



FCC RF Exposure report

1. Product information

FCC ID	2ANZW-ARROWTRAKDVLR
Product	Ship Container Tracking Device
Model No.	ArrowTrack DV
Power supply	3.6 V, battery
Antenna type	Integral
Antenna gain	-3.3dBi (max.)
Assigned frequency range	2400.0-2483.5MHz
Operating frequency range	2402.0-2480.0MHz
Transmit power (conducted)	-10dBm
RF exposure considerations	A worst-case test separation distance of 100mm=1m

2. Evaluation Method and Limit

FCC: Part 1, Subpart I, Section 1.1310(e)(1),KDB447498 D01 V06 (October 23, 2015)

According to KDB447498 D01 General RF Exposure Guidance v06 Section 4.3.1, the standalone SAR test exclusion considerations are: "Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied.

The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander (see 5) of section 4.1)."

For MPE evaluation we take the following E.U.T values:

3. Max. power (conducted)=-10.3 dBm = 0.1mW
4. Antenna gain = -3.3dBi =0.5
5. Minimum distance from human body: 100.0cm=1m

6. The power density was calculated using the following formula: $S = \frac{P_t G_t}{4\pi R^2}$

Where:



S: Power density (mW/cm²)

P_t: Conducted Transmitted Power (mW)

G_t: Antenna Gain (numeric)

R: Distance from Transmitter (cm)

FCC Test Limit

Limits for General Population/Uncontrolled Exposure:

Frequency range (MHz)	Power density (mW/cm ²)	Averaging time (min)
1,500.0-100,000.0	1.0	< 30

7. Test Results

Frequency (MHz)	Calculation (mW/cm ²)	FCC limit (mW/cm ²)	Verdict
2440.0	$S = \frac{P_t G_t}{4\pi R^2} = [0.1 * 0.5] / [4 * 3.16 * (1)] = 0.004$	<1.0	Pass

Figure 1 Test Results

8. Conclusion

The measurement results comply with the limit per FCC, Part 1, Subpart I, Section 1.1310(e)(1).

End of Report