

## Directional Coupler 10 dB SMA Female from 6 GHz to 18 GHz

### Directional Couplers Technical Data Sheet

**C-1806-10**

#### Description

Werbel Microwave model C-1806-10 directional coupler covers the continuous band of 6-18GHz in a small enclosure measuring 1.00 x 0.60 x 0.38 inches. Coupling flatness performance is unrivaled in the industry with typical +/- 0.3 dB. High directivity and low VSWR are features of the product. Precision assembled, tuned, and tested by skilled technicians at our Whippany New Jersey manufacturing facility. Enclosure is aluminum alloy with stainless steel connectors. Finish is gray paint. Made in USA.



Specification	Min	Typ.	Max	Units
Frequency	6		18	GHz
Impedance		50		Ohm
Coupling		10	±1.25	dB
Frequency Sensitivity		± 0.30	±1.00	dB
Insertion Loss Measured at Highest Frequency (above theoretical coupling/splitting loss)		0.82	1.05 (0.50)	dB
Directivity	12	15		dB
Main Line VSWR		<1.35	1.40	:1
Secondary Line VSWR		<1.40	1.50	:1
Input Power (CW) into 1.2:1 max load VSWR			50	Watts
Reverse Power (CW) into 1.2:1 max load VSWR			3	Watts
Termination			1	Watt

#### Mechanical

Connector Interface	SMA-Female
Operating Temperature*	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight	0.8 oz (22.7 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

\* Design to meet based on materials. Production-tested at +25 °C. External heatsink and convection cooling recommended to maintain body temperature below +50 °C.

#### Materials

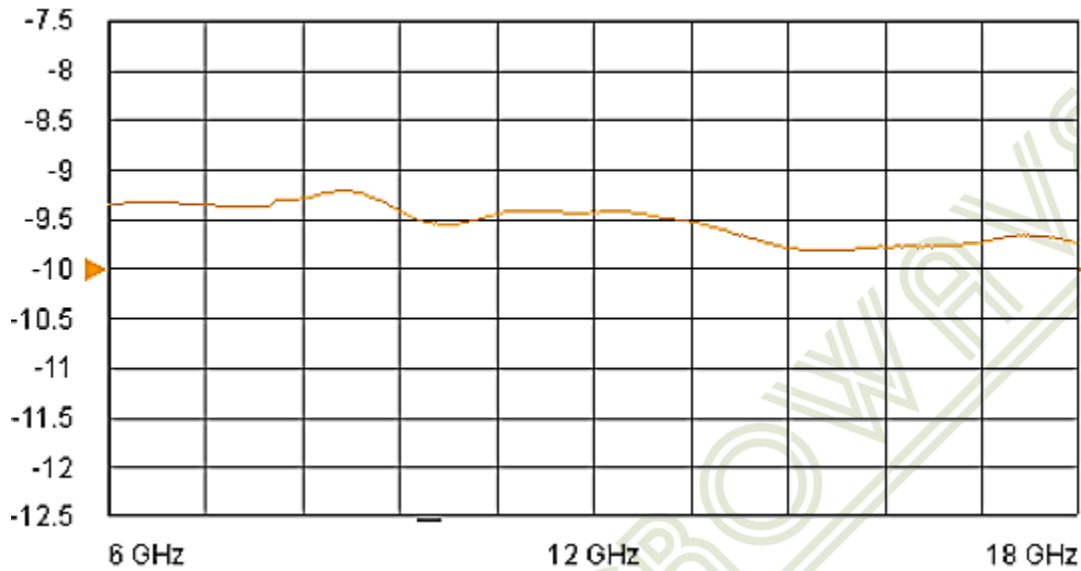
##### RoHS and REACH Compliant

Enclosure	Aluminum
Connectors	Stainless Steel
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Gray Paint

