

Directional Coupler 30 dB SMA Female from 500 MHz to 2 GHz

Directional Couplers Technical Data Sheet

C-1002-30

Description

Directional couplers are used widely in sampling signals for feedback loops over a frequency range. Werbel Microwave single directional coupler model C-1002-30 operates over the band of 500 MHz to 2 GHz with 30 dB coupling. Low insertion loss of 0.35 dB max, with high directivity of 23 dB minimum. Return loss is very low with a guaranteed max VSWR of 1.20:1 at all ports. Designed for 50 watts forward and reflected power at room temperature. Case is aluminum alloy measuring 3.60 x 0.60 x 0.38 inches with stainless steel SMA female connectors. Proudly made in USA.



Specification	Min	Typ.	Max	Units
Frequency	500		2,000	MHz
Impedance		50		Ohm
Coupling		30 ± 1.0		dB
Frequency Sensitivity (Flatness)		± 0.50	± 0.75	dB
Insertion Loss Measured at Highest Frequency (above theoretical coupling/splitting loss)		0.25	0.35	dB
Directivity	23	26		dB
Main Line VSWR		1.15	1.20	:1
Secondary Line VSWR		1.15	1.20	:1
Input Power (CW) into 1.2:1 max load VSWR			50	Watts
Reverse Power (CW) into 1.2:1 max load VSWR			50	Watts
Termination			1	Watt

Mechanical

Connector Interface	SMA-Female
Operating Temperature*	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight	1.6 oz (45 g)
Humidity	10-90% non-condensing
Environment	Indoors use only

