

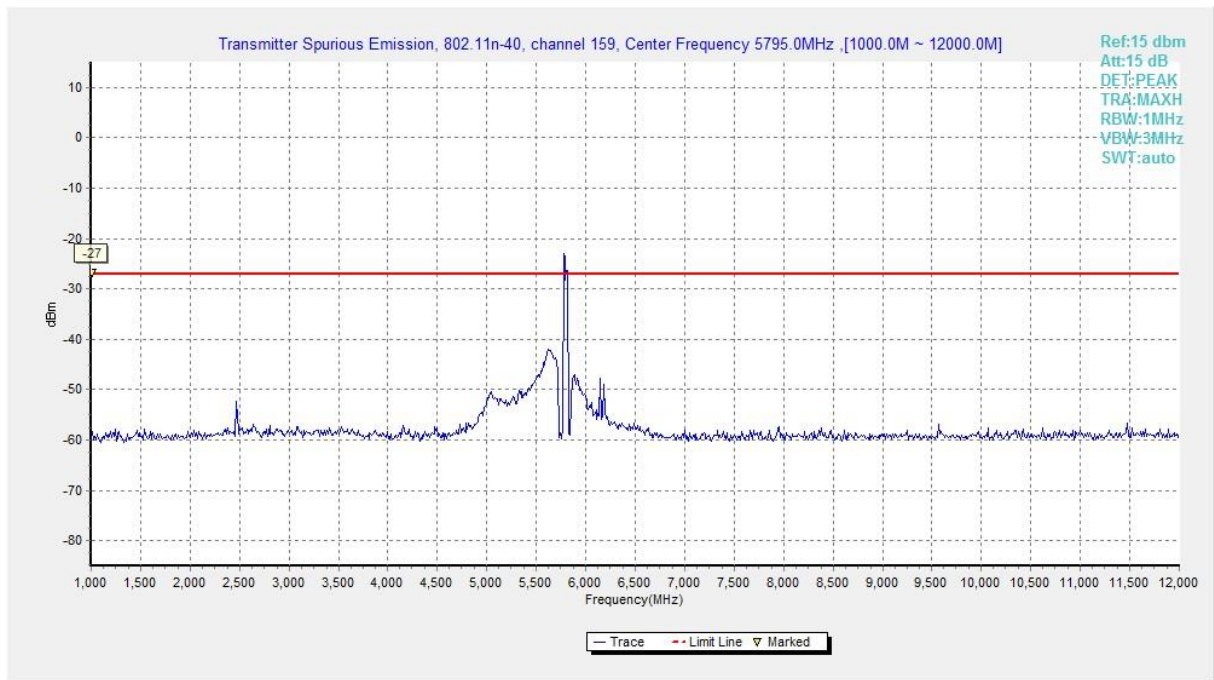


Fig. 56 Conducted Spurious Emission (802.11n40, Ch159 , 1 GHz ~ 12 GHz)

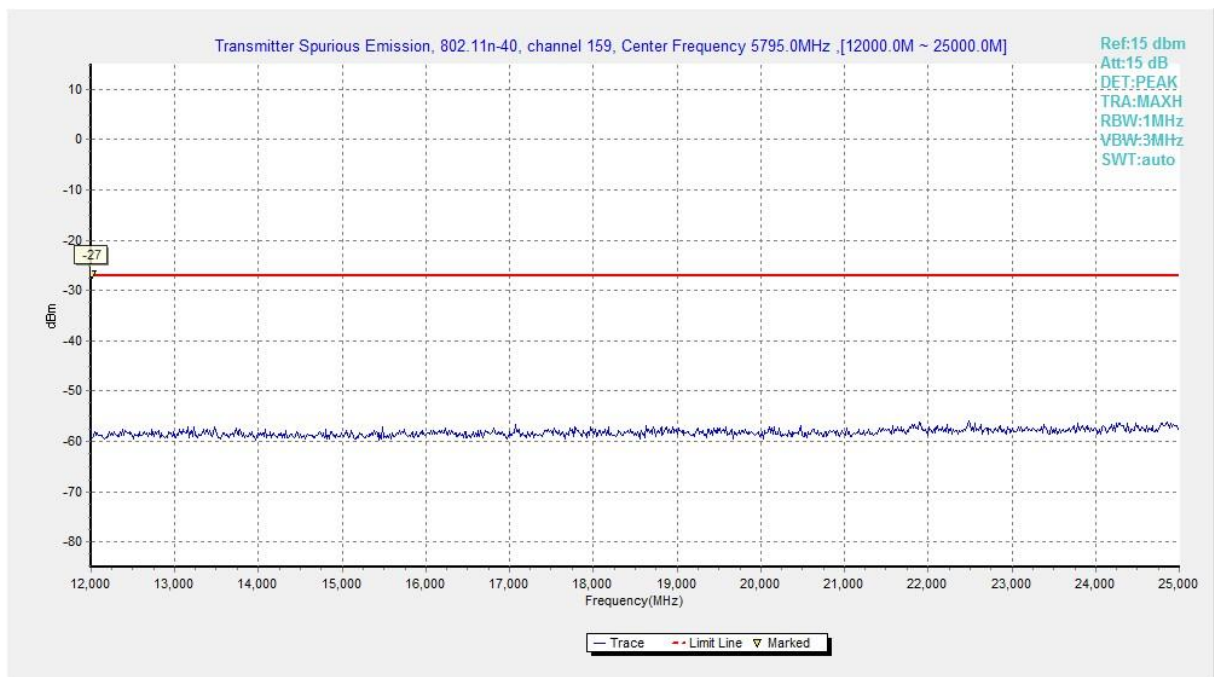


Fig. 57 Conducted Spurious Emission (802.11n40, Ch159 , 12 GHz ~ 25 GHz)

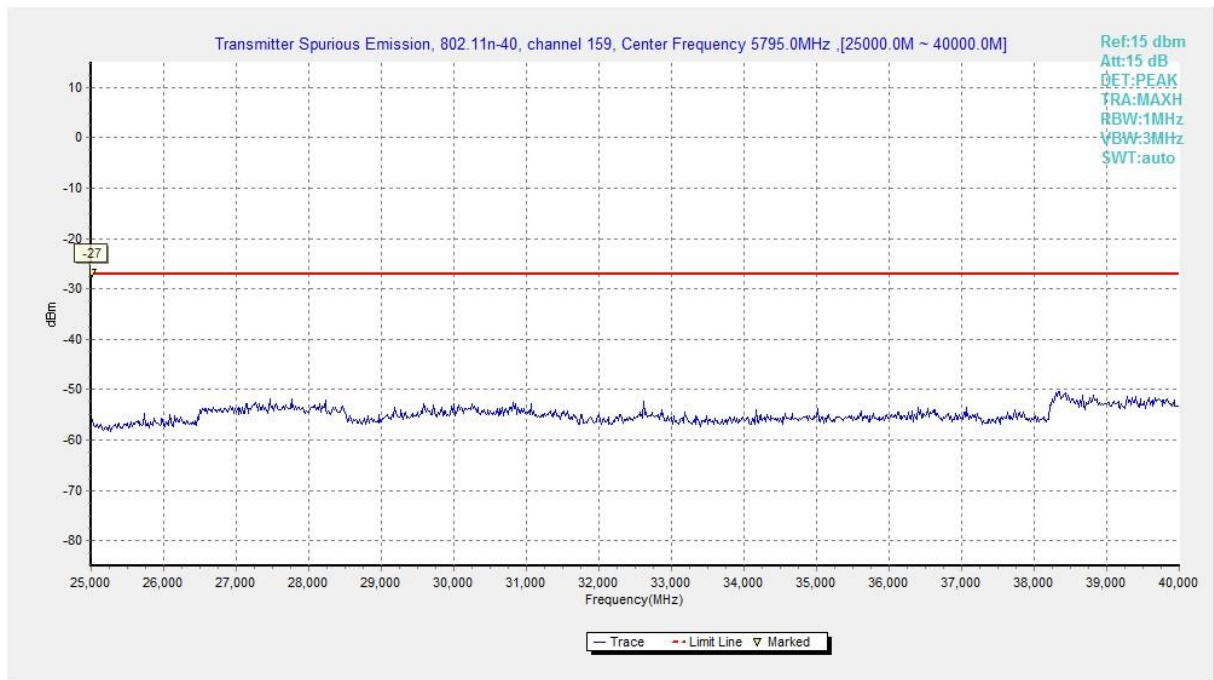


Fig. 58 Conducted Spurious Emission (802.11n40, Ch159 , 25 GHz ~ 40 GHz)

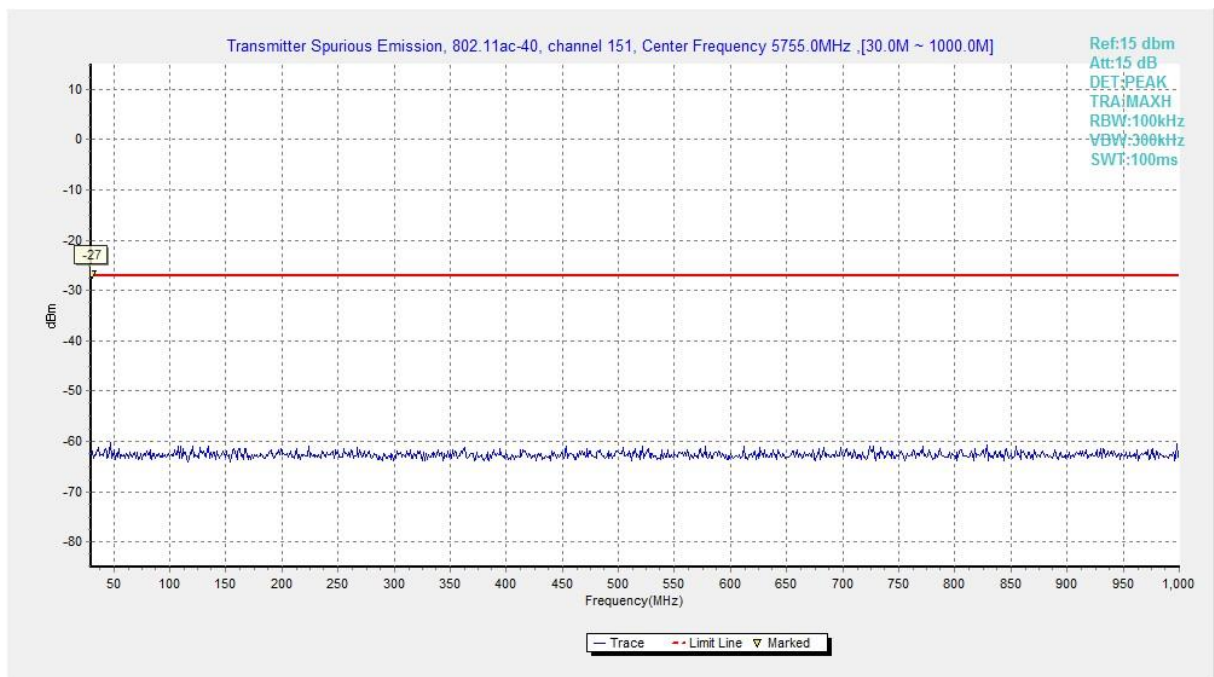


Fig. 59 Conducted Spurious Emission (802.11ac40, Ch151 , 30 MHz ~ 1 GHz)

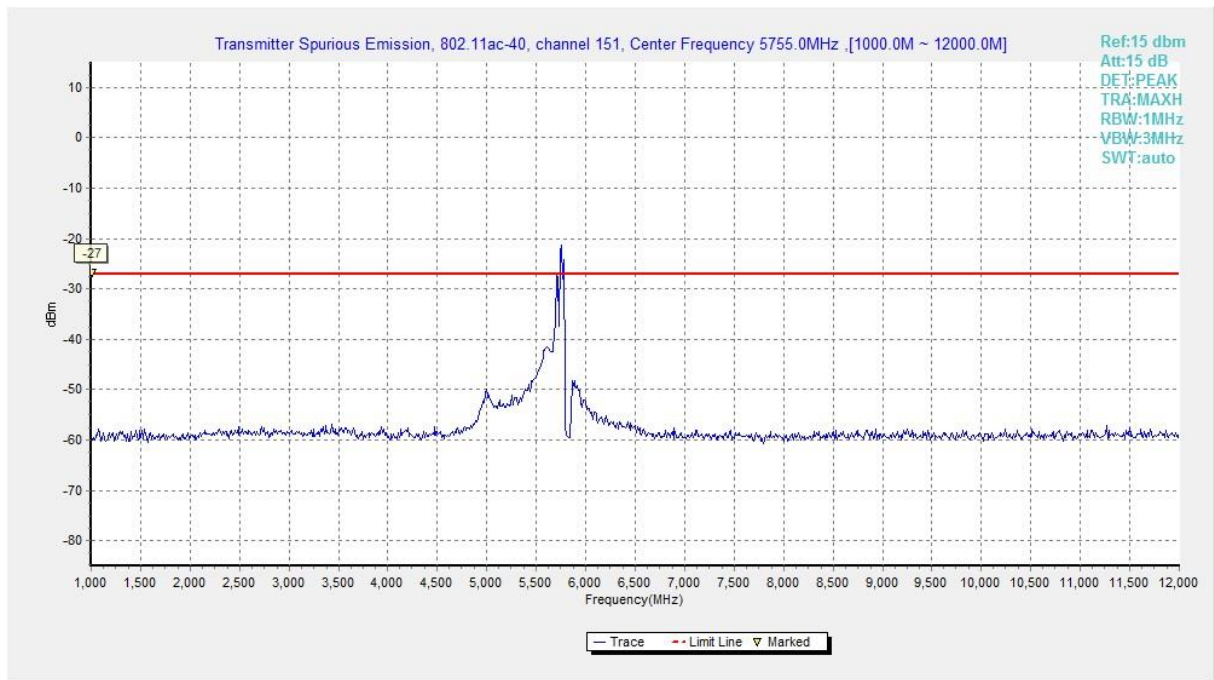


Fig. 60 Conducted Spurious Emission (802.11ac40, Ch151 , 1 GHz ~ 12 GHz)

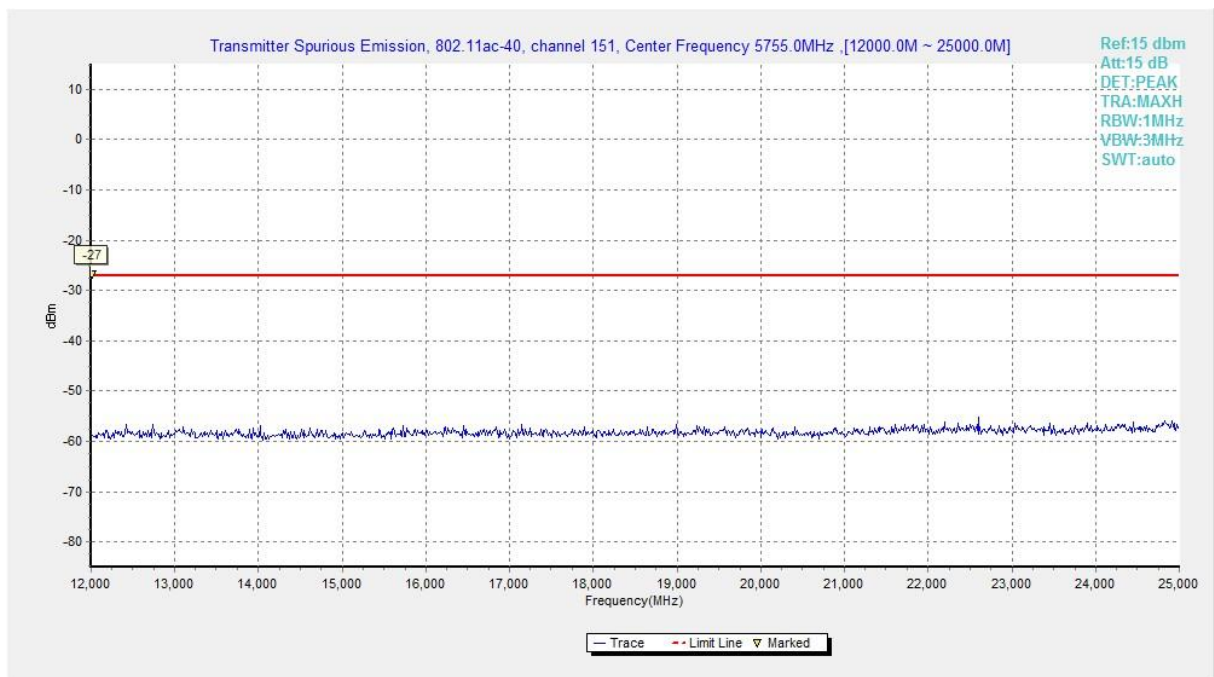


Fig. 61 Conducted Spurious Emission (802.11ac40, Ch151 , 12 GHz ~ 25 GHz)

