WERBEL MICROWAVE LLC
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High Power Dual Directional Coupler, 80-1,000MHz WMHPDDC-80-1000M-40dB-N

Description

Model WMHPDDC-80-1000M-40dB-N from Werbel Microwave is a dual directional coupler that covers 80 MHz to 1 GHz. This catalog model features 40dB coupling factor in both forward and reverse directionals. The catalog model ships with N Female connectors at all ports. Custom configurations of dB values and connector types are available. Consult the factory with your requirements.

The forward and reverse coupled outputs are independently isolated, which means that a mismatch on one coupled port will not affect the other. This is a useful characteristic in amplifier power monitoring applications where a good VSWR cannot always be guaranteed at the detector input.

Photo is representative.

Specifications	L	M	H	Units
Frequency	80-130	130-520	520-1000	MHz
Impedance	--	50	--	Ohm
Coupling	--	40	--	dB, typ.
Frequency Sensitivity (Flatness)	--	± 3.5	--	dB, max.
Mainline Loss[1]	0.1	0.2	0.3	dB, max.
Directivity	25	20	18	dB, min.
Isolation	65	60	58	dB, typ.
Return Loss (In and Out)	21	21	21	dB, min.
Input Power (CW)[2]	500	200	60	Watts

Mechanical

Connector Interface	N-Female
Operating Temperature[3]	-10 to +65 °C
Thermal compound between mounting surface and base plate is recommended.	
Storage Temperature	-55 to +100 °C
Weight	10.5 oz (298 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only

