



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	106.46	-1.97	104.49	122.2	-17.71	peak
5855	94.27	-2.13	92.14	110.8	-18.66	peak
5875	91.36	-2.65	88.71	105.2	-16.49	peak
5925	53.16	-2.28	50.88	68.2	-17.32	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	91.24	-1.97	89.27	122.2	-32.93	peak
5855	92.01	-2.13	89.88	110.8	-20.92	peak
5875	82.66	-2.65	80.01	105.2	-25.19	peak
5925	51.49	-2.28	49.21	68.2	-18.99	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	56.31	-2.06	54.25	68.2	-13.95	peak
5700	87.14	-1.96	85.18	105.2	-20.02	peak
5720	91.25	-2.87	88.38	110.8	-22.42	peak
5725	96.34	-2.14	94.2	122.2	-28	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	60.17	-2.06	58.11	68.2	-10.09	peak
5700	94.26	-1.96	92.3	105.2	-12.9	peak
5720	93.39	-2.87	90.52	110.8	-20.28	peak
5725	94.31	-2.14	92.17	122.2	-30.03	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	95.25	-1.97	93.28	122.2	-28.92	peak
5855	94.17	-2.13	92.04	110.8	-18.76	peak
5875	88.27	-2.65	85.62	105.2	-19.58	peak
5925	51.26	-2.28	48.98	68.2	-19.22	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5850	93.47	-1.97	91.5	122.2	-30.7	peak
5855	91.24	-2.13	89.11	110.8	-21.69	peak
5875	83.24	-2.65	80.59	105.2	-24.61	peak
5925	54.21	-2.28	51.93	68.2	-16.27	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11n40 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	54.15	-2.06	52.09	68.2	-16.11	peak
5700	90.25	-1.96	88.29	105.2	-16.91	peak
5720	93.58	-2.87	90.71	110.8	-20.09	peak
5725	97.79	-2.14	95.65	122.2	-26.55	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	59.68	-2.06	57.62	68.2	-10.58	peak
5700	94.25	-1.96	92.29	105.2	-12.91	peak
5720	87.49	-2.87	84.62	110.8	-26.18	peak
5725	93.32	-2.14	91.18	122.2	-31.02	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	95.17	-1.97	93.2	122.2	-29	peak
5855	91.46	-2.13	89.33	110.8	-21.47	peak
5875	83.34	-2.65	80.69	105.2	-24.51	peak
5925	52.28	-2.28	50	68.2	-18.2	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	97.19	-1.97	95.22	122.2	-26.98	peak
5855	89.46	-2.13	87.33	110.8	-23.47	peak
5875	84.16	-2.65	81.51	105.2	-23.69	peak
5925	52.03	-2.28	49.75	68.2	-18.45	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	54.18	-2.06	52.12	68.2	-16.08	peak
5700	85.02	-1.96	83.06	105.2	-22.14	peak
5720	86.34	-2.87	83.47	110.8	-27.33	peak
5725	103.44	-2.14	101.3	122.2	-20.9	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	53.64	-2.06	51.58	68.2	-16.62	peak
5700	91.02	-1.96	89.06	105.2	-16.14	peak
5720	90.47	-2.87	87.6	110.8	-23.2	peak
5725	96.34	-2.14	94.2	122.2	-28	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	105.64	-1.97	103.67	122.2	-18.53	peak
5855	95.35	-2.13	93.22	110.8	-17.58	peak
5875	87.19	-2.65	84.54	105.2	-20.66	peak
5925	51.21	-2.28	48.93	68.2	-19.27	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.35	-1.97	92.38	122.2	-29.82	peak
5855	89.64	-2.13	87.51	110.8	-23.29	peak
5875	91.14	-2.65	88.49	105.2	-16.71	peak
5925	55.02	-2.28	52.74	68.2	-15.46	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	56.34	-2.06	54.28	68.2	-13.92	peak
5700	88.34	-1.96	86.38	105.2	-18.82	peak
5720	93.01	-2.87	90.14	110.8	-20.66	peak
5725	94.15	-2.14	92.01	122.2	-30.19	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	56.37	-2.06	54.31	68.2	-13.89	peak
