TEST REPORT

4.7 Radiated Spurious Emissions

Test Requirement:	FCC Part 15 E clause 15.407(b) In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).
Test Method:	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01, Clause G
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)
Limit:	40.0 dBμV/m between 30MHz & 88MHz; 43.5 dBμV/m between 88MHz & 216MHz; 46.0 dBμV/m between 216MHz & 960MHz; 54.0 dBμV/m above 960MHz.
Detector:	For Peak and Quasi-Peak value: RBW = 1 MHz for f ≥ 1 GHz, 200 Hz for 9 kHz to 150 kHz 9 kHz for 150 kHz to 30 MHz 120 kHz for 30 MHz to 1GHz VBW ≥ RBW Sweep = auto Detector function = peak for f ≥ 1 GHz, QP for f < 1 GHz Trace = max hold For AV value: RBW = 1 MHz for f ≥ 1 GHz, 100 kHz for f < 1 GHz VBW=10 Hz Sweep = auto Trace = max hold
Field Strength Calculation:	The field strength is calculated by adding the reading on the Spectrum Analyzer to the factors associated with preamplifiers (if any), antennas, cables, pulse desensitization and average factors (when specified limit is in average and measurements are made with peak detectors). A sample calculation is included below: FS = RA + AF + CF - AG + PD + AV FS = RA + Correct Factor + AV
Where:	FS = Field Strength in dBμV/m RA = Receiver Amplitude (including preamplifier) in dBμV

TEST REPORT

AF = Antenna Factor in dB
CF = Cable Attenuation Factor in dB
AG = Amplifier Gain in dB
PD = Pulse Desensitization in dB
AV = Average Factor in –dB
Correct Factor = AF + CF – AG + PD

In the radiated emission table which follows, the reading shown on the data table may reflect the preamplifier gain. An example of the calculations, where the reading does not reflect the preamplifier gain, follows:
FS = RA + AF + CF - AG + PD + AV
Assume a receiver reading of 62.0 dBµV is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB is added. The amplifier gain of 29 dB is subtracted. The pulse desensitization factor of the spectrum analyzer was 0 dB, and the resultant average factor was -10 dB. The net field strength for comparison to the appropriate emission limit is 32 dBµV/m.
RA = 62.0 dBµV
AF = 7.4 dB
CF = 1.6 dB
AG = 29.0 dB
PD = 0 dB
AV = -10 dB
Correct Factor = 7.4 + 1.6 – 29.0 + 0 = -20 dB
FS = 62 + (-20) + (-10) = 32 dBµV/m

TEST REPORT

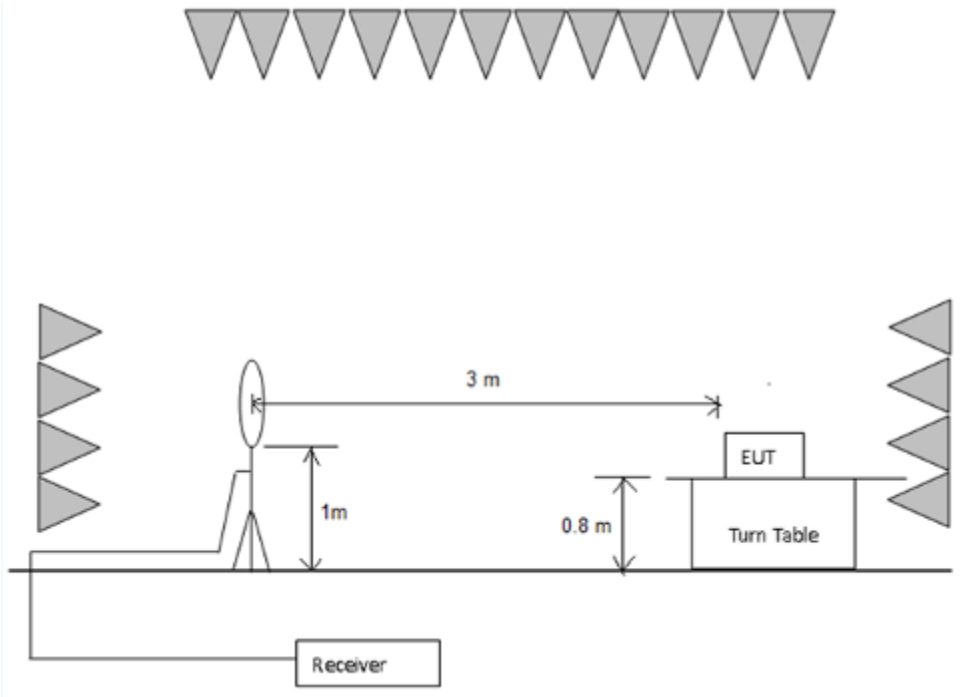
Section 15.205 Restricted bands of operation.

(a) Except as shown in paragraph (d) of this section. Only spurious emissions are permitted in any of the frequency bands listed below:

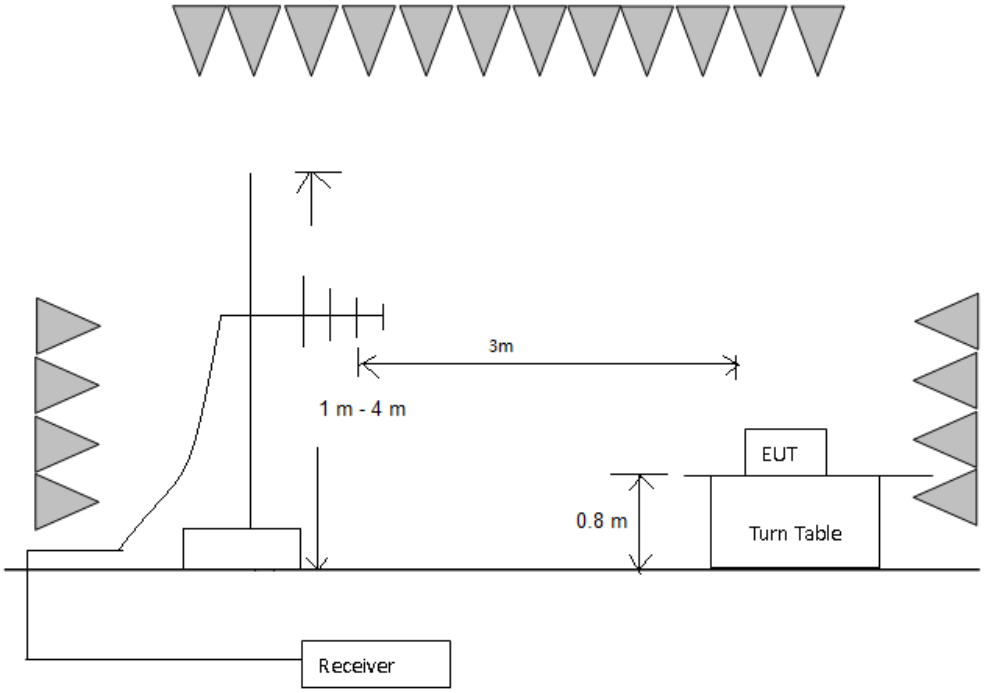
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
10.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	
13.36 - 13.41	322 - 335.4		

Test Configuration:

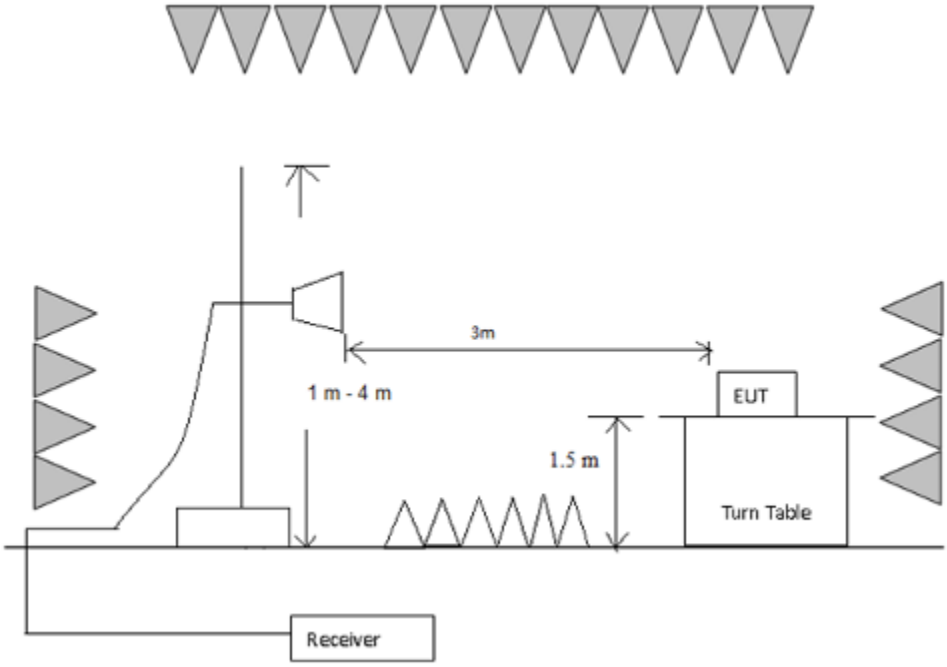
1) 9 kHz to 30 MHz emissions:



2) 30 MHz to 1 GHz emissions:



3) 1 GHz to 40 GHz emissions:



Test Procedure:

Test site with RF absorbing material covering the ground plane that met the site validation criterion called out in CISPR 16-1-4:2010 was used to perform radiated emission test above 1 GHz.

The receiver was scanned from 9 kHz to 25 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. An initial pre-scan was performed for in peak detection mode using the receiver. The EUT was measured for both the Horizontal and Vertical polarities and performed a pre-test three orthogonal planes. For intentional radiators,

measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. The worst case emissions were reported.

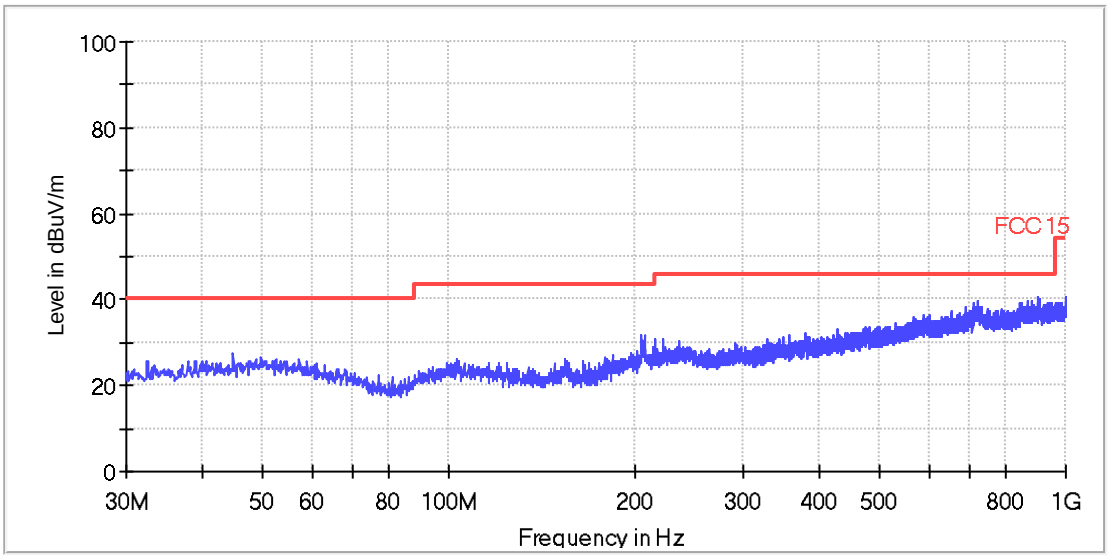
Used Test Equipment List:
3m Semi-Anechoic Chamber, EMI Test Receiver (9 kHz~7 GHz), Signal and Spectrum Analyzer (10 Hz~40 GHz), Loop antenna (9 kHz-30 MHz). TRILOG Super Broadband test Antenna(30 MHz-3 GHz）(RX), Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX) and High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX). Refer to Clause 5 Test Equipment List for details.

9 kHz~30 MHz Field Strength of Unwanted Emissions for Quasi-Peak Measurement
The measurements with active loop antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement.

Pretest on all channel for each mode of the brand I, brand II, brand III and brand IV.
The below data test on mode WIFI an (HT20) channel 36: 5180MHz was the worst case of all test record.

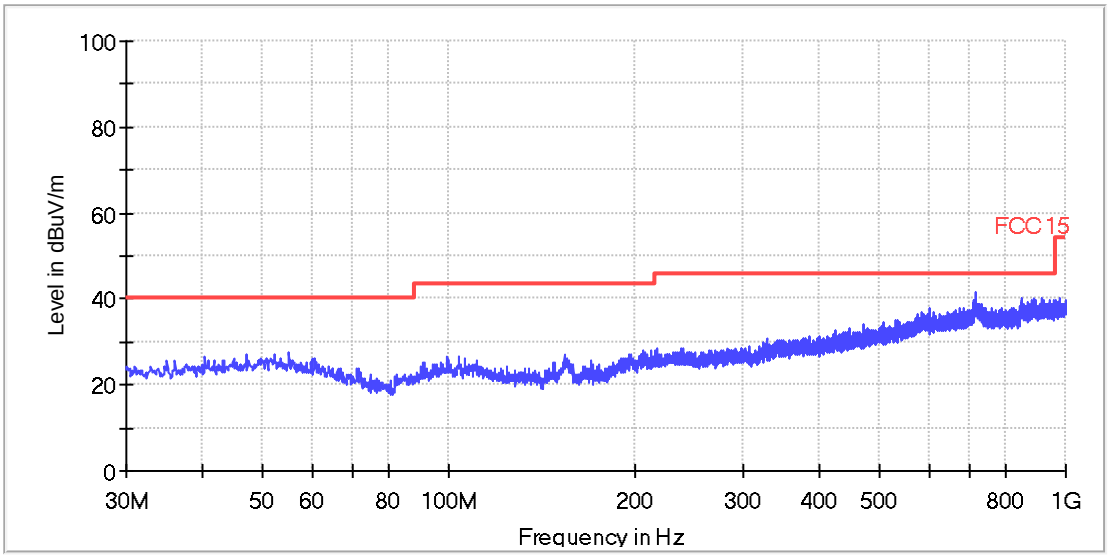
Horizontal:



All emission levels are more than 6dB below the limit.

TEST REPORT

Vertical:



All emission levels are more than 6dB below the limit.

1~40 GHz Radiated Emissions.
Result plot as follows:

Band I 5150 MHz to 5250 MHz

802.11a
Channel 36: 5180 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBµV)	Correct Factor	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
10360.6	42.1	6.8	48.9	68.2	H
10364.9	45.0	6.8	51.8	68.2	V

Channel 44: 5220 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBµV)	Correct Factor	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
10333.0	40.9	6.8	47.7	68.2	H
10398.9	42.2	6.8	49.0	68.2	V

TEST REPORT

Channel 48: 5240 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9053.8	42.8	4.5	47.3	74	H
10175.8	41.7	6.7	48.4	68.2	V

802.11an(HT 20)
Channel 36: 5180 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9389.5	42.9	4.7	47.6	74	H
10056.8	40.6	6.6	47.2	68.2	V

Channel 44: 5220 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9381.0	42.1	4.7	46.8	74	H
10305.4	41.1	6.8	47.9	68.2	V

Channel 48: 5240 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9412.9	42.5	4.7	47.2	74	H
9587.1	42.3	5.0	47.3	68.2	V

802.11an(HT 40)

Channel 38: 5190 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10371.3	40.8	6.8	47.6	68.2	H
9506.4	42.7	4.7	47.4	68.2	V

TEST REPORT

Channel 46: 5230 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9351.3	42.3	4.7	47.0	74	H
9563.8	42.5	4.9	47.4	68.2	V

802.11ac(HT 80)

Channel 42: 5210 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
11265.9	40.1	6.5	46.6	74	H
8460.9	42.5	4.4	46.9	74	V

Band II 5250 MHz to 5350 MHz

802.11a
Channel 52: 5260 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
11782.3	42.1	6.5	48.6	74	H
10520.0	41.1	6.9	48.0	68.2	V

Channel 60: 5300 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10303.3	40.3	6.8	47.1	68.2	H
10598.6	43.4	6.8	50.2	68.2	V

Channel 64: 5320 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10069.5	40.7	6.6	47.3	68.2	H
9323.6	42.9	4.6	47.5	74	V

TEST REPORT

Channel 52: 5260 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
7445.1	42.9	2.6	45.5	74	H
8467.3	42.1	4.4	46.5	74	V

Channel 60: 5300 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9317.3	42.5	4.6	47.1	74	H
10607.1	42.6	6.8	49.4	74	V

Channel 64: 5320 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9389.5	42.9	4.7	47.6	74	H
13682.0	42.6	8.8	51.4	68.2	V

802.11an(HT 40)

Channel 54: 5270 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9357.6	42.6	4.7	47.3	74	H
10613.5	40.3	6.8	47.1	74	V

Channel 62: 5310 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9491.5	43.2	4.7	47.9	74	H
9378.9	41.9	4.7	46.6	74	V

TEST REPORT

802.11ac(HT 80)

Channel 58: 5290 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
11656.9	41.9	6.5	48.4	74	H
4117.5	43.5	-2.5	41.0	74	V

Band III 5470 MHz to 5725 MHz

802.11a
Channel 100: 5500 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9432.0	42.1	4.7	46.8	74	H
10617.8	40.6	6.8	47.4	74	V

Channel 116: 5580 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9525.5	42.2	4.8	47.0	68.2	H
9846.4	41.8	6.0	47.8	68.2	V

Channel 140: 5700 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10766.5	41.0	6.7	47.7	74	H
8890.1	42.9	4.5	47.4	68.2	V

802.11an(HT 20)
Channel 100: 5500 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
8397.1	41.9	4.3	46.2	74	H
12058.5	42.0	6.6	48.6	74	V

TEST REPORT

Channel 116: 5580 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10254.4	41.5	6.8	48.3	68.2	H
8873.1	42.1	4.5	46.6	68.2	V

Channel 140: 5700 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10600.8	40.5	6.8	47.3	74	H
8828.5	41.9	4.5	46.4	68.2	V

802.11an(HT 40)

Channel 102: 5510 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
7778.8	43.1	3.4	46.5	68.2	H
10218.3	41.0	6.7	47.7	68.2	V

Channel 110: 5550 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9119.6	42.9	4.6	47.5	74	H
9043.1	43.1	4.5	47.6	74	V

Channel 134: 5670 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
11367.9	41.0	6.5	47.5	74	H
11297.8	41.4	6.5	47.9	74	V

TEST REPORT

802.11ac(HT 80)

Channel 106: 5530 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9621.1	42.2	5.2	47.4	68.2	H
10551.9	39.9	6.9	46.8	68.2	V

Band IV 5725 MHz to 5850 MHz

802.11a
Channel 149: 5745 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9508.5	42.5	4.7	47.2	68.2	H
4801.6	46.4	-1.1	45.3	74	V

Channel 157: 5785 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9347.0	42.6	4.6	47.2	74	H
9438.4	42.8	4.7	47.5	74	V

Channel 165: 5825 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9578.6	42.1	5.0	47.1	68.2	H
8998.5	42.7	4.5	47.2	68.2	V

802.11an(HT 20)
Channel 149: 5745 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10044.0	41.9	6.6	48.5	68.2	H
9544.6	42.7	4.9	47.6	68.2	V

TEST REPORT

Channel 157: 5785 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9480.9	42.5	4.7	47.2	74	H
9353.4	43.1	4.7	47.8	74	V

Channel 165: 5825 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9489.4	42.8	4.7	47.5	74	H
9497.9	43.4	4.7	48.1	74	V

802.11an(HT 40)

Channel 151: 5755 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
9529.8	42.7	4.8	47.5	68.2	H
9466.0	42.7	4.7	47.4	74	V

Channel 159: 5795 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10226.8	41.0	6.7	47.7	68.2	H
9504.3	43.6	4.7	48.3	68.2	V

802.11ac(HT 80)

Channel 155: 5775 MHz:

Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
10216.1	40.8	6.7	47.5	68.2	H
10632.6	40.4	6.8	47.2	74	V

TEST REPORT

Remark: When Peak emission level was below AV limit, the AV emission level did not be record.

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Loss –Preamplifier Factor.

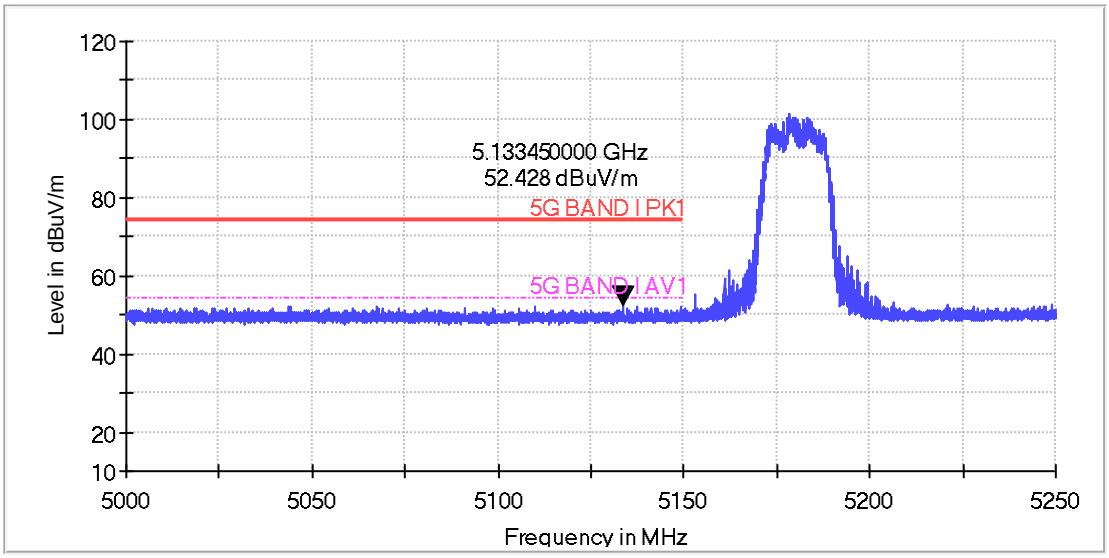
As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

No any other emissions level which are attenuated less than 20dB below the limit.

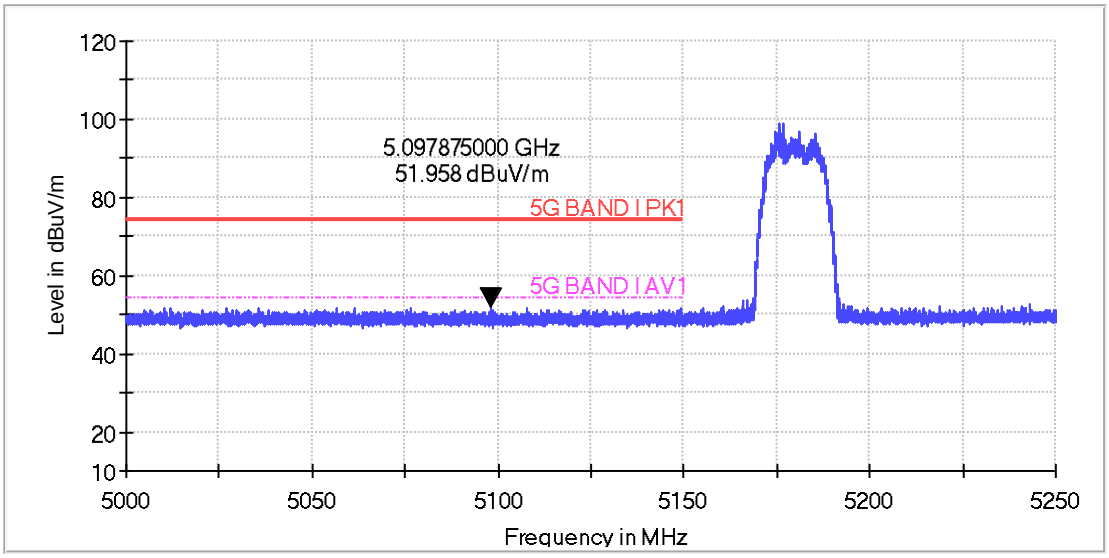
TEST REPORT

4.8 Band Edges Requirement

5180MHz
802.11a
Horizontal



Vertical



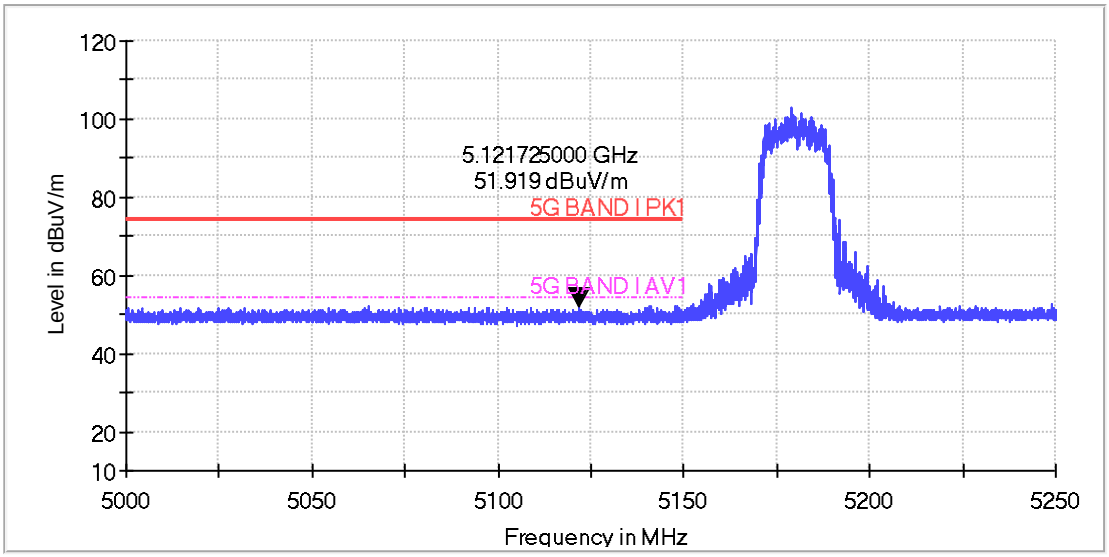
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5133.5	53.0	-0.6	52.4	74	H
5097.9	52.7	-0.7	52.0	74	V

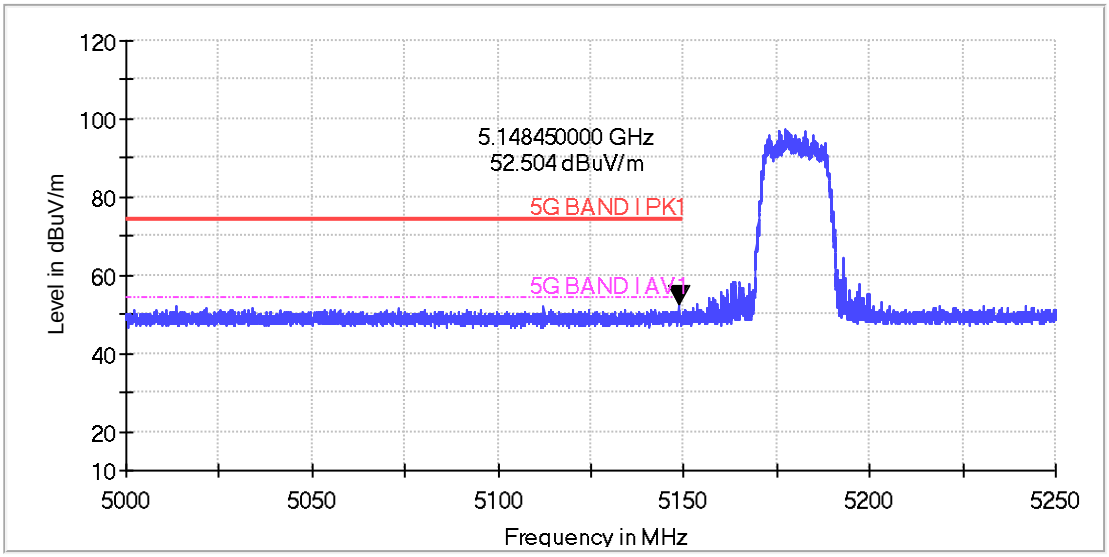
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical



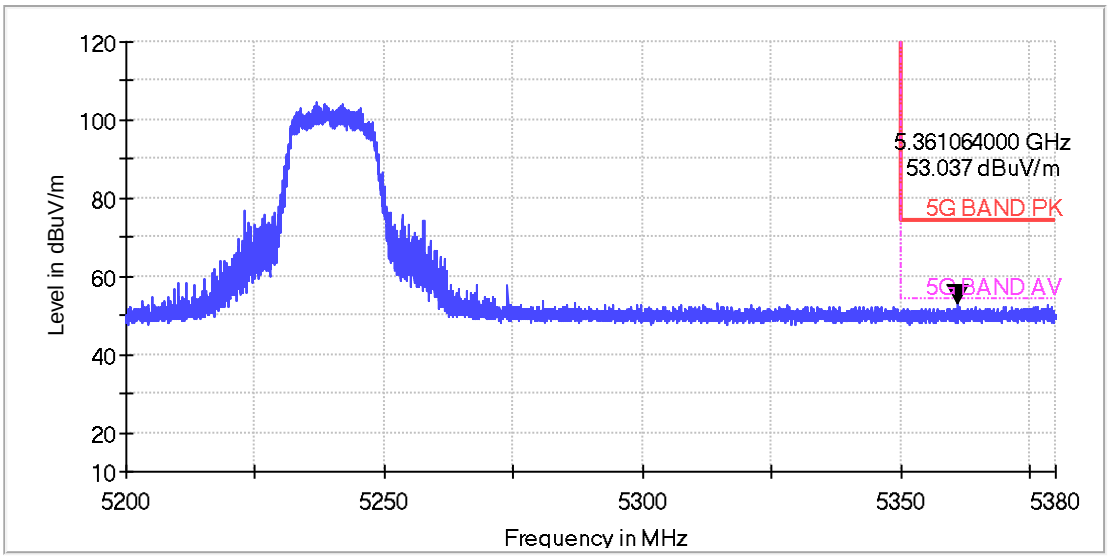
Peak Measurement:

Frequency (MHz)	Reading Level (dBµV)	Correct Factor	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
5121.7	52.5	-0.6	51.9	74	H
5148.5	53.1	-0.6	52.5	74	V

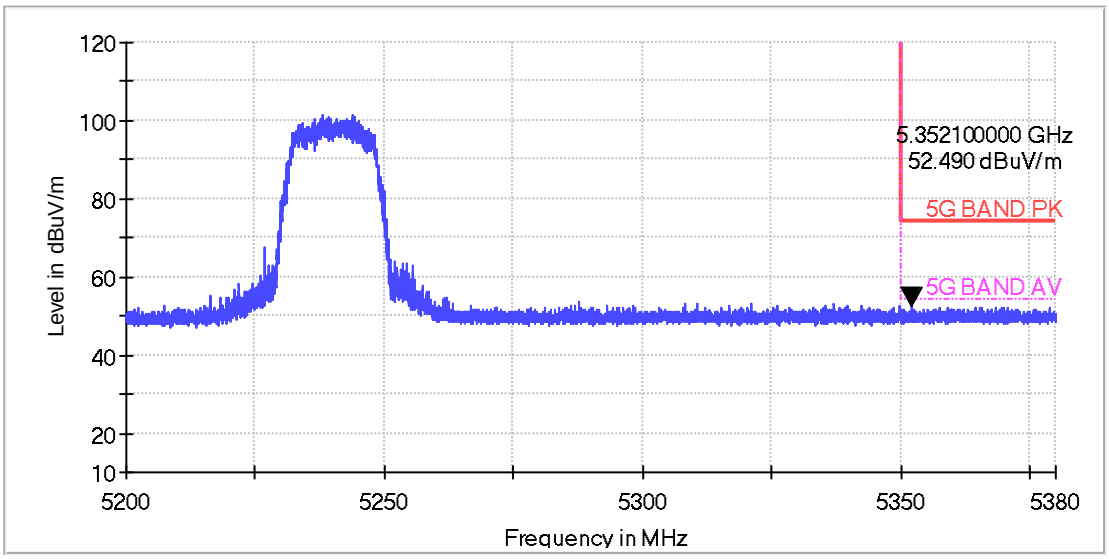
TEST REPORT

5240MHz
802.11a

Horizontal



Vertical



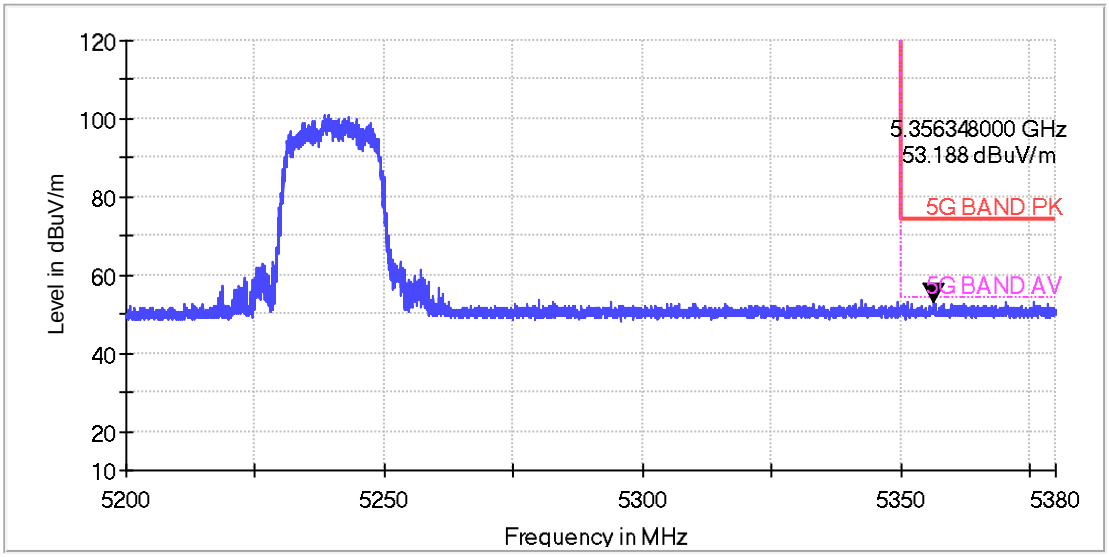
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5361.1	53.2	-0.2	53.0	74	H
5352.1	52.8	-0.3	52.5	74	V

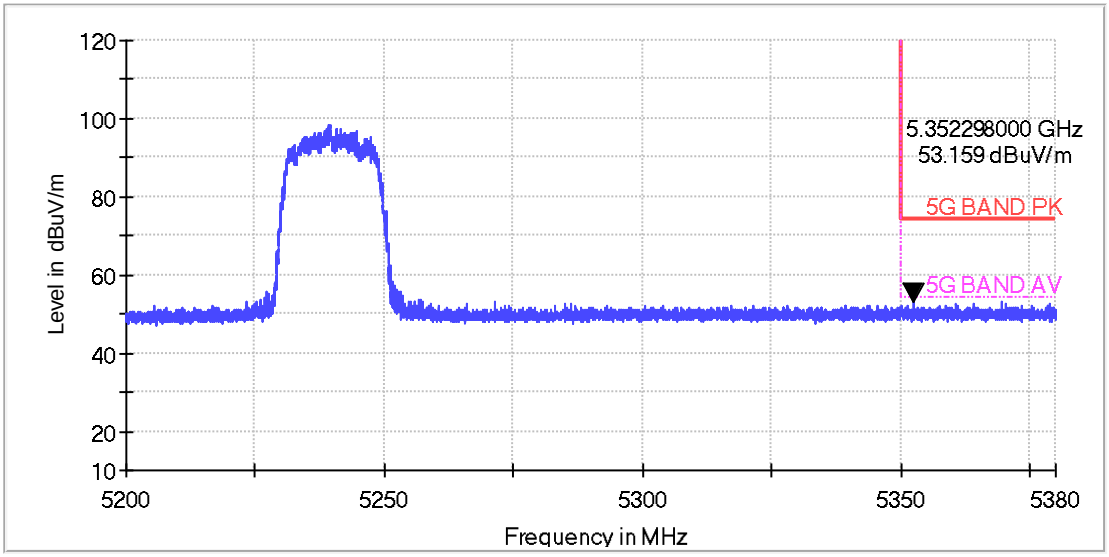
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical



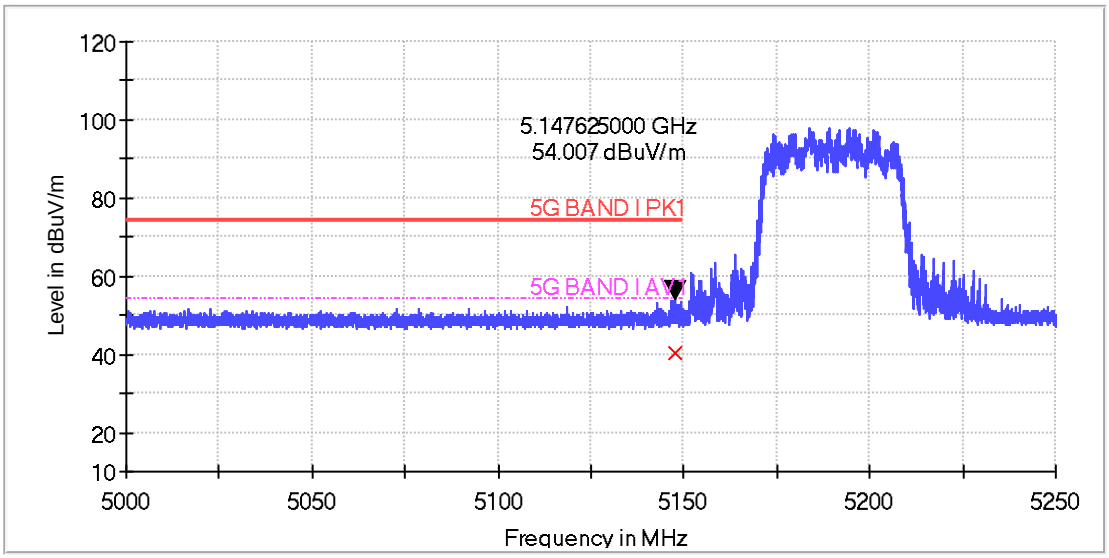
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5356.3	53.5	-0.3	53.2	74	H
5352.3	53.5	-0.3	53.2	74	V

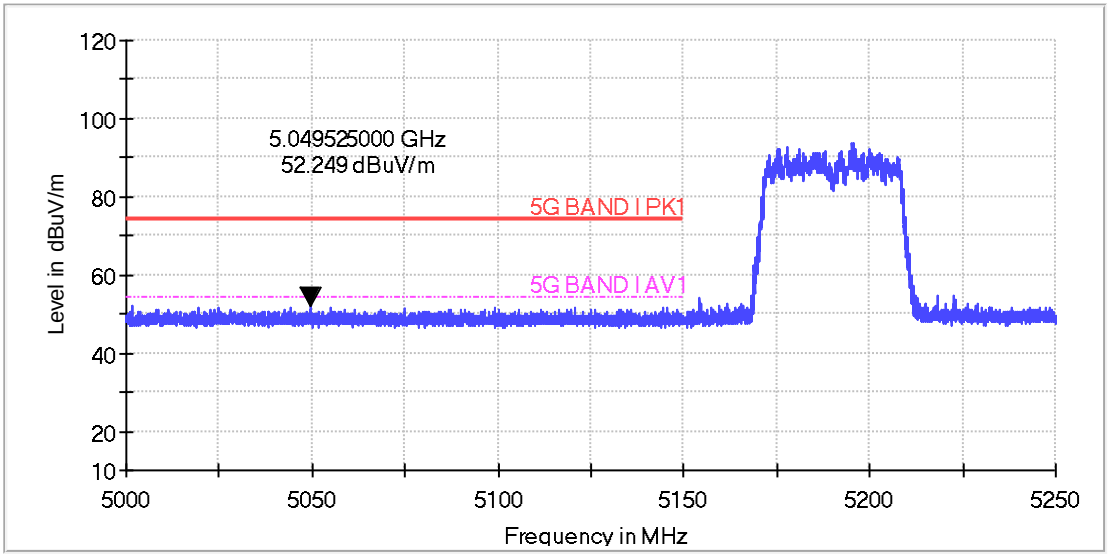
TEST REPORT

5190MHz
802.11an(HT 40)

Horizontal



Vertical



Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5147.6	54.6	-0.6	54.0	74	H
5049.5	52.9	-0.7	52.2	74	V

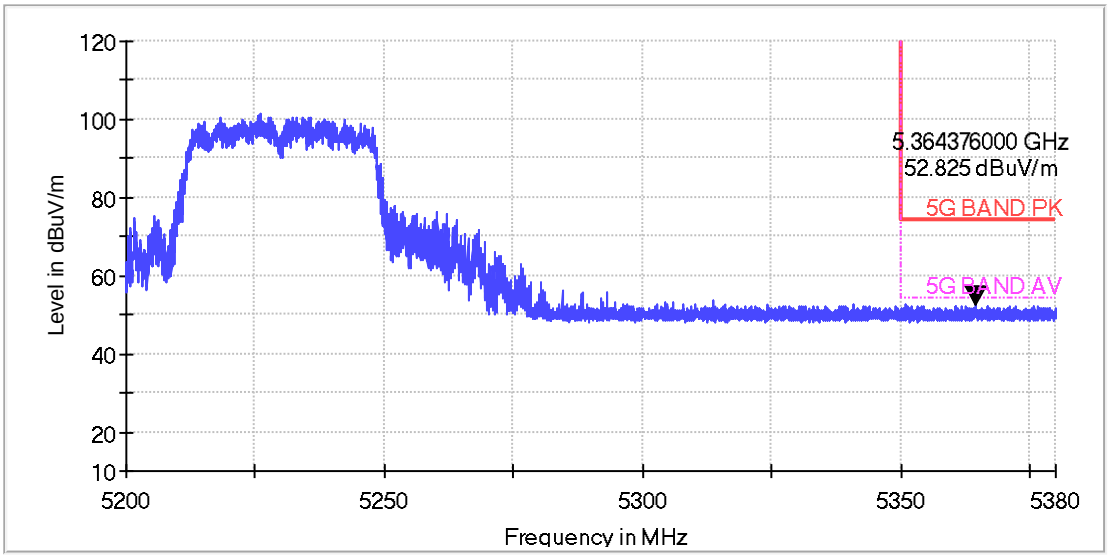
AV Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization

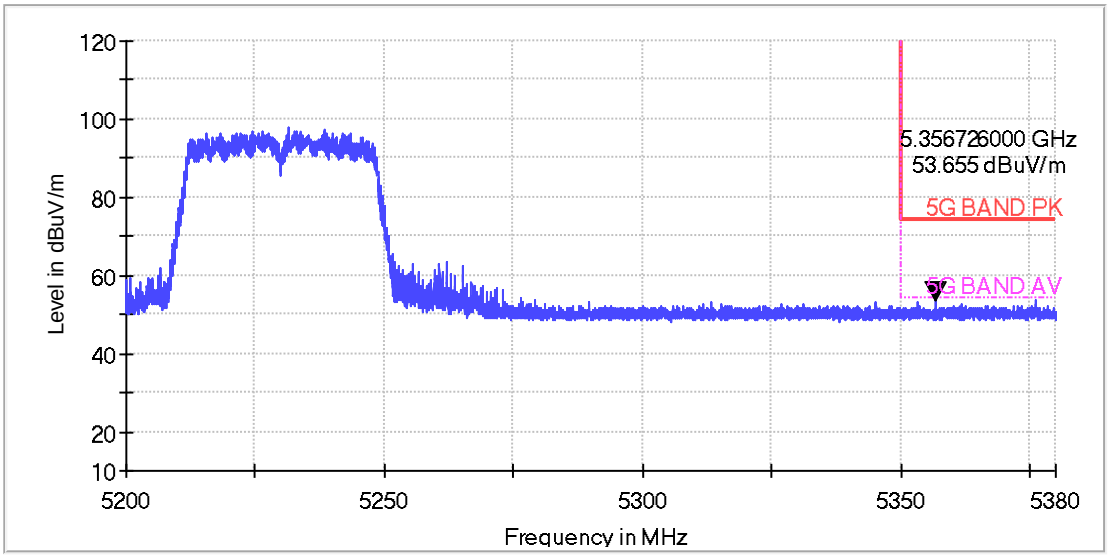
5726.5	40.9	-0.6	40.3	54	H
5049.5	/	-0.7	/	54	V

5230MHz
802.11an(HT 40)

Horizontal



Vertical



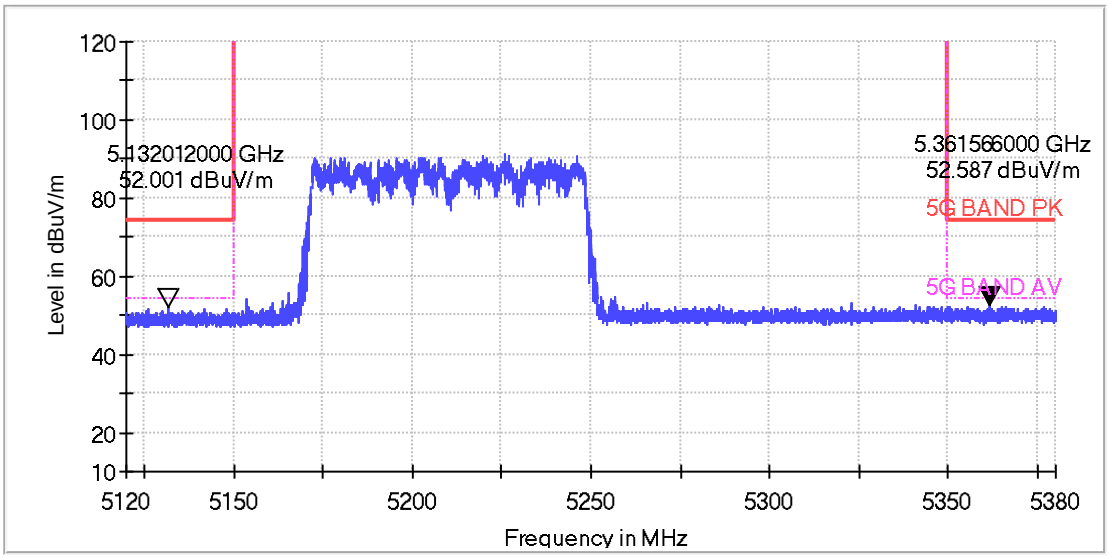
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5364.4	53.0	-0.2	52.8	74	H
5356.7	54.0	-0.3	53.7	74	V

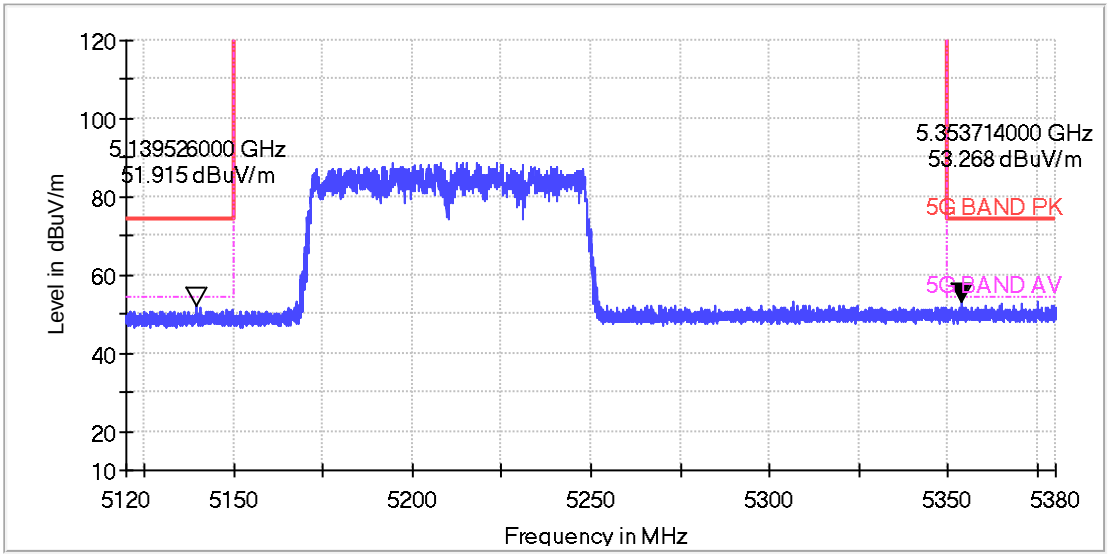
TEST REPORT

5210MHz
802.11ac(HT 80)

Horizontal



Vertical



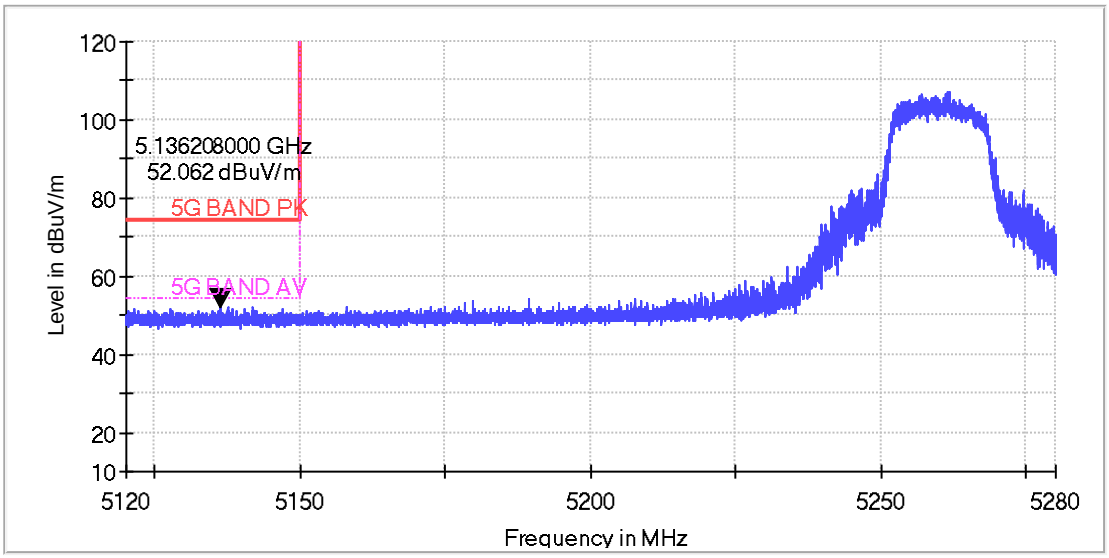
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5132.0	52.6	-0.6	52.0	74	H
5356.7	52.9	-0.3	52.6	74	H
5139.5	52.5	-0.6	51.9	74	V
5253.7	53.7	-0.4	53.3	74	V

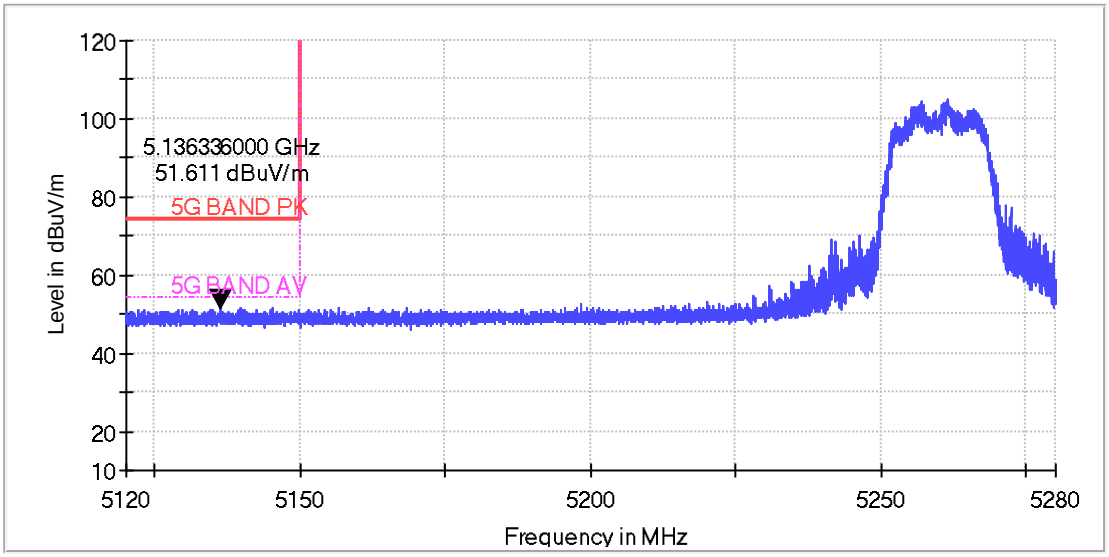
TEST REPORT

5260MHz
802.11a

Horizontal



Vertical



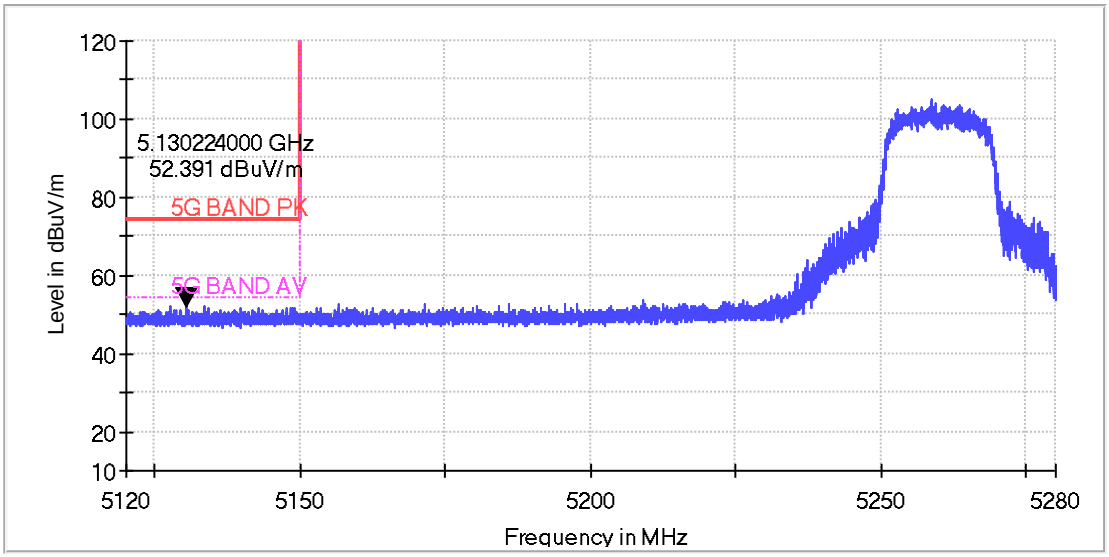
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5136.2	52.7	-0.6	52.1	74	H
5136.3	52.2	-0.6	51.6	74	V

