

SMA Directional Coupler 10 dB from 500 MHz to 18.5 GHz

Directional Couplers Technical Data Sheet

C-1185-10

Description

Werbel Microwave is a USA based designer and manufacturer of microwave components for use in telecommunications systems. Model C-1185-10 is a single directional coupler that covers 500 MHz to 18.5 GHz in a compact enclosure measuring only 4.40 x 0.73 x 0.50 inches, less connectors. The model has very low insertion loss, typically 1.5 dB at 18 GHz; low VSWR and high directivity. Available with stainless steel SMA connectors.



Specification	Min	Typ.	Max	Units
Frequency	0.5		18.5	GHz
Impedance		50		Ohm
Coupling		10 ± 1.0		dB
Frequency Sensitivity (Flatness)		± 0.5	± 1.5	dB
Mainline Loss Measured (Includes coupling loss)		1.56	2.15	dB
Directivity	12	16		dB
Main Line VSWR		1.3	1.65	:1
Secondary Line VSWR		1.5	1.85	: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

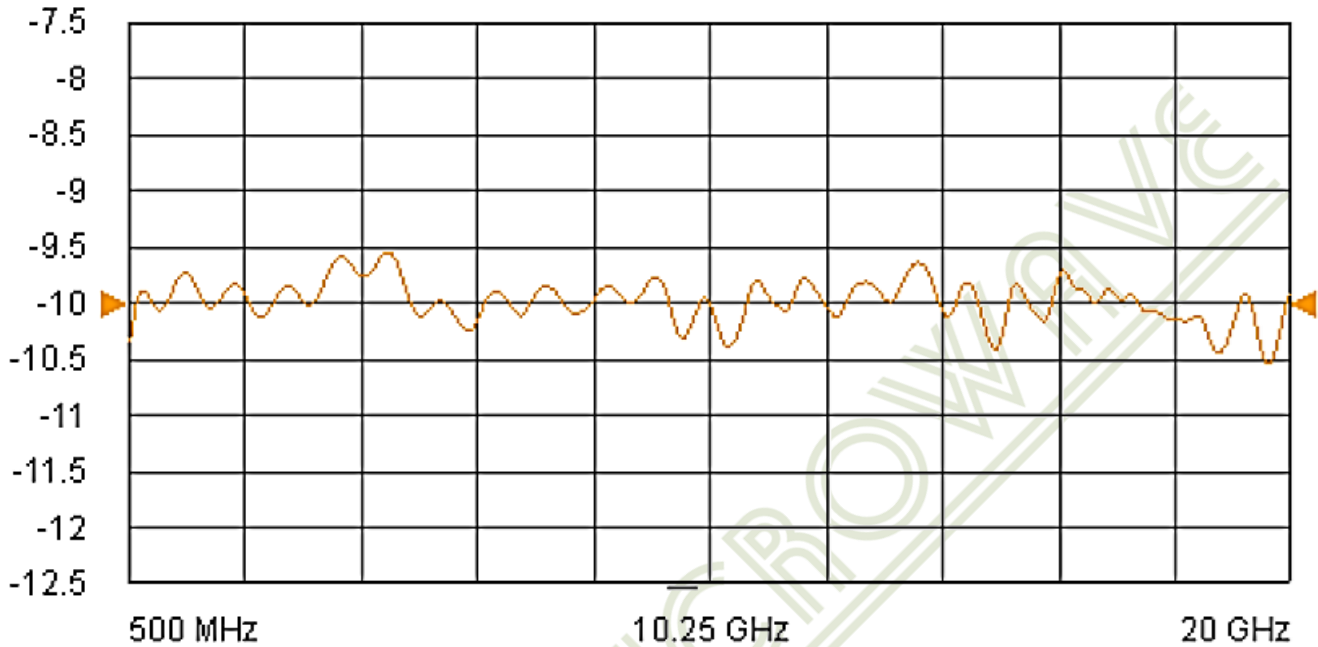
RoHS and REACH Compliant

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

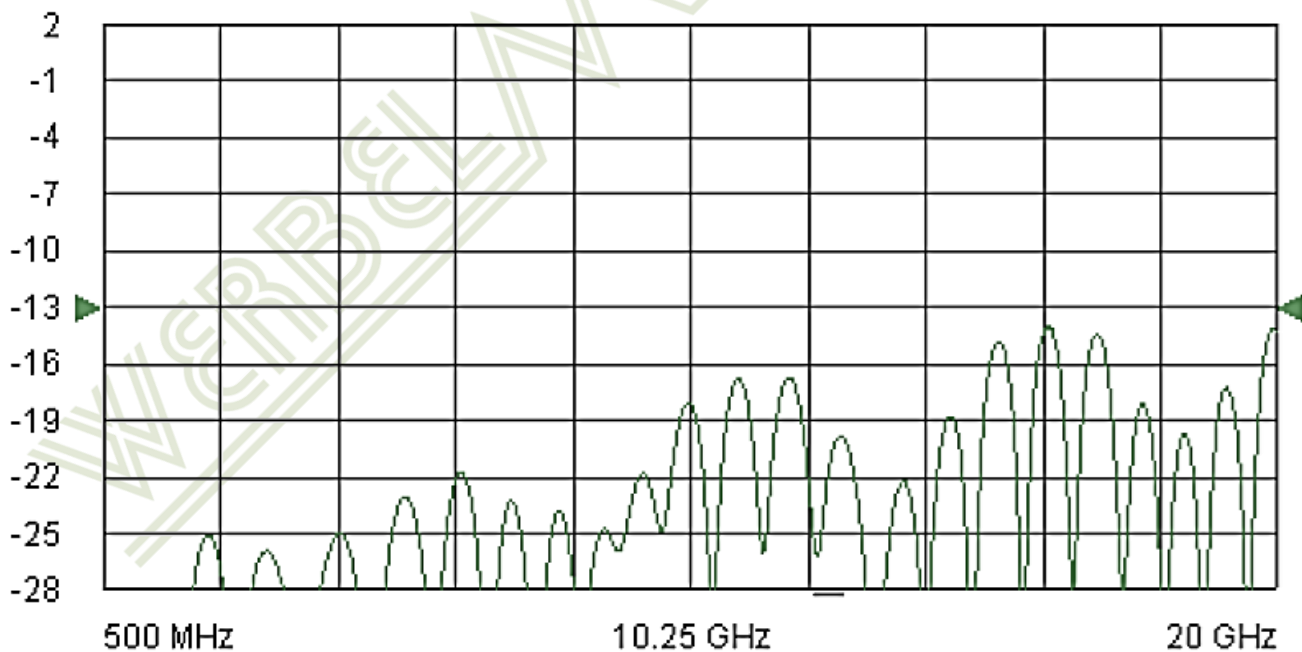


Typical Performance at +25 °C

