ISRAEL TESTING LABORATORIES
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FCC RF Exposure report

1. Product information

FCC ID	2AFHU-SR150F
Product	Radar-Based, Outdoor Perimeter Security Sensor
Model No.	SR150F
Power supply	48V (via POE)
Antenna gain	9.0dBi (max.)
Assigned frequency range	5725-5780MHz
Operating frequency range	5726-5749MHz
Transmit power (max EIRP)	9.3dBm
RF Exposure considerations	A worst-case test separation distance of 20cm=200mm

2. Evaluation Method and Limit

FCC: Part 1, Subpart I, Section 1.1310(e)(1), RSS 102, Issue 5, Section 2.5.2 (Table 4 requirements), KDB447498 D01 V06 (October 23, 2015)

IC: RSS-102, Issue 5, March 2015

According to KDB447498 D01 General RF Exposure Guidance v06 Section 4.3.1, the standalone SAR test exclusion considerations are: “Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied.

The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1)."

According to RSS-102, Section 3, “Devices that have a radiating element normally operating at or below 6 GHz, with a separation distance of up to 20 cm between the user and/or bystander and the device, shall undergo a SAR evaluation. Devices that have a radiating element normally operating at or below 6 GHz, with a separation distance greater than 20 cm between the user and/or bystander and the device shall undergo an RF exposure evaluation. However, a SAR evaluation may be performed in lieu of an RF exposure evaluation for devices operating below 6 GHz with a separation distance of greater than 20 cm between the user and/or

bystander and the device. Devices operating above 6 GHz regardless of the separation distance shall undergo an RF exposure evaluation."

For MPE evaluation we take the following E.U.T values:

3. Max. power (conducted)=0.3 dBm = 1.1mW
4. Antenna gain = 9 dBi = 8
5. Minimum distance from human body: 20cm=200 mm
6. The power density was calculated using the following formula: $S = \frac{P_t G_t}{4\pi R^2}$

   Where:

   S: Power density (mW/cm^2)

   P_t: Conducted Transmitted Power (mW)

   G_t: Antenna Gain (numeric)

   R: Distance from Transmitter (cm)

3. FCC Test Limit

Limits for General Population/Uncontrolled Exposure:

Frequency range (MHz)	Power density (mW/cm^2)	Averaging time (min)
1,500.0-100,000.0	1.0	< 30

4. Test Results

Frequency	FCC calculation	FCC limit calculation	Verdict
(MHz)	(mW/cm^2)	(mW/cm^2)	
5726	$S = \frac{P_t G_t}{4\pi R^2}$ = [1.1*9]/[4*3.16*(20^2)]=0.002	<1.0	Pass

Figure 1 Test Results

5. Conclusion

The measurement results comply with the Limit per FCC, Part 1, Subpart I, Section 1.1310(e)(1), RSS 102, Issue 5, Section 2.5.2(table 4 requirements) KDB447498 D01 V06 (October 23, 2015)

End of Report