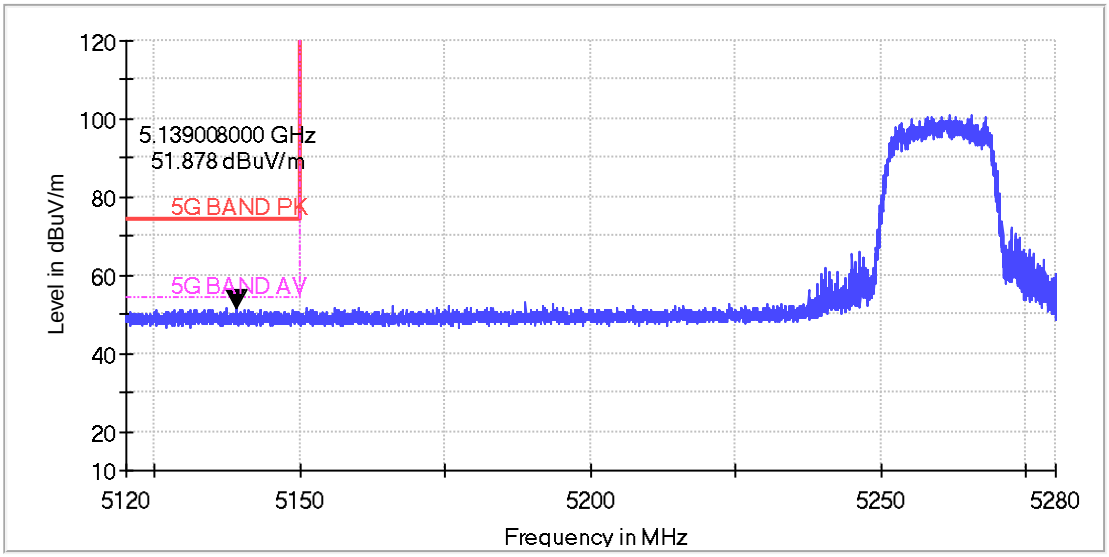
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical



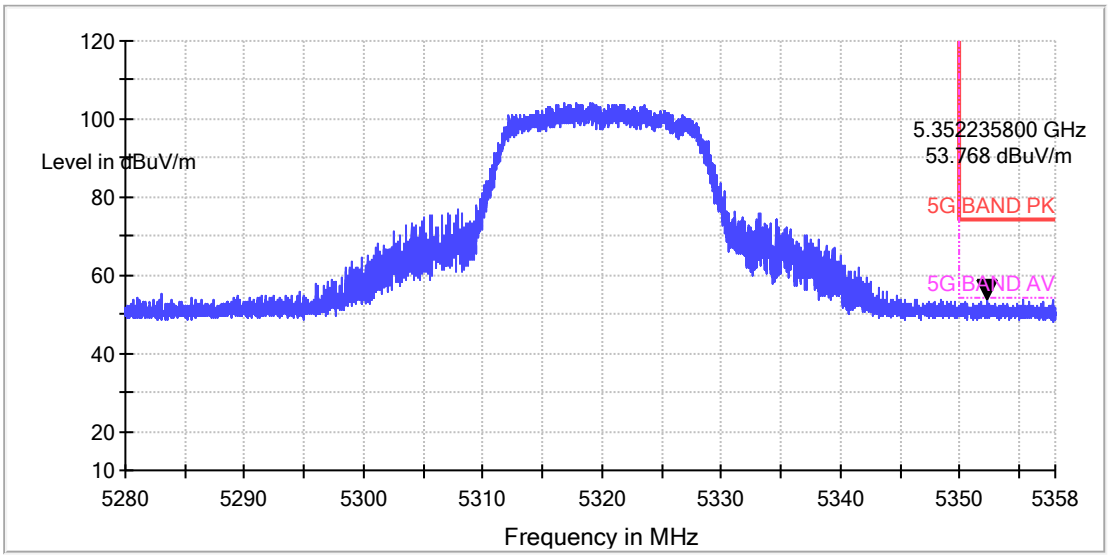
Peak Measurement:

Frequency (MHz)	Reading Level (dBµV)	Correct Factor	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
5130.2	53.0	-0.6	52.4	74	H
5139.0	52.5	-0.6	51.9	74	V

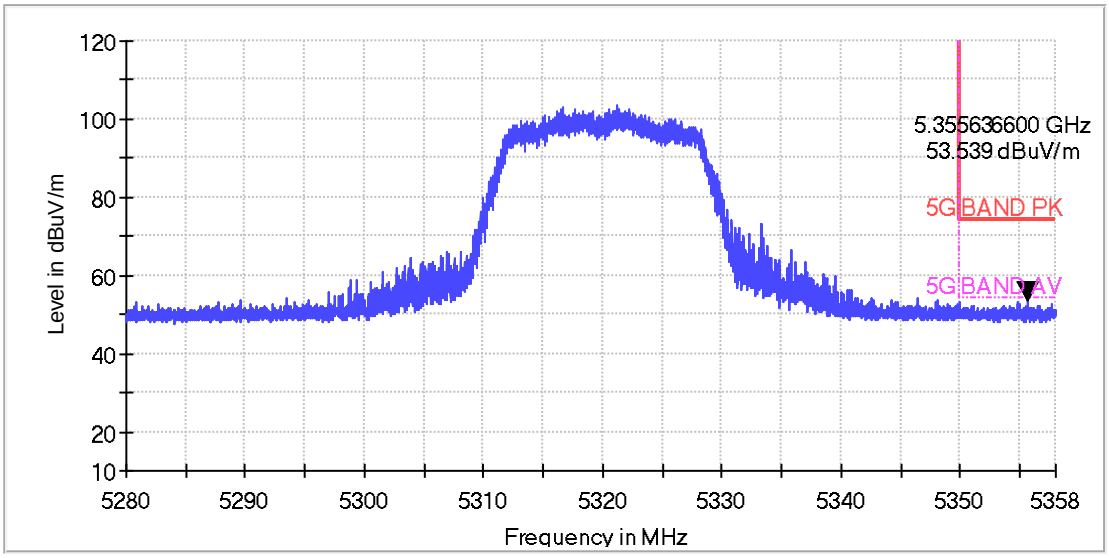
TEST REPORT

5320MHz
802.11a

Horizontal



Vertical



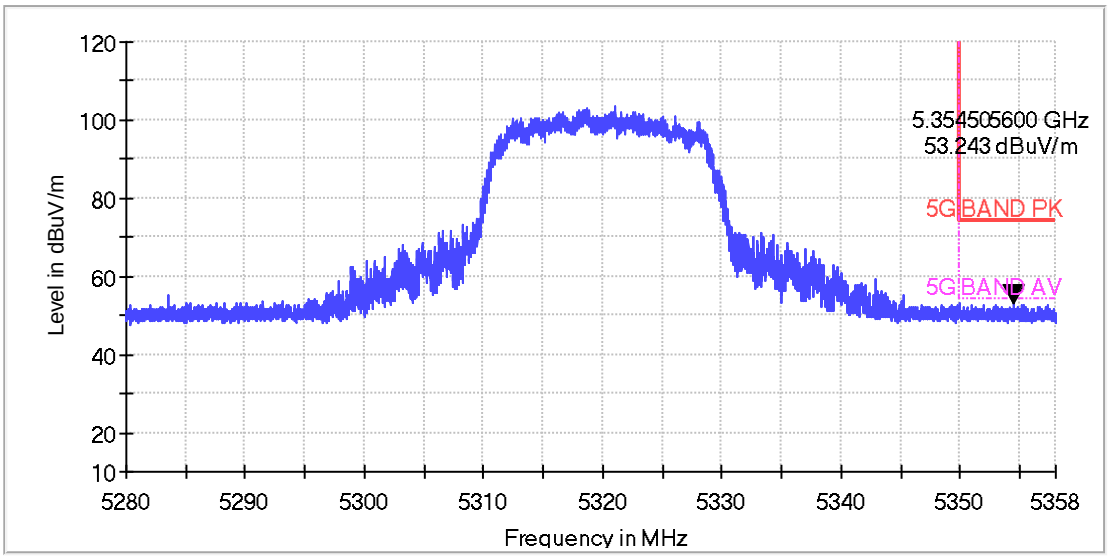
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5352.2	54.1	-0.3	53.8	74	H
5333.6	53.8	-0.3	53.5	74	V

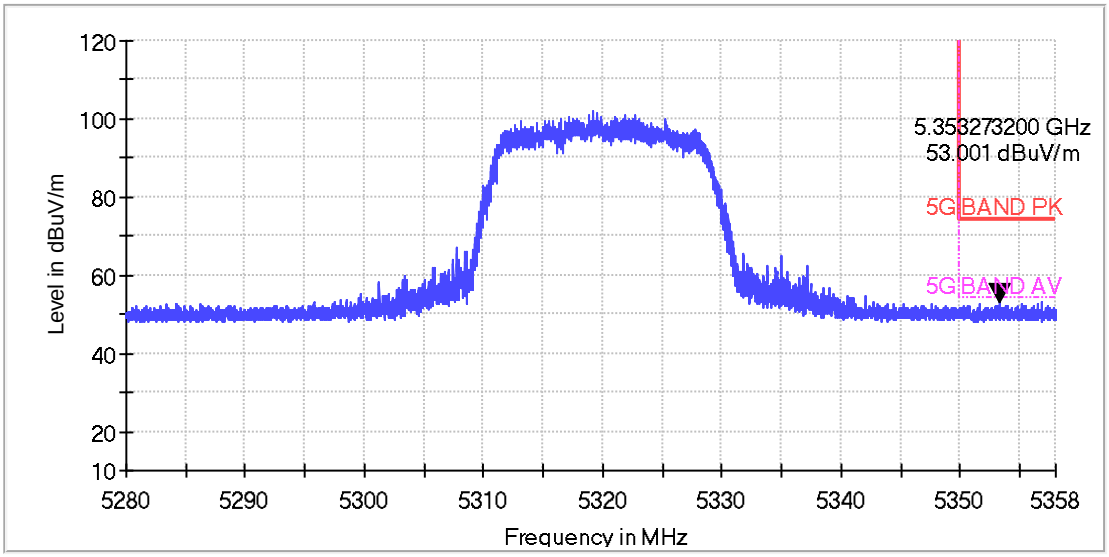
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical



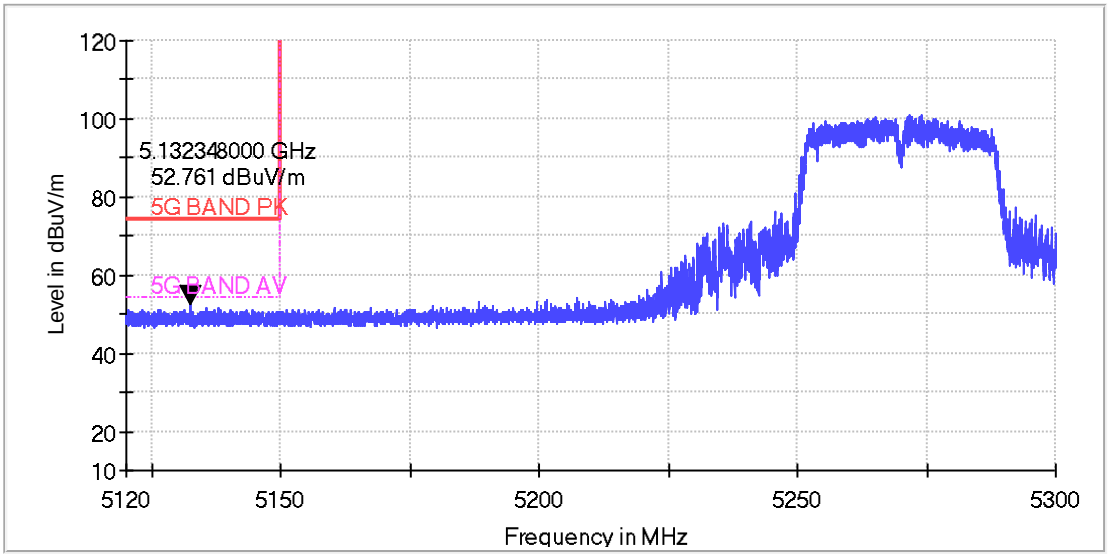
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5354.5	53.5	-0.3	53.2	74	H
5353.3	53.3	-0.3	53.0	74	V

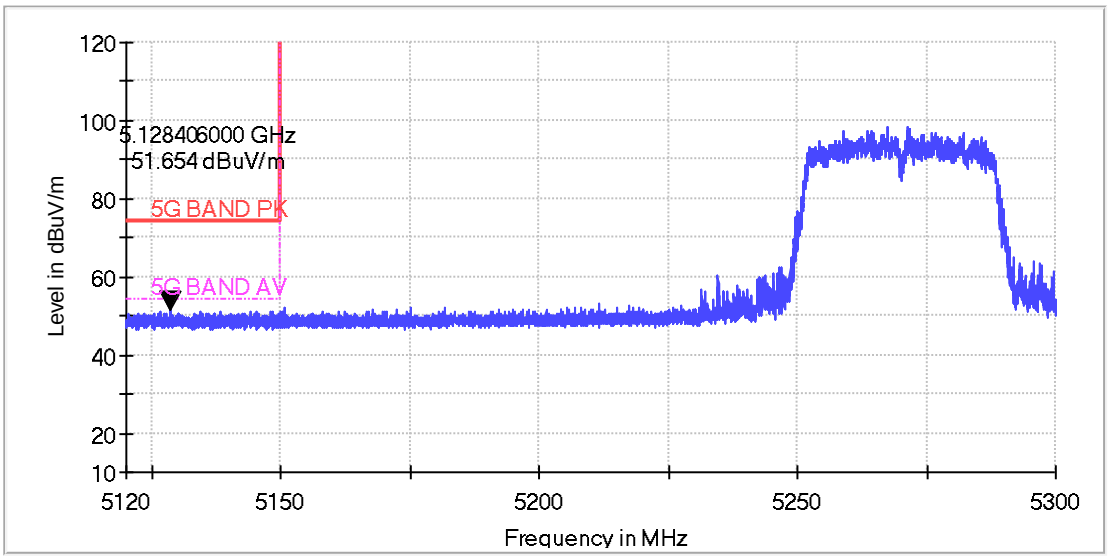
TEST REPORT

5270MHz
802.11an(HT 40)

Horizontal



Vertical



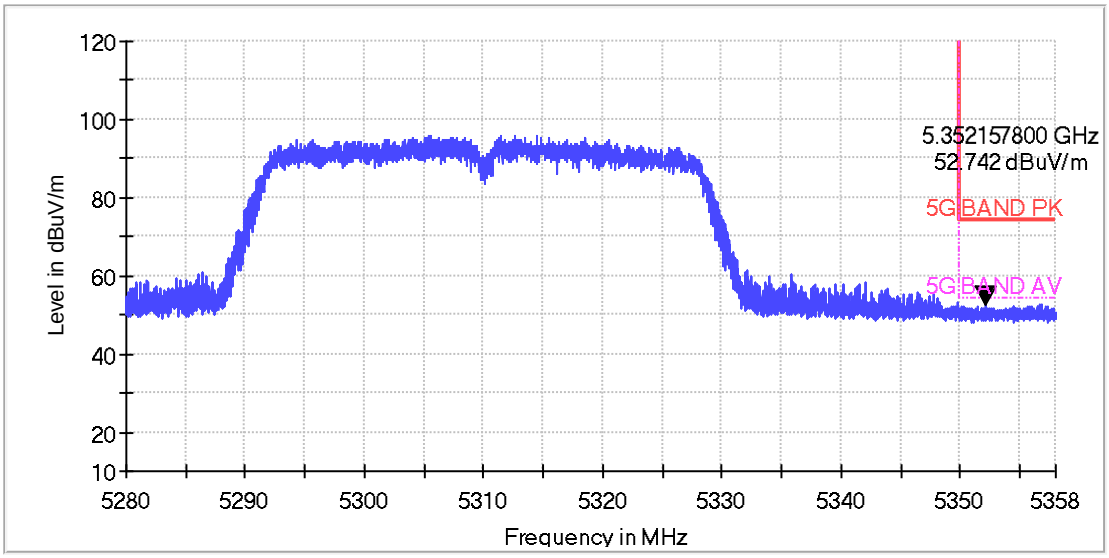
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5132.3	53.4	-0.6	52.8	74	H
5128.4	52.3	-0.6	51.7	74	V

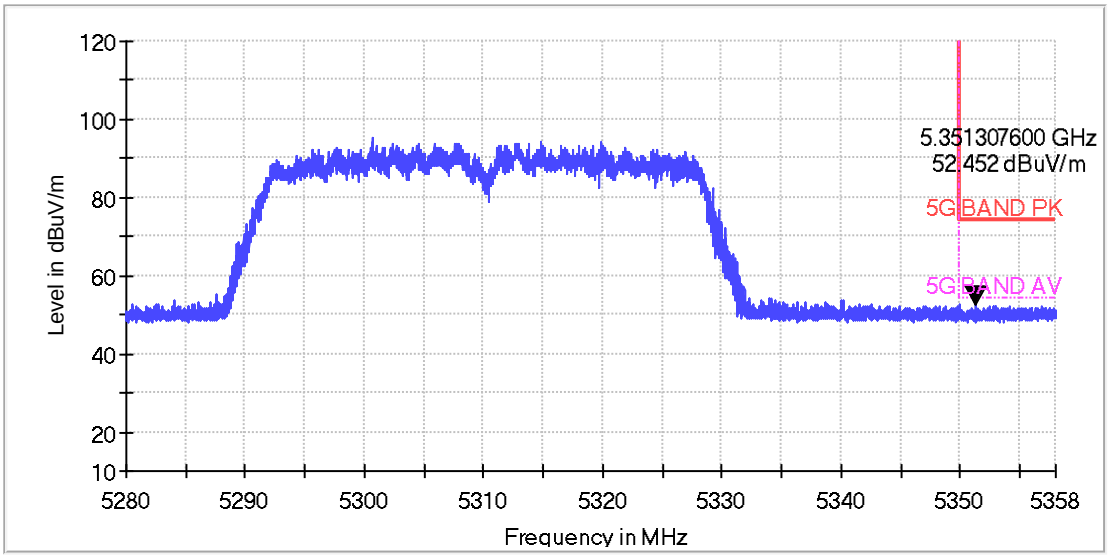
TEST REPORT

5310MHz
802.11an(HT 40)

