

# Standing Wave Detector, WR340

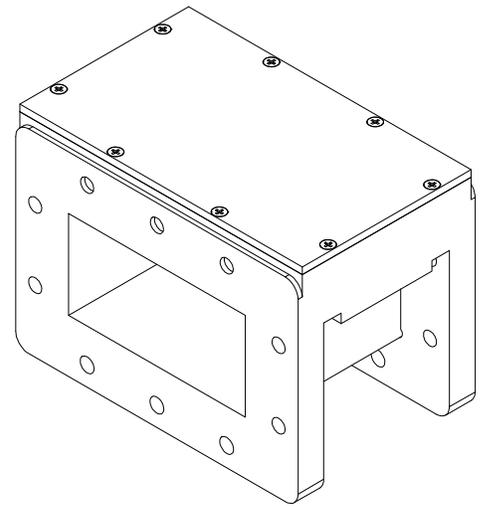
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## Model GA3111

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	10 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:

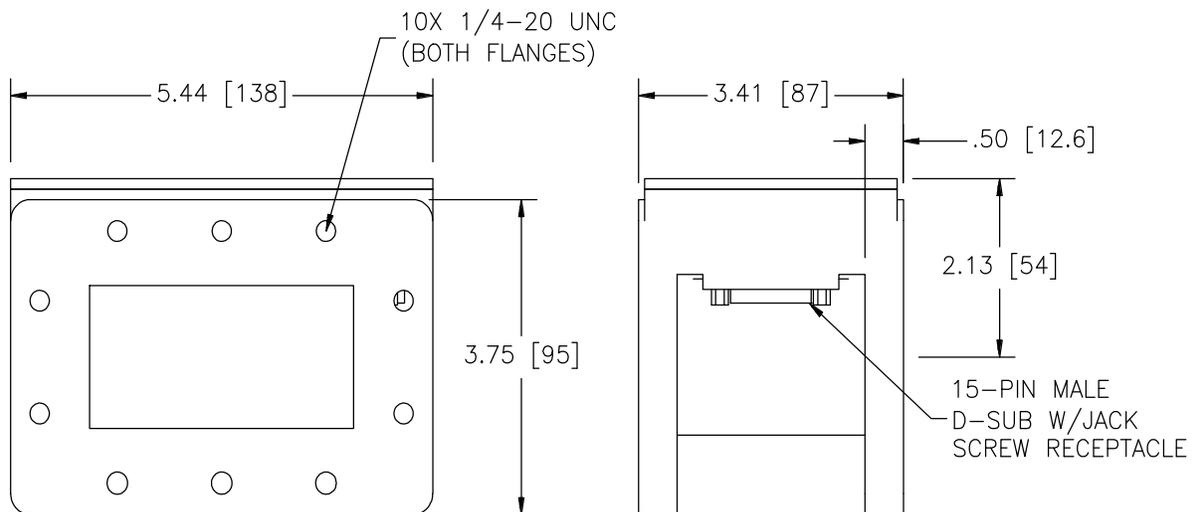
Waveguide	WR340 (RG113/U)
Flange	CPR-F (UG554/U with 1/4-20 UNC tapped holes)
Electrical Connection	15-pin male D-sub with jacking screw receptacles
Construction	Aluminum waveguide
Finish	Clear chemical film (Alodine)

### 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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