

12. Conducted Band edge and Spurious Emissions

12.1. Block diagram of test setup

Same as section 8.1

12.2. Limits

CFR 47 FCC Part15 (15.247) Subpart C ISED RSS-247 ISSUE 3		
Section	Test Item	Limit
CFR 47 FCC §15.247 (d) ISED RSS-247 5.5	Conducted Bandedge and Spurious Emissions	at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power

12.3. Test Procedure

Center Frequency	The centre frequency of the channel under test
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	1.5 x DTS bandwidth
Trace	Max hold
Sweep time	Auto couple.

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

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100 kHz
VBW	$\geq 3 \times \text{RBW}$
measurement points	$\geq \text{span}/\text{RBW}$
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

12.4. Test result

Test Mode	Ant.	Ch Name	Freq. (MHz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	Low	2412	-1.39	-41.11	≤ -21.39	PASS
	Ant2	Low	2412	-2.04	-43.44	≤ -22.04	PASS
	Ant1	High	2462	-1.96	-47.02	≤ -21.96	PASS
	Ant2	High	2462	-3.49	-48.01	≤ -23.49	PASS
11G	Ant1	Low	2412	-8.01	-44.59	≤ -28.01	PASS
	Ant2	Low	2412	-9.03	-47.18	≤ -29.03	PASS
	Ant1	High	2462	-7.09	-48.04	≤ -27.09	PASS
	Ant2	High	2462	-9.29	-47.65	≤ -29.29	PASS
11N20MIMO	Ant1	Low	2412	-6.79	-45.77	≤ -26.79	PASS
	Ant2	Low	2412	-7.64	-44.29	≤ -27.64	PASS
	Ant1	High	2462	-6.63	-46.4	≤ -26.63	PASS
	Ant2	High	2462	-8.98	-46.96	≤ -28.98	PASS

11N40MIMO	Ant1	Low	2422	-7.99	-44.55	≤ -27.99	PASS
	Ant2	Low	2422	-10.23	-45.5	≤ -30.23	PASS
	Ant1	High	2452	-8.67	-46.54	≤ -28.67	PASS
	Ant2	High	2452	-10.81	-46.32	≤ -30.81	PASS

Test Mode	Ant.	Freq. (MHz)	Freq Range (Mhz)	Ref Level (dBm)	Result (dBm)	Limit (dBm)	Verdict
11B	Ant1	2412	Reference	-2.85	-2.85	---	PASS
			30~1000	-2.85	-60.82	≤ -22.85	PASS
			1000~26500	-2.85	-51	≤ -22.85	PASS
	Ant2	2412	Reference	-4.38	-4.38	---	PASS
			30~1000	-4.38	-60.25	≤ -24.38	PASS
			1000~26500	-4.38	-50.61	≤ -24.38	PASS
	Ant1	2437	Reference	-2.25	-2.25	---	PASS
			30~1000	-2.25	-60.09	≤ -22.25	PASS
			1000~26500	-2.25	-51.18	≤ -22.25	PASS
	Ant2	2437	Reference	-5.11	-5.11	---	PASS
			30~1000	-5.11	-60.52	≤ -25.11	PASS
			1000~26500	-5.11	-51.05	≤ -25.11	PASS
	Ant1	2462	Reference	-2.31	-2.31	---	PASS
			30~1000	-2.31	-60.67	≤ -22.31	PASS
			1000~26500	-2.31	-50.82	≤ -22.31	PASS
	Ant2	2462	Reference	-4.80	-4.80	---	PASS
			30~1000	-4.80	-59.56	≤ -24.8	PASS
			1000~26500	-4.80	-51	≤ -24.8	PASS
11G	Ant1	2412	Reference	-9.67	-9.67	---	PASS
			30~1000	-9.67	-60.34	≤ -29.67	PASS
			1000~26500	-9.67	-50.73	≤ -29.67	PASS
	Ant2	2412	Reference	-11.50	-11.50	---	PASS
			30~1000	-11.50	-59.9	≤ -31.5	PASS
			1000~26500	-11.50	-51.16	≤ -31.5	PASS
	Ant1	2437	Reference	-10.12	-10.12	---	PASS
			30~1000	-10.12	-60.18	≤ -30.12	PASS
			1000~26500	-10.12	-51.05	≤ -30.12	PASS
	Ant2	2437	Reference	-10.67	-10.67	---	PASS
			30~1000	-10.67	-59.82	≤ -30.67	PASS
			1000~26500	-10.67	-51.16	≤ -30.67	PASS
	Ant1	2462	Reference	-9.06	-9.06	---	PASS
			30~1000	-9.06	-59.29	≤ -29.06	PASS
			1000~26500	-9.06	-51.34	≤ -29.06	PASS
	Ant2	2462	Reference	-10.60	-10.60	---	PASS
			30~1000	-10.60	-60.34	≤ -30.6	PASS
			1000~26500	-10.60	-49.77	≤ -30.6	PASS
11N20MIMO	Ant1	2412	Reference	-8.47	-8.47	---	PASS
			30~1000	-8.47	-58.83	≤ -28.47	PASS
			1000~26500	-8.47	-48.99	≤ -28.47	PASS
	Ant2	2412	Reference	-8.30	-8.30	---	PASS
			30~1000	-8.30	-57.41	≤ -28.3	PASS
			1000~26500	-8.30	-49.1	≤ -28.3	PASS
	Ant1	2437	Reference	-9.84	-9.84	---	PASS
			30~1000	-9.84	-57.61	≤ -29.84	PASS
			1000~26500	-9.84	-49.4	≤ -29.84	PASS
	Ant2	2437	Reference	-7.12	-7.12	---	PASS
			30~1000	-7.12	-59.26	≤ -27.12	PASS
			1000~26500	-7.12	-48.81	≤ -27.12	PASS

	Ant1	2462	Reference	-6.96	-6.96	---	PASS
			30~1000	-6.96	-58.57	≤ -26.96	PASS
			1000~26500	-6.96	-49.48	≤ -26.96	PASS
	Ant2	2462	Reference	-11.18	-11.18	---	PASS
			30~1000	-11.18	-58.14	≤ -31.18	PASS
			1000~26500	-11.18	-49.42	≤ -31.18	PASS
11N40MIMO	Ant1	2422	Reference	-11.40	-11.40	---	PASS
			30~1000	-11.40	-59.02	≤ -31.4	PASS
			1000~26500	-11.40	-48.79	≤ -31.4	PASS
	Ant2	2422	Reference	-11.56	-11.56	---	PASS
			30~1000	-11.56	-59.23	≤ -31.56	PASS
			1000~26500	-11.56	-49.78	≤ -31.56	PASS
	Ant1	2437	Reference	-9.25	-9.25	---	PASS
			30~1000	-9.25	-58.01	≤ -29.25	PASS
			1000~26500	-9.25	-49.9	≤ -29.25	PASS
	Ant2	2437	Reference	-9.72	-9.72	---	PASS
			30~1000	-9.72	-57.65	≤ -29.72	PASS
			1000~26500	-9.72	-49.44	≤ -29.72	PASS
	Ant1	2452	Reference	-10.52	-10.52	---	PASS
			30~1000	-10.52	-58.83	≤ -30.52	PASS
			1000~26500	-10.52	-49.45	≤ -30.52	PASS
	Ant2	2452	Reference	-11.32	-11.32	---	PASS
			30~1000	-11.32	-59.09	≤ -31.32	PASS
			1000~26500	-11.32	-50.09	≤ -31.32	PASS

12.5. Original test data

Band edge:













Spurious Emission:



