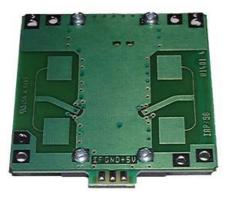


PLANAR TRANSCEIVERS MDU1420 Series





Features

- Low cost
- Small and Flat Profile
- Rugged, Reliable Construction
- Low Power Consumption
- High Sensitivity
- Meets FCC Part 15 reqts.

Description

The MDU (Motion Detector Unit) is an X-Band microwave transceiver that utilizes the Doppler shift phenomenon to "sense" motion. The unit consists of a circuit board with a lightweight plastic housing.

The circuit features a dielectric resonator stabilized FET oscillator, which provides stable operation over a broad temperature range in either CW or low duty cycle pulse mode and a balanced mixer for enhanced sensitivity and reliability.

Applications

- Intrusion Alarms (Room, Vehicle)
- Automatic Door Openers
- Speed Measurement
- Collision Avoidance
- Traffic Control
- Presence Sensing

This document only gives a general description of the product and shall not form part of any contract. Microwave Solutions pursue a policy of continuous product improvement and reserve the right from time to time to amend the specifications of products.



Operation

The basic principle of operation consists of detecting the frequency shift between a transmitted and a received signal reflected back from a moving object within the field of view of the unit.

The unit produces a low level IF output signal which can be amplified and processed to provide an audible or visual alarm signal and employs low cost surface mount manufacturing techniques which are field proven as being rugged and reliable.

Transmitter Frequency Se Power Outpu Operating Vo Operating Cu Harmonic Em <u>Pulse Mode (</u> Average Curr Width (Min.) Cycle (Min.) <u>Receiver</u> Sensitivity (10 3Hz to 80Hz <u>Antenna</u> Gain -3dB Beamwi H Plane E Plane	etting Accuracy : 3M t (Min.) : 13d litage : +5V irrent (CW) : 60n : 45n nissions : < -7 <u>Operation</u> rent (5% DC) : 2m/ : 5µS : 1% OdB S/N ratio) : -860 : 10µ bandwidth) idth :36deg :72deg <u>Characteristics</u> : 9gra	Bm EIRP ±0.25V A max. A typ. .3dBm A typ. Pulse ec Duty BBm Noise V (Both in		Power/I (over op Frequer (over op Temper Temper <u>NC</u> De S/I ov +5	Immental Characteristics Femp. Coefficient berating temp. range) : 3dB hcy/Temp. Coefficient berating temp. range) : 6.5MHz Operating cature :
Model	Application	Order Code	Free	quency	Comments
		C910605	10.515GHz		
MDU1420 USA,CANADA, ETC		C910603 C910606	10.525Ghz 10.535GHz		USA FCC Part 15 Indoors