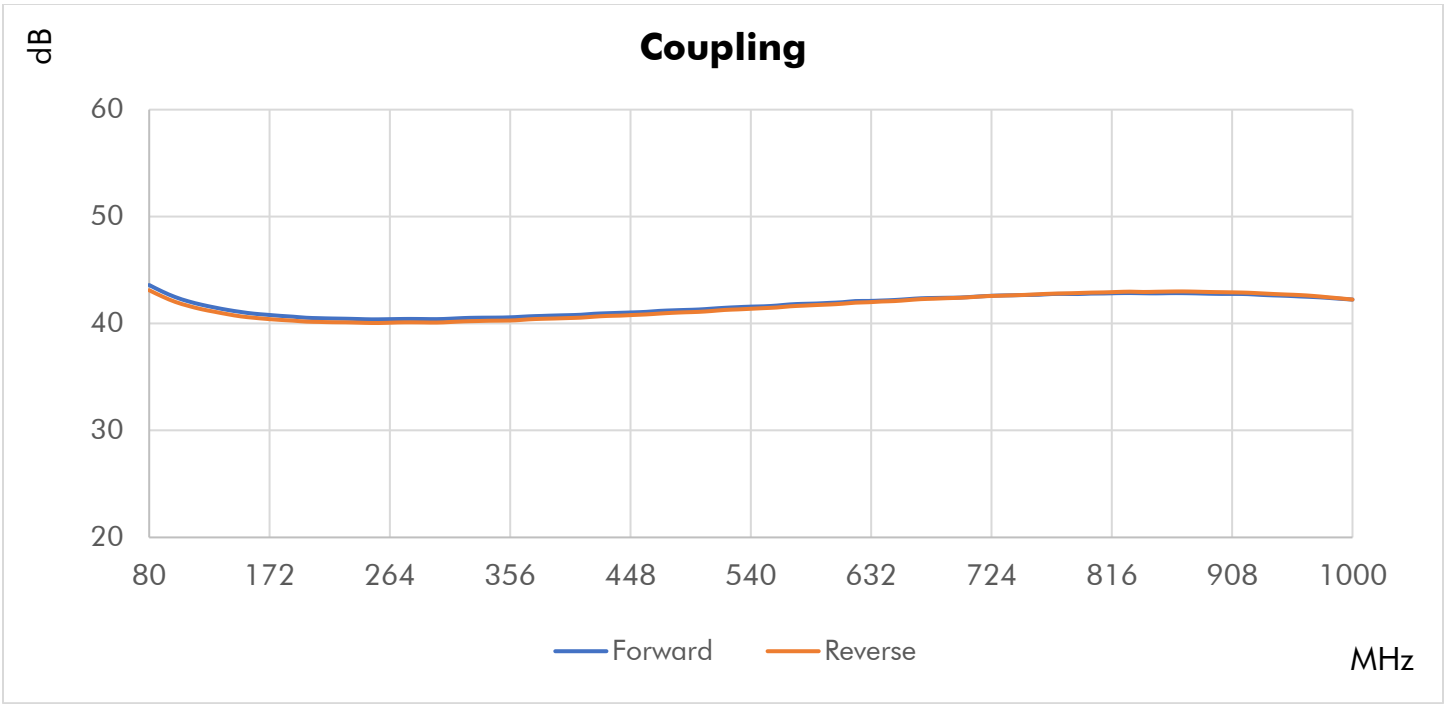
Materials

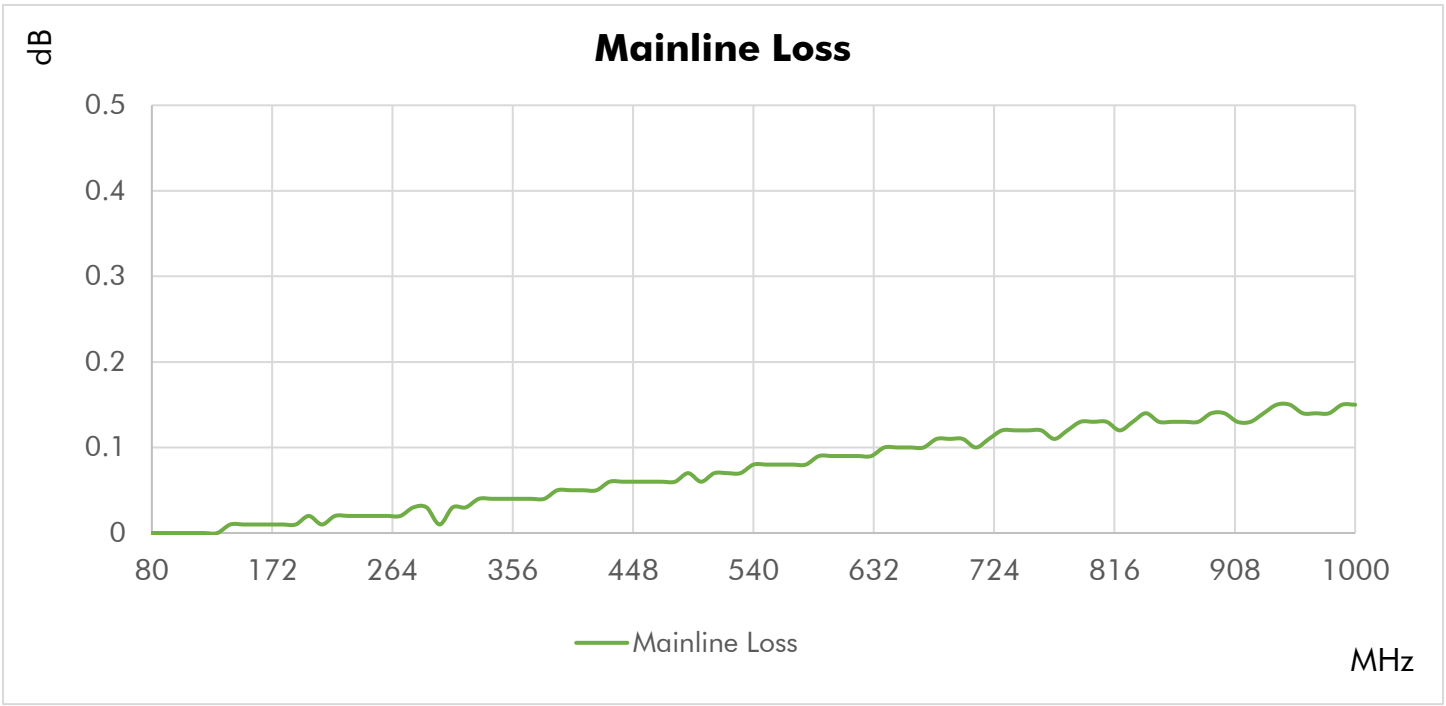
RoHS and REACH Compliant[4]