5700	83.14	-1.96	81.18	105.2	-24.02	peak
5720	91.24	-2.87	88.37	110.8	-22.43	peak
5725	94.22	-2.14	92.08	122.2	-30.12	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	93.25	-1.97	91.28	122.2	-30.92	peak
5855	90.35	-2.13	88.22	110.8	-22.58	peak
5875	86.34	-2.65	83.69	105.2	-21.51	peak
5925	50.14	-2.28	47.86	68.2	-20.34	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.37	-1.97	92.4	122.2	-29.8	peak
5855	86.25	-2.13	84.12	110.8	-26.68	peak
5875	85.97	-2.65	83.32	105.2	-21.88	peak
5925	54.54	-2.28	52.26	68.2	-15.94	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	52.14	-2.06	50.08	68.2	-18.12	peak
5700	85.25	-1.96	83.29	105.2	-21.91	peak
5720	92.34	-2.87	89.47	110.8	-21.33	peak
5725	91.34	-2.14	89.2	122.2	-33	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	53.16	-2.06	51.1	68.2	-17.1	peak
5700	87.16	-1.96	85.2	105.2	-20	peak
5720	91.34	-2.87	88.47	110.8	-22.33	peak
5725	95.47	-2.14	93.33	122.2	-28.87	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	96.35	-1.97	94.38	122.2	-27.82	peak
5855	89.14	-2.13	87.01	110.8	-23.79	peak
5875	83.24	-2.65	80.59	105.2	-24.61	peak
5925	52.69	-2.28	50.41	68.2	-17.79	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	92.34	-1.97	90.37	122.2	-31.83	peak
5855	91.62	-2.13	89.49	110.8	-21.31	peak
5875	78.46	-2.65	75.81	105.2	-29.39	peak
5925	56.89	-2.28	54.61	68.2	-13.59	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	54.28	-2.06	52.22	68.2	-15.98	peak
5700	86.31	-1.96	84.35	105.2	-20.85	peak
5720	92.34	-2.87	89.47	110.8	-21.33	peak
5725	95.68	-2.14	93.54	122.2	-28.66	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	55.28	-2.06	53.22	68.2	-14.98	peak
5700	91.47	-1.96	89.51	105.2	-15.69	peak
5720	92.49	-2.87	89.62	110.8	-21.18	peak
5725	93.55	-2.14	91.41	122.2	-30.79	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	95.64	-1.97	93.67	122.2	-28.53	peak
5855	93.14	-2.13	91.01	110.8	-19.79	peak
5875	83.24	-2.65	80.59	105.2	-24.61	peak
5925	53.22	-2.28	50.94	68.2	-17.26	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	96.17	-1.97	94.2	122.2	-28	peak
5855	91.64	-2.13	89.51	110.8	-21.29	peak
5875	85.32	-2.65	82.67	105.2	-22.53	peak
5925	54.01	-2.28	51.73	68.2	-16.47	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	57.46	-2.06	55.4	68.2	-12.8	peak
5700	85.32	-1.96	83.36	105.2	-21.84	peak
5720	90.14	-2.87	87.27	110.8	-23.53	peak
5725	95.64	-2.14	93.5	122.2	-28.7	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	56.28	-2.06	54.22	68.2	-13.98	peak
5700	92.47	-1.96	90.51	105.2	-14.69	peak
5720	90.34	-2.87	87.47	110.8	-23.33	peak
5725	93.33	-2.14	91.19	122.2	-31.01	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	96.35	-1.97	94.38	122.2	-27.82	peak
5855	91.64	-2.13	89.51	110.8	-21.29	peak
5875	83.24	-2.65	80.59	105.2	-24.61	peak
5925	98.98	-2.28	96.7	68.2	28.5	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5850	94.25	-1.97	92.28	122.2	-29.92	peak
5855	92.16	-2.13	90.03	110.8	-20.77	peak
5875	82.67	-2.65	80.02	105.2	-25.18	peak
5925	54.92	-2.28	52.64	68.2	-15.56	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11n40 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	53.16	-2.06	51.1	68.2	-17.1	peak
5700	91.24	-1.96	89.28	105.2	-15.92	peak
