

1.0 APPLICANT:

2.0 FCC RULES CONCERNING MAXIMUM PERMISSIBLE RF EXPOSURE:

These limits are generally based on recommended exposure guidelines published by the National Council on Radiation Protection and Measurements (NCRP) in “Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields,” NCRP Report No. 86, Sections 17.4.1, 17.4.1.1, 17.4.2 and 17.4.3. Copyright NCRP, 1986, Bethesda, Maryland 20814. In the frequency range from 100 MHz to 1500 MHz, exposure limits for field strength and power density are also generally based on guidelines recommended by the American National Standards Institute (ANSI) in Section 4.1 of “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz,” ANSI/IEEE C95.1–1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers.

Assumed separation distance is 20cm

4.0 RESULTS:

In the configuration tested the EUT complied with the standards specified above.

MPE CALCULATIONS - IC

1.0 APPLICANT:

DATE:12/6/2019

NAME OF APPLICANT:Ademco Inc.

IC NUMBER:573F-PROINDMV

2.0 IC RULES CONCERNING MAXIMUM PERMISSIBLE RF EXPOSURE:

RSS-102 § 2.5.2 Exemption Limits for Routine Evaluation - RF Exposure Evaluation.

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device’s radiating element is greater than 20 cm, except when the device operates as follows:

- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived.

3.0 UUT POWER OUTPUT AND ANTENNA GAIN

The maximum output from Exhibit 5-1 is measured as 19.54 dBm.
The max antenna gain is 2.2 dBi
The max time-averaged EIRP per 2.0 above is $1.31 \times 10^{-2} \times 904.5^{0.6834}$ (W) = 1.373W = 1373 mW.
The power density at 20cm corresponding to 1373 mW EIRP is $N/(4 \times \pi \times d^2)$ or $1373/(4*\pi*20^2) = 0.273 \text{ mW/cm}^2$

3.1 MPE CALCULATIONS:

IC GENERAL POPULATION / UNCONTROLLED EXPOSURE LIMITS:
FROM 300 MHz to 6 GHz use $(1.31 \times 10^{-2}) \times f^{0.6834}$ for max EIRP(W)

EQUATIONS:
 $\text{MAX AVG EIRP (mW)} = 10^{\{(\text{MAX COND PWR.} + \text{ANT GAIN} + \text{DUTY FACTOR})/10\}}$
THE FRIIS TRANSMISSION EQUATION = $\text{EIRP} \times \text{DUTY CYCLE} / (4 \times \pi \times 20 \text{ cm}^2)$

BANDS AND IC NUMBERS	
BAND	IC NUMBER:
900MHz	573F-PROINDMV

BAND:	CH No:	FREQ(Mhz)	TRP dbm	MAX COND. PWR (dBm)	ANTENNA GAIN(db):	DUTY FACTOR (dB)	MAX AVG EIRP (mW)	FRISS mW/CM² :	EXP LIMIT mW/CM² :	% OF LIMIT:
900MHz	N/A	904.5	N/A	19.54	2.2	0.00	149.279	0.0296982	0.273	10.8723

MAXIMUM MPE OF THE RF6 MODULE AS % OF LIMIT IS: 10.8723

4.0 RESULTS:

TEST RESULT: PASS
In the configuration tested the EUT complied with the standards specified above.