

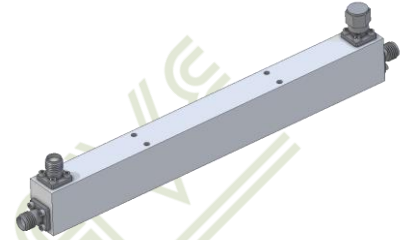
Directional Coupler 10 dB SMA Female from 500 MHz to 6 GHz

Directional Couplers Technical Data Sheet

C-0506-10

Description

Directional couplers are important components for use in isolating, separating, replicating, and combining microwave signals. They can serve as accurate attenuator measurements as they eliminate reflections. They are incredibly useful in sampling RF signals for use in detectors, gain control and feedback loops.



The C-0506-10 has high directivity, excellent flatness and insertion loss performance over the continuous 500 MHz to 6 GHz band. Available with SMA female connectors. The part is RoHS compliant.

Specification	Min	Typ.	Max	Units
Frequency	0.5		6	GHz
Impedance		50		Ohm
Coupling		10 ± 1.2		dB
Frequency Sensitivity (Flatness)		± 0.60	± 1.20	dB
Insertion Loss Measured at Highest Frequency (above theoretical coupling/splitting loss)		1.3	1.7	dB
Directivity	16	22		dB
Main Line VSWR		1.15	1.40	:1
Secondary Line VSWR		1.15	1.40	: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	Watts

