

Directional Coupler, 2-8GHz, 6dB, SMA Female

WMC-2-8-6dB-S

Description

Model WMC-2-8-6dB-S from Werbel Microwave is a directional coupler that covers 2 to 8 GHz with broadband flat coupling response, high directivity, and excellent return loss performance. With max VSWR of 1.25:1 and directivity of 22dB typical, signal loss reflections are minimal while high accuracy reflectometry may be obtained. Small size aluminum enclosure measures 2.00 x 0.69 x 0.38 in. The device is RoHS compliant and is assembled and tested in the USA. Covers S band and C band in one packaged device.



Photo is representative.

Specifications	Min.	Typ.	Max.	Units
Frequency	2	--	8	GHz
Impedance	--	50	--	Ohm
Coupling	--	6.5 ± 1.0	--	dB
Frequency Sensitivity (Flatness)	--	± 0.50	± 1.25	dB
Mainline Loss ¹	--	1.4	2.2	dB
Directivity	18	22	--	dB
Return Loss (In and Out)	19	24	--	dB
Return Loss (Coupling)	19	22	--	dB
Isolation	--	28.5	--	dB
Input Power (CW) ²	--	--	4	Watts

Mechanical

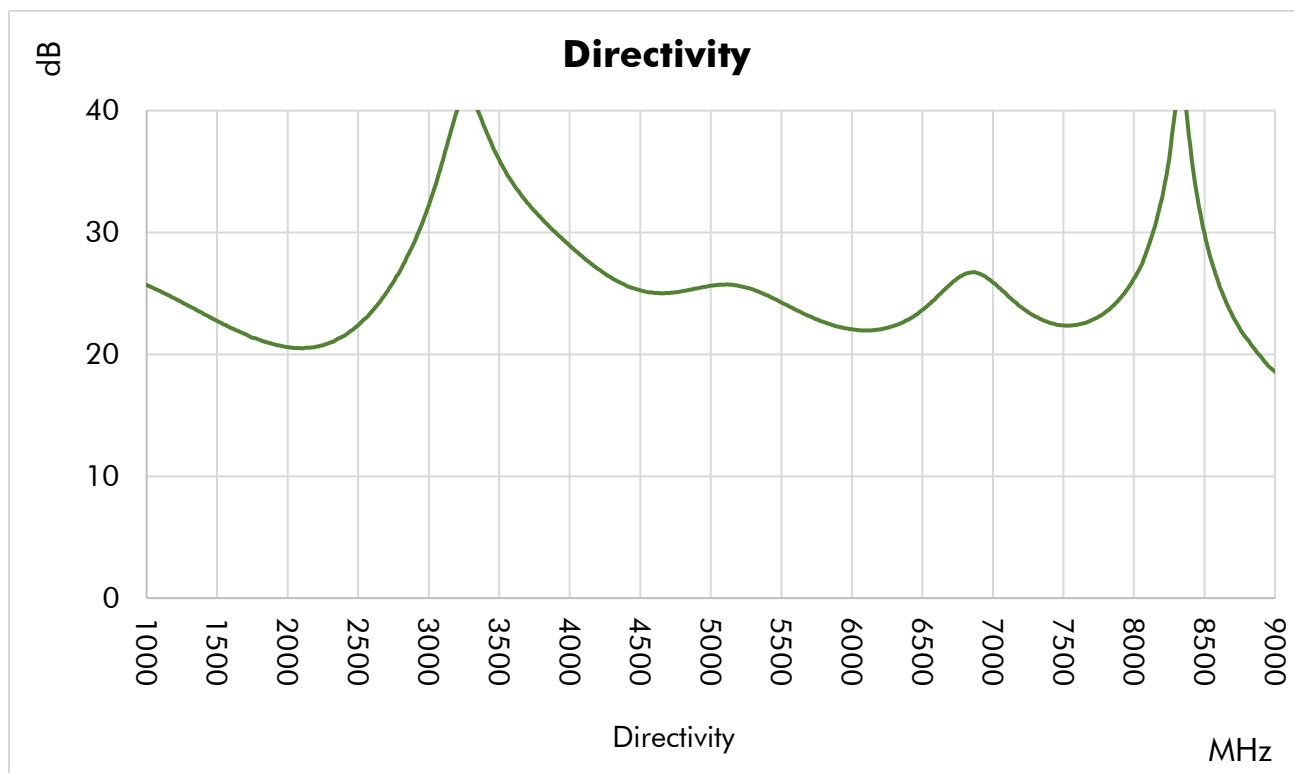
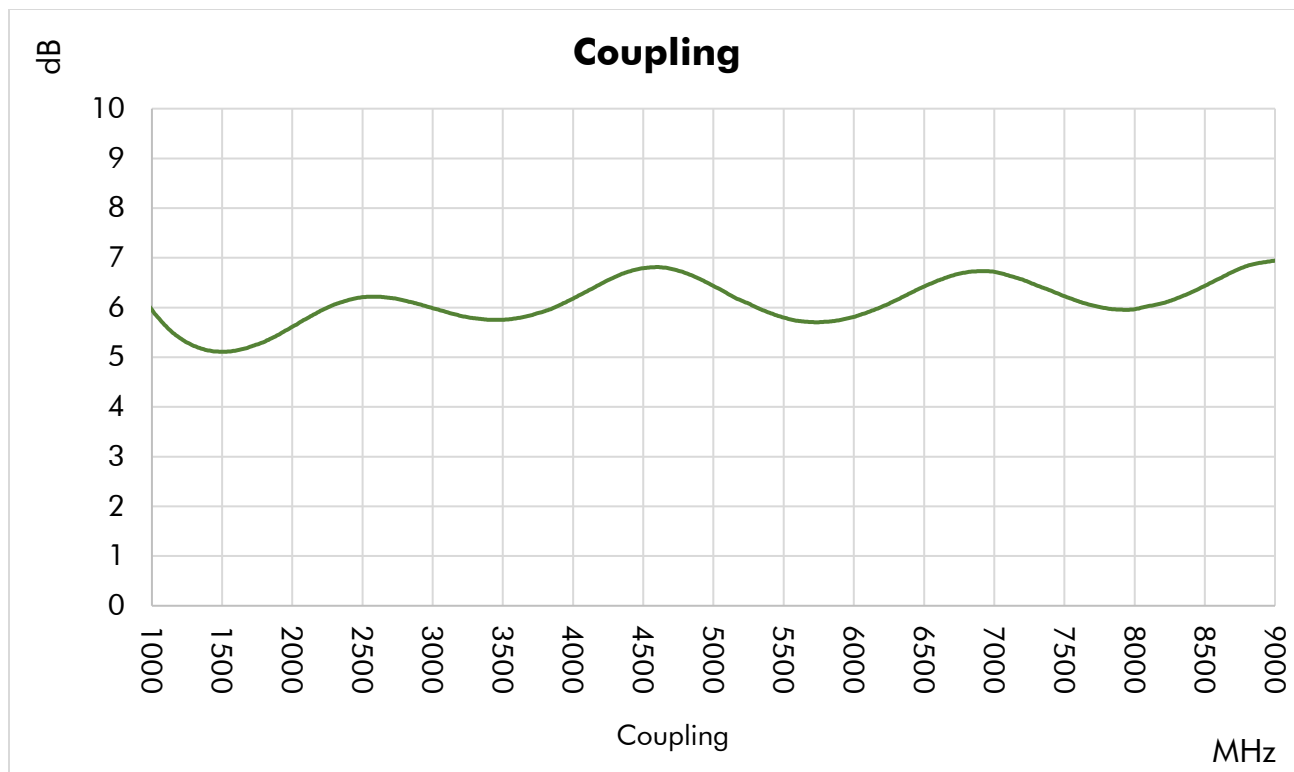
Connector Interface	SMA-Female
Operating Temperature ³	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight	1 oz (28 g)
Humidity	10-90% non-condensing
Environment	Indoor Use Only

