

Standing Wave Detector, CPR284

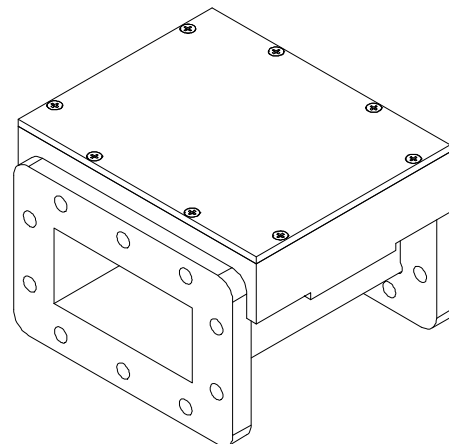
GERLING

Model GA3112

The Standing Wave Detector™ is a 3-probe waveguide reflectometer that utilizes a proprietary detection scheme to deliver output voltages proportional to internal waveguide voltage. Unlike conventional methods that utilize detector diodes, the output voltages from the SWD™ are inherently linear and temperature stable throughout a wide range of waveguide power levels.

A probe spacing of 1/8-guide wavelength allows relatively simple computation of standing wave relative phase angle, complex reflection coefficient and forward and reverse power. The overall length of the SWD™ is 1/2-guide wavelength, which enables insertion into an existing waveguide configuration without altering the effective standing wave conditions.

Connection to the SWD™ is through a standard 15-pin male subminiature "D" connector. Input requirements are +/- 12 VDC and outputs are 0-10 VDC. Scaling is factory calibrated for the customer's maximum waveguide power level and waveform. Custom packaging configurations include variations in waveguide size, length, flange types and hole patterns.



Electrical Specifications:

Frequency	2450 MHz nominal
Power	6 kW continuous max.
Dynamic Range	20 dB
Waveform	Any
Detector Scheme	Three probes at 1/8-guide wavelength spacing
Input Voltage	+/- 12 VDC, 50 mA max
Output Voltage	0-10 VDC proportional to waveguide voltage (1KΩ minimum impedance)
Scale	Factory calibrated for maximum waveguide power level and waveform per customer specification
Insertion Loss	0.01 dB maximum
Input VSWR	1.05 maximum

Mechanical Specifications:

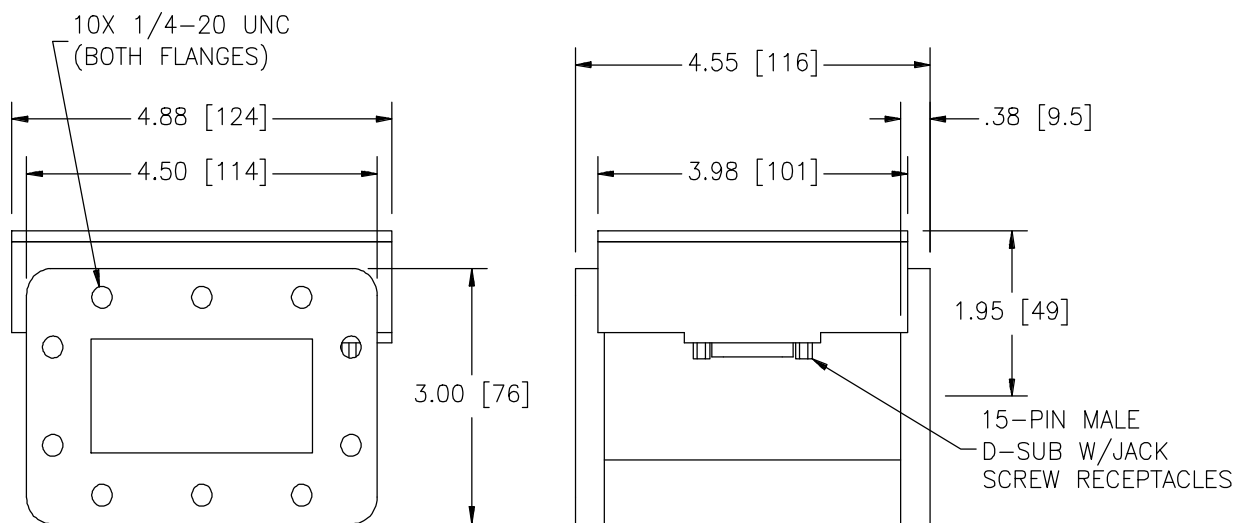
Waveguide	WR284 (RG75/U)
Flange	CPR-F (UG1725/U with 1/4-20 UNC tapped holes)
Electrical Connection	15-pin male D-sub with jacking screw receptacles
Construction	Aluminum waveguide
Finish	Clear chemical film (Alodine)

Environmental Specifications:

Operating Temperature	0-70 °C (32-158 °F)
Operating Humidity	20-90 % RH

Options:

- ◆ Alternate flange-flange length
- ◆ Thru-holes or studs on flanges
- ◆ Flange interlock switches



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