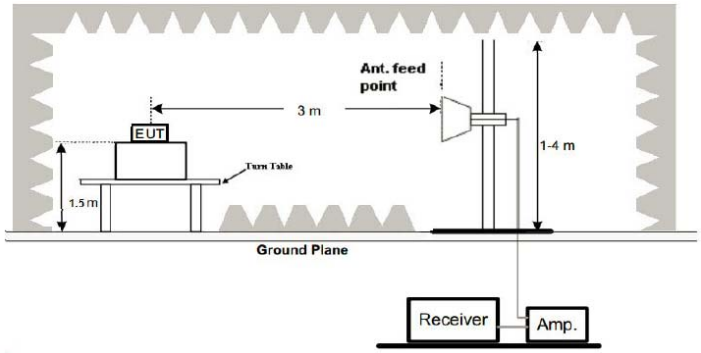
4.6. Band Edge

4.6.1. Test Specification

Test Requirement:	FCC CFR47 Part 15E Section 15.407
Test Method:	ANSI C63.10 2013
Limit:	(1)For transmitters operating in the 5.725-5.85 GHz band: (i) 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 limit of frequency below 1GHz and which fall in restricted ba nds should complies 15.209.
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi peak or average method as specified and then reported in a data sheet.
Test Result:	PASS

4.6.2. Test Instruments

Radiated Emission Test Site (966)					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Receiver	R&S	ESRP3	HKE-005	Feb. 17, 2023	Feb. 16, 2024
Spectrum analyzer	Agilent	N9020A	HKE-048	Feb. 17, 2023	Feb. 16, 2024
Preamplifier	EMCI	EMC051845SE	HKE-015	Feb. 17, 2023	Feb. 16, 2024
Preamplifier	Agilent	83051A	HKE-016	Feb. 17, 2023	Feb. 16, 2024
Loop antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Feb. 17, 2023	Feb. 16, 2024
Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	Feb. 17, 2023	Feb. 16, 2024
Horn antenna	Schwarzbeck	9120D	HKE-013	Feb. 17, 2023	Feb. 16, 2024
Antenna Mast	Keleto	CC-A-4M	N/A	N/A	N/A
Position controller	Taiwan MF	MF7802	HKE-011	Feb. 17, 2023	Feb. 16, 2024
Radiated test software	Tonscend	TS+ Rev 2.5.0.0	HKE-082	N/A	N/A
RF cable (9KHz-1GHz)	Times	381806-001	N/A	N/A	N/A
Hf antenna	Schwarzbeck	LB-180400-KF	HKE-031	Feb. 17, 2023	Feb. 16, 2024
RF cable	Tonscend	1-18G	HKE-099	Feb. 17, 2023	Feb. 16, 2024
RF cable	Times	1-40G	HKE-034	Feb. 17, 2023	Feb. 16, 2024
Horn Antenna	Schewarzbeck	BBHA 9170	HKE-017	Feb. 17, 2023	Feb. 16, 2024
Spectrum analyzer	R&S	FSP40	HKE-025	Feb. 17, 2023	Feb. 16, 2024