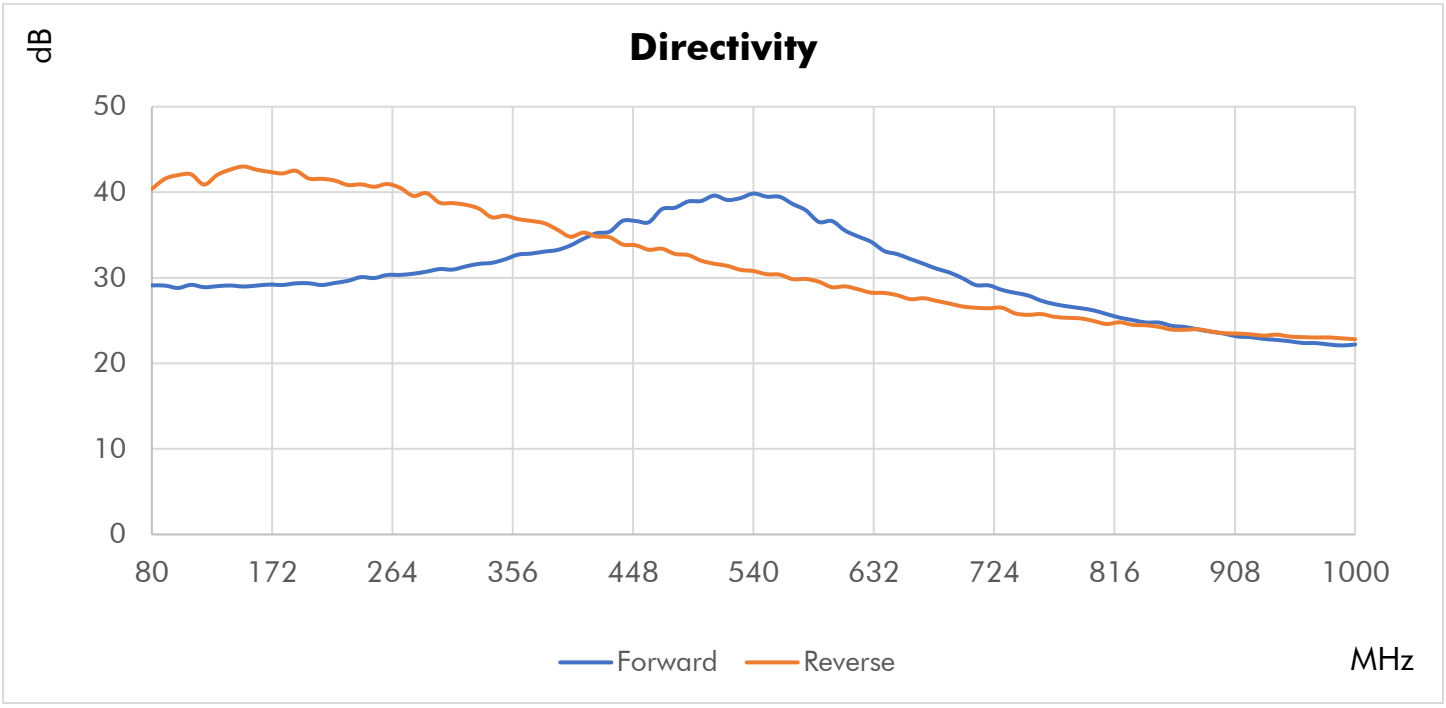
Enclosure	Aluminum
Connectors	Stainless Steel
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish (Outer)	Green Paint
Finish (Mounting Surface)	Clear Conversion Film

