

5.4.5 Test Data (1GHz – 25 GHz) .

1GHz~ 25 GHz (Horizontal), Channel 1 : 2412 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-Am pl. (dB)	Ampl. (dBuV/m) (pk)	Limit (dBuV /m) (av)	Margin (dB)	Height (cm)	Position (°)
7215.78	43.24	39.74	2.36	46.22	39.13	54.00	-14.87	106	125
11359.6	25.13	41.87	3.01	41.29	28.71	54.00	-25.29	108	135
14603.4	24.22	44.39	3.42	41.89	30.14	54.00	-23.86	102	136
14858.1	26.09	43.88	3.45	43.23	30.19	54.00	-23.81	105	325
15282.7	26.02	43.15	3.49	43.30	29.36	54.00	-24.64	100	180
15690.3	27.56	43.41	3.54	42.16	32.35	54.00	-21.65	107	235

pk: peak value, av: average value

1GHz~ 25 GHz (Vertical), Channel 1 : 2412 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-A mpl. (dB)	Ampl. (dBuV/m) (pk)	Limit (dBuV/ m) (av)	Margin (dB)	Height (cm)	Position (°)
4804.20	43.23	34.68	1.93	46.87	32.96	54.00	-21.04	102	120
6315.68	38.66	36.73	2.20	46.68	30.91	54.00	-23.09	100	114
7215.78	48.25	39.74	2.36	46.22	44.13	54.00	-9.87	107	146
14637.4	25.31	44.33	3.43	42.07	30.99	54.00	-23.01	100	303
15299.7	25.87	43.12	3.50	43.26	29.22	54.00	-24.78	103	175
15673.3	26.50	43.35	3.54	42.21	31.18	54.00	-22.82	100	210

Note:

“---“ : No meter reading data due to the emission level is smaller than spectrum noise level.

The Spectrum noise level + Correction Factor < Limit - 6 dB

Margin = Corrected Amplitude – Limit

Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss -
Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

All frequencies from 1GHz to 25 GHz have been tested.

pk: peak value, av: average value

1GHz~ 25 GHz (Horizontal) , Channel 6 : 2437 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-Am pl. (dB)	Ampl. (dBuV/ m) (pk)	Limit (dBuV/m) (av)	Margin*	Height (cm)	Position (°)
7300.70	41.16	39.64	2.37	46.18	37.00	54.00	-17.00	100	120
11699.3	24.86	42.28	3.05	42.05	28.14	54.00	-25.86	103	114
14569.4	23.79	44.46	3.42	41.71	29.95	54.00	-24.05	101	146
14875.1	25.63	43.85	3.45	43.32	29.61	54.00	-24.39	106	303
15282.7	25.60	43.15	3.49	43.30	28.94	54.00	-25.06	105	175
15673.3	27.38	43.35	3.54	42.21	32.06	54.00	-21.94	101	210

pk: peak value, av: average value

1GHz~ 25 GHz (Vertical), Channel 6 : 2437 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-Am pl. (dB)	Ampl. (dBuV/ m) (pk)	Limit (dBuV/ m) (av)	Margin*	Height (cm)	Position (°)
4855.14	41.70	34.89	1.94	46.91	31.61	54.00	-22.39	105	112
6315.68	38.74	36.73	2.20	46.68	30.99	54.00	-23.01	100	95
7300.70	43.79	39.64	2.37	46.18	39.62	54.00	-14.38	101	173
14297.7	25.30	43.91	3.39	41.99	30.61	54.00	-23.39	102	285
14654.3	25.22	44.29	3.43	42.16	30.78	54.00	-23.22	103	170
15656.3	27.77	43.30	3.53	42.27	32.33	54.00	-21.67	100	220

Note:

“---“ : No meter reading data due to the emission level is smaller than spectrum noise level.

The Spectrum noise level + Correction Factor < Limit - 6 dB

Margin = Corrected Amplitude – Limit

Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss -
Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

All frequencies from 1GHz to 25 GHz have been tested.

pk: peak value, av: average value

1GHz~ 25 GHz (Horizontal), Channel 11: 2462 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-Ampl. (dB)	Ampl. (dBuV/ m) (pk)	Limit (dBuV/ m) (av)	Margin* (dB)	Height (cm)	Position (°)
6315.68	35.48	36.73	2.20	46.68	27.72	54.00	-26.28	101	112
7385.61	33.30	39.54	2.39	46.14	29.09	54.00	-24.91	100	95
11937.1	25.54	42.14	3.08	42.60	28.17	54.00	-25.83	105	173
13601.4	24.25	42.10	3.31	41.96	27.70	54.00	-26.30	100	285
14569.4	24.10	44.46	3.42	41.71	30.27	54.00	-23.73	106	170
15248.8	25.54	43.20	3.49	43.38	28.85	54.00	-25.15	100	220