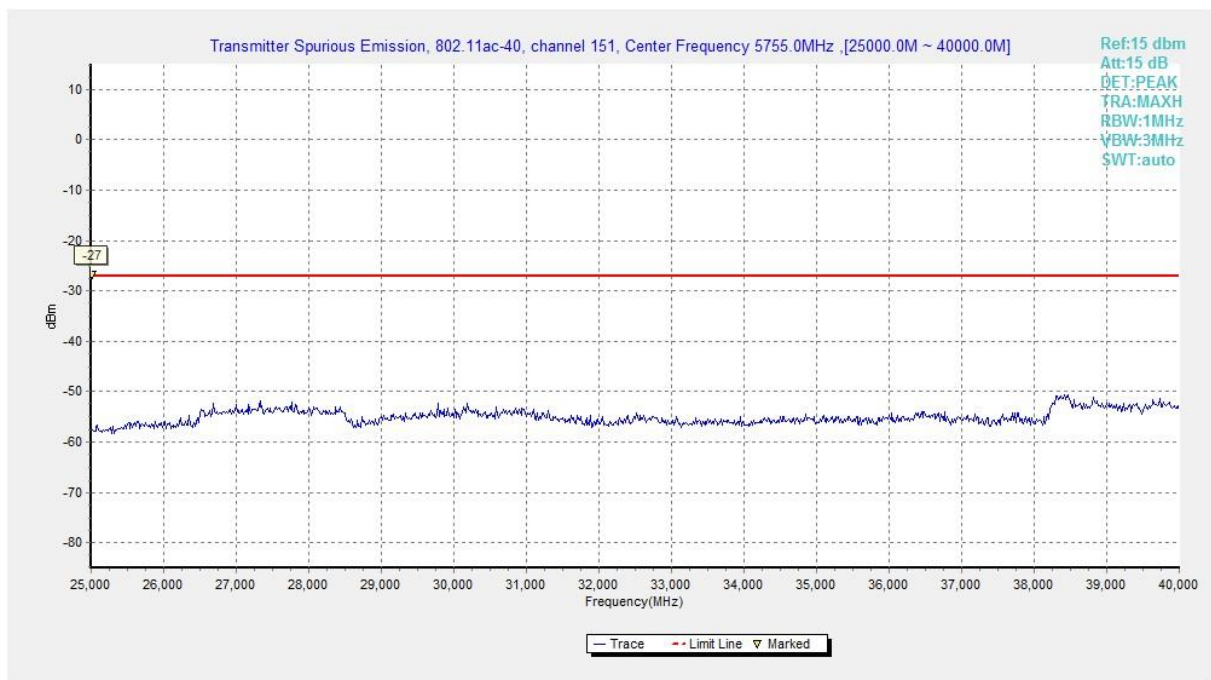


Fig. 62 Conducted Spurious Emission (802.11ac40, Ch151 , 25 GHz ~ 40 GHz)

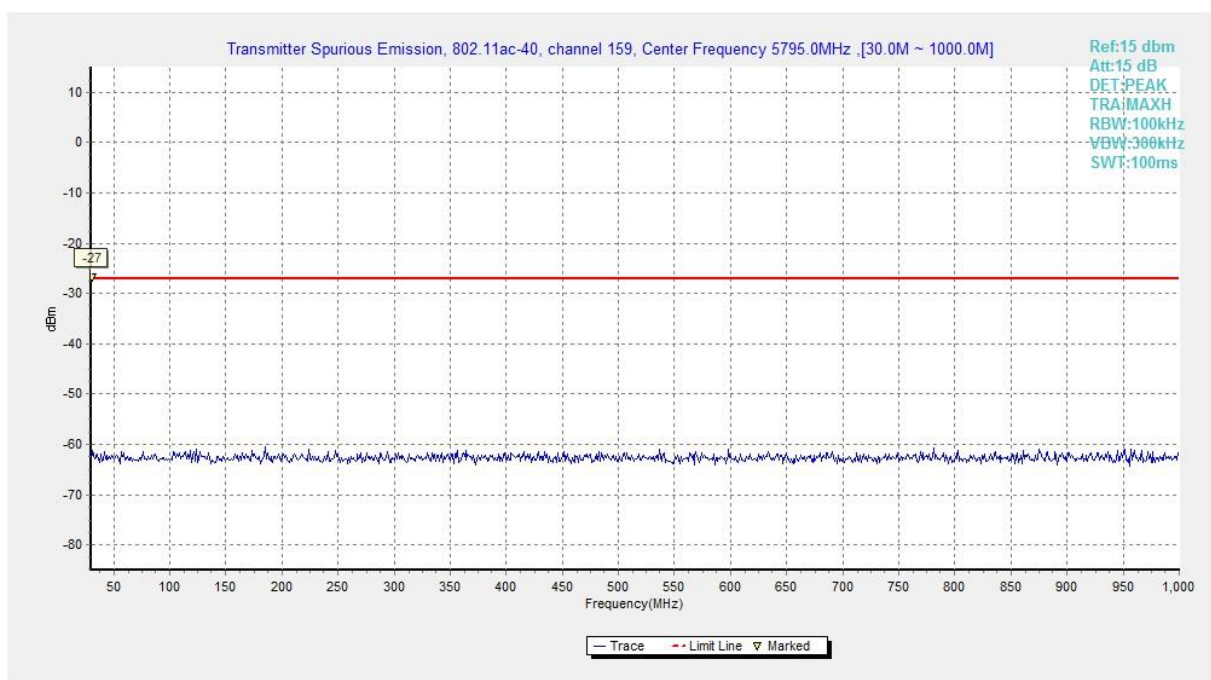


Fig. 63 Conducted Spurious Emission (802.11ac40, Ch159 , 30 MHz ~ 1 GHz)

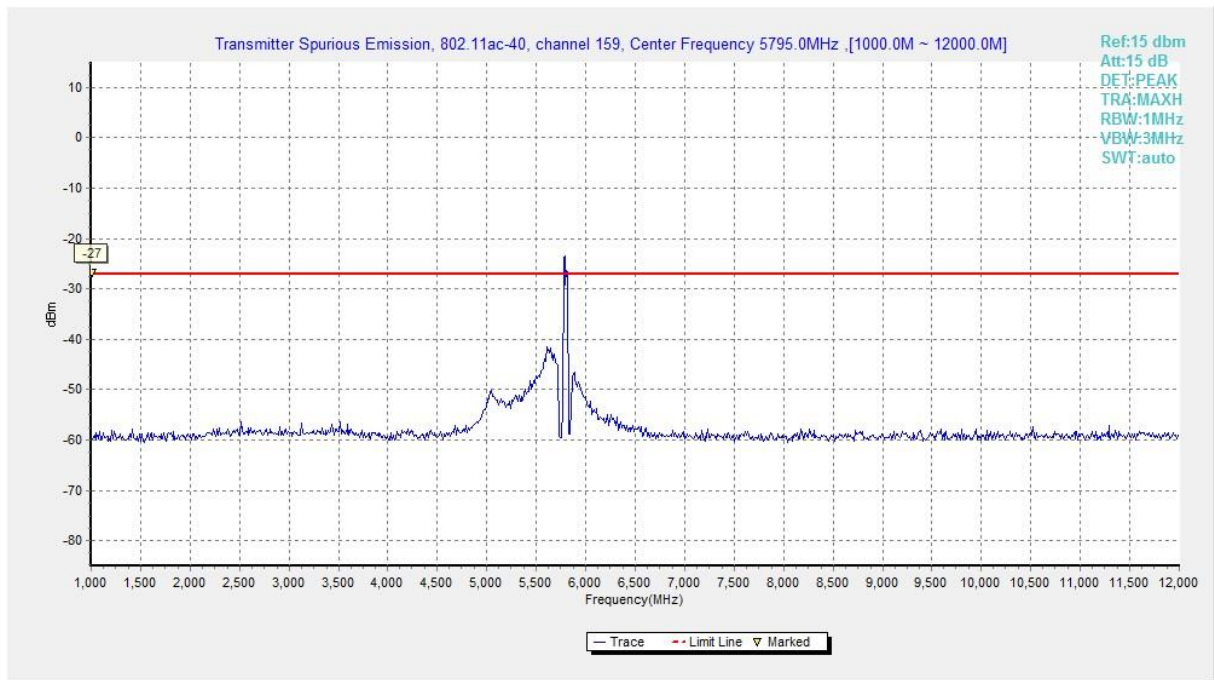


Fig. 64 Conducted Spurious Emission (802.11ac40, Ch159 , 1 GHz ~ 12 GHz)

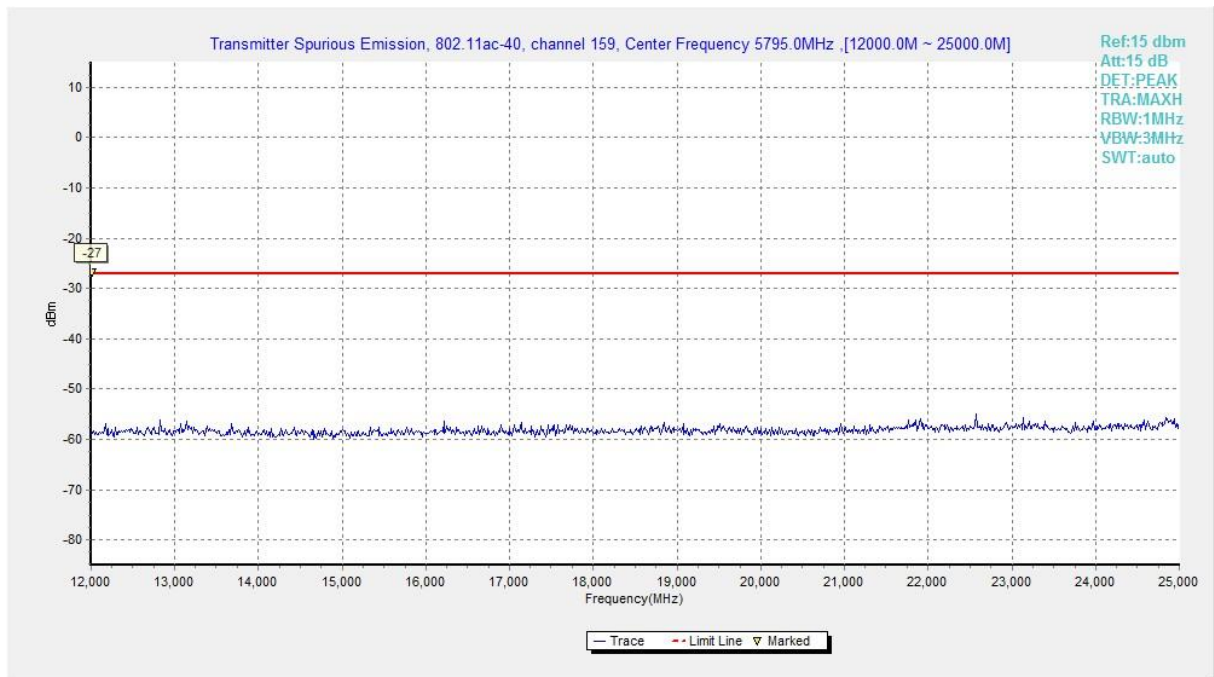


Fig. 65 Conducted Spurious Emission (802.11ac40, Ch159 , 12 GHz ~ 25 GHz)

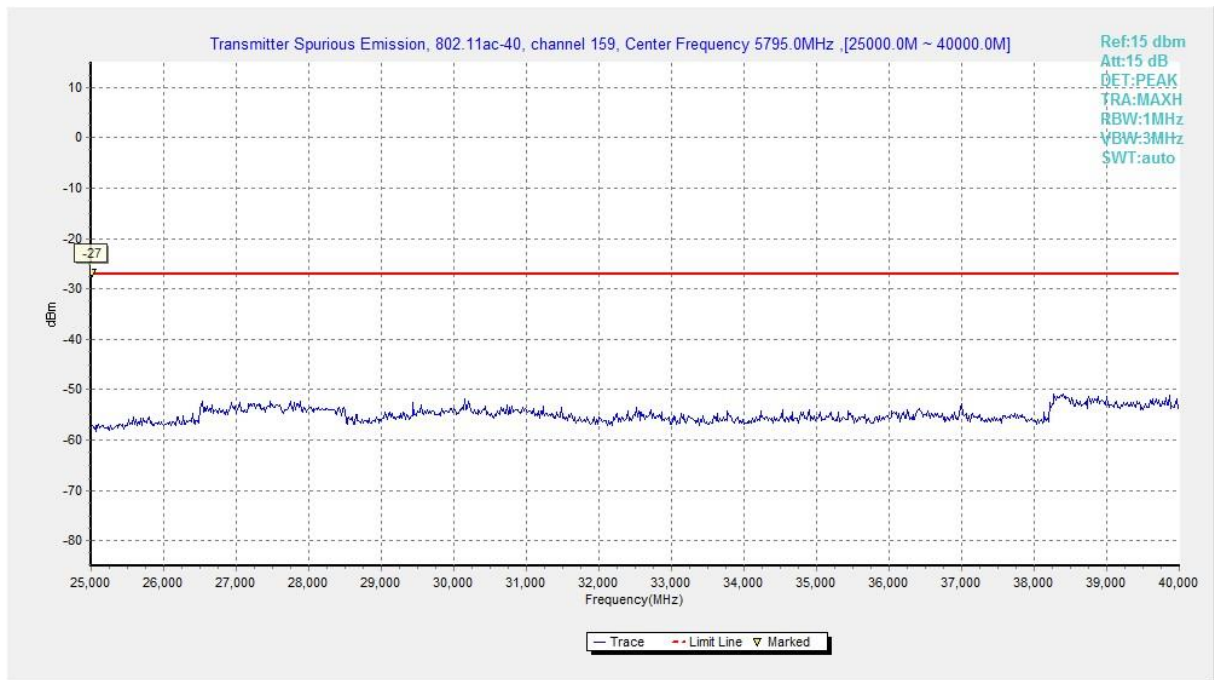


Fig. 66 Conducted Spurious Emission (802.11ac40, Ch159 , 25 GHz ~ 40 GHz)

