

MIMO_ Chain 0+1_IEEE 802.11a_Channel 36

No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10360.00	39.92	11.11	51.03	74.00	-22.97	Peak	Horizontal
2	10360.00	28.84	11.11	39.95	54.00	-14.05	Average	Horizontal
3	15540.00	38.98	10.76	49.74	74.00	-24.26	Peak	Horizontal
4	15540.00	28.16	10.76	38.92	54.00	-15.08	Average	Horizontal
5	10360.00	40.42	9.39	49.81	74.00	-24.19	Peak	Vertical
6	10360.00	29.16	9.39	38.55	54.00	-15.45	Average	Vertical
7	15540.00	41.46	11.59	53.05	74.00	-20.95	Peak	Vertical
8	15540.00	28.58	11.59	40.17	54.00	-13.83	Average	Vertical

MIMO_CI	MIMO_ Chain 0+1_IEEE 802.11a_Channel 44											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	10440.00	40.06	11.31	51.37	74.00	-22.63	Peak	Horizontal				
2	10440.00	28.84	11.31	40.15	54.00	-13.85	Average	Horizontal				
3	15660.00	39.28	11.00	50.28	74.00	-23.72	Peak	Horizontal				
4	15660.00	27.84	11.00	38.84	54.00	-15.16	Average	Horizontal				
5	10440.00	41.60	9.43	51.03	74.00	-22.97	Peak	Vertical				
6	10440.00	28.94	9.43	38.37	54.00	-15.63	Average	Vertical				
7	15660.00	44.78	11.93	56.71	74.00	-17.29	Peak	Vertical				
8	15660.00	29.37	11.93	41.30	54.00	-12.70	Average	Vertical				

MIMO_ Ch	MIMO_ Chain 0+1_IEEE 802.11a_Channel 48											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	10480.00	39.45	11.41	50.86	74.00	-23.14	Peak	Horizontal				
2	10480.00	28.50	11.41	39.91	54.00	-14.09	Average	Horizontal				
3	15720.00	39.10	11.08	50.18	74.00	-23.82	Peak	Horizontal				
4	15720.00	27.47	11.08	38.55	54.00	-15.45	Average	Horizontal				
5	10480.00	40.61	9.45	50.06	74.00	-23.94	Peak	Vertical				
6	10480.00	28.57	9.45	38.02	54.00	-15.98	Average	Vertical				
7	15720.00	40.34	12.05	52.39	74.00	-21.61	Peak	Vertical				
8	15720.00	27.98	12.05	40.03	54.00	-13.97	Average	Vertical				



MIMO_ C	hain 0+1_IE	EE 802.11a __	_Channel 14	19				
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11490.00	43.81	9.78	53.59	74.00	-20.41	Peak	Horizontal
2	11490.00	29.51	9.78	39.29	54.00	-14.71	Average	Horizontal
3	17235.00	39.15	13.98	53.13	74.00	-20.87	Peak	Horizontal
4	17235.00	27.45	13.98	41.43	54.00	-12.57	Average	Horizontal
5	11490.00	40.33	8.27	48.60	74.00	-25.40	Peak	Vertical
6	11490.00	29.11	8.27	37.38	54.00	-16.62	Average	Vertical
7	17235.00	39.77	13.24	53.01	74.00	-20.99	Peak	Vertical
8	17235.00	27.48	13.24	40.72	54.00	-13.28	Average	Vertical
MIMO_C	hain 0+1_IEI	EE 802.11a	_Channel 15	57				
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11570.00	40.82	9.86	50.68	74.00	-23.32	Peak	Horizontal
2	11570.00	28.86	9.86	38.72	54.00	-15.28	Average	Horizontal
			0.00	30.72	54.00	-13.20	Average	1 IOTIZOTILAI
3	17355.00	41.48	14.49	55.97	74.00	-18.03	Peak	Horizontal
3 4	17355.00 17355.00						-	
		41.48	14.49	55.97	74.00	-18.03	Peak	Horizontal
4	17355.00	41.48 28.54	14.49 14.49	55.97 43.03	74.00 54.00	-18.03 -10.97	Peak Average	Horizontal Horizontal
4 5	17355.00 11570.00	41.48 28.54 40.28	14.49 14.49 8.47	55.97 43.03 48.75	74.00 54.00 74.00	-18.03 -10.97 -25.25	Peak Average Peak	Horizontal Horizontal Vertical

MIMO CI	MIMO_ Chain 0+1_IEEE 802.11a_Channel 165										
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis			
1	11650.00	41.20	9.95	51.15	74.00	-22.85	Peak	Horizontal			
2	11650.00	28.74	9.95	38.69	54.00	-15.31	Average	Horizontal			
3	17475.00	39.17	14.89	54.06	74.00	-19.94	Peak	Horizontal			
4	17475.00	28.38	14.89	43.27	54.00	-10.73	Average	Horizontal			
5	11650.00	41.16	8.69	49.85	74.00	-24.15	Peak	Vertical			
6	11650.00	28.86	8.69	37.55	54.00	-16.45	Average	Vertical			
7	17475.00	41.05	14.00	55.05	74.00	-18.95	Peak	Vertical			
8	17475.00	28.76	14.00	42.76	54.00	-11.24	Average	Vertical			



MIMO_ CI	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 36											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	10360.00	39.59	11.11	50.70	74.00	-23.30	Peak	Horizontal				
2	10360.00	28.52	11.11	39.63	54.00	-14.37	Average	Horizontal				
3	15540.00	39.60	10.76	50.36	74.00	-23.64	Peak	Horizontal				
4	15540.00	28.22	10.76	38.98	54.00	-15.02	Average	Horizontal				
5	10360.00	38.80	9.39	48.19	74.00	-25.81	Peak	Vertical				
6	10360.00	28.37	9.39	37.76	54.00	-16.24	Average	Vertical				
7	15540.00	38.76	11.59	50.35	74.00	-23.65	Peak	Vertical				
8	15540.00	28.53	11.59	40.12	54.00	-13.88	Average	Vertical				