Horizontal



Vertical



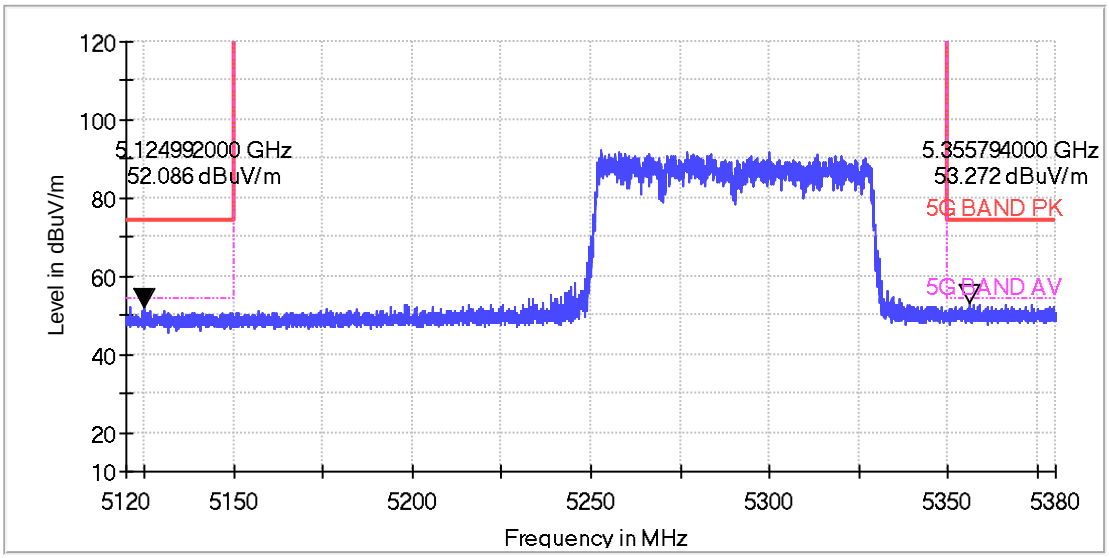
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5352.2	53.0	-0.3	52.7	74	H
5351.3	52.8	-0.3	52.5	74	V

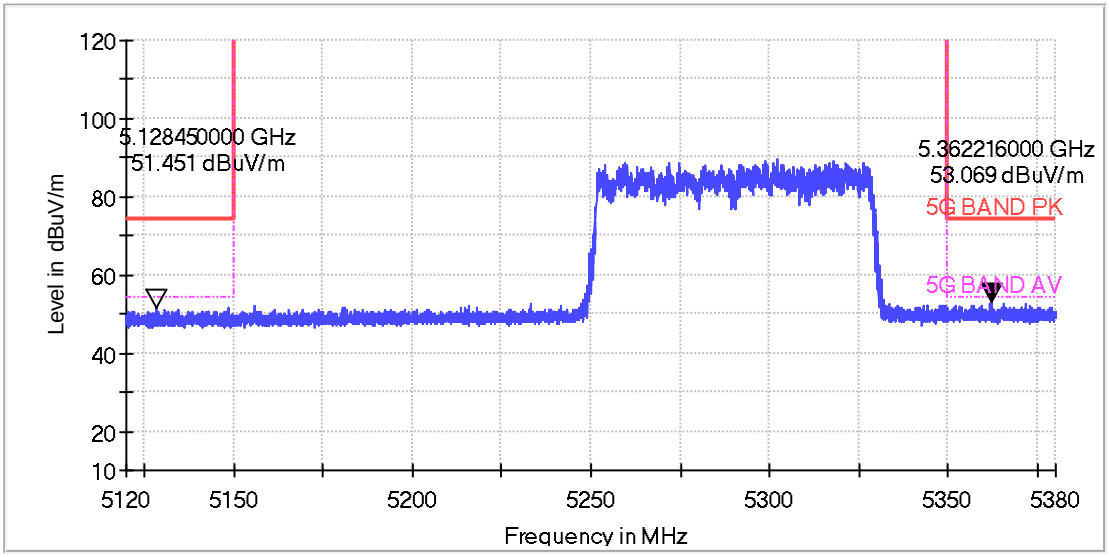
TEST REPORT

5290MHz
802.11ac(HT 80)

Horizontal



Vertical

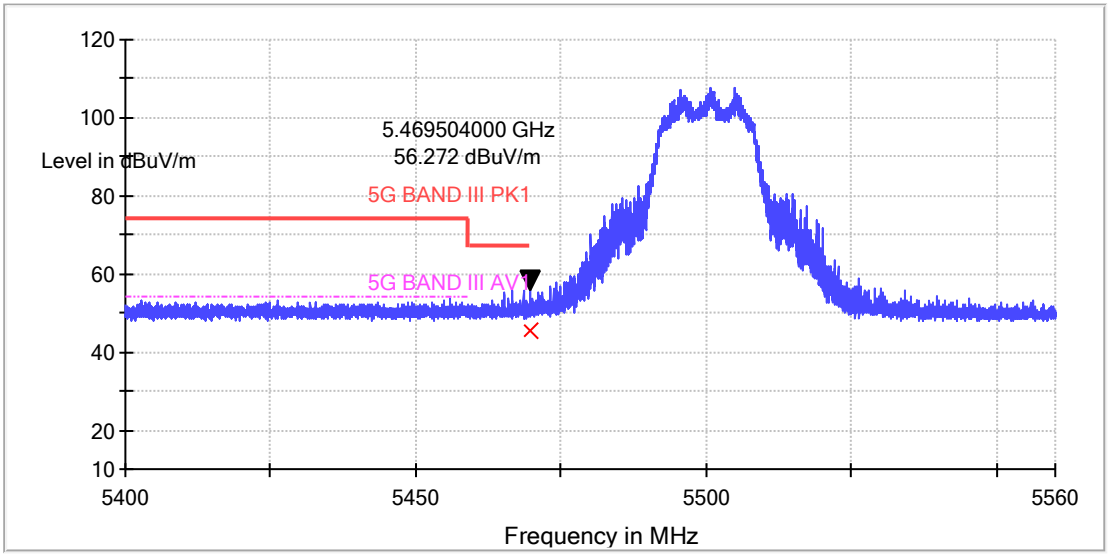


Peak Measurement:

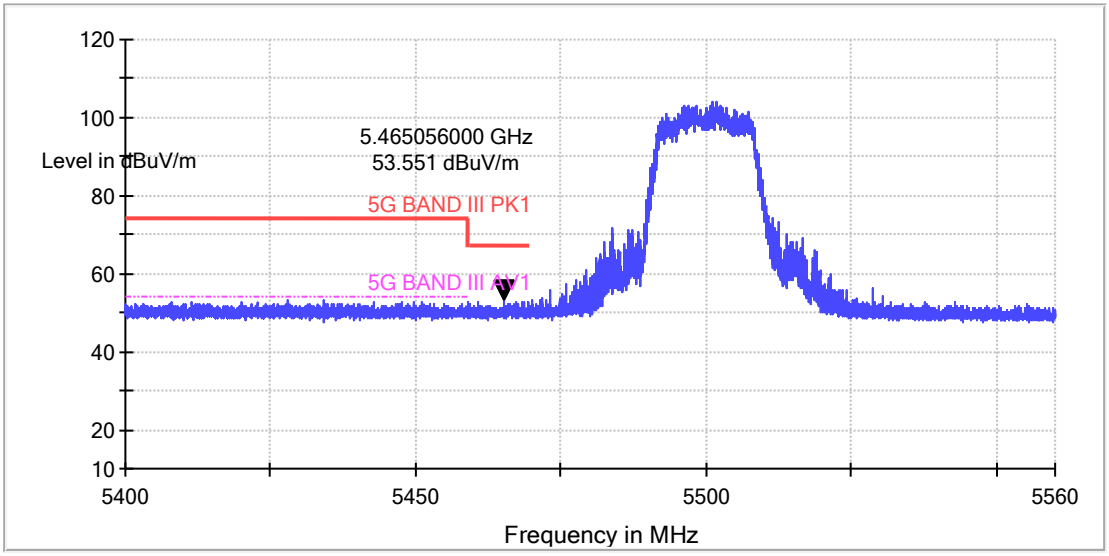
Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5125.0	52.7	-0.6	52.1	74	H
5355.8	53.6	-0.3	53.3	74	H
5128.5	52.1	-0.6	51.5	74	V
5362.2	53.3	-0.2	53.1	74	V

TEST REPORT

5500MHz
802.11a
Horizontal



Vertical



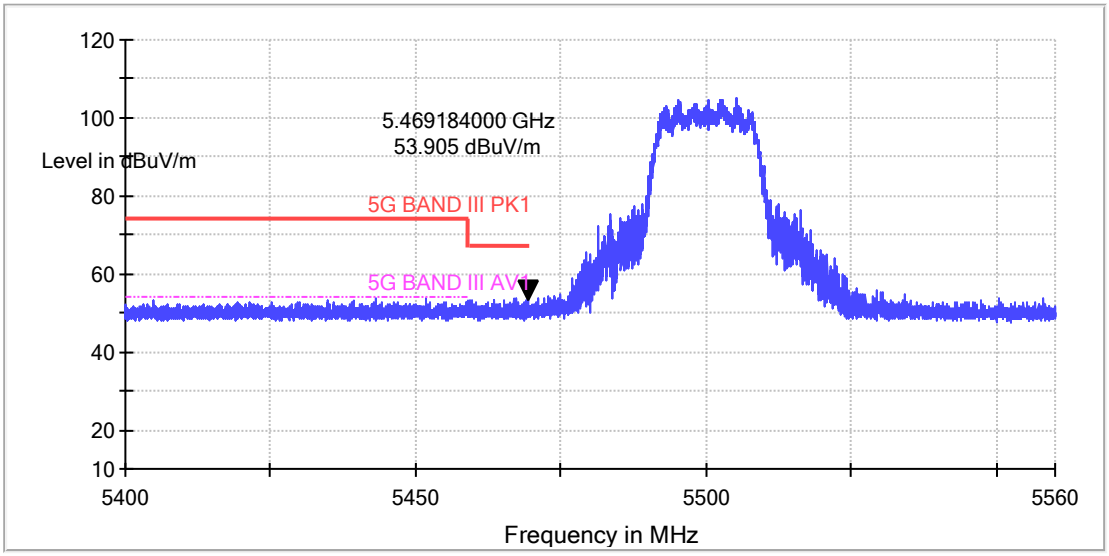
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5469.5	56.4	-0.1	56.3	68.2	H
5465.1	53.7	-0.1	53.6	68.2	V

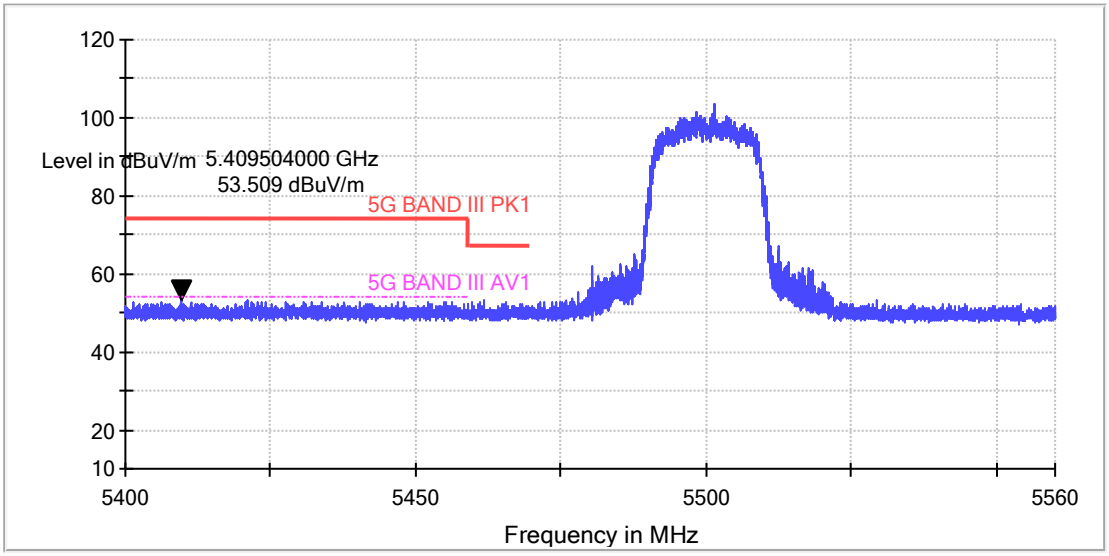
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical

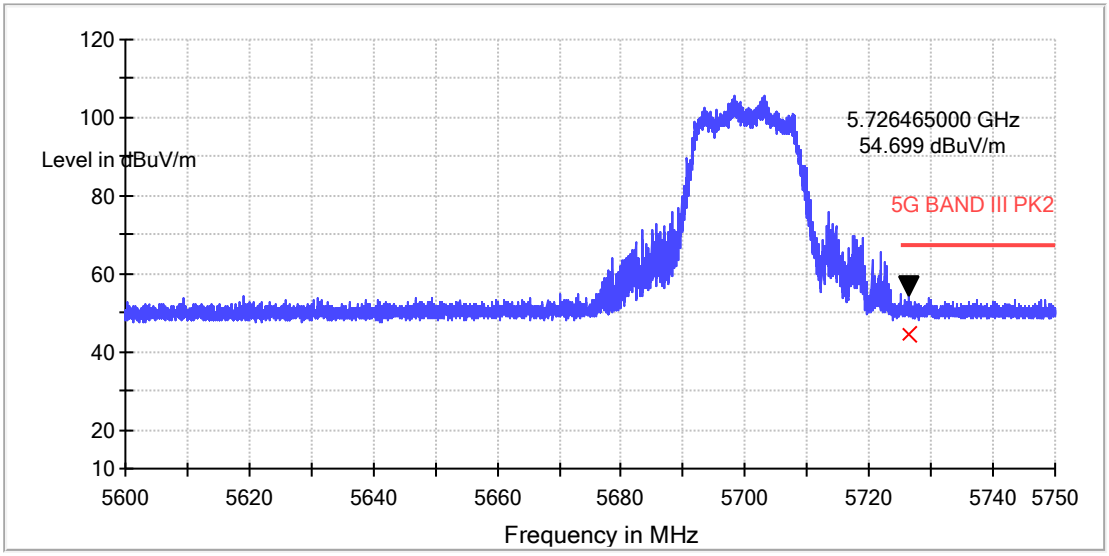


Peak Measurement:

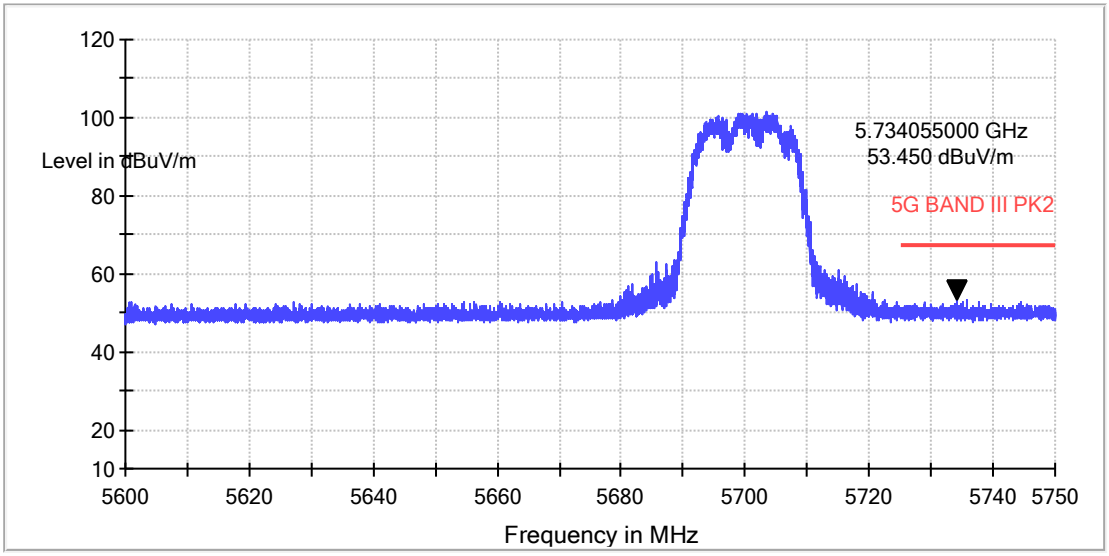
Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5469.2	54.0	-0.1	53.9	68.2	H
5409.5	53.7	-0.2	53.5	74	V

TEST REPORT

5700MHz
802.11a
Horizontal



Vertical



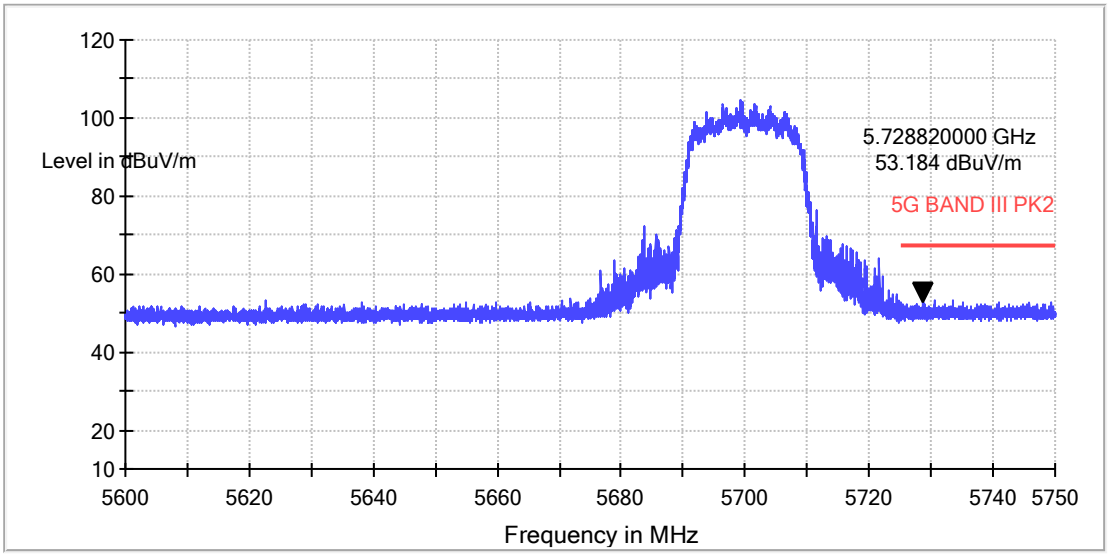
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5726.5	54.4	0.3	54.7	68.2	H
5734.1	53.2	0.3	53.5	68.2	V