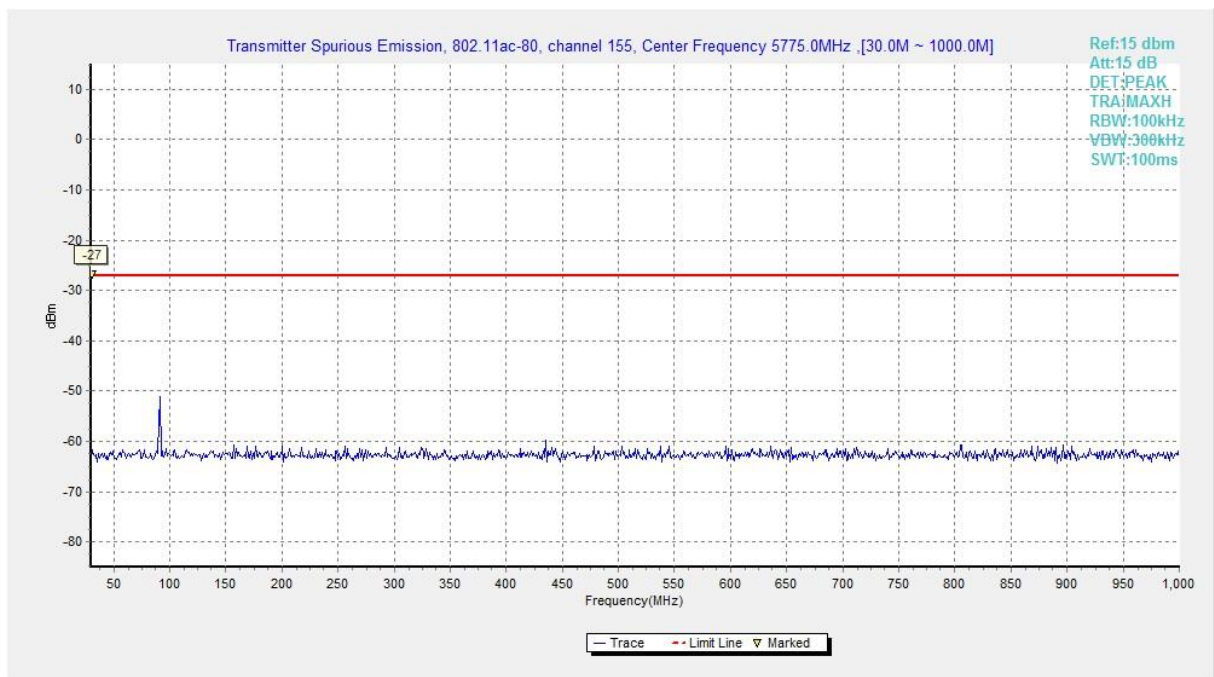


Fig. 67 Conducted Spurious Emission (802.11ac80, Ch155 , 30 MHz ~ 1 GHz)

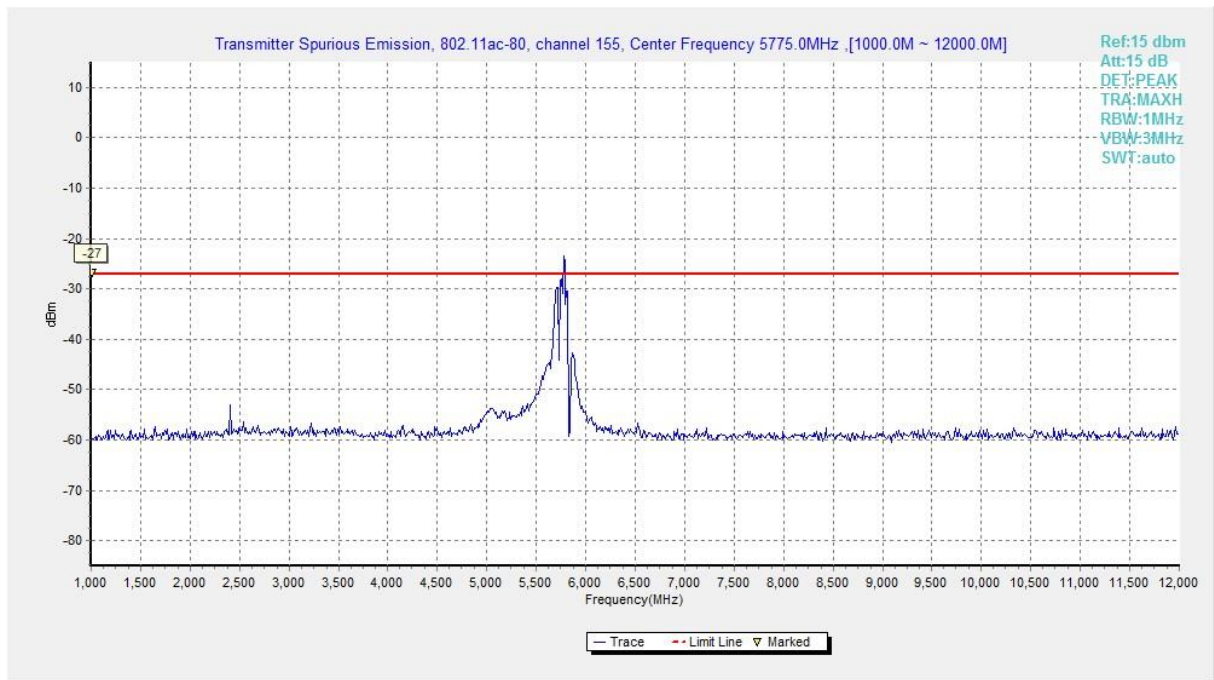


Fig. 68 Conducted Spurious Emission (802.11ac80, Ch155 , 1 GHz ~ 12 GHz)

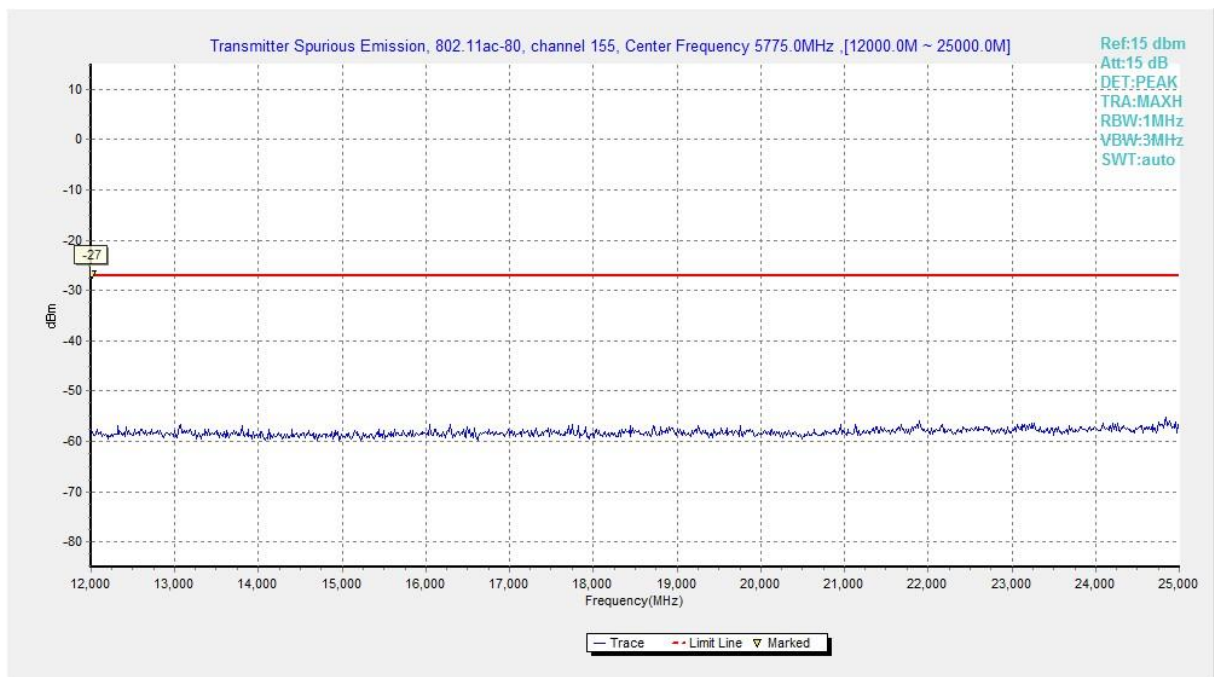


Fig. 69 Conducted Spurious Emission (802.11ac80, Ch155 , 12 GHz ~ 25 GHz)

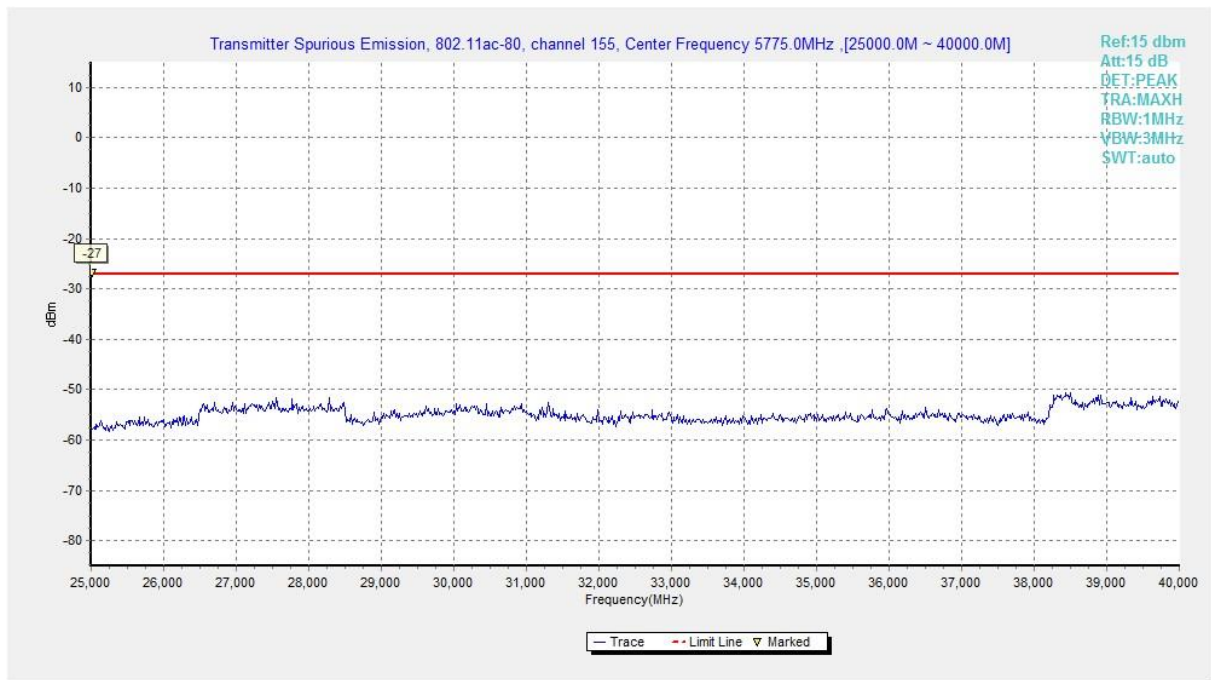


Fig. 70 Conducted Spurious Emission (802.11ac80, Ch155 , 25 GHz ~ 40 GHz)

A.5.2 Transmitter Spurious Emission - Radiated

Measurement Limit:

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

The measurement is made according to KDB 789033

Frequency Range	Uncertainty(dB)
$30\text{MHz} \leq f \leq 1\text{GHz}$	5.40
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.32
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.26

Measurement Results:

Note:

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

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

Average Results:

802.11a
Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.138	40.0	-33.1	34.7	38.29	48.3	8.3	H	155	6
5650.750	39.6	-33.0	34.7	37.95	48.8	9.1	H	155	48
11490.200	35.9	-30.8	38.2	28.50	48.3	12.4	H	155	92
17003.400	40.2	-26.7	41.7	25.23	48.3	8.1	H	155	48
17235.500	39.2	-26.6	41.5	24.39	48.3	9.1	H	155	68
17896.600	40.3	-26.2	41.3	25.25	48.3	8.0	H	155	92

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5719.560	41.1	-33.5	34.8	39.75	48.3	7.2	H	155	268
5851.650	39.9	-33.3	35.0	38.20	48.3	8.4	H	155	138
11570.500	35.2	-30.8	38.3	27.75	48.3	13.1	H	155	104
16949.500	40.1	-27.0	41.7	25.49	48.3	8.2	H	155	40
17355.400	39.5	-26.6	41.3	24.73	48.3	8.8	H	155	28
17870.200	40.1	-26.3	41.3	25.10	48.3	8.2	H	155	8

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.907	40.4	-32.5	35.1	37.83	49.0	8.6	H	155	16
5924.298	40.4	-32.5	35.1	37.81	48.7	8.3	H	155	48
11649.700	35.1	-30.6	38.4	27.31	48.3	13.2	H	155	80
17051.800	40.1	-26.4	41.6	24.83	48.3	8.2	H	155	8
17475.300	38.7	-26.3	41.2	23.77	48.3	9.6	H	155	102
17892.200	40.3	-26.2	41.3	25.24	48.3	8.0	H	155	118

802.11n-HT20
Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.230	40.1	-33.0	34.7	38.42	49.1	9.0	H	155	28
5650.860	39.9	-33.0	34.7	38.18	48.8	9.0	H	155	46
11490.200	35.9	-30.8	38.2	28.50	48.3	12.4	H	155	8
17005.600	40.1	-26.7	41.7	25.06	48.3	8.2	H	155	6
17235.500	39.3	-26.6	41.5	24.41	48.3	9.0	H	155	24
17917.500	40.1	-26.1	41.3	24.91	48.3	8.2	H	155	185

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5616.500	39.7	-33.8	34.7	38.81	48.3	8.6	H	155	92
5871.680	38.5	-32.9	35.0	36.40	48.3	9.8	H	155	26
11570.500	35.2	-30.8	38.3	27.69	48.3	13.1	H	155	222
17054.000	40.1	-26.4	41.6	24.77	48.3	8.2	H	155	248
17355.400	39.3	-26.6	41.3	24.55	48.3	9.0	H	155	46
17896.600	40.2	-26.2	41.3	25.16	48.3	8.1	H	155	68

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.368	38.0	-32.5	35.1	35.39	48.7	10.7	H	155	8
5923.328	37.9	-32.5	35.1	35.34	49.4	11.5	H	155	28
11649.700	35.1	-30.6	38.4	27.31	48.3	13.2	H	155	119
17013.300	40.1	-26.6	41.7	25.05	48.3	8.2	H	155	146
17475.300	38.6	-26.3	41.2	23.68	48.3	9.7	H	155	76
17886.700	40.2	-26.2	41.3	25.14	48.3	8.1	H	155	94

802.11n-HT40
Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.771	38.6	-33.0	34.7	36.88	49.5	10.9	H	155	142
5652.815	38.4	-33.0	34.7	36.68	50.3	11.9	H	155	168
11510.000	35.8	-30.8	38.2	28.40	48.3	12.5	H	155	90
17004.500	40.2	-26.7	41.7	25.17	48.3	8.1	H	155	102
17265.200	39.3	-26.8	41.4	24.66	48.3	9.0	H	155	118
17896.600	40.2	-26.2	41.3	25.15	48.3	8.1	H	155	94

Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.228	36.9	-32.5	35.1	34.33	49.5	12.6	H	155	98
5924.560	36.9	-32.5	35.1	34.28	48.5	11.6	H	155	135
11590.300	35.1	-30.8	38.3	27.58	48.3	13.2	H	155	4
17021.000	40.1	-26.6	41.7	25.00	48.3	8.2	H	155	74
17385.100	39.5	-26.5	41.3	24.67	48.3	8.8	H	155	48
17892.200	40.2	-26.2	41.3	25.14	48.3	8.1	H	155	246

802.11ac-HT20
Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.771	39.9	-33.0	34.7	38.25	48.8	8.8	H	155	48
5652.311	40.0	-33.0	34.7	38.27	49.9	9.9	H	155	6
11490.200	35.8	-30.8	38.2	28.43	48.3	12.5	H	155	312
17007.800	40.2	-26.7	41.7	25.13	48.3	8.1	H	155	48
17235.500	39.2	-26.6	41.5	24.29	48.3	9.1	H	155	68
17894.400	40.3	-26.2	41.3	25.20	48.3	8.0	H	155	80

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5682.650	39.2	-32.8	34.8	37.27	48.3	9.1	H	155	268
5829.250	39.8	-33.8	35.0	38.66	48.3	8.5	H	155	138
11570.500	35.2	-30.8	38.3	27.76	48.3	13.1	H	155	104
16968.200	40.1	-26.9	41.7	25.30	48.3	8.2	H	155	40
17355.400	39.3	-26.6	41.3	24.60	48.3	9.0	H	155	28
17901.000	40.1	-26.2	41.3	25.04	48.3	8.2	H	155	8

