Level 20)



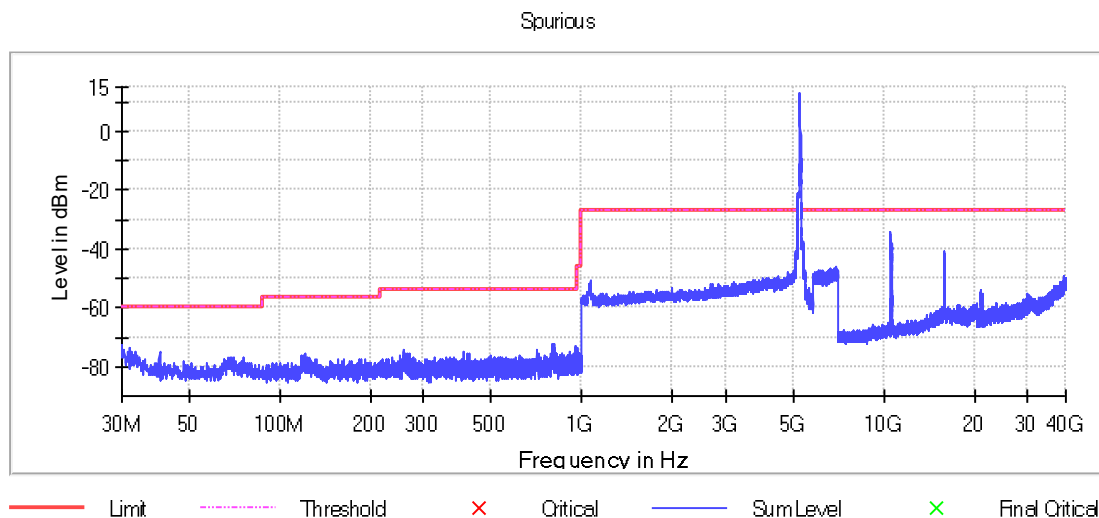
Graph 141: PSD Transmitting at 5670 MHz (Power Level 15)

6.3.3.4 §15.407(b) and §15.207 Undesirable Emissions – Restricted Bands (UNII 2)

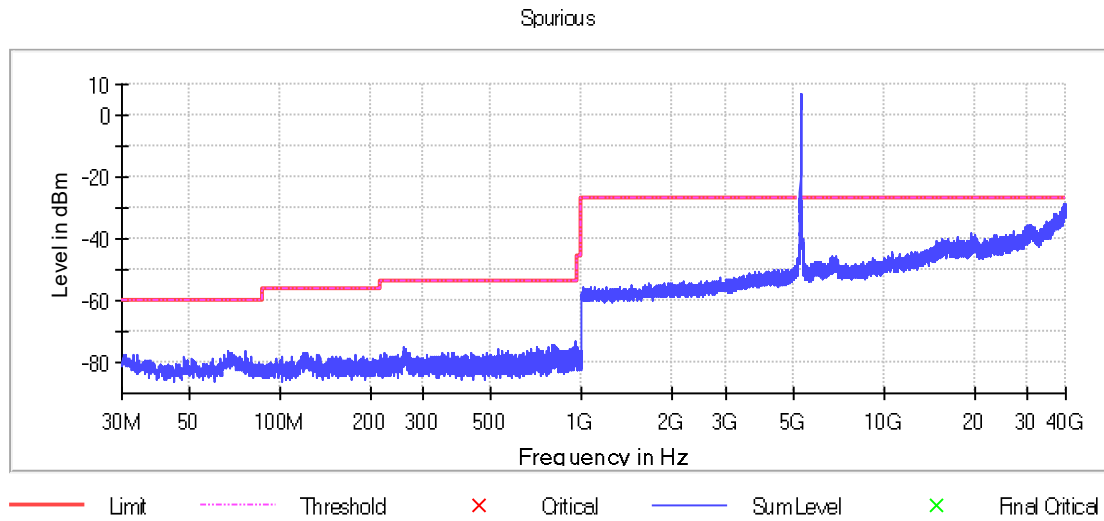
Undesirable radiated emissions in the restricted bands above 1GHz were tested radiated at the low, middle, and high channels at the maximum possible power setting (20). Radiated emissions were measured on both T5IW8 and T5IW11.

Undesirable Emissions were also measured as conducted at the Antenna Port for each channel with stepped powers and corrected using the highest gain antenna (3.3dBi) according to C63.10, sections 11.12.2.2 and 11.12.2.6. Frequencies below 1000MHz were tested for compliance with 15.209 limits with 100kHz RBW at the intended power set level per channel shown in Section 2.3 and noted below. Measurement graphs show max-peak detector results. Below 1000 MHz, when emissions approach the limit, those frequencies are measured with a quasi-peak detector to determine compliance, and those results will be tabulated below the measurement graph.

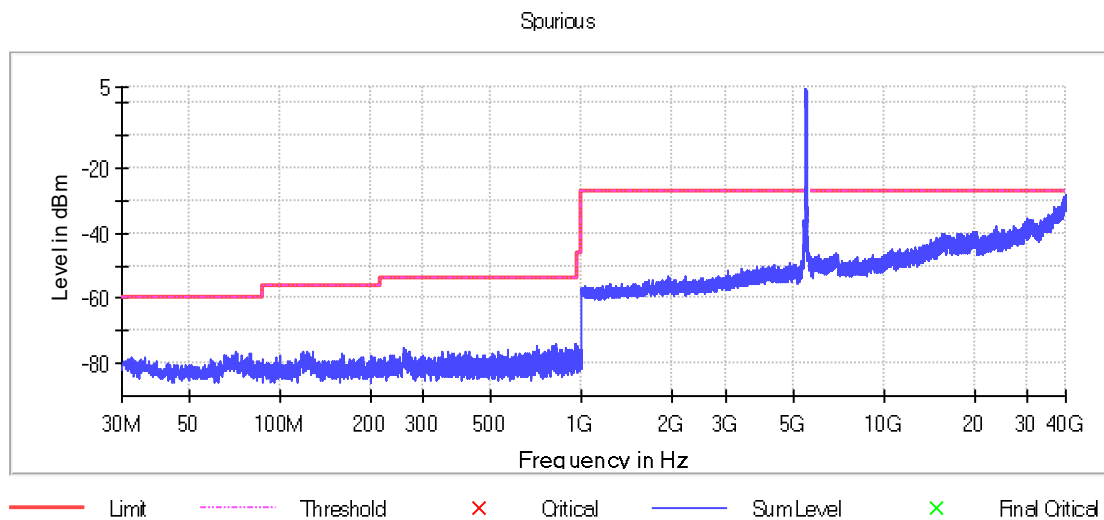
Emissions Transmitting 5270 MHz at Power Level 18:



Emissions Transmitting 5310 MHz at Power Level 12:

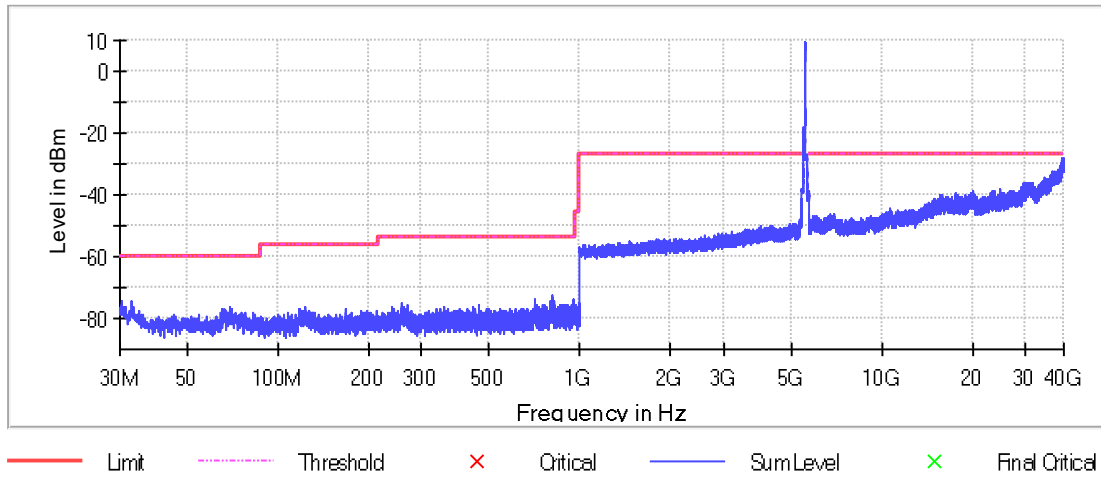


Emissions Transmitting 5510 MHz at Power Level 12:



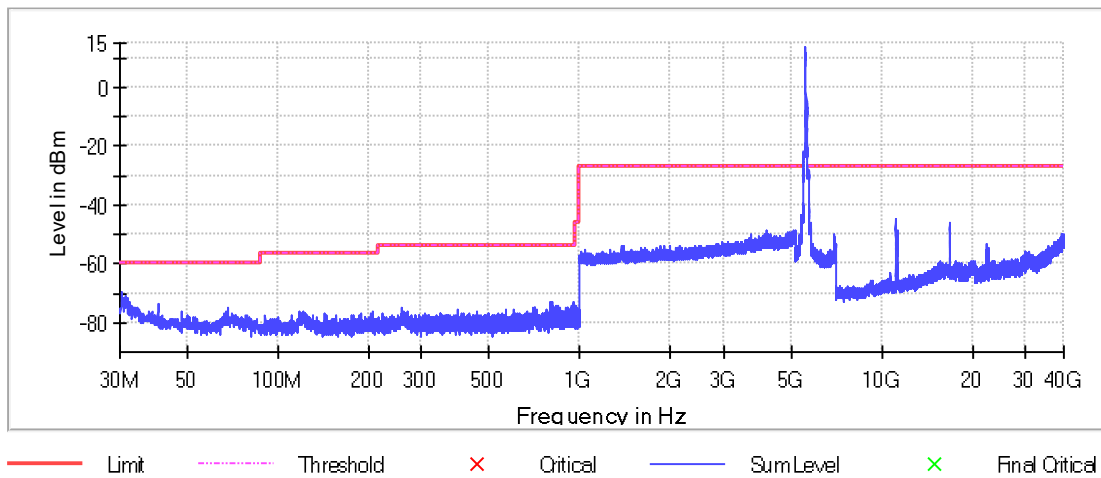
Emissions Transmitting 5550 MHz at Power Level 17:

Spurious

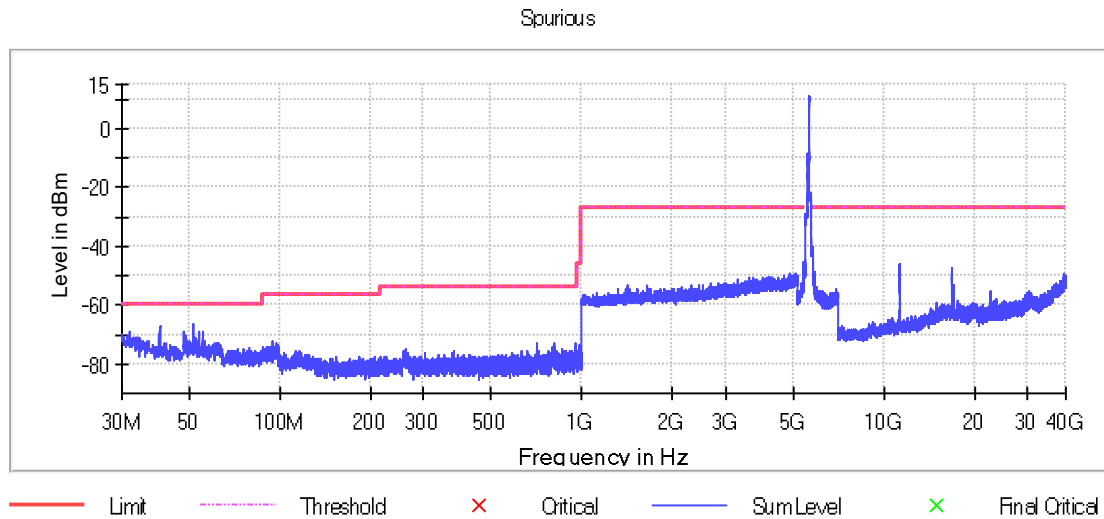


Emissions Transmitting 5590 MHz at Power Level 20:

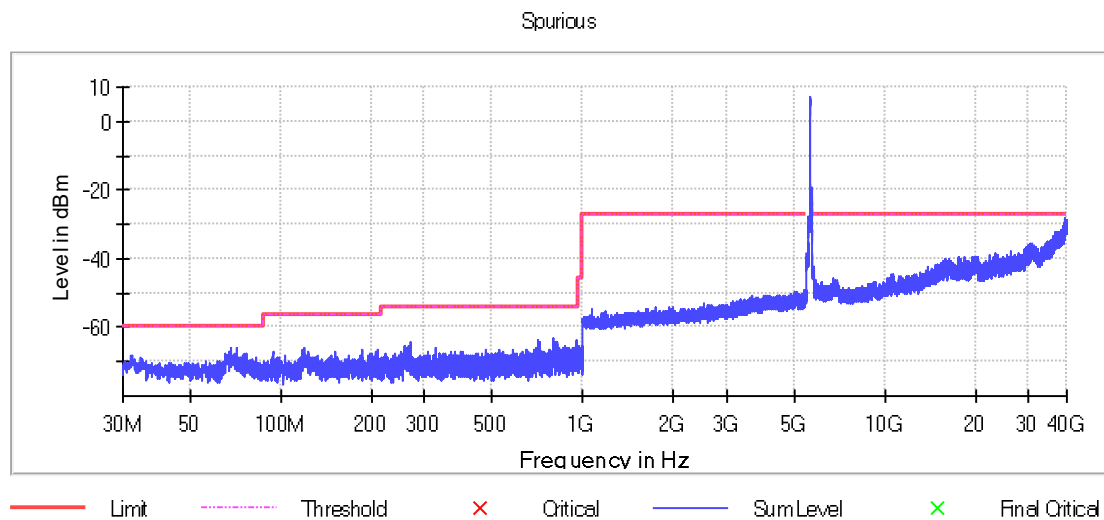
Spurious



Emissions Transmitting 5630 MHz at Power Level 20:



Emissions Transmitting 5670 MHz at Power Level 15:



T5IW8 Radiated Emissions Above 1000MHz Transmitting 5270 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
10528.7	Peak	Vertical	38.3	15.0	53.3	74.0	-20.7
10541.2	Average	Vertical	26.1	15.1	41.1	54.0	-12.9
10537.5	Peak	Horizontal	39.8	15.1	54.9	74.0	-19.1
10538.7	Average	Horizontal	27.8	15.1	42.9	54.0	-11.1
15797.6	Peak	Vertical	38.7	15.7	54.4	74.0	-19.6
15799.7	Average	Vertical	26.3	15.7	42.0	54.0	-12.0

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
15794.3	Peak	Horizontal	40.5	15.7	56.2	74.0	-17.8
15796.2	Average	Horizontal	28.4	15.7	44.1	54.0	-9.9
21148.6	Peak	Vertical	33.6	17.6	51.3	74.0	-22.7
21079.6	Average	Vertical	21.6	17.4	39.0	54.0	-15.0
21058.6	Peak	Horizontal	34.0	17.3	51.3	74.0	-22.7
21079.6	Average	Horizontal	21.4	17.4	38.8	54.0	-15.2
26254.5	Peak	Vertical	30.2	21.9	52.1	74.0	-21.9
26395.8	Average	Vertical	17.1	21.8	38.8	54.0	-15.2
26324.0	Peak	Horizontal	30.3	21.8	52.1	74.0	-21.9
26361.8	Average	Horizontal	17.2	21.8	39.0	54.0	-15.0
31535.4	Peak	Vertical	28.8	28.2	57.0	74.0	-17.0
31522.8	Average	Vertical	15.3	28.3	43.6	54.0	-10.4
31525.5	Peak	Horizontal	29.1	28.3	57.3	74.0	-16.7
31572.9	Average	Horizontal	14.9	28.1	43.0	54.0	-11.0
36779.4	Peak	Vertical	28.1	28.5	56.6	74.0	-17.5
36751.1	Average	Vertical	14.7	28.6	43.3	54.0	-10.8
37008.7	Peak	Horizontal	28.5	28.6	57.0	74.0	-17.0
36895.3	Average	Horizontal	14.8	28.4	43.3	54.0	-10.7

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5310 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
10606.8	Peak	Vertical	38.3	15.4	53.7	74.0	-20.3
10618.6	Average	Vertical	25.1	15.4	40.5	54.0	-13.5
10620.9	Peak	Horizontal	39.5	15.5	55.0	74.0	-19.1
10619.2	Average	Horizontal	27.3	15.4	42.7	54.0	-11.3
15935.4	Peak	Vertical	36.8	15.9	52.8	74.0	-21.2
15927.3	Average	Vertical	24.7	15.9	40.6	54.0	-13.4
15922.8	Peak	Horizontal	38.2	15.9	54.1	74.0	-19.9
15923.1	Average	Horizontal	26.2	15.9	42.1	54.0	-11.9
21301.8	Peak	Vertical	33.6	18.0	51.7	74.0	-22.4

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
21239.8	Average	Vertical	21.5	17.9	39.4	54.0	-14.6
21237.0	Peak	Horizontal	34.0	17.9	51.8	74.0	-22.2
21239.6	Average	Horizontal	21.5	17.9	39.4	54.0	-14.6
26632.5	Peak	Vertical	30.2	24.9	55.1	74.0	-18.9
26590.7	Average	Vertical	16.9	24.7	41.6	54.0	-12.4
26587.2	Peak	Horizontal	30.7	24.7	55.4	74.0	-18.6
26659.1	Average	Horizontal	16.8	25.0	41.8	54.0	-12.2
31921.5	Peak	Vertical	28.9	27.3	56.2	74.0	-17.8
31907.7	Average	Vertical	15.7	27.3	43.0	54.0	-11.0
31887.0	Peak	Horizontal	29.3	27.4	56.6	74.0	-17.4
31898.1	Average	Horizontal	15.7	27.3	43.1	54.0	-11.0
37210.3	Peak	Vertical	28.8	28.8	57.6	74.0	-16.4
37202.2	Average	Vertical	15.3	28.8	44.1	54.0	-9.9
37208.9	Peak	Horizontal	28.3	28.8	57.1	74.0	-16.9
37195.9	Average	Horizontal	15.3	28.8	44.1	54.0	-9.9

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5510 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
10993.9	Peak	Vertical	36.1	16.0	52.1	74.0	-21.9
11018.1	Average	Vertical	23.8	16.2	39.9	54.0	-14.1
11018.6	Peak	Horizontal	36.5	16.2	52.6	74.0	-21.4
11014.7	Average	Horizontal	23.8	16.1	40.0	54.0	-14.0
16547.6	Peak	Vertical	35.5	18.3	53.8	74.0	-20.2
16523.0	Average	Vertical	22.9	18.2	41.1	54.0	-12.9
16523.4	Peak	Horizontal	36.4	18.2	54.6	74.0	-19.4
16522.7	Average	Horizontal	23.7	18.2	41.9	54.0	-12.1
22025.8	Peak	Vertical	33.4	19.3	52.7	74.0	-21.3
22039.8	Average	Vertical	22.4	19.3	41.7	54.0	-12.3
22040.0	Peak	Horizontal	33.7	19.3	53.0	74.0	-21.0
22040.0	Average	Horizontal	22.6	19.3	41.9	54.0	-12.1

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
27548.0	Peak	Vertical	32.0	23.0	55.0	74.0	-19.0
27532.5	Average	Vertical	18.3	23.0	41.4	54.0	-12.7
27462.5	Peak	Horizontal	32.3	23.3	55.6	74.0	-18.5
27466.5	Average	Horizontal	18.8	23.3	42.1	54.0	-12.0
32990.7	Peak	Vertical	28.9	27.4	56.2	74.0	-17.8
33023.1	Average	Vertical	14.8	27.3	42.1	54.0	-11.9
33021.0	Peak	Horizontal	28.6	27.3	55.9	74.0	-18.1
33017.1	Average	Horizontal	15.1	27.3	42.4	54.0	-11.6
38618.0	Peak	Vertical	29.1	29.7	58.8	74.0	-15.3
38528.4	Average	Vertical	16.0	29.4	45.4	54.0	-8.6
38694.3	Peak	Horizontal	29.3	29.9	59.2	74.0	-14.9
38549.4	Average	Horizontal	16.2	29.5	45.7	54.0	-8.3

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5590 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11179.2	Peak	Vertical	36.0	17.2	53.3	74.0	-20.7
11179.4	Average	Vertical	23.4	17.2	40.6	54.0	-13.4
11170.6	Peak	Horizontal	36.3	17.2	53.4	74.0	-20.6
11179.4	Average	Horizontal	23.2	17.2	40.4	54.0	-13.6
16773.5	Peak	Vertical	35.1	19.5	54.5	74.0	-19.5
16762.4	Average	Vertical	21.8	19.5	41.3	54.0	-12.7
16826.7	Peak	Horizontal	35.2	19.5	54.8	74.0	-19.3
16765.5	Average	Horizontal	22.0	19.5	41.5	54.0	-12.5
22359.4	Peak	Vertical	35.2	19.3	54.5	74.0	-19.5
22359.8	Average	Vertical	23.0	19.3	42.4	54.0	-11.7
22360.2	Peak	Horizontal	35.1	19.3	54.5	74.0	-19.6
22360.0	Average	Horizontal	23.9	19.3	43.3	54.0	-10.7
27895.0	Peak	Vertical	32.3	23.2	55.5	74.0	-18.5
27876.5	Average	Vertical	18.7	23.2	41.8	54.0	-12.2
27884.8	Peak	Horizontal	32.2	23.2	55.4	74.0	-18.6

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
27889.8	Average	Horizontal	18.7	23.2	41.9	54.0	-12.1
33519.3	Peak	Vertical	28.6	27.1	55.7	74.0	-18.3
33527.7	Average	Vertical	14.6	27.0	41.7	54.0	-12.4
33454.5	Peak	Horizontal	28.8	27.3	56.0	74.0	-18.0
33454.2	Average	Horizontal	15.5	27.3	42.7	54.0	-11.3
39131.4	Peak	Vertical	28.2	31.9	60.1	74.0	-13.9
39138.8	Average	Vertical	14.3	32.0	46.3	54.0	-7.7
39150.0	Peak	Horizontal	27.8	32.2	59.9	74.0	-14.1
39149.4	Average	Horizontal	14.3	32.2	46.5	54.0	-7.5

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5670 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11312.7	Peak	Vertical	36.1	17.5	53.5	74.0	-20.5
11339.3	Average	Vertical	23.5	17.4	41.0	54.0	-13.1
11348.7	Peak	Horizontal	35.9	17.4	53.3	74.0	-20.7
11339.1	Average	Horizontal	23.0	17.4	40.4	54.0	-13.6
17032.5	Peak	Vertical	34.5	20.4	54.9	74.0	-19.1
17012.1	Average	Vertical	21.4	20.3	41.6	54.0	-12.4
17010.0	Peak	Horizontal	34.3	20.3	54.6	74.0	-19.4
17002.8	Average	Horizontal	21.6	20.2	41.9	54.0	-12.1
22692.2	Peak	Vertical	34.0	20.3	54.3	74.0	-19.7
22679.8	Average	Vertical	22.1	20.3	42.4	54.0	-11.6
22663.6	Peak	Horizontal	34.2	20.3	54.5	74.0	-19.5
22679.8	Average	Horizontal	23.5	20.3	43.8	54.0	-10.2
28303.8	Peak	Vertical	32.5	22.2	54.7	74.0	-19.3
28296.0	Average	Vertical	19.2	22.2	41.3	54.0	-12.7
28268.3	Peak	Horizontal	32.7	22.1	54.8	74.0	-19.2
28268.0	Average	Horizontal	19.4	22.1	41.6	54.0	-12.4
34016.4	Peak	Vertical	29.0	29.0	58.0	74.0	-16.0
34024.5	Average	Vertical	15.3	29.1	44.4	54.0	-9.7

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
34013.7	Peak	Horizontal	29.0	29.0	58.0	74.0	-16.0
34018.5	Average	Horizontal	15.5	29.0	44.5	54.0	-9.5
39753.0	Peak	Vertical	24.8	37.2	62.0	74.0	-12.0
39704.7	Average	Vertical	11.2	37.3	48.5	54.0	-5.5
39726.4	Peak	Horizontal	25.0	37.2	62.2	74.0	-11.8
39671.1	Average	Horizontal	12.6	37.3	49.9	54.0	-4.1

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5270 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
10555.3	Peak	Vertical	39.4	15.1	54.5	74.0	-19.6
10538.5	Average	Vertical	27.2	15.1	42.2	54.0	-11.8
10530.7	Peak	Horizontal	39.1	15.0	54.2	74.0	-19.8
10540.9	Average	Horizontal	26.8	15.1	41.9	54.0	-12.1
15806.9	Peak	Vertical	35.9	15.7	51.6	74.0	-22.5
15802.7	Average	Vertical	22.7	15.7	38.4	54.0	-15.6
15819.0	Peak	Horizontal	36.0	15.7	51.7	74.0	-22.3
15799.5	Average	Horizontal	23.1	15.7	38.8	54.0	-15.2
21135.8	Peak	Vertical	34.5	17.6	52.1	74.0	-21.9
21079.8	Average	Vertical	21.2	17.4	38.6	54.0	-15.4
21020.6	Peak	Horizontal	36.4	17.1	53.5	74.0	-20.5
21079.8	Average	Horizontal	23.2	17.4	40.6	54.0	-13.4
26292.5	Peak	Vertical	31.3	21.8	53.1	74.0	-20.9
26308.3	Average	Vertical	17.5	21.8	39.3	54.0	-14.7
26432.3	Peak	Horizontal	32.8	21.7	54.6	74.0	-19.4
26367.8	Average	Horizontal	19.3	21.8	41.1	54.0	-13.0
31591.8	Peak	Vertical	29.2	28.1	57.3	74.0	-16.7
31670.7	Average	Vertical	16.3	27.9	44.2	54.0	-9.9
31767.0	Peak	Horizontal	29.9	27.6	57.5	74.0	-16.5
31615.8	Average	Horizontal	16.0	28.0	44.0	54.0	-10.0
36915.6	Peak	Vertical	29.4	28.5	57.9	74.0	-16.1

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
36801.1	Average	Vertical	15.9	28.5	44.3	54.0	-9.7
36797.6	Peak	Horizontal	29.5	28.5	57.9	74.0	-16.1
36799.0	Average	Horizontal	15.9	28.5	44.4	54.0	-9.7

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5310 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
10619.9	Peak	Vertical	39.5	15.4	55.0	74.0	-19.0
10619.6	Average	Vertical	26.1	15.4	41.5	54.0	-12.5
10620.5	Peak	Horizontal	38.0	15.5	53.5	74.0	-20.6
10620.9	Average	Horizontal	26.3	15.5	41.7	54.0	-12.3
15930.2	Peak	Vertical	35.4	15.9	51.3	74.0	-22.7
15939.5	Average	Vertical	22.3	16.0	38.2	54.0	-15.8
15942.8	Peak	Horizontal	35.6	16.0	51.5	74.0	-22.5
15939.9	Average	Horizontal	22.7	16.0	38.7	54.0	-15.3
21332.0	Peak	Vertical	34.6	18.1	52.7	74.0	-21.3
21239.4	Average	Vertical	21.2	17.9	39.1	54.0	-14.9
21234.2	Peak	Horizontal	34.7	17.9	52.5	74.0	-21.5
21239.8	Average	Horizontal	22.3	17.9	40.1	54.0	-13.9
26658.6	Peak	Vertical	31.3	25.0	56.3	74.0	-17.7
26660.7	Average	Vertical	18.0	25.0	43.0	54.0	-11.0
26557.4	Peak	Horizontal	32.0	24.5	56.5	74.0	-17.5
26570.5	Average	Horizontal	18.2	24.6	42.8	54.0	-11.3
31746.6	Peak	Vertical	29.9	27.7	57.6	74.0	-16.4
31762.2	Average	Vertical	16.6	27.6	44.2	54.0	-9.8
31769.7	Peak	Horizontal	29.8	27.6	57.4	74.0	-16.6
31927.5	Average	Horizontal	16.4	27.3	43.7	54.0	-10.3
37256.1	Peak	Vertical	29.6	28.9	58.4	74.0	-15.6
37154.6	Average	Vertical	15.8	28.7	44.5	54.0	-9.5
37133.6	Peak	Horizontal	29.7	28.7	58.5	74.0	-15.6
37214.1	Average	Horizontal	15.9	28.8	44.7	54.0	-9.3