5720	87.49	-2.87	84.62	110.8	-26.18	peak
5725	96.33	-2.14	94.19	122.2	-28.01	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	60.34	-2.06	58.28	68.2	-9.92	peak
5700	93.16	-1.96	91.2	105.2	-14	peak
5720	88.02	-2.87	85.15	110.8	-25.65	peak
5725	98.76	-2.14	96.62	122.2	-25.58	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	97.16	-1.97	95.19	122.2	-27.01	peak
5855	91.34	-2.13	89.21	110.8	-21.59	peak
5875	87.16	-2.65	84.51	105.2	-20.69	peak
5925	50.22	-2.28	47.94	68.2	-20.26	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5850	96.32	-1.97	94.35	122.2	-27.85	peak
5855	93.14	-2.13	91.01	110.8	-19.79	peak
5875	84.25	-2.65	81.6	105.2	-23.6	peak
5925	50.01	-2.28	47.73	68.2	-20.47	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	52.14	-2.06	50.08	68.2	-18.12	peak
5700	90.25	-1.96	88.29	105.2	-16.91	peak
5720	90.66	-2.87	87.79	110.8	-23.01	peak
5725	97.19	-2.14	95.05	122.2	-27.15	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	58.17	-2.06	56.11	68.2	-12.09	peak
5700	86.34	-1.96	84.38	105.2	-20.82	peak
5720	93.32	-2.87	90.45	110.8	-20.35	peak
5725	92.16	-2.14	90.02	122.2	-32.18	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	95.34	-1.97	93.37	122.2	-28.83	peak
5855	92.28	-2.13	90.15	110.8	-20.65	peak
5875	83.16	-2.65	80.51	105.2	-24.69	peak
5925	54.16	-2.28	51.88	68.2	-16.32	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.32	-1.97	92.35	122.2	-29.85	peak
5855	90.15	-2.13	88.02	110.8	-22.78	peak
5875	82.33	-2.65	79.68	105.2	-25.52	peak
5925	51.79	-2.28	49.51	68.2	-18.69	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	56.18	-2.06	54.12	68.2	-14.08	peak
5700	94.6	-1.96	92.64	105.2	-12.56	peak
5720	90.13	-2.87	87.26	110.8	-23.54	peak
5725	94.38	-2.14	92.24	122.2	-29.96	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	58.61	-2.06	56.55	68.2	-11.65	peak
5700	96.01	-1.96	94.05	105.2	-11.15	peak
5720	94.16	-2.87	91.29	110.8	-19.51	peak
5725	92.58	-2.14	90.44	122.2	-31.76	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	97.16	-1.97	95.19	122.2	-27.01	peak
5855	92.34	-2.13	90.21	110.8	-20.59	peak
5875	86.14	-2.65	83.49	105.2	-21.71	peak
5925	56.13	-2.28	53.85	68.2	-14.35	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.38	-1.97	92.41	122.2	-29.79	peak
5855	90.14	-2.13	88.01	110.8	-22.79	peak
5875	83.17	-2.65	80.52	105.2	-24.68	peak
5925	54.21	-2.28	51.93	68.2	-16.27	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	55.76	-2.06	53.7	68.2	-14.5	peak
5700	90.06	-1.96	88.1	105.2	-17.1	peak
5720	86.93	-2.87	84.06	110.8	-26.74	peak
5725	95.73	-2.14	93.59	122.2	-28.61	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	55.82	-2.06	53.76	68.2	-14.44	peak
5700	87.16	-1.96	85.2	105.2	-20	peak
5720	92.34	-2.87	89.47	110.8	-21.33	peak
5725	96.02	-2.14	93.88	122.2	-28.32	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	94.16	-1.97	92.19	122.2	-30.01	peak
5855	90.22	-2.13	88.09	110.8	-22.71	peak
5875	82.14	-2.65	79.49	105.2	-25.71	peak
5925	51.11	-2.28	48.83	68.2	-19.37	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	97.34	-1.97	95.37	122.2	-26.83	peak
5855	91.22	-2.13	89.09	110.8	-21.71	peak
5875	82.25	-2.65	79.6	105.2	-25.6	peak
5925	55.16	-2.28	52.88	68.2	-15.32	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MIMO:

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	58.61	-2.06	56.55	68.2	-11.65	peak
5700	90.34	-1.96	88.38	105.2	-16.82	peak
5720	96.25	-2.87	93.38	110.8	-17.42	peak
5725	102.25	-2.14	100.11	122.2	-22.09	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5650	60.37	-2.06	58.31	68.2	-9.89	peak
5700	94.15	-1.96	92.19	105.2	-13.01	peak
5720	94.25	-2.87	91.38	110.8	-19.42	peak
5725	93.66	-2.14	91.52	122.2	-30.68	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	96.25	-1.97	94.28	122.2	-27.92	peak
5855	94.27	-2.13	92.14	110.8	-18.66	peak
5875	86.49	-2.65	83.84	105.2	-21.36	peak
5925	51.24	-2.28	48.96	68.2	-19.24	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	96.25	-1.97	94.28	122.2	-27.92	peak
5855	92.34	-2.13	90.21	110.8	-20.59	peak
5875	84.17	-2.65	81.52	105.2	-23.68	peak
5925	54.21	-2.28	51.93	68.2	-16.27	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



Operation Mode: 802.11n40 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	55.66	-2.06	53.6	68.2	-14.6	peak
5700	94.24	-1.96	92.28	105.2	-12.92	peak
5720	91.74	-2.87	88.87	110.8	-21.93	peak
5725	95.94	-2.14	93.8	122.2	-28.4	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	60.14	-2.06	58.08	68.2	-10.12	peak
5700	95.68	-1.96	93.72	105.2	-11.48	peak
5720	91.11	-2.87	88.24	110.8	-22.56	peak
5725	94.79	-2.14	92.65	122.2	-29.55	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	102.65	-1.97	100.68	122.2	-21.52	peak
5855	95.34	-2.13	93.21	110.8	-17.59	peak
5875	85.52	-2.65	82.87	105.2	-22.33	peak
5925	53.14	-2.28	50.86	68.2	-17.34	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5850	101.12	-1.97	99.15	122.2	-23.05	peak
5855	90.34	-2.13	88.21	110.8	-22.59	peak
5875	84.25	-2.65	81.6	105.2	-23.6	peak
5925	55.62	-2.28	53.34	68.2	-14.86	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	56.89	-2.06	54.83	68.2	-13.37	peak
5700	90.14	-1.96	88.18	105.2	-17.02	peak
5720	91.34	-2.87	88.47	110.8	-22.33	peak
5725	97.46	-2.14	95.32	122.2	-26.88	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	56.37	-2.06	54.31	68.2	-13.89	peak
5700	86.14	-1.96	84.18	105.2	-21.02	peak
5720	90.35	-2.87	87.48	110.8	-23.32	peak
5725	94.15	-2.14	92.01	122.2	-30.19	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	101.64	-1.97	99.67	122.2	-22.53	peak
5855	93.25	-2.13	91.12	110.8	-19.68	peak
5875	88.34	-2.65	85.69	105.2	-19.51	peak
5925	50.97	-2.28	48.69	68.2	-19.51	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.62	-1.97	92.65	122.2	-29.55	peak
5855	87.19	-2.13	85.06	110.8	-25.74	peak
5875	84.16	-2.65	81.51	105.2	-23.69	peak
5925	53.22	-2.28	50.94	68.2	-17.26	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	56.92	-2.06	54.86	68.2	-13.34	peak
5700	87.14	-1.96	85.18	105.2	-20.02	peak
5720	95.36	-2.87	92.49	110.8	-18.31	peak
5725	92.22	-2.14	90.08	122.2	-32.12	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
5650	56.92	-2.06	54.86	68.2	-13.34	peak
5700	87.49	-1.96	85.53	105.2	-19.67	peak
5720	95.24	-2.87	92.37	110.8	-18.43	peak
5725	96.22	-2.14	94.08	122.2	-28.12	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	98.16	-1.97	96.19	122.2	-26.01	peak
5855	91.24	-2.13	89.11	110.8	-21.69	peak
5875	83.14	-2.65	80.49	105.2	-24.71	peak
5925	55.25	-2.28	52.97	68.2	-15.23	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	102.32	-1.97	100.35	122.2	-21.85	peak
5855	96.35	-2.13	94.22	110.8	-16.58	peak
5875	87.49	-2.65	84.84	105.2	-20.36	peak
5925	55.14	-2.28	52.86	68.2	-15.34	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	54.16	-2.06	52.1	68.2	-16.1	peak
5700	87.95	-1.96	85.99	105.2	-19.21	peak
5720	93.25	-2.87	90.38	110.8	-20.42	peak
5725	95.14	-2.14	93	122.2	-29.2	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5650	57.46	-2.06	55.4	68.2	-12.8	peak
5700	88.25	-1.96	86.29	105.2	-18.91	peak
5720	91.34	-2.87	88.47	110.8	-22.33	peak
5725	96.35	-2.14	94.21	122.2	-27.99	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



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	100.47	-1.97	98.5	122.2	-23.7	peak
5855	93.25	-2.13	91.12	110.8	-19.68	peak
5875	84.16	-2.65	81.51	105.2	-23.69	peak
5925	53.22	-2.28	50.94	68.2	-17.26	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5850	94.35	-1.97	92.38	122.2	-29.82	peak
5855	96.25	-2.13	94.12	110.8	-16.68	peak
5875	81.17	-2.65	78.52	105.2	-26.68	peak
5925	56.23	-2.28	53.95	68.2	-14.25	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