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5922.240	37.1	-32.5	35.1	34.46	50.2	13.2	H	155	354
5923.565	37.0	-32.5	35.1	34.35	49.3	12.3	H	155	28
11649.700	35.0	-30.6	38.4	27.23	48.3	13.3	H	155	348
17050.700	40.1	-26.4	41.6	24.81	48.3	8.2	H	155	345
17475.300	38.6	-26.3	41.2	23.72	48.3	9.7	H	155	184
17890.000	40.2	-26.2	41.3	25.16	48.3	8.1	H	155	182

802.11ac-HT40

Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.816	38.8	-33.0	34.7	37.13	48.8	10.0	H	155	92
5651.870	38.9	-33.0	34.7	37.17	49.6	10.7	H	155	68
11510.000	35.7	-30.8	38.2	28.31	48.3	12.6	H	155	118
16944.000	40.1	-27.1	41.7	25.51	48.3	8.2	H	155	354
17265.200	39.4	-26.8	41.4	24.74	48.3	8.9	H	155	18
17913.100	40.1	-26.1	41.3	24.93	48.3	8.2	H	155	38

Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.650	36.5	-32.5	35.1	33.86	48.5	12.0	H	155	20
5923.860	36.0	-32.5	35.1	33.40	49.0	13.0	H	155	18
11590.300	35.1	-30.8	38.3	27.62	48.3	13.2	H	155	90
17011.100	40.2	-26.6	41.7	25.13	48.3	8.1	H	155	114
17385.100	39.4	-26.5	41.3	24.65	48.3	8.9	H	155	36
17888.900	40.3	-26.2	41.3	25.25	48.3	8.0	H	155	2

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.380	38.7	-33.0	34.7	36.98	48.5	9.8	H	155	24
5651.334	38.4	-33.0	34.7	36.73	49.2	10.8	H	155	336
11550.000	35.1	-30.8	38.3	27.68	48.3	13.2	H	155	248
17325.000	39.2	-26.7	41.4	24.58	48.3	9.1	H	155	268
17914.560	39.8	-26.1	41.3	24.67	48.3	8.5	H	155	290
17877.950	39.8	-26.3	41.3	24.82	48.3	8.5	H	155	300

Peak Results:

802.11a

Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.160	55.0	-33.1	34.7	53.35	68.3	13.3	H	155	0
5652.725	55.2	-33.0	34.7	53.47	70.2	15.0	H	155	44
11490.200	49.2	-30.8	38.2	41.80	68.3	19.1	V	155	88
17234.950	54.1	-26.6	41.5	39.20	68.3	14.2	V	155	44
17839.950	57.7	-26.4	41.3	42.86	68.3	10.6	V	155	66
17886.700	57.6	-26.2	41.3	42.56	68.3	10.7	H	155	88

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5681.680	52.7	-32.8	34.8	50.70	68.3	15.6	H	155	264
5854.650	51.2	-33.3	35.0	49.42	68.3	17.1	H	155	132
11569.950	48.6	-30.8	38.3	41.09	68.3	19.7	H	155	110
17079.850	57.5	-26.2	41.6	42.05	68.3	10.8	H	155	44
17163.450	57.3	-26.2	41.5	42.03	68.3	11.0	H	155	22
17354.850	54.6	-26.6	41.3	39.93	68.3	13.7	V	155	0

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.250	53.5	-32.5	35.1	50.88	69.5	16.0	H	155	22
5924.436	53.4	-32.5	35.1	50.76	68.6	15.3	H	155	66
11650.250	48.6	-30.6	38.4	40.87	68.3	19.7	V	155	88
17474.750	54.5	-26.3	41.2	39.54	68.3	13.8	V	155	0
17665.600	57.3	-26.5	41.2	42.61	68.3	11.0	H	155	110
17937.300	57.8	-26.0	41.3	42.52	68.3	10.5	H	155	132

802.11n-HT20
Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.950	54.7	-33.0	34.7	53.05	68.9	14.2	H	155	22
5651.460	55.6	-33.0	34.7	53.89	69.3	13.7	H	155	44
11490.200	48.3	-30.8	38.2	40.98	68.3	20.0	V	155	0
17022.650	57.8	-26.6	41.7	42.69	68.3	10.5	H	155	0
17234.950	54.4	-26.6	41.5	39.54	68.3	13.9	V	155	22
17924.100	57.4	-26.1	41.3	42.23	68.3	10.9	H	155	176

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5706.450	51.9	-33.2	34.8	50.32	68.3	16.4	H	155	88
5901.580	50.1	-32.3	35.1	47.37	68.3	18.2	H	155	22
11569.950	47.8	-30.8	38.3	40.35	68.3	20.5	V	155	220
16981.950	57.1	-26.8	41.7	42.22	68.3	11.2	V	155	242
17354.850	54.3	-26.6	41.3	39.61	68.3	14.0	V	155	44
17546.800	57.3	-26.4	41.2	42.44	68.3	11.0	V	155	66

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.586	50.3	-32.5	35.1	47.66	68.5	18.2	H	155	0
5922.930	50.8	-32.5	35.1	48.17	69.7	19.0	H	155	22
11650.250	48.0	-30.6	38.4	40.22	68.3	20.3	H	155	110
17111.750	57.5	-26.0	41.6	41.88	68.3	10.8	V	155	132
17474.750	54.8	-26.3	41.2	39.82	68.3	13.5	V	155	66
17926.850	57.7	-26.1	41.3	42.51	68.3	10.6	V	155	88

802.11n-HT40
Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.955	51.3	-33.0	34.7	49.59	69.6	18.4	H	155	22
5650.552	51.2	-33.0	34.7	49.49	68.6	17.4	H	155	44
11510.000	49.2	-30.8	38.2	41.86	68.3	19.1	H	155	88
16973.700	57.2	-26.9	41.7	42.43	68.3	11.1	V	155	110
17265.200	55.4	-26.8	41.4	40.73	68.3	12.9	V	155	110
17933.450	57.6	-26.0	41.3	42.37	68.3	10.7	V	155	88

Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5924.275	49.5	-32.5	35.1	46.87	68.7	19.3	H	155	88
5923.175	50.9	-32.5	35.1	48.28	69.6	18.7	H	155	132
11589.750	49.6	-30.8	38.3	42.12	68.3	18.7	H	155	0
16940.700	58.0	-27.1	41.7	43.42	68.3	10.3	V	155	66
17385.100	54.8	-26.5	41.3	40.05	68.3	13.5	V	155	44
17588.600	58.2	-26.4	41.2	43.42	68.3	10.1	H	155	242

802.11ac-HT20
Ch149

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.024	53.8	-33.0	34.7	52.09	69.0	15.2	H	155	0
5650.425	53.0	-33.0	34.7	51.35	68.5	15.5	H	155	22
11490.200	48.8	-30.8	38.2	41.45	68.3	19.5	V	155	308
17234.950	53.9	-26.6	41.5	39.01	68.3	14.4	H	155	44
17871.850	57.3	-26.3	41.3	42.37	68.3	11.0	V	155	66
17941.150	57.1	-26.0	41.3	41.82	68.3	11.2	H	155	88

Ch157

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5709.400	52.9	-33.3	34.8	51.39	68.3	15.4	H	155	264
5848.560	50.9	-33.4	35.0	49.33	68.3	17.4	H	155	132
11569.950	48.3	-30.8	38.3	40.81	68.3	20.0	H	155	110
17354.850	54.9	-26.6	41.3	40.21	68.3	13.4	H	155	44
17733.800	57.4	-26.5	41.2	42.64	68.3	10.9	H	155	22
17965.900	57.3	-25.9	41.3	41.95	68.3	11.0	V	155	0

Ch165

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5921.136	50.2	-32.5	35.1	47.59	71.1	20.8	H	155	0
5923.805	49.7	-32.5	35.1	47.05	69.1	19.4	H	155	22
11650.250	48.7	-30.6	38.4	40.89	68.3	19.6	V	155	352
17009.450	57.5	-26.6	41.7	42.49	68.3	10.8	V	155	352
17474.750	54.9	-26.3	41.2	40.01	68.3	13.4	V	155	176
17915.300	58.2	-26.1	41.3	42.99	68.3	10.1	V	155	176

802.11ac-HT40

Ch151

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5651.093	51.3	-33.0	34.7	49.61	69.0	17.7	H	155	88
5651.890	51.7	-33.0	34.7	50.02	69.6	17.9	H	155	66
11510.000	48.2	-30.8	38.2	40.87	68.3	20.1	H	155	110
17025.950	58.2	-26.5	41.7	43.05	68.3	10.1	V	155	0
17051.800	58.3	-26.4	41.6	43.00	68.3	10.0	H	155	22
17265.200	54.2	-26.8	41.4	39.48	68.3	14.1	H	155	44

Ch159

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5923.050	49.7	-32.5	35.1	47.07	69.6	20.0	H	155	132
5923.953	49.2	-32.5	35.1	46.59	69.0	19.8	H	155	154
11589.750	48.7	-30.8	38.3	41.16	68.3	19.6	H	155	88
17001.200	57.9	-26.7	41.7	42.92	68.3	10.4	V	155	110
17385.100	55.1	-26.5	41.3	40.33	68.3	13.2	V	155	44
17616.100	57.5	-26.5	41.2	42.78	68.3	10.8	H	155	0

802.11ac-HT80

Ch155

Frequency (MHz)	Measurement Result (dBμV/m)	Cable loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBμV)	Limit (dBμV/m)	Margin (dB)	Antenna Pol. (H/V)	Antenna Height (cm)	Turntable angle (deg)
5650.943	52.1	-33.0	34.7	50.46	68.9	16.8	H	155	22
5650.125	52.4	-33.1	34.7	50.75	68.3	15.9	H	155	330
11550.000	48.0	-30.8	38.3	40.51	68.3	20.3	H	155	242
17325.000	55.5	-26.7	41.4	40.85	68.3	12.8	V	155	264
16867.890	57.0	-26.9	41.6	42.29	68.3	11.3	V	155	286
17677.850	56.9	-26.5	41.2	42.21	68.3	11.4	V	155	308

Conclusion: PASS

A.6. Band Edges Compliance

A6.1 Band Edges - conducted

Measurement Limit:

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

The measurement is made according to KDB 789033 D02

Measurement Uncertainty:

Measurement Uncertainty	0.75dB
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Measurement Result:

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

Conclusion: PASS

Test graphs as below:

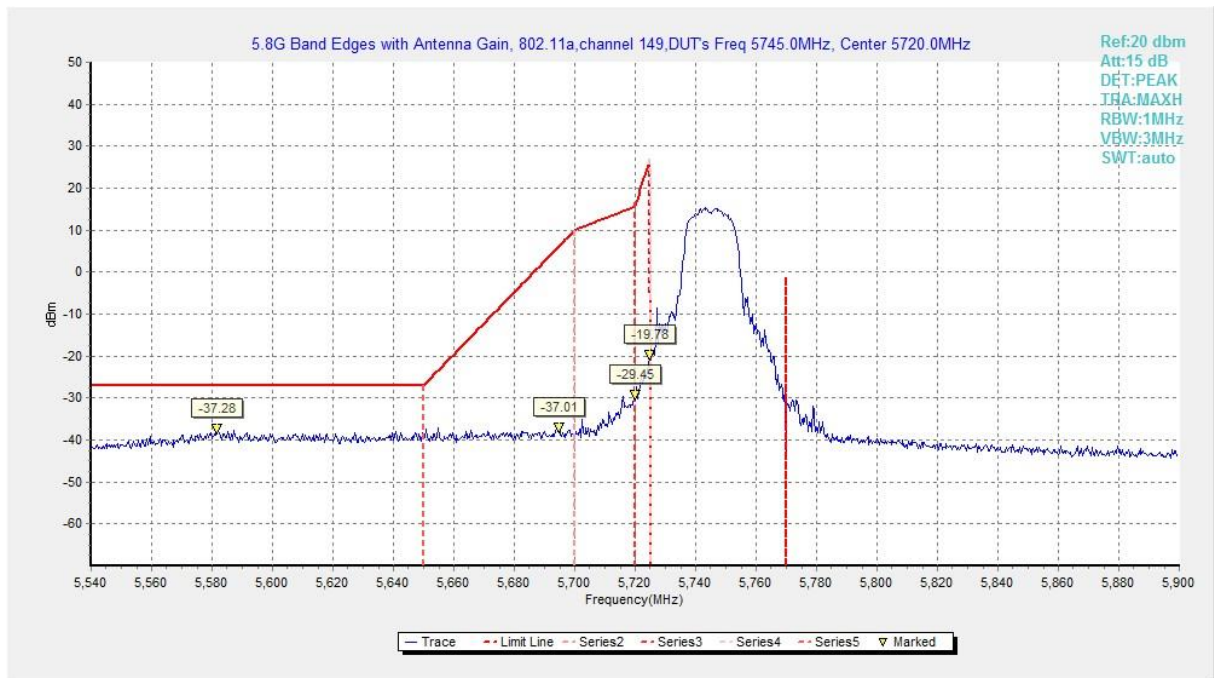


Fig. 71 Band Edges (802.11a, 5745MHz)

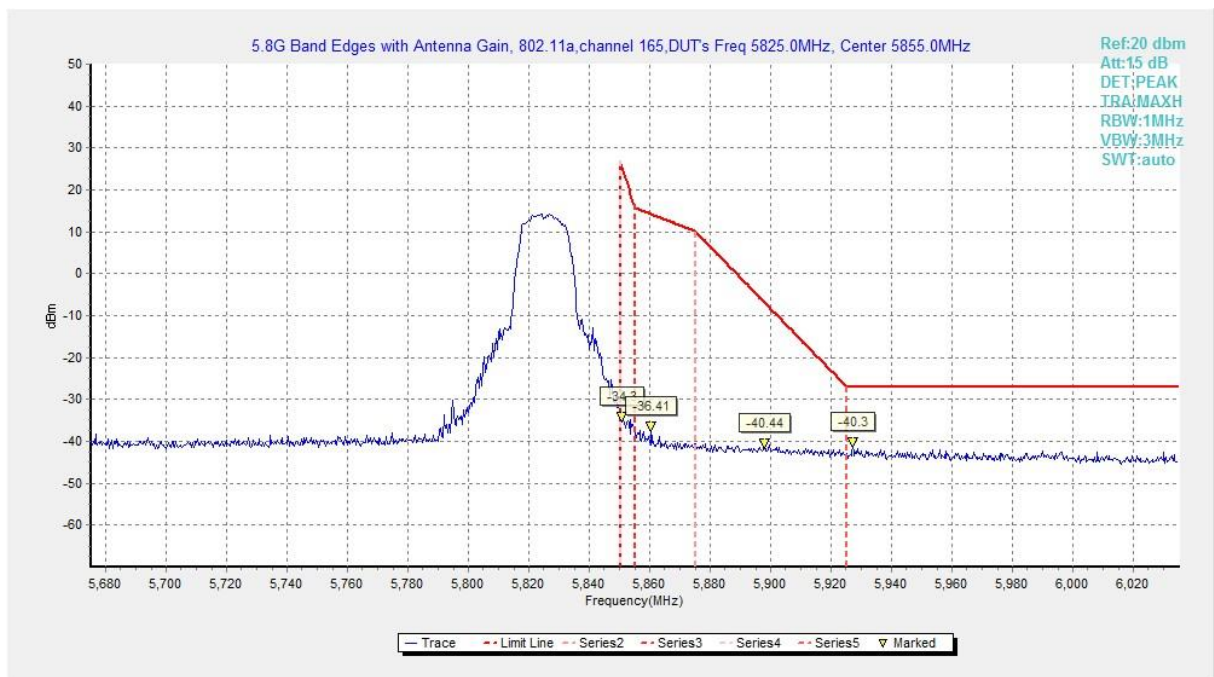


Fig. 72 Band Edges (802.11a, 5825MHz)