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5510 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11018.6	Peak	Vertical	35.5	16.2	51.7	74.0	-22.4
11020.1	Average	Vertical	22.7	16.2	38.8	54.0	-15.2
11019.7	Peak	Horizontal	36.3	16.2	52.4	74.0	-21.6
11021.0	Average	Horizontal	22.5	16.2	38.7	54.0	-15.3
16557.9	Peak	Vertical	34.4	18.4	52.8	74.0	-21.2
16521.8	Average	Vertical	21.5	18.2	39.7	54.0	-14.3
16553.4	Peak	Horizontal	34.9	18.4	53.3	74.0	-20.7
16527.9	Average	Horizontal	21.7	18.2	40.0	54.0	-14.1
22064.8	Peak	Vertical	33.5	19.3	52.8	74.0	-21.2
22040.0	Average	Vertical	20.1	19.3	39.4	54.0	-14.6
22047.6	Peak	Horizontal	33.6	19.3	52.9	74.0	-21.1
22039.6	Average	Horizontal	21.2	19.3	40.5	54.0	-13.5
27530.5	Peak	Vertical	33.0	23.0	56.0	74.0	-18.0
27487.3	Average	Vertical	19.3	23.2	42.5	54.0	-11.6
27493.0	Peak	Horizontal	33.3	23.2	56.5	74.0	-17.5
27545.5	Average	Horizontal	19.9	23.0	42.9	54.0	-11.1
33029.1	Peak	Vertical	30.3	27.3	57.6	74.0	-16.4
33192.3	Average	Vertical	16.2	27.4	43.6	54.0	-10.4
32927.4	Peak	Horizontal	30.4	27.5	57.8	74.0	-16.2
32978.7	Average	Horizontal	16.5	27.4	43.9	54.0	-10.1
38593.5	Peak	Vertical	30.0	29.6	59.6	74.0	-14.4
38424.4	Average	Vertical	17.1	29.2	46.2	54.0	-7.8
38459.4	Peak	Horizontal	31.2	29.3	60.5	74.0	-13.5
38468.5	Average	Horizontal	17.1	29.3	46.3	54.0	-7.7

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5590 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11180.4	Peak	Vertical	36.1	17.2	53.3	74.0	-20.7
11179.3	Average	Vertical	22.7	17.2	39.9	54.0	-14.1

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11188.8	Peak	Horizontal	35.5	17.3	52.8	74.0	-21.3
11178.5	Average	Horizontal	22.6	17.2	39.8	54.0	-14.2
16743.0	Peak	Vertical	33.9	19.5	53.4	74.0	-20.6
16767.2	Average	Vertical	20.6	19.5	40.1	54.0	-13.9
16753.8	Peak	Horizontal	34.1	19.5	53.5	74.0	-20.5
16775.9	Average	Horizontal	20.6	19.5	40.1	54.0	-13.9
22403.8	Peak	Vertical	32.5	19.4	51.9	74.0	-22.1
22369.4	Average	Vertical	19.2	19.3	38.6	54.0	-15.4
22331.4	Peak	Horizontal	32.6	19.3	51.9	74.0	-22.2
22359.8	Average	Horizontal	20.3	19.3	39.6	54.0	-14.4
27872.3	Peak	Vertical	33.3	23.2	56.5	74.0	-17.5
27879.8	Average	Vertical	19.7	23.2	42.9	54.0	-11.2
27920.0	Peak	Horizontal	33.4	23.1	56.5	74.0	-17.5
27886.8	Average	Horizontal	19.9	23.2	43.1	54.0	-10.9
33404.4	Peak	Vertical	30.4	27.4	57.8	74.0	-16.3
33429.9	Average	Vertical	16.6	27.3	43.9	54.0	-10.1
33579.3	Peak	Horizontal	29.9	26.9	56.8	74.0	-17.2
33619.2	Average	Horizontal	16.3	26.8	43.0	54.0	-11.0
39271.2	Peak	Vertical	28.4	34.0	62.4	74.0	-11.6
39137.6	Average	Vertical	16.0	32.0	48.0	54.0	-6.0
39141.9	Peak	Horizontal	28.9	32.0	61.0	74.0	-13.0
39140.4	Average	Horizontal	16.1	32.0	48.1	54.0	-5.9

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5670 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11322.4	Peak	Vertical	36.1	17.5	53.6	74.0	-20.4
11338.6	Average	Vertical	22.6	17.4	40.1	54.0	-14.0
11342.5	Peak	Horizontal	36.0	17.4	53.4	74.0	-20.6
11338.7	Average	Horizontal	22.5	17.4	40.0	54.0	-14.1
17019.0	Peak	Vertical	34.1	20.3	54.4	74.0	-19.6

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
16999.7	Average	Vertical	20.4	20.2	40.6	54.0	-13.4
16999.2	Peak	Horizontal	34.0	20.2	54.3	74.0	-19.7
17003.7	Average	Horizontal	20.5	20.3	40.7	54.0	-13.3
22610.4	Peak	Vertical	31.7	20.2	51.8	74.0	-22.2
22679.2	Average	Vertical	18.4	20.3	38.7	54.0	-15.3
22740.8	Peak	Horizontal	32.0	20.4	52.4	74.0	-21.6
22679.6	Average	Horizontal	19.1	20.3	39.4	54.0	-14.6
28244.5	Peak	Vertical	33.8	22.1	55.9	74.0	-18.1
28338.3	Average	Vertical	20.1	22.2	42.3	54.0	-11.7
28298.8	Peak	Horizontal	34.1	22.2	56.2	74.0	-17.8
28319.3	Average	Horizontal	20.3	22.2	42.4	54.0	-11.6
34008.3	Peak	Vertical	29.8	28.9	58.8	74.0	-15.2
33975.3	Average	Vertical	16.9	28.7	45.6	54.0	-8.4
34032.6	Peak	Horizontal	30.0	29.1	59.1	74.0	-14.9
34037.7	Average	Horizontal	16.5	29.1	45.6	54.0	-8.4
39772.6	Peak	Vertical	25.3	37.2	62.5	74.0	-11.5
39764.9	Average	Vertical	11.7	37.2	48.9	54.0	-5.1
39613.4	Peak	Horizontal	28.6	37.4	66.0	74.0	-8.0
39648.4	Average	Horizontal	14.4	37.3	51.7	54.0	-2.3

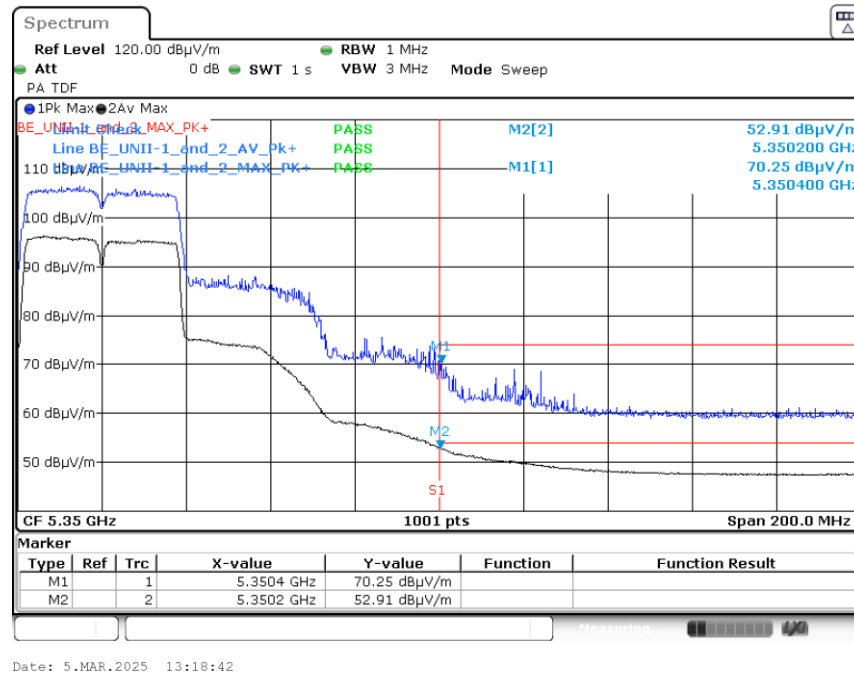
Result

The EUT complied with the specification limit by a margin of 4.1 dB.

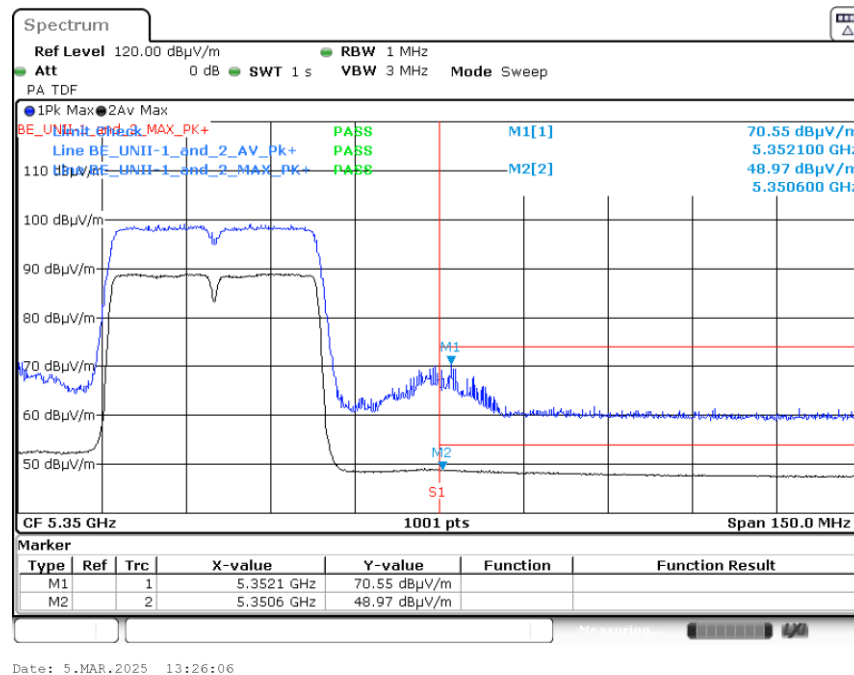
6.3.3.5 §15.407(b) Undesirable Emissions – Band Edges (UNII 2)

Band Edge were tested radiated at or above the intended power setting per channel.

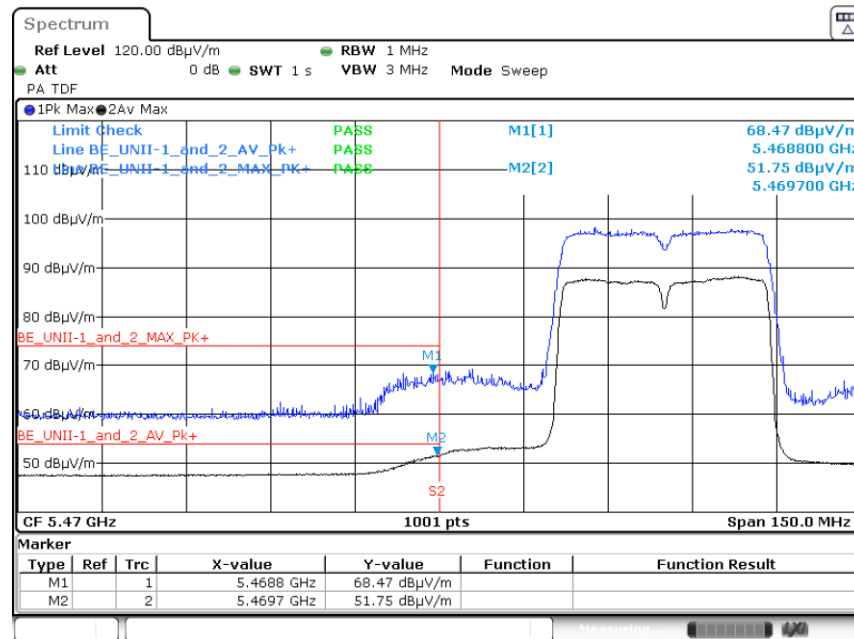
T5IW8 Transmitting on 5270 MHz (Power Level 19):



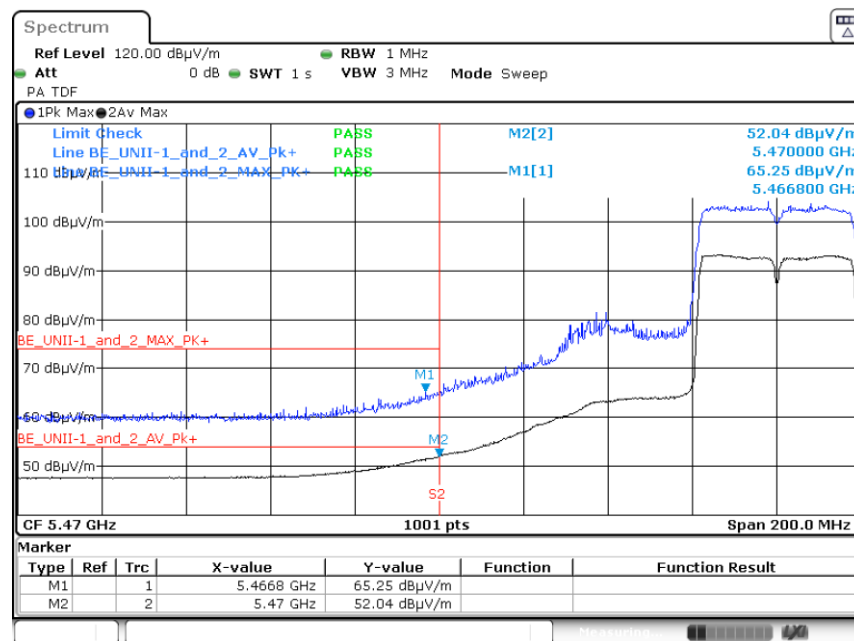
T5IW8 Transmitting on 5310 MHz (Power Level 12):



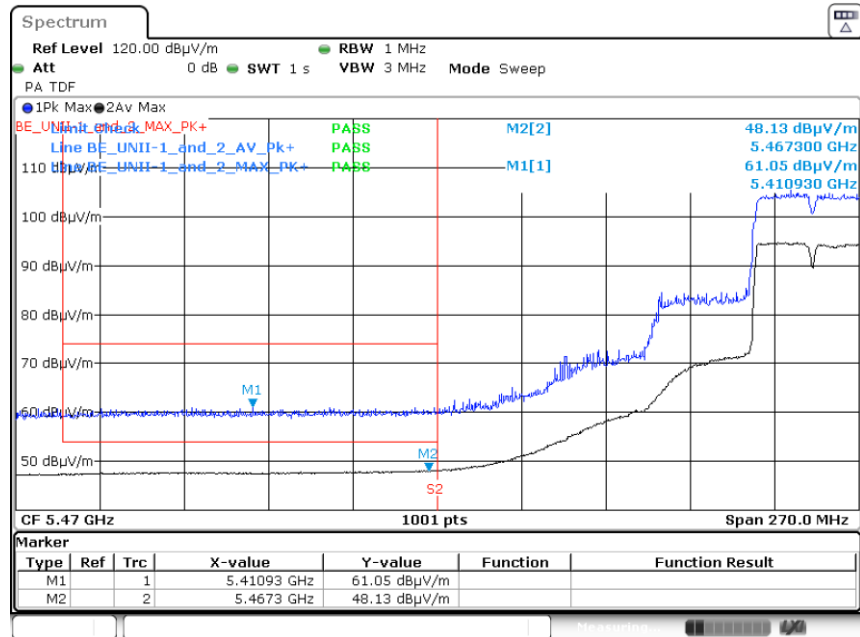
T5IW8 Transmitting on 5510 MHz (Power Level 12):



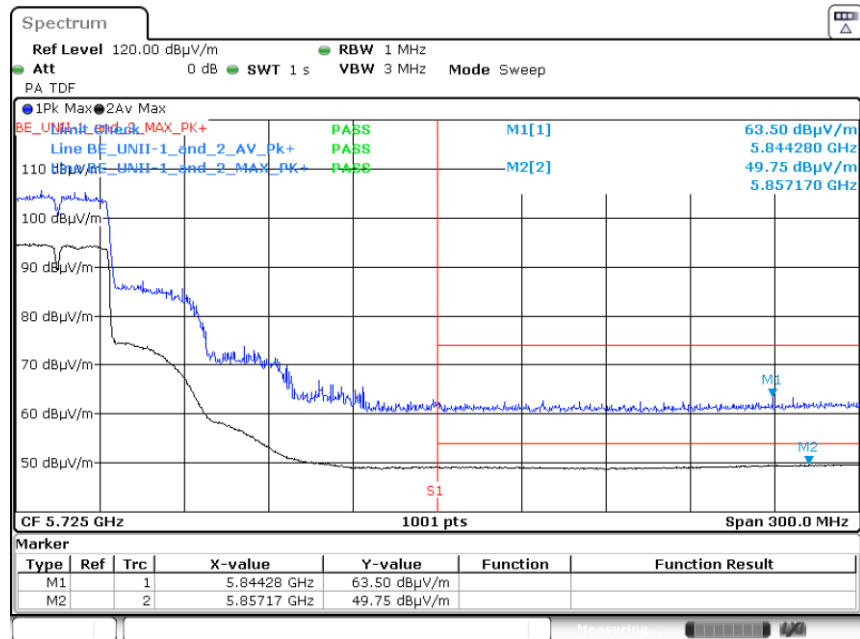
T5IW8 Transmitting on 5550 MHz (Power Level 18):



T5IW8 Transmitting on 5590 MHz (Power Level 20):

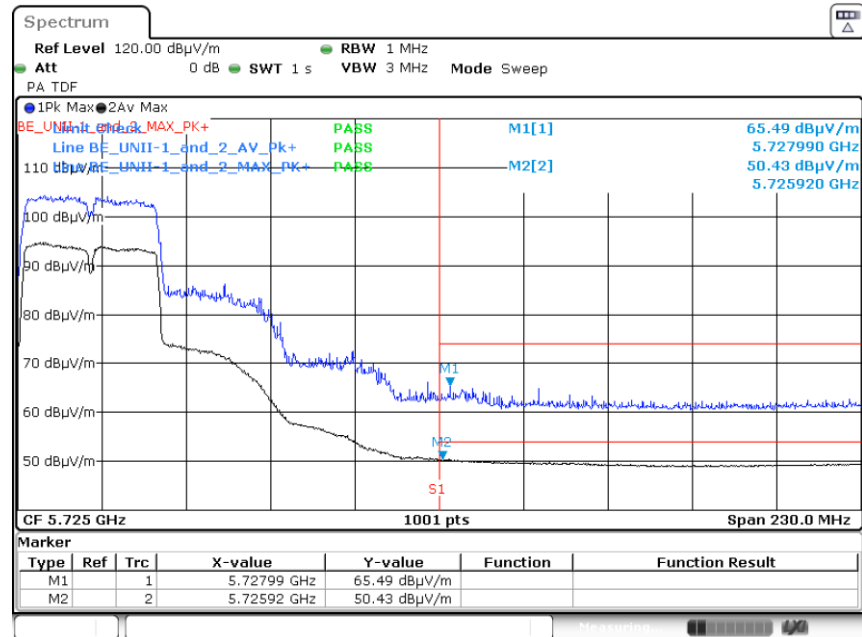


Date: 5.MAR.2025 14:13:39

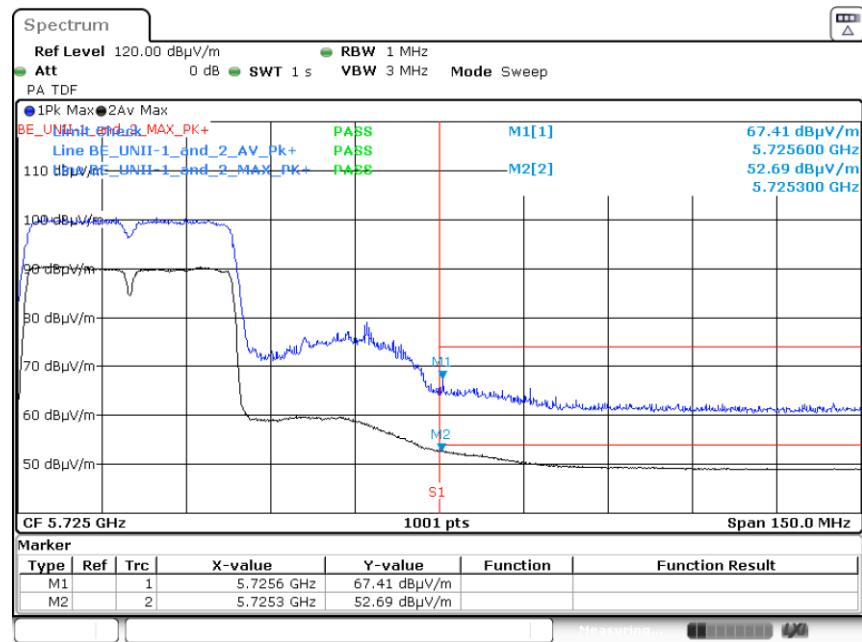


Date: 5.MAR.2025 14:16:55

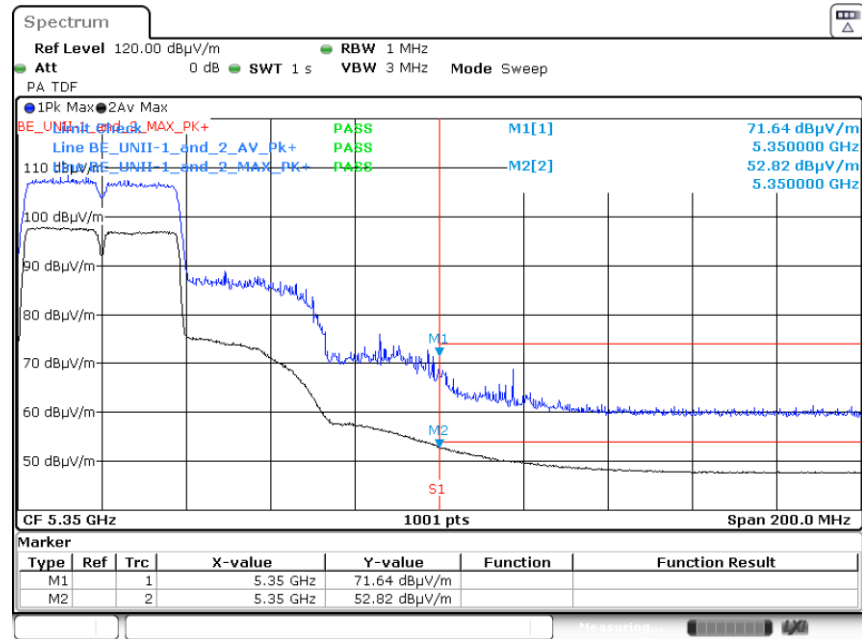
T5IW8 Transmitting on 5630 MHz (Power Level 20):



T5IW8 Transmitting on 5670 MHz (Power Level 16):

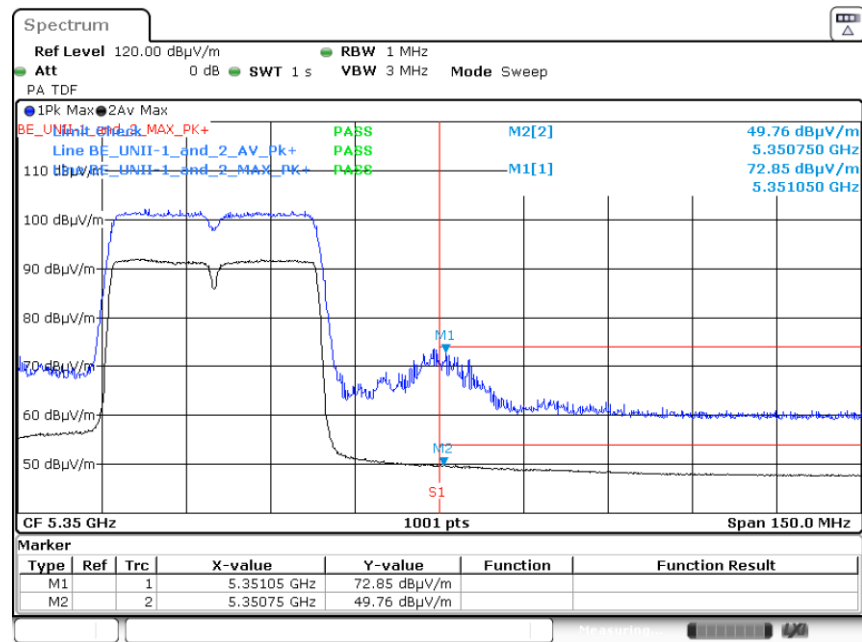


T5IW11 Transmitting on 5270 MHz (Power Level 18):



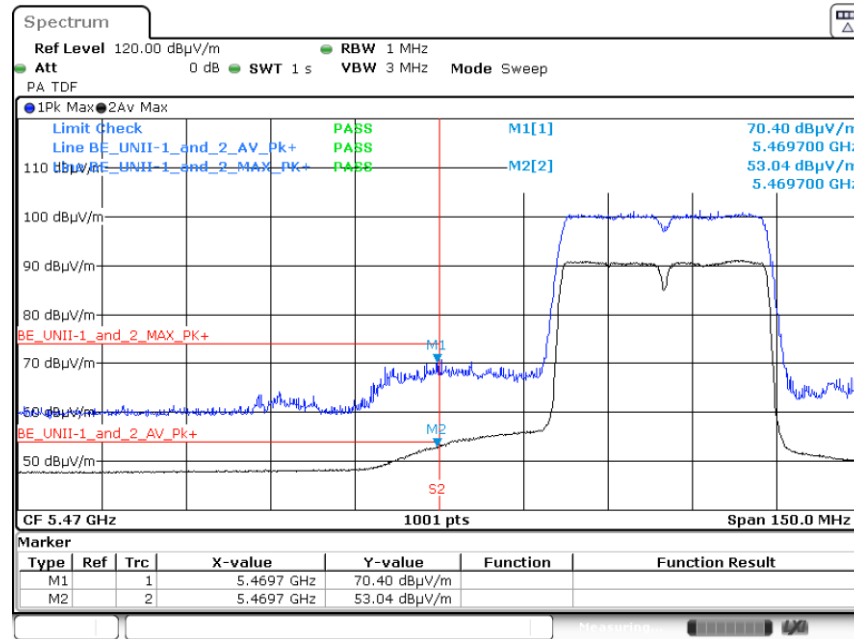
Date: 4.MAR.2025 16:15:45

T5IW11 Transmitting on 5310 MHz (Power Level 12):



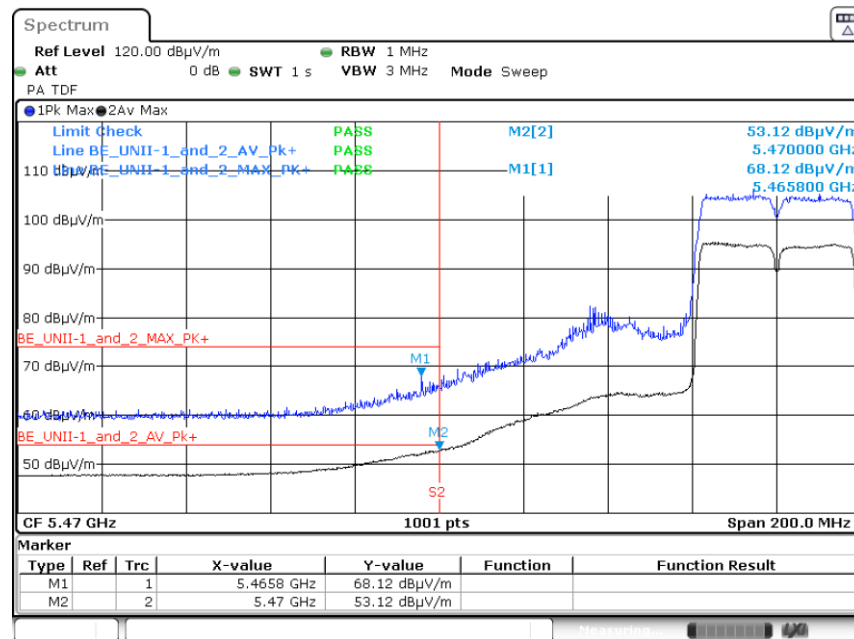
Date: 4.MAR.2025 16:20:05

T5IW11 Transmitting on 5510 MHz (Power Level 12):