MIMO_ CI	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 44											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	10440.00	39.59	11.31	50.90	74.00	-23.10	Peak	Horizontal				
2	10440.00	28.52	11.31	39.83	54.00	-14.17	Average	Horizontal				
3	15660.00	39.68	11.00	50.68	74.00	-23.32	Peak	Horizontal				
4	15660.00	27.96	11.00	38.96	54.00	-15.04	Average	Horizontal				
5	10440.00	40.43	9.43	49.86	74.00	-24.14	Peak	Vertical				
6	10440.00	28.68	9.43	38.11	54.00	-15.89	Average	Vertical				
7	15660.00	39.93	11.93	51.86	74.00	-22.14	Peak	Vertical				
8	15660.00	28.19	11.93	40.12	54.00	-13.88	Average	Vertical				

MIMO_Ch	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 48										
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis			
1	10480.00	39.61	11.41	51.02	74.00	-22.98	Peak	Horizontal			
2	10480.00	28.39	11.41	39.80	54.00	-14.20	Average	Horizontal			
3	15720.00	38.57	11.08	49.65	74.00	-24.35	Peak	Horizontal			
4	15720.00	27.41	11.08	38.49	54.00	-15.51	Average	Horizontal			
5	10480.00	41.05	9.45	50.50	74.00	-23.50	Peak	Vertical			
6	10480.00	28.24	9.45	37.69	54.00	-16.31	Average	Vertical			
7	15720.00	41.42	12.05	53.47	74.00	-20.53	Peak	Vertical			
8	15720.00	27.68	12.05	39.73	54.00	-14.27	Average	Vertical			



MIMO_C	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 149											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	11490.00	41.89	9.78	51.67	74.00	-22.33	Peak	Horizontal				
2	11490.00	29.31	9.78	39.09	54.00	-14.91	Average	Horizontal				
3	17235.00	40.62	13.98	54.60	74.00	-19.40	Peak	Horizontal				
4	17235.00	29.38	13.98	43.36	54.00	-10.64	Average	Horizontal				
5	11490.00	41.38	8.27	49.65	74.00	-24.35	Peak	Vertical				
6	11490.00	29.11	8.27	37.38	54.00	-16.62	Average	Vertical				
7	17235.00	40.84	13.24	54.08	74.00	-19.92	Peak	Vertical				
8	17235.00	29.29	13.24	42.53	54.00	-11.47	Average	Vertical				

MIMO_ CI	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 157											
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis				
1	11570.00	40.12	9.86	49.98	74.00	-24.02	Peak	Horizontal				
2	11570.00	28.43	9.86	38.29	54.00	-15.71	Average	Horizontal				
3	17355.00	41.54	14.49	56.03	74.00	-17.97	Peak	Horizontal				
4	17355.00	29.54	14.49	44.03	54.00	-9.97	Average	Horizontal				
5	11570.00	40.97	8.47	49.44	74.00	-24.56	Peak	Vertical				
6	11570.00	28.18	8.47	36.65	54.00	-17.35	Average	Vertical				
7	17355.00	41.54	13.68	55.22	74.00	-18.78	Peak	Vertical				
8	17355.00	29.62	13.68	43.30	54.00	-10.70	Average	Vertical				

MIMO_Ch	MIMO_ Chain 0+1_IEEE 802.11n-HT20_Channel 165										
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis			
1	11650.00	41.04	9.95	50.99	74.00	-23.01	Peak	Horizontal			
2	11650.00	28.58	9.95	38.53	54.00	-15.47	Average	Horizontal			
3	17475.00	40.59	14.89	55.48	74.00	-18.52	Peak	Horizontal			
4	17475.00	29.32	14.89	44.21	54.00	-9.79	Average	Horizontal			
5	11650.00	41.24	8.69	49.93	74.00	-24.07	Peak	Vertical			
6	11650.00	29.02	8.69	37.71	54.00	-16.29	Average	Vertical			
7	17475.00	40.96	14.00	54.96	74.00	-19.04	Peak	Vertical			
8	17475.00	28.76	14.00	42.76	54.00	-11.24	Average	Vertical			



MIMO_ C	MIMO_ Chain 0+1_IEEE 802.11n-HT40_Channel 38							
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10380.00	40.46	11.17	51.63	74.00	-22.37	Peak	Horizontal
2	10380.00	28.46	11.17	39.63	54.00	-14.37	Average	Horizontal
3	15570.00	41.61	10.84	52.45	74.00	-21.55	Peak	Horizontal
4	15570.00	29.08	10.84	39.92	54.00	-14.08	Average	Horizontal
5	10380.00	41.70	9.41	51.11	74.00	-22.89	Peak	Vertical
6	10380.00	28.40	9.41	37.81	54.00	-16.19	Average	Vertical
7	15570.00	41.65	11.69	53.34	74.00	-20.66	Peak	Vertical
8	15570.00	29.43	11.69	41.12	54.00	-12.88	Average	Vertical

MIMO_ C	MIMO_ Chain 0+1_IEEE 802.11n-HT40_Channel 46							
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	40.30	11.35	51.65	74.00	-22.35	Peak	Horizontal
2	10460.00	28.64	11.35	39.99	54.00	-14.01	Average	Horizontal
3	15690.00	39.63	11.03	50.66	74.00	-23.34	Peak	Horizontal
4	15690.00	27.93	11.03	38.96	54.00	-15.04	Average	Horizontal
5	10460.00	39.67	9.43	49.10	74.00	-24.90	Peak	Vertical
6	10460.00	27.36	9.43	36.79	54.00	-17.21	Average	Vertical
7	15690.00	42.28	11.98	54.26	74.00	-19.74	Peak	Vertical
8	15690.00	29.31	11.98	41.29	54.00	-12.71	Average	Vertical