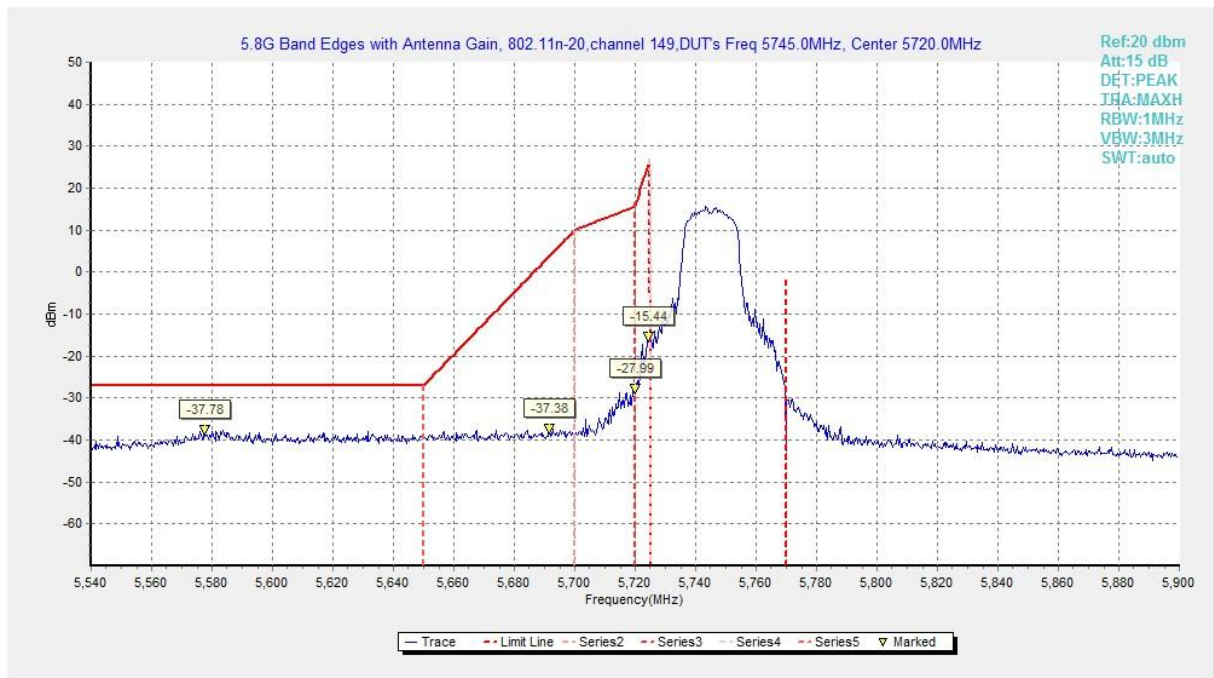


Fig. 73 Band Edges (802.11n20, 5745MHz)

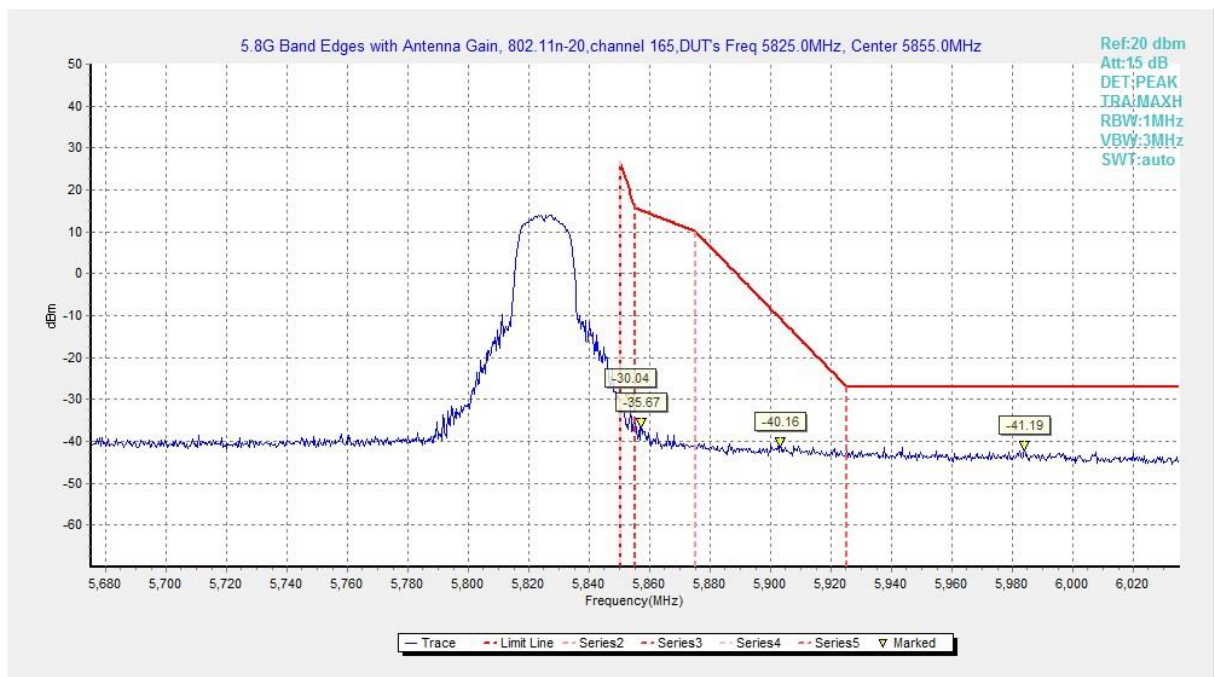


Fig. 74 Band Edges (802.11n20, 5825MHz)

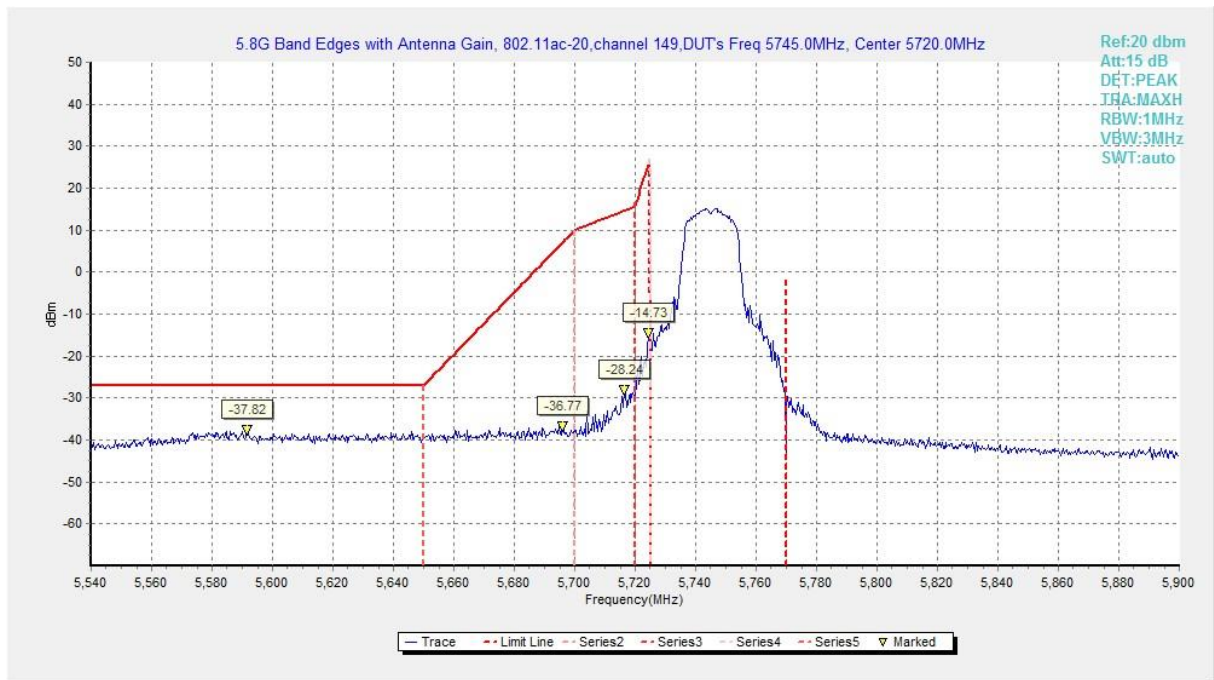


Fig. 75 Band Edges (802.11ac20, 5745MHz)

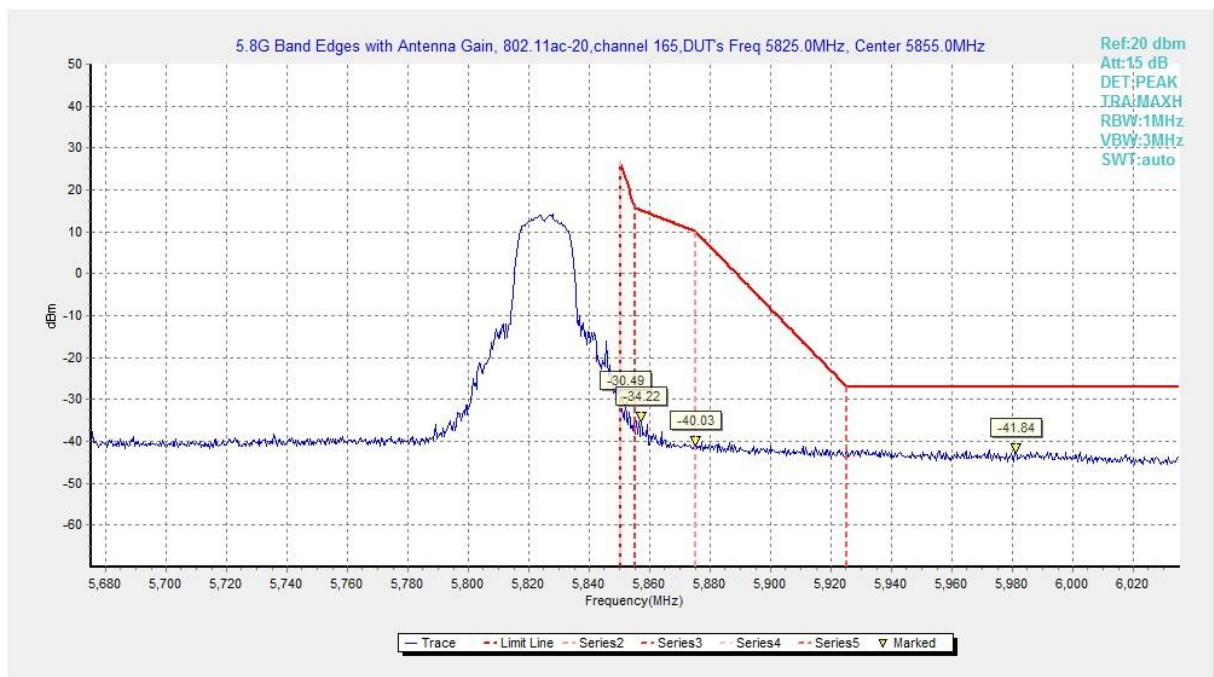


Fig. 76 Band Edges (802.11ac20, 5825MHz)

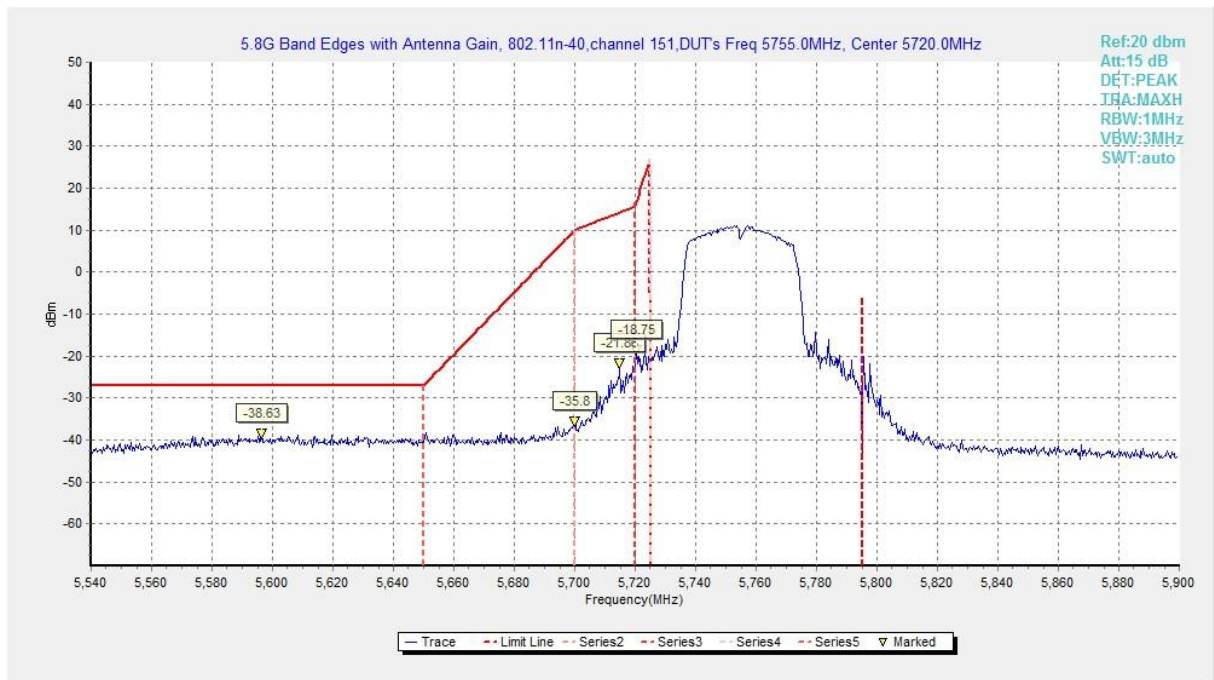


Fig. 77 Band Edges (802.11n40, 5755MHz)

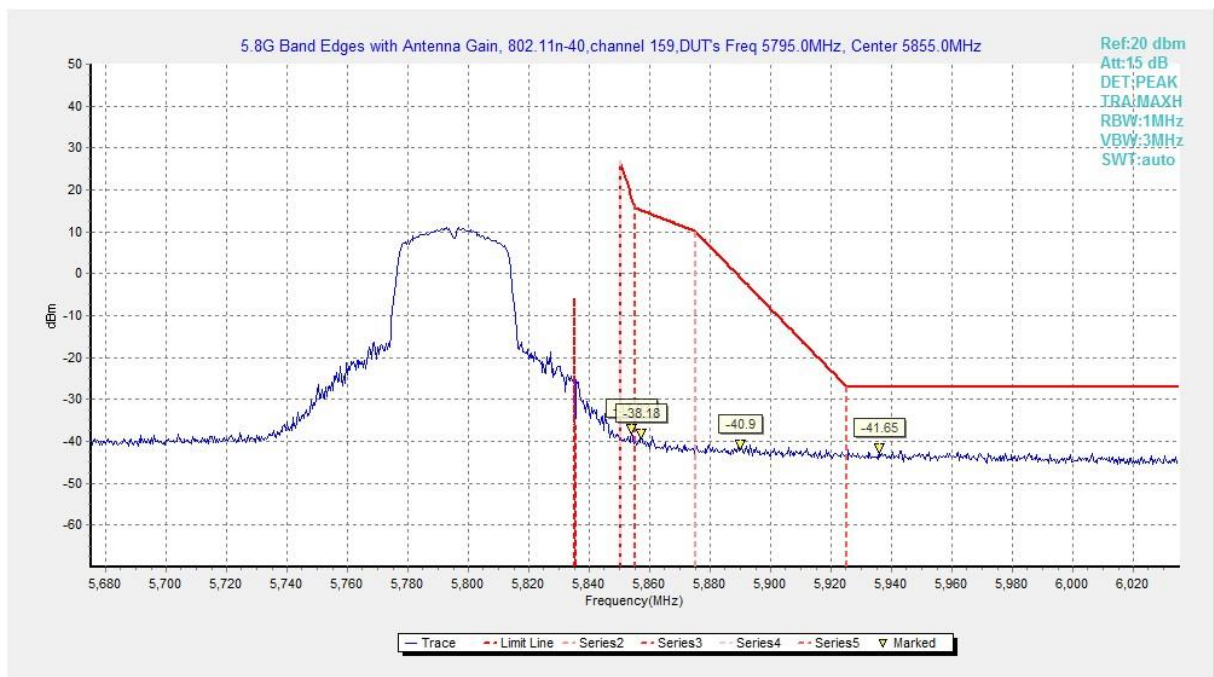


Fig. 78 Band Edges (802.11n40, 5795MHz)