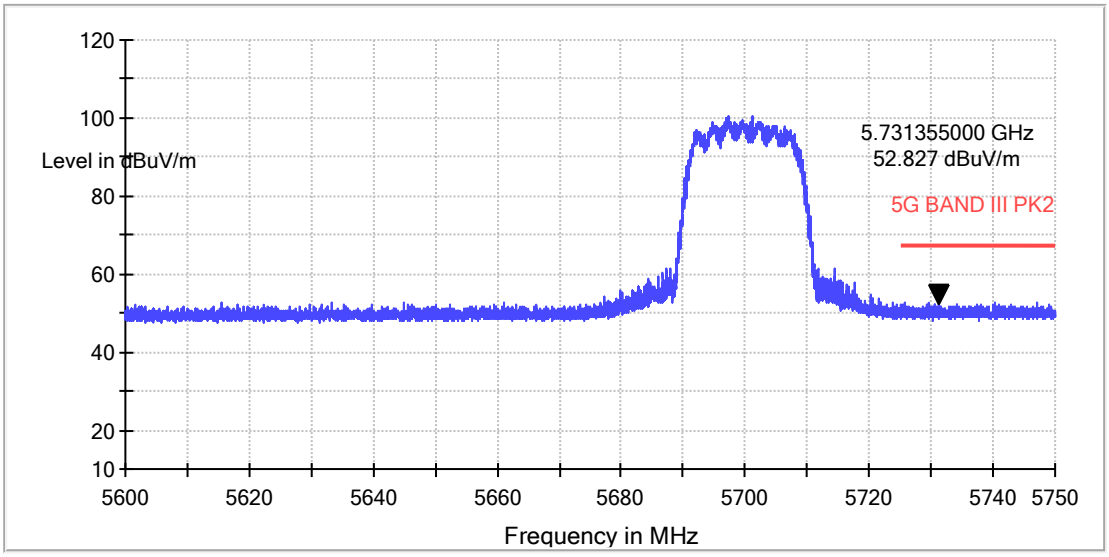
TEST REPORT

802.11an(HT 20)

Horizontal



Vertical

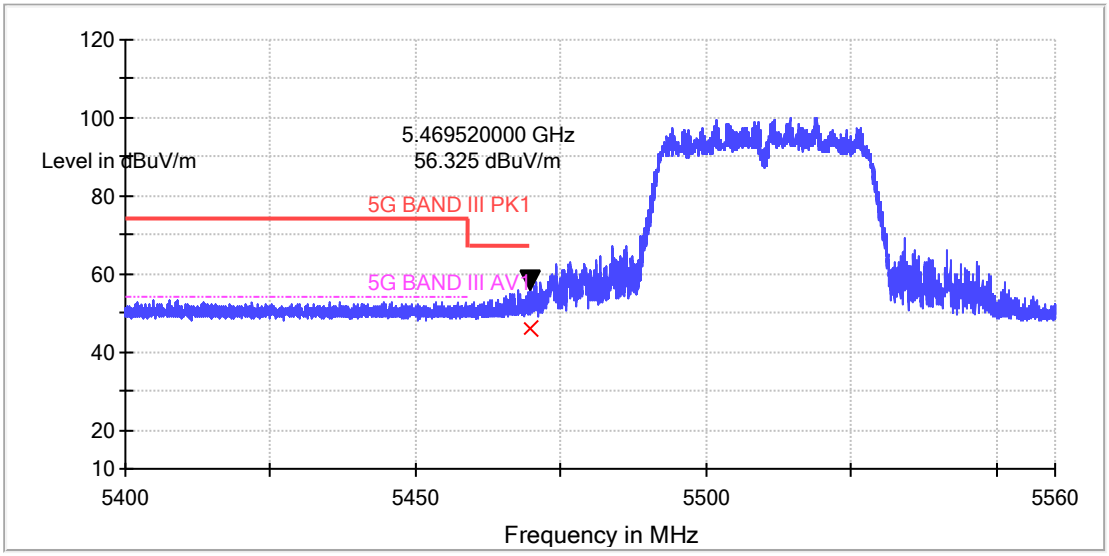


Peak Measurement:

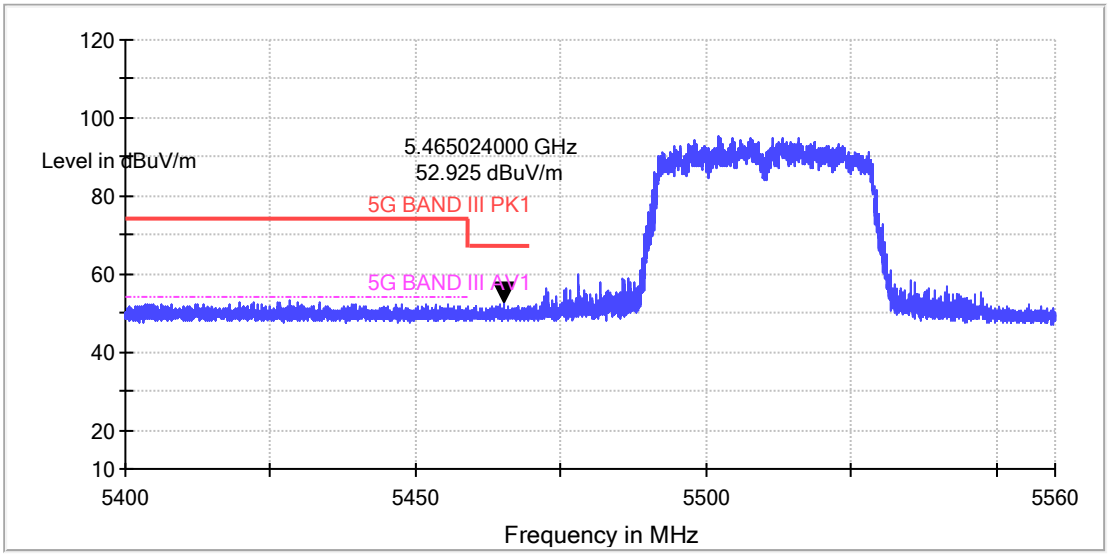
Frequency (MHz)	Reading Level (dBµV)	Correct Factor	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
5728.8	52.9	0.3	53.2	68.2	H
5731.4	52.5	0.3	52.8	68.2	V

TEST REPORT

5510MHz
802.11an(HT 40)
Horizontal



Vertical

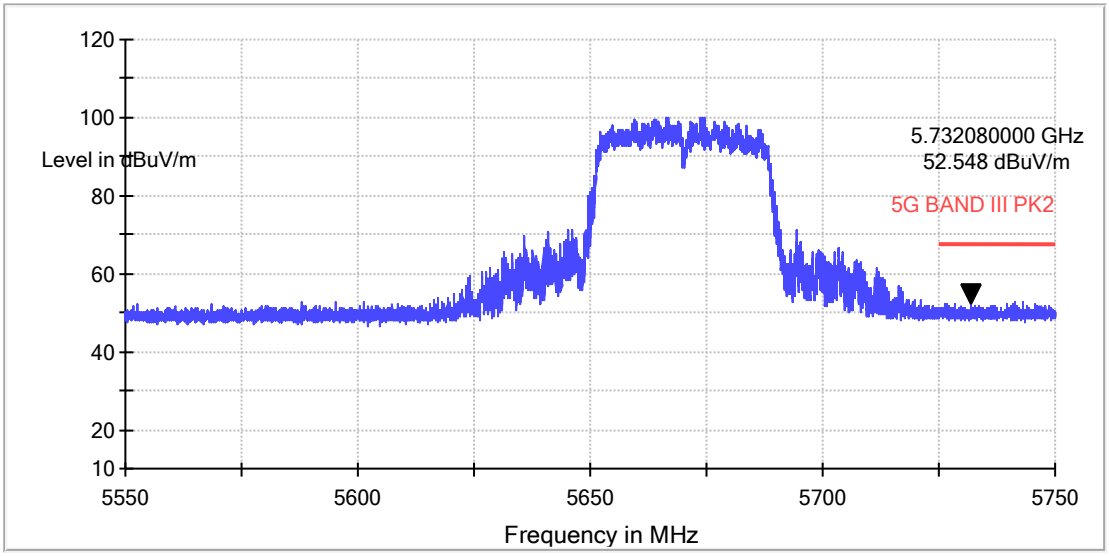


Peak Measurement:

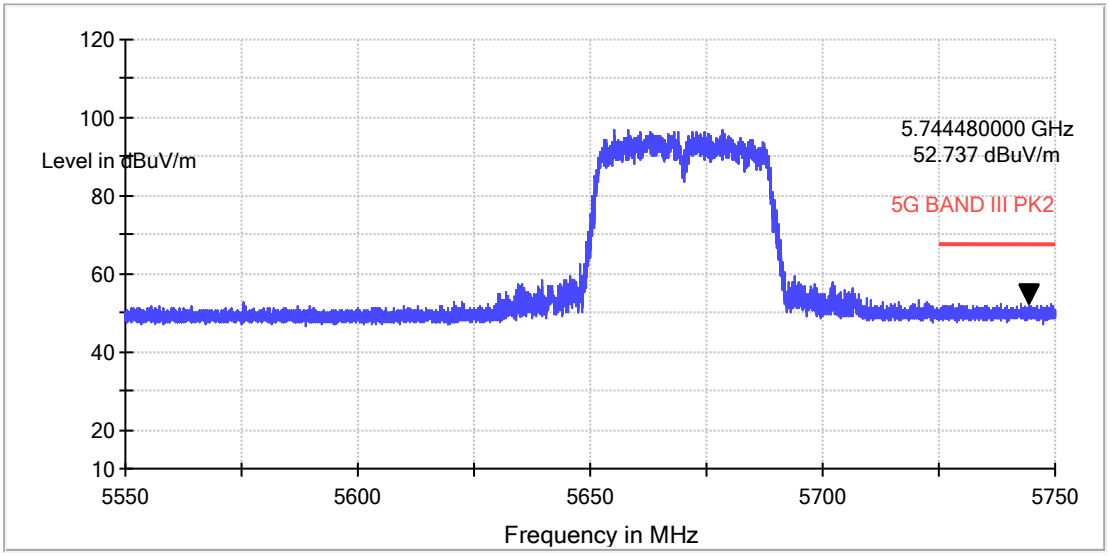
Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5469.5	56.4	-0.1	56.3	68.2	H
5465.0	53.0	-0.1	52.9	68.2	V

TEST REPORT

5670MHz
802.11an(HT 40)
Horizontal



Vertical

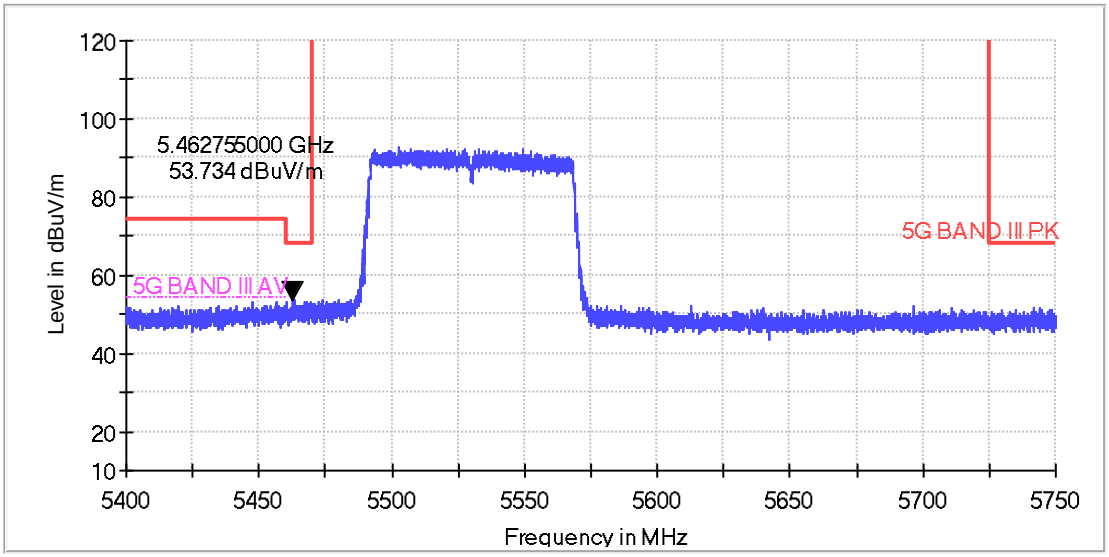


Peak Measurement:

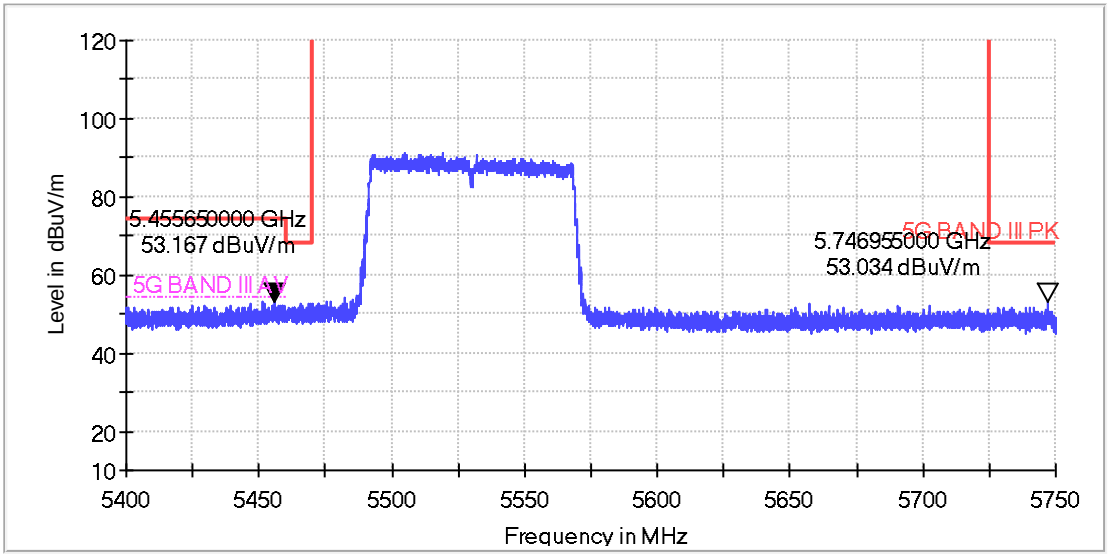
Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5732.1	52.2	0.3	52.5	68.2	H
5744.5	52.4	0.3	52.7	68.2	V

TEST REPORT

5530MHz
802.11ac(HT 80)
Horizontal



Vertical



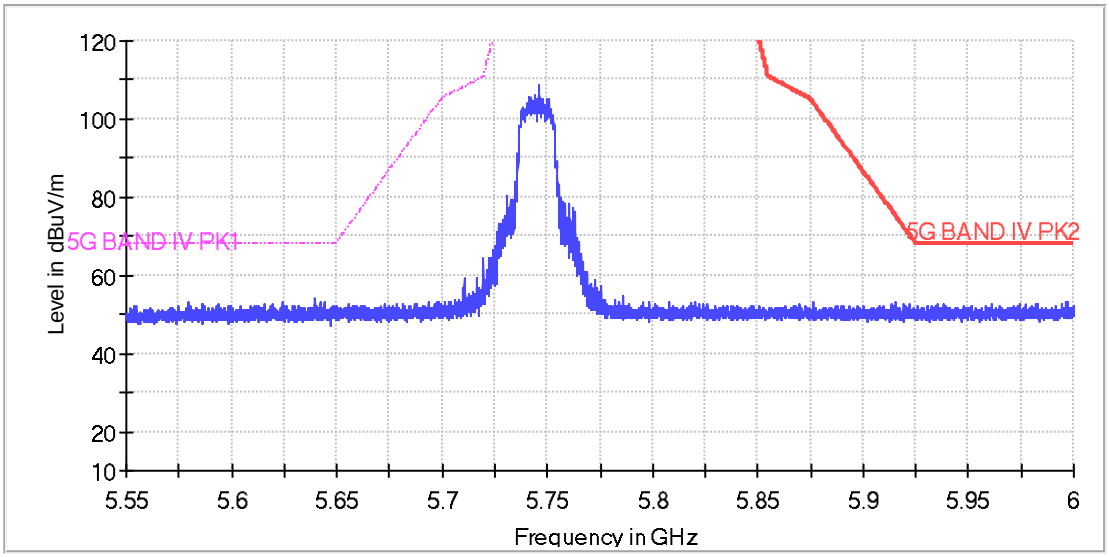
Peak Measurement:

Frequency (MHz)	Reading Level (dBμV)	Correct Factor	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
5462.8	53.8	-0.1	53.7	74	H
5455.7	53.3	-0.1	53.2	74	V
5770.0	52.6	0.4	53.0	68.2	V

