

SMA Directional Coupler 10 dB from 500 MHz to 20 GHz

Directional Couplers Technical Data Sheet

C-1205-10

Description

Werbel Microwave model C-1205-10 is a wideband directional coupler that covers 500 MHz to 20 GHz with 10 dB coupling factor. Typical flatness is +/- 0.5 dB across the band. Typical directivity is 13 dB. Case measures 4.40 x 0.73 x 0.50 inches. Available with SMA female connectors. Made in USA.



Specification	Min	Typ.	Max	Units
Frequency	0.5		20	GHz
Impedance		50		Ohm
Coupling		10	±1.2	dB
Frequency Sensitivity (Flatness)		±0.54	±1.8	dB
Mainline Loss Measured (Includes loss due to coupling)		1.68	2.10	dB
Directivity	12	15		dB
Main Line VSWR		1.42	1.60	:1
Secondary Line VSWR		1.53	1.70	:1
Input Power (CW) into 1.2:1 max load VSWR			20	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	3.5 oz (86 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

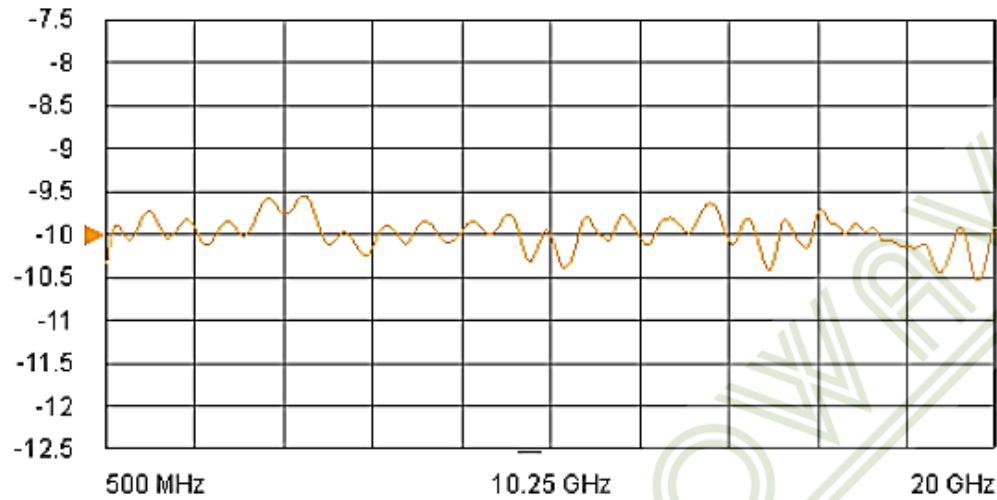
RoHS and REACH Compliant

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