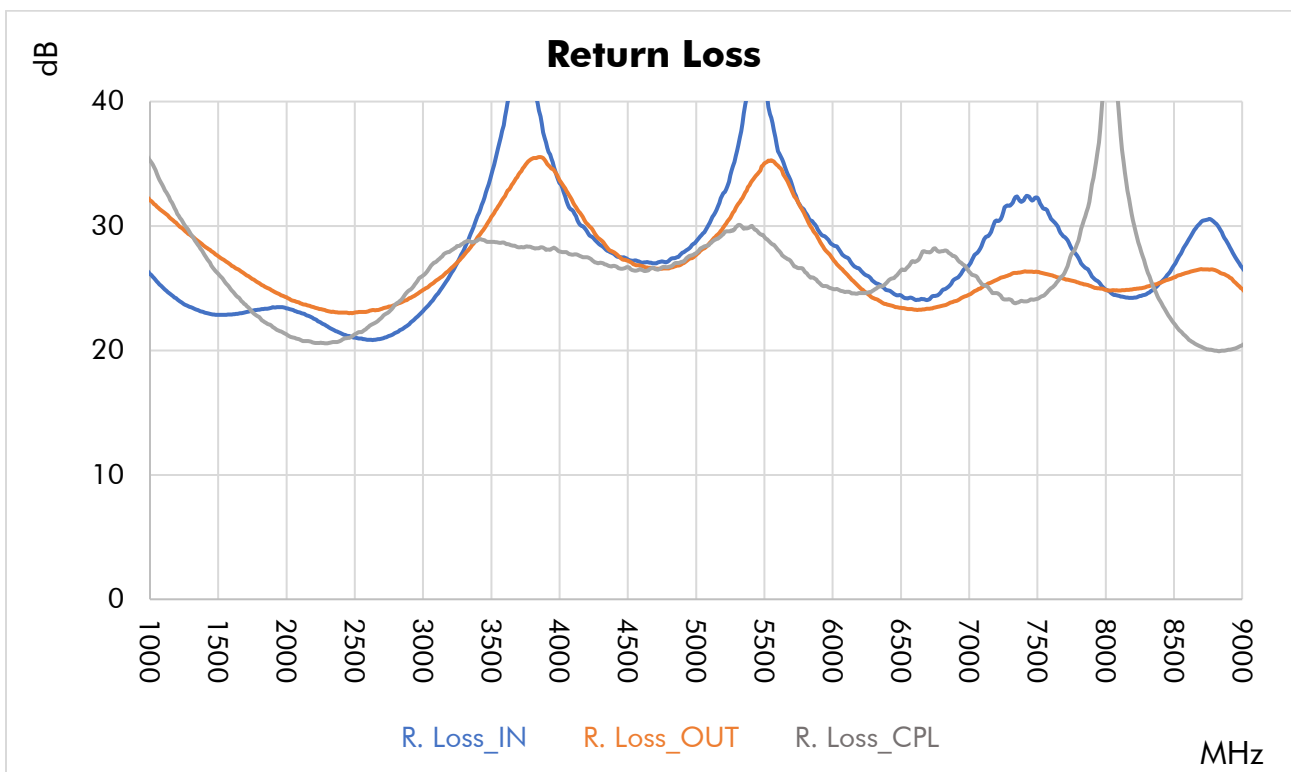
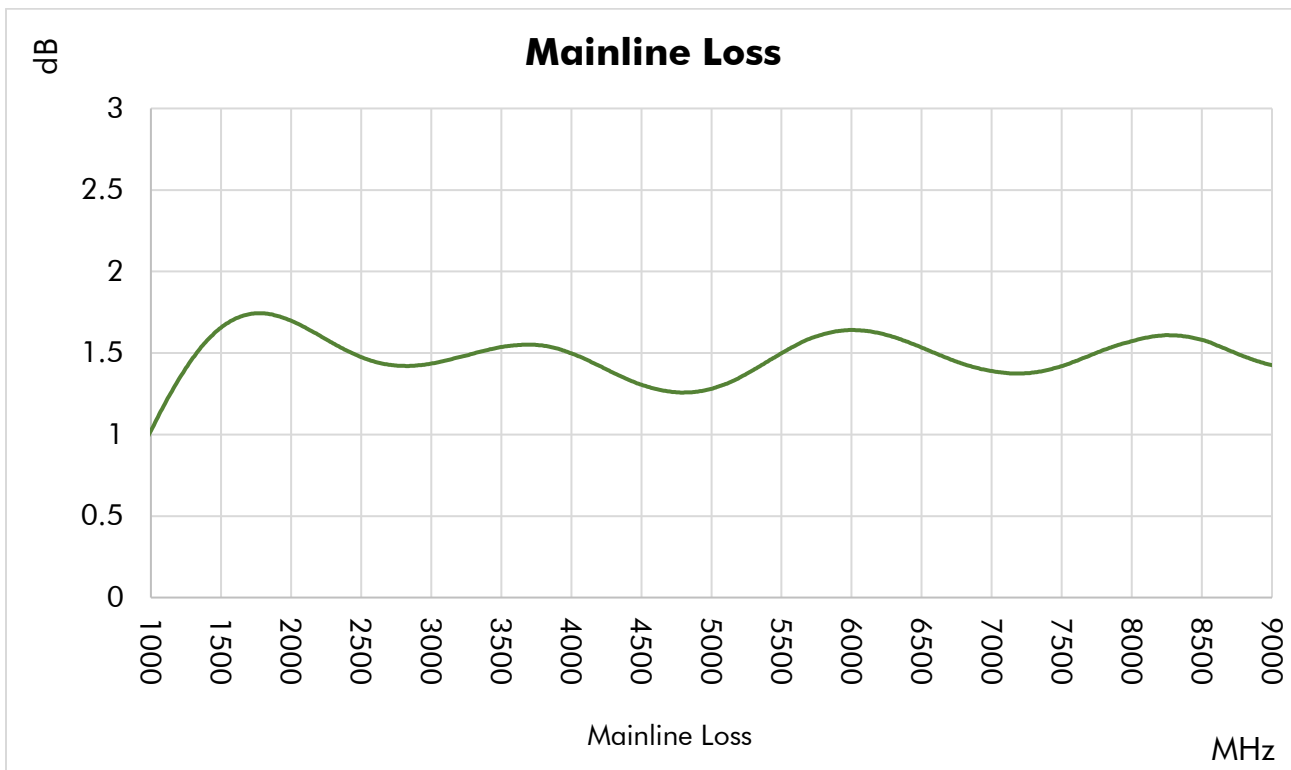
1. Mainline loss includes coupling loss.
2. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
3. Electrical specifications at +25 °C only.
4. To the best of our knowledge at time of publication.

