



Product Sheet

IFF Transponder

IFF TRANSPONDER

Model MD500L

The Model MD500L IFF Transponder is an L-Band augmentation device ideally suited for use in aerial target drones, unmanned vehicles, and cruise missiles as a radar enhancement device to provide automatic radar identification in response to interrogations from L-Band IFF and Air Traffic Control (ATC) radars. It also supports Mode C (altitude reporting) operation.

It features a modern compact design with less than 90 cubic inches (1,475 cubic centimeters) volume and weighs <4.25 lbs (~1.9 kilograms) which is 35% smaller than previous versions. The transponder incorporates the latest in solid state electronics design and features a 400 watt nominal peak power output. It also features IFF/TACAN blanking and suppression, reverse polarity power lead protection, and has a built-in duplexer for single antenna operation. Also, the transponder was designed with both front panel and remote reply code selection for greater convenience and ease of use. The L-Band IFF meets MIL-STD-810 requirements and is designed to operate over the temperature range of -40° C to +71° C.



Features

- Operates in 1, 2, 3/A, or C Modes

- 400 Watt Peak Power Output (typ.)

- 100% Solid State for High Reliability

- IFF/TACAN Blanking & Suppression

- Interrogation Side Lobe Suppression for Use in Busy Air Corridors

- Front Panel and Remote Reply Code Selection

- Weights Less than 4 lbs

- Built-In Duplexer for Single Antenna Operation

Applications

- Radar Identification

- Vehicle Tracking

IFF TRANSPONDER

Models: MD500L

Environmental

Temp, Operating:	-40 ° C to +71 ° C
Temp, Storage:	-80 ° F (-62° C) to 185 ° F (+85 ° C)
Altitude: Vibration:	Sea Level to 50,000 feet Random, 9.3 Grms max from 10 to 2000 Hz
Acceleration:	10 G in each of six direction for 1 min per axis while operating
Shock:	20 G (11 ms), 3 shocks each axis

Electrical

Frequency:	1030 / 1090 MHz
Impedance, Input/Output:	50 ohms nominal
Protection:	Built-in series diode protection against from DC input power reversal
Input Voltage:	24 to 32 VDC, common GND
Quiescent Current:	0.4 Amp nominal
Input Current:	1.1 Amp typical @ 2,500 prf
Input Power:	40 Watts max, all conditions
Suppression Modes:	

- (1) Decoding suppression during transmission
- (2) Interrogation Side Lobe Suppression (ISLS)
- (3) Over-interrogation reply limiting
- (4) Suppression from an external IFF or TACAN system
- (5) Provides suppression pulse to an IFF or TACAN system

Physical

Size:	2.52" H x 5.00" W x 5.13" D (6.40 x 12.7 x 13.03 cm)
Weight:	< 4.25 lbs
Antenna Connector:	TNC Female
Pwr/Remote Connector:	MS27474E14B35P BNC
IFF/TACAN Connector:	Female
Installation:	Flange Mount Base Plate