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

4.6.3. Test Data

ANT 1

Operation Mode: 802.11a Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	52.07	-2.06	50.01	68.2	-18.19	peak
5700	82.98	-1.96	81.02	105.2	-24.18	peak
5720	88.07	-2.87	85.2	110.8	-25.6	peak
5725	104.29	-2.14	102.15	122.2	-20.05	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	52.42	-2.06	50.36	68.2	-17.84	peak
5700	82.68	-1.96	80.72	105.2	-24.48	peak
5720	92.58	-2.87	89.71	110.8	-21.09	peak
5725	106.92	-2.14	104.78	122.2	-17.42	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	102.41	-1.97	100.44	122.2	-21.76	peak
5855	87.67	-2.13	85.54	110.8	-25.26	peak
5875	84.64	-2.65	81.99	105.2	-23.21	peak
5925	51.99	-2.28	49.71	68.2	-18.49	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	98.32	-1.97	96.35	122.2	-25.85	peak
5855	91.04	-2.13	88.91	110.8	-21.89	peak
5875	84.42	-2.65	81.77	105.2	-23.43	peak
5925	55.62	-2.28	53.34	68.2	-14.86	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11n20 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	52.64	-2.06	50.58	68.2	-17.62	peak
5700	84.32	-1.96	82.36	105.2	-22.84	peak
5720	91.14	-2.87	88.27	110.8	-22.53	peak
5725	111.05	-2.14	108.91	122.2	-13.29	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	57.31	-2.06	55.25	68.2	-12.95	peak
5700	91.31	-1.96	89.35	105.2	-15.85	peak
5720	92.99	-2.87	90.12	110.8	-20.68	peak
5725	106.99	-2.14	104.85	122.2	-17.35	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	104.49	-1.97	102.52	122.2	-19.68	peak
5855	90.09	-2.13	87.96	110.8	-22.84	peak
5875	87.24	-2.65	84.59	105.2	-20.61	peak
5925	51.35	-2.28	49.07	68.2	-19.13	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	101.16	-1.97	99.19	122.2	-23.01	peak
5855	91.84	-2.13	89.71	110.8	-21.09	peak
5875	84.62	-2.65	81.97	105.2	-23.23	peak
5925	55.15	-2.28	52.87	68.2	-15.33	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11n40 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	45.04	-2.06	42.98	68.2	-25.22	peak
5700	84.07	-1.96	82.11	105.2	-23.09	peak
5720	88.28	-2.87	85.41	110.8	-25.39	peak
5725	98.09	-2.14	95.95	122.2	-26.25	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	44.26	-2.06	42.2	68.2	-26	peak
5700	83.92	-1.96	81.96	105.2	-23.24	peak
5720	92.34	-2.87	89.47	110.8	-21.33	peak
5725	98.51	-2.14	96.37	122.2	-25.83	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	97.31	-1.97	95.34	122.2	-26.86	peak
5855	88.98	-2.13	86.85	110.8	-23.95	peak
5875	83.89	-2.65	81.24	105.2	-23.96	peak
5925	49.12	-2.28	46.84	68.2	-21.36	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	96.33	-1.97	94.36	122.2	-27.84	peak
5855	89.27	-2.13	87.14	110.8	-23.66	peak
5875	83.05	-2.65	80.4	105.2	-24.8	peak
5925	50.13	-2.28	47.85	68.2	-20.35	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac20 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	46.19	-2.06	44.13	68.2	-24.07	peak
5700	84.04	-1.96	82.08	105.2	-23.12	peak
5720	88.57	-2.87	85.7	110.8	-25.1	peak
5725	98.91	-2.14	96.77	122.2	-25.43	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	43.6	-2.06	41.54	68.2	-26.66	peak
5700	84.47	-1.96	82.51	105.2	-22.69	peak
5720	90.87	-2.87	88	110.8	-22.8	peak
5725	96.59	-2.14	94.45	122.2	-27.75	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	98.31	-1.97	96.34	122.2	-25.86	peak
5855	88.89	-2.13	86.76	110.8	-24.04	peak
5875	84.44	-2.65	81.79	105.2	-23.41	peak
5925	48.49	-2.28	46.21	68.2	-21.99	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	98.19	-1.97	96.22	122.2	-25.98	peak
5855	90.12	-2.13	87.99	110.8	-22.81	peak
5875	86.22	-2.65	83.57	105.2	-21.63	peak
5925	49.54	-2.28	47.26	68.2	-20.94	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac40 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	44.72	-2.06	42.66	68.2	-25.54	peak
5700	84.77	-1.96	82.81	105.2	-22.39	peak
5720	89.24	-2.87	86.37	110.8	-24.43	peak
5725	99.63	-2.14	97.49	122.2	-24.71	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	42.24	-2.06	40.18	68.2	-28.02	peak
5700	82.93	-1.96	80.97	105.2	-24.23	peak
5720	90.2	-2.87	87.33	110.8	-23.47	peak
5725	99.18	-2.14	97.04	122.2	-25.16	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	95.44	-1.97	93.47	122.2	-28.73	peak
5855	88.14	-2.13	86.01	110.8	-24.79	peak
5875	83.46	-2.65	80.81	105.2	-24.39	peak
5925	47.24	-2.28	44.96	68.2	-23.24	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	99.78	-1.97	97.81	122.2	-24.39	peak
5855	89.51	-2.13	87.38	110.8	-23.42	peak
5875	84.79	-2.65	82.14	105.2	-23.06	peak
5925	49.96	-2.28	47.68	68.2	-20.52	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac80 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	51.76	-2.06	49.7	68.2	-18.5	peak
5700	86.02	-1.96	84.06	105.2	-21.14	peak
5720	93.56	-2.87	90.69	110.8	-20.11	peak
5725	92.65	-2.14	90.51	122.2	-31.69	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	55.56	-2.06	53.5	68.2	-14.7	peak
5700	88.96	-1.96	87	105.2	-18.2	peak
5720	88.4	-2.87	85.53	110.8	-25.27	peak
5725	95.28	-2.14	93.14	122.2	-29.06	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	95.54	-1.97	93.57	122.2	-28.63	peak
5855	89.03	-2.13	86.9	110.8	-23.9	peak
5875	82.5	-2.65	79.85	105.2	-25.35	peak
5925	53.05	-2.28	50.77	68.2	-17.43	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	93.32	-1.97	91.35	122.2	-30.85	peak
5855	91.02	-2.13	88.89	110.8	-21.91	peak
5875	78.75	-2.65	76.1	105.2	-29.1	peak
5925	56.07	-2.28	53.79	68.2	-14.41	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark:
1. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
2. In restricted bands of operation, the spurious emissions below the permissible value more than 20dB.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