Materials

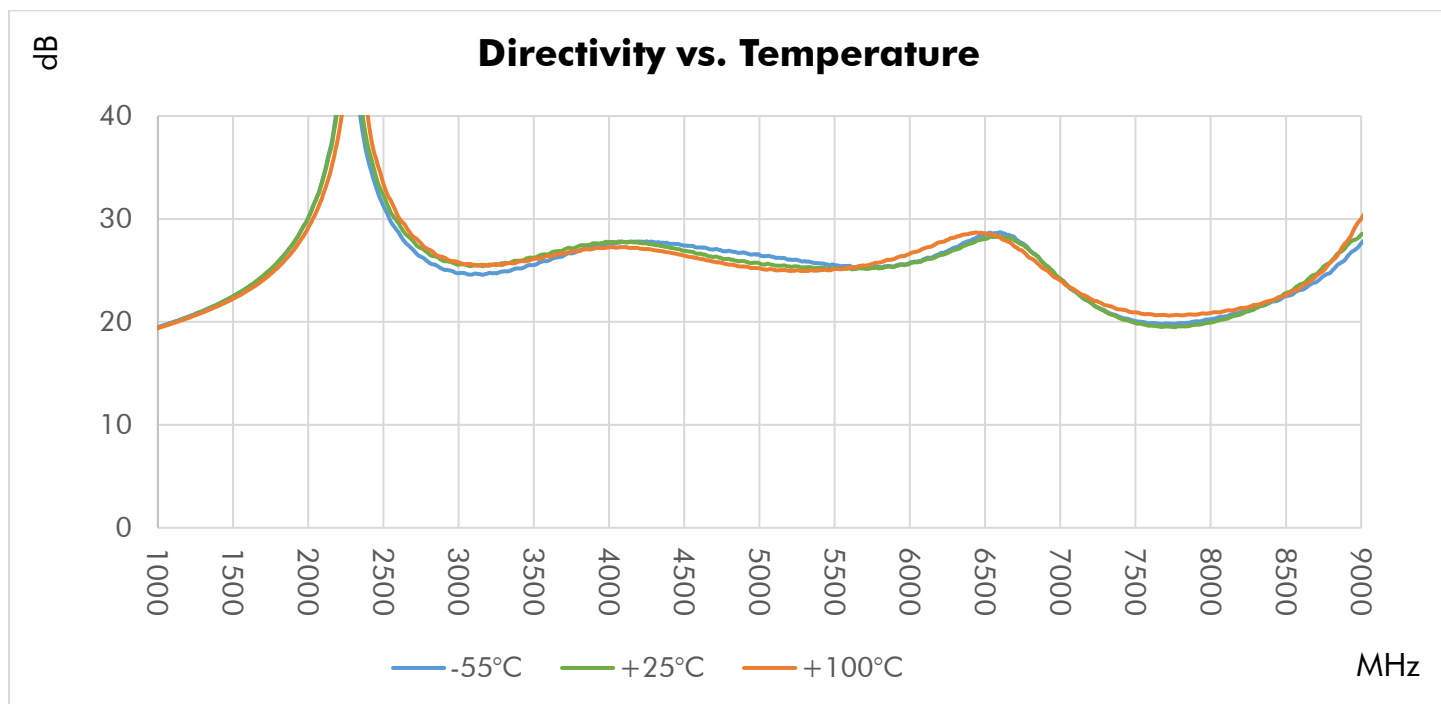
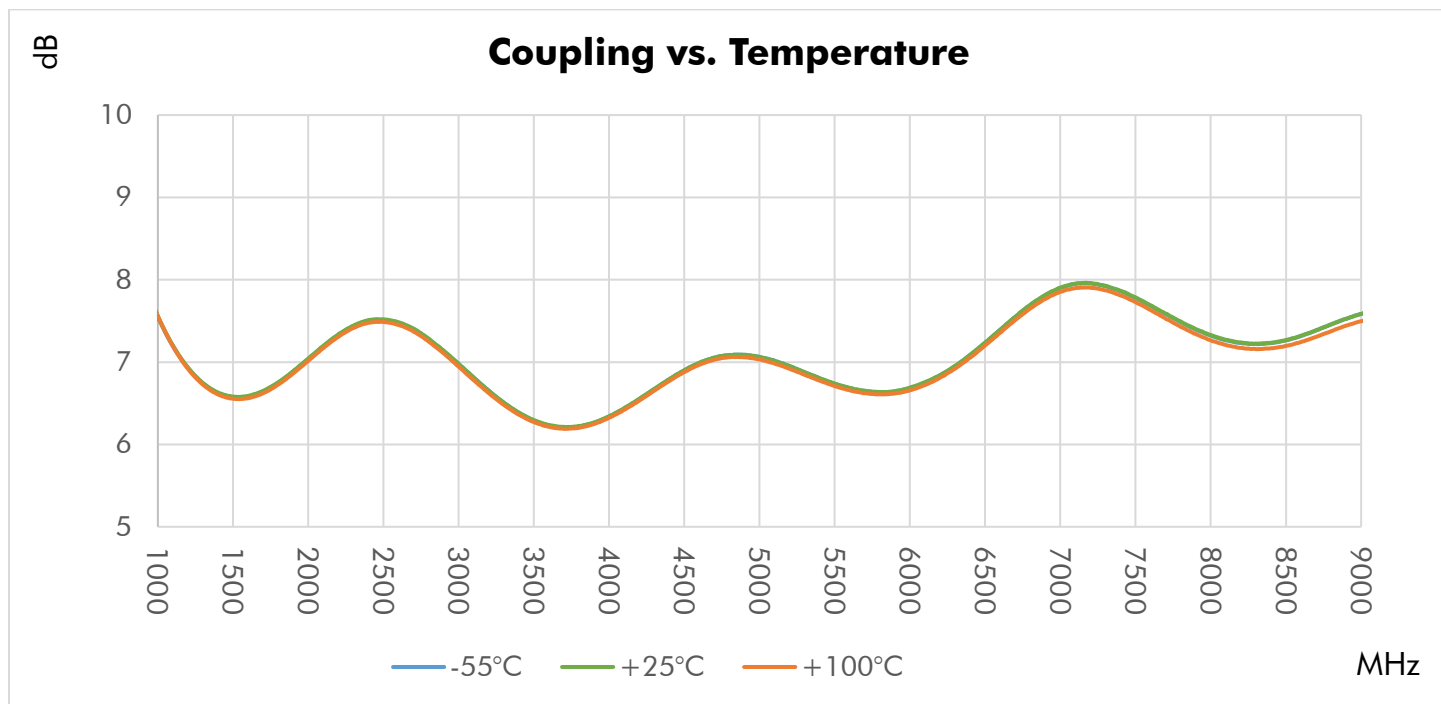
RoHS and REACH Compliant ⁴	
Enclosure	Aluminum
Connectors	Stainless Steel
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Green Paint

