

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	Digital Proportional System
Model Name	MT-201
FCC ID	2ANFRMT-201

2. EVALUATION METHOD

According to 447498 D01 General RF Exposure Guidance v05

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 5 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR.

Where $f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

3. CALCULATION

According to the follow transmitter output power (P_t) formula :

$$P_t = (E \times d)^2 / (30 \times g_t)$$

P_t =transmitter output power in watts

g_t =numeric gain of the transmitting antenna (2.5dBi=1.778)

E =electric field strength in V/m

d =measurement distance in meters (m)

According to the report ATSE170707111,

$E_{\text{max}}=105.74\text{dBuV/m}=0.19364\text{V/m}$, $d=3\text{m}$, $g_t=1.778$

$P_t = (E \times d)^2 / (30 \times g_t) = 0.00633\text{W} = 6.33\text{mW}$

The result for RF exposure evaluation

$\text{SAR} = (6.33\text{mW} / 5\text{mm}) \cdot [\sqrt{2.478(\text{GHz})}] = 1.993 < 3.0$ for 1-g SAR

4. CONCLUSION

The SAR evaluation is not required.