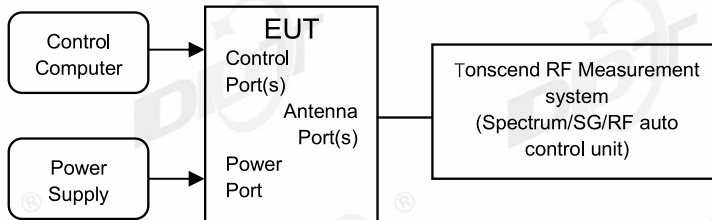


8. Maximum Output Power

8.1. Block diagram of test setup



8.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Maximum Output Power	outdoor access point: 1 W(30 dBm) indoor access point: 1 W(30 dBm) fixed point-to-point access points1 W(30 dBm) client devices: 250 mW (23.98 dBm)	5150-5250
	For FCC: 250 mW (23.98 dBm) or $11 + 10 \log_{10} B$	5250-5350
	For FCC: 250 mW (23.98 dBm) or $11 + 10 \log_{10} B$	5470 - 5725
	1 Watt (30 dBm)	5725-5850
Note: B=26 bandwidth		

8.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator

Measure the output power of each antenna port by power sensor.

8.4. Test result

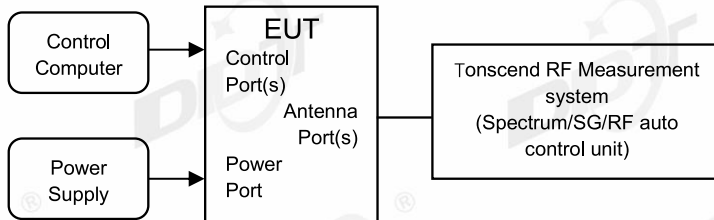
Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.3℃, 45.7%RH	Test Date:	2023.11.07-2023.11.08
Test Power Supply:	AC 230V	EUT:	All-In-One Desktop Android HiFi Music Player
Sample Number:	S23101912-01	Model No.:	F3051R

Test Mode	Antenna	Frequency [MHz]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	EIRP [dBm]	EIRP Limit [dBm]	Verdict
11A	Ant1	5180	98.55	0.06	12.41	≤23.84	18.55	---	PASS
		5200	98.54	0.06	12.60	≤23.84	18.74	---	PASS
		5240	98.55	0.06	12.35	≤23.84	18.49	---	PASS
		5260	98.54	0.06	12.28	≤23.48	18.78	---	PASS
		5280	98.54	0.06	12.20	≤23.48	18.70	---	PASS
		5320	98.55	0.06	11.47	≤23.48	17.97	---	PASS
		5500	98.07	0.08	10.69	≤22.06	18.85	---	PASS
		5580	98.07	0.08	11.64	≤22.06	19.80	---	PASS
		5700	98.54	0.06	13.89	≤22.06	22.05	---	PASS
		5720	98.07	0.08	13.96	≤22.06	22.12	---	PASS
		5745	98.07	0.08	14.05	≤27.84	22.21	---	PASS
		5785	98.07	0.08	13.24	≤27.84	21.40	---	PASS
		5825	98.07	0.08	12.27	≤27.84	20.43	---	PASS
11N20SISO	Ant1	5180	98.44	0.07	12.17	≤23.84	18.31	---	PASS
		5200	97.93	0.09	12.37	≤23.84	18.51	---	PASS
		5240	97.93	0.09	12.14	≤23.84	18.28	---	PASS
		5260	97.93	0.09	12.02	≤23.48	18.52	---	PASS
		5280	98.45	0.07	11.85	≤23.48	18.35	---	PASS
		5320	97.93	0.09	11.30	≤23.48	17.80	---	PASS
		5500	97.93	0.09	10.63	≤22.06	18.79	---	PASS
		5580	97.93	0.09	11.51	≤22.06	19.67	---	PASS
		5700	97.93	0.09	13.66	≤22.06	21.82	---	PASS
		5720	97.93	0.09	13.83	≤22.06	21.99	---	PASS
		5745	97.93	0.09	13.79	≤27.84	21.95	---	PASS
		5785	97.93	0.09	13.06	≤27.84	21.22	---	PASS
		5825	97.93	0.09	12.25	≤27.84	20.41	---	PASS
11N40SISO	Ant1	5190	95.88	0.18	13.32	≤23.84	19.46	---	PASS
		5230	95.88	0.18	13.08	≤23.84	19.22	---	PASS
		5270	95.88	0.18	13.21	≤23.48	19.71	---	PASS
		5310	96.88	0.14	12.77	≤23.48	19.27	---	PASS
		5510	95.88	0.18	11.55	≤22.06	19.71	---	PASS