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	Indoor Use Only

Materials

RoHS and REACH Compliant

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

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

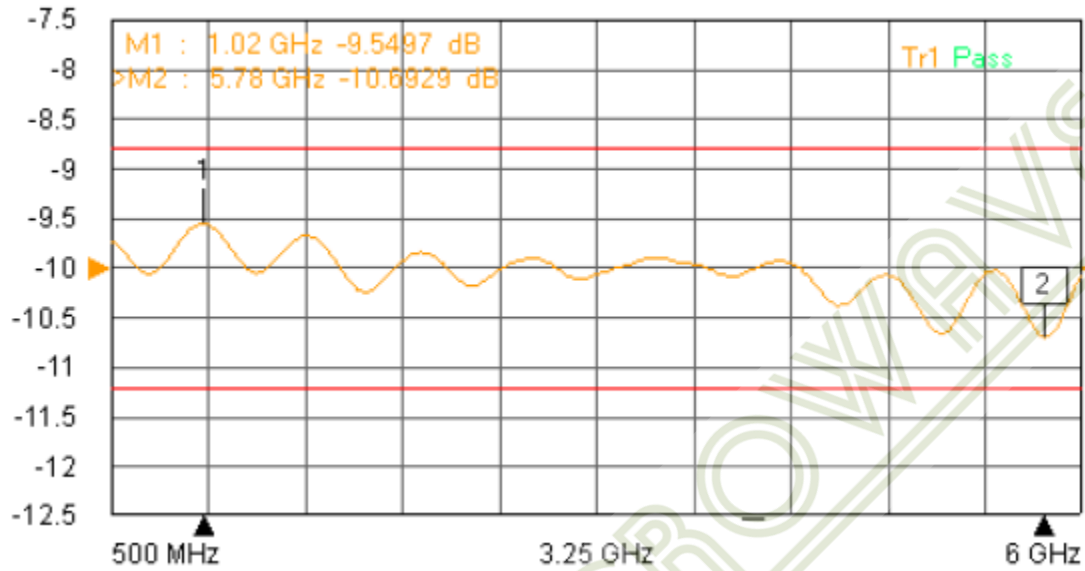


MADE IN USA