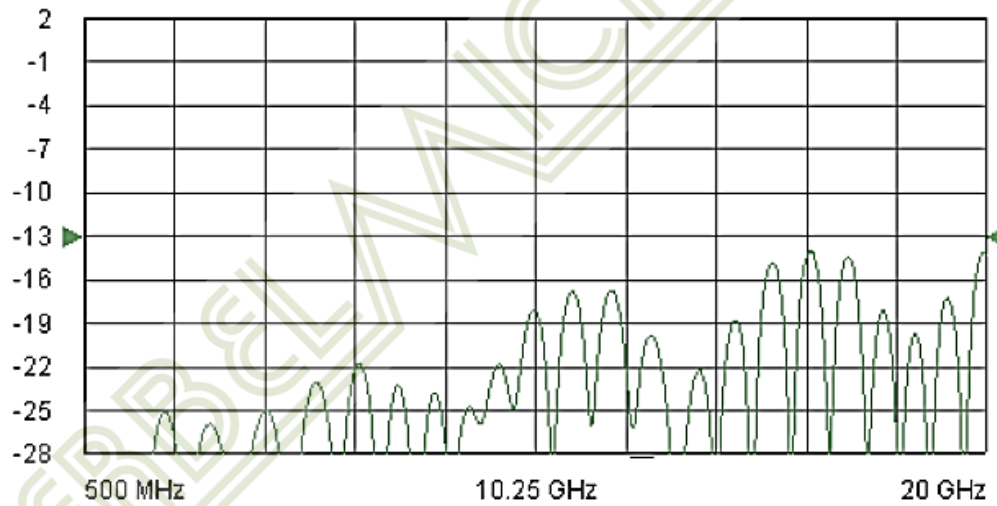


Typical Performance at +25 °C

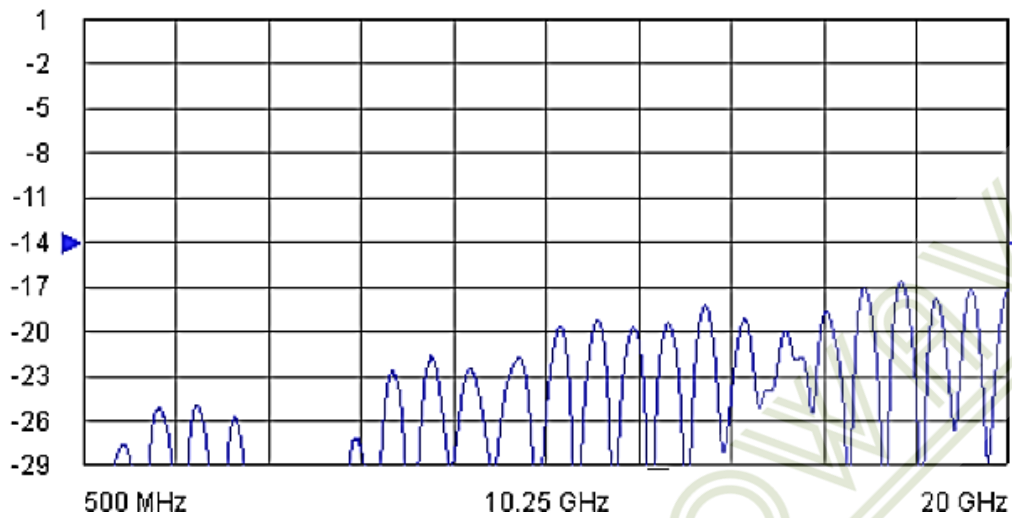
Coupling Value and Flatness



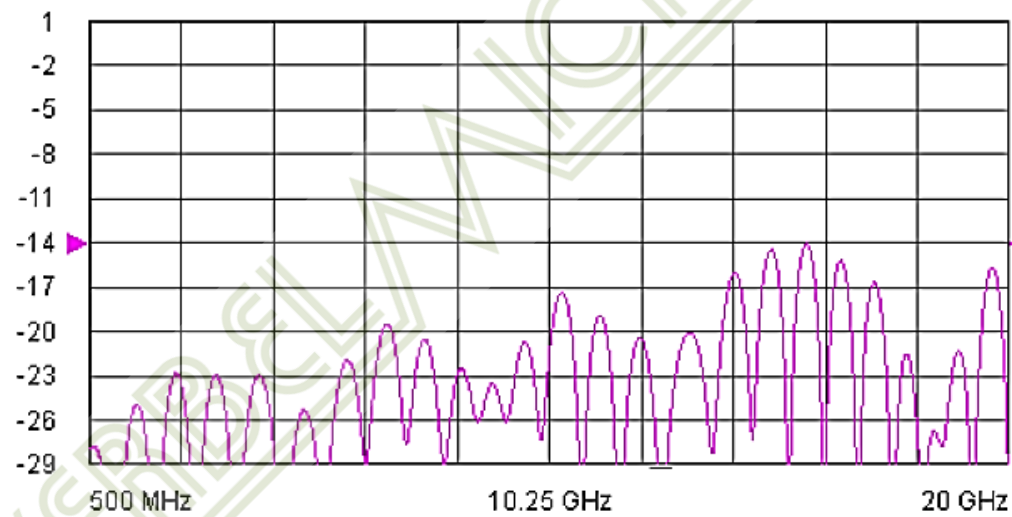
Directionality



Return Loss Mainline



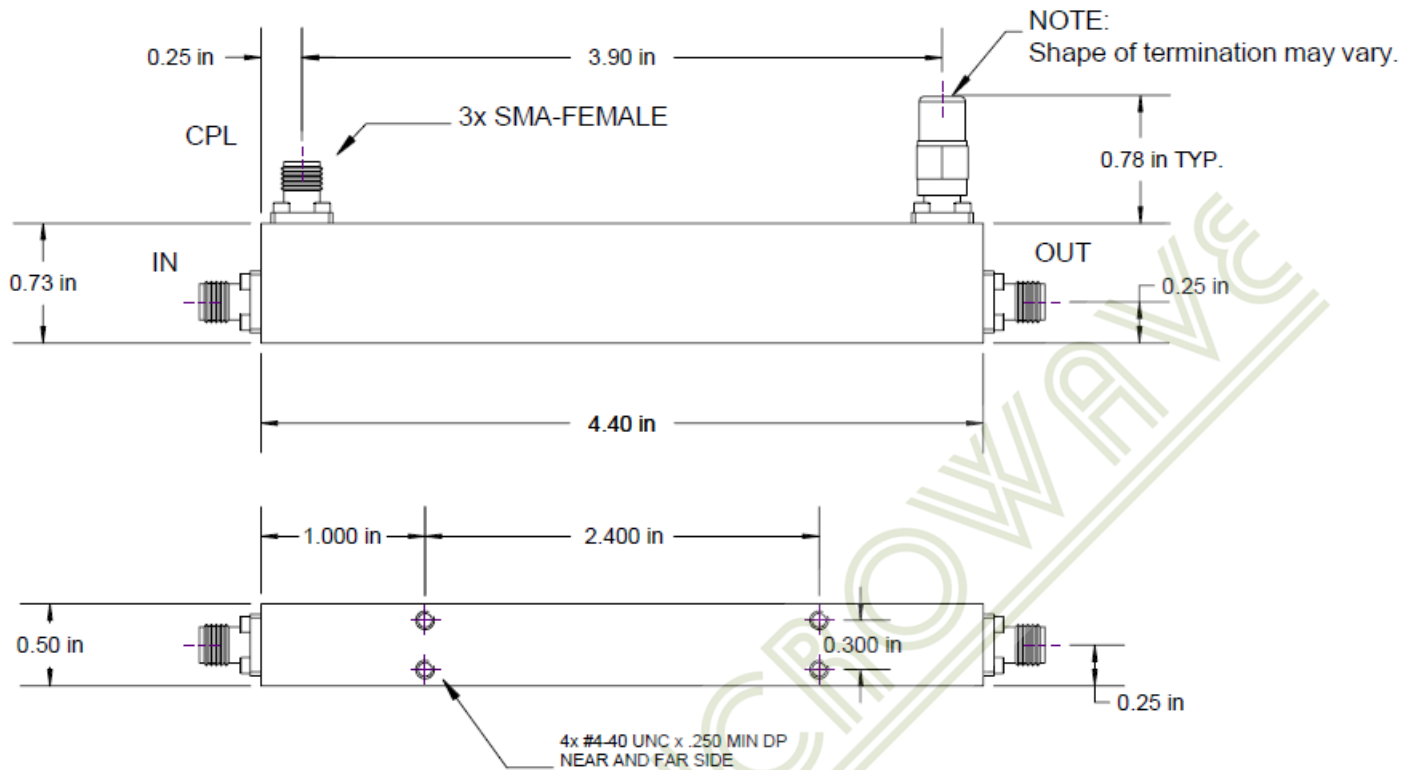
Return Loss Coupled Port



Insertion Loss



Outline Dimensions



Outline # OL-1185

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

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

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