MIMO_ Chain 0+1_IEEE 802.11n-HT40_Channel 151								
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11510.00	40.38	9.79	50.17	74.00	-23.83	Peak	Horizontal
2	11510.00	29.78	9.79	39.57	54.00	-14.43	Average	Horizontal
3	17265.00	40.50	14.11	54.61	74.00	-19.39	Peak	Horizontal
4	17265.00	29.32	14.11	43.43	54.00	-10.57	Average	Horizontal
5	11510.00	41.71	8.30	50.01	74.00	-23.99	Peak	Vertical
6	11510.00	29.28	8.30	37.58	54.00	-16.42	Average	Vertical
7	17265.00	41.49	13.35	54.84	74.00	-19.16	Peak	Vertical
8	17265.00	30.18	13.35	43.53	54.00	-10.47	Average	Vertical

MIMO_ C	MIMO_ Chain 0+1_IEEE 802.11n-HT40_Channel 159							
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11590.00	41.01	9.87	50.88	74.00	-23.12	Peak	Horizontal
2	11590.00	28.36	9.87	38.23	54.00	-15.77	Average	Horizontal
3	17385.00	40.27	14.62	54.89	74.00	-19.11	Peak	Horizontal
4	17385.00	30.51	14.62	45.13	54.00	-8.87	Average	Horizontal
5	11590.00	41.57	8.52	50.09	74.00	-23.91	Peak	Vertical
6	11590.00	28.24	8.52	36.76	54.00	-17.24	Average	Vertical
7	17385.00	39.95	13.79	53.74	74.00	-20.26	Peak	Vertical
8	17385.00	29.57	13.79	43.36	54.00	-10.64	Average	Vertical



MIMO_ C	MIMO_ Chain 0+1_IEEE 802.11ac-VHT80_Channel 42							
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	10460.00	39.36	11.35	50.71	74.00	-23.29	Peak	Horizontal
2	10460.00	28.69	11.35	40.04	54.00	-13.96	Average	Horizontal
3	15690.00	39.37	11.03	50.40	74.00	-23.60	Peak	Horizontal
4	15690.00	27.99	11.03	39.02	54.00	-14.98	Average	Horizontal
5	10460.00	38.64	9.43	48.07	74.00	-25.93	Peak	Vertical
6	10460.00	28.41	9.43	37.84	54.00	-16.16	Average	Vertical
7	15690.00	39.67	11.98	51.65	74.00	-22.35	Peak	Vertical
8	15690.00	28.20	11.98	40.18	54.00	-13.82	Average	Vertical

MIMO_ CI	MIMO_ Chain 0+1_IEEE 802.11ac-VHT80_Channel 155							
No.	Frequency (MHz)	Reading (dBuV/m)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	11550.00	40.32	9.83	50.15	74.00	-23.85	Peak	Horizontal
2	11550.00	29.31	9.83	39.14	54.00	-14.86	Average	Horizontal
3	17325.00	38.35	14.36	52.71	74.00	-21.29	Peak	Horizontal
4	17325.00	27.19	14.36	41.55	54.00	-12.45	Average	Horizontal
5	11550.00	39.94	8.41	48.35	74.00	-25.65	Peak	Vertical
6	11550.00	28.86	8.41	37.27	54.00	-16.73	Average	Vertical
7	17325.00	38.18	13.57	51.75	74.00	-22.25	Peak	Vertical
8	17325.00	27.09	13.57	40.66	54.00	-13.34	Average	Vertical

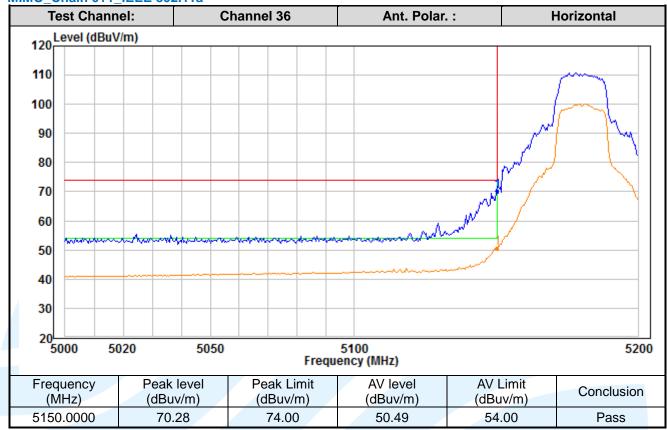
Remark:

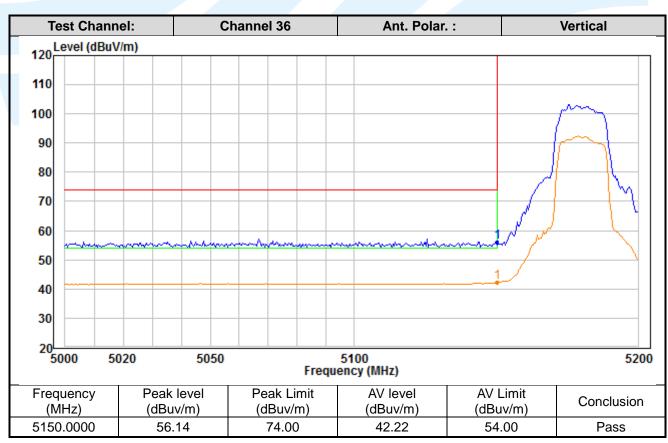
- 1. Correct Factor = Antenna Factor + Cable Loss Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.
- 2. Result = Reading + Correct Factor.
- 3. Margin = Result Limit



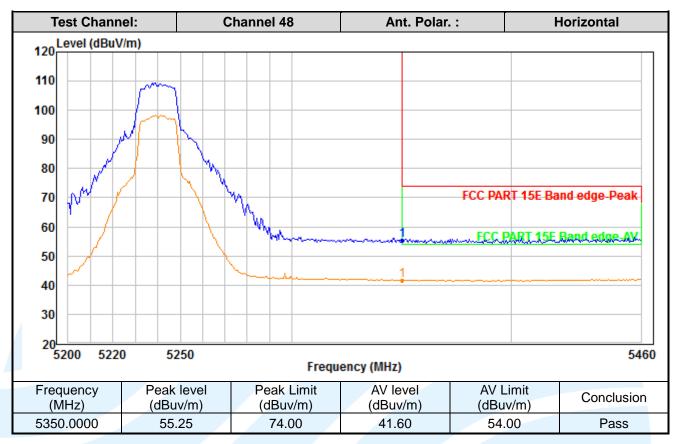
Band Edge Measurements (Radiated)