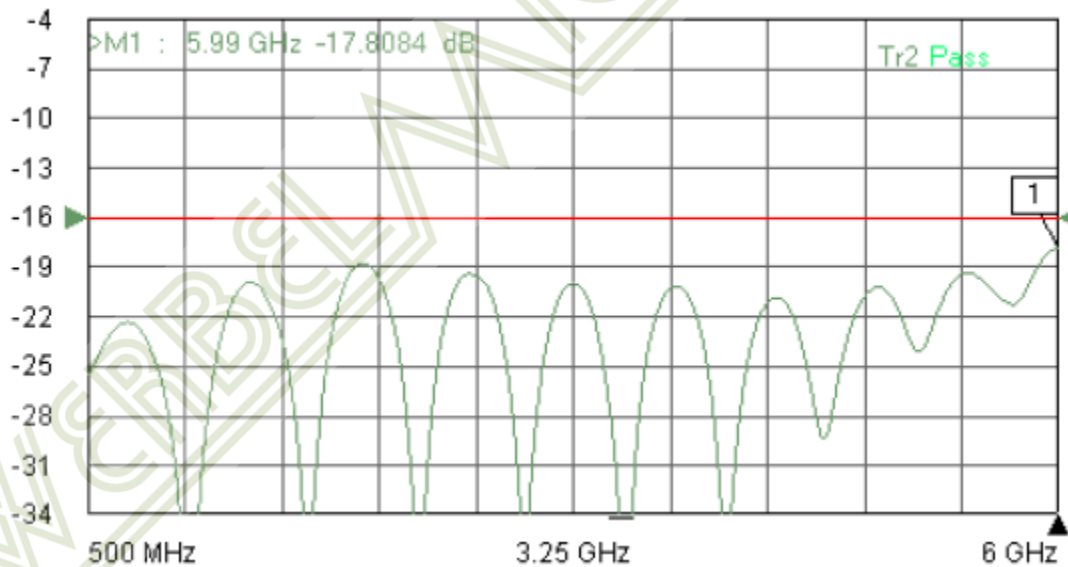


Typical Performance at +25 °C

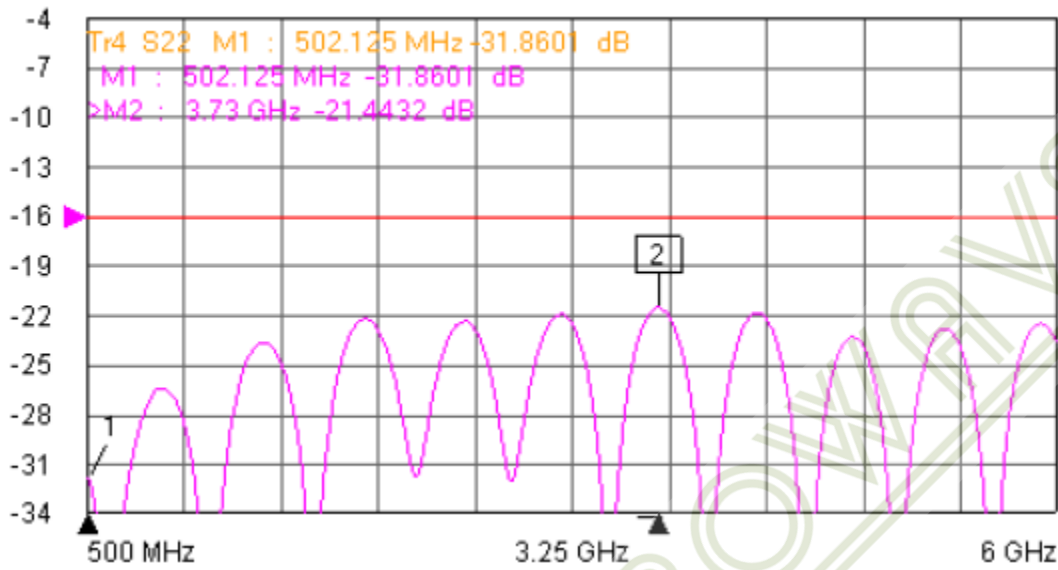
Coupling Value and Flatness



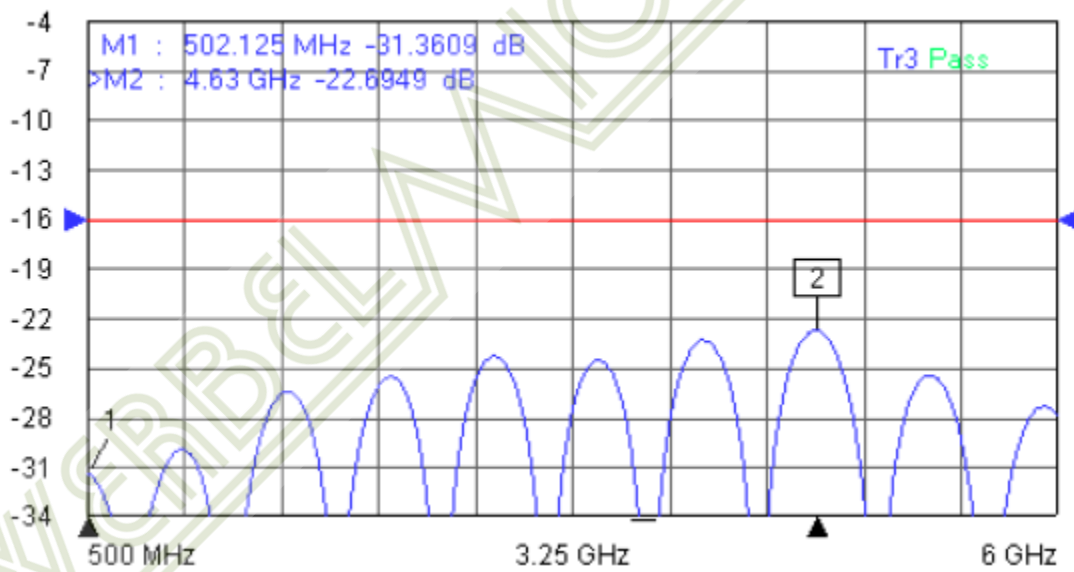
Directivity



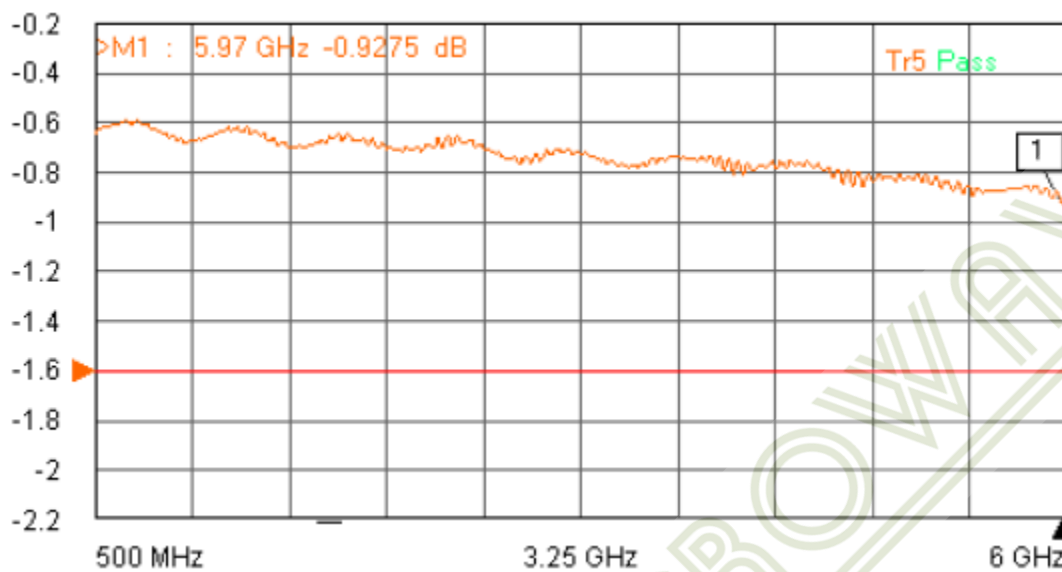
Coupling VSWR