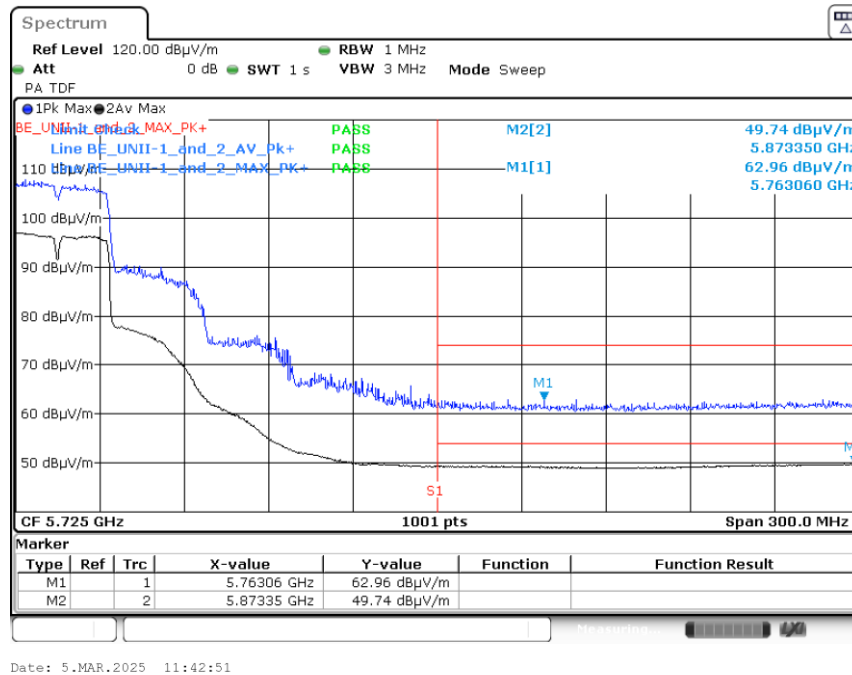
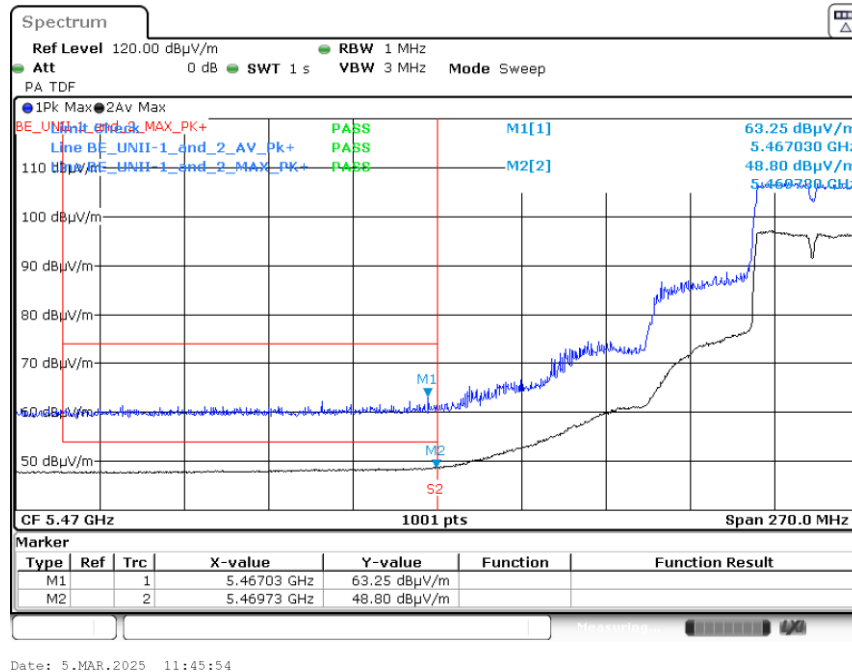
Date: 5.MAR.2025 11:54:09

T5IW11 Transmitting on 5550 MHz (Power Level 17):

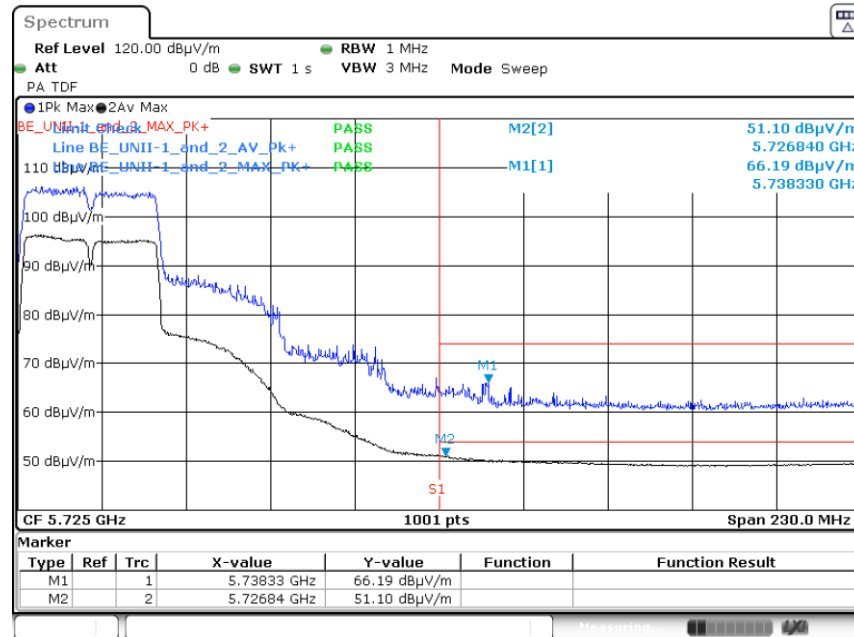


Date: 5.MAR.2025 11:49:38

T5IW11 Transmitting on 5590 MHz (Power Level 20):

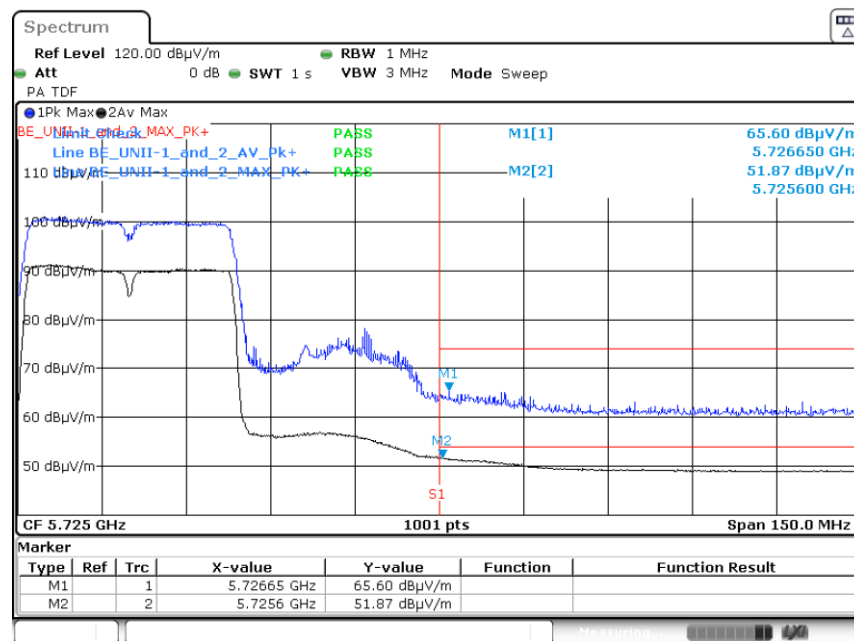


T5IW11 Transmitting on 5630 MHz (Power Level 20):



Date: 5.MAR.2025 11:37:43

T5IW11 Transmitting on 5670 MHz (Power Level 15):



Date: 5.MAR.2025 11:33:24

Result

The EUT complied with the specification.

6.3.3.6 §15.407(h)(1) TPC (UNII 2)

Based upon the conducted output power measurements, EUT does not require a transmit power control mechanism to operate in the UNII-2 band in the configuration tested.

Result

In the configurations tested the EUT complied with the requirements of the specification.

6.3.3.7 §15.407(h)(2) DFS (UNII 2)

EUT is a Client device and does not contain In-Service Monitoring. EUT was tested on Channel 62 (5310 MHz) with a Netgear R7000 Router (FCC ID #PY313200233) as the Master Device.

Radar Detection (UNII 2)

EUT does not operate as a Master device in the UNII-2 Band and cannot detect radar in the configurations tested.

Result

In the configurations tested the EUT complied with the requirements of the specification.

Master Device Channel Availability Check Time (UNII 2)

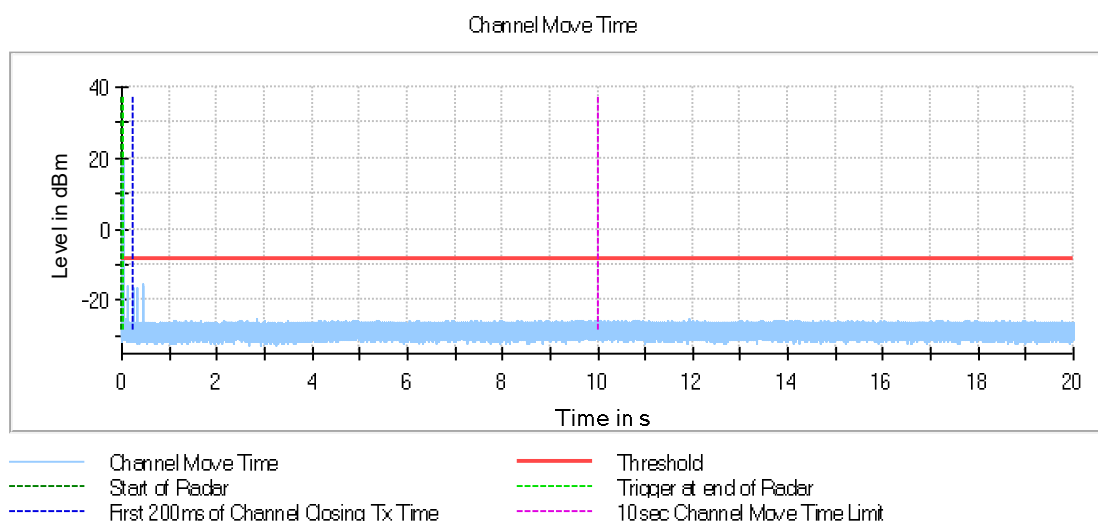
EUT does not operate as a master device in the UNII-2 Band and cannot detect radar in the configurations tested.

Result

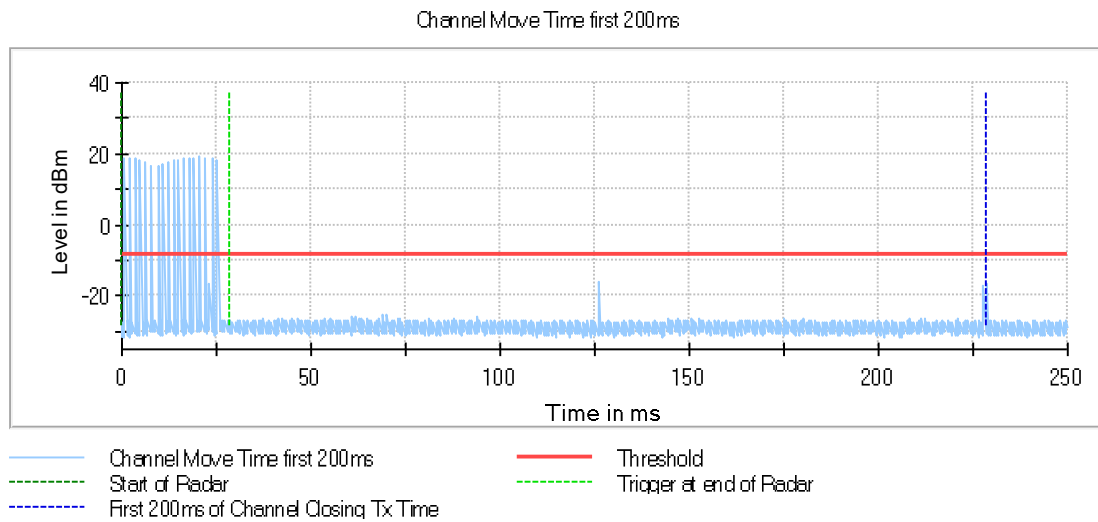
In the configurations tested the EUT complied with the requirements of the specification.

Channel Closing Transmission Time and Channel Move Time (UNII 2)

Upon receiving a clear channel command from a Master device, EUT cleared transmissions within 10 seconds.



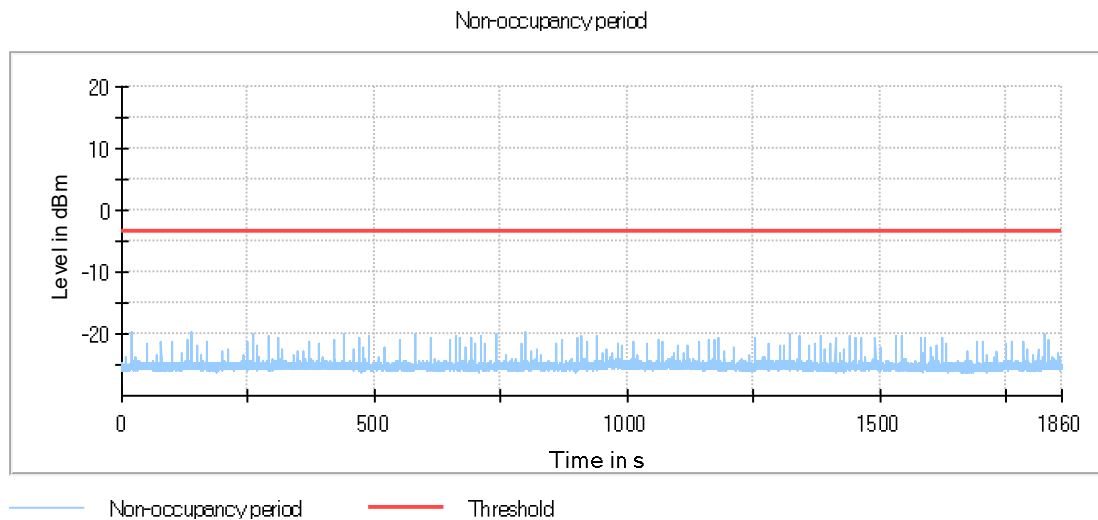
Graph 7: EUT 5310 MHz Channel Close Time and Channel Move Time



Graph 8: EUT 5310 MHz First 200 ms (Channel Closing Tx Time)

Channel Non-Occupancy Period (UNII 2)

Upon receiving Clear Channel command, EUT did not transmit in that channel for 30 minutes.



Graph 9: EUT 5310 MHz Non-Occupancy Period of 30 minutes.

Result

In the configurations tested the EUT complied with the requirements of the specification.

6.4 UNII 3 Band (5725-5850 MHz)

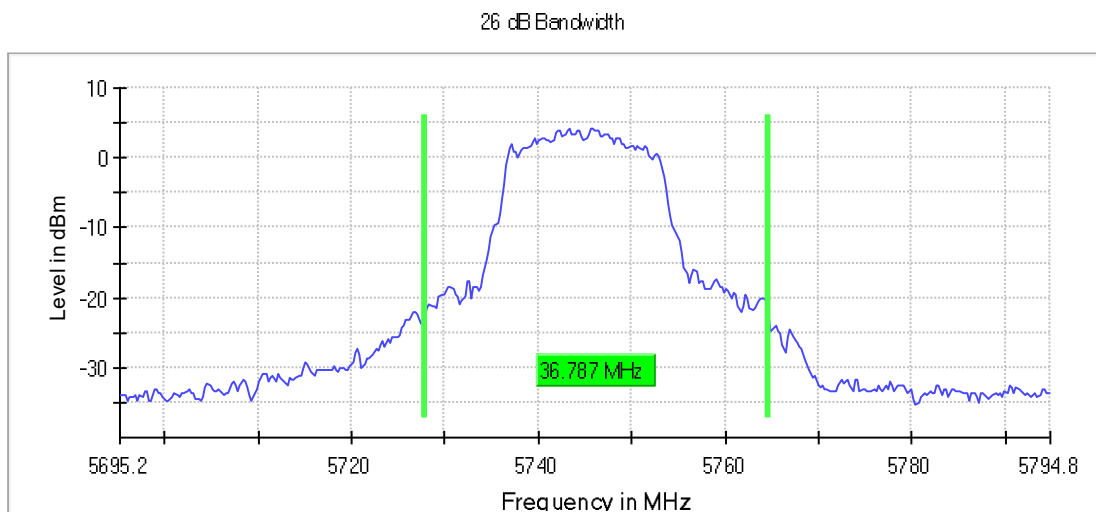
6.4.1 802.11a Mode

6.4.1.1 §15.403 26dB Bandwidth (UNII 3)

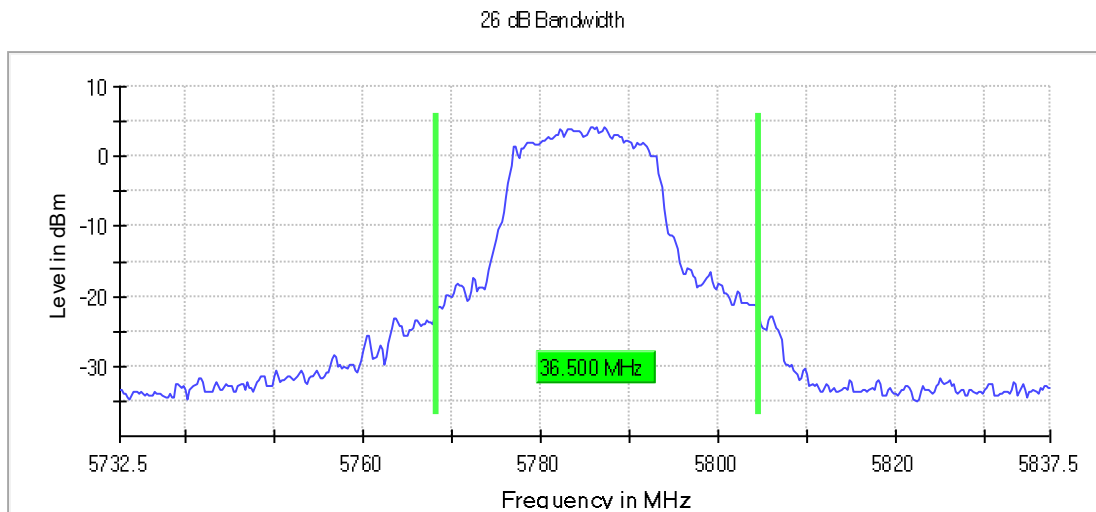
Bandwidths were measured at the intended power set level per channel.

Frequency (MHz)	Emissions 26 dB Bandwidth (MHz)
5745	36.8
5785	36.5
5825	40.0

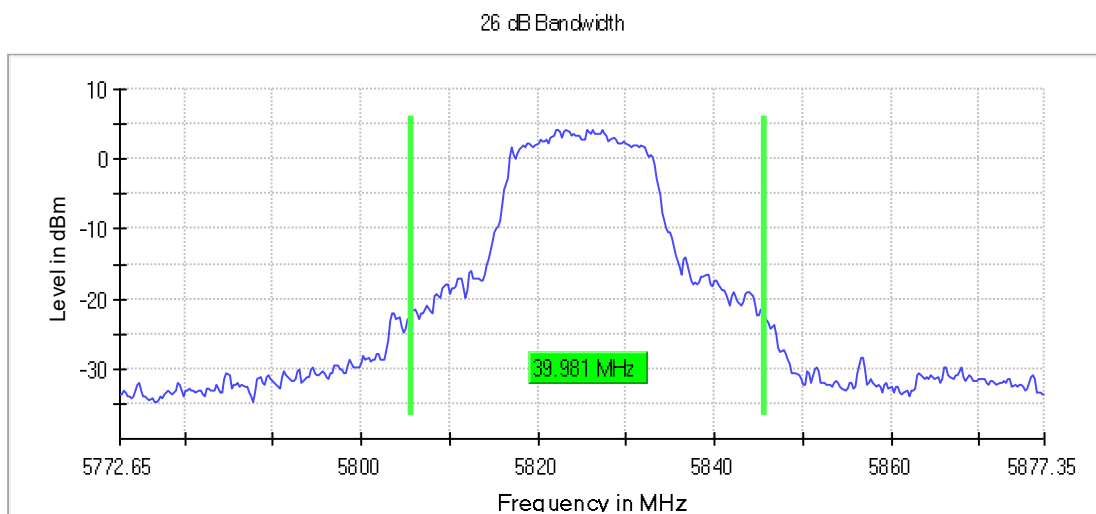
Table 20: 26 dB Emissions Bandwidth



Graph 142: 26 dB Emissions Bandwidth Transmitting at 5745 MHz



Graph 143: 26 dB Emissions Bandwidth Transmitting at 5785 MHz



Graph 144: 26 dB Emissions Bandwidth Transmitting at 5825 MHz

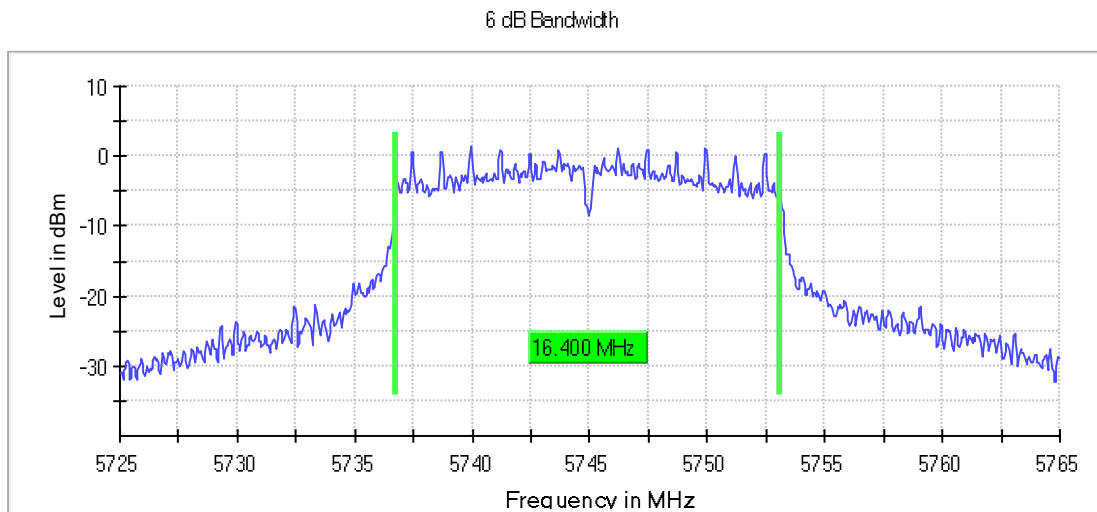
6.4.1.2 §15.407(e) Minimum 6dB Emissions Bandwidth (UNII 3)

The UNII-3 minimum 6 dB emissions bandwidth for the channel is shown in the table and plots below.

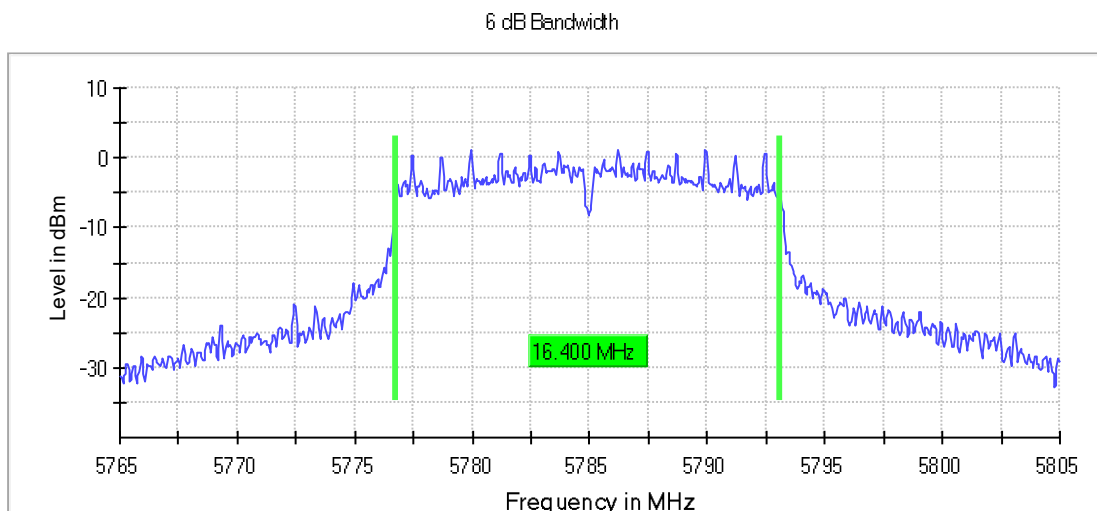
Frequency (MHz)	Emissions 6 dB bandwidth (MHz)
5745	16.4
5785	16.4
5825	16.4

Result

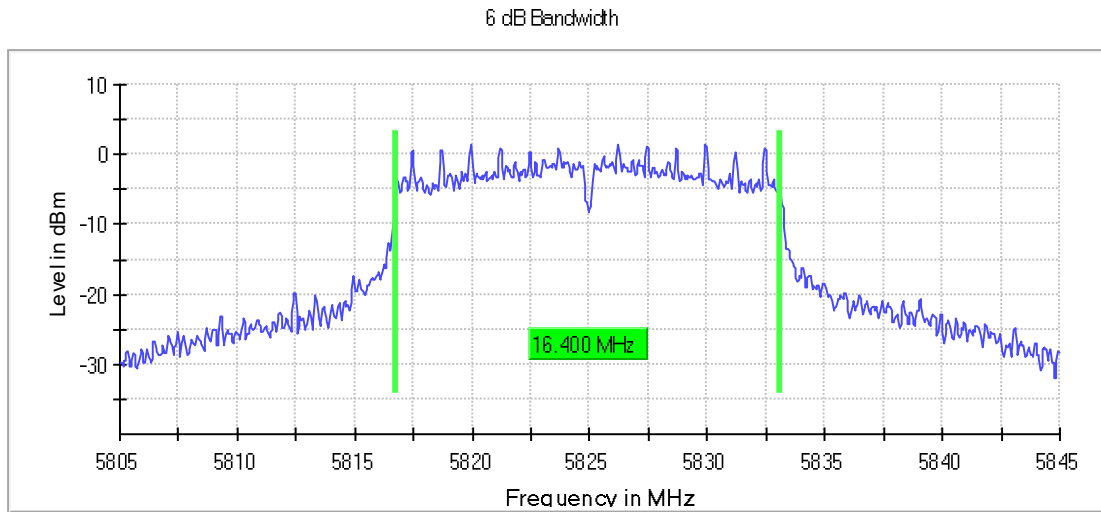
In the configurations tested the EUT complied with the requirements of the specification.



Graph 145: UNII-3 Lowest Channel Minimum 6 dB Bandwidth



Graph 146: UNII-3 Middle Channel Minimum 6 dB Bandwidth



Graph 147: UNII-3 Highest Channel Minimum 6 dB Bandwidth

6.4.1.3 §15.407(a) Power Limits: Maximum Conducted Output Power (UNII 3)

The following tables show the adjusted conducted power limits.

UNII-3 Conducted Power Limits

Maximum conducted power limits for the UNII-3 band are adjusted based on the isotropic antenna gain and wireless architecture.

Wireless Architecture	Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
AP	3.3	6	0	30	30

Table 21: UNII-3 maximum conducted power limits based upon antenna gain and Wireless Architecture.

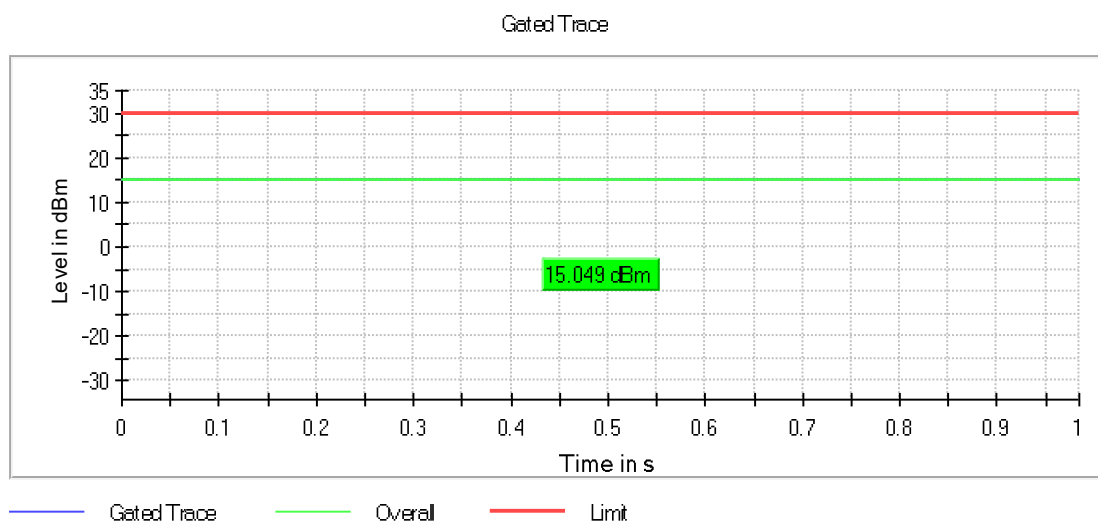
Power was measured for the low, middle, and high channel at the maximum power level possible (20) using KDB 789033 D02 method PM-G and a gated power meter which does not require an average correction factor.