4.7. SPURIOUS EMISSION

4.7.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205																													
Test Method:	KDB 789033 D02 v02r01																													
Frequency Range:	9kHz to 40GHz																													
Measurement Distance:	3 m																													
Antenna Polarization:	Horizontal & Vertical																													
Operation mode:	Transmitting mode with modulation																													
Receiver Setup:	<table border="1"> <thead> <tr> <th>Frequency</th> <th>Detector</th> <th>RBW</th> <th>VBW</th> <th>Remark</th> </tr> </thead> <tbody> <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> </tbody> </table>	Frequency	Detector	RBW	VBW	Remark	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value	Above 1GHz	Peak	1MHz	3MHz	Peak Value	Peak	1MHz	10Hz	Average Value
	Frequency	Detector	RBW	VBW	Remark																									
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz	Quasi-peak Value																									
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz	Quasi-peak Value																									
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak Value																									
Above 1GHz	Peak	1MHz	3MHz	Peak Value																										
	Peak	1MHz	10Hz	Average Value																										
Limit:	<p>(1) For transmitters operating in the 5.725-5.85 GHz band:</p> <p>(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.</p> <p>The limit of frequency below 1GHz and which fall in restricted bands should comply 15.209.</p>																													
Test setup:	<p>For radiated emissions below 30MHz</p> <p>30MHz to 1GHz</p>																													

	<p>Above 1GHz</p>
<p>Test Procedure:</p>	<ol style="list-style-type: none"> 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. 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.
<p>Test results:</p>	<p>PASS</p>



