

AES Corporation
285 Newbury Street, Peabody, Massachusetts 01960,
United States

Federal Communications Commission
Authorization and Evaluation Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia, MD 21046

Applicant's declaration concerning RF Radiation Exposure

We hereby indicate that the product
Product description: RF DATA RADIO
Model No: 52-7085UE5

The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The integral antennas used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter within the host device.

A safety statement concerning minimum separation distances from enclosure of the
Product: RF DATA RADIO
will be integrated in the user's manual to provide end-users with transmitter operating conditions for satisfying RF exposure compliance.

The appropriate information can be drawn from the test report no: W6M22003-19794-C-1 and the accompanying calculations.

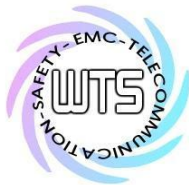
Company: AES Corporation
Address: 285 Newbury Street, Peabody, Massachusetts 01960, United States

Date: 2020-04-17



Signature

Michael Sherman
President & CEO
AES Corporation



12. Maximum Permissible Exposure

12.1 Applicable Standard

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.9 m normally can be maintained between the user and the device.

12.2 MPE Calculation Method

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	--	--	f/1500	30
1500-100,000	--	--	1.0	30

f = frequency in MHz

*Plane-wave equivalent power density

$$E \text{ (V/m)} \cdot \frac{\sqrt{30 \times P \times G}}{d}$$

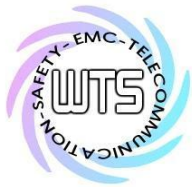
$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} \cdot \frac{E^2}{377}$$

E = Electric field (V/m) P = output power (W) G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$Pd \cdot \frac{30 \times P \times G}{377 \times d^2}$$



Registration number: W6M22003-19794-C-1
FCC ID: L9N-7085PUE5

EIRP = max. conducted output power + antenna gain+ tune up

$$\begin{aligned} \text{EIRP} &= 38.75 \text{ dBm} + (3 \text{ dBi [antenna gain claimed by manufacturer]} + 0.35 \text{ dB [tune up]}) = \\ &42.1 \text{ dBm} = 16218.101 \text{ mW} \end{aligned}$$

Established separation distance is 35 cm.

Operating frequency band: 406~430 MHz, 440~470 MHz

The product meets RF exposure requirement.

Because the power density of 1.0535 mW/cm^2 at 430 MHz is below the power density limit of 1.4333 mW/cm^2 .