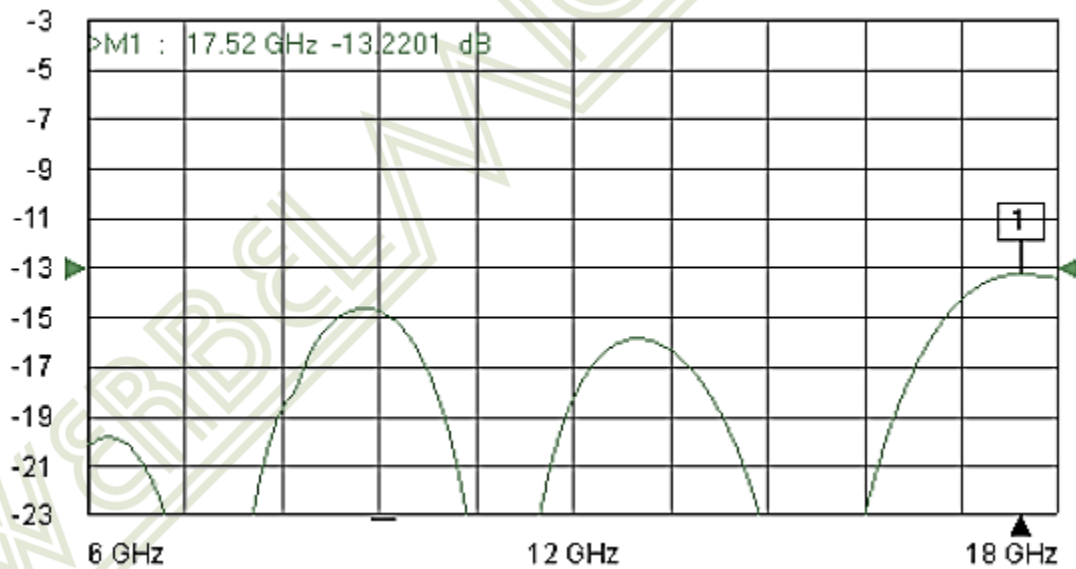


## Typical Performance at +25 °C

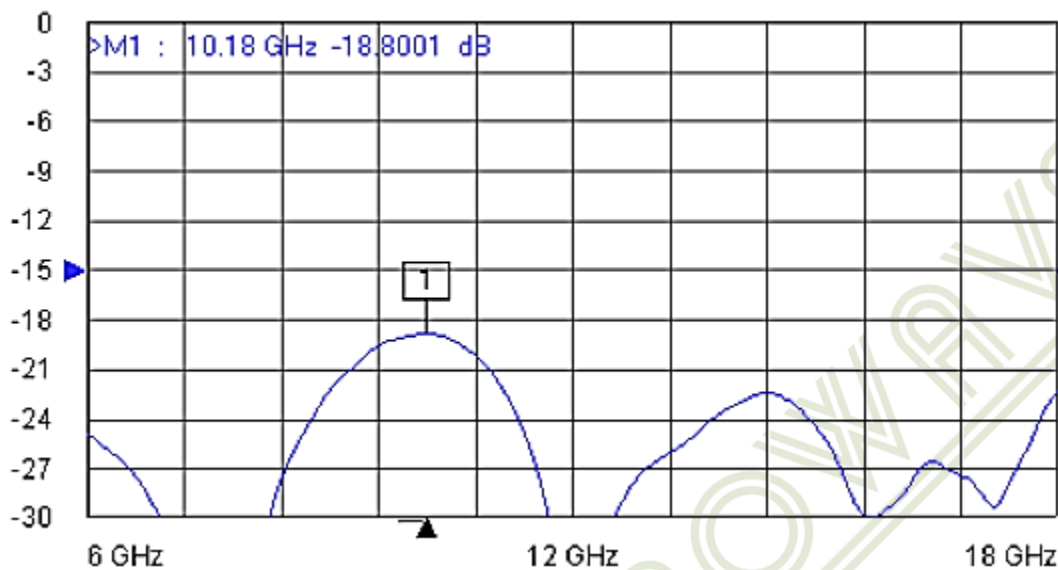
### Coupling Value and Flatness



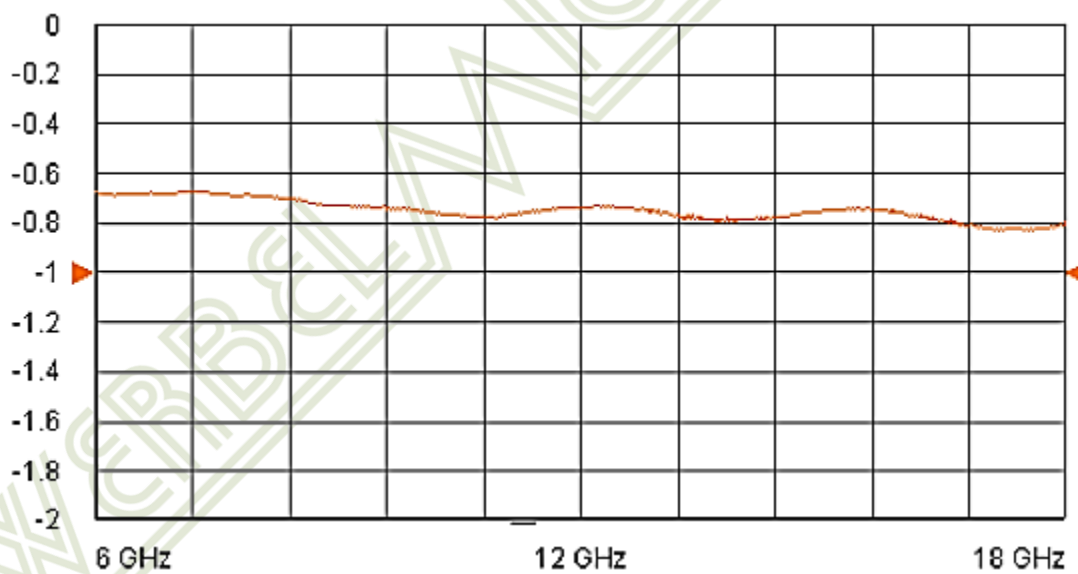
### Directionality



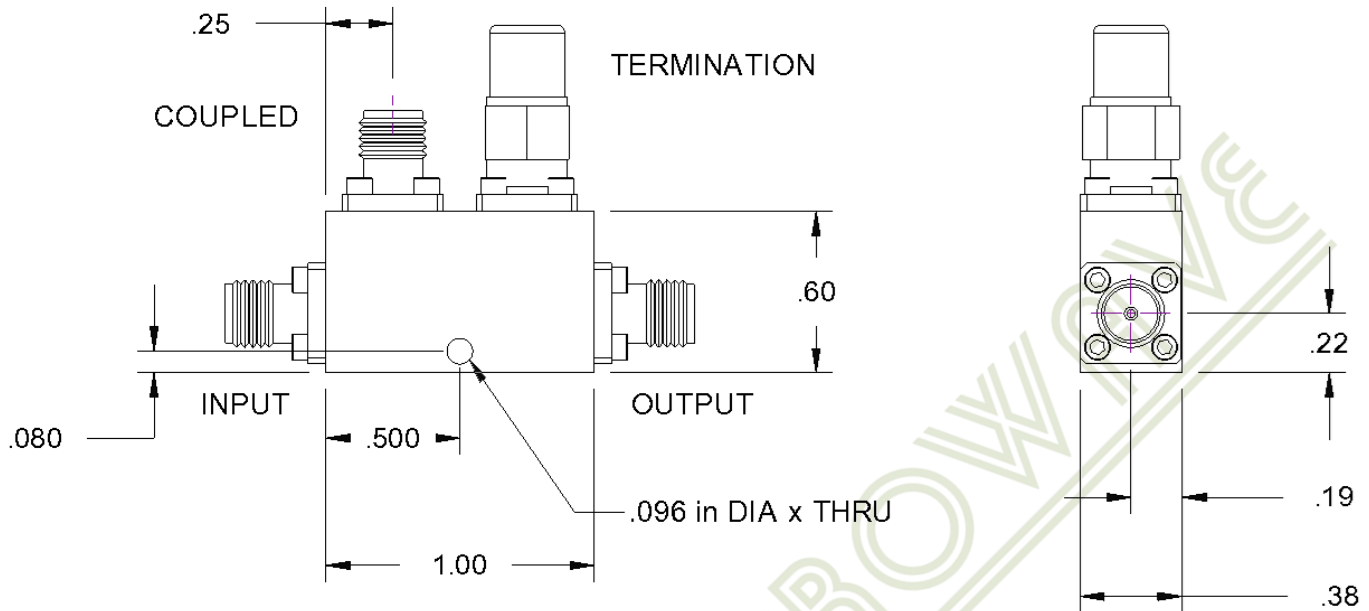
## Return Loss



## Insertion Loss



## Outline Dimensions



Outline # OL-1006

Dimensions are in inches, [mm] shown for convenience.

Tolerances on 2-pl decimals:  $\pm .03$ . 3-pl decimals:  $\pm .015$ .

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