



# PRECISION DIRECTIONAL COUPLERS

## 10 – 300 MHz, HIGH POWER

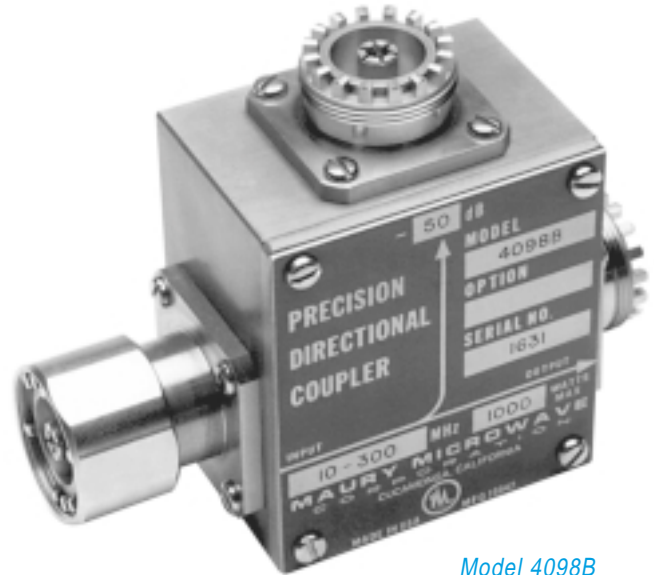
### Description

The model 4098B precision directional coupler is a compact high performance coupler capable of handling appreciable amounts of power over an extremely broad frequency range. The units cover the 10 to 300 MHz range, exhibiting exceptionally flat coupling, high directivity (typically greater than 30 dB), and low mainline VSWR. Model 4098B provides 50 dB of nominal coupling with 1000 watt mainline power handling. The performance of these units offers a substantial improvement over conventional designs while providing exceptionally small size and appreciable power handling capability. They are supplied with precision 14mm connectors and are suitable for calibration by NBS.

These units are ideally suited for metrology labs for use in calibrating power sources, power meters and thermistor mounts, as well as a variety of other applications. Several options and accessories are available which further enhance the usefulness of these devices; this information is provided below. The units can be provided as power standard sets in an attractive instrument case which results in a complete instrument ready for calibration and which is fully protected during handling and storage; refer to [option 12](#) below.

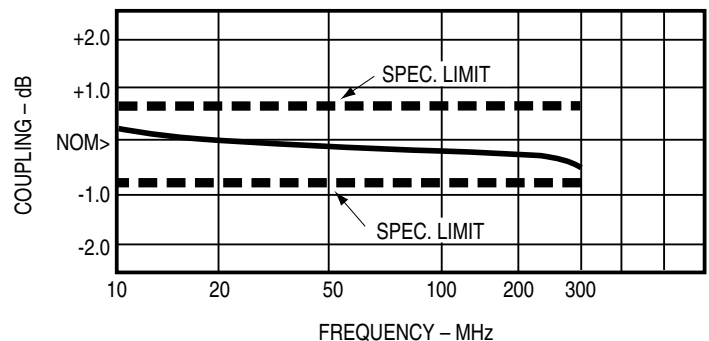
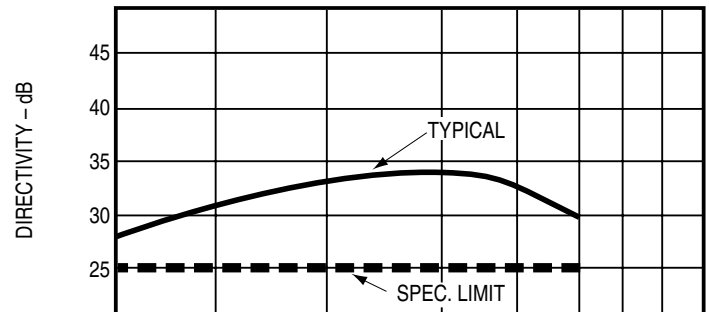
### Specifications

Frequency Range .....	10 to 300 MHz (useable to 400 MHz <a href="#">1</a> )
Coupling .....	50 dB nominal (see chart)
Coupling Accuracy <a href="#">1</a> .....	±0.8 dB(see graph)
Directivity <a href="#">2</a> .....	25 dB minimum (see graph)
Power Handling, Mainline .....	1000 watts
VSWR .....	1.05 maximum mainline 1.07 maximum secondary
Nominal Impedance .....	50 ohms
Connectors .....	14mm GPC <a href="#">3</a>



Model 4098B

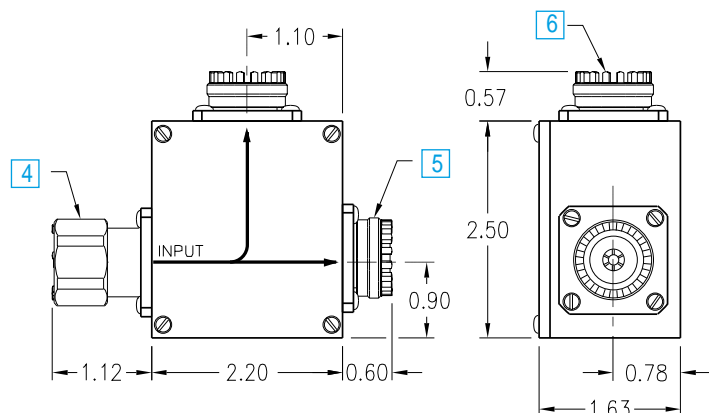
### Typical Response Curves



See page 2 for footnotes.



## Dimensions



## Accessories

**4098Z1:** Instrument case will house basic coupler and/or power standard set.  
Size: 10 x 7 x 3-1/2 inches.

**Adapters:** Maury produces a complete line of adapters from 14mm (MPC14) connectors to other connector types. Please refer to data sheet 2B-020 or catalog 1G-002, page 88.

## Options

- 02 - Supplied with type N female connector on secondary arm.
- 04 - 14mm GPC flanged rotatable gear ring connector on mainline output port.
- 12 - Power standard set, basic unit with 02 option (N female secondary connector) supplied with HP478A-H72 thermistor mount in instrument case 4098Z1

**NOTE:** Other power standard sets are also available or can be configured for your specific application. Consult us for application assistance.

- 1 Coupling accuracy includes frequency sensitivity. Long term stability of coupling is 1% max./year, and variation of coupling with respect to input power is 1% max. from 1 to 300 watts.
- 2 Units can also be provided optimized over narrower bandwidth on request.
- 3 See drawing under dimensions for further description of connectors and options for standard variations available. Other connectors can be provided on request.
- 4 Input connector – 14mm GPC (equiv. GR900BT).
- 5 Output connector – 14mm GPC flanged rotatable gear ring. See options for other connectors available on this port.
- 6 Secondary arm connector – 14mm GPC flanged fixed gear ring. See options for other connectors available on this port.