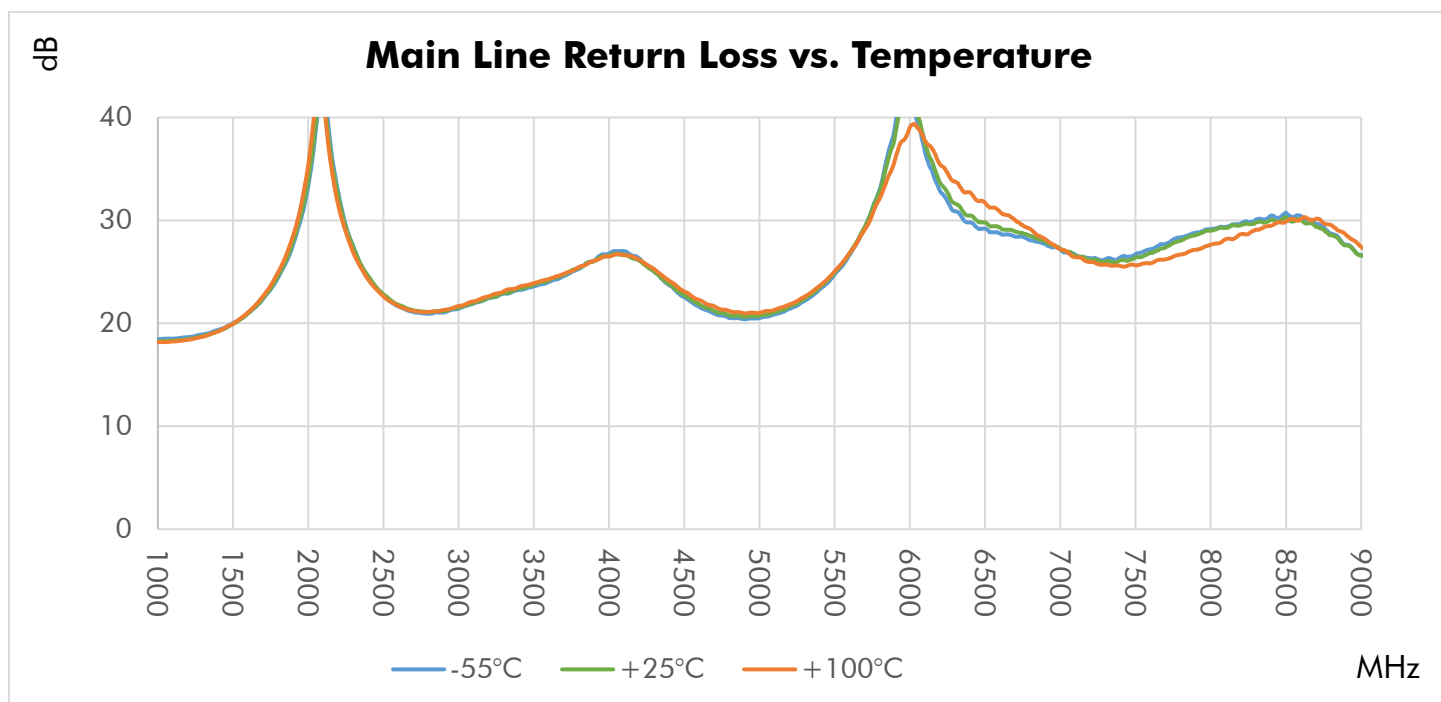
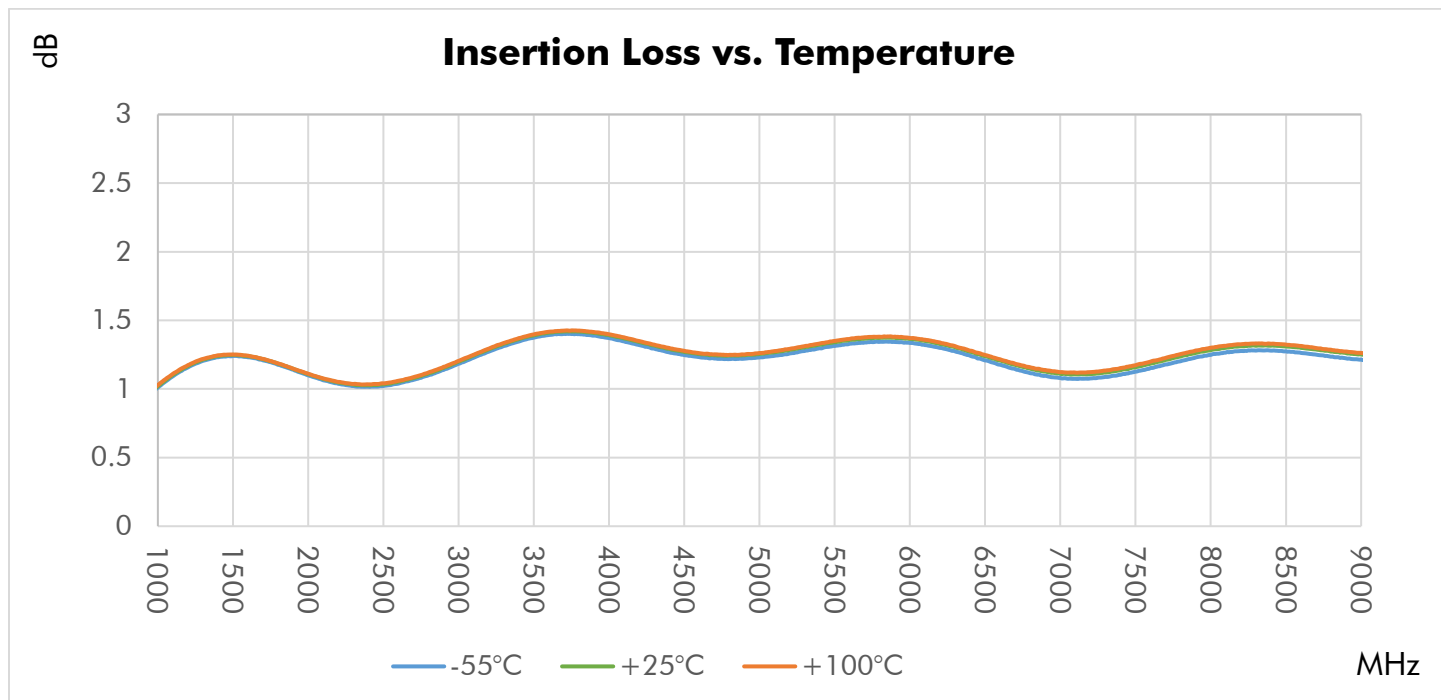
Typical Performance at +25 °C