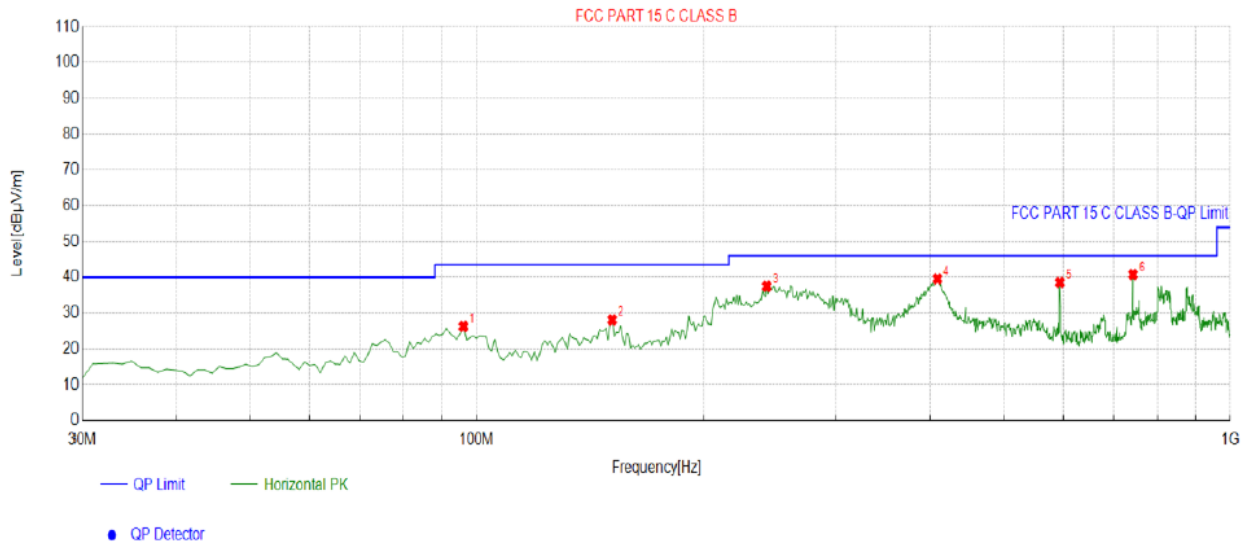
4.7.2. Test Data

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

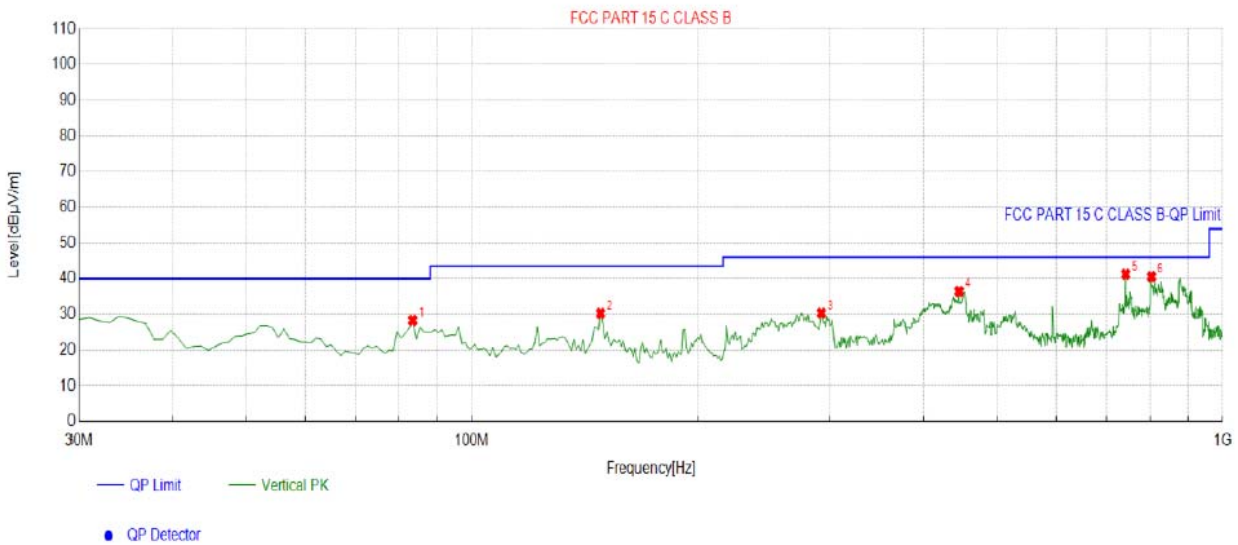


Suspected List									
NO.	Freq. [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	96.0260	-16.06	42.34	26.28	43.50	17.22	100	161	Horizontal
2	151.3714	-18.84	46.95	28.11	43.50	15.39	100	50	Horizontal
3	242.6426	-13.73	51.24	37.51	46.00	8.49	100	26	Horizontal
4	408.6787	-10.24	49.85	39.61	46.00	6.39	100	339	Horizontal
5	594.1341	-6.50	45.06	38.56	46.00	7.44	100	93	Horizontal
6	742.6927	-4.02	44.81	40.79	46.00	5.21	100	276	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	83.4034	-18.65	46.98	28.33	40.00	11.67	100	41	Vertical
2	148.4585	-18.98	49.22	30.24	43.50	13.26	100	152	Vertical
3	292.1622	-12.82	43.14	30.32	46.00	15.68	100	33	Vertical
4	445.5756	-9.18	45.65	36.47	46.00	9.53	100	358	Vertical
5	742.6927	-4.02	45.29	41.27	46.00	4.73	100	33	Vertical
6	803.8639	-3.06	43.61	40.55	46.00	5.45	100	350	Vertical

Remark: Factor = Cable loss + Antenna factor – Pre-amplifier; 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

5.8G 802.11 a Mode

All modes of operation were investigated and the worst-case of Antenna 1 are reported.

LOW CH 149

Horizontal:

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
3368	58.17	-4.59	53.58	68.2	-14.62	peak
11096	52.69	4.21	56.9	74	-17.1	peak
11096	42.23	4.21	46.44	54	-7.56	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
3368	61.34	-4.59	56.75	68.2	-11.45	peak
11096	52.79	4.21	57	74	-17	peak
11096	39.25	4.21	43.46	54	-10.54	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH157

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	60.34	-4.59	55.75	68.2	-12.45	peak
10523	51.24	4.21	55.45	68.2	-12.75	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	56.23	-4.59	51.64	68.2	-16.56	peak
10523	54.14	4.21	58.35	68.2	-9.85	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



HIGH CH165

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	58.46	-4.59	53.87	74	-20.13	peak
2705	45.12	-4.59	40.53	54	-13.47	AVG
11717	53.21	4.84	58.05	74	-15.95	peak
11717	34.34	4.84	39.18	54	-14.82	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	56.27	-4.59	51.68	74	-22.32	peak
2705	45.19	-4.59	40.6	54	-13.4	AVG
11717	51.51	4.84	56.35	74	-17.65	peak
11717	37.14	4.84	41.98	54	-12.02	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	61.25	-4.59	56.66	68.2	-11.54	
11096	53.98	4.21	58.19	74	-15.81	peak
11096	40.33	4.21	44.54	54	-9.46	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	61.58	-4.59	56.99	68.2	-11.21	
11096	56.12	4.21	60.33	74	-13.67	peak
11096	39.68	4.21	43.89	54	-10.11	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH157

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	61.28	-4.59	56.69	68.2	-11.51	peak
10523	53.47	4.21	57.68	68.2	-10.52	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	58.46	-4.59	53.87	68.2	-14.33	peak
10523	55.14	4.21	59.35	68.2	-8.85	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



