

RF EXPOSURE EVALUATION

1. PRODUCT INFORMATION

Product Description	iBall Wireless Trailer Hitch Camera System
Model Number	VT-C6110, iBall-M 5.8Ghz, VT-6110
FCC ID	2ABFHVTC6110TX

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 ≤ 50 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 (unitless)

E =electric field strength in V/m

d =measurement distance in meters (m)

According to the report AGC01765151101FE03,

$E_{\text{max}}=88.28\text{dBuV/m}=0.026\text{V/m}$, $d=3\text{m}$, $g_t=1.78$

$$P_t = (E \times d)^2 / (30 \times g_t) = (0.026 \times 3)^2 / (30 \times 1.78) = 0.000114\text{W} = 0.114\text{mW}$$

The result for RF exposure evaluation

$$\text{SAR} = (0.114\text{mW} / 5\text{mm}) \cdot [\sqrt{5.805(\text{GHz})}] = 0.055 < 3.0 \text{ for 1-g SAR}$$

4. CONCLUSION

The SAR evaluation is not required.