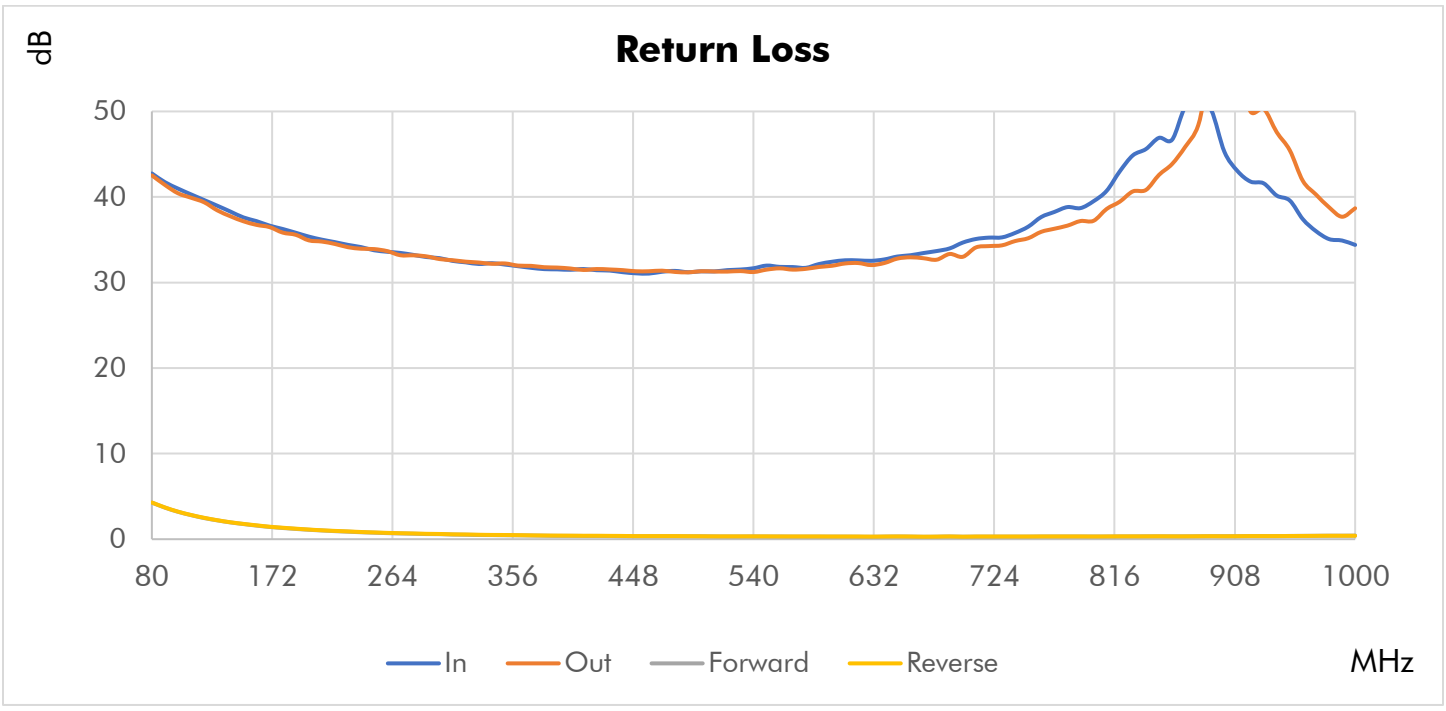
1. Mainline loss includes coupling loss.
2. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
3. Electrical specifications at +25 °C.
4. To the best of our knowledge at time of publication.