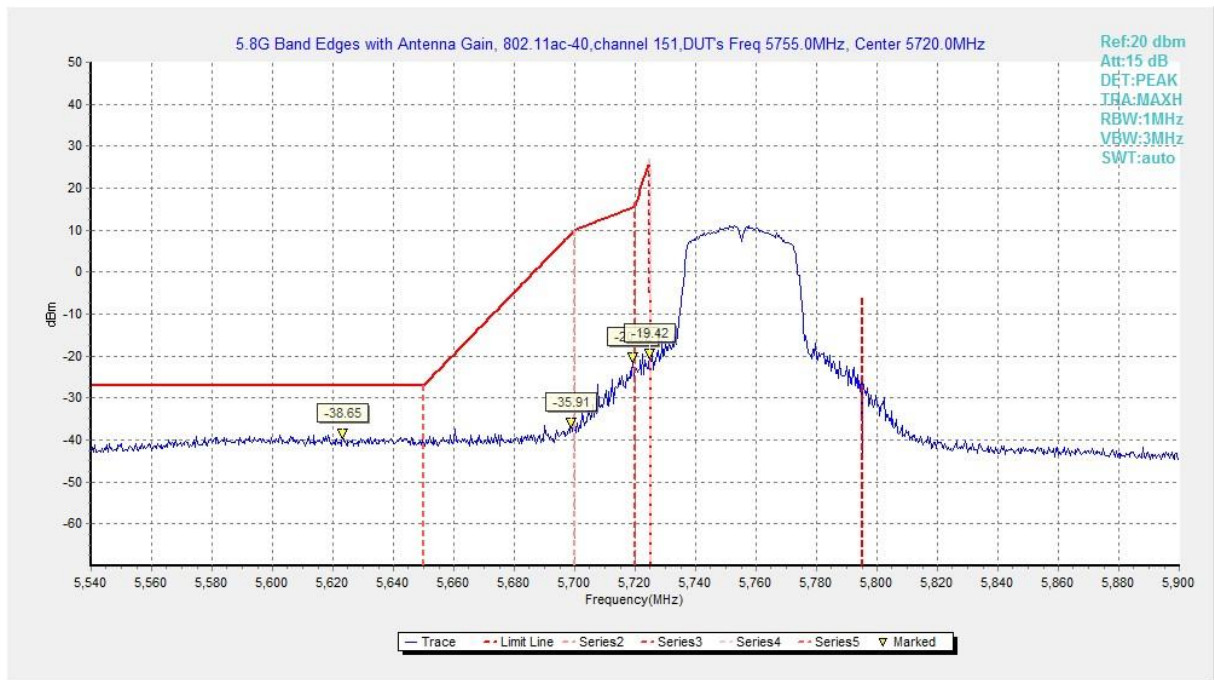


Fig. 79 Band Edges (802.11ac40, 5755MHz)

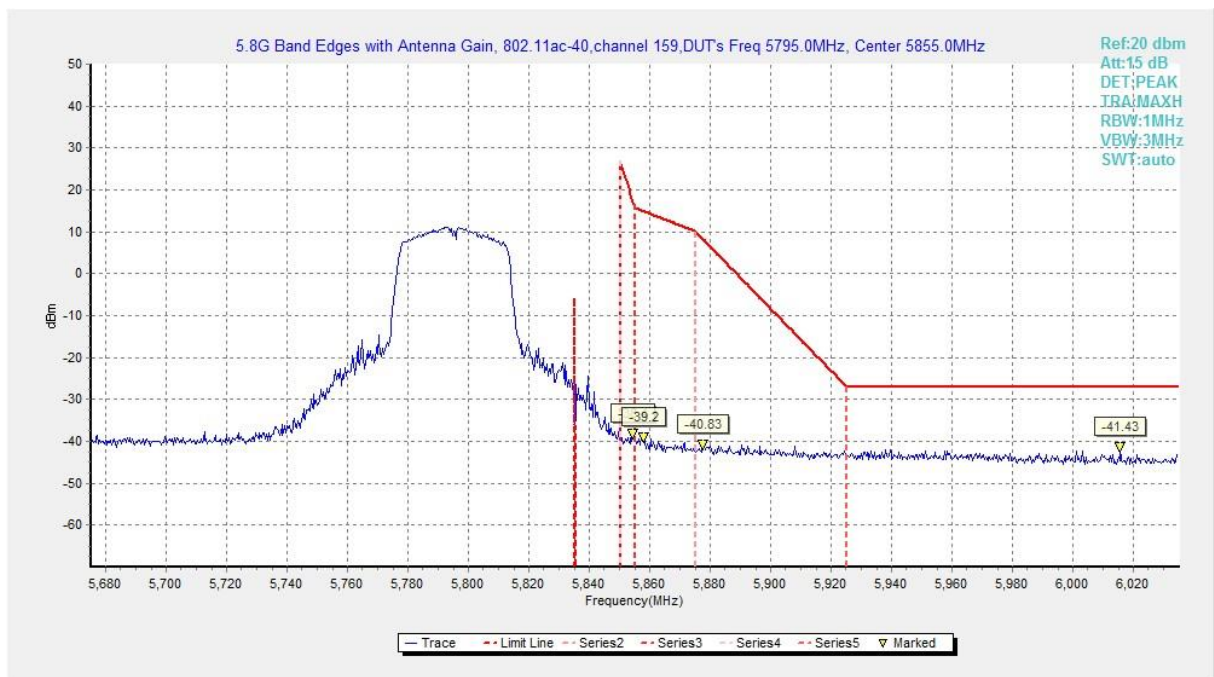


Fig. 80 Band Edges (802.11ac40, 5795MHz)

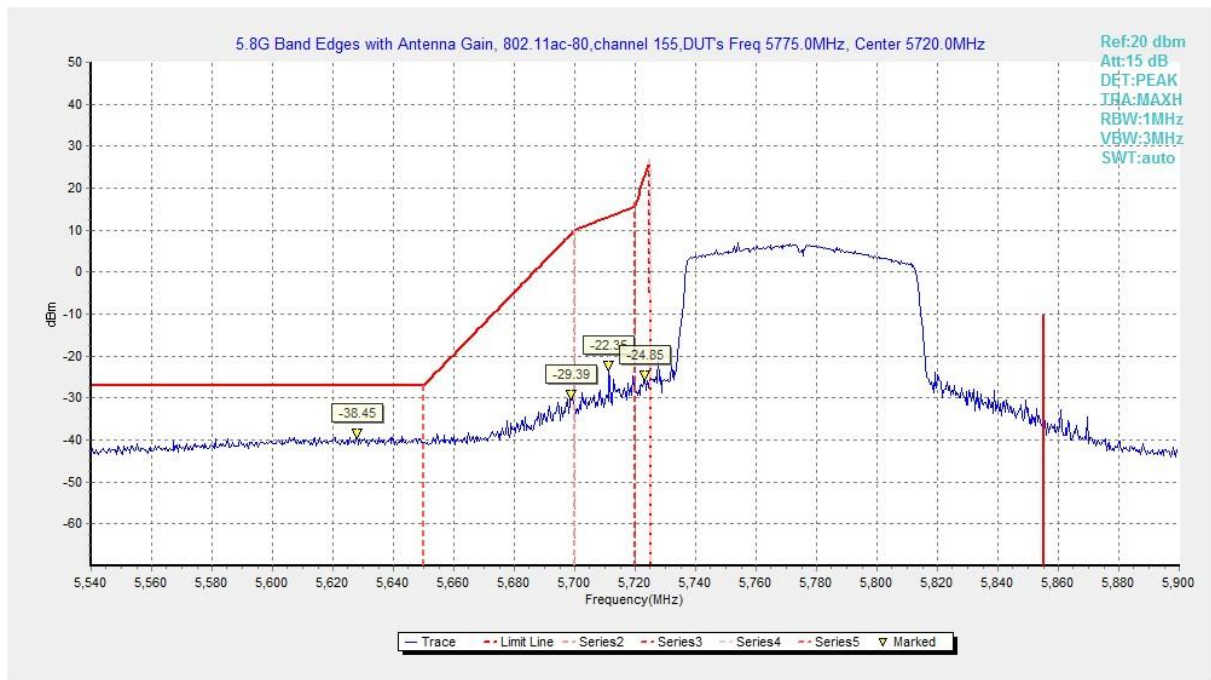


Fig. 81 Band Edges (802.11ac80, 5775MHz)

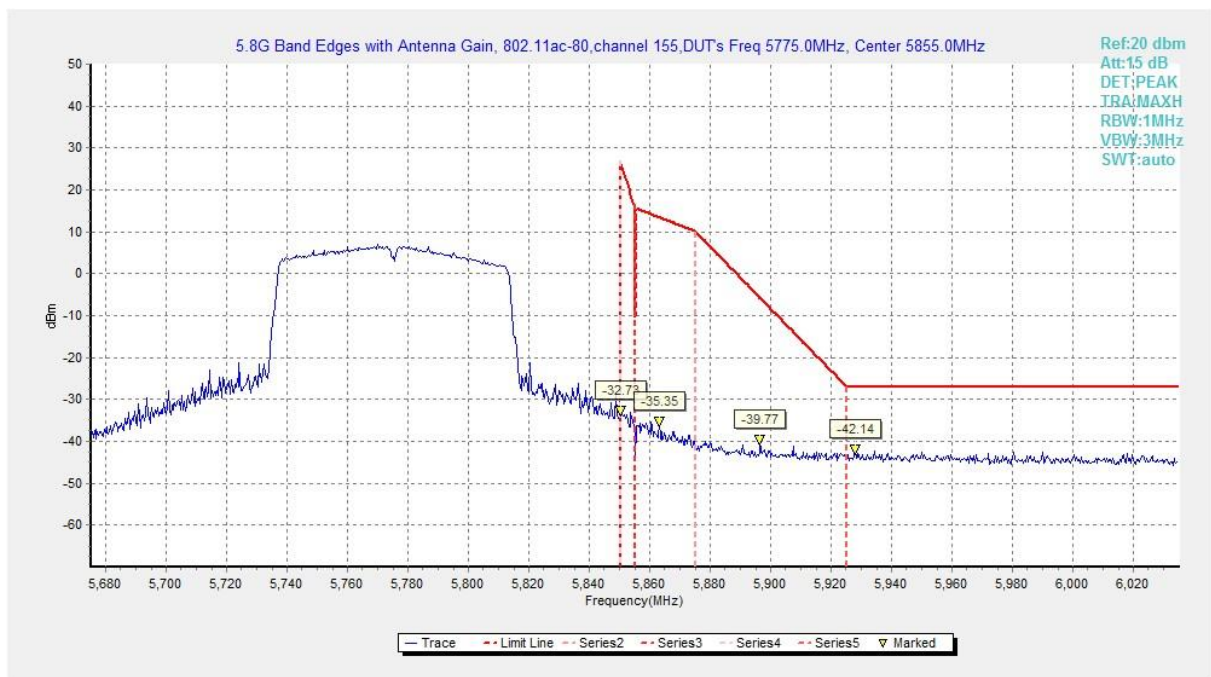


Fig. 82 Band Edges (802.11ac80, 5775MHz)

A6.2 Band Edges - Radiated

Measurement Limit:

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

The measurement is made according to KDB 789033 D02

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

Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a	5745 MHz	Fig.83	P
	5825 MHz	Fig.84	P
802.11n HT20	5745 MHz	Fig.85	P
	5825 MHz	Fig.86	P
802.11ac HT20	5745 MHz	Fig.87	P
	5825 MHz	Fig.88	P
802.11n HT40	5755 MHz	Fig.89	P
	5795 MHz	Fig.90	P
802.11ac HT40	5755 MHz	Fig.91	P
	5795 MHz	Fig.92	P
802.11ac HT80	5775 MHz	Fig.93	P
	5775 MHz	Fig.94	P

Conclusion: PASS

Test graphs as below:

RE - Power-5.650GHz-5.765GHz

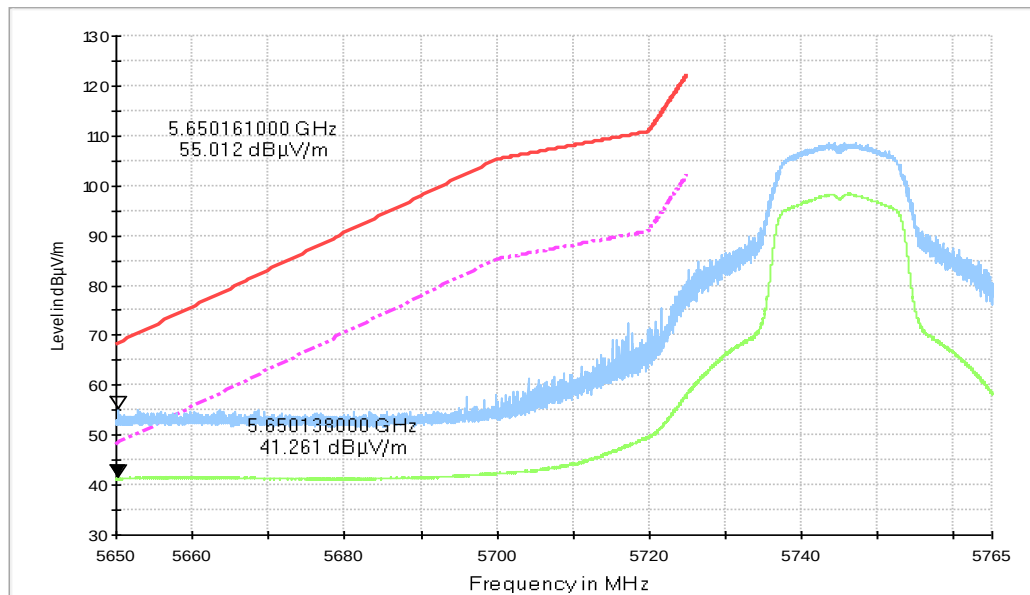


Fig. 83 Band Edges (802.11a, 5745MHz)

RE - Power-5.810GHz-5.925GHz

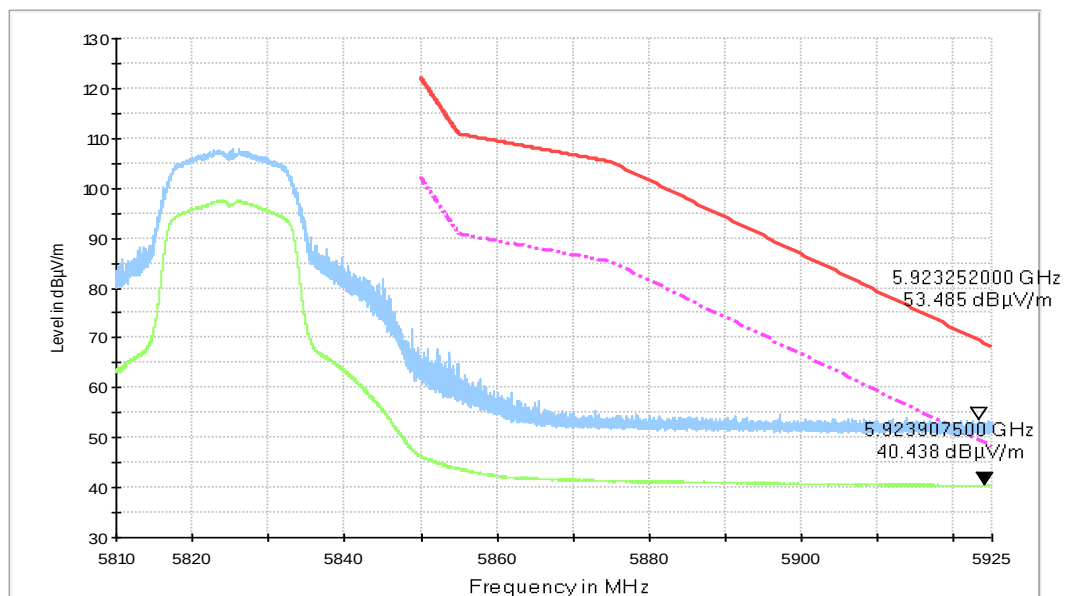


Fig. 84 Band Edges (802.11a, 5825MHz)

