Maximum Public Exposure to RF (MPE) CFR 15.247 (i)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, of 1 mW/cm^2 at a distance, d, of 20 cm from the EUT.

Therefore, for:

Highest Gain Corner Reflective Antenna= 14 dBi

Calculation at 2 meters.

Peak Power (Watts) = 0.198 (from Table 4 of Test Report)
Gain of Transmit Antenna = 14 dB_i = 25.11, numeric (from Table 3 of Test Report)
d = Distance = 2 m = 2.0 m

S = (PG/ $4\pi d^2$) = EIRP/4A = 0.198 (25.11)/4*π*2.0*2.0
= 4.9718/50.265 = 0.0989 w/m^2
= (W/m^2) (1m^2/W) (0.1 mW/cm^2)
= 0.00989 mW/cm^2

which is << less than 1 mW/cm^2

Calculation at 20 cm.

Peak Power (Watts) = 0.198 (from Table 4 of Test Report)
Gain of Transmit Antenna = 14 dB_i = 25.11, numeric (from Table 3 of Test Report)
d = Distance = 20 cm = 0.20 cm

S = (PG/ $4\pi d^2$) = EIRP/4A = 0.198 (25.11)/4*π*0.2*0.2
= 4.9718/0.503 = 9.8968 w/m^2
= (W/m^2) (1m^2/W) (0.1 mW/cm^2)
= 0.98968 mW/cm^2

which is << less than 1 mW/cm^2

Highest Gain Dipole Antenna= 12 dBi

Peak Power (Watts) = 0.198 (from Table 4 of Test Report)
Gain of Transmit Antenna = 12 dB_i = 15.84, numeric (from Table 3 of Test Report)
d = Distance = 20 cm = 0.2 m

S = $(PG/ 4\pi d^2)$ = EIRP/4A = 0.198 (15.84)/4*π*0.2*0.2
= 3.138/0.503 = 6.2387 w/m^2
= (W/m^2) $(1m^2/W)$ $(0.1\ mW/cm^2)$
= 0.62387 mW/cm^2

which is << less than 1 mW/cm^2

Highest Gain Patch Antenna= 12 dBi

Peak Power (Watts) = 0.198 (from Table 4 of Test Report)
Gain of Transmit Antenna = 12 dB_i = 15.84, numeric (from Table 3 of Test Report)
d = Distance = 20 cm = 0.2 m

S = $(PG/ 4\pi d^2)$ = EIRP/4A = 0.198 (15.84)/4*π*0.2*0.2
= 3.138/0.503 = 6.2387 w/m^2
= (W/m^2) $(1m^2/W)$ $(0.1\ mW/cm^2)$
= 0.62387 mW/cm^2

which is << less than 1 mW/cm^2