

Client:	Broadcom Corporation	Job Number:	J79248
Model:	BCM94322HM8L	T-Log Number:	T79249
		Account Manager:	Sheareen Washington
Contact:	Pin Wen		
Standard:	15.209 / 15.247 / 15.E / RSS-210	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: 5/17/2010

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
Maximum Power Density ( $mW/cm^2$ )	0.157

### 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 - Calculations use the worse case antenna from original testing or from this change.

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Run #1: MPE for 5150-5250 MHz - 802.11a Legacy

Use: General  
Antenna: 5.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5180	14.5	28.2	0	5.6	14.5	102.33	0.020	1.000
5200	14.7	29.5	0	5.6	14.7	107.15	0.021	1.000
5240	14.3	26.9	0	5.6	14.3	97.72	0.019	1.000

Run #2: MPE for 5250-5350 MHz - 802.11a Legacy

Use: General  
Antenna: 5.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5260	17.7	58.9	0	5.6	17.7	213.80	0.043	1.000
5300	18.0	63.1	0	5.6	18.0	229.09	0.046	1.000
5320	16.2	41.7	0	5.6	16.2	151.36	0.030	1.000

Run #3: MPE for 5470-5725 MHz - 802.11a Legacy

Use: General  
Antenna: 5.67 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5500	17.4	55.0	0	5.67	17.4	202.77	0.040	1.000
5600	18.1	64.6	0	5.67	18.1	238.23	0.047	1.000
5700	18.2	66.1	0	5.67	18.2	243.78	0.048	1.000

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Run #4: MPE for 5150-5250 MHz - 802.11n 20MHz CDD

Use: General  
Antenna: Effective Gain 8.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5180	12.8	19.1	0	8.6	12.8	138.04	0.027	1.000
5200	12.8	19.1	0	8.6	12.8	138.04	0.027	1.000
5240	12.9	19.5	0	8.6	12.9	141.25	0.028	1.000

Run #5: MPE for 5250-5350 MHz - 802.11n 20MHz CDD

Use: General  
Antenna: Effective Gain 8.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5260	18.6	72.4	0	8.6	18.6	524.81	0.104	1.000
5300	18.7	74.1	0	8.6	18.7	537.03	0.107	1.000
5320	16.8	47.9	0	8.6	16.8	346.74	0.069	1.000

Run #6: MPE for 5470-5725 MHz - 802.11n 20MHz CDD

Use: General  
Antenna: Effective Gain 8.67 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5500	18.8	75.9	0	8.67	18.8	558.47	0.111	1.000
5600	19.6	91.2	0	8.67	19.6	671.43	0.134	1.000
5700	19.5	89.1	0	8.67	19.5	656.15	0.131	1.000

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Run #7: MPE for 5150-5250 MHz - 802.11n 40MHz CDD

Use: General  
Antenna: Effective Gain 8.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5190	14.9	30.9	0	8.6	14.9	223.87	0.045	1.000
5230	15.3	33.9	0	8.6	15.3	245.47	0.049	1.000

Run #8: MPE for 5250-5350 MHz - 802.11n 40MHz CDD

Use: General  
Antenna: Effective Gain 8.6 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5270	18.7	74.1	0	8.6	18.7	537.03	0.107	1.000
5310	16.2	41.7	0	8.6	16.2	302.00	0.060	1.000

Run #9: MPE for 5470-5725 MHz - 802.11n 40MHz CDD

Use: General  
Antenna: Effective Gain 8.67 dBi

Freq. MHz	EUT Power		Cable Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 20 cm mW/cm <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
5510	20.0	100.0	0	8.67	20.0	736.21	0.146	1.000
5590	20.3	107.2	0	8.67	20.3	788.86	0.157	1.000
5670	19.9	97.7	0	8.67	19.9	719.45	0.143	1.000