

# R.F Exposure/Safety Calculation for MobileAccessHX High Power DAS Remote Unit CELL PCS

The E.U.T. is rack or wall mounted. The typical distance between the E.U.T. and the general population is >75 cm.

Calculation of Maximum Permissible Exposure (MPE)  
Based on Section 1.1307(b)(1) Requirements

(a) FCC limit at 881.0 MHz is:  $f / 1500 = 0.587 \frac{mW}{cm^2}$

FCC limit at 1960 MHz is:  $1 \frac{mW}{cm^2}$

Using table 1 of Section 1.1310 limit for general population/uncontrolled exposures, the above level is an average over 30 minutes.

(b) The power density produced by the E.U.T. is

$$S = \frac{P_t G_t}{4\pi R^2}$$

$P_t$ - Transmitted Peak Power (worst case)

$G_T$ - Antenna Gain ,dBi

$R$ - Distance from Transmitter

(c) Peak power density at worst case continuous transmission:

Band	Modulation	Pt (mW)	Antenna type	$G_T$ (dBi)	R (cm)	$S_{AV}$ (mW/cm <sup>2</sup> )	Spec (mW/cm <sup>2</sup> )
CELL	CDMA	3828	External	10	75	0.542	0.587
	GSM	3524	External	10	75	0.499	0.587
	W-CDMA	3381	External	10	75	0.478	0.587
PCS	CDMA	3556	External	10	75	0.503	1.0
	GSM	3221	External	10	75	0.456	1.0
	W-CDMA	3648	External	10	75	0.516	1.0