

Client: Pace Americas, Inc	Job Number: J97522
Model: HR44	T-Log Number: T97548
Contact: Mark Rieger	Project Manager: Irene Rademacher
Standard: FCC 15.407 (New Rules)	Project Coordinator: -
	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: 2/20/2015

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
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EMC Test Data

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Contact:	Mark Rieger	Project Manager:	Irene Rademacher
Standard:	FCC 15.407 (New Rules)	Project Coordinator:	-
		Class:	N/A

Use: General
 Antenna: 2.4GHz Wifi - 3.3dBi (3.3dBi effective for MIMO modes)
 5GHz Wifi - 4.1dBi (4.1dBi effective for MIMO modes)
 802.15.4 - 4.9dBi

Band	Mode	Output Power		Antenna gain (Max)	EIRP		Channels Available	Channels Used	Total EIRP	
		Peak	Average		dBm	W			W	dBm
2400 - 2483.5	OFDM	-	21.7	3.3	25.0	0.316	11			
2400 - 2483.5	CCK	-	19.7	3.3	23.0	0.200				
2400 - 2483.5	802.15.4	-	2.8	4.9	7.7	0.006	15	1	0.006	7.70
5150 - 5250	OFDM	-	23.4	4.1	27.5	0.562	2			
5250 - 5350	OFDM	-	22.0	4.1	26.1	0.407	4			
5470-5725	OFDM	-	21.9	4.1	26.0	0.398	8			
5725 - 5850	OFDM	-	24.8	4.1	28.9	0.776	2	1	0.776	28.90
Totals:								2	0.782	28.93

Worse case combination of 802.15.4 radio + wifi radio.

EIRP mW	Power Density (S) at 20 cm mW/cm ²	MPE Limit at 20 cm mW/cm ²
782.14	0.156	1.000

1. For 2.4GHz OFDM - 802.11n20 was worse case (highest eirp) (taken from original filing)
2. For 5.8GHz OFDM - 802.11n20 was worse case
3. For 5150-5250MHz OFDM - 802.11n40 was worse case
4. For 5250-5350MHz OFDM - 802.11n20 was worse case (taken from original filing)
5. For 5470-5725MHz OFDM - 802.11n20 was worse case (taken from original filing)

The 802.15.4 radio can transmit simultaneously with the wifi radio. The wifi radio can not transmit in the 2.4 and 5GHz bands simultaneously.