

# REFLECTOMETER

## MODEL: MREF-T/R-08

### FEATURES

- RF frequency ..... 8 GHz
- In/out VSWR..... 1.25:1 maximum
- Digital output ..... 12 bit
- Low DC current ..... +12 VDC 550 mA maximum
- Weight ..... 450 grams typical
- Hermetically sealed



MITEQ's Model MREF-T/R-08 is an integrated assembly that contains a signal generator, transmitter, receiver and control circuitry. This unit transmits an RF signal, measures the reflected signal and then generates both an analog voltage and digital output that follows the level of reflected signal.

MREF-T/R-08 transmit section contains a stable and accurate Dielectric Resonant Oscillator (DRO) followed by an amplifier, low pass filter and isolator. The receive section contains an isolator, low-noise amplifier and temperature compensated detector to provide superior RF performance. Unit has both analog and digital (RS232) outputs of the detected signal which can feed a computer system for digital processing.

### ELECTRICAL SPECIFICATIONS

#### RECEIVER

PARAMETERS	UNITS	MIN.	TYP.	MAX.
RF input frequency	GHz		8.0	
Minimum detectable signal	dBm	-38	-42	
Dynamic range	dB	35	40	
VSWR	Ratio		1.20:1	1.25:1
Analog output	Volts	0		+5
Digital output			RS232	

#### TRANSMITTER

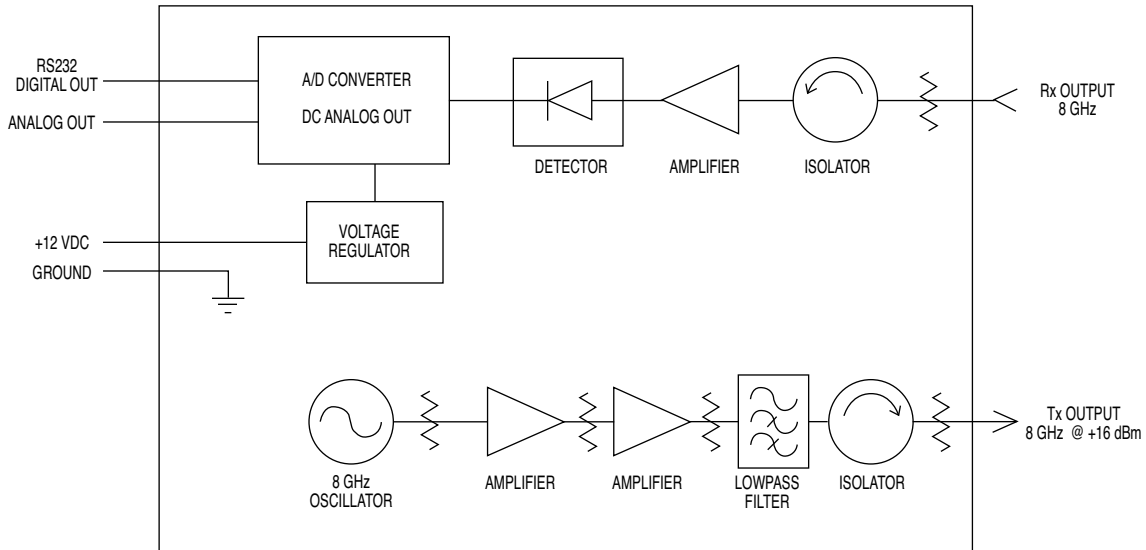
PARAMETERS	UNITS	MIN.	TYP.	MAX.
RF output frequency	GHz		8.0	
Frequency stability	MHz		± 5	± 10
Harmonics	dBc	40	50	
VSWR	Ratio		1.20:1	1.25:1
Output power	dBm	15	16	17
DC current @ +12 V	mA			550

# MREF-T/R-08

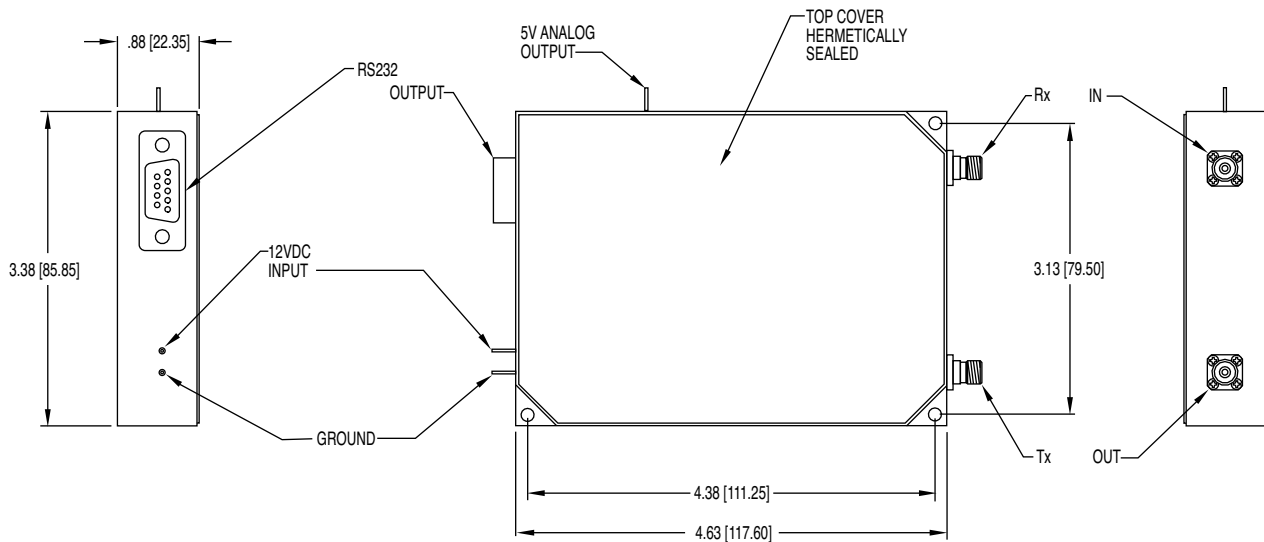
## ENVIRONMENTAL CONDITIONS

Operating temperature ..... 0 to 70°C  
 Storage temperature ..... -30 to +85°C

## FUNCTIONAL BLOCK DIAGRAM



## OUTLINE DRAWING



### GENERAL NOTES:

1. Dimensions shown in brackets [ ] are in millimeters.
2. Tolerance as follows: .xx = ±0.01 [.xx = ±0.25], .xxx = ±0.005 [.xxx = ±0.13]