		5550	95.88	0.18	11.98	≤22.06	20.14	---	PASS
		5670	96.88	0.14	14.37	≤22.06	22.53	---	PASS
		5710	95.88	0.18	14.86	≤22.06	23.02	---	PASS
		5755	95.88	0.18	14.91	≤27.84	23.07	---	PASS
		5795	96.88	0.14	13.73	≤27.84	21.89	---	PASS
11AC20SISO	Ant1	5180	98.45	0.07	11.49	≤23.84	17.63	---	PASS
		5200	97.94	0.09	11.68	≤23.84	17.82	---	PASS
		5240	98.45	0.07	11.43	≤23.84	17.57	---	PASS
		5260	97.94	0.09	11.32	≤23.48	17.82	---	PASS
		5280	97.94	0.09	11.32	≤23.48	17.82	---	PASS
		5320	97.94	0.09	10.88	≤23.48	17.38	---	PASS
		5500	97.94	0.09	9.58	≤22.06	17.74	---	PASS
		5580	98.45	0.07	10.57	≤22.06	18.73	---	PASS
		5700	98.45	0.07	12.76	≤22.06	20.92	---	PASS
		5720	97.94	0.09	12.91	≤22.06	21.07	---	PASS
		5745	98.45	0.07	12.71	≤27.84	20.87	---	PASS
		5785	97.94	0.09	12.12	≤27.84	20.28	---	PASS
		5825	97.94	0.09	11.16	≤27.84	19.32	---	PASS
11AC40SISO	Ant1	5190	95.88	0.18	12.28	≤23.84	18.42	---	PASS
		5230	96.91	0.14	12.03	≤23.84	18.17	---	PASS
		5270	95.92	0.18	11.73	≤23.48	18.23	---	PASS
		5310	95.88	0.18	11.13	≤23.48	17.63	---	PASS
		5510	96.91	0.14	10.37	≤22.06	18.53	---	PASS
		5550	95.92	0.18	10.87	≤22.06	19.03	---	PASS
		5670	95.92	0.18	13.28	≤22.06	21.44	---	PASS
		5710	95.88	0.18	13.85	≤22.06	22.01	---	PASS
		5755	95.88	0.18	13.79	≤27.84	21.95	---	PASS
		5795	96.91	0.14	12.78	≤27.84	20.94	---	PASS
11AC80SISO	Ant1	5210	92.00	0.36	12.42	≤23.84	18.56	---	PASS
		5290	91.84	0.37	11.90	≤23.48	18.40	---	PASS
		5530	92.00	0.36	10.70	≤22.06	18.86	---	PASS
		5610	91.84	0.37	12.29	≤22.06	20.45	---	PASS
		5690	91.84	0.37	13.46	≤22.06	21.62	---	PASS
		5775	92.00	0.36	13.36	≤27.84	21.52	---	PASS

9. Power Spectral Density

9.1. Block diagram of test setup



9.2. Limits

FCC Part15		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	Other than Mobile and portable:17 dBm/MHz Mobile and portable client devices:11 dBm/MHz	5150-5250
	11 dBm/MHz	5250-5350
	11 dBm/MHz	5470 - 5725
	30 dBm/500 kHz	5725-5850

9.3. Test procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

Connect the UUT to the spectrum analyser and use the following settings:

5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

9.4. Test result

Test Engineer:	Zhongyao	Test Site:	RF Measurement System 3#
Ambient Condition:	25.3°C, 45.7%RH	Test Date:	2023.11.07-2023.11.08
Test Power Supply:	AC 230V	EUT:	All-In-One Desktop Android HiFi Music Player
Sample Number:	S23101912-01	Model No.:	F3051R

Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5180	1.57	≤ 10.86	PASS
		5200	1.43	≤ 10.86	PASS
		5240	1.30	≤ 10.86	PASS
		5260	1.16	≤ 10.50	PASS
		5280	0.90	≤ 10.50	PASS
		5320	0.54	≤ 10.50	PASS
		5500	-0.16	≤ 9.08	PASS
		5580	0.58	≤ 9.08	PASS
		5700	2.80	≤ 9.08	PASS
		5720_UNII-2C	2.62	≤ 9.08	PASS
		5720_UNII-3	-1.65	≤ 27.84	PASS
		5745	0.11	≤ 27.84	PASS
		5785	-0.95	≤ 27.84	PASS
		5825	-2.04	≤ 27.84	PASS
11N20SISO	Ant1	5180	1.00	≤ 10.86	PASS
		5200	0.90	≤ 10.86	PASS
		5240	0.70	≤ 10.86	PASS
		5260	0.64	≤ 10.50	PASS
		5280	0.26	≤ 10.50	PASS
		5320	-0.04	≤ 10.50	PASS
		5500	-0.50	≤ 9.08	PASS
		5580	0.19	≤ 9.08	PASS
		5700	2.38	≤ 9.08	PASS
		5720_UNII-2C	2.24	≤ 9.08	PASS
		5720_UNII-3	-2.09	≤ 27.84	PASS
		5745	-0.44	≤ 27.84	PASS

		5785	-1.34	≤27.84	PASS
		5825	-2.22	≤27.84	PASS
11N40SISO	Ant1	5190	-0.89	≤10.86	PASS
		5230	-1.32	≤10.86	PASS
		5270	-1.74	≤10.50	PASS
		5310	-1.81	≤10.50	PASS
		5510	-2.90	≤9.08	PASS
		5550	-2.39	≤9.08	PASS
		5670	-0.63	≤9.08	PASS
		5710_UNII-2C	-0.06	≤9.08	PASS
		5710_UNII-3	-4.60	≤27.84	PASS
		5755	-2.74	≤27.84	PASS
		5795	-4.05	≤27.84	PASS
		11AC20SISO	Ant1	5180	0.23
5200	0.11			≤10.86	PASS
5240	-0.12			≤10.86	PASS
5260	-0.23			≤10.50	PASS
5280	-0.38			≤10.50	PASS
5320	-1.01			≤10.50	PASS
5500	-1.65			≤9.08	PASS
5580	-0.90			≤9.08	PASS
5700	1.28			≤9.08	PASS
5720_UNII-2C	1.17			≤9.08	PASS
5720_UNII-3	-3.11			≤27.84	PASS
5745	-1.61			≤27.84	PASS
5785	-2.43			≤27.84	PASS
5825	-3.38			≤27.84	PASS
11AC40SISO	Ant1	5190	-2.12	≤10.86	PASS
		5230	-2.46	≤10.86	PASS
		5270	-3.08	≤10.50	PASS
		5310	-3.44	≤10.50	PASS
		5510	-3.96	≤9.08	PASS
		5550	-3.48	≤9.08	PASS
		5670	-1.53	≤9.08	PASS
		5710_UNII-2C	-0.96	≤9.08	PASS
		5710_UNII-3	-5.49	≤27.84	PASS
		5755	-3.88	≤27.84	PASS
		5795	-4.94	≤27.84	PASS
11AC80SISO	Ant1	5210	-5.39	≤10.86	PASS
		5290	-6.14	≤10.50	PASS
		5530	-6.89	≤9.08	PASS
		5610	-5.47	≤9.08	PASS
		5690_UNII-2C	-4.45	≤9.08	PASS
		5690_UNII-3	-8.58	≤27.84	PASS
		5775	-7.51	≤27.84	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor is compensated in the graph.

9.5. Test graphs

