EXHIBIT MPE CALCULATIONS LS Research RateSaver

The following MPE calculations are based on a printed circuit board trace antenna with measured field strength of 127.2 dBµV/m (at 1 meter) and conducted RF power of +23.0 dBm as presented to the antenna. The calculated gain of this antenna, based on the field strength measurement is -0.6 dBi (measured over a conducting ground plane).

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

where: S = power density
P = power input to the 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:	23.00	(dBm)
Maximum peak output power at antenna input terminal:	199.526	(mW)
Antenna gain(typical):	-0.6	(dBi)
Maximum antenna gain:	0.871	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	2405	(MHz)
MPE limit for uncontrolled exposure at prediction frequency:	1	(mW/cm^2)
Power density at prediction frequency:	0.034572	(mW/cm^2)
Maximum allowable antenna gain:	14.0	(dBi)
Margin of Compliance at 20 cm =	14.6	dB