UNII-3 Conducted Power Measurements – AP Architecture

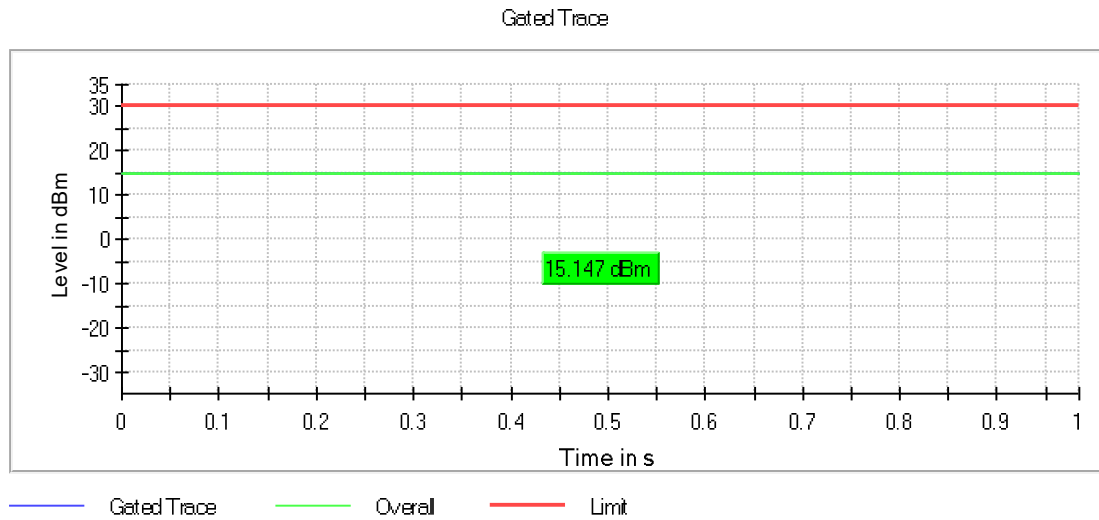
Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)
5745	15.1	30	-14.9
5785	15.2	30	-14.8
5825	15.1	30	-14.9

Result

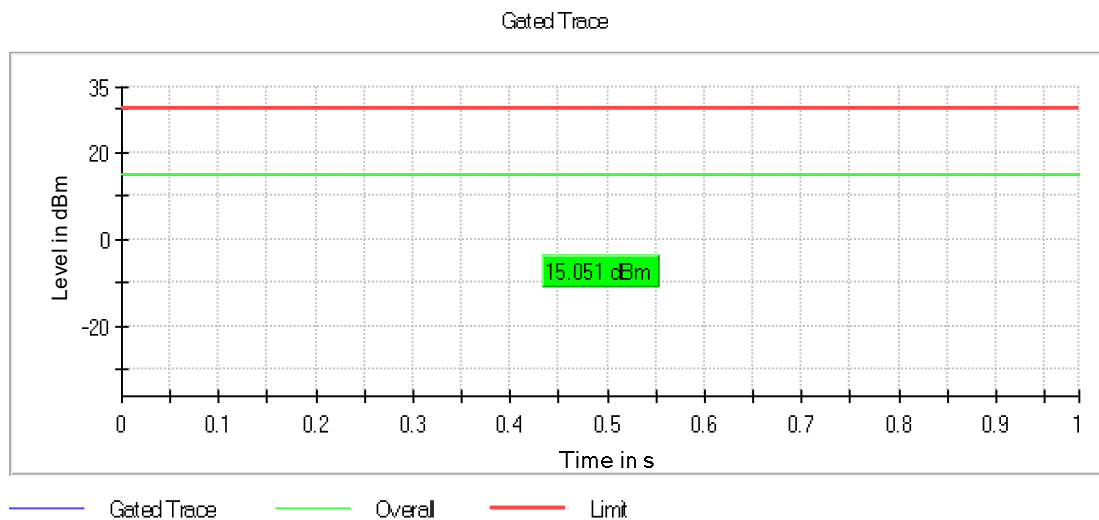
In the configurations tested the EUT complied with the limit with a margin of 14.8 dB.



Graph 148: Gated Trace Power Transmitting at 5745 MHz (Power Level 20)



Graph 149: Gated Trace Power Transmitting at 5785 MHz (Power Level 20)



Graph 150: Gated Trace Power Transmitting at 5825 MHz (Power Level 20)

6.4.1.4 §15.407(a) Power Limits: Maximum Power Spectral Density (UNII 3)

The following tables show the adjusted power spectral density limits.

UNII-3 Power Spectral Density Limits

Power spectral density limits for the UNII-3 band are adjusted based on isotropic antenna gain.

Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm/500kHz)	Adjusted Limit (dBm/500kHz)
3.3	6	0	30	30

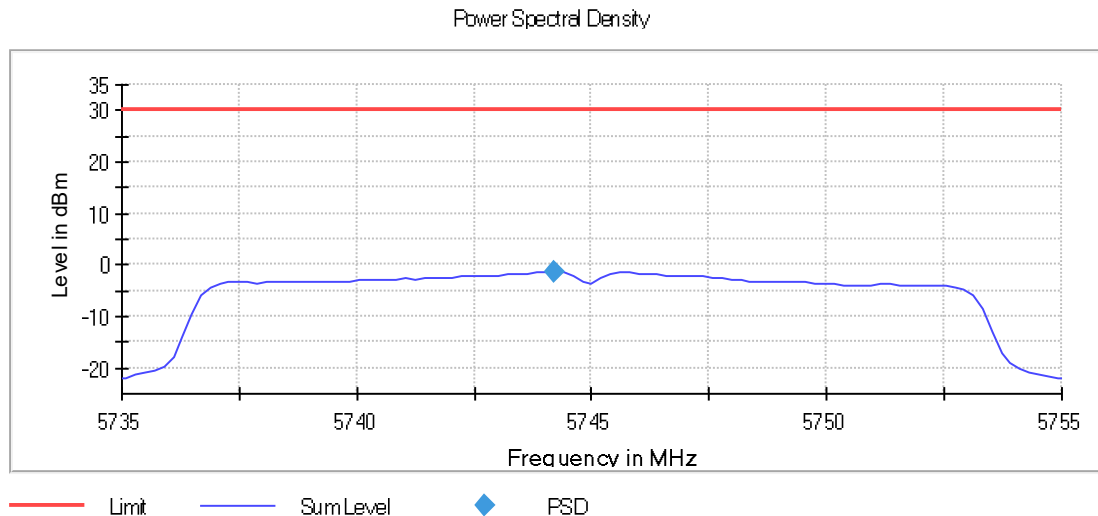
EIRP was measured for the low, middle, and high channel at the maximum power level possible (20) using method SA-1 to create the power spectrum over a 500kHz measurement bandwidth. See Section 6.2.3 for measurement graphics.

UNII-3 Power Spectral Density Measurements

Frequency (MHz)	EIRP Density Limit (dBm/500kHz)	EIRP Density Limit (dBm/500kHz)	Margin (dB)
5745	-1.4	30	-31.4
5785	-1.4	30	-31.4
5825	-1.3	30	-31.3

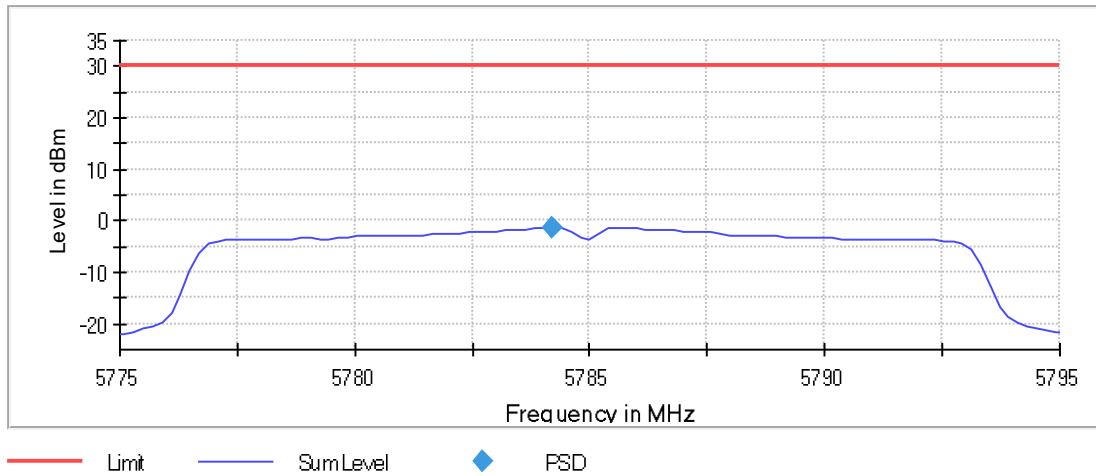
Result

In the configurations tested the EUT complied with the limit with a margin of 31.3 dB.



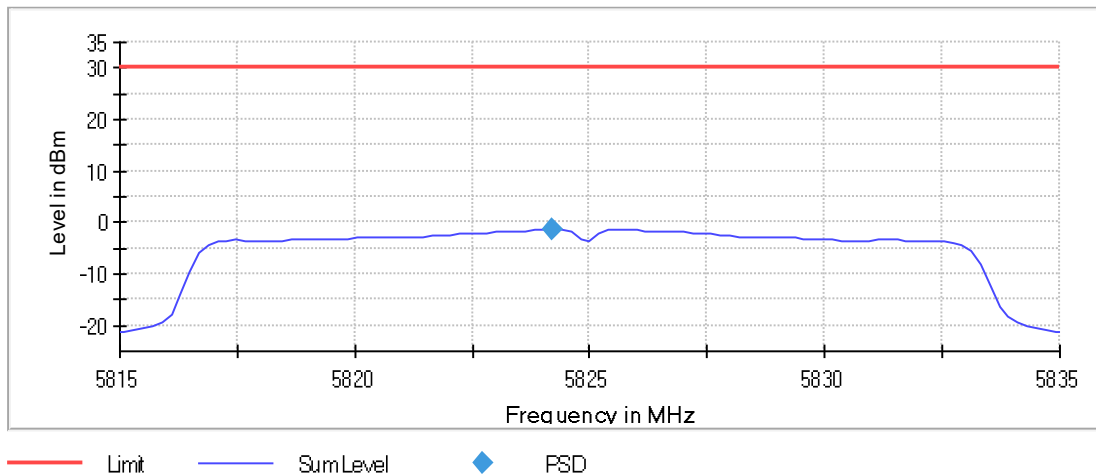
Graph 151: PSD at 5745 MHz (Power Level 20)

Power Spectral Density



Graph 152: PSD at 5785 MHz (Power Level 20)

Power Spectral Density



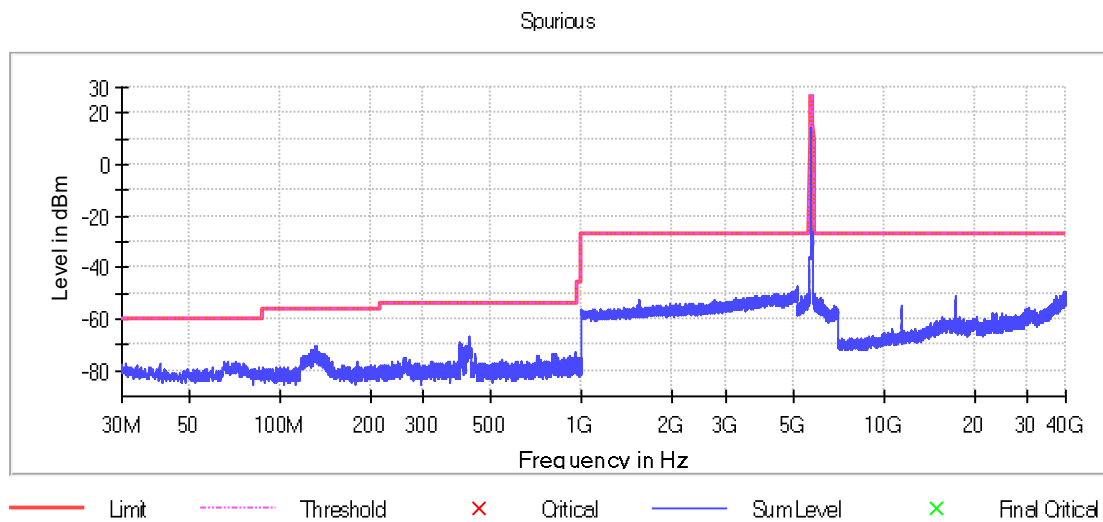
Graph 153: PSD at 5825 MHz (Power Level 20)

6.4.1.5 §15.407(b) and §15.207 Undesirable Emissions – Restricted Bands (UNII 3)

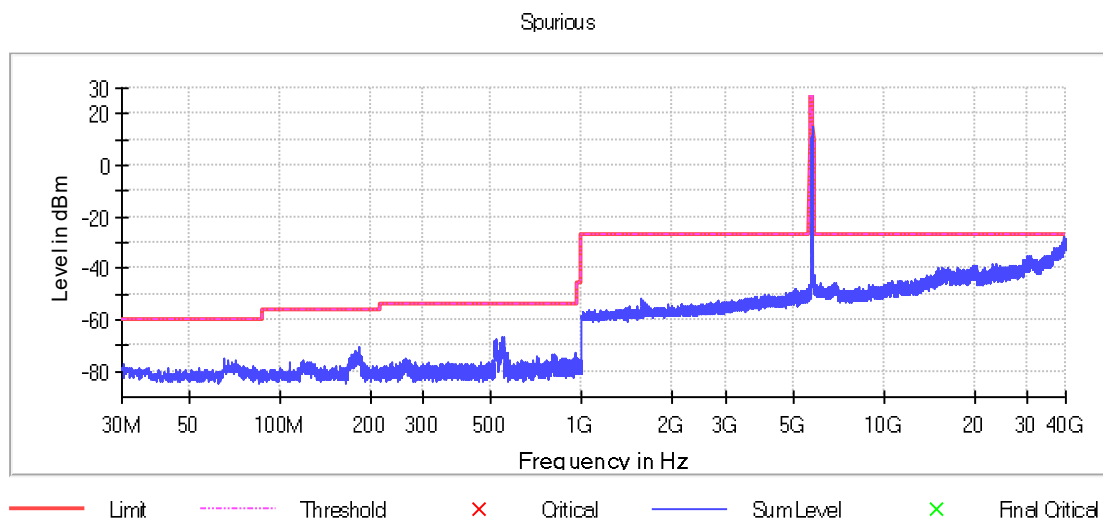
Undesirable radiated emissions in the restricted bands above 1GHz were tested radiated at the low, middle, and high channels at the maximum possible power setting (20). Radiated emissions were measured on both T5IW8 and T5IW11.

Undesirable Emissions were also measured as conducted at the Antenna Port for each channel with stepped powers and corrected using the highest gain antenna (3.3dBi) according to C63.10, sections 11.12.2.2 and 11.12.2.6. Frequencies below 1000MHz were tested for compliance with 15.209 limits with 100kHz RBW at the intended power set level per channel shown in Section 2.3 and noted below. Measurement graphs show max-peak detector results. Below 1000 MHz, when emissions approach the limit, those frequencies are measured with a quasi-peak detector to determine compliance, and those results will be tabulated below the measurement graph.

Emissions Transmitting 5745 MHz at Power Level 20:

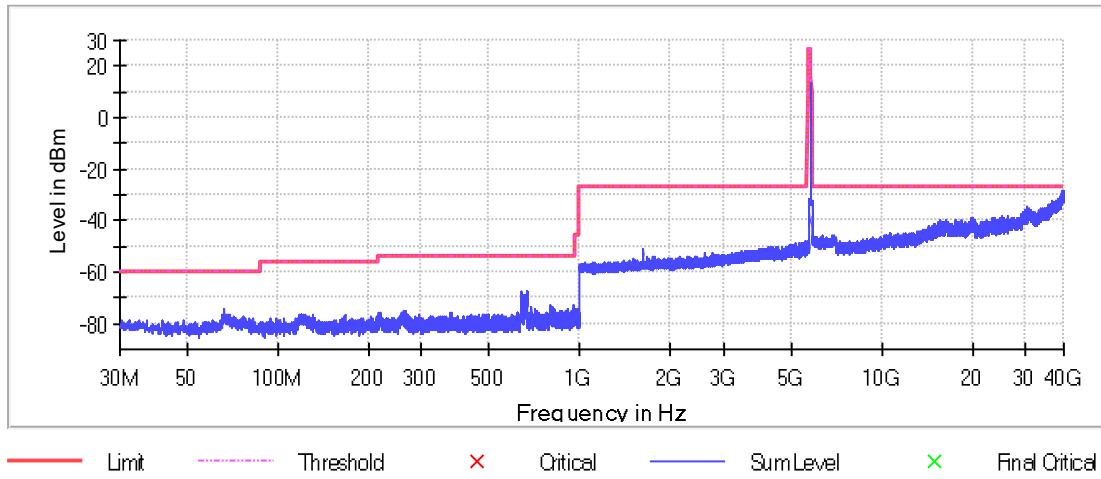


Emissions Transmitting 5785 MHz at Power Level 20:



Emissions Transmitting 5825 MHz at Power Level 20:

Spurious



T5IW8 Radiated Emissions Above 1000MHz Transmitting 5745 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11501.1	Peak	Vertical	35.5	17.2	52.7	74.0	-21.3
11486.3	Average	Vertical	22.9	17.1	40.0	54.0	-14.0
11483.2	Peak	Horizontal	36.0	17.1	53.1	74.0	-21.0
11491.7	Average	Horizontal	22.8	17.2	40.0	54.0	-14.1
17241.8	Peak	Vertical	34.4	21.3	55.7	74.0	-18.3
17237.0	Average	Vertical	21.5	21.3	42.8	54.0	-11.2
17238.7	Peak	Horizontal	34.2	21.3	55.4	74.0	-18.6
17232.3	Average	Horizontal	21.3	21.2	42.4	54.0	-11.6
23031.1	Peak	Vertical	39.1	21.2	60.3	74.0	-13.7
22980.1	Average	Vertical	25.1	21.0	46.1	54.0	-7.9
23019.4	Peak	Horizontal	39.0	21.2	60.2	74.0	-13.8
22980.1	Average	Horizontal	25.3	21.0	46.3	54.0	-7.7
28755.9	Peak	Vertical	33.3	22.6	55.9	74.0	-18.1
28750.2	Average	Vertical	19.6	22.6	42.2	54.0	-11.8
28666.1	Peak	Horizontal	33.8	22.5	56.4	74.0	-17.6
28730.1	Average	Horizontal	19.8	22.6	42.4	54.0	-11.6
34427.5	Peak	Vertical	29.4	28.4	57.7	74.0	-16.3
34386.5	Average	Vertical	16.0	28.5	44.4	54.0	-9.6
34419.2	Peak	Horizontal	29.5	28.4	57.9	74.0	-16.1
34446.1	Average	Horizontal	16.0	28.3	44.3	54.0	-9.7

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5785 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11582.1	Peak	Vertical	36.5	17.7	54.1	74.0	-19.9
11565.1	Average	Vertical	23.3	17.7	41.0	54.0	-13.0
11565.6	Peak	Horizontal	36.9	17.7	54.6	74.0	-19.5
11568.0	Average	Horizontal	23.4	17.7	41.1	54.0	-12.9
17364.3	Peak	Vertical	35.8	22.9	58.6	74.0	-15.4
17354.1	Average	Vertical	23.1	22.7	45.8	54.0	-8.2

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
17362.0	Peak	Horizontal	35.7	22.8	58.5	74.0	-15.5
17358.1	Average	Horizontal	22.8	22.8	45.6	54.0	-8.4
23095.0	Peak	Vertical	39.1	21.4	60.5	74.0	-13.5
23099.4	Average	Vertical	25.6	21.4	47.1	54.0	-6.9
23115.0	Peak	Horizontal	39.3	21.5	60.8	74.0	-13.2
23140.0	Average	Horizontal	25.4	21.5	46.9	54.0	-7.1
28862.2	Peak	Vertical	32.6	22.8	55.5	74.0	-18.6
28936.0	Average	Vertical	18.8	23.0	41.7	54.0	-12.3
28865.5	Peak	Horizontal	32.9	22.8	55.7	74.0	-18.3
28922.2	Average	Horizontal	19.0	22.9	41.9	54.0	-12.1
34661.6	Peak	Vertical	28.5	27.9	56.4	74.0	-17.6
34689.5	Average	Vertical	14.7	27.8	42.6	54.0	-11.5
34677.6	Peak	Horizontal	28.4	27.9	56.2	74.0	-17.8
34686.2	Average	Horizontal	14.9	27.8	42.8	54.0	-11.3

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5825 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11666.8	Peak	Vertical	36.3	17.6	53.9	74.0	-20.1
11634.1	Average	Vertical	23.0	17.6	40.7	54.0	-13.3
11642.6	Peak	Horizontal	36.1	17.6	53.7	74.0	-20.3
11646.5	Average	Horizontal	23.2	17.6	40.9	54.0	-13.2
17479.5	Peak	Vertical	35.4	23.8	59.2	74.0	-14.9
17477.3	Average	Vertical	22.3	23.8	46.1	54.0	-8.0
17482.6	Peak	Horizontal	35.1	23.8	58.9	74.0	-15.1
17471.9	Average	Horizontal	22.4	23.7	46.1	54.0	-7.9
23326.5	Peak	Vertical	39.6	21.8	61.4	74.0	-12.6
23349.7	Average	Vertical	26.2	21.7	47.8	54.0	-6.2
23327.5	Peak	Horizontal	39.5	21.8	61.3	74.0	-12.7
23300.0	Average	Horizontal	25.3	21.9	47.1	54.0	-6.9
29153.1	Peak	Vertical	32.1	23.0	55.1	74.0	-18.9

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
29150.4	Average	Vertical	18.8	23.0	41.8	54.0	-12.2
29133.1	Peak	Horizontal	32.2	23.0	55.2	74.0	-18.8
29155.9	Average	Horizontal	19.0	23.0	42.0	54.0	-12.0
34975.2	Peak	Vertical	26.4	29.2	55.5	74.0	-18.5
34912.9	Average	Vertical	14.4	28.8	43.2	54.0	-10.8
34990.9	Peak	Horizontal	27.9	29.2	57.1	74.0	-16.9
34990.5	Average	Horizontal	14.7	29.2	43.9	54.0	-10.1

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5745 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11496.2	Peak	Vertical	36.1	17.2	53.3	74.0	-20.7
11490.0	Average	Vertical	23.2	17.1	40.3	54.0	-13.7
11494.6	Peak	Horizontal	36.4	17.2	53.5	74.0	-20.5
11491.8	Average	Horizontal	23.3	17.2	40.4	54.0	-13.6
17209.9	Peak	Vertical	36.0	20.9	57.0	74.0	-17.0
17239.4	Average	Vertical	22.0	21.3	43.3	54.0	-10.7
17263.4	Peak	Horizontal	35.3	21.6	56.9	74.0	-17.1
17238.4	Average	Horizontal	22.1	21.3	43.3	54.0	-10.7
23018.5	Peak	Vertical	38.6	21.1	59.7	74.0	-14.3
23021.0	Average	Vertical	24.5	21.2	45.7	54.0	-8.3
23030.5	Peak	Horizontal	38.5	21.2	59.6	74.0	-14.4
23031.0	Average	Horizontal	24.6	21.2	45.8	54.0	-8.2
28781.6	Peak	Vertical	33.4	22.7	56.1	74.0	-17.9
28787.6	Average	Vertical	19.5	22.7	42.2	54.0	-11.8
28763.7	Peak	Horizontal	32.8	22.7	55.4	74.0	-18.6
28784.3	Average	Horizontal	19.7	22.7	42.4	54.0	-11.6
34420.1	Peak	Vertical	29.1	28.4	57.4	74.0	-16.6
34412.6	Average	Vertical	15.5	28.4	43.9	54.0	-10.1
34416.5	Peak	Horizontal	29.1	28.4	57.5	74.0	-16.5
34402.5	Average	Horizontal	15.7	28.4	44.1	54.0	-9.9

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5785 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11571.2	Peak	Vertical	36.9	17.7	54.5	74.0	-19.5
11571.3	Average	Vertical	23.4	17.7	41.1	54.0	-12.9
11572.0	Peak	Horizontal	36.7	17.7	54.3	74.0	-19.7
11572.3	Average	Horizontal	23.8	17.7	41.5	54.0	-12.5
17364.5	Peak	Vertical	35.2	22.9	58.1	74.0	-15.9
17362.3	Average	Vertical	21.9	22.8	44.7	54.0	-9.3
17371.7	Peak	Horizontal	35.1	23.0	58.1	74.0	-16.0
17358.8	Average	Horizontal	21.9	22.8	44.7	54.0	-9.3
23101.2	Peak	Vertical	38.5	21.4	59.9	74.0	-14.1
23109.3	Average	Vertical	25.2	21.5	46.6	54.0	-7.4
23122.5	Peak	Horizontal	38.6	21.5	60.1	74.0	-13.9
23099.7	Average	Horizontal	25.3	21.4	46.8	54.0	-7.2
28936.6	Peak	Vertical	32.6	23.0	55.6	74.0	-18.4
28932.1	Average	Vertical	18.7	23.0	41.7	54.0	-12.4
28933.1	Peak	Horizontal	32.6	23.0	55.5	74.0	-18.5
28862.2	Average	Horizontal	18.9	22.8	41.8	54.0	-12.2
34656.4	Peak	Vertical	27.5	27.9	55.4	74.0	-18.6
34665.2	Average	Vertical	14.4	27.9	42.3	54.0	-11.7
34763.6	Peak	Horizontal	28.2	28.1	56.2	74.0	-17.8
34648.8	Average	Horizontal	14.6	27.9	42.5	54.0	-11.5

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5825 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11652.2	Peak	Vertical	36.7	17.6	54.3	74.0	-19.7
11655.4	Average	Vertical	23.3	17.6	40.9	54.0	-13.1
11668.3	Peak	Horizontal	36.9	17.6	54.5	74.0	-19.5
11645.1	Average	Horizontal	23.4	17.6	41.1	54.0	-12.9
17463.8	Peak	Vertical	35.3	23.7	59.0	74.0	-15.0
17472.1	Average	Vertical	22.0	23.7	45.8	54.0	-8.2

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
17477.2	Peak	Horizontal	35.6	23.8	59.4	74.0	-14.6
17477.8	Average	Horizontal	21.9	23.8	45.7	54.0	-8.3
23349.2	Peak	Vertical	38.7	21.7	60.4	74.0	-13.6
23320.9	Average	Vertical	24.9	21.9	46.8	54.0	-7.2
23336.2	Peak	Horizontal	39.0	21.8	60.7	74.0	-13.3
23353.5	Average	Horizontal	25.8	21.7	47.4	54.0	-6.6
29088.7	Peak	Vertical	32.2	23.0	55.2	74.0	-18.8
29147.8	Average	Vertical	19.0	23.0	42.0	54.0	-12.0
29179.8	Peak	Horizontal	32.9	23.0	55.9	74.0	-18.1
29152.3	Average	Horizontal	19.1	23.0	42.1	54.0	-11.9
35015.5	Peak	Vertical	27.9	29.4	57.2	74.0	-16.8
35010.1	Average	Vertical	14.5	29.3	43.9	54.0	-10.1
35035.7	Peak	Horizontal	28.0	29.5	57.5	74.0	-16.6
35039.3	Average	Horizontal	14.7	29.5	44.2	54.0	-9.8

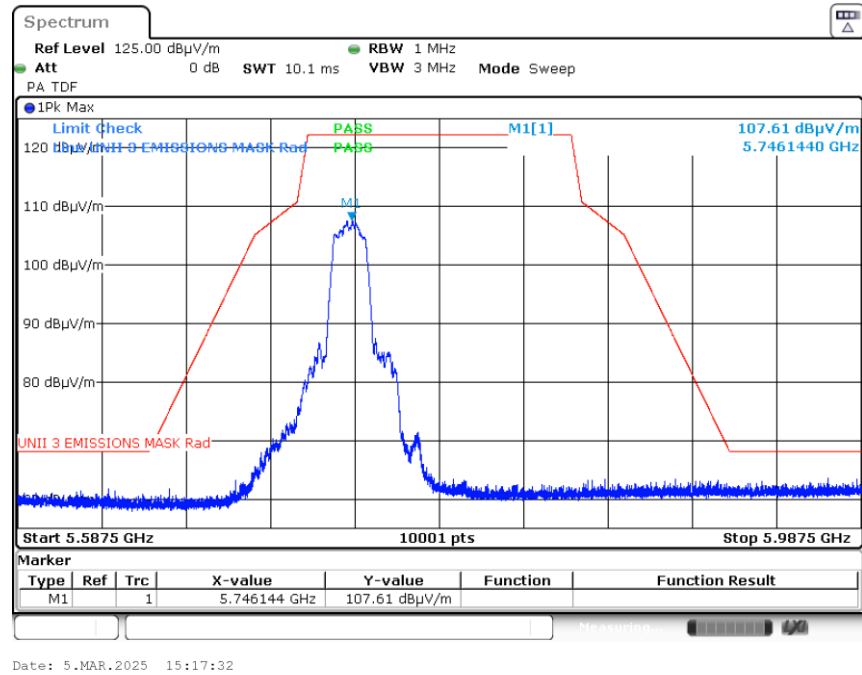
Result

The EUT complied with the specification limit by a margin of 6.2 dB.

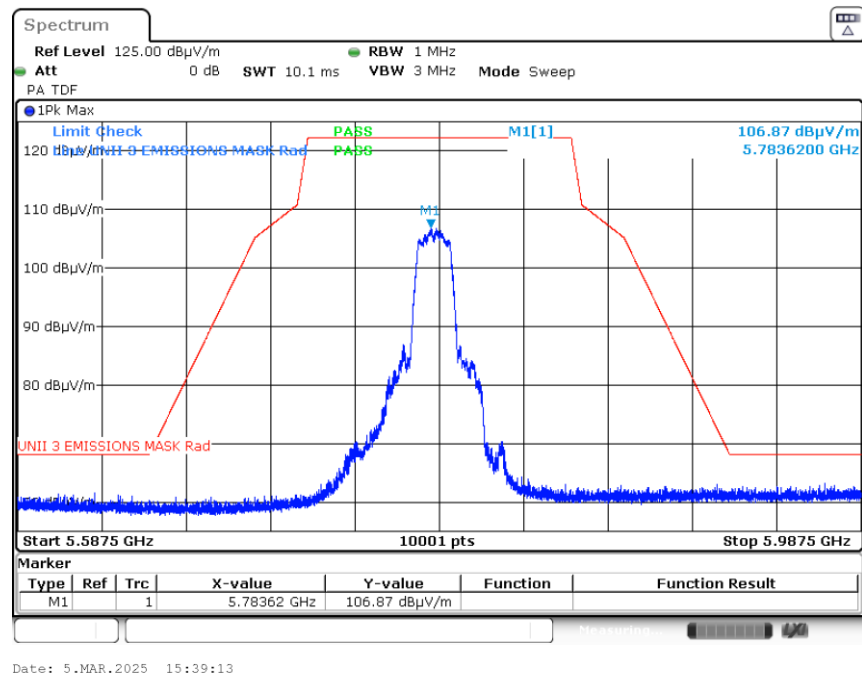
6.4.1.6 §15.407(b) Undesirable Emissions – Band Mask (UNII 3)

Radiated measurements of the UNII-3 band mask are shown below.