TEST REPORT

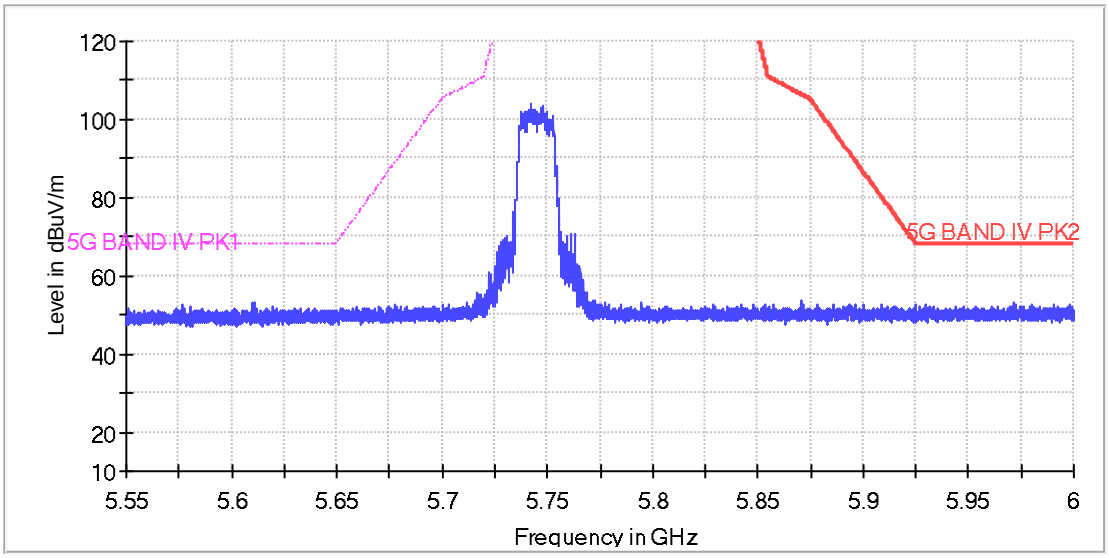
5745MHz
802.11a

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

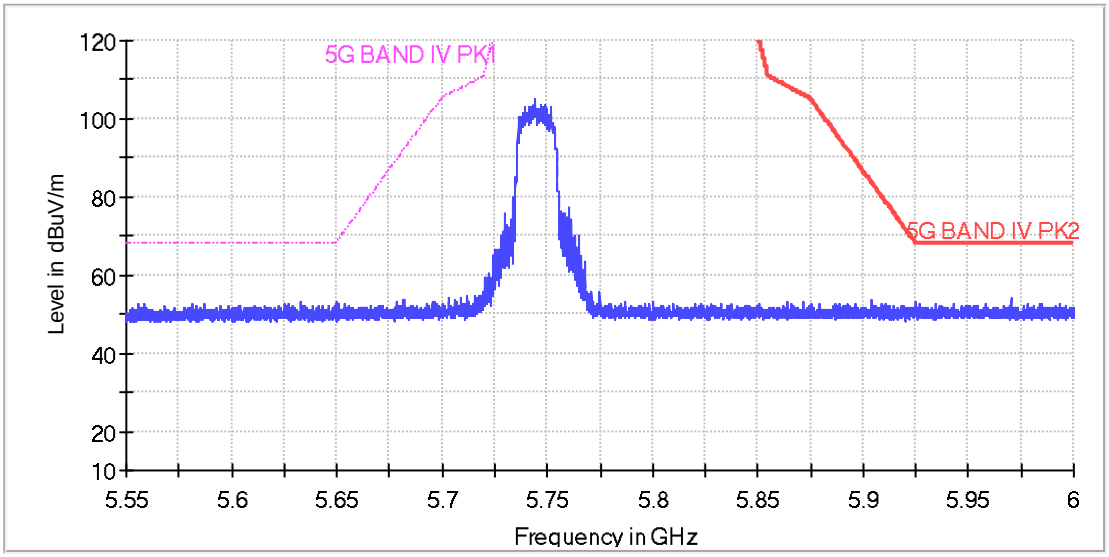


All emission levels are more than 6dB below the limit.

TEST REPORT

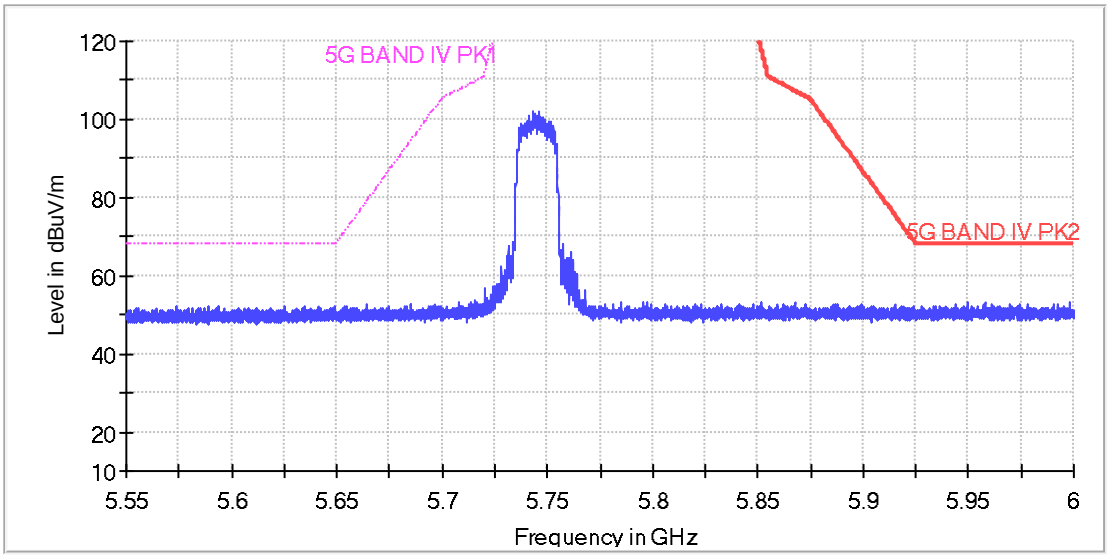
802.11an(HT 20)

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

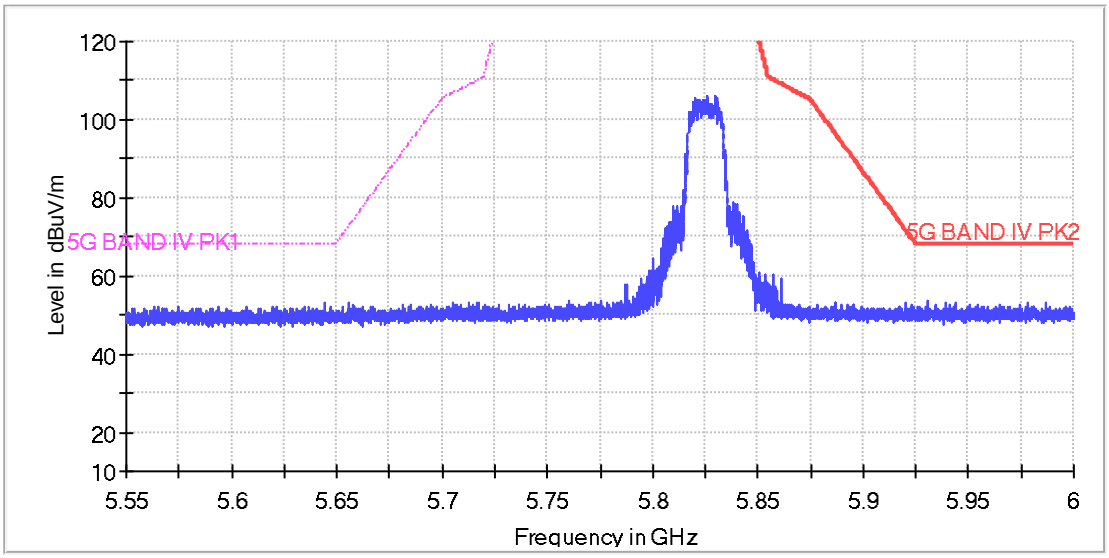


All emission levels are more than 6dB below the limit.

TEST REPORT

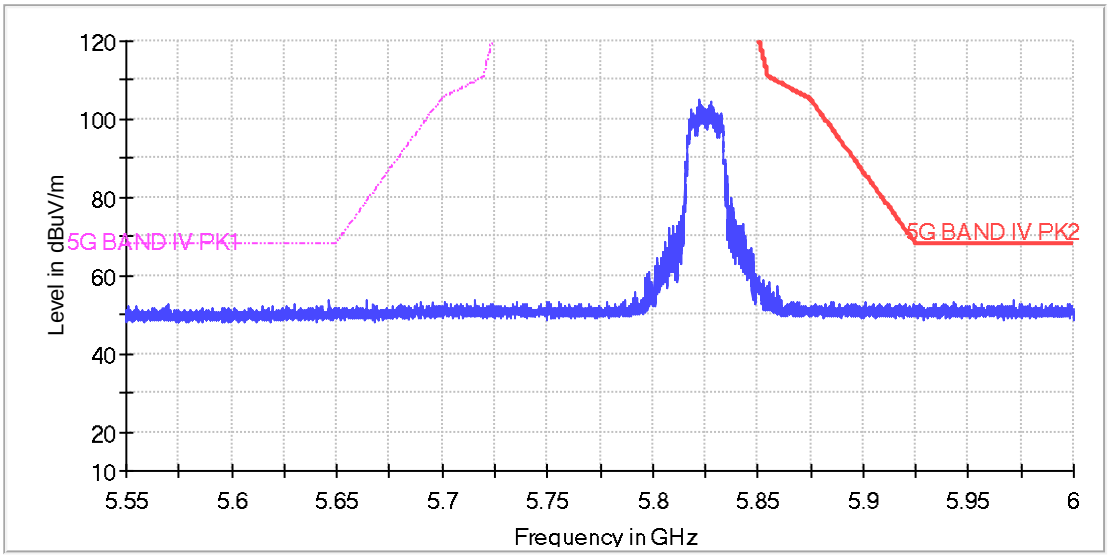
5825MHz
802.11a

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

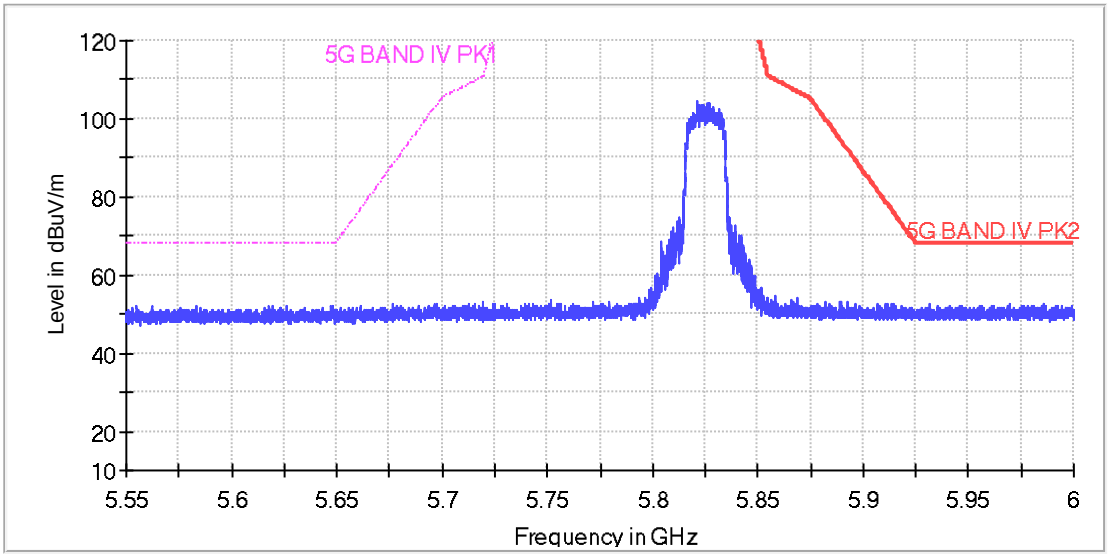


All emission levels are more than 6dB below the limit.

TEST REPORT

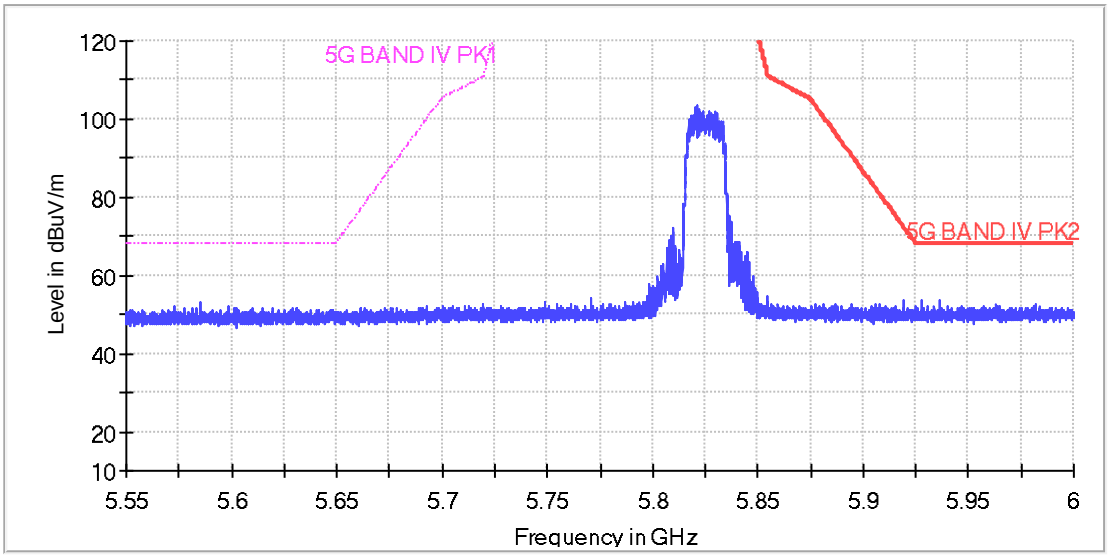
802.11an(HT 20)

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

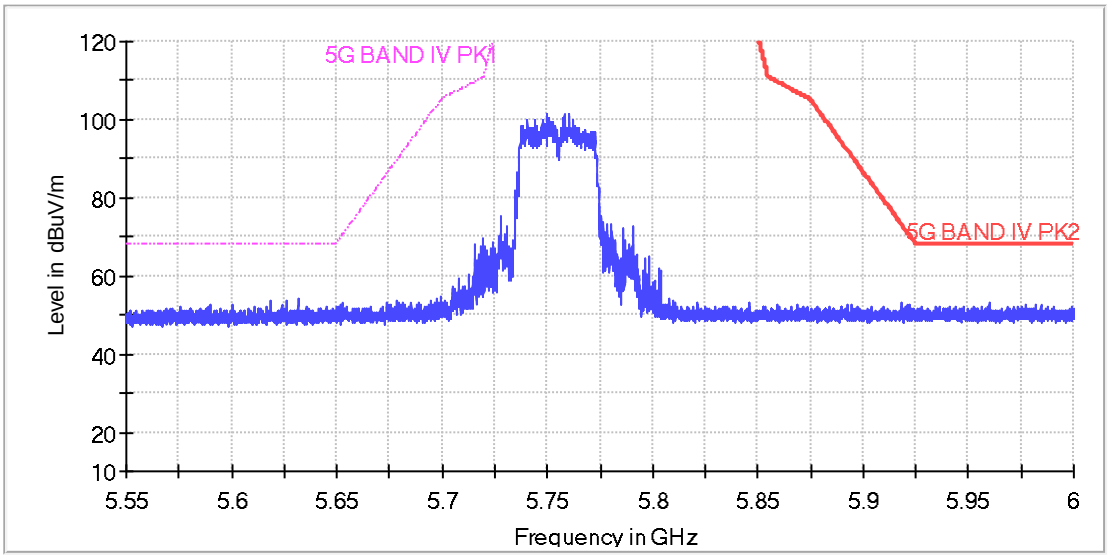


All emission levels are more than 6dB below the limit.

TEST REPORT

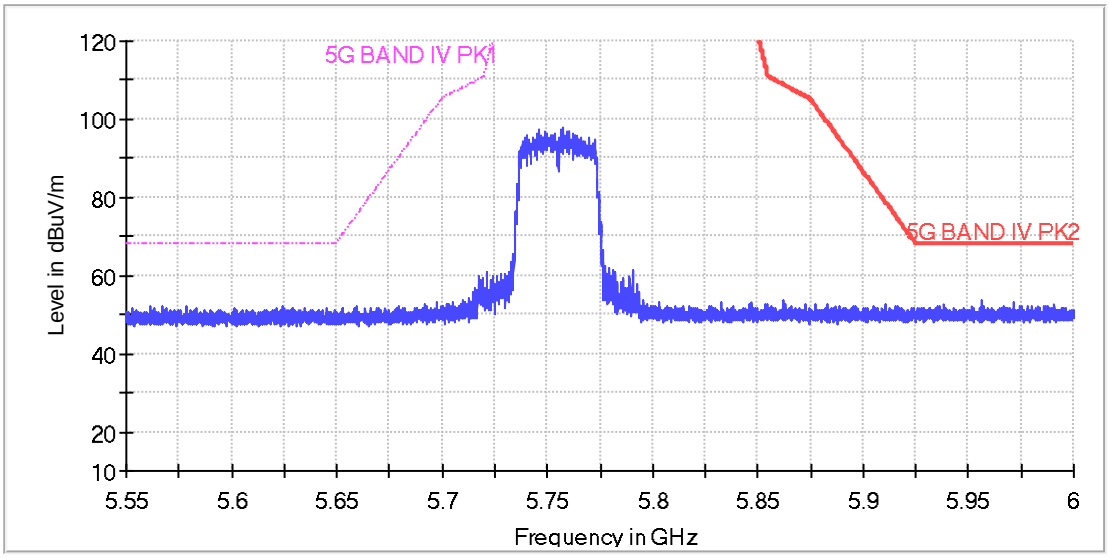
5755MHz
802.11an(HT 40)

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

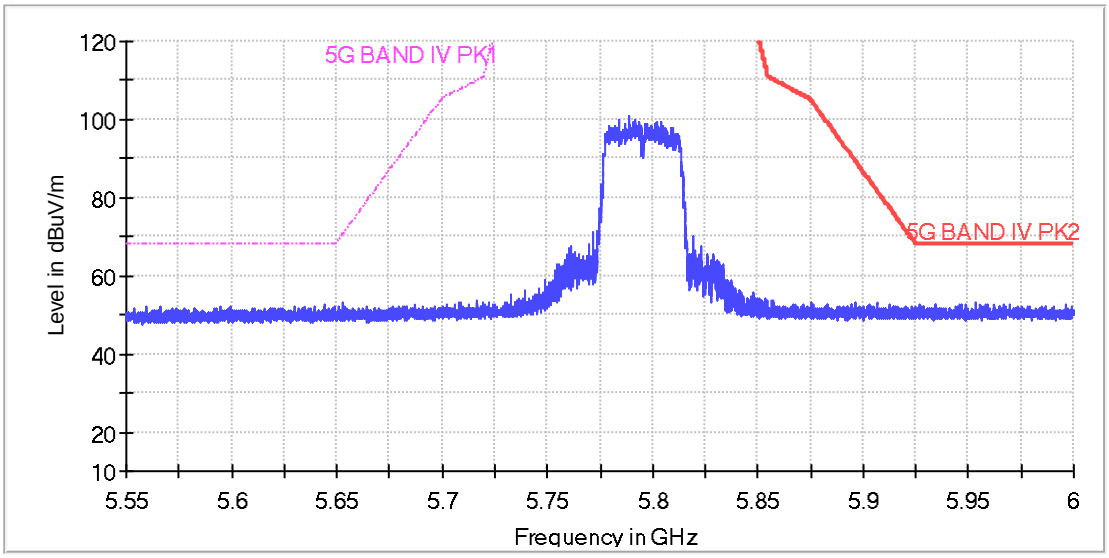


All emission levels are more than 6dB below the limit.