ANT 2

Operation Mode: 802.11a Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	54.19	-2.06	52.13	68.2	-16.07	peak
5700	84.72	-1.96	82.76	105.2	-22.44	peak
5720	90.52	-2.87	87.65	110.8	-23.15	peak
5725	106.06	-2.14	103.92	122.2	-18.28	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	53.65	-2.06	51.59	68.2	-16.61	peak
5700	86.84	-1.96	84.88	105.2	-20.32	peak
5720	91.38	-2.87	88.51	110.8	-22.29	peak
5725	101.84	-2.14	99.7	122.2	-22.5	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	105.65	-1.97	103.68	122.2	-18.52	peak
5855	88.92	-2.13	86.79	110.8	-24.01	peak
5875	86.34	-2.65	83.69	105.2	-21.51	peak
5925	51.07	-2.28	48.79	68.2	-19.41	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	102.06	-1.97	100.09	122.2	-22.11	peak
5855	90.93	-2.13	88.8	110.8	-22	peak
5875	83.3	-2.65	80.65	105.2	-24.55	peak
5925	52.97	-2.28	50.69	68.2	-17.51	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11n20 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	51.29	-2.06	49.23	68.2	-18.97	peak
5700	91.09	-1.96	89.13	105.2	-16.07	peak
5720	90.18	-2.87	87.31	110.8	-23.49	peak
5725	104.24	-2.14	102.1	122.2	-20.1	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	54.07	-2.06	52.01	68.2	-16.19	peak
5700	87.68	-1.96	85.72	105.2	-19.48	peak
5720	92.44	-2.87	89.57	110.8	-21.23	peak
5725	105.46	-2.14	103.32	122.2	-18.88	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	105.93	-1.97	103.96	122.2	-18.24	peak
5855	86.41	-2.13	84.28	110.8	-26.52	peak
5875	81.63	-2.65	78.98	105.2	-26.22	peak
5925	51.72	-2.28	49.44	68.2	-18.76	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	100.24	-1.97	98.27	122.2	-23.93	peak
5855	87.78	-2.13	85.65	110.8	-25.15	peak
5875	80.33	-2.65	77.68	105.2	-27.52	peak
5925	52.05	-2.28	49.77	68.2	-18.43	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11n40 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	44.47	-2.06	42.41	68.2	-25.79	peak
5700	85.04	-1.96	83.08	105.2	-22.12	peak
5720	88.34	-2.87	85.47	110.8	-25.33	peak
5725	98.17	-2.14	96.03	122.2	-26.17	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	43.24	-2.06	41.18	68.2	-27.02	peak
5700	84.17	-1.96	82.21	105.2	-22.99	peak
5720	91.52	-2.87	88.65	110.8	-22.15	peak
5725	98.76	-2.14	96.62	122.2	-25.58	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	96.2	-1.97	94.23	122.2	-27.97	peak
5855	88.79	-2.13	86.66	110.8	-24.14	peak
5875	82.7	-2.65	80.05	105.2	-25.15	peak
5925	48.6	-2.28	46.32	68.2	-21.88	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	97.7	-1.97	95.73	122.2	-26.47	peak
5855	88.84	-2.13	86.71	110.8	-24.09	peak
5875	82.57	-2.65	79.92	105.2	-25.28	peak
5925	50.26	-2.28	47.98	68.2	-20.22	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac20 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	46.87	-2.06	44.81	68.2	-23.39	peak
5700	85.51	-1.96	83.55	105.2	-21.65	peak
5720	89.75	-2.87	86.88	110.8	-23.92	peak
5725	97.48	-2.14	95.34	122.2	-26.86	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	43.02	-2.06	40.96	68.2	-27.24	peak
5700	84.26	-1.96	82.3	105.2	-22.9	peak
5720	90.36	-2.87	87.49	110.8	-23.31	peak
5725	96.71	-2.14	94.57	122.2	-27.63	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	97.86	-1.97	95.89	122.2	-26.31	peak
5855	87.66	-2.13	85.53	110.8	-25.27	peak
5875	83.75	-2.65	81.1	105.2	-24.1	peak
5925	47.3	-2.28	45.02	68.2	-23.18	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	98.19	-1.97	96.22	122.2	-25.98	peak
5855	90.12	-2.13	87.99	110.8	-22.81	peak
5875	86.22	-2.65	83.57	105.2	-21.63	peak
5925	49.54	-2.28	47.26	68.2	-20.94	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac40 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	43.53	-2.06	41.47	68.2	-26.73	peak
5700	84.12	-1.96	82.16	105.2	-23.04	peak
5720	88.16	-2.87	85.29	110.8	-25.51	peak
5725	98.54	-2.14	96.4	122.2	-25.8	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	43.25	-2.06	41.19	68.2	-27.01	peak
5700	83.61	-1.96	81.65	105.2	-23.55	peak
5720	90.63	-2.87	87.76	110.8	-23.04	peak
5725	98.78	-2.14	96.64	122.2	-25.56	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	96.46	-1.97	94.49	122.2	-27.71	peak
5855	88.12	-2.13	85.99	110.8	-24.81	peak
5875	84.31	-2.65	81.66	105.2	-23.54	peak
5925	46.88	-2.28	44.6	68.2	-23.6	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	99.78	-1.97	97.81	122.2	-24.39	peak
5855	89.52	-2.13	87.39	110.8	-23.41	peak
5875	83.22	-2.65	80.57	105.2	-24.63	peak
5925	49.34	-2.28	47.06	68.2	-21.14	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: 802.11ac80 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	53.09	-2.06	51.03	68.2	-17.17	peak
5700	85.36	-1.96	83.4	105.2	-21.8	peak
5720	93.1	-2.87	90.23	110.8	-20.57	peak
5725	92.46	-2.14	90.32	122.2	-31.88	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	55.56	-2.06	53.5	68.2	-14.7	peak
5700	88.96	-1.96	87	105.2	-18.2	peak
5720	88.4	-2.87	85.53	110.8	-25.27	peak
5725	95.28	-2.14	93.14	122.2	-29.06	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	95.61	-1.97	93.64	122.2	-28.56	peak
5855	88.76	-2.13	86.63	110.8	-24.17	peak
5875	83.5	-2.65	80.85	105.2	-24.35	peak
5925	52.81	-2.28	50.53	68.2	-17.67	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	93.81	-1.97	91.84	122.2	-30.36	peak
5855	91.11	-2.13	88.98	110.8	-21.82	peak
5875	77.94	-2.65	75.29	105.2	-29.91	peak
5925	56.37	-2.28	54.09	68.2	-14.11	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark:
1. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.
2. In restricted bands of operation, the spurious emissions below the permissible value more than 20dB.
3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