pk: peak value, av: average value

1GHz~ 25 GHz (Vertical), Channel 11 : 2462 MHz

Meter Reading		Correction Factor			Corrected Emissions			Antenna	Turntable
Freq. (MHz)	Ampl. (dBuV) (pk)	Ant. (dB/m)	Cable (dB)	Pre-Ampl. l. (dB)	Ampl. (dBuV/ m) (pk)	Limit (dBuV/ m) (av)	Margin* (dB)	Height (cm)	Position (°)
4906.09	40.39	35.11	1.94	46.96	30.48	54.00	-23.52	100	212
6315.68	37.53	36.73	2.20	46.68	29.78	54.00	-24.22	100	295
7130.87	39.24	39.84	2.34	46.25	35.18	54.00	-18.82	101	173
14552.4	23.57	44.50	3.42	41.62	29.86	54.00	-24.14	102	285
15282.7	26.33	43.15	3.49	43.30	29.67	54.00	-24.33	103	170
15707.3	26.83	43.46	3.54	42.10	31.73	54.00	-22.27	100	115

Note:

“---“ : No meter reading data due to the emission level is smaller than spectrum noise level.

The Spectrum noise level + Correction Factor < Limit - 6 dB

Margin = Corrected Amplitude – Limit

Corrected Amplitude = Radiated Amplitude + Antenna Correction Factor + Cable Loss -
Pre-Amplifier Gain

A margin of -8dB means that the emission is 8dB below the limit

All frequencies from 1GHz to 25 GHz have been tested.

pk: peak value, av: average value

5.5 Band Edge Measurement

5.5.1 Test Procedure (Conducted)

1. The Transmitter output of EUT was connected to the spectrum analyzer.
Equipment mode: Spectrum analyzer
Detector function: Peak mode
SPAN: 100MHz
RBW: 100KHz
VBW: 100KHz
Center frequency: 2.4GHz, 2.4835GHz.
2. Using Peak Search to read the peak power of Carrier frequencies after Maximum Hold function is completed.
3. Find the next peak frequency outside the operation frequency band.

5.5.2 Test Setup (Conducted)



5.5.3 Test Data:

Band Edge measurement (Conducted)

Channel	Frequency (MHz)	Spectrum Reading (dBuV)	Carrier - Outsideband Limit: > 20dB (dB)	Pass/Fail
1	2413.2	103.67	---	---
Outside band	2499.8	77.77	25.9	Pass
11	2456.9	102.91	---	---
Outside band	2473.5	81.43	21.48	Pass

Band Edge Conducted measurement



Band Edge Conducted Measurement



5.5.4 Test Procedure (Radiated)

1. Antenna and Turntable test procedure same as Radiated Emission Measurement.
Equipment mode: Spectrum analyzer
Detector function: Peak mode
SPAN: 100MHz
RBW: 1MHz
VBW: 1MHz
Center frequency: 2.395GHz, 2.48 GHz.
2. Using Peak Search to read the peak power of Carrier frequencies after Maximum Hold function is completed.
3. Find the next peak frequency outside the operation frequency band.
4. For peak frequency emission level measurement in Restricted Band ,
Change RBW: 1MHz ,
VBW: 10Hz,
Span: 100MHz.
5. Get the spectrum reading after Maximum Hold function is completed.

5.5.5 Test Setup (Radiated)

Same as *Radiated Emission Measurement*

5.5.6 Test Data:**Table Band Edge measurement (Radiated)**

Channel	Frequency (MHz)	Spectrum Reading (dBuV)	Correction Factor (dB/m)	Emission Level (dBuV/m)	Limit: > 20dB (dBC)	Limit (dBuV/m)	Equip. Setup VBW	Pass or Fail
1(peak mode)	2414.6	60.59	31.67	92.26	---	-----	1MHz	-----
Outside band	2499.9	38.55	31.67	70.22	22.04	-----	1MHz	Pass
1(average mode)	2406.2	50.26	31.67	81.93	---	-----	10Hz	-----
Restricted band	2390.0	11.17	31.67	42.84	-----	54	10Hz	Pass
11(peak mode)	2465.7	60.91	31.64	92.55	----	-----	1MHz	-----
Outside band	2476.0	39.05	31.64	70.69	21.86	-----	1MHz	Pass
11(average mode)	2468.3	49.92	31.64	81.56	----	-----	10Hz	-----
Restricted band	2483.5	9.91	31.64	41.55	-----	54	10Hz	Pass

Note: The Spectrum plot of emission level measurement in Restricted band is attached.

Emission Level = Spectrum Reading + Correction Factor

Correction Factor = Antenna Factor + cable loss – amplifier gain

Band Edge measurement for radiated emission in Restricted Band(Radiated)

Peak Mode (Channel 1)



Band Edge measurement for radiated emission in Restricted Band(Radiated)

Average Mode (Channel 1)



Band Edge measurement for radiated emission in Restricted Band(Radiated)

Peak Mode (Channel 11)



Band Edge measurement for radiated emission in Ristricted Band(Radiated)

Average Mode (Channel 11)



5.6 RF Exposure Measurement [Section 15.247(b)(4) & 1.1307(b)]
See MPE report