Typical Performance at +25 °C

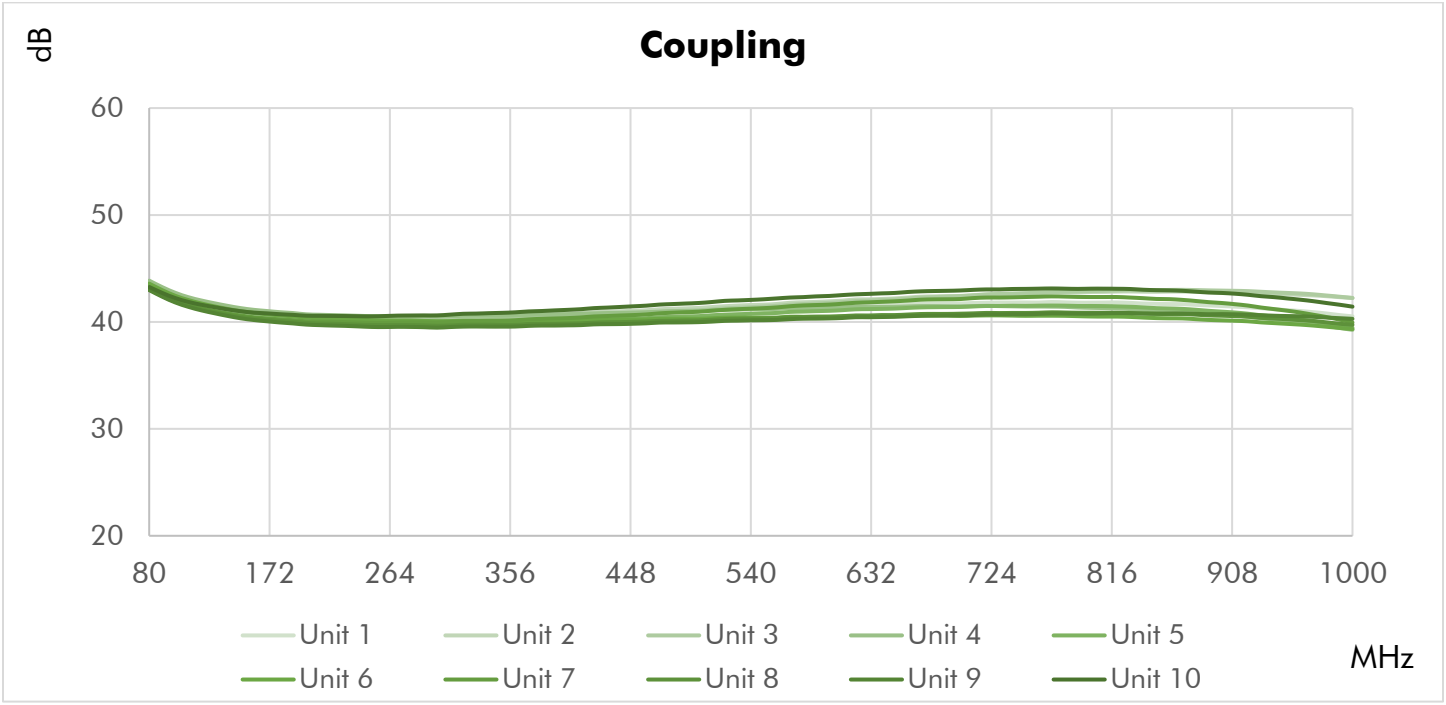


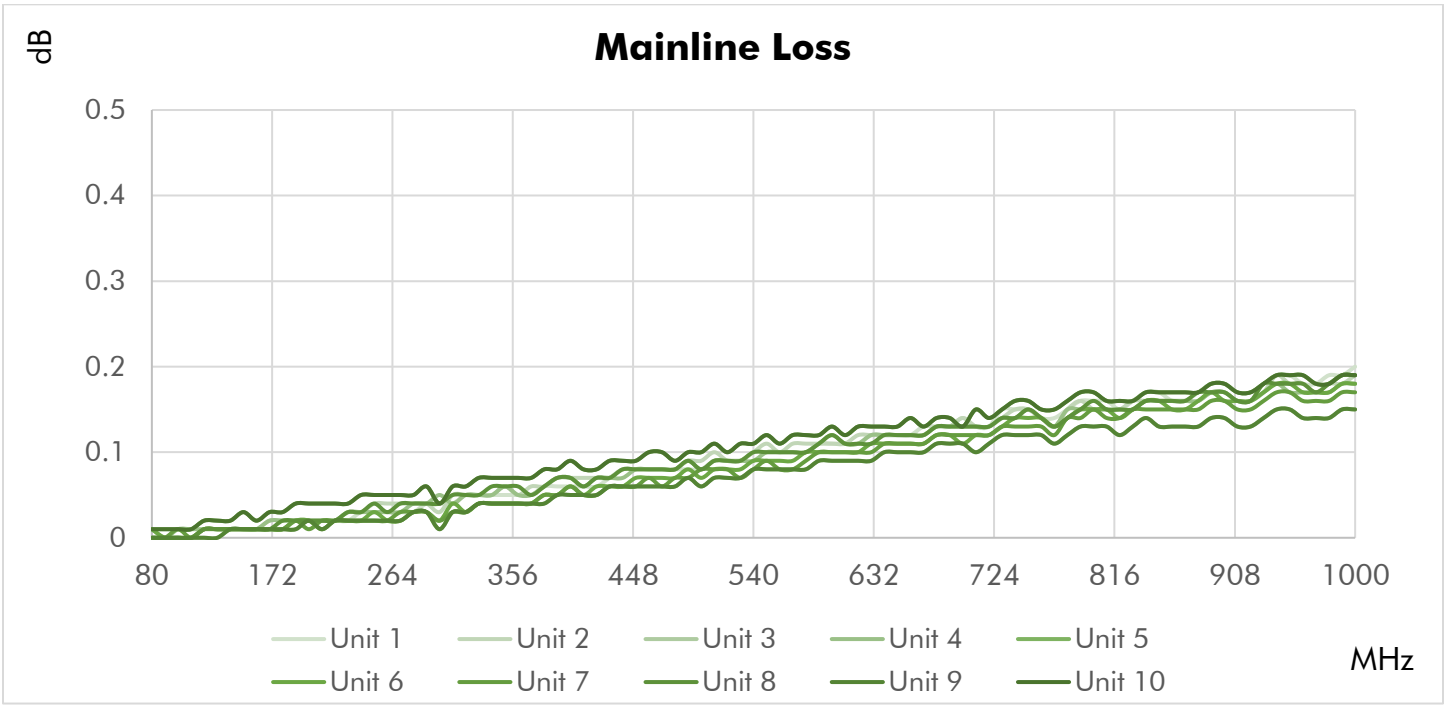



Directivity
dB
50
40
30
20
10
0
80
172
264
356
448
540
632
724
816
908
1000
Forward
Reverse
MHz