MIMO

Operation Mode: 802.11n20 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	98.1	-2.06	96.04	68.2	27.84	peak
5700	87.46	-1.96	85.5	105.2	-19.7	peak
5720	80.5	-2.87	77.63	110.8	-33.17	peak
5725	54.08	-2.14	51.94	122.2	-70.26	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	58.32	-2.06	56.26	68.2	-11.94	peak
5700	90.58	-1.96	88.62	105.2	-16.58	peak
5720	87.92	-2.87	85.05	110.8	-25.75	peak
5725	110.43	-2.14	108.29	122.2	-13.91	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	105.42	-1.97	103.45	122.2	-18.75	peak
5855	91.51	-2.13	89.38	110.8	-21.42	peak
5875	84.97	-2.65	82.32	105.2	-22.88	peak
5925	52.55	-2.28	50.27	68.2	-17.93	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5850	101.42	-1.97	99.45	122.2	-22.75	peak
5855	90.25	-2.13	88.12	110.8	-22.68	peak
5875	85.37	-2.65	82.72	105.2	-22.48	peak
5925	53.43	-2.28	51.15	68.2	-17.05	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11n40 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	54.82	-2.06	52.76	68.2	-15.44	peak
5700	89.92	-1.96	87.96	105.2	-17.24	peak
5720	92.83	-2.87	89.96	110.8	-20.84	peak
5725	94.5	-2.14	92.36	122.2	-29.84	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	58.92	-2.06	56.86	68.2	-11.34	peak
5700	95.58	-1.96	93.62	105.2	-11.58	peak
5720	89.86	-2.87	86.99	110.8	-23.81	peak
5725	95.55	-2.14	93.41	122.2	-28.79	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	100.57	-1.97	98.6	122.2	-23.6	peak
5855	93.67	-2.13	91.54	110.8	-19.26	peak
5875	83.64	-2.65	80.99	105.2	-24.21	peak
5925	53.99	-2.28	51.71	68.2	-16.49	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	101.08	-1.97	99.11	122.2	-23.09	peak
5855	90	-2.13	87.87	110.8	-22.93	peak
5875	83.58	-2.65	80.93	105.2	-24.27	peak
5925	53.54	-2.28	51.26	68.2	-16.94	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11ac20 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	54.81	-2.06	52.75	68.2	-15.45	peak
5700	89.14	-1.96	87.18	105.2	-18.02	peak
5720	91.2	-2.87	88.33	110.8	-22.47	peak
5725	99.5	-2.14	97.36	122.2	-24.84	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	56.85	-2.06	54.79	68.2	-13.41	peak
5700	87.89	-1.96	85.93	105.2	-19.27	peak
5720	91.81	-2.87	88.94	110.8	-21.86	peak
5725	92.98	-2.14	90.84	122.2	-31.36	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	100.11	-1.97	98.14	122.2	-24.06	peak
5855	95.58	-2.13	93.45	110.8	-17.35	peak
5875	85.19	-2.65	82.54	105.2	-22.66	peak
5925	50.61	-2.28	48.33	68.2	-19.87	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	95.67	-1.97	93.7	122.2	-28.5	peak
5855	90.36	-2.13	88.23	110.8	-22.57	peak
5875	82.56	-2.65	79.91	105.2	-25.29	peak
5925	53.38	-2.28	51.1	68.2	-17.1	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11ac40 Mode with 5.8G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	55.53	-2.06	53.47	68.2	-14.73	peak
5700	87.47	-1.96	85.51	105.2	-19.69	peak
5720	92.83	-2.87	89.96	110.8	-20.84	peak
5725	93.12	-2.14	90.98	122.2	-31.22	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	55.8	-2.06	53.74	68.2	-14.46	peak
5700	88.85	-1.96	86.89	105.2	-18.31	peak
5720	93.23	-2.87	90.36	110.8	-20.44	peak
5725	96.53	-2.14	94.39	122.2	-27.81	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.85	-1.97	92.88	122.2	-29.32	peak
5855	89.21	-2.13	87.08	110.8	-23.72	peak
5875	83.77	-2.65	81.12	105.2	-24.08	peak
5925	51.43	-2.28	49.15	68.2	-19.05	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.58	-1.97	92.61	122.2	-29.59	peak
5855	88.02	-2.13	85.89	110.8	-24.91	peak
5875	84.79	-2.65	82.14	105.2	-23.06	peak
5925	53.27	-2.28	50.99	68.2	-17.21	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: 802.11ac80 Mode with 5.8G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	59.19	-2.06	57.13	68.2	-11.07	peak
5700	86.53	-1.96	84.57	105.2	-20.63	peak
5720	91.55	-2.87	88.68	110.8	-22.12	peak
5725	95.71	-2.14	93.57	122.2	-28.63	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	55.25	-2.06	53.19	68.2	-15.01	peak
5700	90.61	-1.96	88.65	105.2	-16.55	peak
5720	92.35	-2.87	89.48	110.8	-21.32	peak
5725	95.34	-2.14	93.2	122.2	-29	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Operation Mode: TX CH High with 5.8G

Horizontal

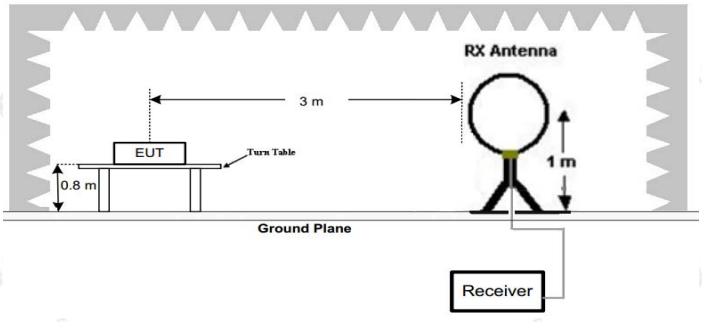
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	99.79	-1.97	97.82	122.2	-24.38	peak
5855	90.97	-2.13	88.84	110.8	-21.96	peak
5875	85.35	-2.65	82.7	105.2	-22.5	peak
5925	50.61	-2.28	48.33	68.2	-19.87	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

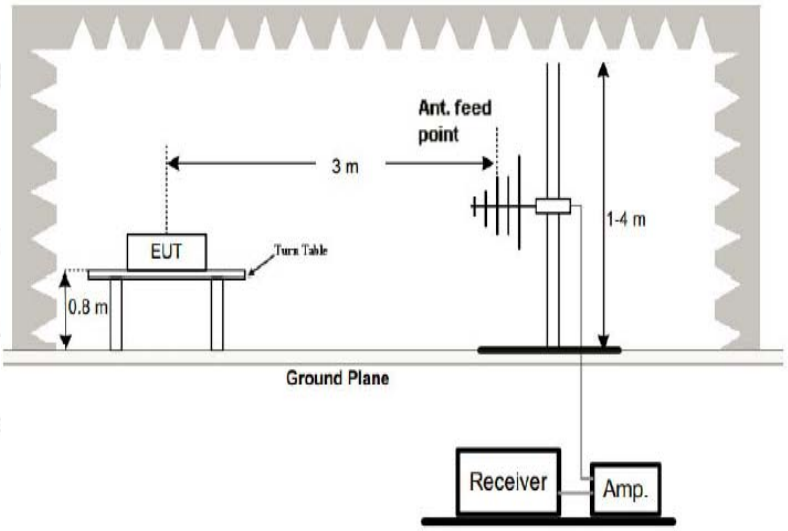
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	98.44	-1.97	96.47	122.2	-25.73	peak
5855	91.17	-2.13	89.04	110.8	-21.76	peak
5875	80.54	-2.65	77.89	105.2	-27.31	peak
5925	54.98	-2.28	52.7	68.2	-15.5	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