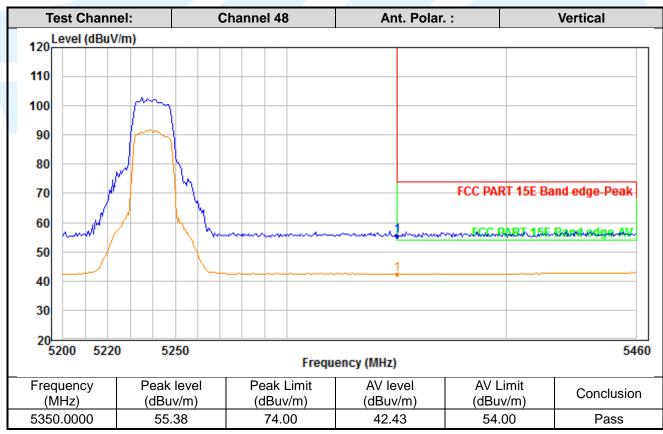
MIMO Chain 0+1 IEEE 802.11a



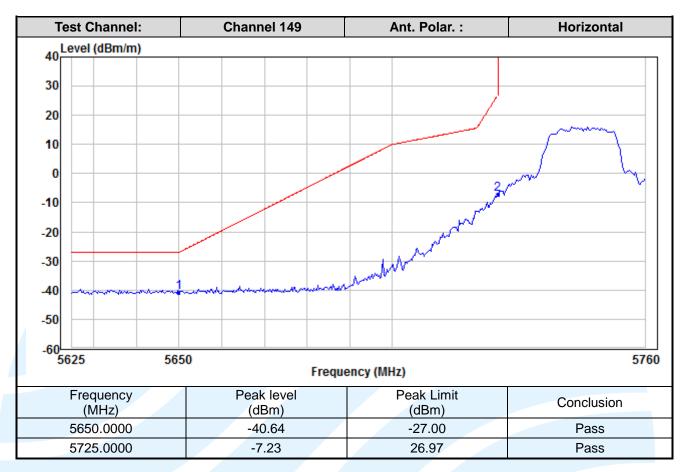


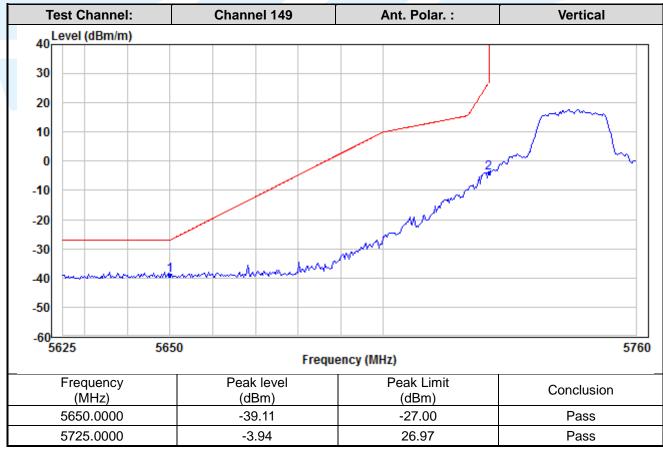




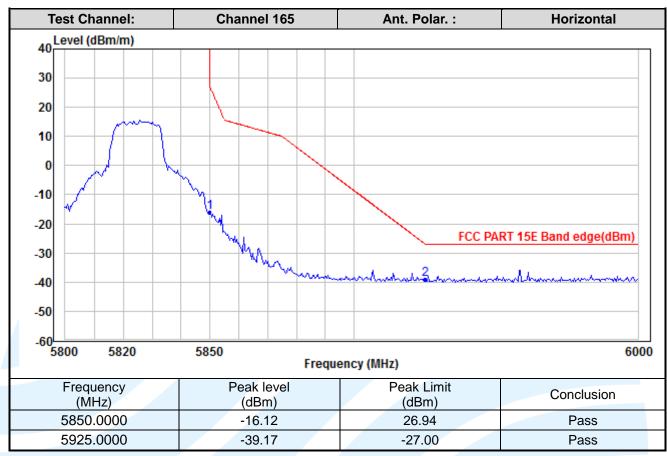


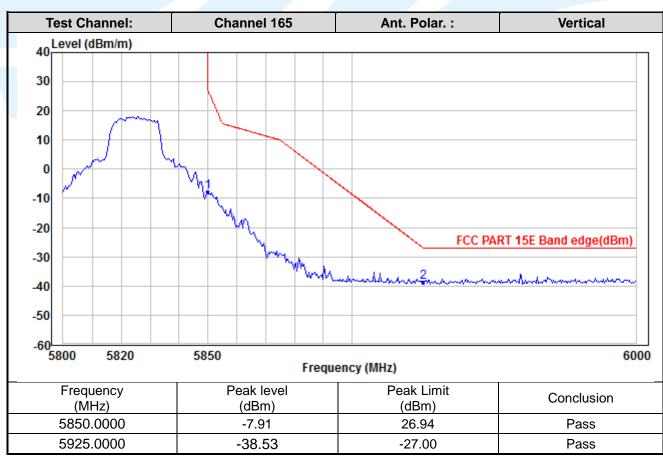






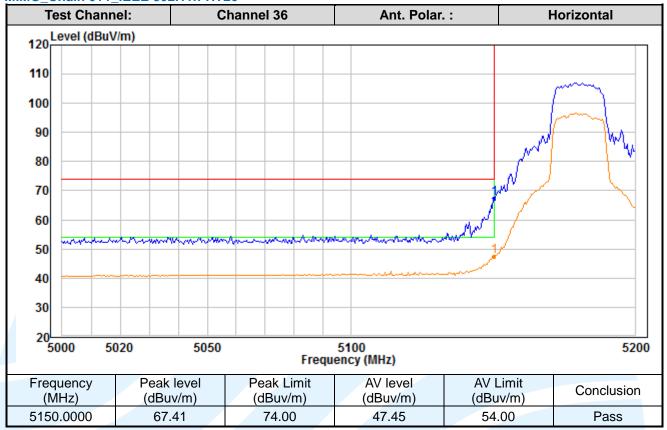


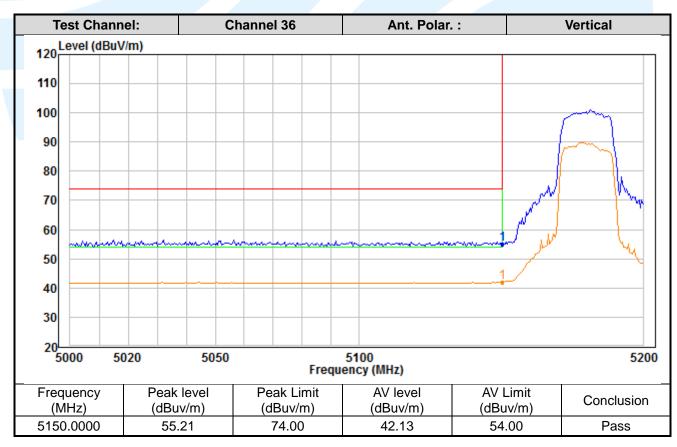




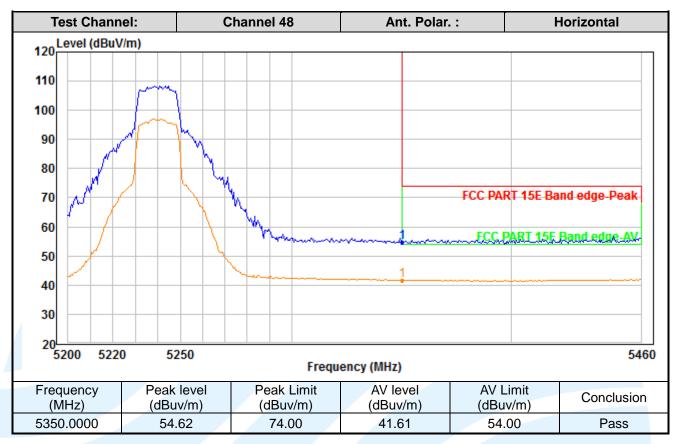


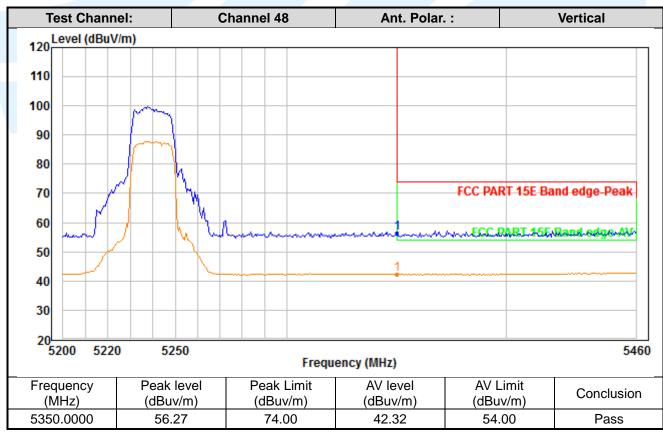
MIMO Chain 0+1 IEEE 802.11n-HT20



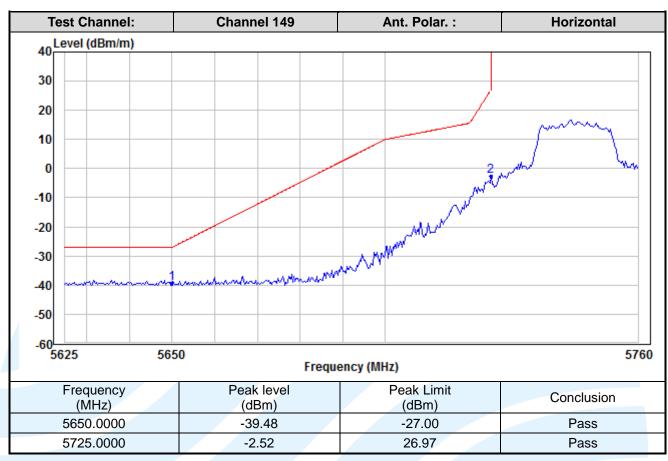