RE - Power-5.650GHz-5.765GHz

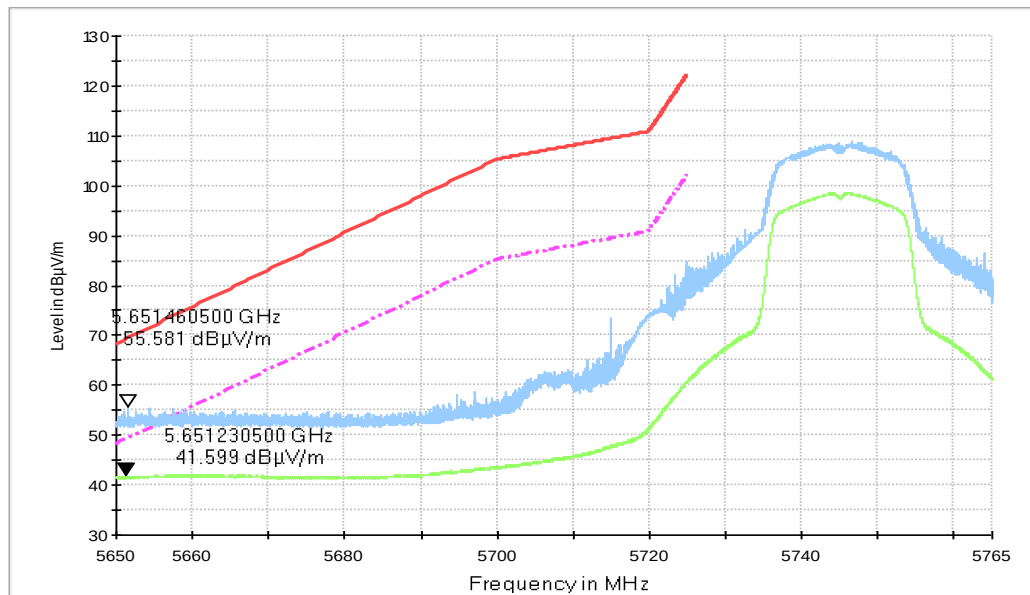


Fig. 85 Band Edges (802.11n-HT20, 5745MHz)

RE - Power-5.810GHz-5.925GHz

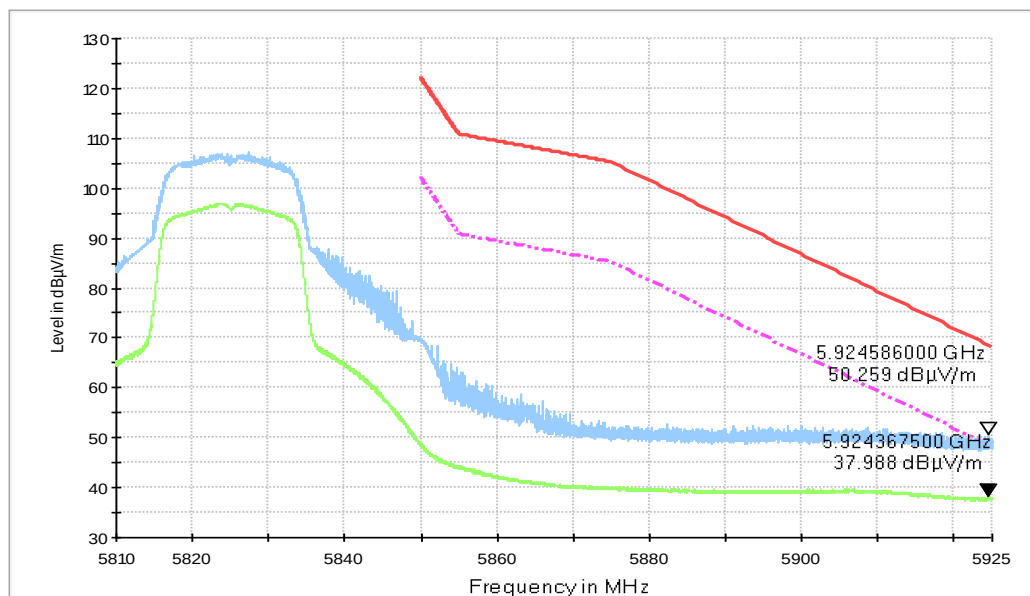


Fig. 86 Band Edges (802.11n-HT20, 5825MHz)

RE - Power-5.650GHz-5.765GHz

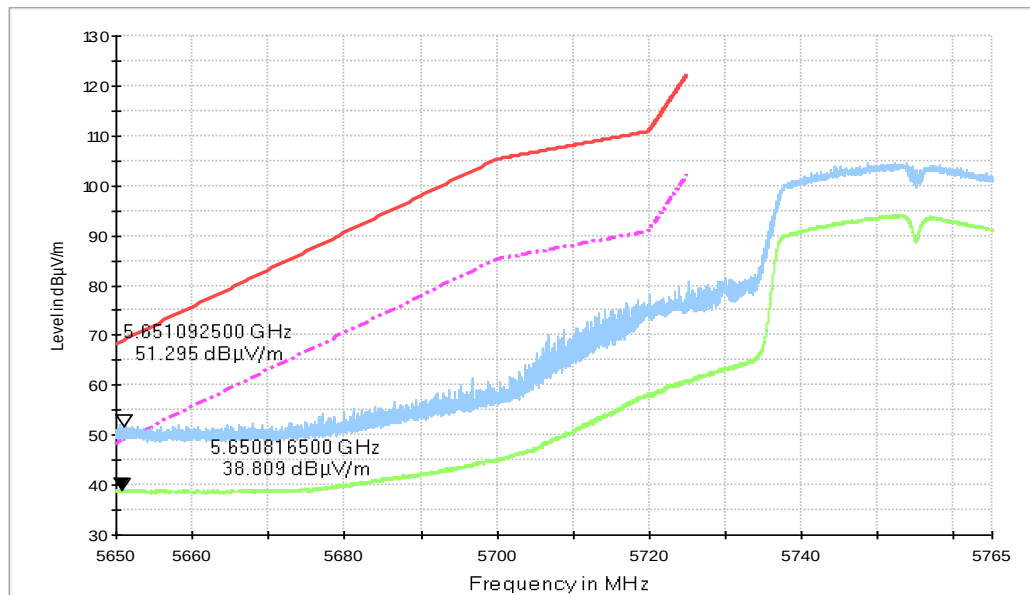


Fig. 87 Band Edges (802.11ac-HT20, 5745MHz)

RE - Power-5.810GHz-5.925GHz

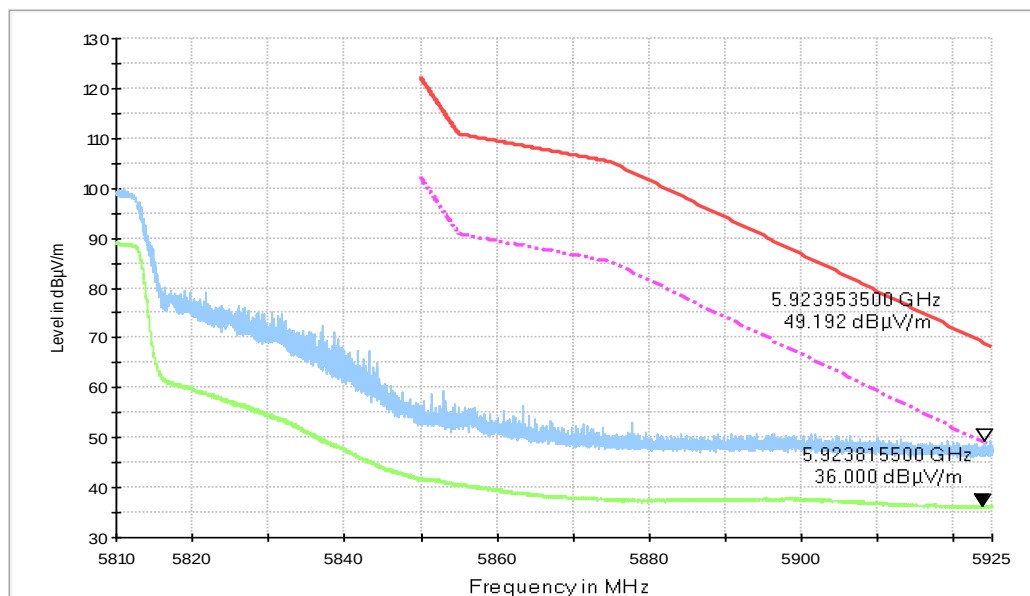


Fig. 88 Band Edges (802.11ac-HT20, 5825MHz)

RE - Power-5.650GHz-5.765GHz

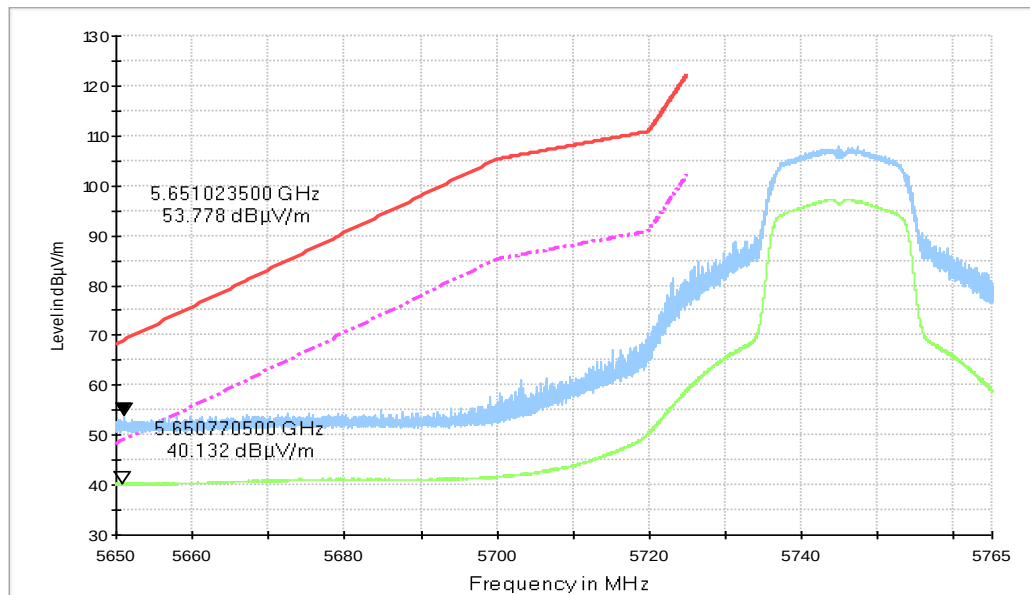


Fig. 89 Band Edges (802.11n-HT40, 5755MHz)

RE - Power-5.810GHz-5.925GHz

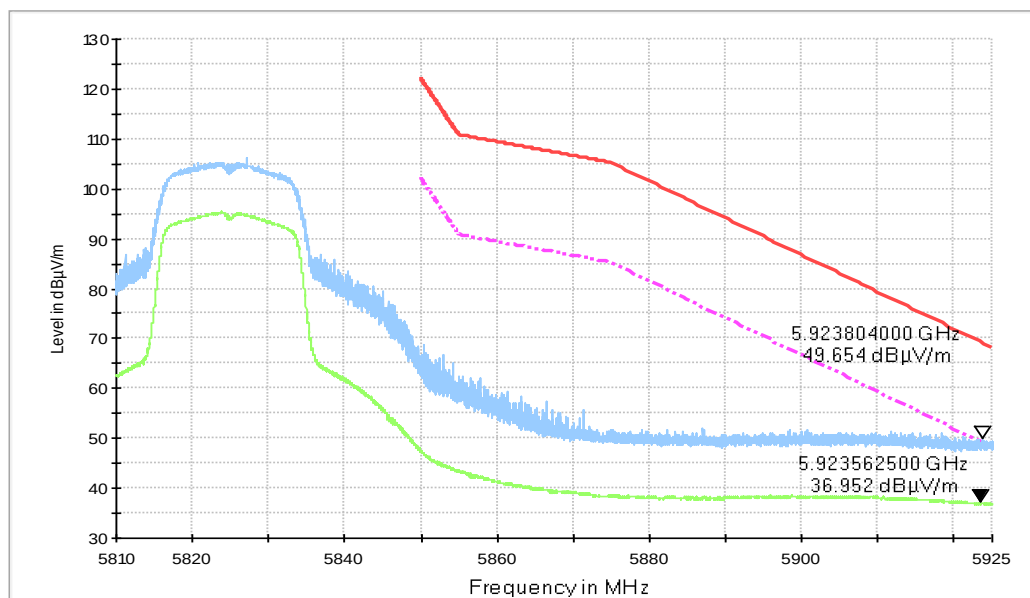


Fig. 90 Band Edges (802.11n-HT40, 5795MHz)

RE - Power-5.650GHz-5.765GHz

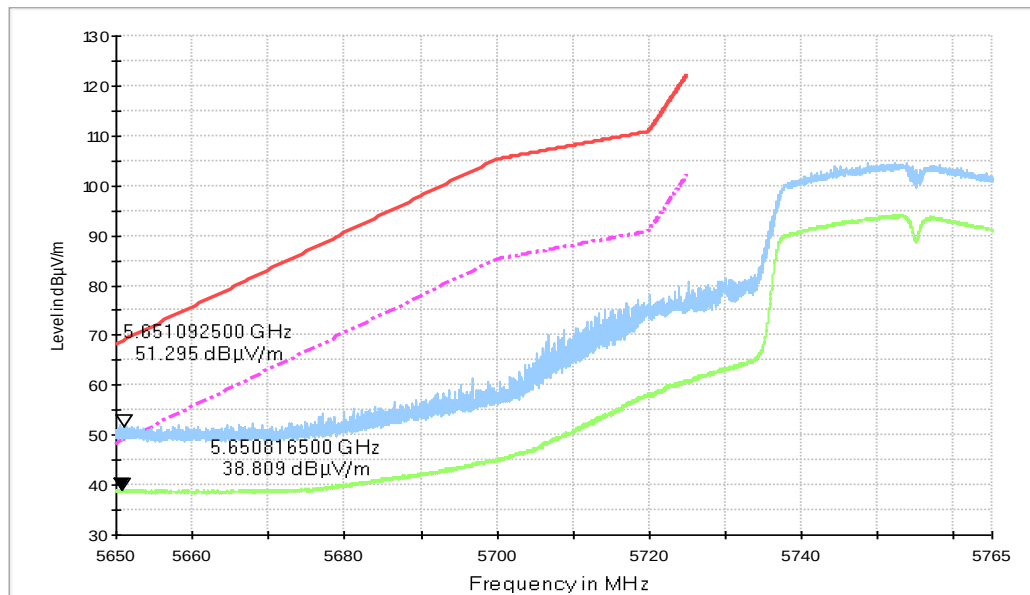


Fig. 91 Band Edges (802.11ac-HT40, 5755MHz)