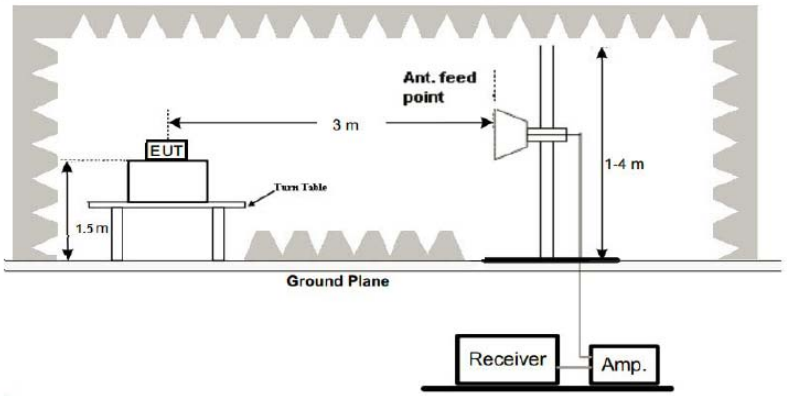
4.7. Spurious Emission

4.7.1.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205</td></tr>
<tr><td>Test Method:</td><td>KDB 789033 D02 v02r01</td></tr>
<tr><td>Frequency Range:</td><td>9kHz to 40GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) 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 limit of frequency below 1GHz and which fall in restricted b ands should complies 15.209.</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz
 

30MHz to 1GHz</td></tr>
</table>

<table>
<tr>
<td></td>
<td>


Above 1GHz


</td>
</tr>
<tr>
<td>Test Procedure:</td>
<td>1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading.
5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</td>
</tr>
</table>

	6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would bere-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test results:	PASS

4.7.2. Test Data

Test mode: TX 802.11a 5745MHz

All the test modes completed for test. The worst case of Radiated Emission; the test data of this mode was reported.

Below 1GHz

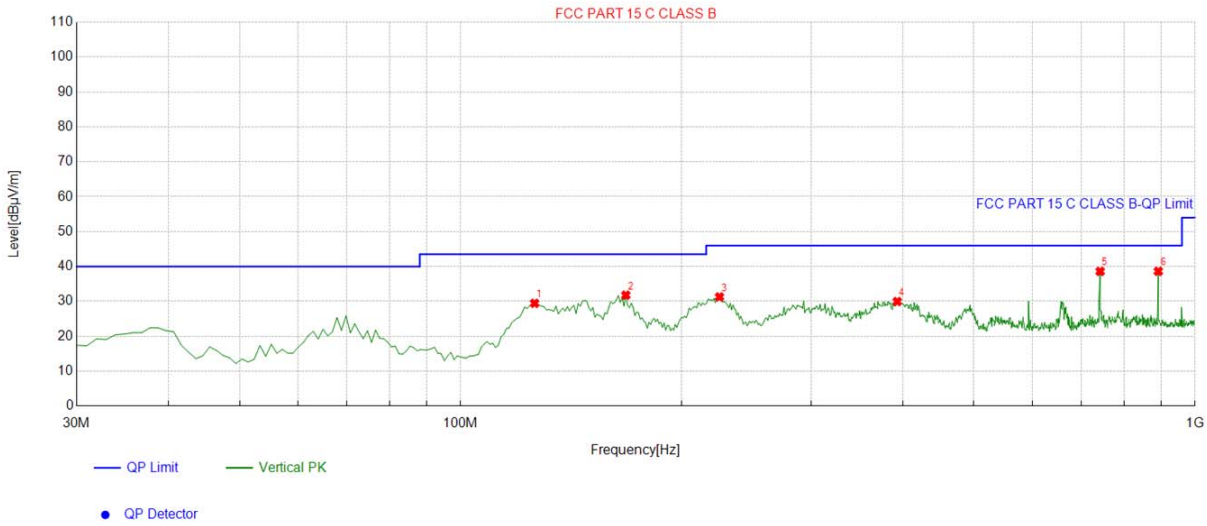
Horizontal

Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	212.54254	-14.52	51.32	36.80	43.50	6.70	100	118	Horizontal
2	261.09109	-12.73	44.99	32.26	46.00	13.74	100	283	Horizontal
3	496.06606	-7.20	35.35	28.15	46.00	17.85	100	319	Horizontal
4	659.18918	-4.50	38.28	33.78	46.00	12.22	100	211	Horizontal
5	742.69269	-2.96	46.76	43.80	46.00	2.20	100	313	Horizontal
6	891.25125	-0.67	35.14	34.47	46.00	11.53	100	310	Horizontal

Final Data List									
NO.	Freq. [MHz]	Factor [dB]	QP Reading [dBµV/m]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	742.4774	-2.96	45.55	42.59	46.00	3.41	100	313	Horizontal

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

Vertical



Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	126.12612	-16.21	45.66	29.45	43.50	14.05	100	107	Vertical
2	167.87787	-16.99	48.77	31.78	43.50	11.72	100	157	Vertical
3	225.16516	-14.01	45.28	31.27	46.00	14.73	100	1	Vertical
4	393.14314	-9.88	39.84	29.96	46.00	16.04	100	248	Vertical
5	742.69269	-2.96	41.55	38.59	46.00	7.41	100	295	Vertical
6	891.25125	-0.67	39.29	38.62	46.00	7.38	100	278	Vertical

Remark: Factor = Cable loss + Antenna factor – Preamplifier; Level = Reading + Factor; Margin = Limit – Level

Harmonics and Spurious Emissions

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBµV/m)	Limit@3m (dBµV/m)
--	--	--
--	--	--
--	--	--
--	--	--

Note: *1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor*

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement.

