16. RF Exposure

16.1 Standard Applicable

According to §15.247(b)(4) and §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.

The device is class as a Mobile device.

According to §1.1310 and §2.1093 RF exposure is calculated.

Limits for Maximum Permissive Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
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
1500-15000	/	/	1.0	30

F = frequency in MHz

* = Plane-wave equipment power density

(A-antenna Port)

Maximum peak output power at antenna input terminal: 14.80 (dBm)

Maximum peak output power at antenna input terminal: 30.1995 (mW)

Antenna gain (typical): 5 (dBi)

Maximum antenna gain: 3.162 (numeric)

Prediction distance: 20 (cm)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm^2)

Power density at predication frequency at 20 (cm) distance   0.0190086 (mW/cm^2)

S	P	P	G	G	R
mW/cm^2	mW	dBm	dBi	(numeric)	cm
0.01900861	30.1995172	14.8	5	3.162278	20

Result

The predicted power density level at 20 cm is 0.0190086 mW/cm^2.   This is below the uncontrolled exposure limit of 1 mW/cm^2 at 5180 MHz.

(B-antenna port)

Maximum peak output power at antenna input terminal: 20.12 (dBm)
Maximum peak output power at antenna input terminal: 102.80 (mW)
Antenna gain (typical): 3.25 (dBi)
Maximum antenna gain: 2.1134 (numeric)
Prediction distance: 20 (cm)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm^2)
Power density at predication frequency at 20 (cm) distance   0.04324 (mW/cm^2)

S	P	P	G	G	R
mW/cm^2	mW	dBm	dBi	(numeric)	cm
0.043246441	102.8016298	20.12	3.25	2.113489	20

Result

The predicted power density level at 20 cm is 0.04324 mW/cm^2.   This is below the uncontrolled exposure limit of 1 mW/cm^2 at 5260 MHz.