

MPE EVALUATION

Model Name: ECOSTONE

Model No.: GDI-EGST700, GDI-EGST701, GDI-EGST702, GDI-EGST703, GDI-EGST704, GDI-EGST705, GDI-EGST706, GDI-EGST707, GDI-EGST708, GDI-EGST709, GDI-EGST710

FCC ID: **WYHGDI-EGST700**

Limits for Maximum Permissible Exposure(MPE)

| Frequency Range(MHz) | Electric Field Strength(V/m) | Magnetic Field Strength(A/m) | Power Density(mW/cm ²) | Average Time |
|--|------------------------------|------------------------------|------------------------------------|--------------|
| (A) Limits for Occupational/Control Exposures | | | | |
| 300-1500 | -- | -- | F/300 | 6 |
| 1500-100000 | -- | -- | 5 | 6 |
| (B) Limits for General Population/Uncontrol Exposures | | | | |
| 300-1500 | -- | -- | F/1500 | 6 |
| 1500-100000 | -- | -- | 1 | 30 |

transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = gain of antenna in linear scale

π =3.1416

R = distance between observation point and center of the radiator in cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

| Channel Frequency (MHz) | Output Peak power (mW) | Antenna Gain (dBi) | Power density at 20cm (mW/ cm ²) | Power density Limits (mW/cm ²) | Modulation |
|-------------------------|------------------------|--------------------|--|--|---------------|
| 2402 | 1.14 | 0 | 2.268e-4 | 1 | GFSK |
| 2441 | 2.16 | 0 | 4.297e-4 | 1 | GFSK |
| 2480 | 2.13 | 0 | 4.237e-4 | 1 | GFSK |
| 2402 | 0.83 | 0 | 1.651e-4 | 1 | π /4DQPSK |
| 2441 | 1.82 | 0 | 3.621e-4 | 1 | π /4DQPSK |
| 2480 | 1.54 | 0 | 3.064e-4 | 1 | π /4DQPSK |
| 2402 | 0.83 | 0 | 1.651e-4 | 1 | 8DPSK |
| 2441 | 1.82 | 0 | 3.621e-4 | 1 | 8DPSK |
| 2480 | 1.54 | 0 | 3.064e-4 | 1 | 8DPSK |