RE - Power-5.810GHz-5.925GHz

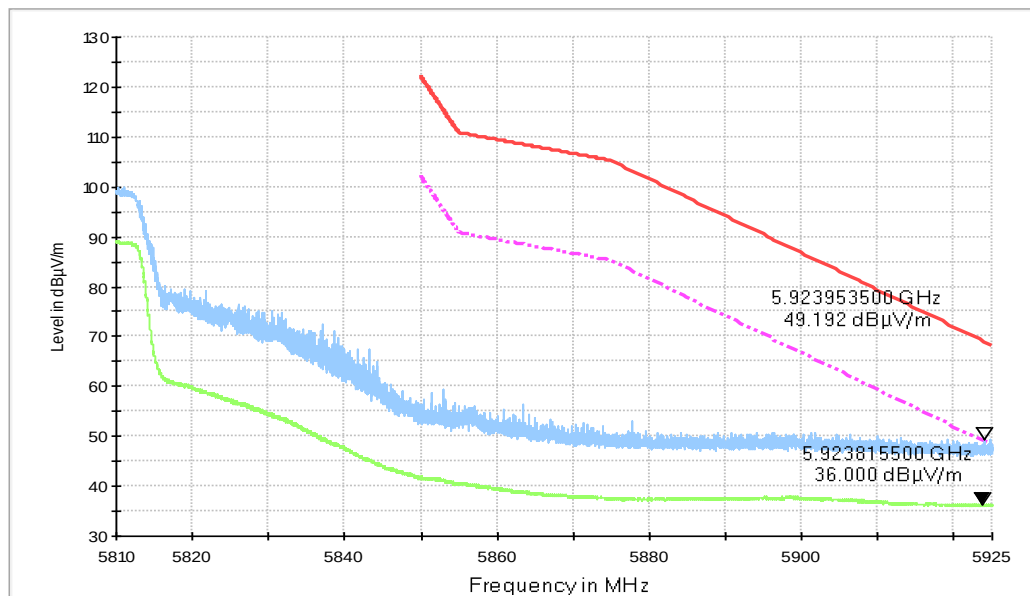


Fig. 92 Band Edges (802.11ac-HT40, 5795MHz)

RE - Power-5.650GHz-5.765GHz

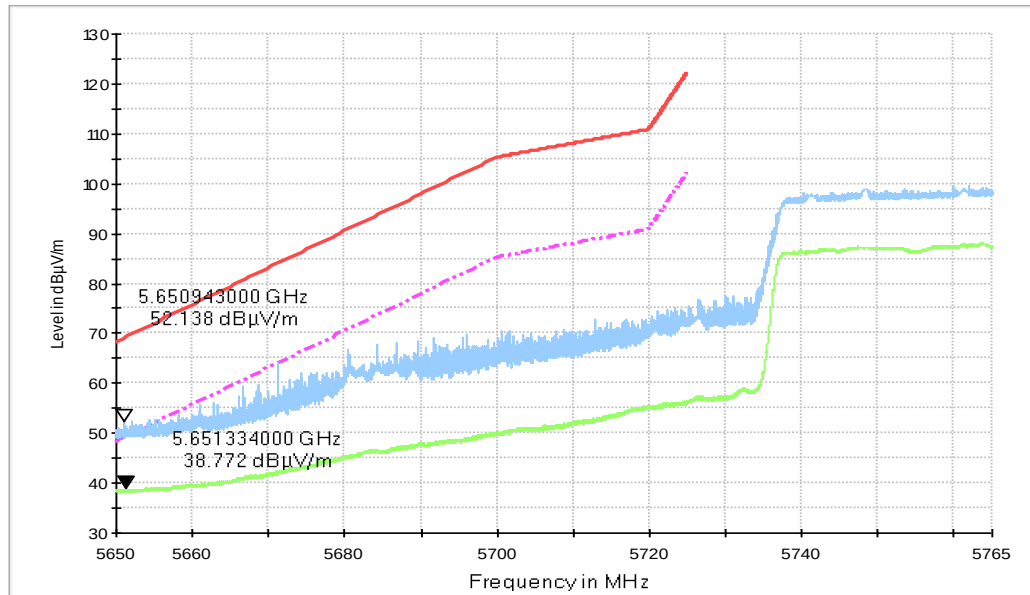


Fig. 93 Band Edges (802.11ac-HT80, 5775MHz)

RE - Power-5.810GHz-5.925GHz

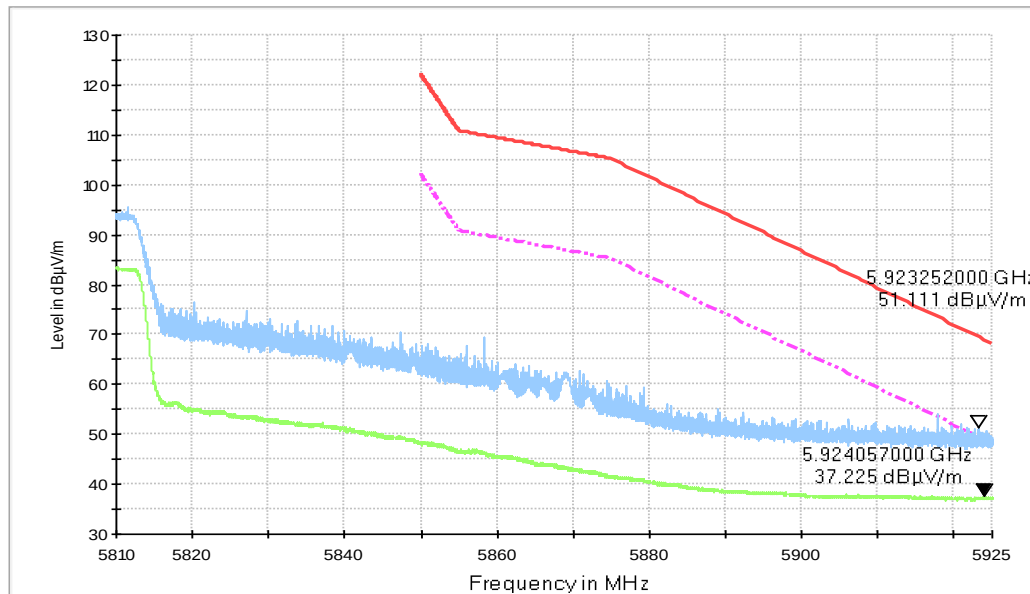


Fig. 94 Band Edges (802.11ac-HT80, 5775MHz)

A.7. AC Powerline Conducted Emission

Test Condition:

Voltage (V)	Frequency (Hz)
120	60

Measurement uncertainty:

Expanded measurement uncertainty for this test item is $U = 3.10\text{dB}$, $k=2$.

Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	66 to 56	Fig.95 Fig.97	Fig.96	P
0.5 to 5	56			
5 to 30	60			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)	Result (dBμV)		Conclusion
		With charger		
		802.11a	Idle	
0.15 to 0.5	56 to 46	Fig.95 Fig.97	Fig.96	P
0.5 to 5	46			
5 to 30	50			
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.				

The measurement is made according to ANSI C63.10 .

Conclusion: PASS

Test graphs as below:

Traffic (With AE2):

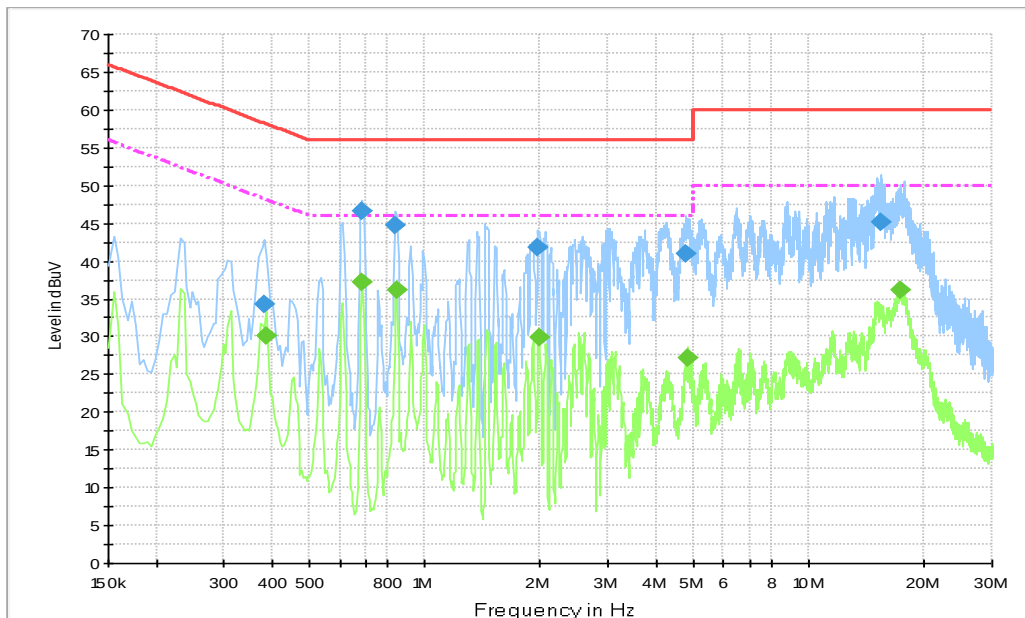


Fig. 95 AC Power line Conducted Emission-802.11a

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.384000	34.3	10000.0	9.000	N	20.0	23.9	58.2
0.690000	46.7	10000.0	9.000	L1	19.9	9.3	56.0
0.838500	44.7	10000.0	9.000	L1	19.9	11.3	56.0
1.963500	41.8	10000.0	9.000	L1	19.8	14.2	56.0
4.780500	40.9	10000.0	9.000	L1	19.8	15.1	56.0
15.436500	45.1	10000.0	9.000	L1	20.0	14.9	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.388500	30.2	10000.0	9.000	L1	20.0	17.9	48.1
0.690000	37.3	10000.0	9.000	L1	19.9	8.7	46.0
0.843000	36.1	10000.0	9.000	L1	19.9	9.9	46.0
1.986000	29.9	10000.0	9.000	L1	19.8	16.1	46.0
4.843500	27.2	10000.0	9.000	L1	19.8	18.8	46.0
17.236500	36.2	10000.0	9.000	L1	20.0	13.8	50.0

Idle (With AE2):

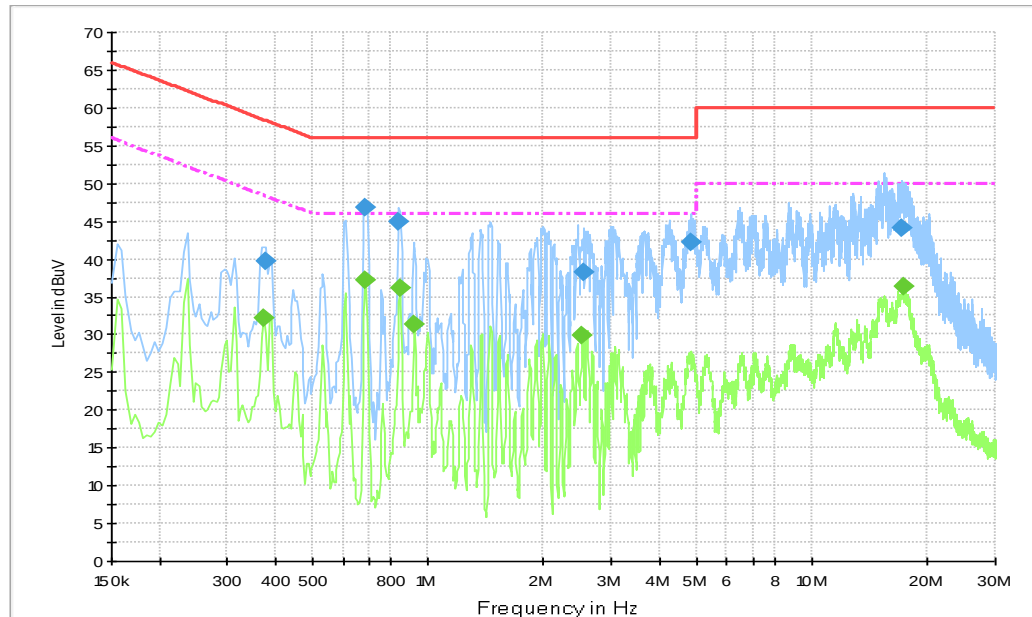


Fig. 96 AC Power line Conducted Emission-Idle

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.379500	39.8	10000.0	9.000	L1	20.0	18.5	58.3
0.690000	46.7	10000.0	9.000	L1	19.9	9.3	56.0
0.838500	44.9	10000.0	9.000	L1	19.9	11.1	56.0
2.535000	38.2	10000.0	9.000	L1	19.8	17.8	56.0
4.848000	42.2	10000.0	9.000	L1	19.8	13.8	56.0
17.025000	44.0	10000.0	9.000	L1	20.0	16.0	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.375000	32.2	10000.0	9.000	L1	20.0	16.2	48.4
0.690000	37.3	10000.0	9.000	L1	19.9	8.7	46.0
0.843000	36.2	10000.0	9.000	L1	19.9	9.8	46.0
0.919500	31.4	10000.0	9.000	L1	19.9	14.6	46.0
2.521500	29.8	10000.0	9.000	L1	19.8	16.2	46.0
17.268000	36.3	10000.0	9.000	L1	20.0	13.7	50.0

Traffic (With AE3):

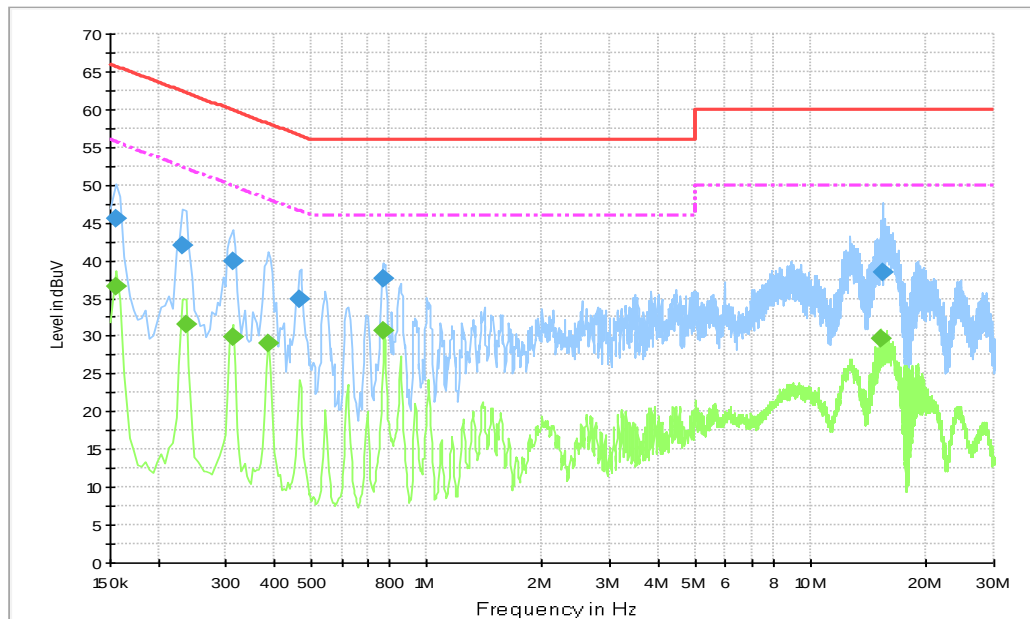


Fig. 97 AC Power line Conducted Emission-802.11a

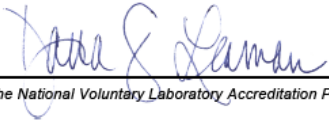
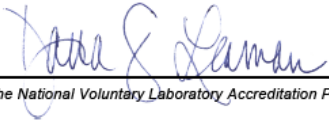
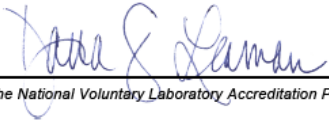
Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	45.6	10000.0	9.000	L1	19.9	20.2	65.8
0.231000	42.0	10000.0	9.000	L1	20.0	20.4	62.4
0.312000	39.8	10000.0	9.000	L1	20.0	20.1	59.9
0.465000	34.8	10000.0	9.000	L1	20.0	21.8	56.6
0.771000	37.5	10000.0	9.000	L1	20.0	18.5	56.0
15.427500	38.5	10000.0	9.000	L1	20.0	21.5	60.0

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154500	36.5	10000.0	9.000	L1	19.9	19.2	55.8
0.235500	31.5	10000.0	9.000	L1	20.0	20.8	52.3
0.312000	29.9	10000.0	9.000	L1	20.0	20.0	49.9
0.388500	29.0	10000.0	9.000	L1	20.0	19.1	48.1
0.775500	30.8	10000.0	9.000	L1	20.0	15.2	46.0
15.292500	29.8	10000.0	9.000	L1	20.0	20.2	50.0

ANNEX B: Accreditation Certificate

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

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