RF Field Strength Calculations: Handset Unit

1. F.S. = 112.23 dBuV/m

2. $F.S.\ antilog\ \frac{112.23}{20} = antilog\ 5.61 = 0.7490\ V/M$

3. $ERP\ \frac{(0.7490)^2\ X\ 9}{49.2} = 102.6\ mW$

4. EIRP = 102.6 x 1.64 = 168.3 mW

5. Time Division Source Based Average Power

$$= 168.3\ x\ \frac{1.06\ mS\ (ontime\ 1\ slot)}{10mS} = 168.3\ x\ 0.106 = \underline{17.8\ mW}.$$

Time Division Source Based Average Power is determined by multiplying the EIRP as show in 4. above by the ratio of the SLOT(s) ON TIME divided by the FRAME period. In the above example, the slot is 1.06 mS divided by Frame Time 10 mS or 0.106 or 10.6% [see B(1)-7].