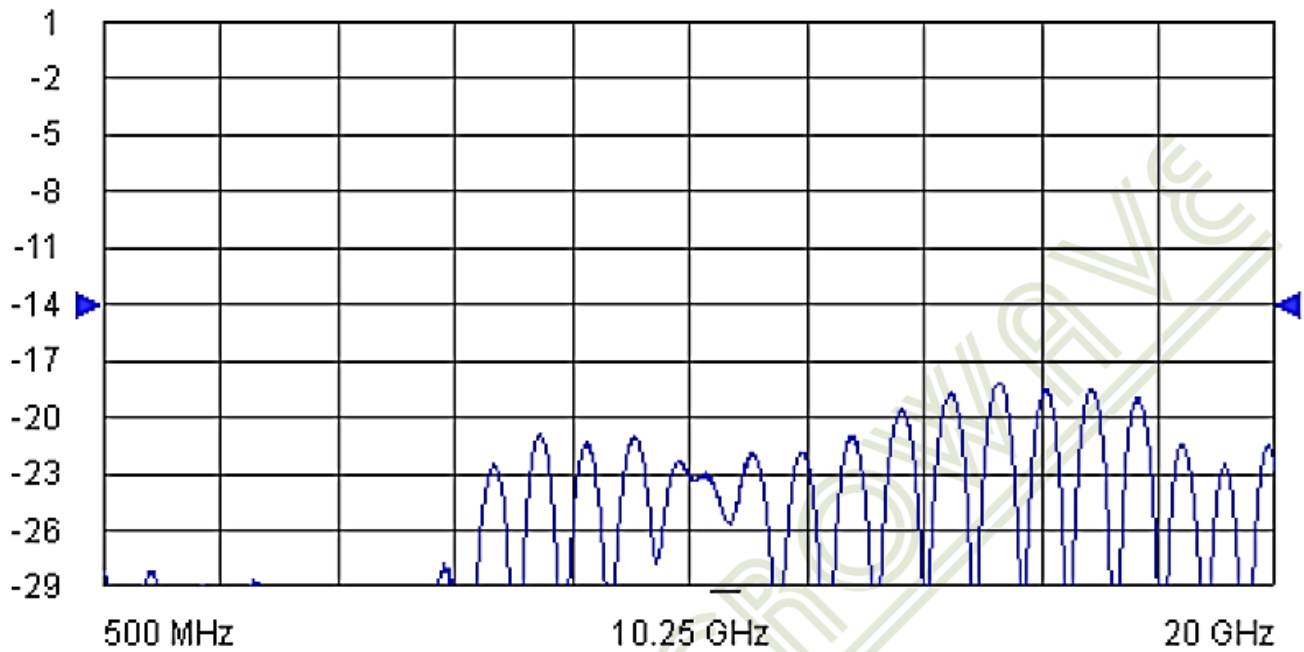
Coupling Value and Flatness



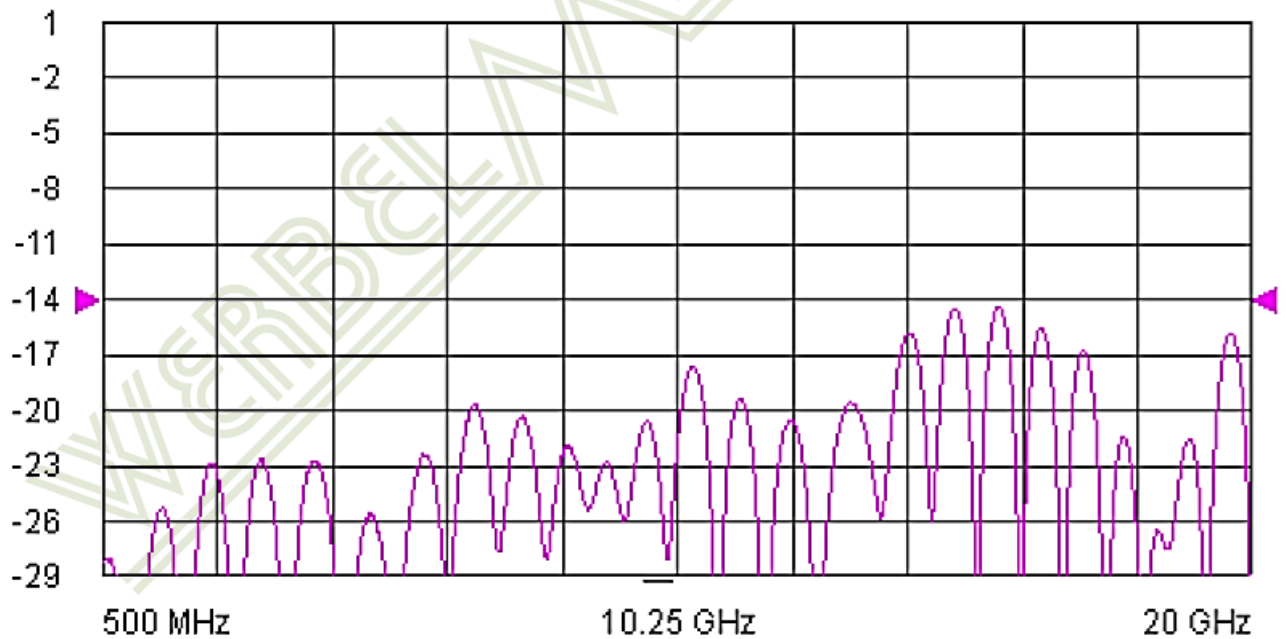
Directionality



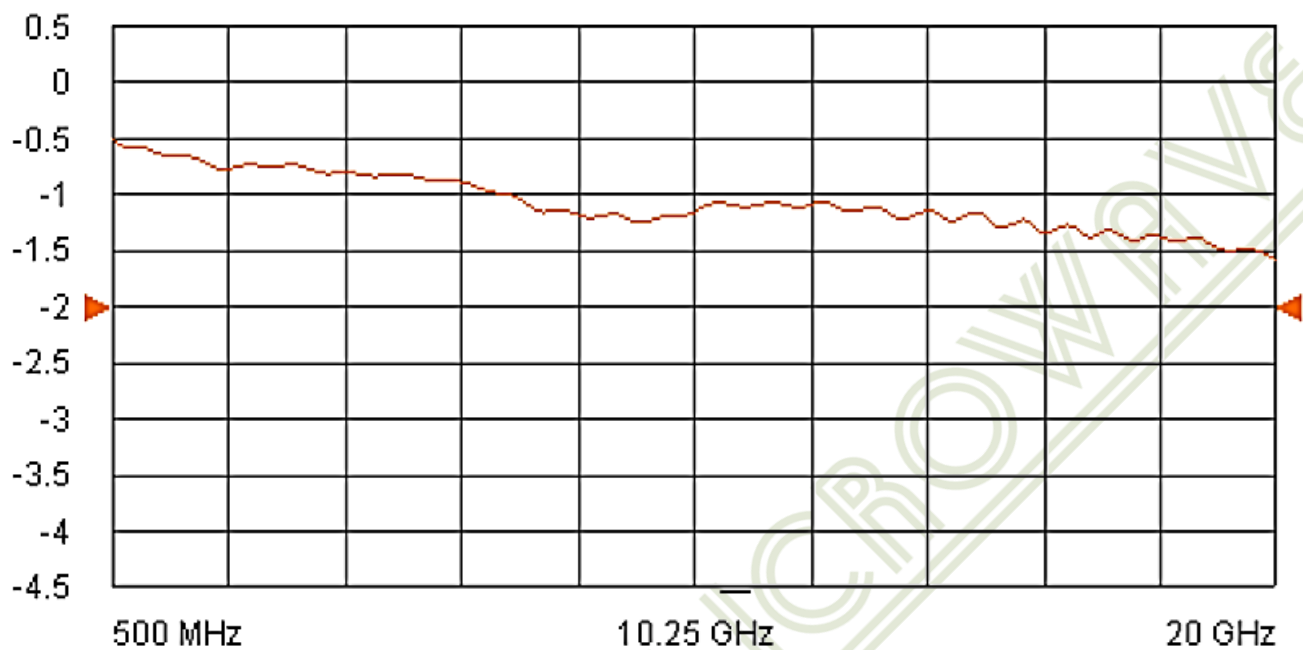
Return Loss Mainline



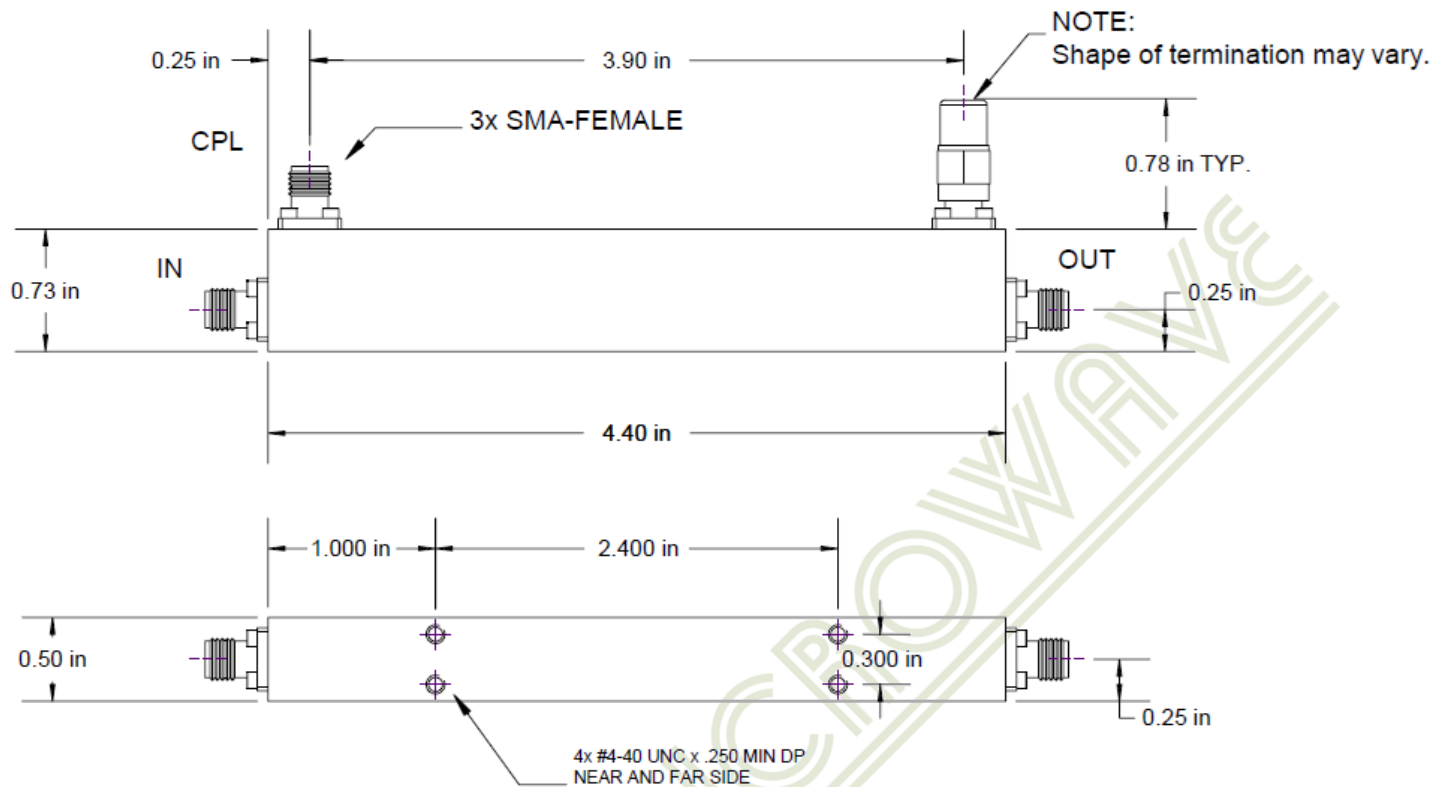
Return Loss Coupled Port



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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