Client	**Ecobee Inc**	
Product	**Athena RS**	
Standard(s)	RSS 210 Issue 8:2010 / FCC Part 15 Subpart C 15:2014	**GLOBAL EMC INC**

Maximum Permissible Exposure

Purpose

The purpose of this test is to ensure that the RF energy intentionally transmitted, in terms of power density emitted from the EUT at a stated operating distance does not exceed the limits listed below as defined in the applicable test standard, as calculated based upon readings obtained during testing.   This helps protect human exposure to excessive RF fields.

Limit(s) and Method

The limits, as defined FCC 1.1310 Table 1 (B) limits for general public exposure was applied. The limits for the frequency ranges 300 MHz to 1.5 GHz was applied. The limits are f/1500 mW/ cm^2. The distance used for calculations was 20 cm, as this is the minimum distance an operator will be from the EUT during normal operation, as stated by the manufacturer.

Results

The EUT passed the requirements.   The worst case calculated power density was 0.000127 mW/cm^2, this is significantly under the 0.618 mW/cm^2 requirement.

Calculations

Method 2 (EIRP)
PCB antenna

P_d = EIRP / (4*pi*R^2)

Where EIRP = equivalent isotropic radiated power
Where R = 20 cm

The EUT have highest output field strength, 93.1 dBuV, at 927 MHz.
EIRP = E(dBuV/m) – 95.2
EIRP = 93.3 -95.2
EIRP = -1.9 dBm or 0.64 mW

P_d = 0.64 mW / (4 * pi * 20cm^2)
P_d = 0.64 mW / 5026 cm^2
P_d = 0.000127 mW/cm^2

The limit for 927 MHz is (927/1500) = 0.618 mW/cm^2