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RF EXPOSURE (mobile unit)

Standard Applicable

This device is not fixed inside the host equipment, it is connected with host through wire. So it is easy to be re-located in the place where at least 20cm far away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance with the antenna should be included in users manual. So this device is classified as Mobile Device.

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Measurement Result:

According to FCC 1.1310: The criteria shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b).

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
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				
30-300	27.5	0.073	0.2	30
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

Friis transmission formula : Pd = (Pout*G) / (4*pi*R)

where

Pd = power density in mW/cm$_2$

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm.

Antenna Gain:

Output Power Into Antenna & RF Exposure at distance 20cm:

The max. Pd is:

Pout=-5.08dBm=0.31mW

G=2.1dB

Pd=(0.31X2.1)/(4X3.1416X2.5)=0.02 mW/cm$_2$

The SAR measurement is not necessary.