Above 1GHz

RADIATED EMISSION TEST

LOW CH 149 (802.11 a Mode with 5.8G)/5745
All modes of operation were investigated and the worst-case of Ant 1 are reported.

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	55.91	-4.59	51.32	68.2	-16.88	peak
11096	46.24	4.21	50.45	74	-23.55	peak
11096	52.82	4.21	57.03	54	3.03	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	57.77	-4.59	53.18	68.2	-15.02	peak
11096	48.77	4.21	52.98	74	-21.02	peak
11096	32.68	4.21	36.89	54	-17.11	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

MID CH157 (802.11 a Mode with 5.8G)/5785

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	53.01	-4.59	48.42	68.2	-19.78	peak
10523	50.98	4.21	55.19	68.2	-13.01	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	51.54	-4.59	46.95	68.2	-21.25	peak
10523	50.63	4.21	54.84	68.2	-13.36	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

HIGH CH 165 (802.11a Mode with 5.8G)/5825

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2705	56.49	-4.59	51.9	74	-22.1	peak
2705	43.54	-4.59	38.95	54	-15.05	AVG
11717	53.17	4.84	58.01	74	-15.99	peak
11717	40.77	4.84	45.61	54	-8.39	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2705	54.91	-4.59	50.32	74	-23.68	peak
2705	48.29	-4.59	43.7	54	-10.3	AVG
11717	51.82	4.84	56.66	74	-17.34	peak
11717	41.05	4.84	45.89	54	-8.11	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5.8G 802.11n20 Mode
All modes of operation were investigated and the worst-case of MIMO are reported.

LOW CH 149

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	60.88	-4.59	56.29	68.2	-11.91	peak
11096	51.68	4.21	55.89	74	-18.11	peak
11096	42.92	4.21	47.13	54	-6.87	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	56.15	-4.59	51.56	68.2	-16.64	peak
11096	51.53	4.21	55.74	74	-18.26	peak
11096	35.39	4.21	39.6	54	-14.4	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

MID CH157

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	59.61	-4.59	55.02	68.2	-13.18	peak
10523	51.15	4.21	55.36	68.2	-12.84	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	54.56	-4.59	49.97	68.2	-18.23	peak
10523	51.31	4.21	55.52	68.2	-12.68	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

HIGH CH165

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	56.53	-4.59	51.94	74	-22.06	peak
2705	43.77	-4.59	39.18	54	-14.82	AVG
11717	51.16	4.84	56	74	-18	peak
11717	40.45	4.84	45.29	54	-8.71	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	56.68	-4.59	52.09	74	-21.91	peak
2705	44.55	-4.59	39.96	54	-14.04	AVG
11717	52.38	4.84	57.22	74	-16.78	peak
11717	40.51	4.84	45.35	54	-8.65	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level-Limit.						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5.8G 802.11n40 Mode
All modes of operation were investigated and the worst-case of MIMO are reported.
LOW CH 151

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	63.05	-4.59	58.46	68.2	-9.74	peak
11096	49.89	4.21	54.1	74	-19.9	peak
11096	41.35	4.21	45.56	54	-8.44	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	61.99	-4.59	57.4	68.2	-10.8	peak
11096	56.49	4.21	60.7	74	-13.3	peak
11096	37.69	4.21	41.9	54	-12.1	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

MID CH159

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	61.05	-4.59	56.46	68.2	-11.74	peak
10523	52.23	4.21	56.44	68.2	-11.76	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	55.36	-4.59	50.77	68.2	-17.43	peak
10523	52.02	4.21	56.23	68.2	-11.97	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5.8G 802.11ac20 Mode
All modes of operation were investigated and the worst-case of MIMO are reported.
LOW CH 149

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	64.11	-4.59	59.52	68.2	-8.68	peak
11096	47.49	4.21	51.7	74	-22.3	peak
11096	37.59	4.21	41.8	54	-12.2	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	58.59	-4.59	54	68.2	-14.2	peak
11096	56.72	4.21	60.93	74	-13.07	peak
11096	35.78	4.21	39.99	54	-14.01	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

MID CH157

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	60.46	-4.59	55.87	68.2	-12.33	peak
10523	53.35	4.21	57.56	68.2	-10.64	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	56.77	-4.59	52.18	68.2	-16.02	peak
10523	52.89	4.21	57.1	68.2	-11.1	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

HIGH CH165

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	60.72	-4.59	56.13	74	-17.87	peak
2705	45.41	-4.59	40.82	54	-13.18	AVG
11717	52.7	4.84	57.54	74	-16.46	peak
11717	37.63	4.84	42.47	54	-11.53	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	59.44	-4.59	54.85	74	-19.15	peak
2705	44.62	-4.59	40.03	54	-13.97	AVG
11717	50.9	4.84	55.74	74	-18.26	peak
11717	36.39	4.84	41.23	54	-12.77	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5.8G 802.11ac40 Mode
All modes of operation were investigated and the worst-case of MIMO are reported.
LOW CH 151

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	62.1	-4.59	57.51	68.2	-10.69	peak
11096	49.27	4.21	53.48	74	-20.52	peak
11096	44.13	4.21	48.34	54	-5.66	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	61.33	-4.59	56.74	68.2	-11.46	peak
11096	54.45	4.21	58.66	74	-15.34	peak
11096	38.78	4.21	42.99	54	-11.01	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

MID CH159

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	60.33	-4.59	55.74	68.2	-12.46	peak
10523	54.65	4.21	58.86	68.2	-9.34	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	58.66	-4.59	54.07	68.2	-14.13	peak
10523	54.86	4.21	59.07	68.2	-9.13	peak
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

5.8G 802.11ac80 Mode
All modes of operation were investigated and the worst-case of MIMO are reported.
CH 155

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	65.03	-4.59	60.44	68.2	-7.76	peak
11096	51.24	4.21	55.45	74	-18.55	peak
11096	45.39	4.21	49.6	54	-4.4	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