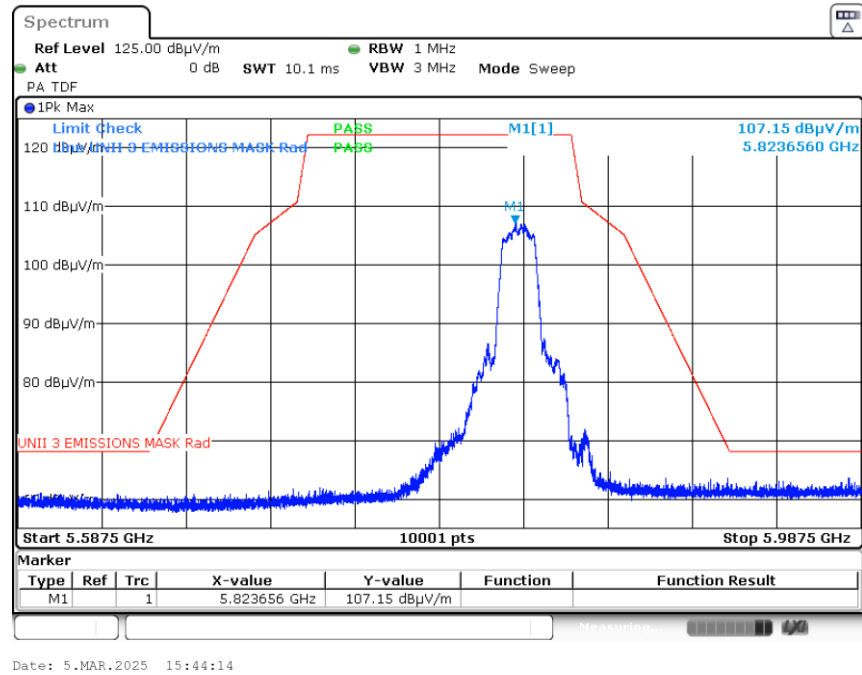
T5IW8 Transmitting on 5745 MHz (Power Level 20):



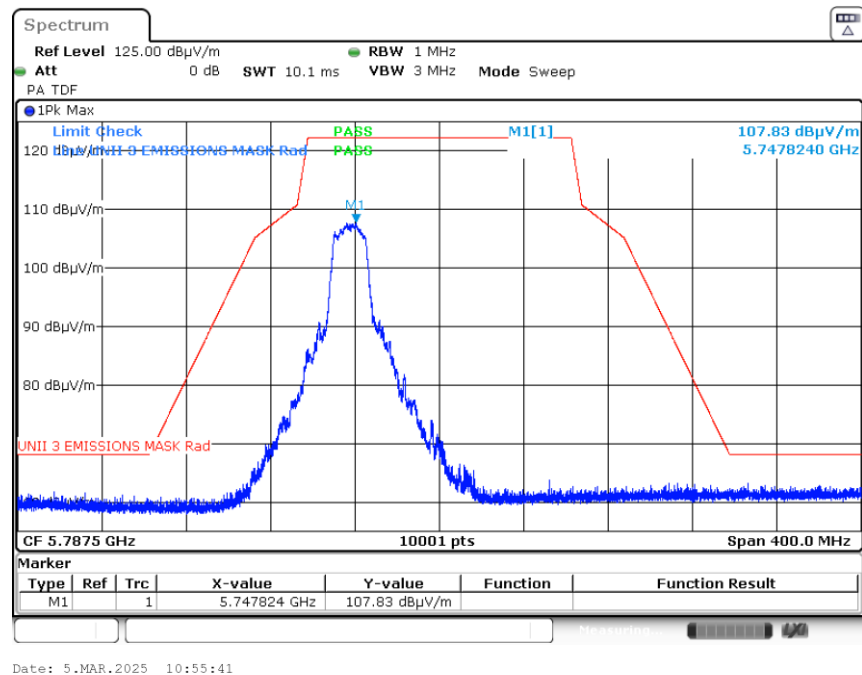
T5IW8 Transmitting on 5785 MHz (Power Level 20):



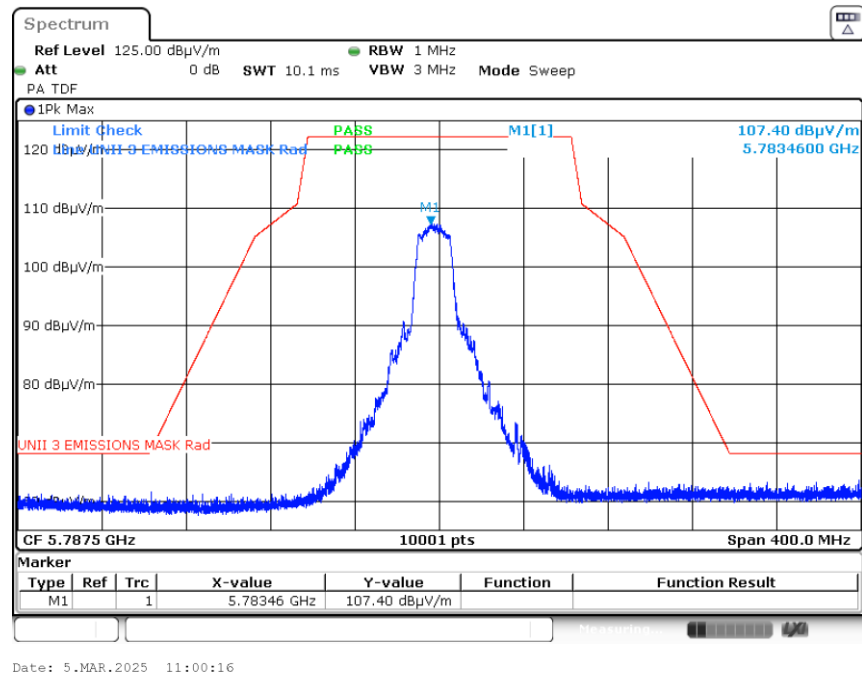
T5IW8 Transmitting on 5825 MHz (Power Level 20):



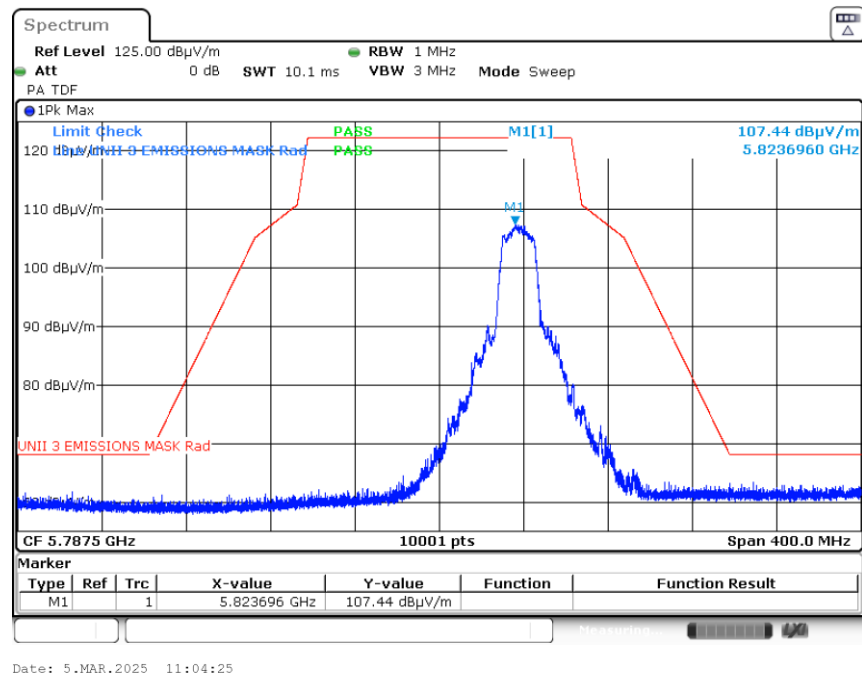
T5IW11 Transmitting on 5745 MHz (Power Level 20):



T5IW11 Transmitting on 5785 MHz (Power Level 20):



T5IW11 Transmitting on 5825 MHz (Power Level 20):



Result

The EUT complied with the specification.

6.4.2 802.11n-20 Mode

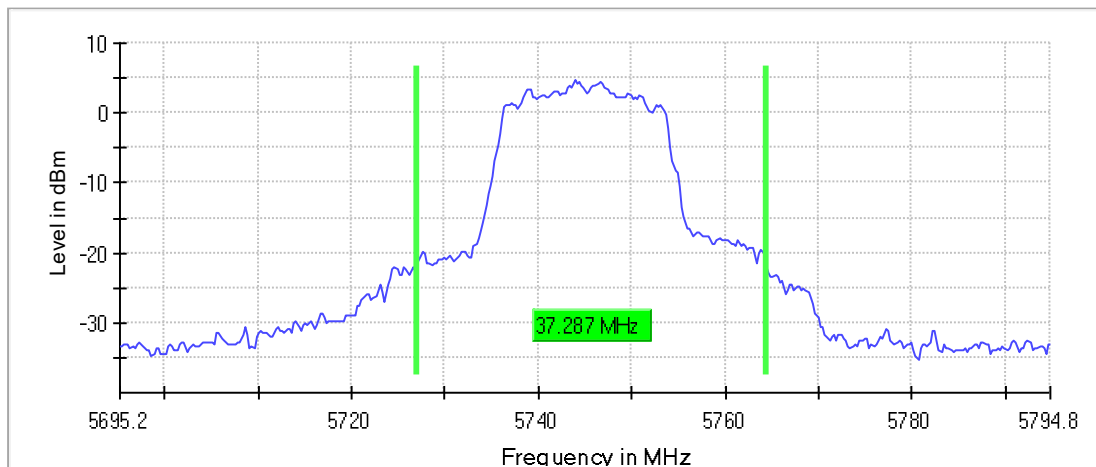
6.4.2.1 §15.403 26dB Bandwidth (UNII 3)

Bandwidths were measured at the intended power set level per channel.

Frequency (MHz)	Emissions 26 dB Bandwidth (MHz)
5745	37.3
5785	41.0
5825	44.0

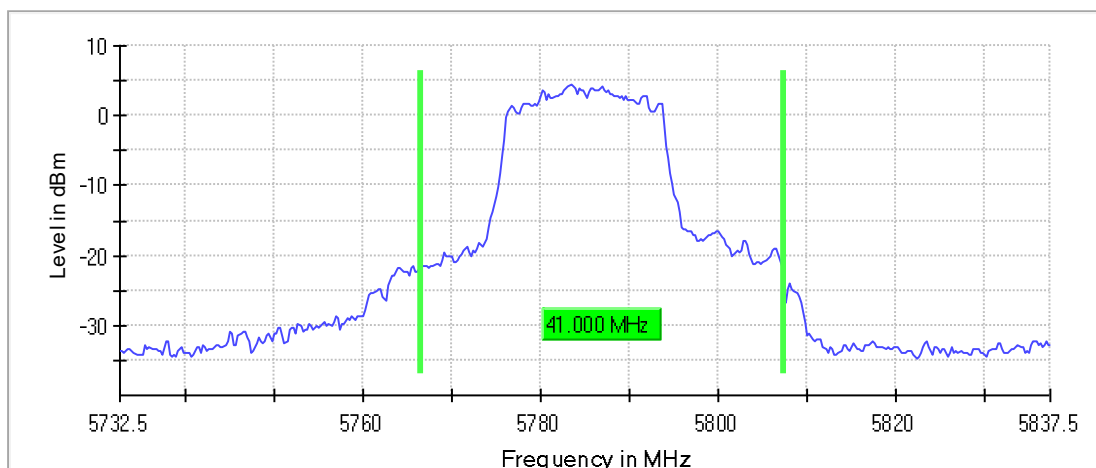
Table 22: 26 dB Emissions Bandwidth

26 dB Bandwidth

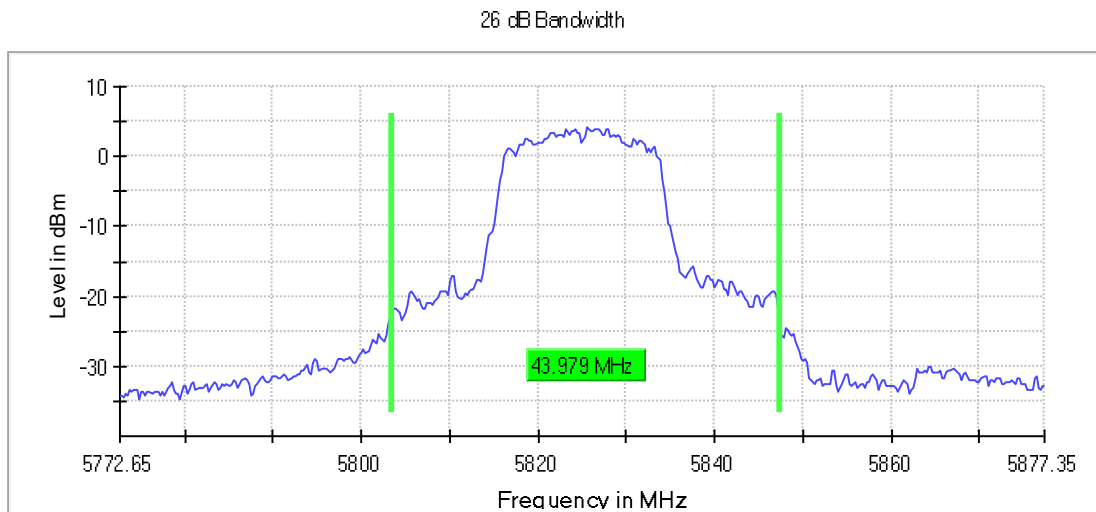


Graph 154: 26 dB Emissions Bandwidth Transmitting at 5745 MHz

26 dB Bandwidth



Graph 155: 26 dB Emissions Bandwidth Transmitting at 5785 MHz



Graph 156: 26 dB Emissions Bandwidth Transmitting at 5825 MHz

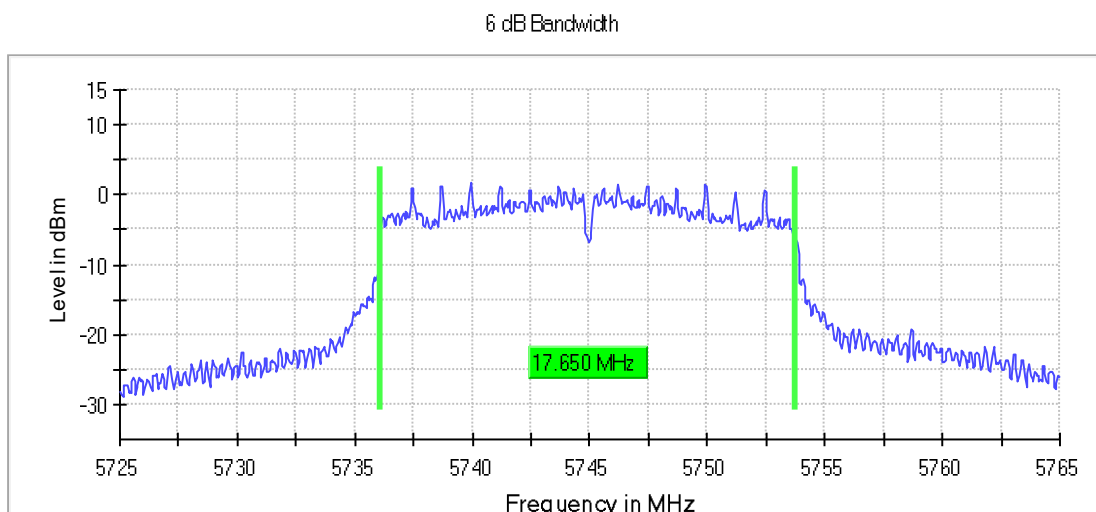
6.4.2.2 §15.407(e) Minimum 6dB Emissions Bandwidth (UNII 3)

The UNII-3 minimum 6 dB emissions bandwidth for the channel is shown in the table and plots below.

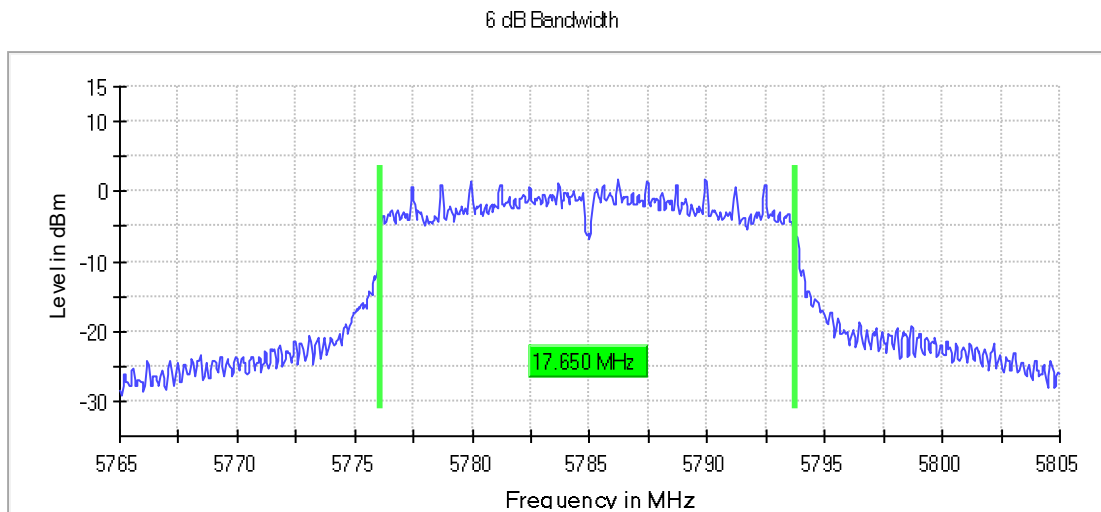
Frequency (MHz)	Emissions 6 dB bandwidth (MHz)
5745	17.7
5785	17.7
5825	17.7

Result

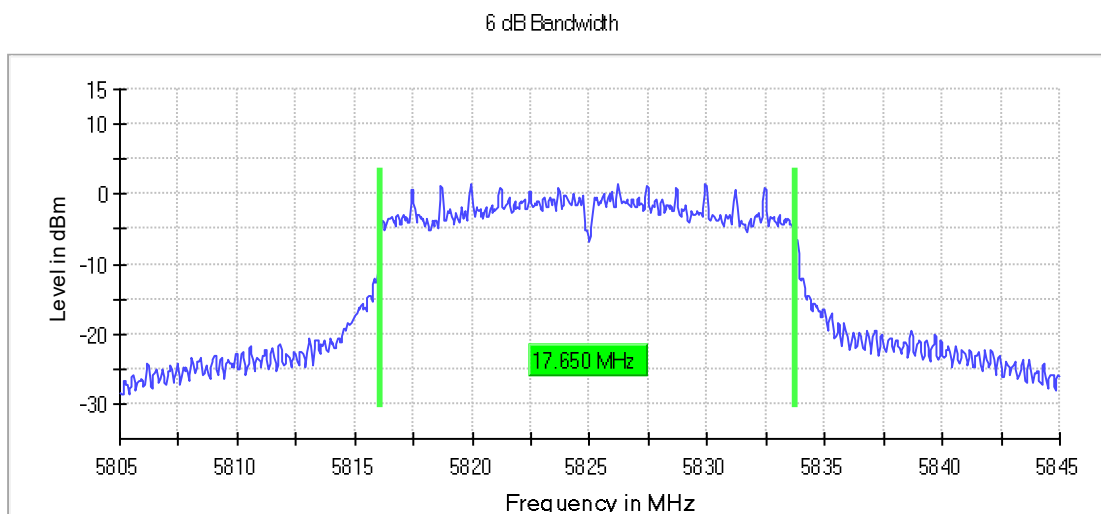
In the configurations tested the EUT complied with the requirements of the specification.



Graph 157: UNII-3 Lowest Channel Minimum 6 dB Bandwidth



Graph 158: UNII-3 Middle Channel Minimum 6 dB Bandwidth



Graph 159: UNII-3 Highest Channel Minimum 6 dB Bandwidth

6.4.2.3 §15.407(a) Power Limits: Maximum Conducted Output Power (UNII 3)

The following tables show the adjusted conducted power limits.

UNII-3 Conducted Power Limits

Maximum conducted power limits for the UNII-3 band are adjusted based on the isotropic antenna gain and wireless architecture.

Wireless Architecture	Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
AP	3.3	6	0	30	30

Table 23: UNII-3 maximum conducted power limits based upon antenna gain and Wireless Architecture.

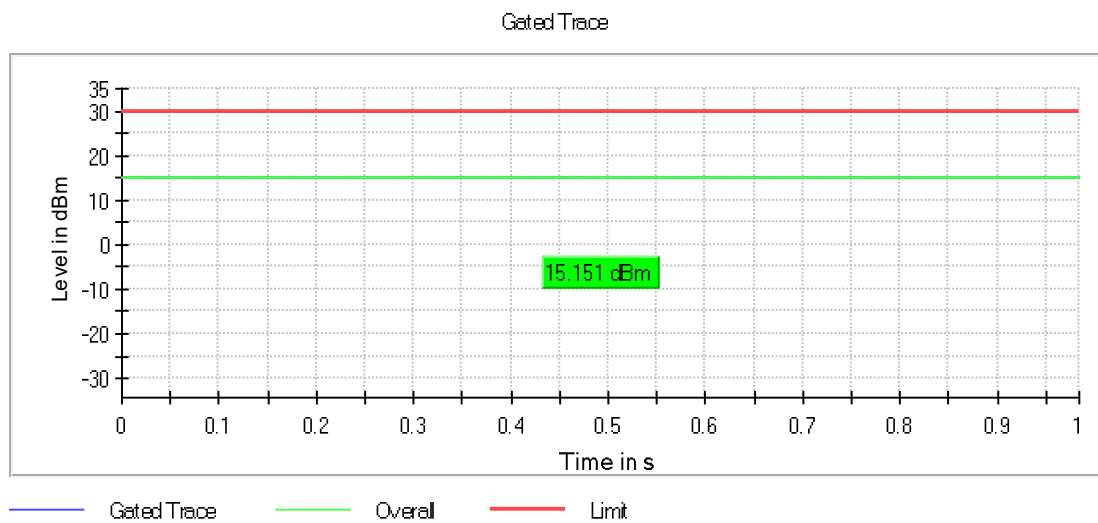
Power was measured for the low, middle, and high channel at the maximum power level possible (20) using KDB 789033 D02 method PM-G and a gated power meter which does not require an average correction factor.

UNII-3 Conducted Power Measurements – AP Architecture

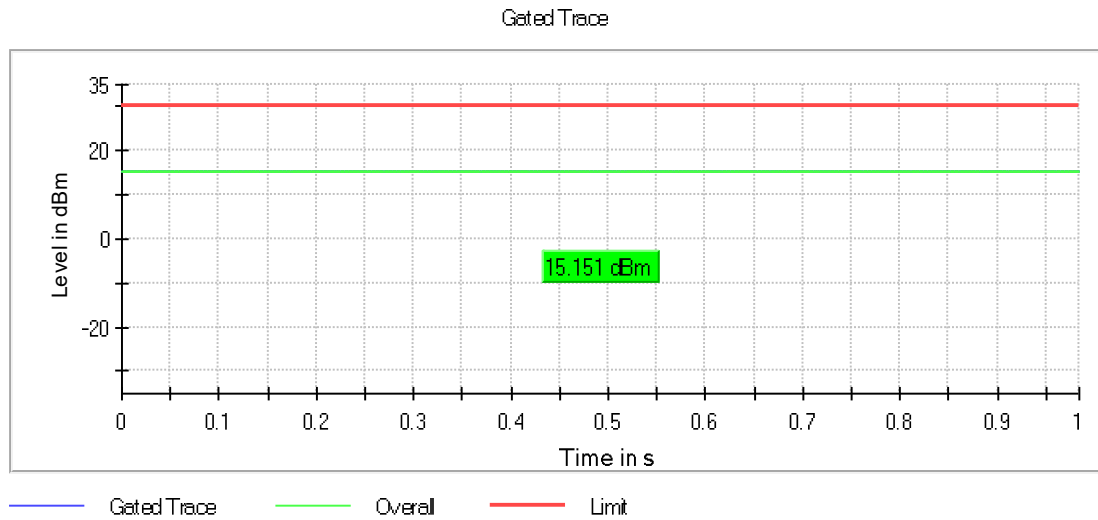
Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)
5745	15.2	30	-14.8
5785	15.2	30	-14.8
5825	15.2	30	-14.8

Result

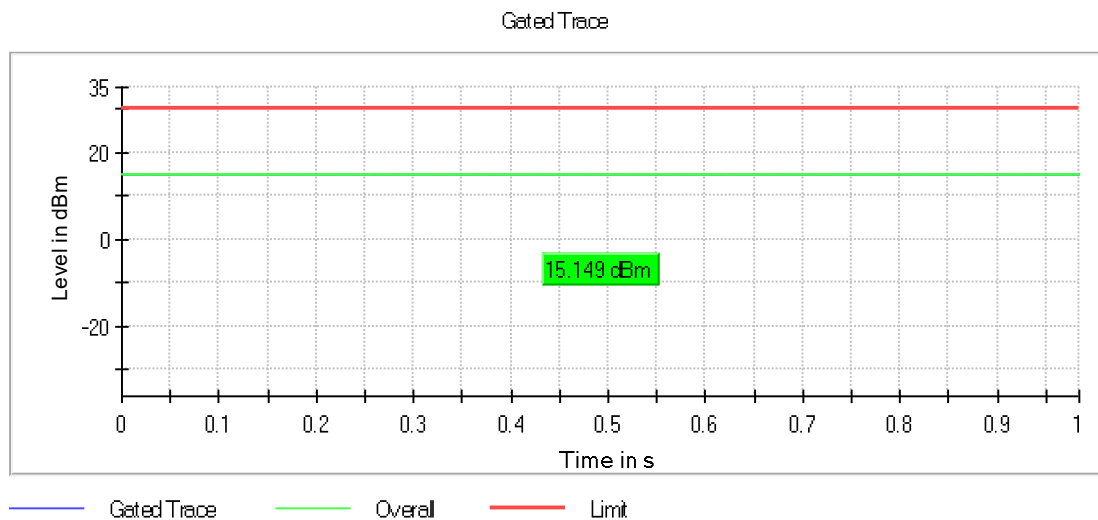
In the configurations tested the EUT complied with the limit with a margin of 14.8 dB.



Graph 160: Gated Trace Power Transmitting at 5745 MHz (Power Level 20)



Graph 161: Gated Trace Power Transmitting at 5785 MHz (Power Level 20)



Graph 162: Gated Trace Power Transmitting at 5825 MHz (Power Level 20)

6.4.2.4 §15.407(a) Power Limits: Maximum Power Spectral Density (UNII 3)

The following tables show the adjusted power spectral density limits.

UNII-3 Power Spectral Density Limits

Power spectral density limits for the UNII-3 band are adjusted based on isotropic antenna gain.

Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm/500kHz)	Adjusted Limit (dBm/500kHz)
3.3	6	0	30	30

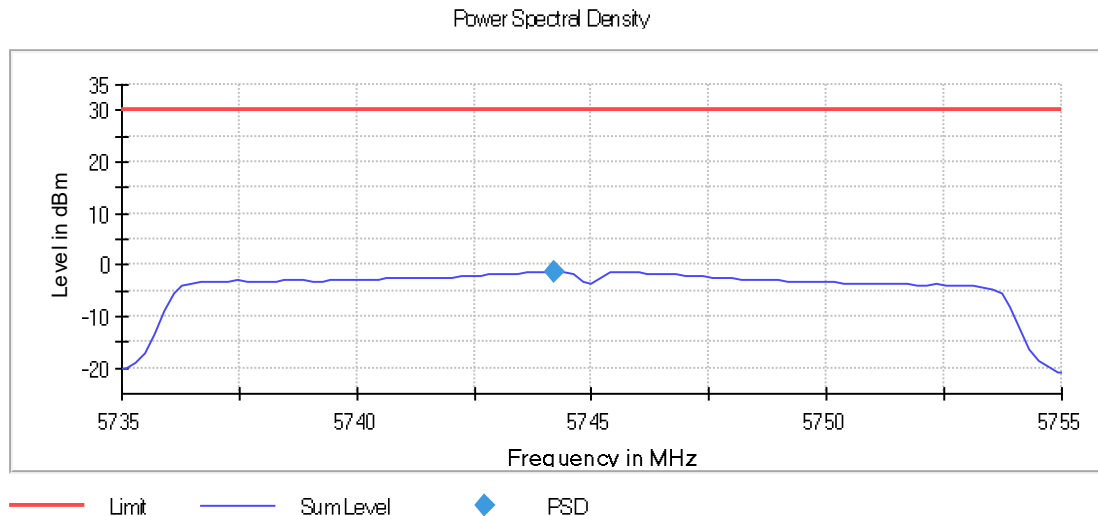
EIRP was measured for the low, middle, and high channel at the maximum power level possible (20) using method SA-1 to create the power spectrum over a 500kHz measurement bandwidth. See Section 6.2.3 for measurement graphics.