Materials

RoHS and REACH Compliant

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

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

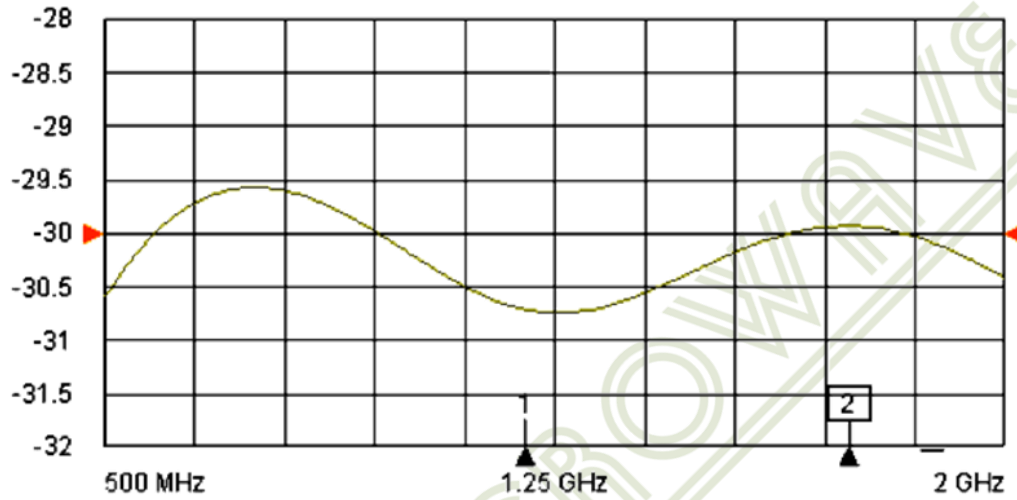


MADE IN USA

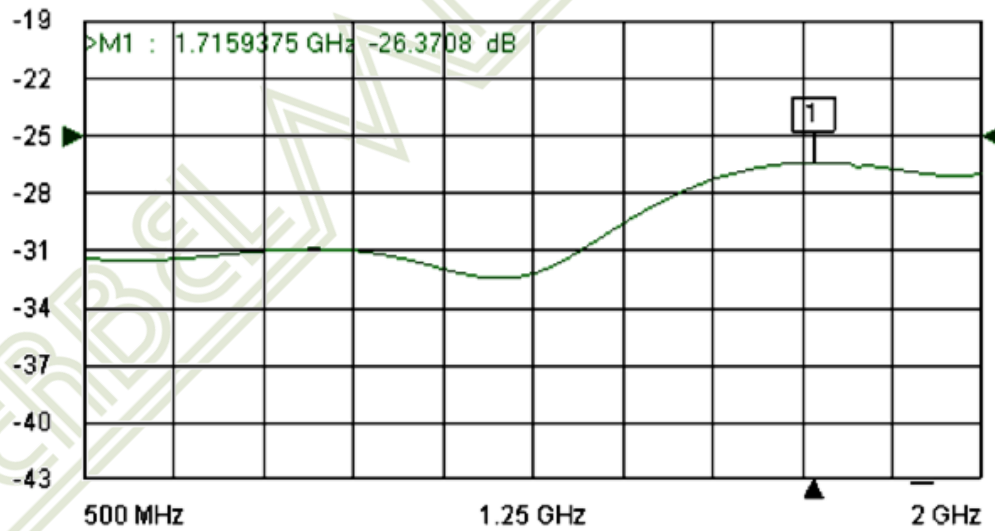


Typical Performance at +25 °C

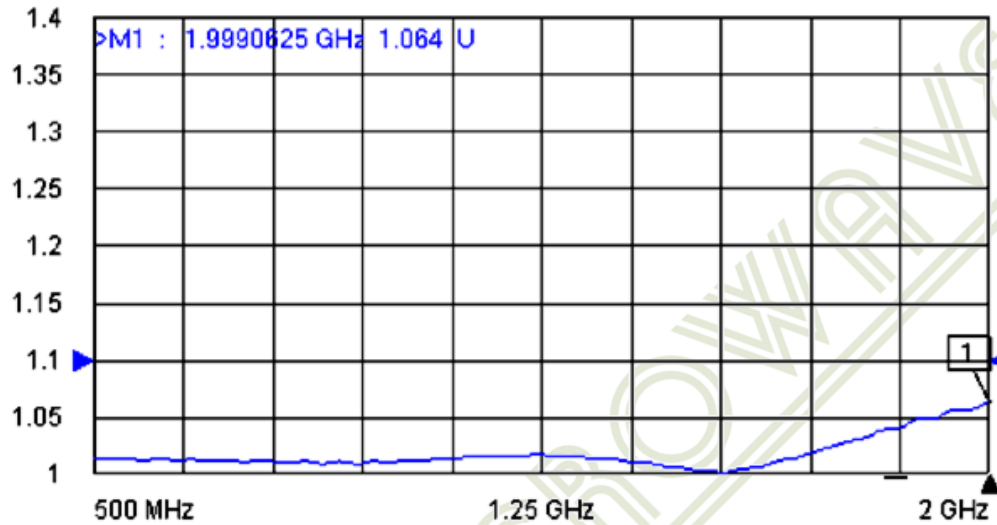
Coupling Value and Flatness



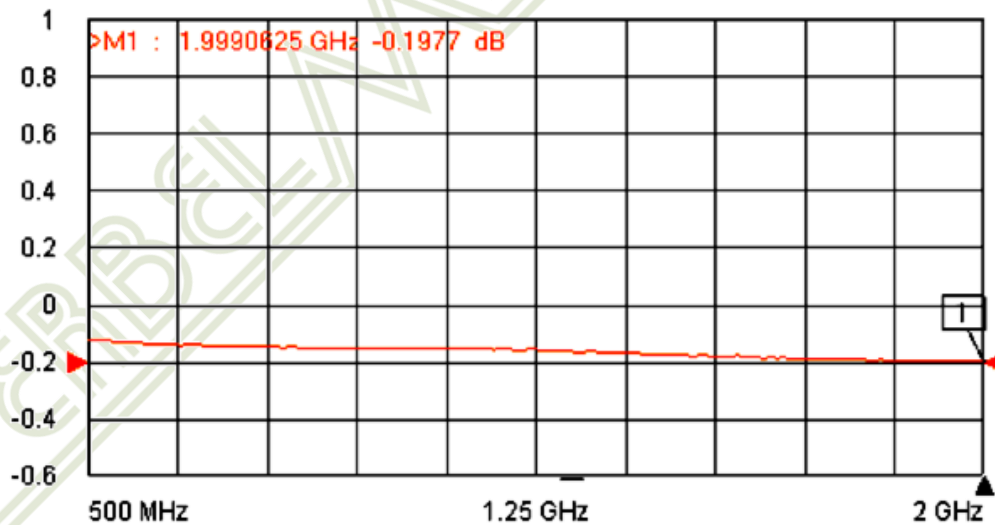
Directionality



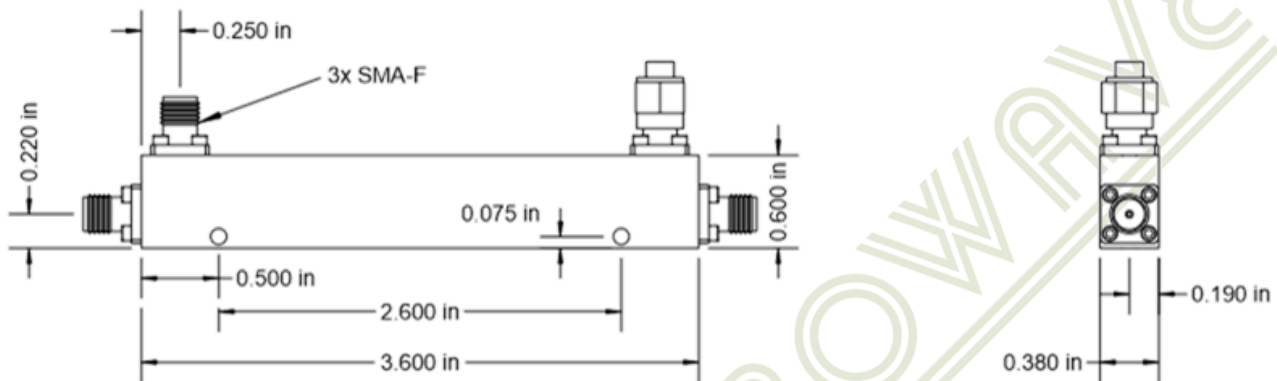
Return Loss



Insertion Loss



Outline Dimensions



Outline # OL-1002

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

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

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