HIGH CH165

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	56.31	-4.59	51.72	74	-22.28	peak
2705	47.28	-4.59	42.69	54	-11.31	AVG
11717	54.21	4.84	59.05	74	-14.95	peak
11717	37.92	4.84	42.76	54	-11.24	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
2705	58.61	-4.59	54.02	74	-19.98	peak
2705	44.16	-4.59	39.57	54	-14.43	AVG
11717	54.25	4.84	59.09	74	-14.91	peak
11717	40.98	4.84	45.82	54	-8.18	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	64.15	-4.59	59.56	68.2	-8.64	peak
11096	50.21	4.21	54.42	74	-19.58	peak
11096	41.25	4.21	45.46	54	-8.54	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	62.35	-4.59	57.76	68.2	-10.44	peak
11096	56.89	4.21	61.1	74	-12.9	peak
11096	35.67	4.21	39.88	54	-14.12	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH159

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	64.15	-4.59	59.56	68.2	-8.64	peak
10523	52.99	4.21	57.2	68.2	-11	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	57.14	-4.59	52.55	68.2	-15.65	peak
10523	56.34	4.21	60.55	68.2	-7.65	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	67.49	-4.59	62.9	68.2	-5.3	peak
11096	51.24	4.21	55.45	74	-18.55	peak
11096	36.96	4.21	41.17	54	-12.83	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	63.14	-4.59	58.55	68.2	-9.65	peak
11096	52.58	4.21	56.79	74	-17.21	peak
11096	36.46	4.21	40.67	54	-13.33	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH157

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
3172	61.25	-4.59	56.66	68.2	-11.54	peak
10523	53.79	4.21	58	68.2	-10.2	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	
3172	56.19	-4.59	51.6	68.2	-16.6	peak
10523	54.21	4.21	58.42	68.2	-9.78	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



HIGH CH165

Horizontal:

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2705	60.25	-4.59	55.66	74	-18.34	peak
2705	47.15	-4.59	42.56	54	-11.44	AVG
11717	56.98	4.84	61.82	74	-12.18	peak
11717	40.25	4.84	45.09	54	-8.91	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBµV)	Factor (dB)	Emission Level (dBµV/m)	Limits (dBµV/m)	Margin (dB)	Detector Type
2705	58.46	-4.59	53.87	74	-20.13	peak
2705	44.16	-4.59	39.57	54	-14.43	AVG
11717	51.32	4.84	56.16	74	-17.84	peak
11717	39.25	4.84	44.09	54	-9.91	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	65.32	-4.59	60.73	68.2	-7.47	peak
11096	50.47	4.21	54.68	74	-19.32	peak
11096	41.03	4.21	45.24	54	-8.76	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	61.35	-4.59	56.76	68.2	-11.44	peak
11096	52.17	4.21	56.38	74	-17.62	peak
11096	39.58	4.21	43.79	54	-10.21	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.



MID CH159

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	61.34	-4.59	56.75	68.2	-11.45	peak
10523	53.19	4.21	57.4	68.2	-10.8	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
3172	57.99	-4.59	53.4	68.2	-14.8	peak
10523	53.26	4.21	57.47	68.2	-10.73	peak

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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 (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	54.16	-4.59	49.57	68.2	-18.63	peak
11096	52.97	4.21	57.18	74	-16.82	peak
11096	40.12	4.21	44.33	54	-9.67	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
3368	61.34	-4.59	56.75	68.2	-11.45	peak
11096	56.27	4.21	60.48	74	-13.52	peak
11096	37.49	4.21	41.7	54	-12.3	AVG

Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.

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:	<pre> graph TD SA[Spectrum Analyzer] --- EUT[EUT] subgraph TC [Temperature Chamber] EUT end P[AC/DC Power supply] --- EUT </pre>
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	4.50V	5745.002	2	5825.001	1
	5.00V	5744.998	-2	5825.013	13
	5.50V	5745.042	-42	5824.976	-24

Mode	Temperature (°C)	FHL (5745MHz)	Deviation (KHz)	FHH (5825MHz)	Deviation (KHz)
5.8G Band	-30	5745.045	45	5825.038	38
	-20	5745.003	3	5825.028	28
	-10	5745.005	5	5824.965	-35
	0	5744.953	-47	5824.968	-32
	10	5745.011	11	5824.966	-34
	20	5745.022	22	5824.996	-4
	30	5744.991	-9	5825.038	38
	40	5745.039	39	5824.958	-42
	50	5744.963	-37	5824.975	-25

The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAKE, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

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

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.