UNII-3 Power Spectral Density Measurements

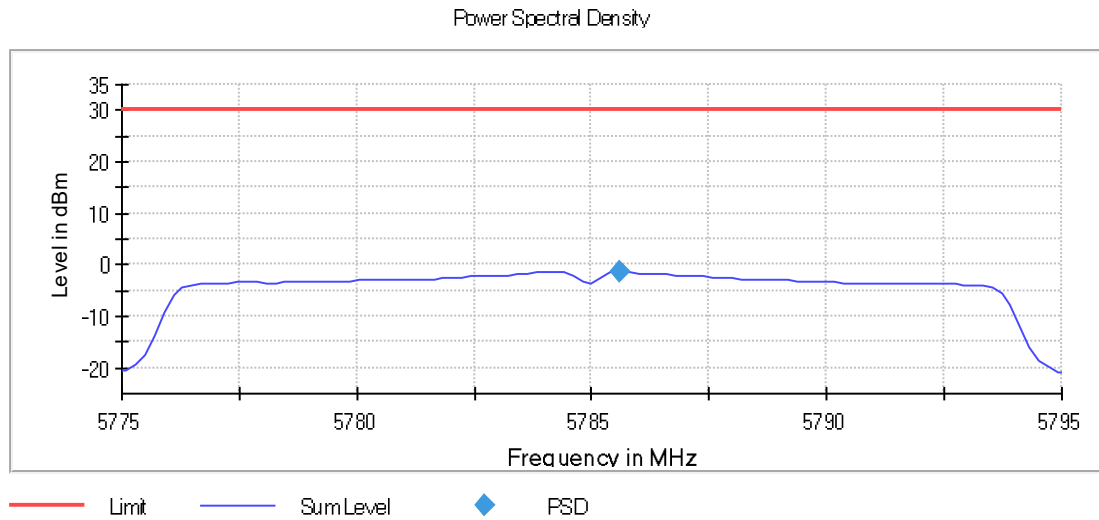
Frequency (MHz)	EIRP Density Limit (dBm/500kHz)	EIRP Density Limit (dBm/500kHz)	Margin (dB)
5745	-1.3	30	-31.3
5785	-1.4	30	-31.4
5825	-1.5	30	-31.5

Result

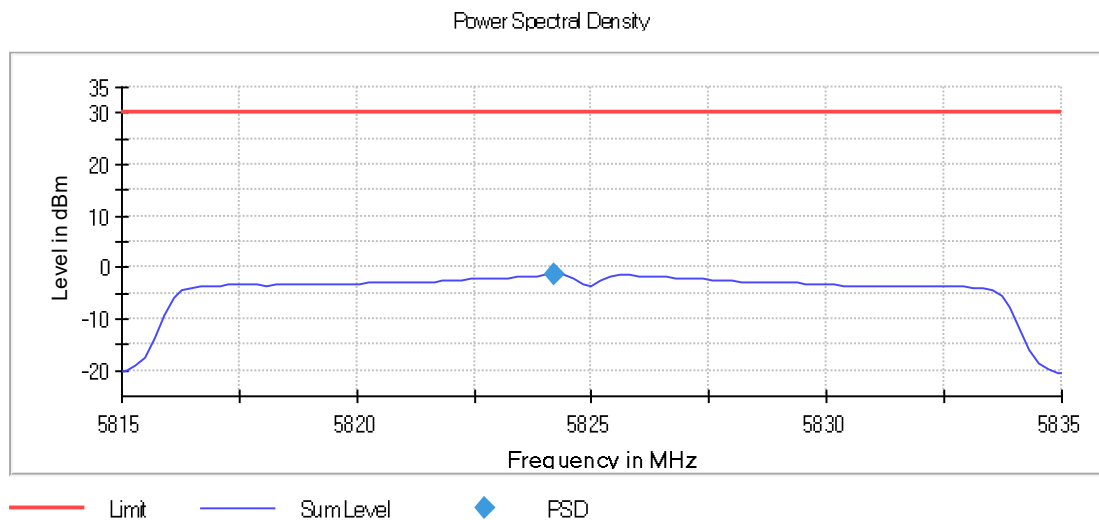
In the configurations tested the EUT complied with the limit with a margin of 31.3 dB.



Graph 163: PSD at 5745 MHz (Power Level 20)



Graph 164: PSD at 5785 MHz (Power Level 20)



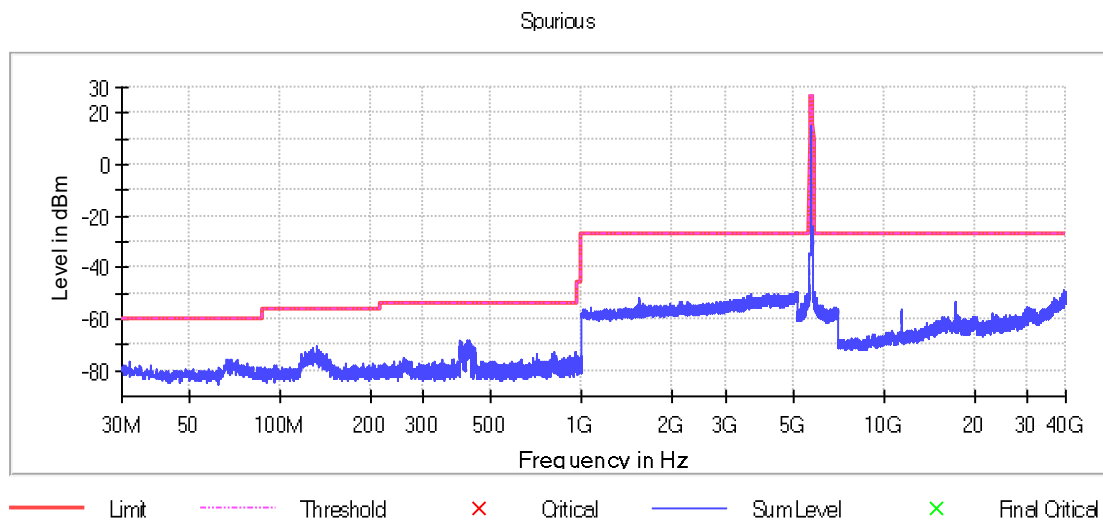
Graph 165: PSD at 5825 MHz (Power Level 20)

6.4.2.5 §15.407(b) and §15.207 Undesirable Emissions – Restricted Bands (UNII 3)

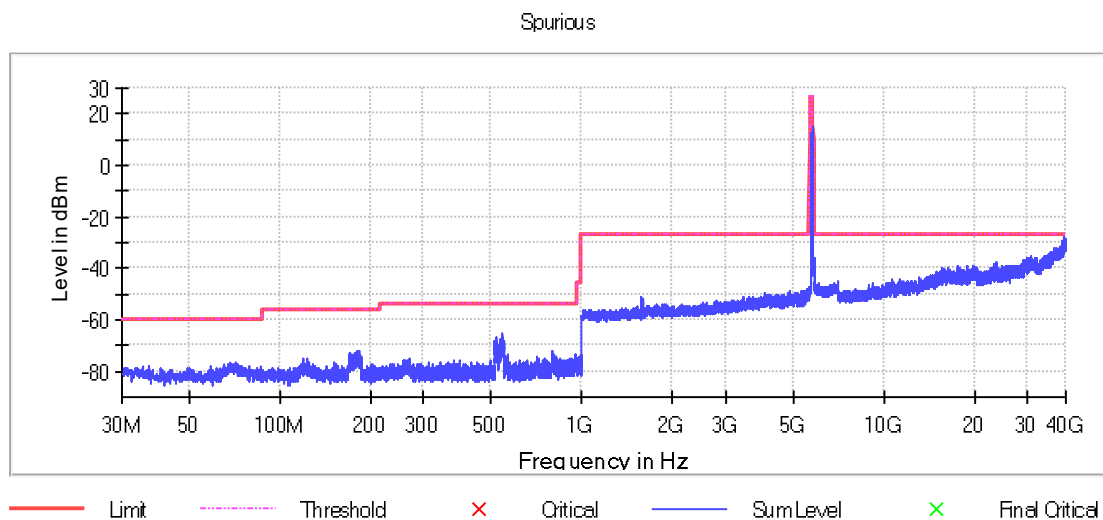
Undesirable radiated emissions in the restricted bands above 1GHz were tested radiated at the low, middle, and high channels at the maximum possible power setting (20). Radiated emissions were measured on both T5IW8 and T5IW11.

Undesirable Emissions were also measured as conducted at the Antenna Port for each channel with stepped powers and corrected using the highest gain antenna (3.3dBi) according to C63.10, sections 11.12.2.2 and 11.12.2.6. Frequencies below 1000MHz were tested for compliance with 15.209 limits with 100kHz RBW at the intended power set level per channel shown in Section 2.3 and noted below. Measurement graphs show max-peak detector results. Below 1000 MHz, when emissions approach the limit, those frequencies are measured with a quasi-peak detector to determine compliance, and those results will be tabulated below the measurement graph.

Emissions Transmitting 5745 MHz at Power Level 20:

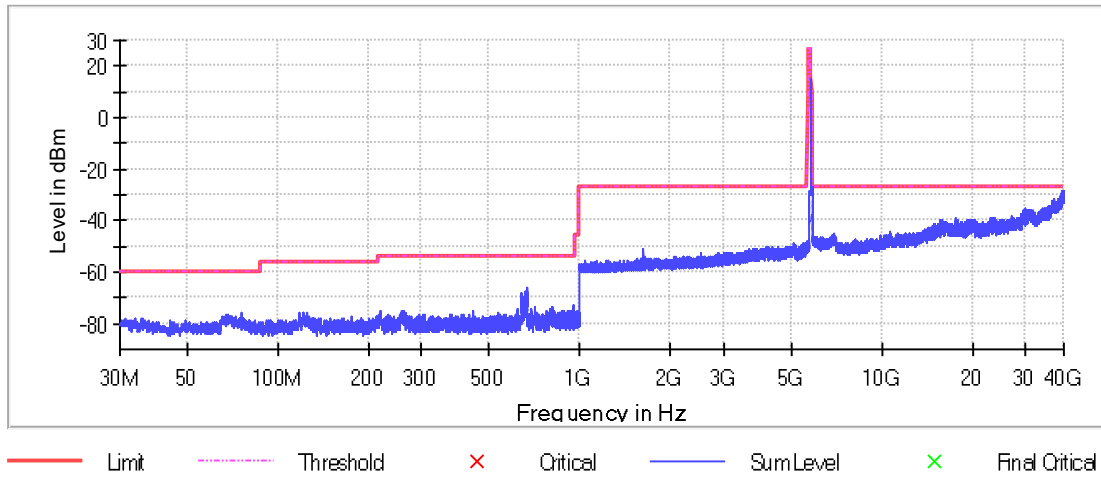


Emissions Transmitting 5785 MHz at Power Level 20:



Emissions Transmitting 5825 MHz at Power Level 20:

Spurious



T5IW8 Radiated Emissions Above 1000MHz Transmitting 5745 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11492.2	Peak	Vertical	37.6	17.2	54.8	74.0	-19.2
11489.4	Average	Vertical	23.8	17.1	40.9	54.0	-13.1
11494.1	Peak	Horizontal	37.2	17.2	54.4	74.0	-19.6
11491.6	Average	Horizontal	24.1	17.2	41.3	54.0	-12.7
17241.8	Peak	Vertical	35.7	21.3	57.0	74.0	-17.0
17236.9	Average	Vertical	23.3	21.3	44.6	54.0	-9.4
17230.8	Peak	Horizontal	36.4	21.2	57.5	74.0	-16.5
17236.1	Average	Horizontal	23.5	21.2	44.8	54.0	-9.2
23002.4	Peak	Vertical	38.0	21.1	59.1	74.0	-14.9
22998.5	Average	Vertical	24.7	21.1	45.7	54.0	-8.3
22994.6	Peak	Horizontal	38.3	21.1	59.4	74.0	-14.7
22980.0	Average	Horizontal	24.8	21.0	45.8	54.0	-8.2
28750.4	Peak	Vertical	32.2	22.6	54.8	74.0	-19.2
28781.7	Average	Vertical	19.1	22.7	41.8	54.0	-12.2
28761.3	Peak	Horizontal	32.8	22.7	55.5	74.0	-18.5
28769.3	Average	Horizontal	19.2	22.7	41.9	54.0	-12.1
34468.7	Peak	Vertical	28.0	28.3	56.3	74.0	-17.7
34482.2	Average	Vertical	15.0	28.3	43.2	54.0	-10.8
34521.7	Peak	Horizontal	28.7	28.2	56.9	74.0	-17.1
34496.8	Average	Horizontal	15.1	28.2	43.4	54.0	-10.6

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5785 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11584.0	Peak	Vertical	36.3	17.7	53.9	74.0	-20.1
11565.3	Average	Vertical	23.2	17.7	40.8	54.0	-13.2
11574.1	Peak	Horizontal	36.7	17.7	54.3	74.0	-19.7
11564.9	Average	Horizontal	23.2	17.7	40.9	54.0	-13.1
17350.5	Peak	Vertical	35.1	22.7	57.8	74.0	-16.3
17357.3	Average	Vertical	22.7	22.8	45.4	54.0	-8.6

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
17363.2	Peak	Horizontal	36.2	22.8	59.0	74.0	-15.0
17355.4	Average	Horizontal	22.6	22.8	45.4	54.0	-8.6
23106.4	Peak	Vertical	38.8	21.5	60.3	74.0	-13.7
23107.7	Average	Vertical	25.3	21.5	46.7	54.0	-7.3
23096.6	Peak	Horizontal	39.3	21.4	60.8	74.0	-13.3
23114.2	Average	Horizontal	25.3	21.5	46.7	54.0	-7.3
28912.3	Peak	Vertical	31.4	22.9	54.3	74.0	-19.7
28918.4	Average	Vertical	18.0	22.9	40.9	54.0	-13.1
28882.3	Peak	Horizontal	31.8	22.9	54.7	74.0	-19.3
28928.6	Average	Horizontal	18.0	22.9	41.0	54.0	-13.1
34739.9	Peak	Vertical	27.1	27.9	55.0	74.0	-19.0
34743.1	Average	Vertical	13.4	28.0	41.3	54.0	-12.7
34682.3	Peak	Horizontal	27.8	27.9	55.6	74.0	-18.4
34742.8	Average	Horizontal	13.5	27.9	41.5	54.0	-12.5

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5825 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11629.3	Peak	Vertical	36.4	17.6	54.1	74.0	-19.9
11630.0	Average	Vertical	23.0	17.6	40.6	54.0	-13.4
11633.0	Peak	Horizontal	36.5	17.6	54.2	74.0	-19.8
11636.6	Average	Horizontal	23.1	17.6	40.8	54.0	-13.3
17506.9	Peak	Vertical	34.8	24.0	58.8	74.0	-15.2
17479.0	Average	Vertical	22.2	23.8	46.0	54.0	-8.0
17447.2	Peak	Horizontal	35.8	23.6	59.4	74.0	-14.6
17473.1	Average	Horizontal	22.1	23.8	45.9	54.0	-8.2
23344.2	Peak	Vertical	39.2	21.7	61.0	74.0	-13.0
23339.8	Average	Vertical	25.6	21.8	47.3	54.0	-6.7
23338.3	Peak	Horizontal	39.0	21.8	60.7	74.0	-13.3
23342.8	Average	Horizontal	25.7	21.7	47.4	54.0	-6.6
29140.8	Peak	Vertical	35.4	23.0	58.4	74.0	-15.6

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
29146.2	Average	Vertical	21.4	23.0	44.4	54.0	-9.6
29155.8	Peak	Horizontal	35.6	23.0	58.6	74.0	-15.4
29112.1	Average	Horizontal	21.7	23.0	44.8	54.0	-9.2
34888.6	Peak	Vertical	30.5	28.7	59.2	74.0	-14.8
34869.4	Average	Vertical	17.0	28.6	45.6	54.0	-8.4
34885.9	Peak	Horizontal	30.6	28.7	59.3	74.0	-14.7
34885.9	Average	Horizontal	17.5	28.7	46.2	54.0	-7.8

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5745 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11474.0	Peak	Vertical	36.4	17.1	53.4	74.0	-20.6
11488.4	Average	Vertical	23.0	17.1	40.2	54.0	-13.8
11502.0	Peak	Horizontal	36.3	17.2	53.5	74.0	-20.5
11489.7	Average	Horizontal	23.2	17.1	40.4	54.0	-13.7
17225.5	Peak	Vertical	35.8	21.1	56.9	74.0	-17.1
17235.3	Average	Vertical	22.0	21.2	43.2	54.0	-10.8
17215.3	Peak	Horizontal	36.0	21.0	56.9	74.0	-17.1
17236.7	Average	Horizontal	22.1	21.3	43.3	54.0	-10.7
23024.5	Peak	Vertical	39.0	21.2	60.2	74.0	-13.8
23017.0	Average	Vertical	25.1	21.1	46.3	54.0	-7.7
22977.6	Peak	Horizontal	39.3	21.0	60.3	74.0	-13.7
23030.9	Average	Horizontal	25.2	21.2	46.4	54.0	-7.6
28680.9	Peak	Vertical	34.6	22.6	57.1	74.0	-16.9
28699.5	Average	Vertical	21.2	22.6	43.7	54.0	-10.3
28707.9	Peak	Horizontal	34.9	22.6	57.5	74.0	-16.5
28701.3	Average	Horizontal	21.2	22.6	43.8	54.0	-10.2
34431.3	Peak	Vertical	31.0	28.4	59.4	74.0	-14.6
34425.4	Average	Vertical	17.2	28.4	45.6	54.0	-8.4
34407.2	Peak	Horizontal	30.9	28.4	59.3	74.0	-14.7
34438.0	Average	Horizontal	17.4	28.4	45.7	54.0	-8.3

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5785 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11591.6	Peak	Vertical	37.0	17.7	54.7	74.0	-19.3
11564.9	Average	Vertical	23.3	17.7	41.0	54.0	-13.0
11561.0	Peak	Horizontal	36.8	17.7	54.4	74.0	-19.6
11568.6	Average	Horizontal	23.6	17.7	41.2	54.0	-12.8
17355.1	Peak	Vertical	35.2	22.7	57.9	74.0	-16.1
17367.7	Average	Vertical	21.7	22.9	44.6	54.0	-9.4
17357.7	Peak	Horizontal	35.8	22.8	58.6	74.0	-15.5
17354.6	Average	Horizontal	21.9	22.7	44.6	54.0	-9.4
23139.5	Peak	Vertical	39.2	21.5	60.7	74.0	-13.3
23099.3	Average	Vertical	25.6	21.4	47.0	54.0	-7.0
23129.8	Peak	Horizontal	38.8	21.5	60.3	74.0	-13.7
23097.0	Average	Horizontal	25.6	21.4	47.0	54.0	-7.0
28993.4	Peak	Vertical	33.9	23.1	57.0	74.0	-17.0
28931.0	Average	Vertical	19.8	23.0	42.7	54.0	-11.3
28924.6	Peak	Horizontal	33.6	22.9	56.6	74.0	-17.4
28895.5	Average	Horizontal	20.2	22.9	43.1	54.0	-10.9
34637.5	Peak	Vertical	29.5	27.9	57.5	74.0	-16.5
34679.8	Average	Vertical	16.2	27.9	44.1	54.0	-9.9
34690.6	Peak	Horizontal	29.7	27.8	57.6	74.0	-16.4
34694.7	Average	Horizontal	16.2	27.8	44.0	54.0	-10.0

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5825 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11626.1	Peak	Vertical	36.6	17.7	54.3	74.0	-19.7
11650.2	Average	Vertical	23.2	17.6	40.8	54.0	-13.2
11661.6	Peak	Horizontal	36.0	17.6	53.6	74.0	-20.4
11649.5	Average	Horizontal	23.3	17.6	40.9	54.0	-13.1
17510.0	Peak	Vertical	35.3	24.0	59.3	74.0	-14.7
17471.7	Average	Vertical	22.0	23.7	45.7	54.0	-8.3

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
17497.9	Peak	Horizontal	35.1	23.9	59.0	74.0	-15.0
17478.1	Average	Horizontal	21.9	23.8	45.7	54.0	-8.3
23353.2	Peak	Vertical	39.5	21.7	61.2	74.0	-12.8
23351.0	Average	Vertical	26.1	21.7	47.7	54.0	-6.3
23328.9	Peak	Horizontal	39.2	21.8	61.0	74.0	-13.0
23330.5	Average	Horizontal	25.7	21.8	47.5	54.0	-6.5
29057.7	Peak	Vertical	34.0	23.1	57.1	74.0	-16.9
29072.4	Average	Vertical	20.2	23.1	43.2	54.0	-10.8
29069.2	Peak	Horizontal	33.5	23.1	56.5	74.0	-17.5
29090.8	Average	Horizontal	20.4	23.0	43.5	54.0	-10.5
35012.5	Peak	Vertical	29.6	29.4	58.9	74.0	-15.1
34900.5	Average	Vertical	15.0	28.8	43.8	54.0	-10.3
35001.5	Peak	Horizontal	29.5	29.3	58.8	74.0	-15.2
35005.6	Average	Horizontal	16.4	29.3	45.7	54.0	-8.3

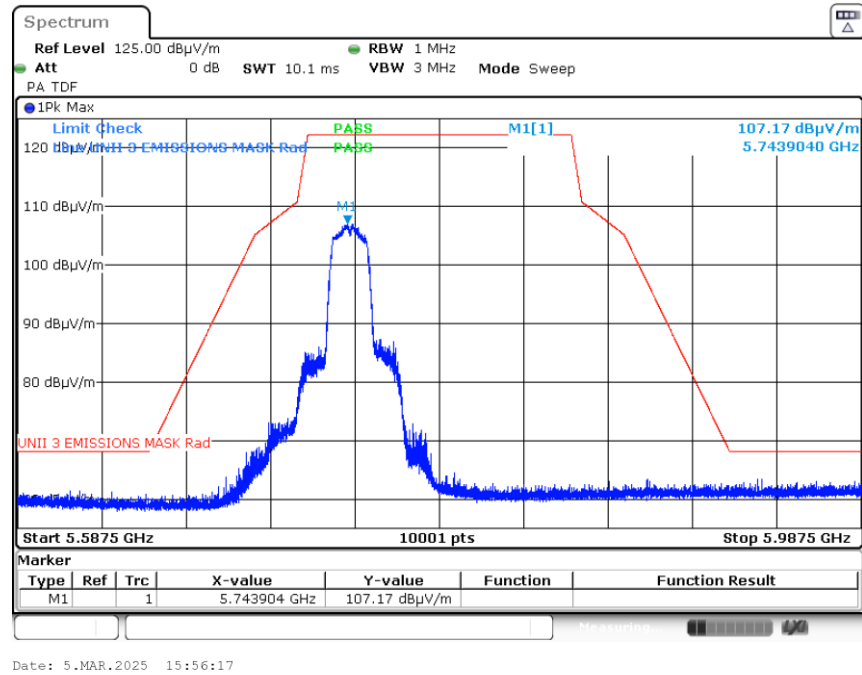
Result

The EUT complied with the specification limit by a margin of 6.3 dB.

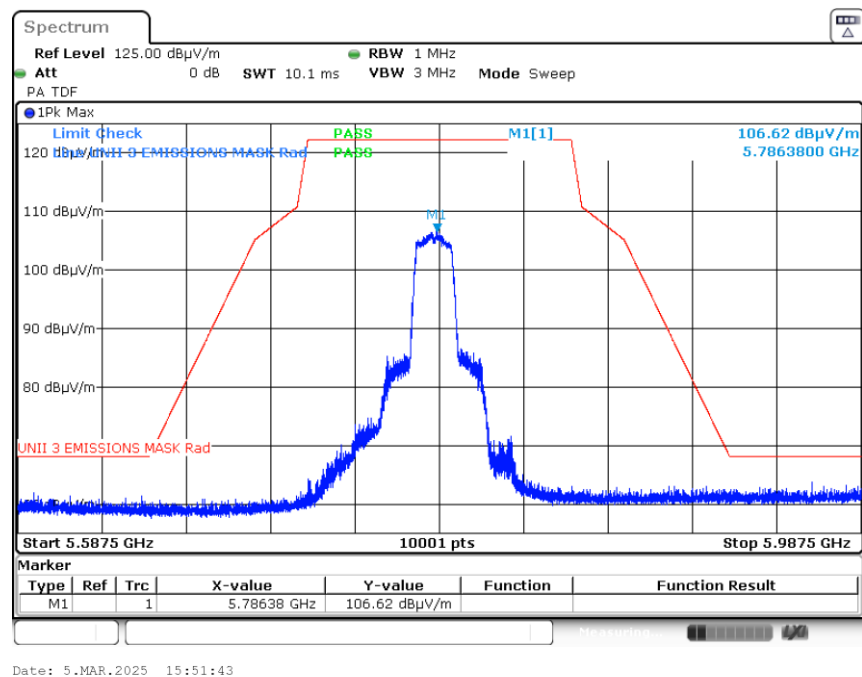
6.4.2.6 §15.407(b) Undesirable Emissions – Band Mask (UNII 3)

Radiated measurements of the UNII-3 band mask are shown below.

