

## Maximum Permissible Exposure (MPE) & Exposure evaluation

Report identification number: 1-9547/19-02-06

Certification numbers and labeling requirements	
FCC ID	ROJ-AVIATOR700S
IC number	6200B-AVIATOR700S
HVIN (Hardware Version Identification Number)	AVIATOR 700S
PMN (Product Marketing Name)	AVIATOR 700S
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

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### Document authorized:

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**EUT technologies:**

Technologies:	Nominal EIRP	Max. tolerance:	Min. pathloss:
Aeronautical Satellite Terminal	23 dBW = 53 dBm	+/- 1.5 dB	-- (if applicable)

**Prediction of MPE limit at given distance - FCC**

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2$$

where: S = Power density  
P = Power input to the antenna  
G = Antenna gain  
R = Distance to the center of radiation of the antenna

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled "Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure"

Frequency Range (MHz)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction: minimum safety distance (worst case for each antenna)

Marketing Name	Antenna Type	Max EIRP / dBm	MPE limit / mW/cm <sup>2</sup>	minimum safety distance during operation / cm
Aviator 700S	LGA-5001	54.5	1	<b>233.94</b>

**Prediction of MPE limit - IC**

RSS-102, Issue 5, Section 4 Table 4:

Power density at 1626 MHz =  $0.02619 * 1626^{0.6834} = 4.098 \text{ W/m}^2$

Prediction: minimum safety distance (worst case for each antenna)

Marketing Name	Antenna Type	Max EIRP / dBm	MPE limit / W/m <sup>2</sup>	minimum safety distance during operation / cm
Aviator 700S	LGA-5001	54.5	4.098	<b>201.42</b>

**Conclusion:** Safety distance according to RSS-102 represents the worst case of both FCC and ISED requirements.