

## High Performance Wideband Directional Coupler 20 dB SMA Female from 2 GHz to 18 GHz

### Directional Couplers Technical Data Sheet

**C-1182-20**

#### Description

Directional coupler model C-1182-20 from Werbel Microwave is a high performance wideband directional coupler that covers 2 to 18 GHz with 20 dB coupling and a typical flatness of +/- 0.45 dB. It has excellent return loss and low insertion loss.

Werbel Microwave's catalog of single directional couplers are high performance at an affordable price point. Our original design, USA made.



Specification	Min	Typ.	Max	Units
Frequency	2		18	GHz
Impedance		50		Ohm
Coupling		20 ± 1.0		dB
Frequency Sensitivity (Flatness)		± 0.45	± 1.0	dB
Mainline Loss Measured		0.8	1.3	dB
Directivity	14	17		dB
Main Line VSWR		1.25	1.58	:1
Secondary Line VSWR		1.35	1.58	:1
Input Power (CW) into 1.2:1 max load VSWR (Up to +85C derate linearly to 10W at +100C)			20	Watts
Reverse Power (CW) into 1.2:1 max load VSWR			20	Watts
Termination			1	Watt

#### Mechanical

Connector Interface	SMA-Female
Operating Temperature*	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight	1.4 oz (40 g)
Humidity	10-90% non-condensing
Environment	Indoor 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



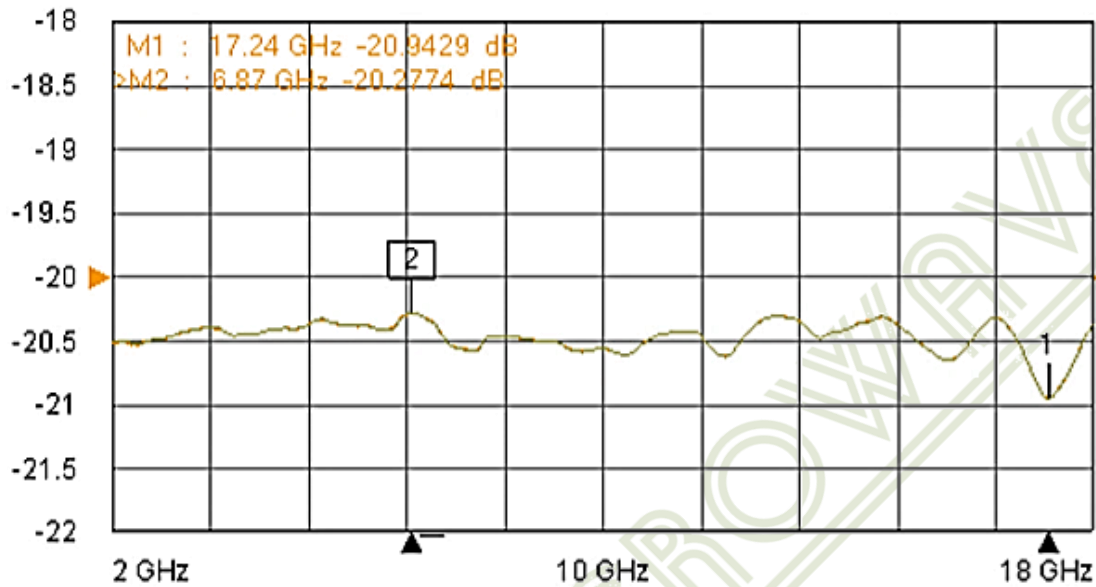
**MADE IN USA**

**ISO 9001:2015**

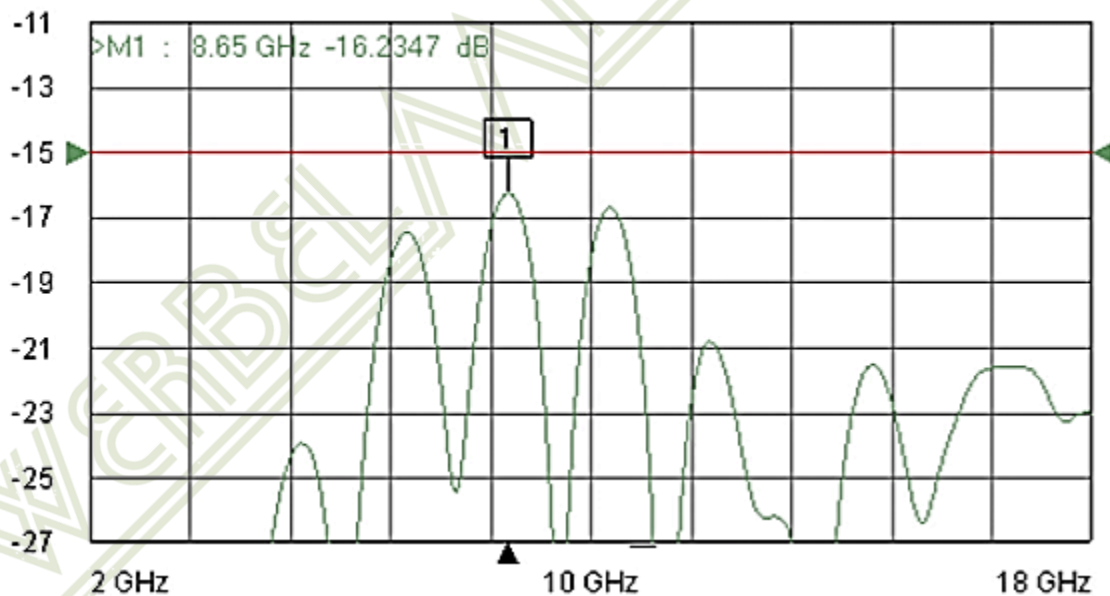
**Certified Company**

## Typical Performance at +25 °C

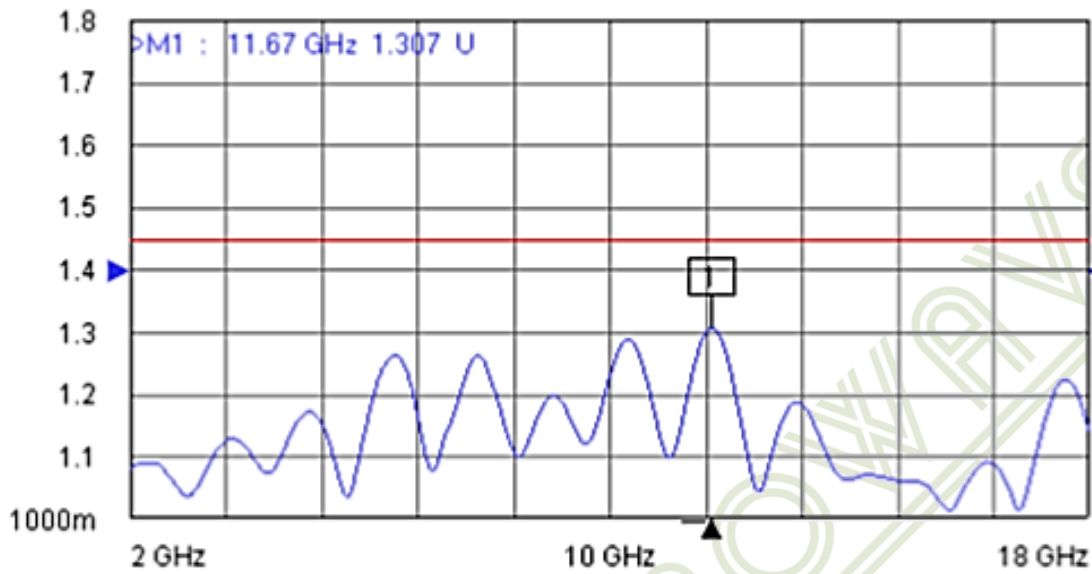
### Coupling Value and Flatness



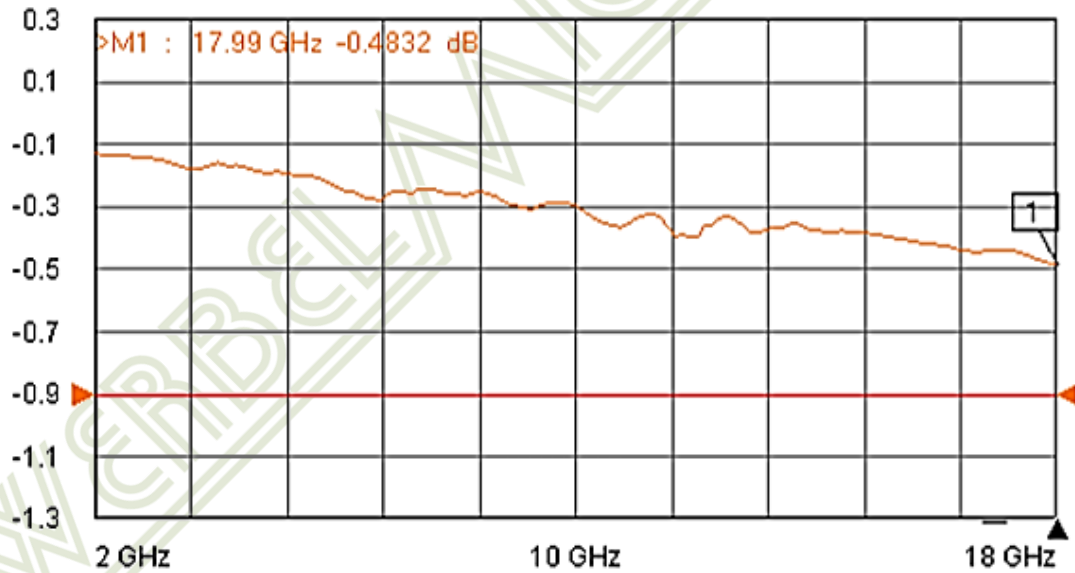