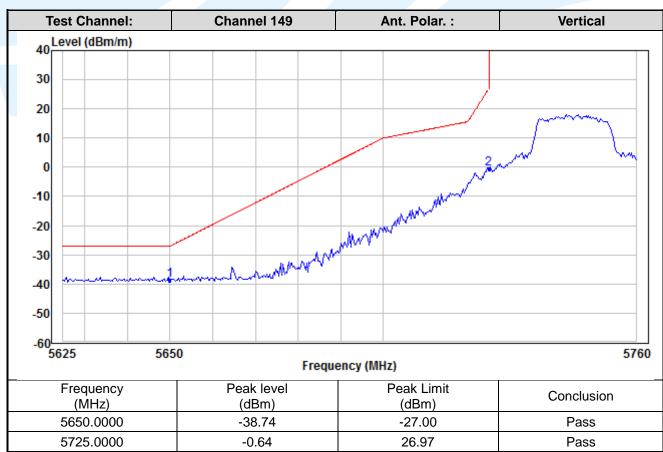




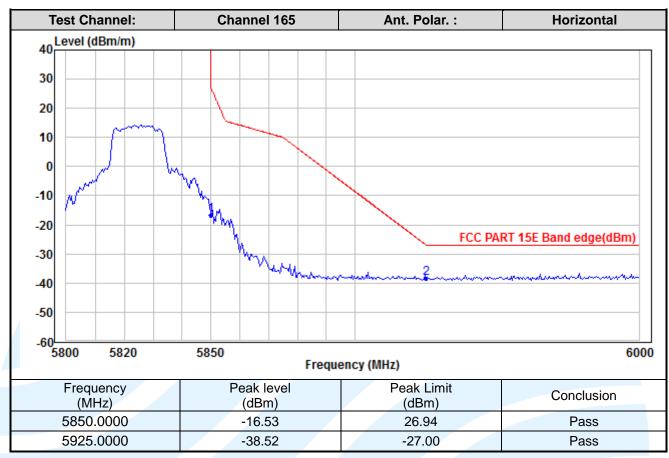


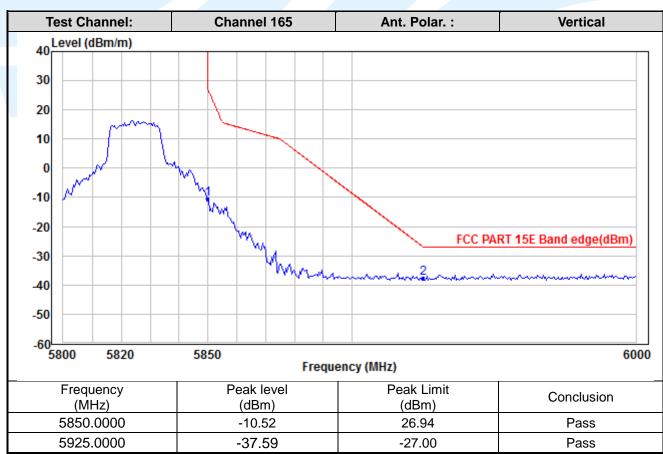






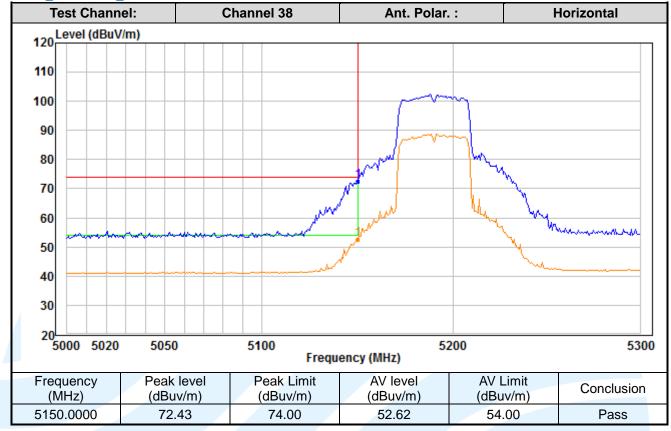


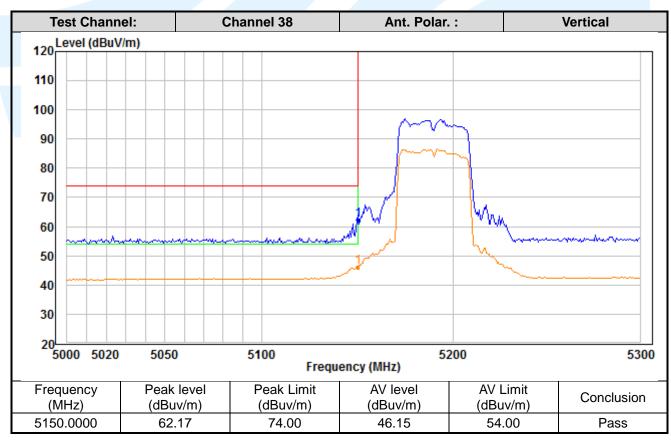




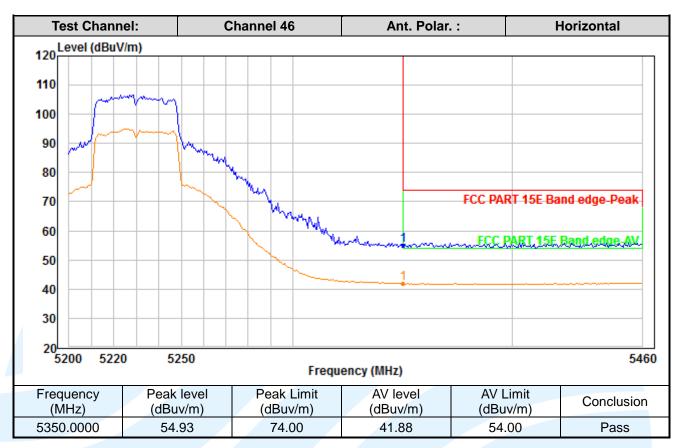


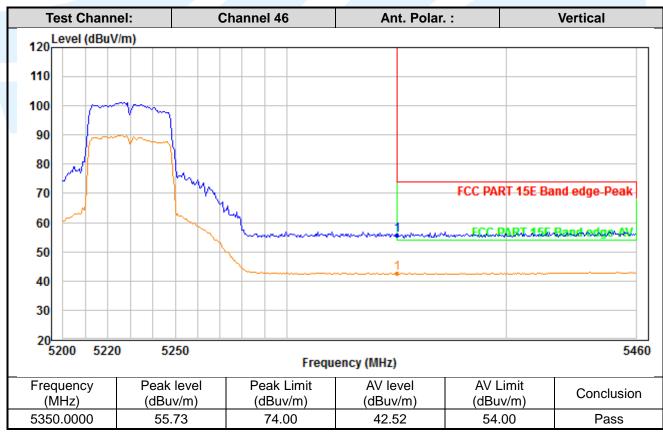
MIMO Chain 0+1 IEEE 802.11n-HT40



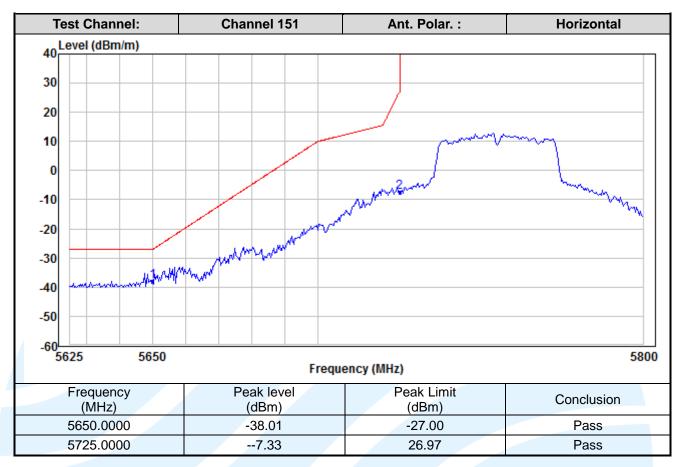


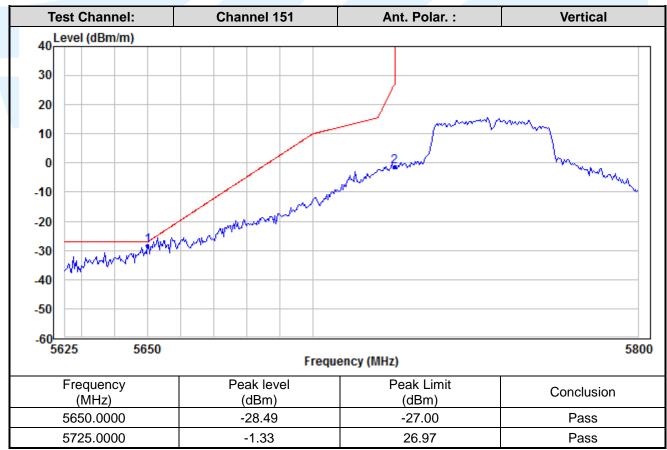




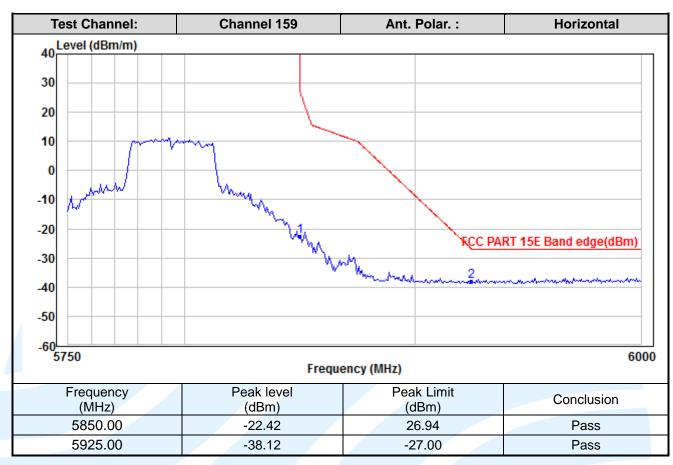


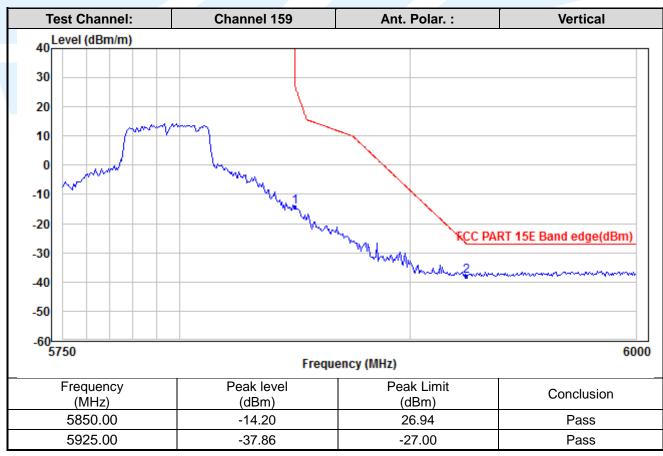






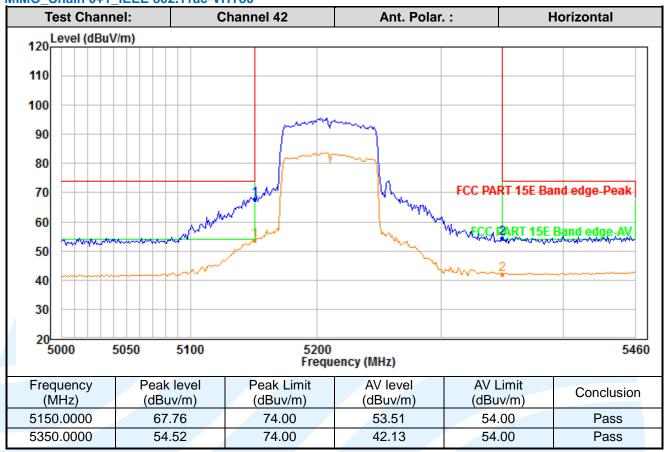