TEST REPORT

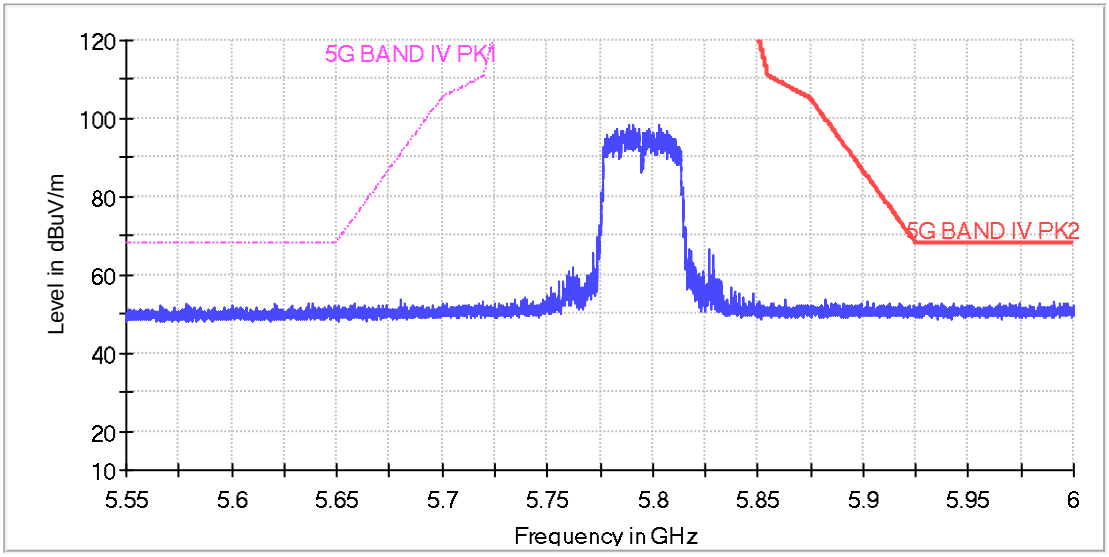
5795MHz
802.11an(HT 40)

Horizontal



All emission levels are more than 6dB below the limit.

Vertical

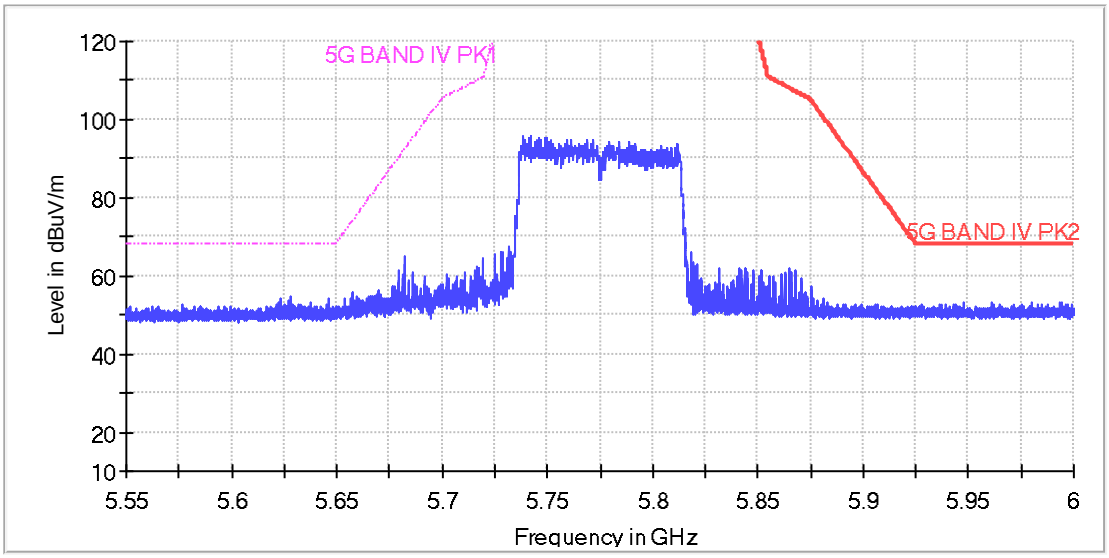


All emission levels are more than 6dB below the limit.

TEST REPORT

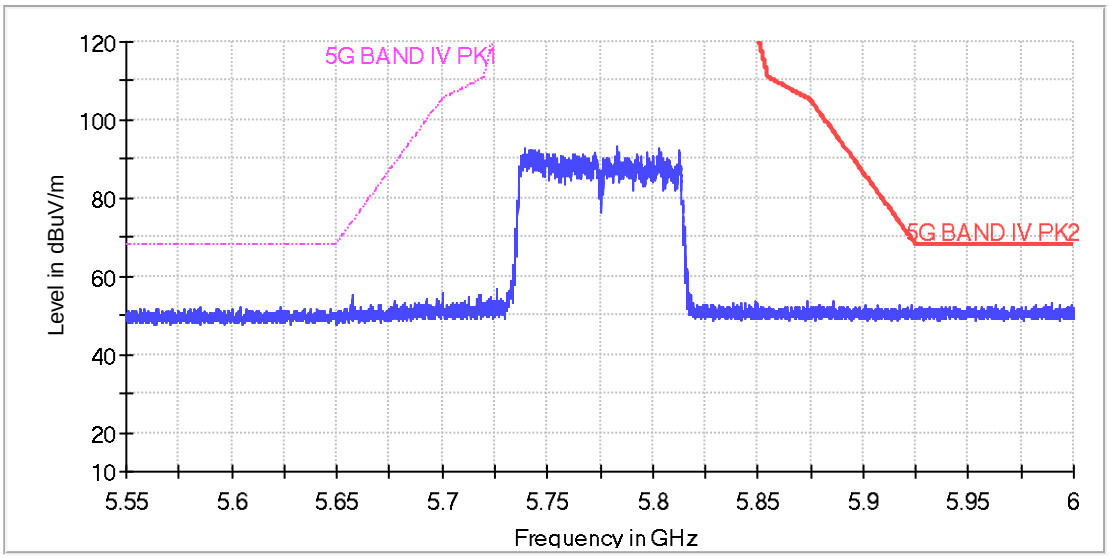
5775MHz
802.11ac(HT 80)

Horizontal



All emission levels are more than 6dB below the limit.

Vertical



All emission levels are more than 6dB below the limit.

Remark: When Peak emission level was below AV limit, the AV emission level did not be record.

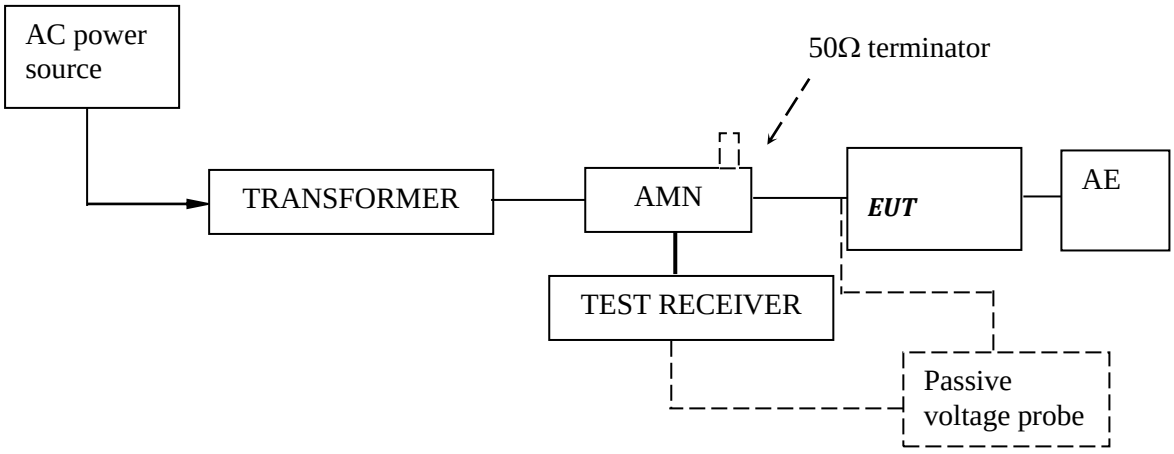
TEST REPORT

4.9 Frequency Stability Test

N/A

4.10 Conducted Emission Test

Test Configuration:



Test Setup and Procedure:
Test was performed according to ANSI C63.10 Clause 6.2. The EUT was set to achieve the maximum emission level. The mains terminal disturbance voltage was measured with the EUT in a shielded room. The EUT was connected to AC power source through an Artificial Mains Network which provides a 50Ω linear impedance Artificial hand is used if appropriate (for handheld apparatus). The load/control terminal disturbance voltage was measured with passive voltage probe if appropriate.

The table-top EUT was placed on a 0.8m high non-metallic table above earthed ground plane (Ground Reference Plane).And for floor standing EUT, was placed on a 0.1m high non-metallic supported on GRP. The EUT keeps a distance of at least 0.8m from any other of the metallic surface. The Artificial Mains Network is situated at a distance of 0.8m from the EUT.

During the test, mains lead of EUT excess 0.8m was folded back and forth parallel to the lead so as to form a horizontal bundle with a length between 0.3m and 0.4m

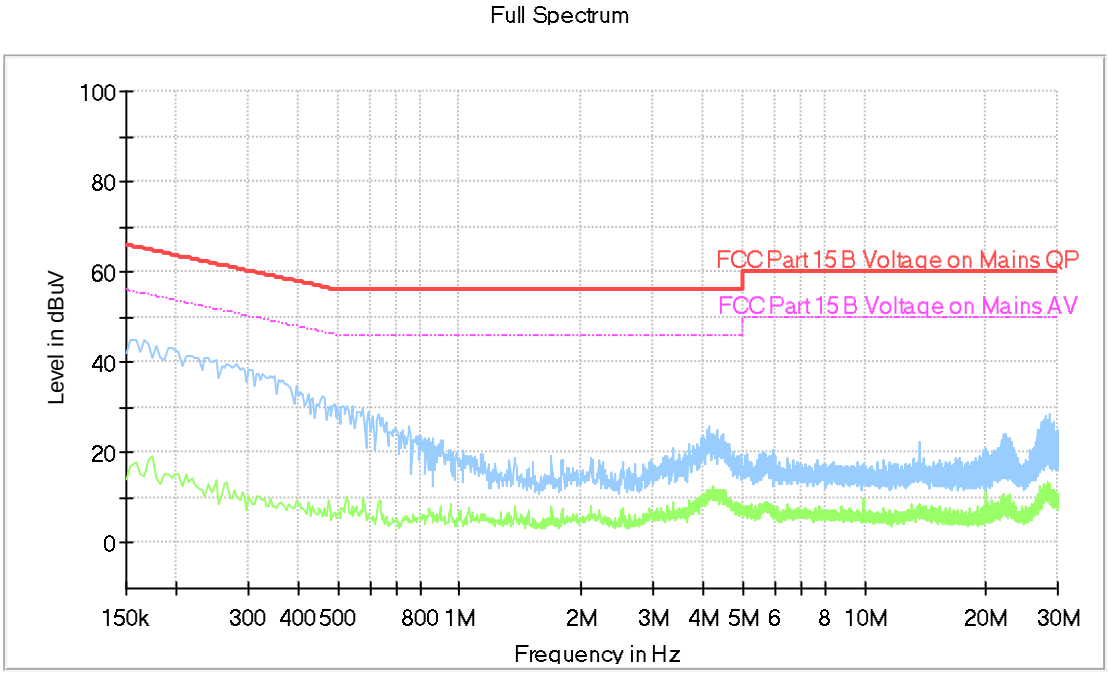
The bandwidth of test receiver was set at 9 kHz. The frequency range from 150 kHz to 30MHz was checked.

TEST REPORT

Test Data and Curve

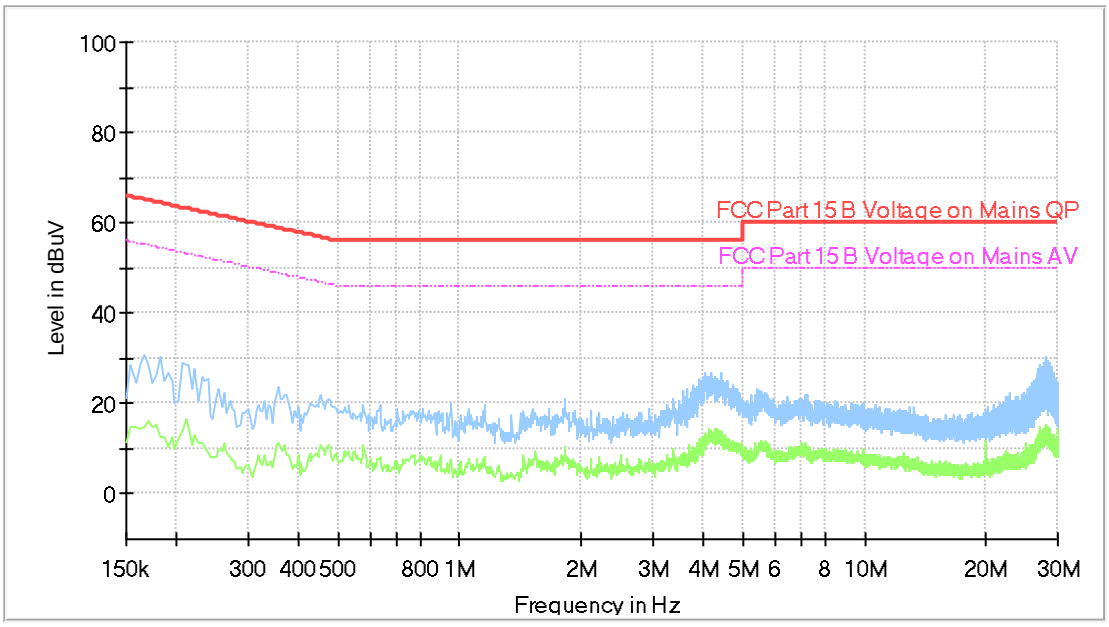
At main terminal: Pass

Tested Wire: Live Operation Mode: transmitting mode



All emission levels are more than 10dB below the limit.

Tested Wire: Neutral Operation Mode: transmitting mode



TEST REPORT

All emission levels are more than 10dB below the limit.

5.0 Test Equipment List

Radiated Emission/Radio

Equipment No.	Equipment	Model	Manufacturer	Cal. Due date (YYYY-MM-DD)	Calibration Interval
EM030-04	3m Semi-Anechoic Chamber	9×6×6 m^3	ETS• LINDGREN	2025-04-09	1Y
EM031-02	EMI Test Receiver (9 kHz~7 GHz)	R&S ESR7	R&S	2024-11-15	1Y
EM031-03	Signal and Spectrum Analyzer (10 Hz~40 GHz)	R&S FSV40	R&S	2024-11-12	1Y
EM011-04	Loop antenna (9 kHz-30 MHz)	HFH2-Z2	R&S	2025-07-07	1Y
EM033-01	TRILOG Super Broadband test Antenna(30 MHz-3 GHz）(RX)	VULB 9163	SCHWARZBECK	2024-12-05	1Y
EM033-02	Bouble-Ridged Waveguide Horn Antenna (800 MHz-18 GHz)(RX)	R&S HF907	R&S	2025-07-02	1Y
EM033-03	High Frequency Antenna & preamplifier(18 GHz~26.5 GHz) (RX)	R&S SCU-26	R&S	2025-04-22	1Y
EM033-04	High Frequency Antenna & preamplifier (26 GHz-40 GHz)	R&S SCU-40	R&S	2025-04-22	1Y
EM031-02-01	Coaxial cable(9 kHz-1 GHz)	N/A	R&S	2025-04-09	1Y
EM033-02-02	Coaxial cable(1 GHz-18 GHz)	N/A	R&S	2025-04-09	1Y
EM033-04-02	Coaxial cable(18 GHz~40 GHz)	N/A	R&S	2025-04-25	1Y
EM031-01	Signal Generator (9 kHz~6 GHz)	SMB100A	R&S	2025-03-17	1Y
EM040-01	Band Reject/Notch Filter	WRHFV	Wainwright	N/A	1Y
EM040-02	Band Reject/Notch Filter	WRCGV	Wainwright	N/A	1Y
EM040-03	Band Reject/Notch Filter	WRCGV	Wainwright	N/A	1Y
EM022-03	2.45 GHz Filter	BRM50702	Micro-Tronics	2025-05-15	1Y
SA016-29	Climatic Test Chamber	MHU-80L	JIANQIAO	2025-01-03	1Y
EM046-05	Power meter	NPR6A	R&S	2025-04-22	1Y
EM046-06	Power meter	NPR6A	R&S	2025-05-09	1Y
EM045-01-01	EMC32 software (RE/RS)	V10.01.00	R&S	N/A	N/A
EM045-01-10	10dB Attenuator	N/A	R&S	2024-11-10	N/A

Conducted Disturbance-Mains Terminal(2)

Equipment No.	Equipment	Model	Manufacturer	Cal. Due date (DD-MM-YYYY)	Calibration Interval
EM031-04	EMI receiver	ESR3	R&S	04/01/2025	1Y
EM006-06	LISN	ENV216	R&S	01/09/2025	1Y
SA047-111	Digital Temperature-Humidity Recorder	RS210	YIJIE	22/10/2024	1Y
EM004-03	EMC shield Room	8m×4m×3m	Zhongyu	03/01/2025	1Y
EM031-04-01	EMC32 software (CE)	V10.01.00	R&S	N/A	1Y

**********End of the test report**********