

- 1) Emission level (dBuV/m) = Meter Reading+ antenna Factor+ cable loss- preamp factor.
- 2) Margin value = Limits-Emission level.
- 3) -- Mean the PK detector measured value is below average limit.
- 4) The other emission levels were very low against the limit.
- 5) RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

Results of Band Edges Test (Radiated)

Note: 802.11b/802.11g/802.11n (H20) MIMO Mode all have been tested, only worse case 802.11b mode is reported

Frequency(MHz):			2412		Polarity:		HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2390.00	60.84	PK	74	13.16	71.26	27.42	4.31	42.15	-10.42
2390.00	43.36	AV	54	10.64	53.78	27.42	4.31	42.15	-10.42
Frequency(MHz):			2412		Polarity:		VERTICAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2390.00	60.09	PK	74	13.91	70.51	27.42	4.31	42.15	-10.42
2390.00	41.23	AV	54	12.77	51.65	27.42	4.31	42.15	-10.42
Frequency(MHz):			2462		Polarity:		HORIZONTAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2483.50	60.39	PK	74	13.61	70.50	27.7	4.47	42.28	-10.11
2483.50	44.66	AV	54	9.34	54.77	27.7	4.47	42.28	-10.11
Frequency(MHz):			2462		Polarity:		VERTICAL		
Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Raw Value (dBuV)	Antenna Factor (dB/m)	Cable Factor (dB)	Pre-amplifier (dB)	Correction Factor (dB/m)
2483.50	58.77	PK	74	15.23	68.88	27.7	4.47	42.28	-10.11
2483.50	42.51	AV	54	11.49	52.62	27.7	4.47	42.28	-10.11

Note:

- 1) Emission level (dBuV/m) = Meter Reading+ antenna Factor+ cable loss- preamp factor.
- 2) Margin value = Limits-Emission level.
- 3) -- Mean the PK detector measured value is below average limit.
- 4) The other emission levels were very low against the limit.
- 5) RBW1MHz VBW3MHz Peak detector is for PK value; RBW 1MHz VBW10Hz Peak detector is for AV value.

4.2 Maximum Peak Conducted Output Power

Limit

The Maximum Peak Output Power Measurement is 30dBm.

Test Procedure

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power sensor.

Test Configuration



Test Results

ANT 1

Type	Channel	Output power PK (dBm)	Limit (dBm)	Result
802.11b	01	14.99	30.00	Pass
	06	13.37		
	11	12.47		
802.11g	01	14.20	30.00	Pass
	06	12.90		
	11	12.17		
802.11n(HT20)	01	14.11	30.00	Pass
	06	12.85		
	11	12.09		

ANT 2

Type	Channel	Output power PK (dBm)	Limit (dBm)	Result
802.11b	01	14.83	30.00	Pass
	06	13.24		
	11	12.51		
802.11g	01	13.99	30.00	Pass
	06	12.85		
	11	12.00		
802.11n(HT20)	01	14.08	30.00	Pass
	06	12.70		
	11	12.03		

Note:

- 1) Measured output power at difference data rate for each mode and recorded worst case for each mode.
- 2) Test results including cable loss.

Shenzhen CTA Testing Technology Co., Ltd.

Room 106, Building 1, Yibaolai Industrial Park, Qiaotou Community, Fuhai Street, Bao'an District, Shenzhen, China

Tel: +86-755 2322 5875 E-mail: cta@cta-test.cn Web: http://www.cta-test.cn

- 3) Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20;

For MIMO:

Type	Channel	Output power PK(dBm) ANT1	Output power PK(dBm) ANT2	Output power PK(dBm) MIMO	Limit (dBm)	Result
802.11n(HT20)	01	14.11	14.08	17.11	30	Pass
	06	12.85	12.70	15.79		
	11	12.09	12.03	15.07		

4.3 Power Spectral Density

Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Test Procedure

1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
2. Set the RBW ≥ 3 kHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Set the span to 1.5 times the DTS channel bandwidth.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum power level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
11. The resulting peak PSD level must be 8dBm.

Test Configuration



Test Results

ANT 1

Type	Channel	Power Spectral Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-9.89	8.00	Pass
	06	-11.99		
	11	-12.88		
802.11g	01	-16.82	8.00	Pass
	06	-18.21		
	11	-18.80		
802.11n(HT20)	01	-17.14	8.00	Pass
	06	-19.28		
	11	-19.44		

ANT 2

Type	Channel	Power Spectral Density (dBm/3KHz)	Limit (dBm/3KHz)	Result
802.11b	01	-10.46	8.00	Pass
	06	-11.89		
	11	-12.43		
802.11g	01	-16.68	8.00	Pass
	06	-18.07		
	11	-18.76		
802.11n(HT20)	01	-17.13	8.00	Pass
	06	-18.15		
	11	-19.36		

Note:

- 1) Measured peak power spectrum density at difference data rate for each mode and recorded worst case for each mode.
- 2) Test results including cable loss;
- 3) Worst case data at 1Mbps at IEEE 802.11b; 6Mbps at IEEE 802.11g; 6.5Mbps at IEEE 802.11n HT20;

For MIMO:

Type	Channel	Power Spectral Density (dBm/3KHz) ANT1	Power Spectral Density (dBm/3KHz) ANT2	Power Spectral Density (dBm/3KHz) MIMO	Limit (dBm)	Result
802.11n(HT20)	01	-17.14	-17.13	-14.12	8	Pass
	06	-19.28	-18.15	-15.67		
	11	-19.44	-19.36	-16.39		

Please refer to following plots;

ANT 1