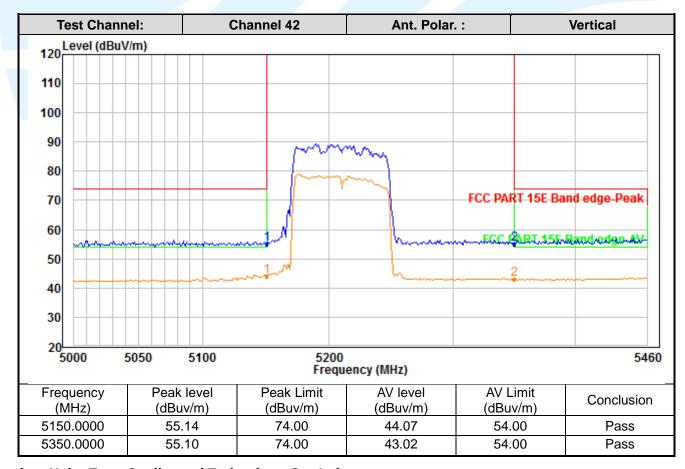




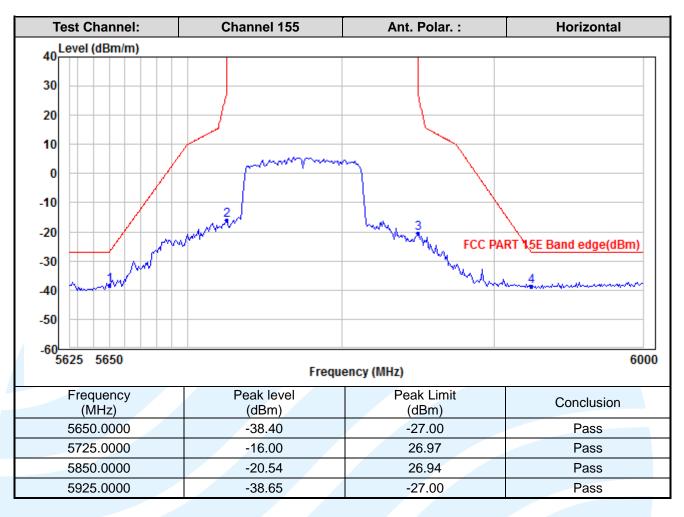


MIMO Chain 0+1 IEEE 802.11ac-VHT80

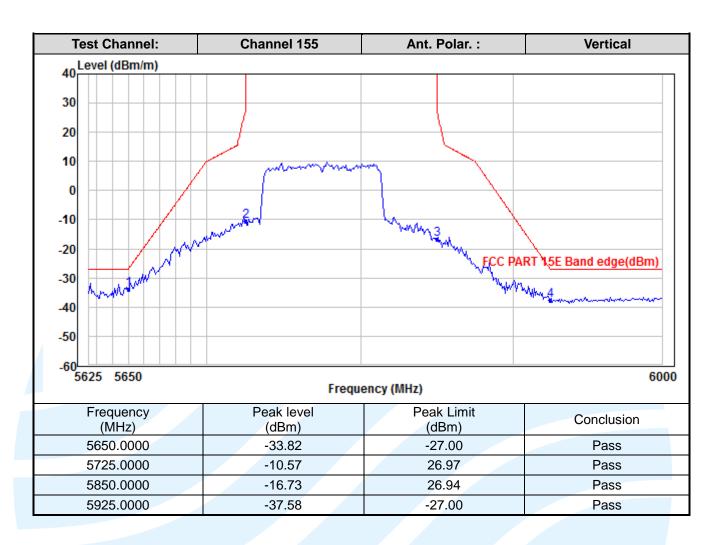














Page 85 of 88 Report No.: 191025009RFC-2

5.8 AC POWER LINE CONDUCTED EMISSION

FCC 47 CFR Part 15 Subpart E Section 15.407 (b)(6)

Test Requirement: FCC 47 CFR Part 15 Subpart C Section 15.207

RSS-Gen Issue 5, Section 8.8

Test Method: ANSI C63.10-2013, Section 6.2.

Limits:

Frequency range	Limits (Limits (dB(μV)					
