1 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

1.1 Standard Applicable

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.

This is a Mobile device, the MPE is required.

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

1.2 Maximum Permissible Exposure (MPE) Evaluation

Frequency (MHz)	Output Power (dBm)	Output Power (W)	Limit (W)
2402	**-1.30**	0.0007	1
2442	-1.34	0.0007	1
2480	-3.78	0.0004	1

MPE Prediction (BT4.0 Mode)

Prediction of MPE limit at a given distance

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 antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	-1.30	(dBm)
Maximum peak output power at antenna input terminal:	0.74131024	(mW)
Duty cycle:	60	(%)
Maximum Pav :	0.44478614	(mW)
Antenna gain (Maximum):	0.5	(dBi)
Antenna gain (linear):	1.12201845	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2402	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm2)
Power density at predication frequency at 20 (cm)	0.0000993	(mW/cm^2)

Measurement Result

The predicted power density level at 20 cm is 0.0000993 mW/cm^2. This is below the uncontrolled exposure limit of 1 mW/cm^2 at 2402MHz.

2 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 Standard Applicable:

According to RSS 102 issue 4 §2.5.2 RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and the device's radiating element is greater than 20 cm, except when the device operates as follows:
below 1.5 GHz and the maximum e.i.r.p. of the device is equal to or less than 2.5 W;
at or above 1.5 GHz and the maximum e.i.r.p. of the device is equal to or less than 5 W.

This is a Mobile device, at which separation distance between the user and the device's antenna is 20cm. Therefore, section 2.5.2 shall be complied with.

2.2 Maximum Permissible Exposure (MPE) Evaluation

BT4.0 Mode:

Maximum Peak output power at antenna input terminal:	-1.30	(dBm)
Maximum Peak output power at antenna input terminal:	0.74131024	(mW)
Antenna gain (typical):	0.5	(dBi)
Maximum antenna gain:	1.12201845	(numeric)

Evaluation Result
The radiated power is -1.3 + 0.5 = -0.8 dBm(EIRP) =0.832mW =0.000832W
that is less than or equal to 5W. Hence, following section 2.5.2 of RSS102 issue 4,
RF exposure evaluation is no longer required.

The predicted power density level at 20 cm is 0.000832 mW/cm2. This is below the uncontrolled exposure limit of 1 mW/cm2 at 2402.

~ End of Report ~