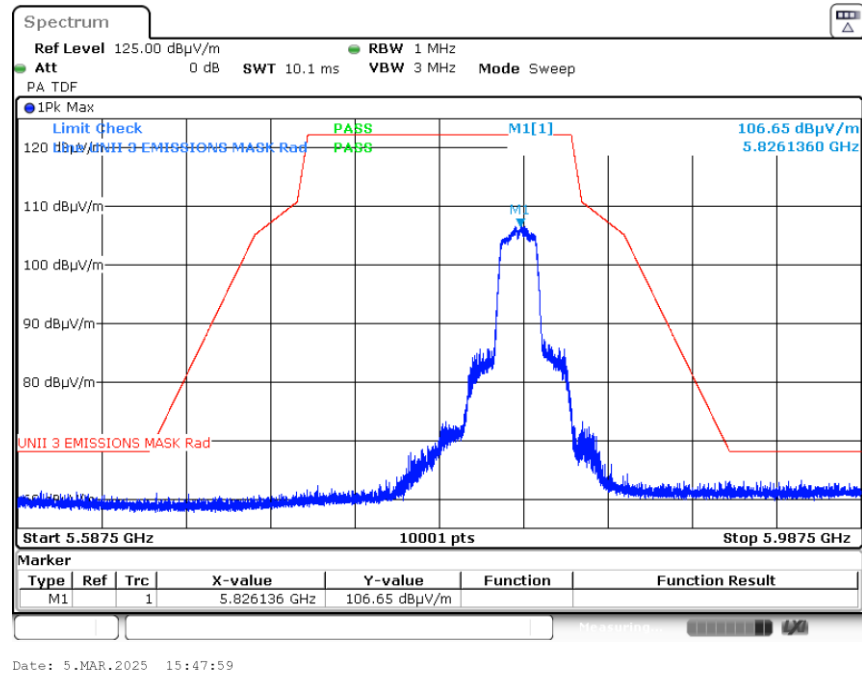
T5IW8 Transmitting on 5745 MHz (Power Level 20):



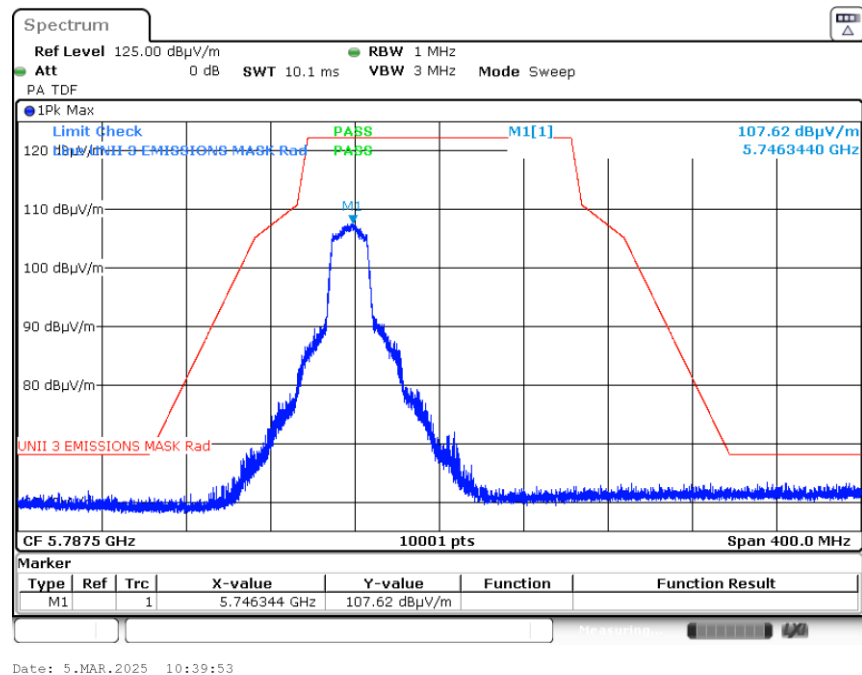
T5IW8 Transmitting on 5785 MHz (Power Level 20):



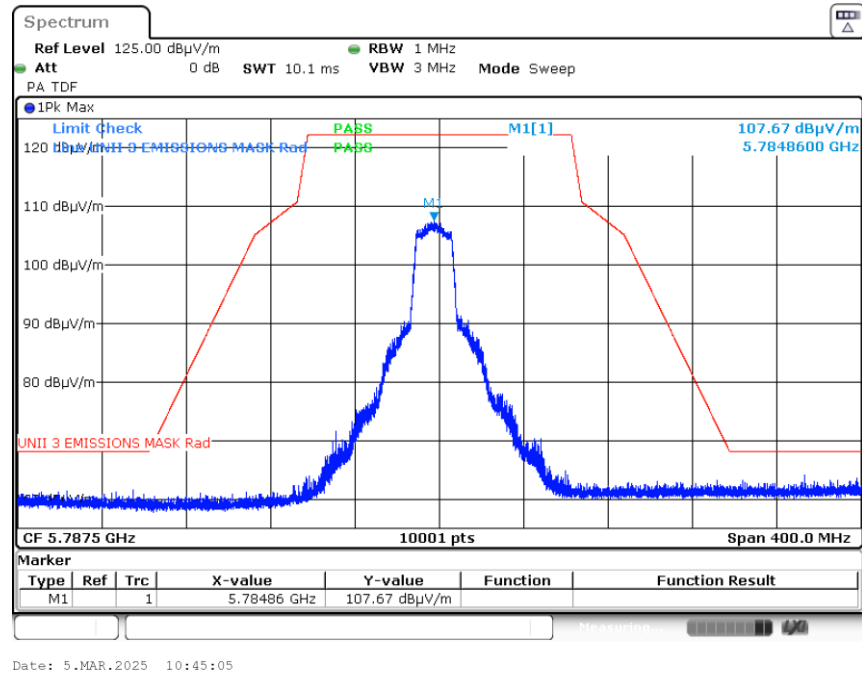
T5IW8 Transmitting on 5825 MHz (Power Level 20):



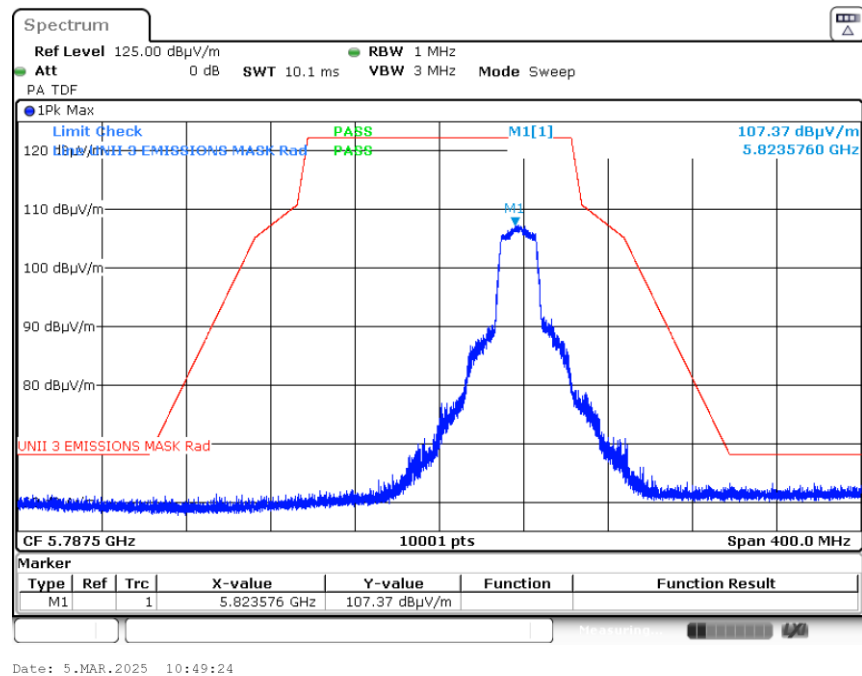
T5IW11 Transmitting on 5745 MHz (Power Level 20):



T5IW11 Transmitting on 5785 MHz (Power Level 20):



T5IW11 Transmitting on 5825 MHz (Power Level 20):



Result

The EUT complied with the specification.

6.4.3 802.11n-40 Mode

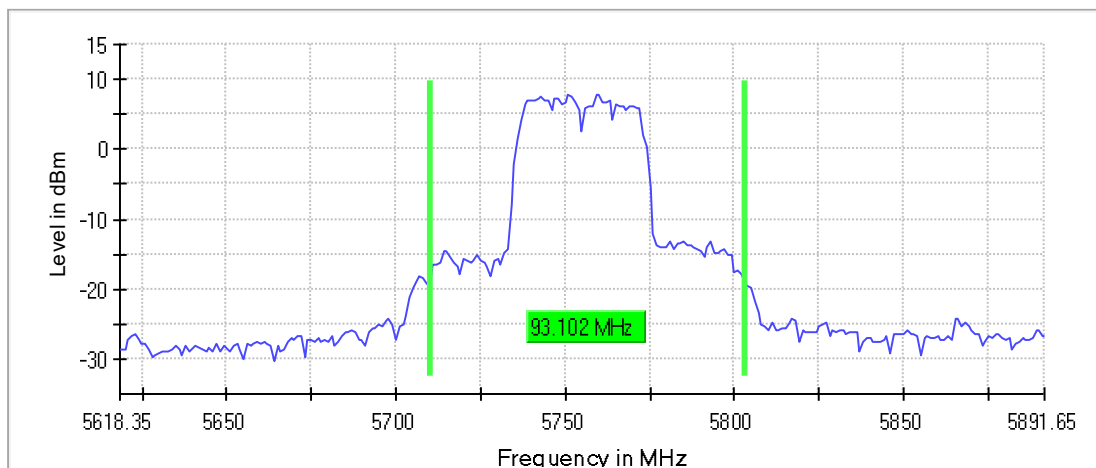
6.4.3.1 §15.403 26dB Bandwidth (UNII 3)

Bandwidths were measured at the intended power set level per channel.

Frequency (MHz)	Emissions 26 dB Bandwidth (MHz)
5755	93.1
5795	102.1

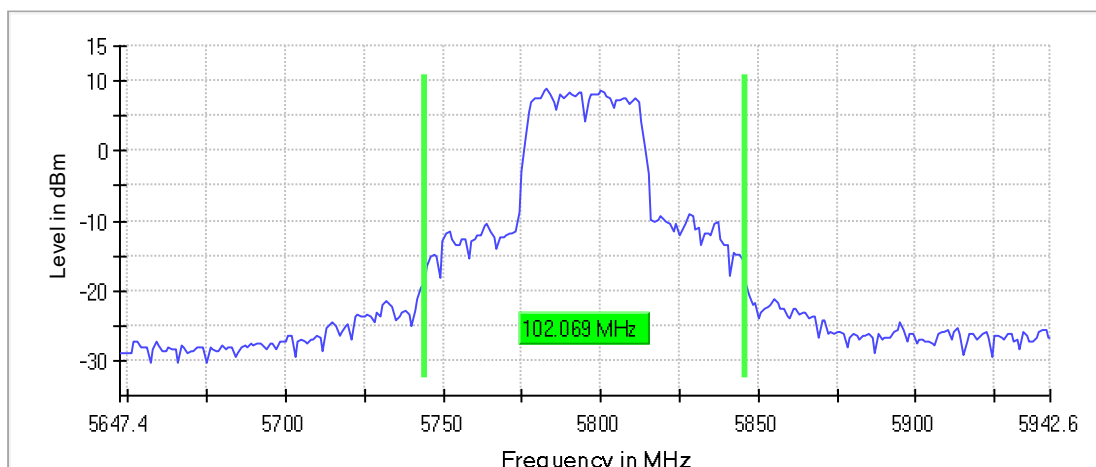
Table 24: 26 dB Emissions Bandwidth

26 dB Bandwidth



Graph 166: 26 dB Emissions Bandwidth Transmitting at 5755 MHz

26 dB Bandwidth



Graph 167: 26 dB Emissions Bandwidth Transmitting at 5795 MHz

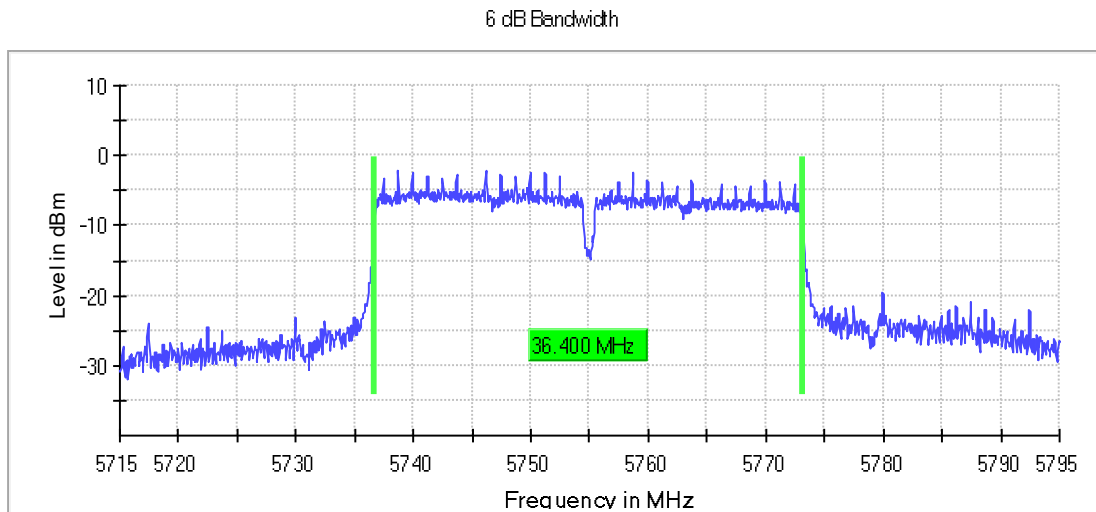
6.4.3.2 §15.407(e) Minimum 6dB Emissions Bandwidth (UNII 3)

The UNII-3 minimum 6 dB emissions bandwidth for the channel is shown in the table and plots below.

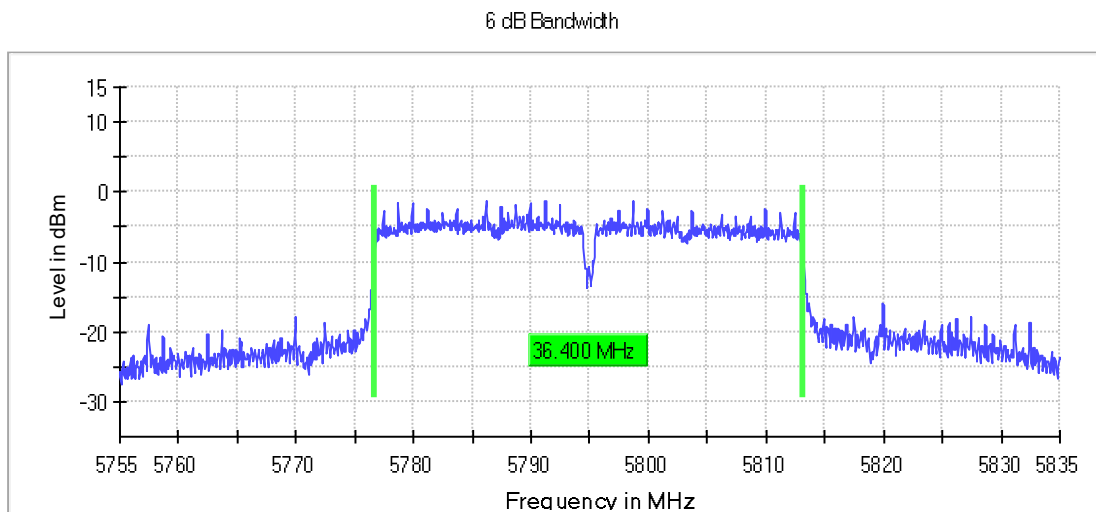
Frequency (MHz)	Emissions 6 dB bandwidth (MHz)
5755	36.4
5795	36.4

Result

In the configurations tested the EUT complied with the requirements of the specification.



Graph 168: UNII-3 Lowest Channel Minimum 6 dB Bandwidth



Graph 169: UNII-3 Highest Channel Minimum 6 dB Bandwidth

6.4.3.3 §15.407(a) Power Limits: Maximum Conducted Output Power (UNII 3)

The following tables show the adjusted conducted power limits.

UNII-3 Conducted Power Limits

Maximum conducted power limits for the UNII-3 band are adjusted based on the isotropic antenna gain and wireless architecture.

Wireless Architecture	Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm)	Adjusted Limit (dBm)
AP	3.3	6	0	30	30

Table 25: UNII-3 maximum conducted power limits based upon antenna gain and Wireless Architecture.

Power was measured for the low, middle, and high channel at the maximum power level possible (20) using KDB 789033 D02 method PM-G and a gated power meter which does not require an average correction factor.

UNII-3 Conducted Power Measurements – AP Architecture

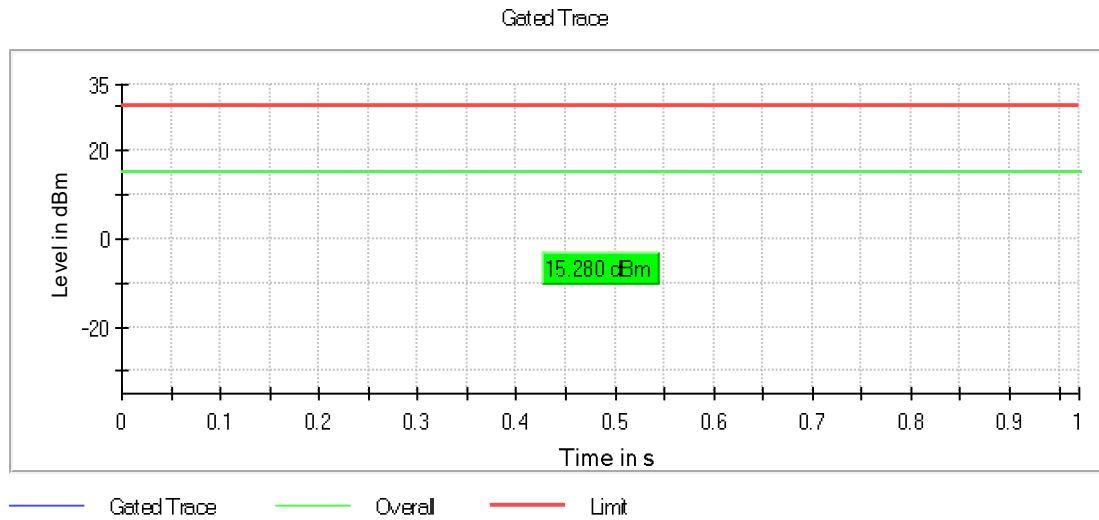
Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Margin (dB)
5755	14.1	30	-15.9
5795	15.3	30	-14.7

Result

In the configurations tested the EUT complied with the limit with a margin of 14.7 dB.



Graph 170: Gated Trace Power Transmitting at 5755 MHz (Power Level 19)



Graph 171: Gated Trace Power Transmitting at 5795 MHz (Power Level 20)

6.4.3.4 §15.407(a) Power Limits: Maximum Power Spectral Density (UNII 3)

The following tables show the adjusted power spectral density limits.

UNII-3 Power Spectral Density Limits

Power spectral density limits for the UNII-3 band are adjusted based on isotropic antenna gain.

Antenna Gain (dBi)	Default Gain (dBi)	Limit Change (dB)	Default Limit (dBm/500kHz)	Adjusted Limit (dBm/500kHz)
3.3	6	0	30	30

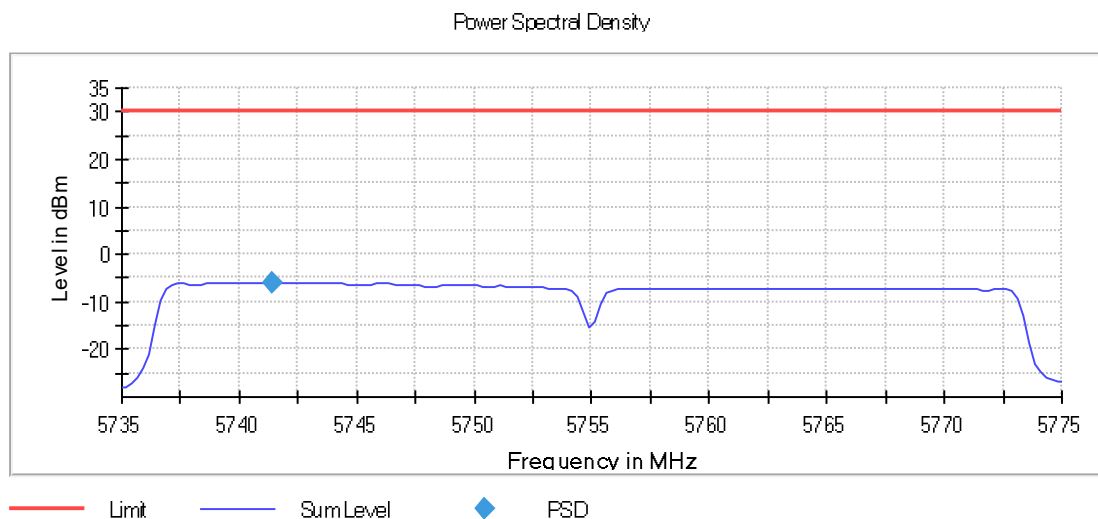
EIRP was measured for the low, middle, and high channel at the maximum power level possible (20) using method SA-1 to create the power spectrum over a 500kHz measurement bandwidth. See Section 6.2.3 for measurement graphics.

UNII-3 Power Spectral Density Measurements

Frequency (MHz)	EIRP Density Limit (dBm/500kHz)	EIRP Density Limit (dBm/500kHz)	Margin (dB)
5755	-5.8	30	-35.8
5795	-5.1	30	-35.1

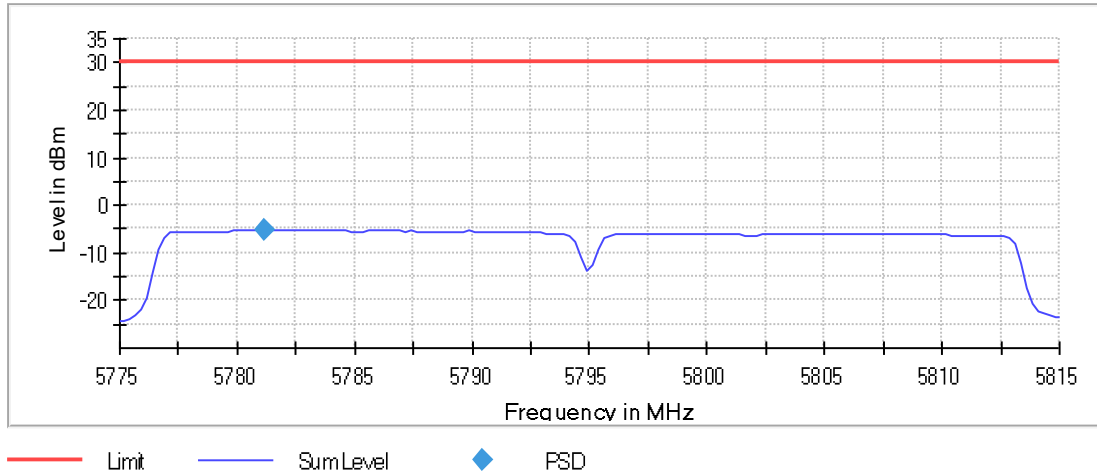
Result

In the configurations tested the EUT complied with the limit with a margin of 35.1 dB.



Graph 172: PSD at 5755 MHz (Power Level 19)

Power Spectral Density



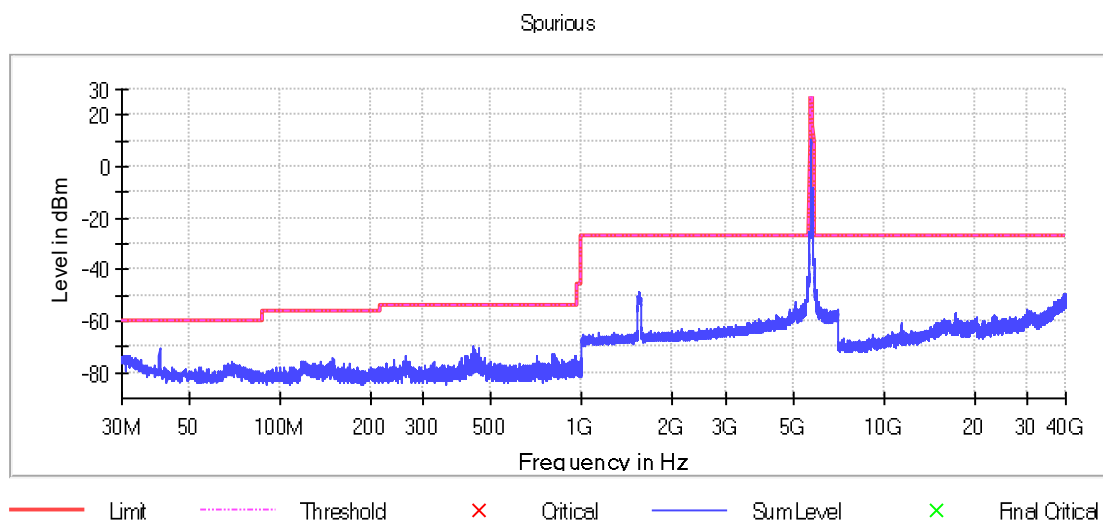
Graph 173: PSD at 5795 MHz (Power Level 20)

6.4.3.5 §15.407(b) and §15.207 Undesirable Emissions – Restricted Bands (UNII 3)

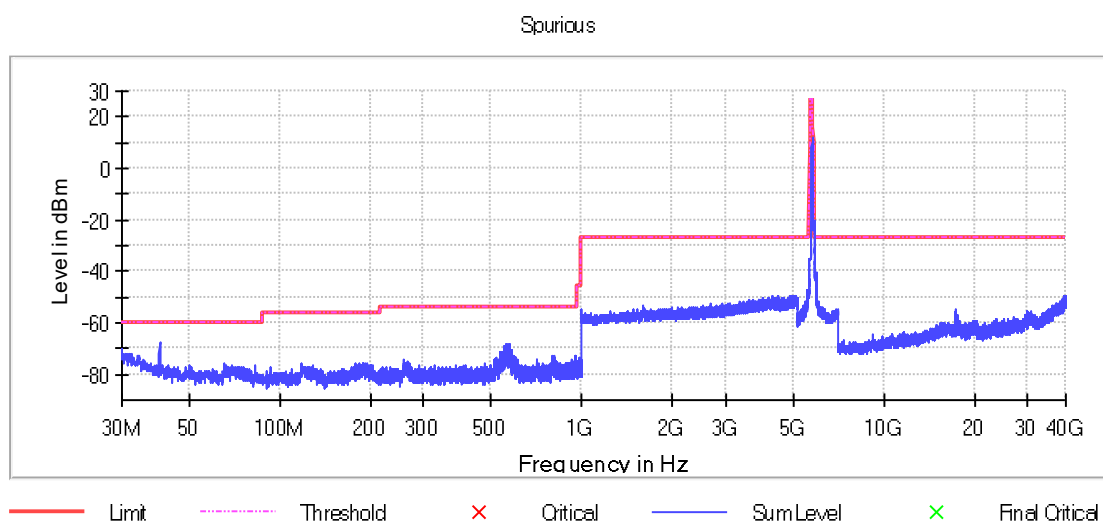
Undesirable radiated emissions in the restricted bands above 1GHz were tested radiated at the low, middle, and high channels at the maximum possible power setting (20). Radiated emissions were measured on both T5IW8 and T5IW11.

Undesirable Emissions were also measured as conducted at the Antenna Port for each channel with stepped powers and corrected using the highest gain antenna (3.3dBi) according to C63.10, sections 11.12.2.2 and 11.12.2.6. Frequencies below 1000MHz were tested for compliance with 15.209 limits with 100kHz RBW at the intended power set level per channel shown in Section 2.3 and noted below. Measurement graphs show max-peak detector results. Below 1000 MHz, when emissions approach the limit, those frequencies are measured with a quasi-peak detector to determine compliance, and those results will be tabulated below the measurement graph.

Emissions Transmitting 5755 MHz at Power Level 19:



Emissions Transmitting 5795 MHz at Power Level 20:



T5IW8 Radiated Emissions Above 1000MHz Transmitting 5755 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11522.6	Peak	Vertical	36.7	17.4	54.0	74.0	-20.0
11516.5	Average	Vertical	22.7	17.3	40.0	54.0	-14.0
11516.5	Peak	Horizontal	36.1	17.3	53.4	74.0	-20.6
11542.7	Average	Horizontal	22.6	17.5	40.1	54.0	-13.9
17275.1	Peak	Vertical	33.9	21.7	55.7	74.0	-18.3
17282.6	Average	Vertical	20.8	21.8	42.7	54.0	-11.3
17261.1	Peak	Horizontal	34.8	21.6	56.4	74.0	-17.6
17268.5	Average	Horizontal	21.1	21.7	42.7	54.0	-11.3
23019.4	Peak	Vertical	33.7	21.2	54.9	74.0	-19.1
23019.6	Average	Vertical	20.8	21.2	42.0	54.0	-12.0
23026.0	Peak	Horizontal	33.1	21.2	54.2	74.0	-19.8
23019.8	Average	Horizontal	21.7	21.2	42.9	54.0	-11.1
28777.8	Peak	Vertical	34.9	22.7	57.6	74.0	-16.4
28753.8	Average	Vertical	22.2	22.6	44.8	54.0	-9.2
28786.8	Peak	Horizontal	35.4	22.7	58.1	74.0	-15.9
28745.8	Average	Horizontal	22.1	22.6	44.7	54.0	-9.3
34492.5	Peak	Vertical	31.8	28.2	60.0	74.0	-14.0
34499.1	Average	Vertical	18.3	28.2	46.6	54.0	-7.4
34525.8	Peak	Horizontal	31.4	28.2	59.6	74.0	-14.4
34498.8	Average	Horizontal	18.6	28.2	46.8	54.0	-7.2

T5IW8 Radiated Emissions Above 1000MHz Transmitting 5795 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dBμV)	Correction Factor (dB)	Field Strength (dBμV/m)	Limit (dBμV/m)	Margin (dB)
11564.2	Peak	Vertical	35.7	17.7	53.4	74.0	-20.6
11585.4	Average	Vertical	22.4	17.7	40.1	54.0	-13.9
11559.4	Peak	Horizontal	36.3	17.6	53.9	74.0	-20.1
11591.2	Average	Horizontal	22.7	17.7	40.4	54.0	-13.6
17450.1	Peak	Vertical	33.6	23.6	57.2	74.0	-16.8
17386.1	Average	Vertical	21.1	23.1	44.2	54.0	-9.8

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
17435.1	Peak	Horizontal	33.9	23.5	57.4	74.0	-16.6
17391.3	Average	Horizontal	21.1	23.2	44.3	54.0	-9.7
23157.8	Peak	Vertical	33.3	21.6	54.8	74.0	-19.2
23179.8	Average	Vertical	20.2	21.6	41.8	54.0	-12.2
23154.0	Peak	Horizontal	33.5	21.6	55.0	74.0	-19.0
23179.8	Average	Horizontal	21.4	21.6	43.0	54.0	-11.0
28878.3	Peak	Vertical	34.3	22.9	57.1	74.0	-16.9
28966.3	Average	Vertical	20.2	23.0	43.2	54.0	-10.8
28922.0	Peak	Horizontal	34.0	22.9	56.9	74.0	-17.1
28913.5	Average	Horizontal	20.5	22.9	43.4	54.0	-10.6
34745.1	Peak	Vertical	31.0	28.0	58.9	74.0	-15.1
34798.8	Average	Vertical	17.3	28.2	45.5	54.0	-8.5
34825.5	Peak	Horizontal	30.5	28.4	58.9	74.0	-15.1
34852.8	Average	Horizontal	17.3	28.5	45.8	54.0	-8.2

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5755 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11498.5	Peak	Vertical	35.4	17.2	52.5	74.0	-21.5
11506.5	Average	Vertical	22.2	17.2	39.4	54.0	-14.6
11526.3	Peak	Horizontal	35.8	17.4	53.2	74.0	-20.8
11508.5	Average	Horizontal	22.4	17.3	39.6	54.0	-14.4
17290.4	Peak	Vertical	33.7	21.9	55.7	74.0	-18.4
17274.0	Average	Vertical	19.9	21.7	41.6	54.0	-12.4
17245.2	Peak	Horizontal	33.8	21.4	55.2	74.0	-18.8
17276.6	Average	Horizontal	20.0	21.8	41.8	54.0	-12.2
23065.4	Peak	Vertical	31.6	21.3	52.9	74.0	-21.1
23116.8	Average	Vertical	18.0	21.5	39.5	54.0	-14.5
23072.4	Peak	Horizontal	31.9	21.4	53.2	74.0	-20.8
23022.6	Average	Horizontal	18.2	21.2	39.4	54.0	-14.6
28664.5	Peak	Vertical	34.1	22.5	56.7	74.0	-17.4