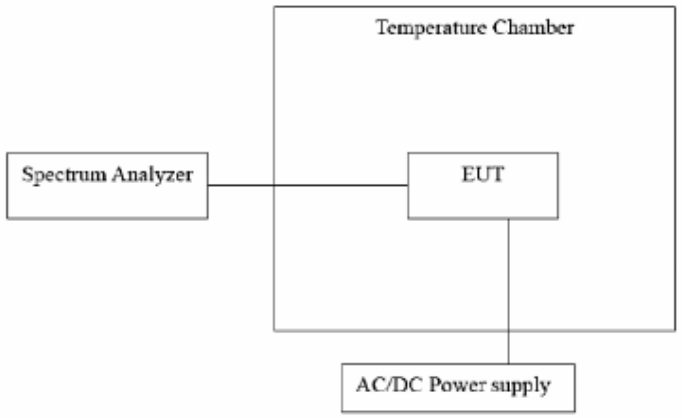
Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3368	61	-4.59	56.41	68.2	-11.79	peak
11096	55.33	4.21	59.54	74	-14.46	peak
11096	35.1	4.21	39.31	54	-14.69	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier; Level = Reading + Factor; Margin = Level - Limit						

Remark：
(1) Measuring frequencies from 1 GHz to the 40 GHz.
(2) “F” denotes fundamental frequency; “H” denotes spurious frequency. “E” denotes band edge frequency.
(3) * denotes emission frequency which appearing within the Restricted Bands specified in provision of 15.205, then the general radiated emission limits in 15.209 apply.
(4) The emissions are attenuated more than 20dB below the permissible limits are not record in the report.
(5) The IF bandwidth of EMI Test Receiver between 30MHz to 1GHz was 120KHz, 1 MHz for measuring above 1 GHz, below 30MHz was 10KHz.
(6) When the test results of Peak Detected below the limits of Average Detected, the Average Detected is not need completed. For example: Top Channel at Fundamental 73.16dBuV/m(PK Value) <93.98(AV Limit), at harmonic 53.20 dBuV/m(PK Value) <54 dBuV/m(AV Limit), the Average Detected not need to completed.

4.8. Frequency Stability Measurement

4.8.1. Test Specification

Test Requirement:	FCC Part15 Section 15.407(g)
Test Method:	ANSI C63.10: 2013
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
Test Setup:	
Test Procedure:	The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test Result:	PASS
Remark:	N/A

Test Result as follows:

Mode	Voltage (V)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
5.8G Band	4.25V	5744.978	-22	5825.017	17
	5.0V	5745.016	16	5824.964	-36
	5.75V	5744.981	-19	5824.979	-21

Mode	Temperature (℃)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
5.8G Band	-30	5744.956	-44	5825.015	15
	-20	5745.031	31	5825.024	24
	-10	5744.989	-11	5824.992	-8
	0	5744.972	-28	5824.971	-29
	10	5744.966	-34	5825.011	11
	20	5745.012	12	5824.991	-9
	30	5744.993	-7	5824.972	-28
	40	5744.981	-19	5824.969	-31
	50	5744.969	-31	5825.021	21

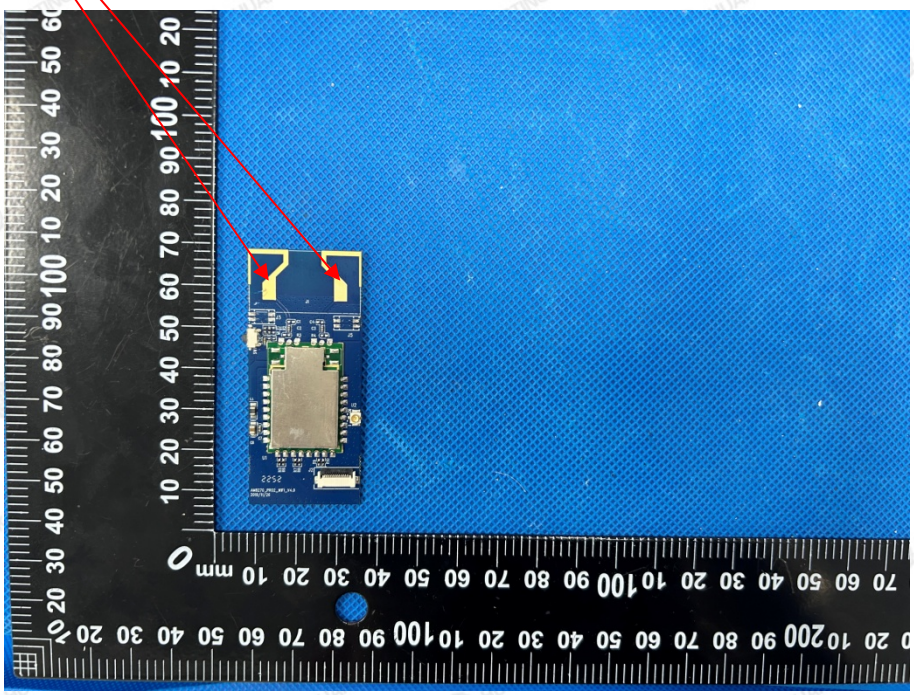
4.9. Antenna Requirement

Standard Applicable
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.249, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.
The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

