

Client:	Broadcom Corporation	Job Number:	J72137
Model:	BCM94322HM8L (Dipole C2PC)	T-Log Number:	T72240_DTS
		Account Manager:	Dean Eriksen
Contact:	Anna Liang		
Standard:	FCC	Class:	N/A

Maximum Permissible Exposure

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 8/6/2008

Test Engineer: Mark Hill

General Test Configuration

Calculation uses the free space transmission formula:

$$S = (PG)/(4 \pi d^2)$$

Where: S is power density (W/m^2), P is output power (W), G is antenna gain relative to isotropic, d is separation distance from the transmitting antenna (m).

Summary of Results

Device complies with Power Density requirements at 20cm separation:	Yes/No
Maximum Power Density (mW/cm^2)	0.138

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Note: Power measurements taken from original MPE calculations

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Run #1: MPE for 2.4GHz band transmission - 802.11b and 802.11g

Use: General
Antenna: 3.62 dBi - Joymax Dipole

2.4 GHz band - 802.11b and 802.11g mode worse case

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
2412	22.0	158.5	0	3.62	22.0	364.75	0.073	1.000
2437	21.9	154.9	0	3.62	21.9	356.45	0.071	1.000
2462	21.6	144.5	0	3.62	21.6	332.66	0.066	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
2412	0.073	1.000	5.4cm
2437	0.071	1.000	5.3cm
2462	0.066	1.000	5.1cm

Run #2: MPE for 2.4GHz band transmission - 802.11n 20 MHz CDD

Use: General
Antenna: 3.62 dBi - Effective gain 6.62 dBi

2.4 GHz band - 802.11n 20MHz CDD

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
2412	17.0	50.1	0	6.62	17.0	230.14	0.046	1.000
2437	21.8	151.4	0	6.62	21.8	695.02	0.138	1.000
2462	16.7	46.8	0	6.62	16.7	214.78	0.043	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
2412	0.046	1.000	4.3cm
2437	0.138	1.000	7.4cm
2462	0.043	1.000	4.1cm

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Run #3: MPE for 2.4GHz band transmission - 802.11n 40 MHz CDD

Use: General
Antenna: 3.62 dBi - Effective gain 6.62 dBi

2.4 GHz band - 802.11n 40MHz CDD

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
2422	16.1	40.7	0	6.62	16.1	187.07	0.037	1.000
2437	16.8	47.9	0	6.62	16.8	219.79	0.044	1.000
2452	14.8	30.2	0	6.62	14.8	138.68	0.028	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
2422	0.037	1.000	3.9cm
2437	0.044	1.000	4.2cm
2452	0.028	1.000	3.3cm

Run #4: MPE for 5.7GHz band transmission - 802.11a Legacy

Use: General
Antenna: 4.61 dBi - Joymax Dipole

5.7 GHz band - 802.11a Legacy

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
5745	16.6	45.7	0	4.61	16.6	132.13	0.026	1.000
5785	16.6	45.7	0	4.61	16.6	132.13	0.026	1.000
5825	16.7	46.8	0	4.61	16.7	135.21	0.027	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
5745	0.026	1.000	3.2cm
5785	0.026	1.000	3.2cm
5825	0.027	1.000	3.3cm

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Run #5: MPE for 5.7GHz band transmission - 802.11n 20MHz CDD

Use: General
Antenna: Two 4.61 antenna - Effective 7.61 dBi

5.7 GHz band - 802.11n 20MHz CDD

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
5745	19.8	95.5	0	7.61	19.8	550.81	0.110	1.000
5785	19.4	87.1	0	7.61	19.4	502.34	0.100	1.000
5825	19.6	91.2	0	7.61	19.6	526.02	0.105	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
5745	0.110	1.000	6.6cm
5785	0.100	1.000	6.3cm
5825	0.105	1.000	6.5cm

Run #6: MPE for 5.7GHz band transmission - 802.11n 40MHz CDD

Use: General
Antenna: Two 4.61 antenna - Effective 7.61 dBi

5.7 GHz band - 802.11n 40MHz CDD

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
	dBm	mW*						
5755	19.9	97.7	0	7.61	19.9	563.64	0.112	1.000
5795	19.7	93.3	0	7.61	19.7	538.27	0.107	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 20 cm mW/cm ²	MPE Limit mW/cm ²	Distance where S <= MPE Limit
5755	0.112	1.000	6.7cm
5795	0.107	1.000	6.5cm