RF Exposure Statement

1. LIMITS

According to §1.1310 and §2.1091 RF exposure is calculated.

(B) Limits for General Population/Uncontrolled Exposures				
Frequency range (MHz)	Electric field Strength (V/m)	Magnetic field Strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)
0.3 - 1.34......................................	614	1.63	*(100)	30
1.34 - 30......................................	824/f	2.19/f	*(180/ f²)	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

2. MAXIMUM PERMISSIBLE EXPOSURE Prediction

Prediction of MPE limit at a given distance

$$S = PG/4\pi R^2$$

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

3. RESULTS

*. LTE 5MHz Mode

Max Peak output Power at antenna input terminal	30.290	dBm
Max Peak output Power at antenna input terminal	1069.055	mW
Prediction distance	150.000	cm
Prediction frequency	1882.500	MHz
Antenna Gain(typical)	20.000	dBi
Antenna Gain(numeric)	100.000	-
Power density at prediction frequency(S)	0.378	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

*. LTE 10MHz Mode

Max Peak output Power at antenna input terminal	30.270	dBm
Max Peak output Power at antenna input terminal	1064.143	mW
Prediction distance	150.000	cm
Prediction frequency	1855.000	MHz
Antenna Gain(typical)	20.000	dBi
Antenna Gain(numeric)	100.000	-
Power density at prediction frequency(S)	0.376	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

*. CDMA Mode

Max Peak output Power at antenna input terminal	30.120	dBm
Max Peak output Power at antenna input terminal	1028.016	mW
Prediction distance	150.000	cm
Prediction frequency	1851.250	MHz
Antenna Gain(typical)	20.000	dBi
Antenna Gain(numeric)	100.000	-
Power density at prediction frequency(S)	0.364	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

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*. LTE Mode

Max Peak output Power at antenna input terminal	24.00	dBm
Max Peak output Power at antenna input terminal	251.189	mW
Prediction distance	20.00	cm
Prediction frequency	1850	MHz
Antenna Gain(typical)	3.000	dBi
Antenna Gain(numeric)	1.995	-
Power density at prediction frequency(S)	0.100	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

*. CDMA Mode

Max Peak output Power at antenna input terminal	25.00	dBm
Max Peak output Power at antenna input terminal	316.228	mW
Prediction distance	20.00	cm
Prediction frequency	1850	MHz
Antenna Gain(typical)	3.000	dBi
Antenna Gain(numeric)	1.995	-
Power density at prediction frequency(S)	0.126	mW/cm^2
MPE limit for uncontrolled exposure at prediction frequency	1.000	mW/cm^2

[Booster]

1. **The power density level at 150 cm is 0.378 mW/cm^2 , which is below the uncontrolled exposure limit of 1.0 mW/cm^2 at LTE 5MHz**

2. **The power density level at 150 cm is 0.364 mW/cm^2 , which is below the uncontrolled exposure limit of 1.0 mW/cm^2 at CDMA**

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1. **The power density level with 3 dBi antenna gain / max power 24 dBm is 0.100 mW/cm^2 , which is below the uncontrolled exposure limit of 1.0 mW/cm^2 at LTE.**

2. **The power density level with 3 dBi antenna gain / max power 25 dBm is 0.126**

mW/cm^2, which is below the uncontrolled exposure limit of 1.0 mW/cm^2 at CDMA

⇨ **Simultaneous MPE for booster and module is (0.378/1.0) +(0.364/1.0) + (0.100/1.0) + (0.126/1.0) = 0.968 < 1**