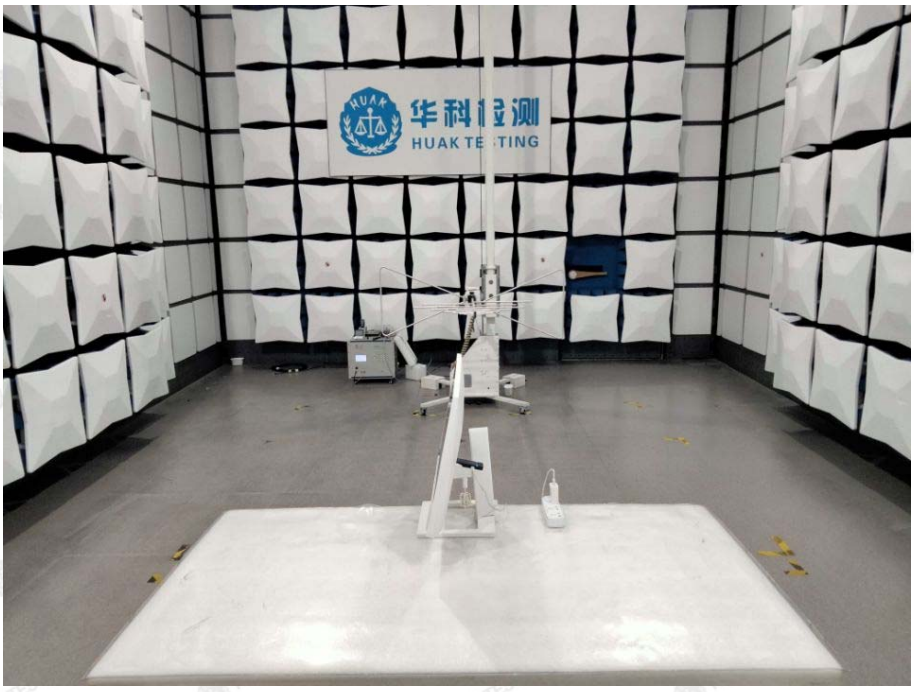
Antenna Connected Construction
The antenna used in this product is a PCB Antenna, which permanently attached. It conforms to the standard requirements. and the best case gain of the antenna is Antenna port 1:1.2dBi and Antenna port 2: 1dBi.

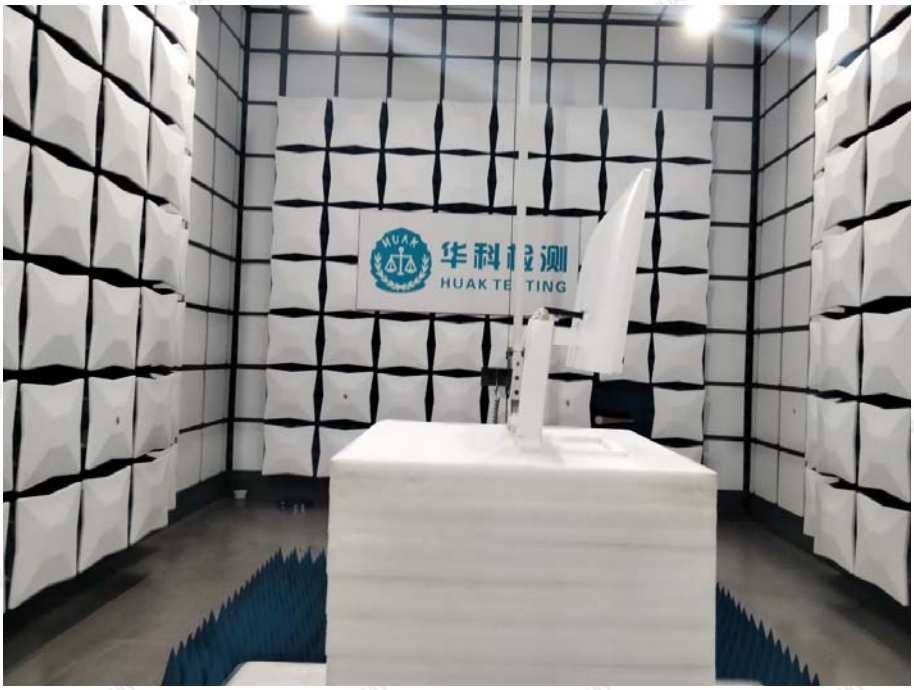
Antenna



5. Photographs of Test Setup

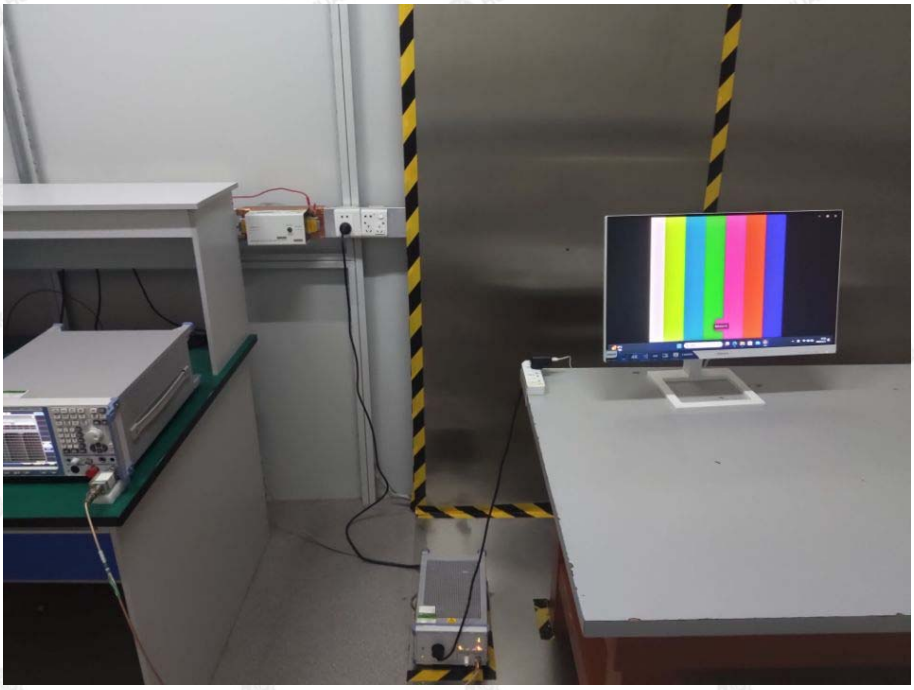
Radiated Emission





TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Conducted Emission



TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

6. Photos of the EUT

Reference to the report: ANNEX A of external photos and ANNEX B of internal photos

---------End of test report---------

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China