APPLICANT: OTC Wireless
FCC ID: MKZ0208WODU0E

MPE CALCULATION FOR 15 dBi ANTENNA

Formula used in the MPE Calculations:

$E^2/3770 = S$, mW/cm2
Pwatts*Ggain = $10^{(PdBm-30+GdBi)/10}$
E, V/m = $(Pwatts*Ggain*30)^{.5}/d$, meters
d = $((Pwatts*G*30)/3770*S))^{0.5}$ --------- (A)

Since
S (mW/cm2)	=	1.00	from 1.1310 Table 1
P (dBm)	=	15.80	EUT output power
G (dBi)	=	15.00	EUT antenna gain

Substitute these parameters into the A above, we have
MPE safe distance d (cm) =   4.37

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less

MPE CALCULATION FOR 24 dBi ANTENNA

Formula used in the MPE Calculations:

$E^2/3770 = S$, mW/cm2
Pwatts*Ggain = $10^{(PdBm-30+GdBi)/10}$
E, V/m = $(Pwatts*Ggain*30)^{.5}/d$, meters
d = $((Pwatts*G*30)/3770*S))^{0.5}$ --------- (A)

Since
S (mW/cm2) =		1.00	from 1.1310 Table 1
P (dBm) =	15.80	EUT output power	
G (dBi) =	24.00	EUT antenna gain	

Substitute these parameters into the A above, we have
MPE safe distance d (cm) =   12.33

NOTE: For mobile or fixed location transmitters, minimum separation distance is 20 cm, even if calculations indicate MPE distance is less