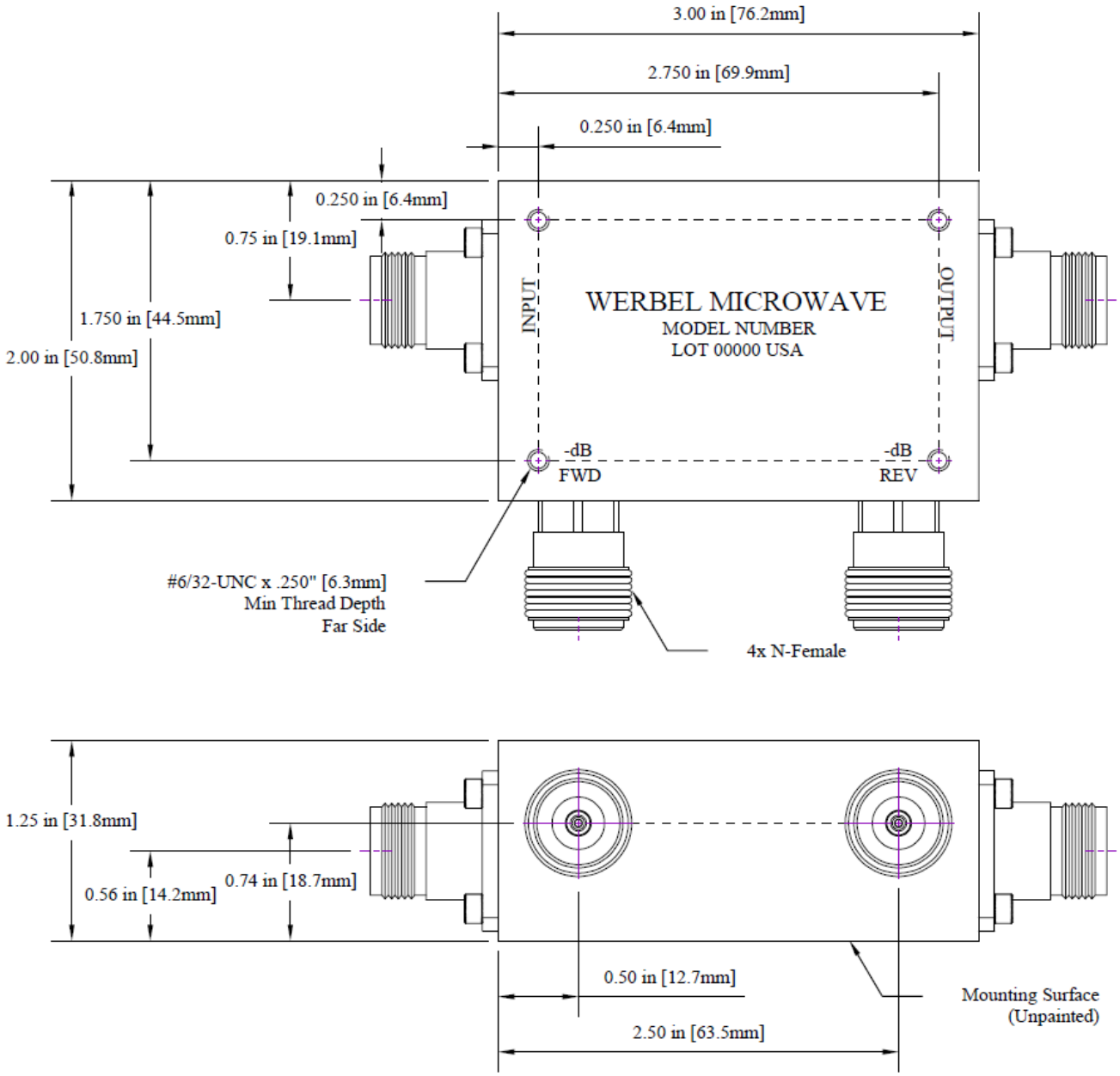

Return Loss
dB
50
40
30
20
10
0
80
172
264
356
448
540
632
724
816
908
1000
In
Out
Forward
Reverse
MHz

Repeatability in Production





Outline Dimensions



Outline # OL-5018-N
Dimensions are in inches, [mm] shown for convenience.
Tolerances on 2-pl decimals: ±.03. 3-pl decimals: ± .015.

(e.g., performance over temperature, power handling, DC current, HI-POT) are "designed to meet" and are not individually tested in production of commercially available products. Please contact a Werbel Microwave LLC Applications Engineer if specific reliability testing is needed on a particular product.