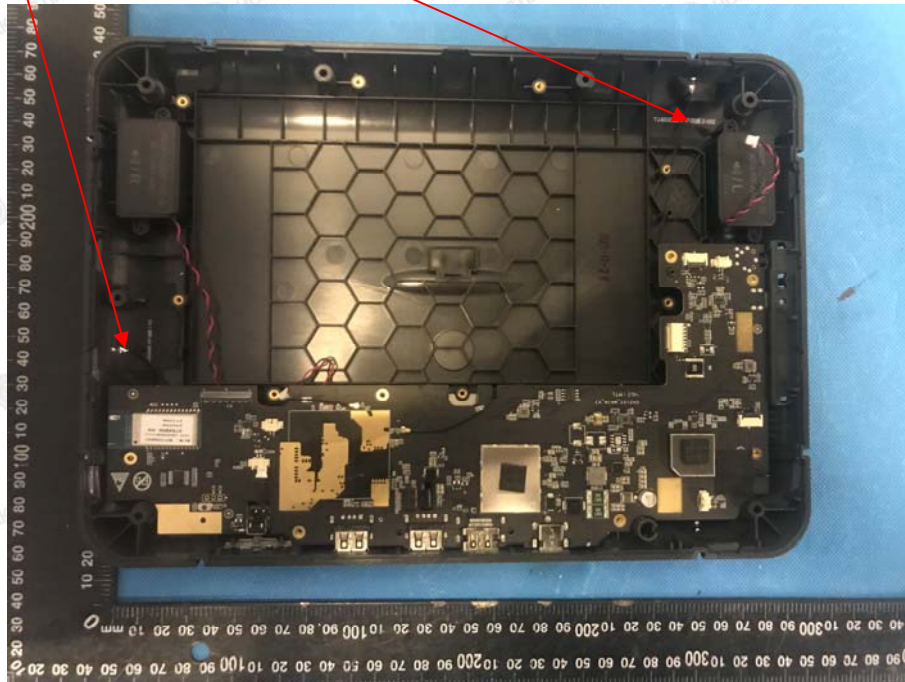
Refer to statement below for compliance.

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 Internal Antenna, need professional installation, It conforms to the standard requirements. and the best case gain of the antenna is Antenna port 1:4.2dBi and Antenna port 2:3.4dBi.

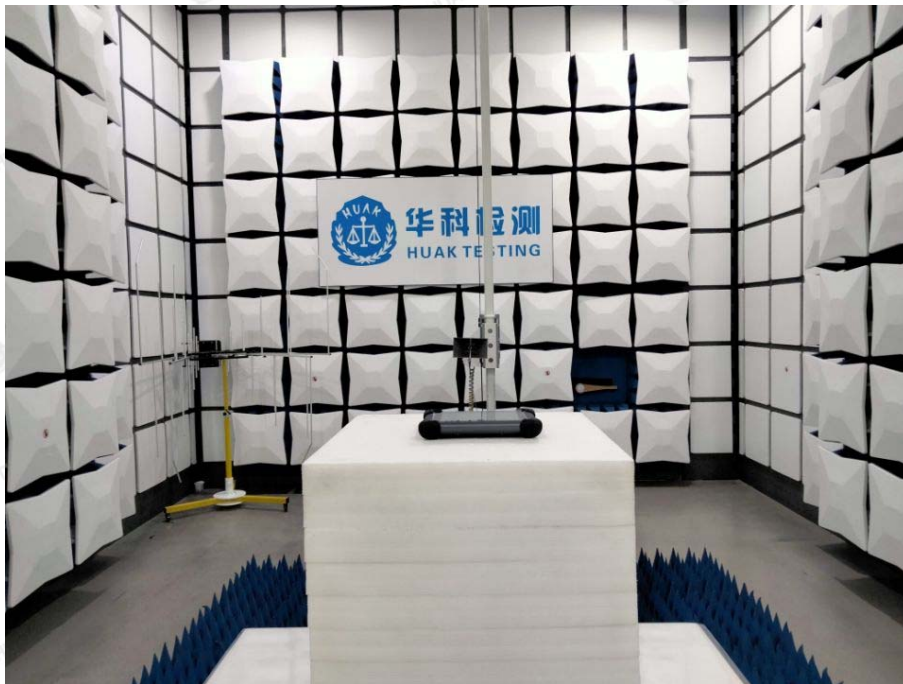
WIFI ANTENNA





5. PHOTOGRAPHS OF TEST SETUP

Radiated Emission



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAK, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com

Addr: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



Conducted Emission



The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 30 days only. The document is issued by HUAK, this document cannot be reproduced except in full with our prior written permission. The more details and the authenticity of the report will be confirmed at <http://www.cer-mark.com>.

TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com

Addr: 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 report-----