Typical Performance Over Temperature

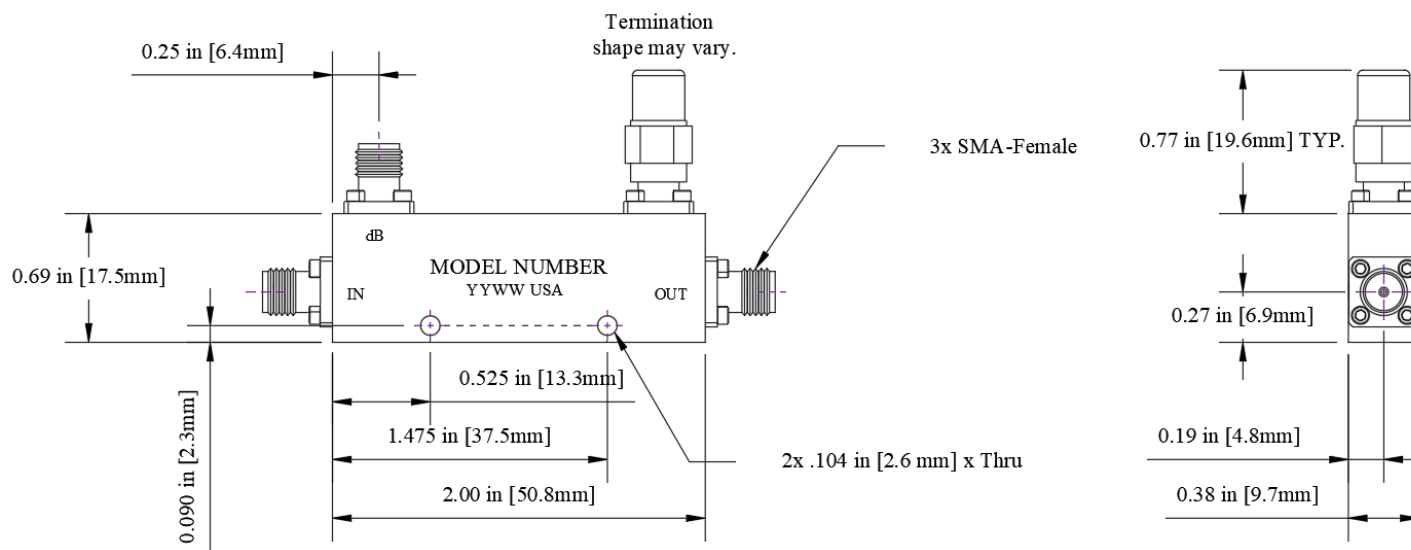




Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Mainline Loss (dB)	Coupling (dB)	Directivity (dB)
	In	Out	Cpl.	In-Out	In-Cpl.	
2000	23.2	23.9	21.2	1.6	5.7	20.6
2250	22.0	23.1	20.6	1.5	6.1	20.8
2500	20.9	23.3	21.4	1.4	6.2	22.4
2750	21.5	23.8	23.3	1.4	6.1	26.0
3000	23.8	25.3	26.3	1.5	6.0	32.4
3250	27.8	27.8	28.6	1.5	5.8	41.2
3500	35.8	32.3	28.8	1.6	5.8	35.8
3750	43.0	35.8	28.6	1.5	5.9	31.7
4000	31.8	32.0	28.1	1.4	6.3	28.9
4250	28.2	28.2	27.1	1.3	6.6	26.6
4500	27.2	26.6	26.6	1.2	6.8	25.2
4750	27.4	26.6	26.7	1.3	6.7	25.1
5000	29.6	28.4	28.1	1.4	6.4	25.6
5250	36.8	31.9	29.6	1.5	6.0	25.5
5500	40.5	35.3	28.9	1.6	5.8	24.2
5750	30.6	30.4	26.6	1.7	5.7	22.9
6000	27.7	26.0	25.0	1.6	5.8	22.1
6250	25.6	24.1	24.7	1.5	6.1	22.2
6500	24.5	23.4	26.6	1.4	6.5	23.7
6750	24.5	23.5	28.1	1.4	6.7	26.3
7000	27.3	24.8	26.0	1.4	6.7	25.9
7250	32.8	25.9	24.0	1.4	6.5	23.4
7500	31.7	26.1	24.3	1.5	6.2	22.4
7750	26.9	25.6	28.0	1.6	6.0	23.1
8000	24.6	24.8	52.1	1.6	6.0	26.3

Outline Dimensions



Outline # OL-1305

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

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

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