(MHz)	Quasi-peak	Average					
0,15 to 0,50	66 to 56	56 to 46					
0,50 to 5	56	46					
5 to 30	60	50					

Remark:

- 1. The lower limit shall apply at the transition frequencies.
- 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

Test Setup: Refer to section 4.5.2 for details.

Test Procedures:

Test frequency range: 150KHz-30MHz

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50µH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Equipment Used: Refer to section 3 for details.

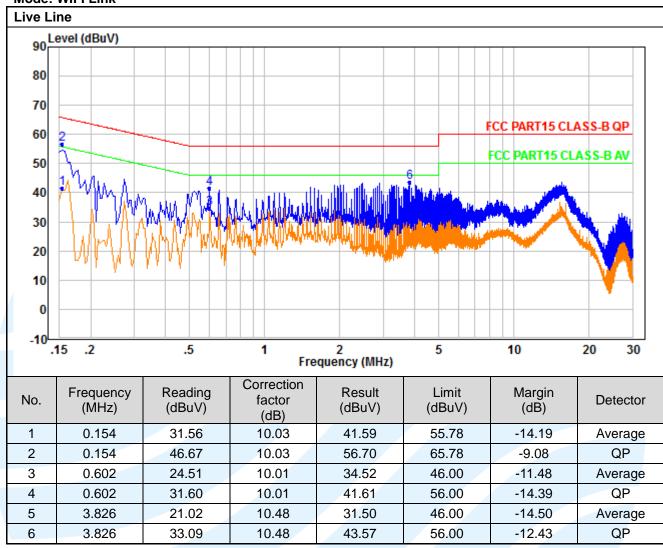