### Directionality



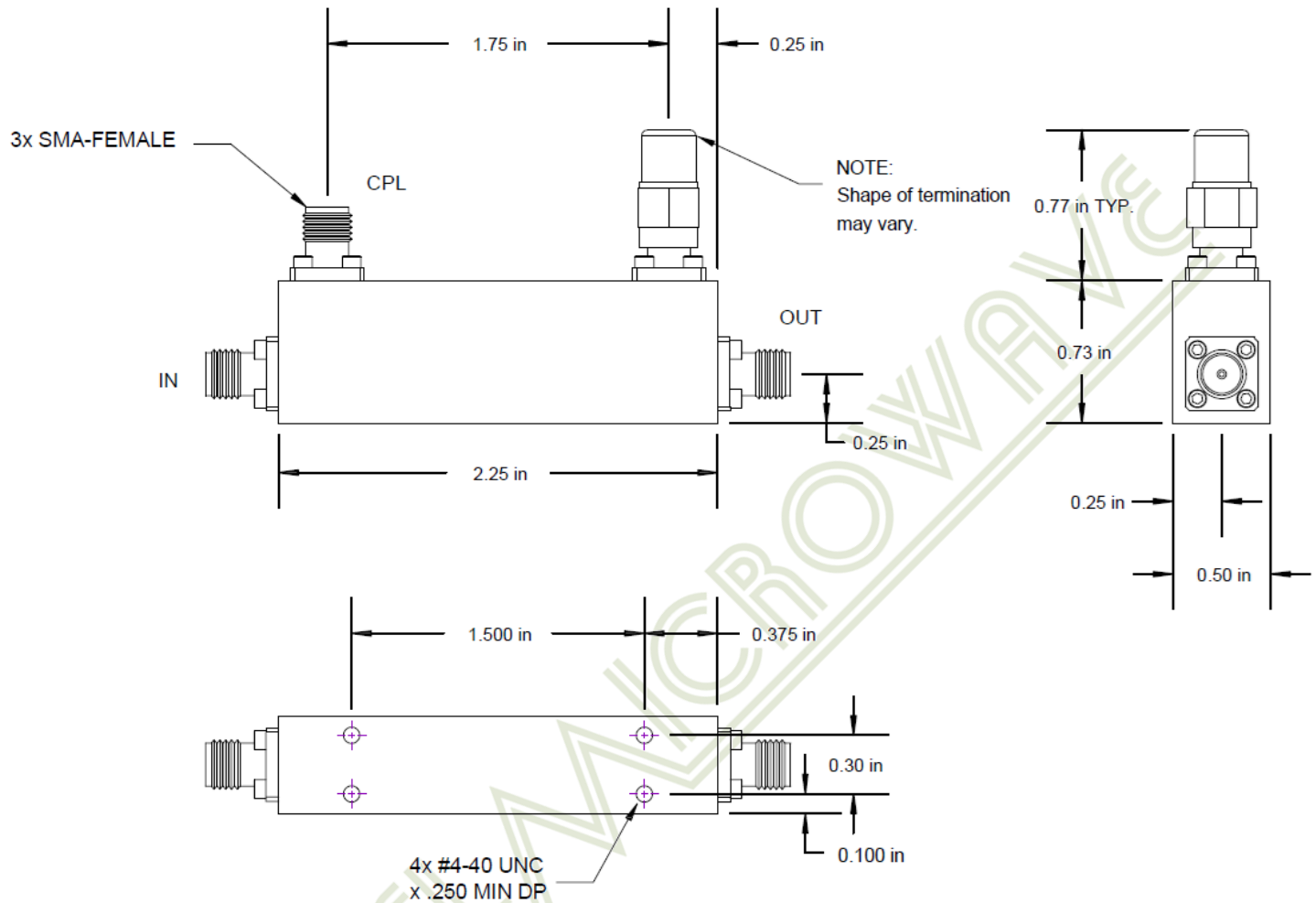
## Return Loss



## Insertion Loss



## Outline Dimensions



Outline # OL-1182

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

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

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