

Maximum Permissible Exposure (MPE) & Exposure evaluation

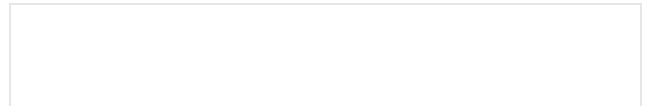
Report identification number: 1-9547/19-01-06-A

Certification numbers and labeling requirements	
FCC ID	ROJ-AVIATOR200S
IC number	6200B-AVIATOR200S
HVIN (Hardware Version Identification Number)	AVIATOR 200S
PMN (Product Marketing Name)	AVIATOR 200S
FVIN (Firmware Version Identification Number)	-/-
HMN (Host Marketing Name)	-/-

Note: Version –A: minimum distance of 50 cm used for calculation, HVIN and PMN updated

This test report is electronically signed and valid without handwriting signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

Document authorized:



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EUT technologies:

Technologies:	Nominal EIRP	Max. tolerance:	Min. pathloss:
Aeronautical Satellite Terminal	10 dBW = 40 dBm	+/- 1 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 ²)	Averaging Time (minutes)
300 -1500	f/1500	30
1500 - 100000	1.0	30

where f = Frequency (MHz)

Prediction: worst case

Marketing Name	Antenna Type	Max EIRP / dBm	MPE limit / mW/cm ²	minimum safety distance during operation / cm	S / mW/cm ²
Aviator 200S	LGA-5005	41.0	1	50	0.4

Prediction of MPE limit - IC

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

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

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

Marketing Name	Antenna Type	Max EIRP / dBm	MPE limit / W/m ²	minimum safety distance during operation / cm	S / W/m ²
Aviator 200S	LGA-5005	41	4.098	50	4.01

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