Test Result: Pass



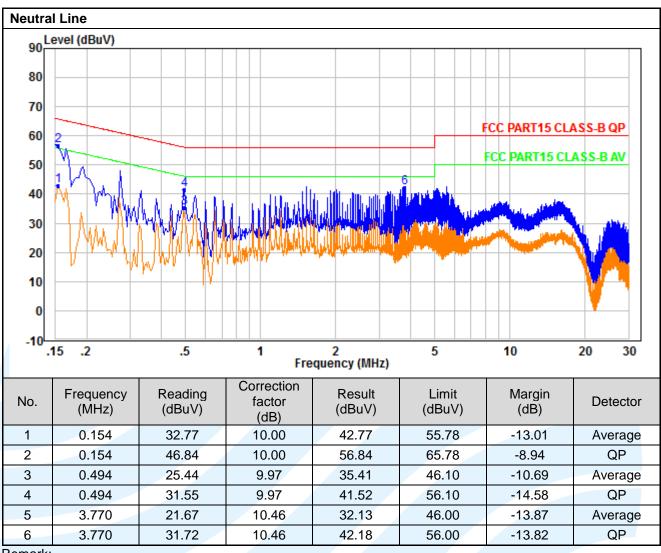
The measurement data as follows:

Quasi Peak and Average:

Mode: WIFI Link







Remark:

- Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
- Result = Reading + Correct Factor. 2.
- Margin = Result Limit
- An initial pre-scan was performed on the Phase and neutral lines with peak detector. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.



APPENDIX 1 PHOTOS OF TEST SETUP

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

