Client:	Avaya	Job Number:	J81820
Model:	AP 8120 with 2 external Antenna (Class II Permissive change)	T-Log Number:	T82013
		Account Manager:	Christine
Contact:	Vipin Naik		
Standard:	FCC 15.247	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: 8/2/2011

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:	No
Power Density (mW/cm^2) @ 20cm:	1.234
If not, required separation distance (in cm):	22.2

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.

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Run #1: Two channel operation, one 2.4GHz and 5GHz channel, worse case

Use: General Use

Antenna: 2.4GHz - 7.13dBi, 5GHz - 8.7dBi
Effective Gain for CDD Mimo: 2.4GHz - 10.0dBi, 5GHz - 11.7dBi

The system allows for one radio to operate in the 2.4GHz band and one radio to operate in the 5GHz bands simultaneously. It prevents both radios operating in the same band at the same time. Below calculations include worse case from original filing and this C2PC.

Maximum eirp is calculated as follows:

Uses the average power for each channel (where given), otherwise uses the peak power

Used for Multiple Transmitters

One 2.4GHz and one 5.15-5.25GHz operation

Band	Mode	Output Power		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2400 - 2483.5	OFDM	25.6	-	10.0	35.6	3.631	11	1	3.631	35.60
2401 - 2483.5	CCK	-	18.8	7.1	25.9	0.392				
5150-5250	OFDM	-	13.4	8.7	22.1	0.162	4	1	0.162	22.10
5250-5350	OFDM	-	18.2	11.7	29.9	0.977	4	0	-	-
5470-5725	OFDM	-	18.0	11.8	29.8	0.955	4	0	-	-
5725 - 5850	OFDM	22.3	-	11.8	34.1	2.570	5	0	-	-
						Totals:		2	3.793	35.79

One 2.4GHz and one 5.25-5.35GHz operation

Band	Mode	Output Power		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2400 - 2483.5	OFDM	25.6	-	10.0	35.6	3.631	11	1	3.631	35.60
2401 - 2483.5	CCK	-	18.8	7.1	25.9	0.392				
5150-5250	OFDM	-	13.4	8.7	22.1	0.162	4	0	-	-
5250-5350	OFDM	-	18.2	11.7	29.9	0.977	4	1	0.977	29.90
5470-5725	OFDM	-	18.0	11.8	29.8	0.955	4	0	-	-
5725 - 5850	OFDM	22.3	-	11.8	34.1	2.570	5	0	-	-
						Totals:		2	4.608	36.64

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Contact:	Vipin Naik		
Standard:	FCC 15.247	Class:	N/A

One 2.4GHz and one 5.4-5.7GHz operation

Band	Mode	Output Power		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2400 - 2483.5	OFDM	25.6	-	10.0	35.6	3.631	11	1	3.631	35.60
2401 - 2483.5	CCK	-	18.8	7.1	25.9	0.392				
5150-5250	OFDM	-	13.4	8.7	22.1	0.162	4	1	0.162	22.10
5250-5350	OFDM	-	18.2	11.7	29.9	0.977	4	0	-	-
5470-5725	OFDM	-	18.0	11.8	29.8	0.955	4	1	0.955	29.80
5725 - 5850	OFDM	22.3	-	11.8	34.1	2.570	5	0	-	-
							Totals:	3	4.748	36.77

One 2.4GHz and one 5.7-5.8GHz operation

Band	Mode	Output Power		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2400 - 2483.5	OFDM	25.6	-	10.0	35.6	3.631	11	1	3.631	35.60
2401 - 2483.5	CCK	-	18.8	7.1	25.9	0.392				
5150-5250	OFDM	-	13.4	8.7	22.1	0.162	4	0	-	-
5250-5350	OFDM	-	18.2	11.7	29.9	0.977	4	0	-	-
5470-5725	OFDM	-	18.0	11.8	29.8	0.955	4	0	-	-
5725 - 5850	OFDM	22.3	-	11.8	34.1	2.570	5	1	2.570	34.10
							Totals:	2	6.201	37.92

Worse Case Condition

EIRP mW	Power Density (S) at 20 cm mW/cm^2	MPE Limit at 20 cm mW/cm^2	Distance where S <= MPE Limit cm
6201.2	1.234	1.000	22.2