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
28678.5	Average	Vertical	20.4	22.5	42.9	54.0	-11.1
28707.8	Peak	Horizontal	34.0	22.6	56.5	74.0	-17.5
28694.8	Average	Horizontal	20.6	22.6	43.2	54.0	-10.8
34485.0	Peak	Vertical	29.4	28.3	57.7	74.0	-16.3
34428.0	Average	Vertical	16.5	28.4	44.8	54.0	-9.2
34506.6	Peak	Horizontal	29.4	28.2	57.6	74.0	-16.4
34496.7	Average	Horizontal	16.2	28.2	44.5	54.0	-9.6

T5IW11 Radiated Emissions Above 1000MHz Transmitting 5795 MHz at Power Level 20:

Frequency (MHz)	Detector	Antenna Polarity	Receiver Reading (dB μ V)	Correction Factor (dB)	Field Strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
11603.2	Peak	Vertical	35.0	17.7	52.7	74.0	-21.3
11581.7	Average	Vertical	21.9	17.7	39.6	54.0	-14.4
11584.4	Peak	Horizontal	35.6	17.7	53.3	74.0	-20.7
11579.2	Average	Horizontal	22.2	17.7	39.8	54.0	-14.2
17410.2	Peak	Vertical	33.0	23.3	56.3	74.0	-17.7
17396.4	Average	Vertical	19.9	23.2	43.1	54.0	-10.9
17412.6	Peak	Horizontal	34.4	23.3	57.7	74.0	-16.3
17396.4	Average	Horizontal	20.2	23.2	43.4	54.0	-10.6
23246.4	Peak	Vertical	31.0	21.8	52.8	74.0	-21.2
23212.2	Average	Vertical	17.9	21.7	39.6	54.0	-14.4
23218.4	Peak	Horizontal	31.5	21.7	53.1	74.0	-20.9
23209.2	Average	Horizontal	18.1	21.7	39.7	54.0	-14.3
28867.8	Peak	Vertical	32.9	22.8	55.7	74.0	-18.3
28885.3	Average	Vertical	19.4	22.9	42.3	54.0	-11.7
29004.8	Peak	Horizontal	32.5	23.1	55.6	74.0	-18.4
28962.5	Average	Horizontal	19.4	23.0	42.4	54.0	-11.6
34671.6	Peak	Vertical	29.2	27.9	57.0	74.0	-17.0
34827.3	Average	Vertical	15.0	28.4	43.3	54.0	-10.7
34750.5	Peak	Horizontal	28.5	28.0	56.5	74.0	-17.5
34849.2	Average	Horizontal	15.1	28.5	43.6	54.0	-10.4

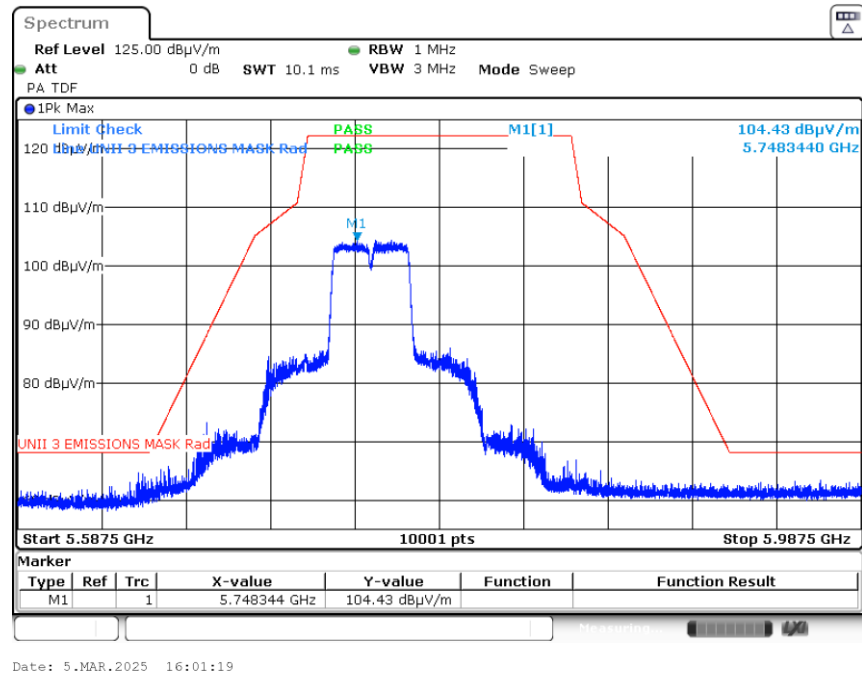
Result

The EUT complied with the specification limit by a margin of 7.2 dB.

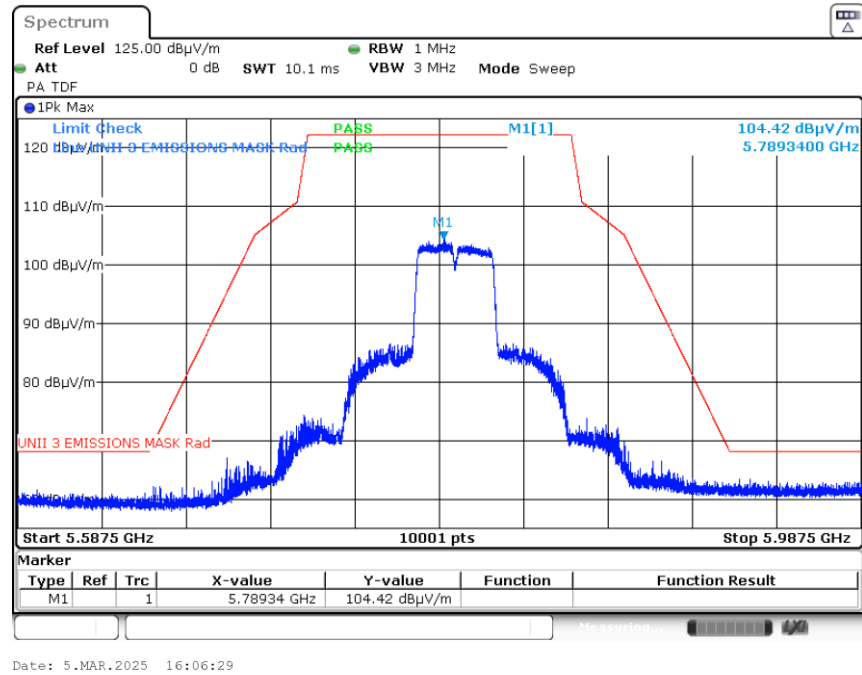
6.4.3.6 §15.407(b) Undesirable Emissions – Band Mask (UNII 3)

Radiated measurements of the UNII-3 band mask are shown below.

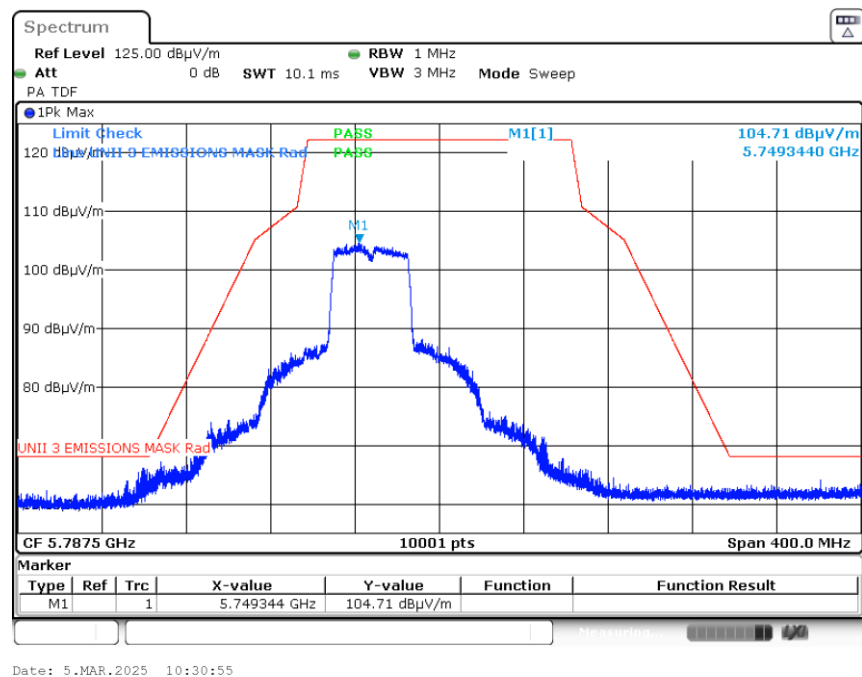
T5IW8 Transmitting on 5755 MHz (Power Level 20):



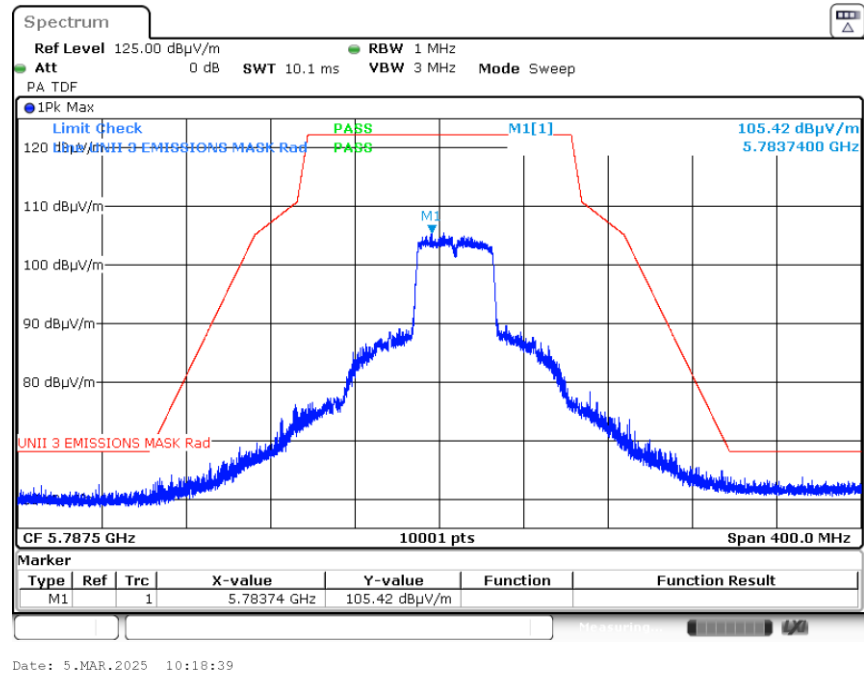
T5IW8 Transmitting on 5795 MHz (Power Level 20):



T5IW11 Transmitting on 5755 MHz (Power Level 19):



T5IW11 Transmitting on 5795 MHz (Power Level 20):



Result

The EUT complied with the specification.

7 Test Procedures and Test Equipment

7.1 Conducted Emissions at Mains Ports

The conducted emissions at mains and telecommunications ports from the EUT were measured using a spectrum analyzer with a quasi-peak adapter for peak, quasi-peak and average readings. The quasi-peak adapter uses a bandwidth of 9 kHz, with the spectrum analyzer's resolution bandwidth set at 100 kHz, for readings in the 150 kHz to 30 MHz frequency ranges.

The conducted emissions at mains ports measurements are performed in a screen room using a (50 Ω /50 μ H) Line Impedance Stabilization Network (LISN).

Where mains flexible power cords are longer than 1 m, the excess cable is folded back and forth as far as possible so as to form a bundle not exceeding 0.4 m in length.

Where the EUT is a collection of devices with each device having its own power cord, the point of connection for the LISN is determined from the following rules:

- Each power cord, which is terminated in a mains supply plug, shall be tested separately.
- Power cords, which are not specified by the manufacturer to be connected via a host unit, shall be tested separately.
- Power cords which are specified by the manufacturer to be connected via a host unit or other power supplying equipment shall be connected to that host unit and the power cords of that host unit connected to the LISN and tested.
- Where a special connection is specified, the necessary hardware to effect the connection is supplied by the manufacturer for the testing purpose.
- When testing equipment with multiple mains cords, those cords not under test are connected to an artificial mains network (AMN) different than the AMN used for the mains cord under test.

For testing, desktop EUT are placed on a non-conducting table at least 0.8 meters from the metallic floor and placed 40 cm from the vertical coupling plane (copper plating in the wall behind EUT table). Floor standing equipment is placed directly on the earth grounded floor.

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer/Receiver	Rohde & Schwarz	ESU40	V033119	12/02/2024	12/02/2025
LISN	Teseq	NNB 51	V045406	12/19/2024	12/19/2025
Conductance Cable Wanship Upper Site	VPI Labs	Cable J	V034832	12/19/2024	12/19/2025
EMC32 Measurement Software	Rohde & Schwarz	10.60.20	N/A	N/A	N/A

Table 26: List of equipment used for conducted emissions testing at mains ports.

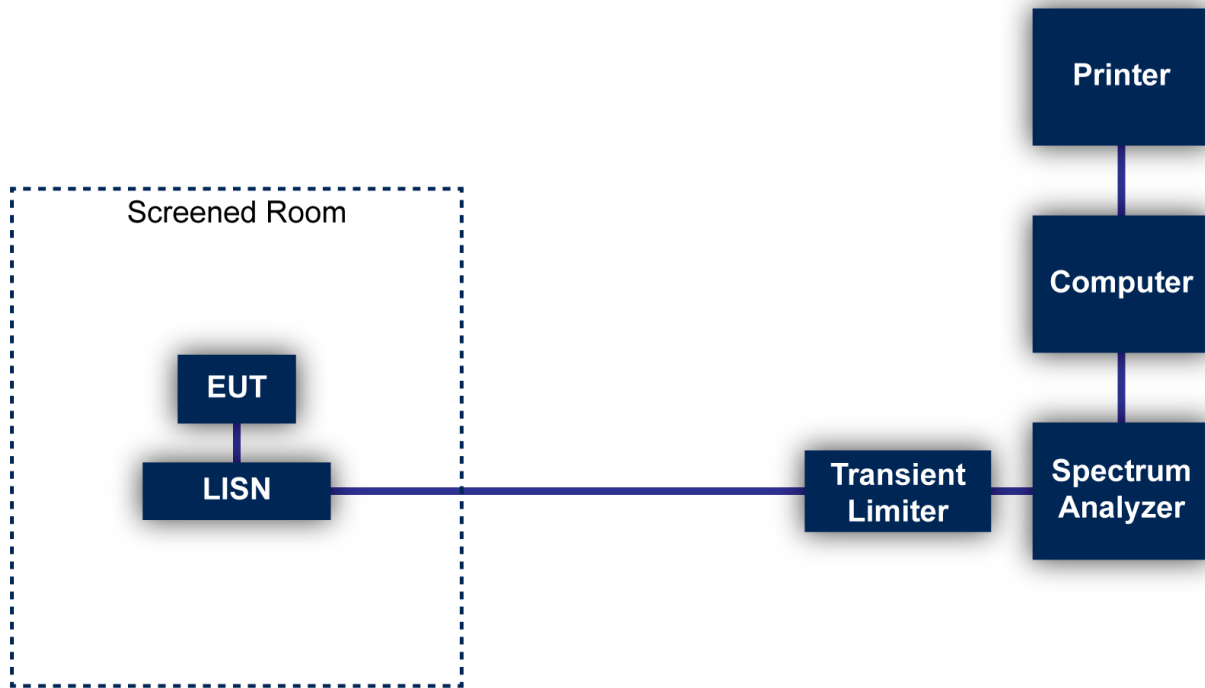


Figure 10: Mains Conducted Emissions Test

7.2 Direct Connection at the Antenna Port Test

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
40GHz Switch Extension	Rohde & Schwarz	OSP-150	V044486	09/25/2023	09/25/2026
40GHz Switch Base Unit	Rohde & Schwarz	OSP-120	V044487	03/23/2022	12/31/2025
Spectrum Analyzer/ Signal Analyzer	Rohde & Schwarz	FSV40	V044352	03/05/2024	03/05/2026
Signal Generator	Rohde & Schwarz	SMB100A	V044485	04/03/2023	12/31/2025
Vector Signal Generator	Rohde & Schwarz	SMBV100A	V044217	03/08/2022	12/31/2025
6' High Frequency Cable	Microcoax	UFB197C-0-0720-000000	V033638	12/19/2024	12/19/2025

Table 27: List of equipment used for conducted emissions testing at antenna ports.

7.2.1 Test Configuration Block Diagram

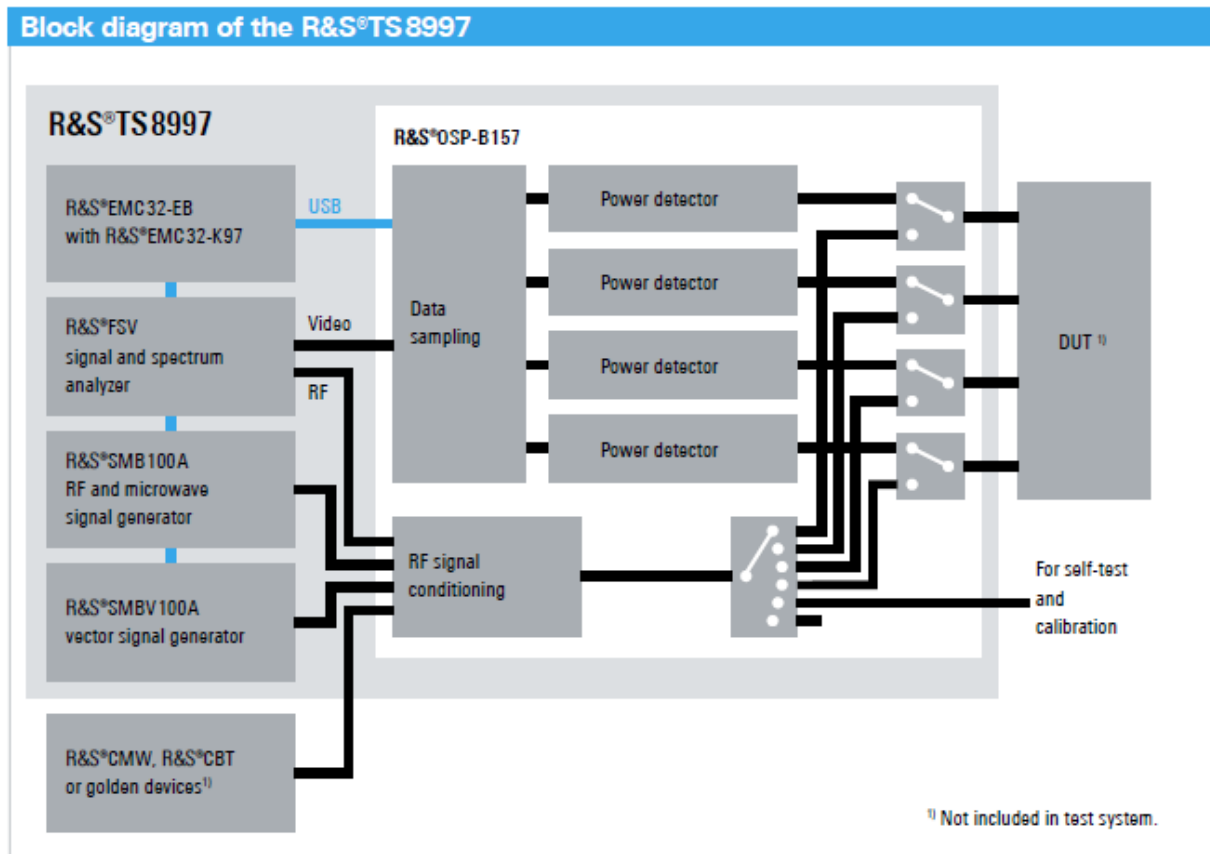


Figure 11: Direct Connection at the Antenna Port Test

7.3 Radiated Emissions

The radiated emissions from the EUT were measured using a spectrum analyzer with a quasi-peak adapter for peak and quasi-peak readings.

A preamplifier with a fixed gain of 51 dB was used to increase the sensitivity of the measuring instrumentation. The quasi-peak adapter uses a bandwidth of 120 kHz, with the spectrum analyzer's resolution bandwidth set at 1 MHz, for readings in the 30 to 1000 MHz frequency ranges. For frequencies below 30 MHz, a 9 kHz resolution Bandwidth was used.

A loop antenna was used to measure frequencies below 30 MHz. A biconilog antenna was used to measure the frequency range of 30 to 1000 MHz, at a distance of 3 meters from the EUT. The readings obtained by these antennas are correlated to the levels obtained with a tuned dipole antenna by adding antenna factors. A double-ridged guide antenna was used to measure the emissions at frequencies above 1000 MHz at a 3 meter or 1 meter distance from the EUT.

The configuration of the EUT was varied to find the maximum radiated emission. The EUT was connected to the peripherals listed in Section 2.3 via the interconnecting cables listed in Section 2.4. A technician manually manipulated these interconnecting cables to obtain worst-case radiated emissions. The EUT was rotated 360 degrees, and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission. Where there were multiple interface ports all of the same type, cables are either placed on all of the ports or cables added to these ports until the emissions do not increase by more than 2 dB.

Desktop EUT are measured on a non-conducting table 0.8 meters above the ground plane. For frequencies above 1000 MHz, the EUT is placed on a table 1.5 meters above the ground plane. The table is placed on a turntable, which is level with the ground plane. For equipment normally placed on floors, the equipment shall be placed directly on the turntable.

For radiated emissions testing that is performed at distances closer than the specified distance; an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer/Receiver	Rohde & Schwarz	ESU40	V033119	12/02/2024	12/02/2025
Spectrum Analyzer/Signal Analyzer	Rohde & Schwarz	FSV40	V044352	03/05/2024	03/05/2026
Biconilog Antenna	EMCO	3142E	V035736	07/08/2025	07/08/2027
Power Amplifier	HP	8447E	V034189	12/19/2024	12/19/2025
Double Ridged Guide Antenna	EMCO	3115	V034194	06/25/2025	06/25/2027
Standard Gain Horn	ETS-Lindgren	3160-09	V034223	ICO	ICO
High Frequency Amplifier	Miteq	AFS4-001018000-35-10P-4	V033997	12/19/2024	12/19/2025
900 MHz High Pass Filter	Micro-Tronics	HPM50108-03	V034185	12/19/2024	12/19/2025
2.4 GHz High Pass Filter	Micro-Tronics	HPM50111-03	V034183	12/19/2024	12/19/2025
2.4 GHz Notch Filter	Micro-Tronics	BRM50702-03	V034213	12/19/2024	12/19/2025
6' High Frequency Cable	Microcoax	UFB197C-0-0720-000000	V033638	12/19/2024	12/19/2025
20' High Frequency Cable	Microcoax	UFB197C-1-3120-000000	V033979	12/19/2024	12/19/2025
3 Meter Radiated Emissions Cable Wanship Upper Site	Microcoax	UFB205A-0-4700-000000	V033639	12/19/2024	12/19/2025
EMC32 Test Software	Rohde & Schwarz	10.60.20	N/A	N/A	N/A

Table 28: List of equipment used for radiated emissions testing.

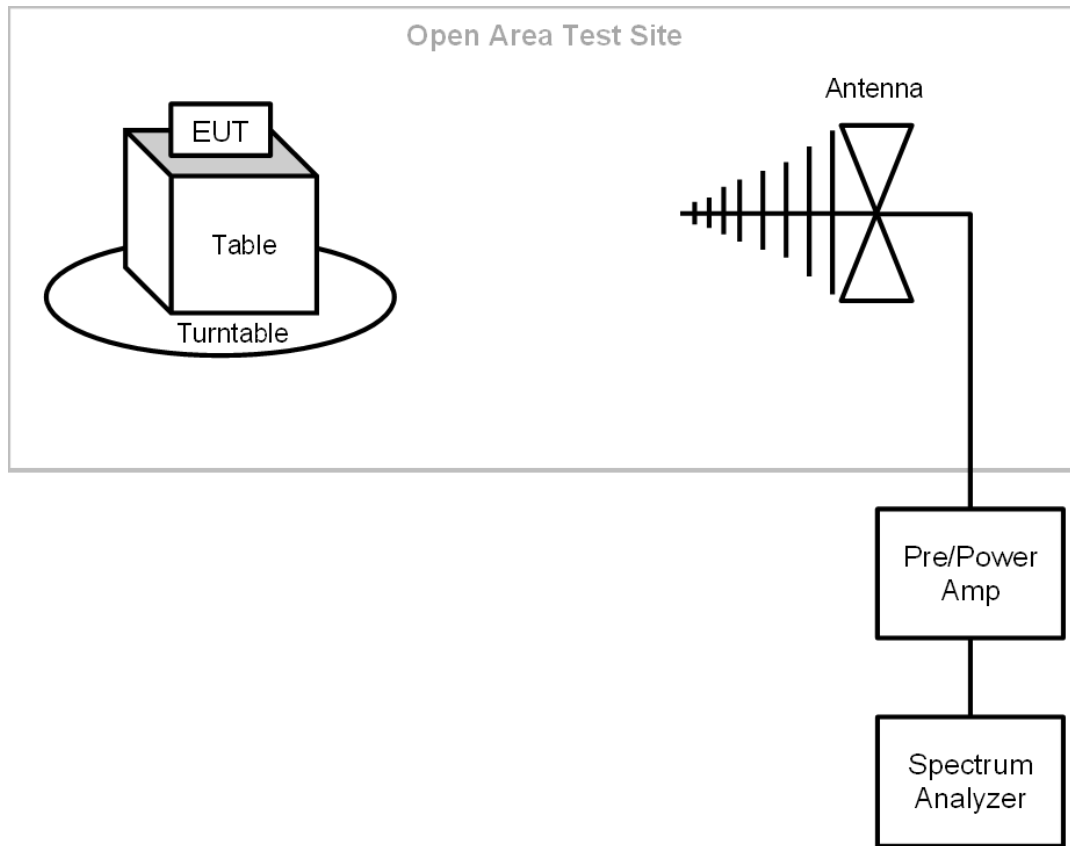


Figure 12: Radiated Emissions Below 1GHz Test

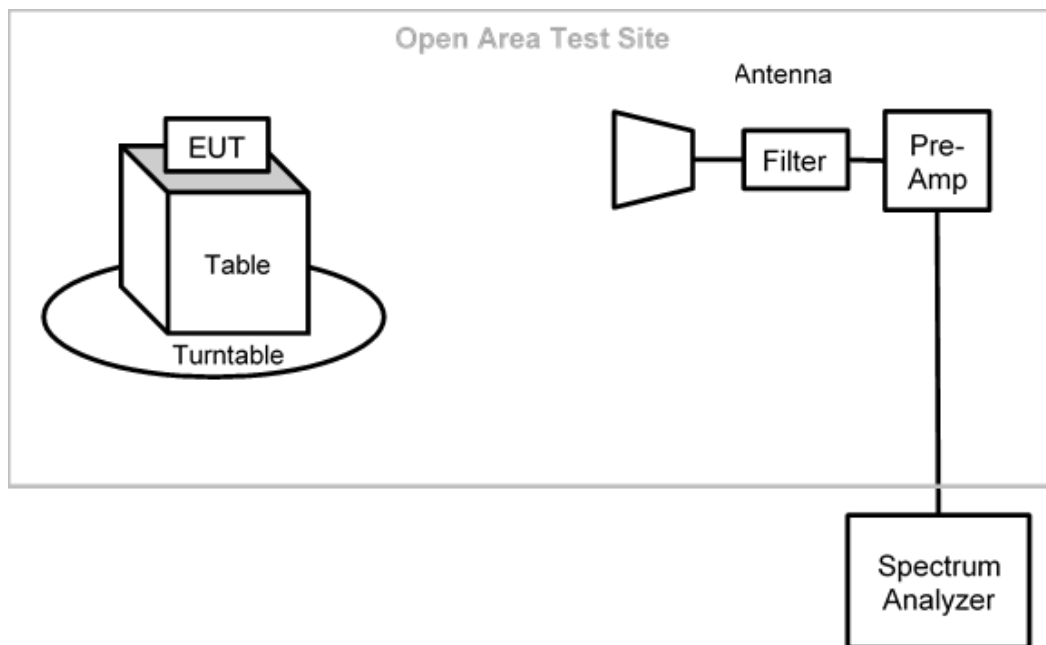


Figure 13: Radiated Emissions Above 1GHz Test

7.4 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or VPI Laboratories, Inc. personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to tractability is on file and is available for examination upon request.

7.5 Measurement Uncertainty

Test	Uncertainty ($\pm$ dB)	Confidence (%)
Conducted Emissions	2.8	95
Radiated Emission (9 kHz to 30 MHz)	3.3	95
Radiated Emissions (30 MHz to 1 GHz)	3.4	95
Radiated Emissions (1 GHz to 18 GHz)	5.0	95
Radiated Emissions (18 GHz to 40 GHz)	4.1	95

8 Photographs

Photographs will be provided in an external appendix

--- End of Report ---