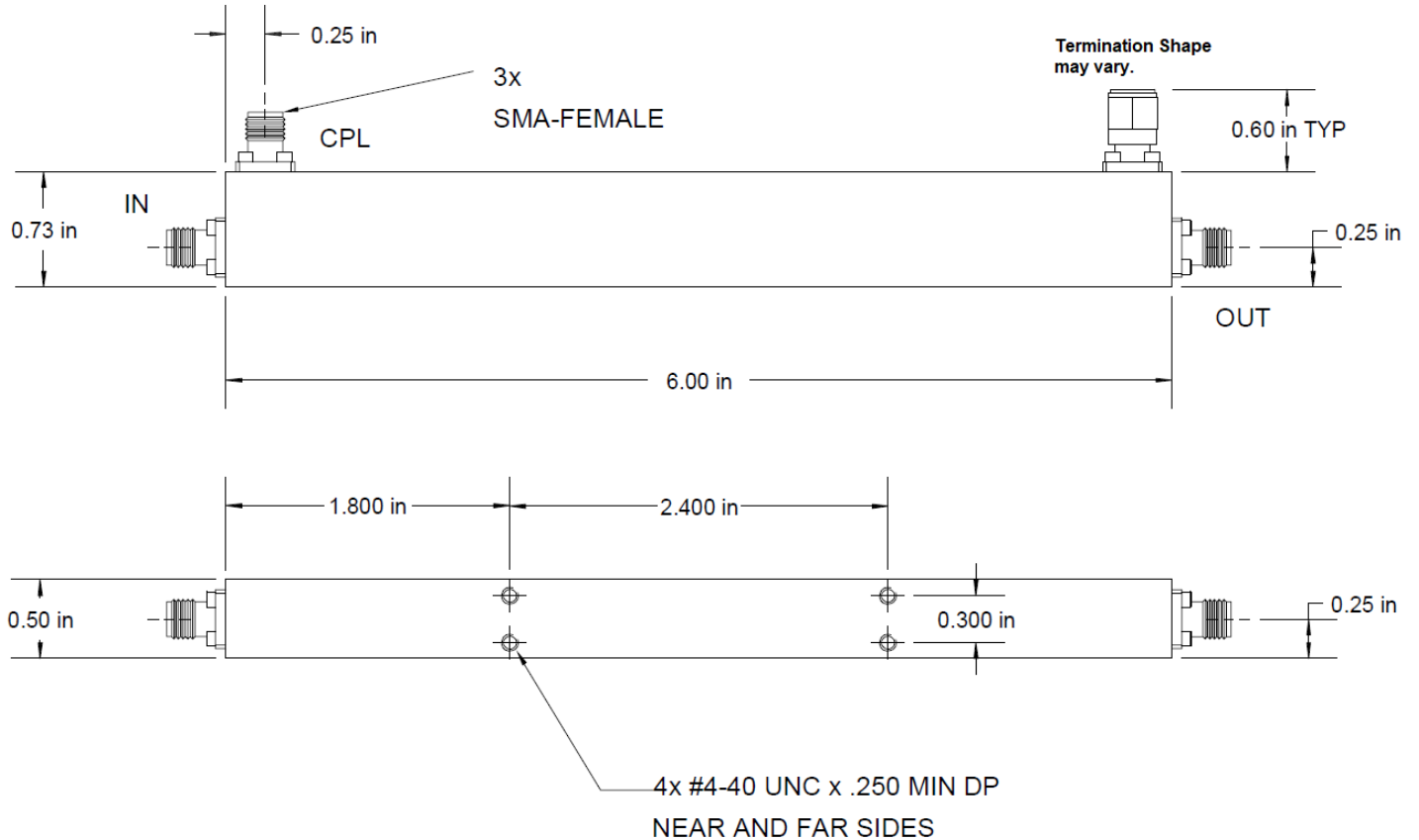
Mainline VSWR



Insertion Loss



Outline Dimensions



Outline # OL-1830-M1

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

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

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