

Power Divider, 2-way, 0.5-6GHz, SMA Female

WM2PD-0.5-6-S

Description

Model WM2PD-0.5-6-S from Werbel Microwave is a 2-way power splitter covering the continuous bandwidth of 500 MHz to 6 GHz in a small sized enclosure with versatile mounting options. The device is RoHS compliant. This part has versatile mounting options. Standard through holes mount the part from the broad surface, while threaded holes allow for bulkhead rack-mountable mounting. Typical insertion loss of 0.7dB. Typical isolation of 23dB. Return loss 19dB typical. Amplitude balance 0.2dB typical. Phase balance 2 degrees typical.



Photo is representative.

Specifications		Min.	Typ.	Max.	Units
Frequency		500	-	6000	MHz
Impedance		-	50	-	Ohm
Return Loss (Port S)		12.7	17.3	-	dB
Return Loss (Port 1-2)		15.6	19.1	-	dB
Insertion Loss (above 3.01 dB)		-	0.7	0.9	dB
Isolation	500-600 MHz	15	21	-	dB
	600-6000 MHz	18	23	-	dB
Amplitude Balance		-	0.2	0.5	dB
Phase Balance		-	2	6	Degrees
Input Power (CW) ¹	500-2700 MHz	-	-	50	Watts
	2700-6000 MHz	-	-	30	Watts
Combining Power (CW) ¹		-	-	0.5	Watts/port
Internal Dissipation		-	-	1	Watts
DC Current		-	-	2.4 (1.2 A/port)	A

Mechanical

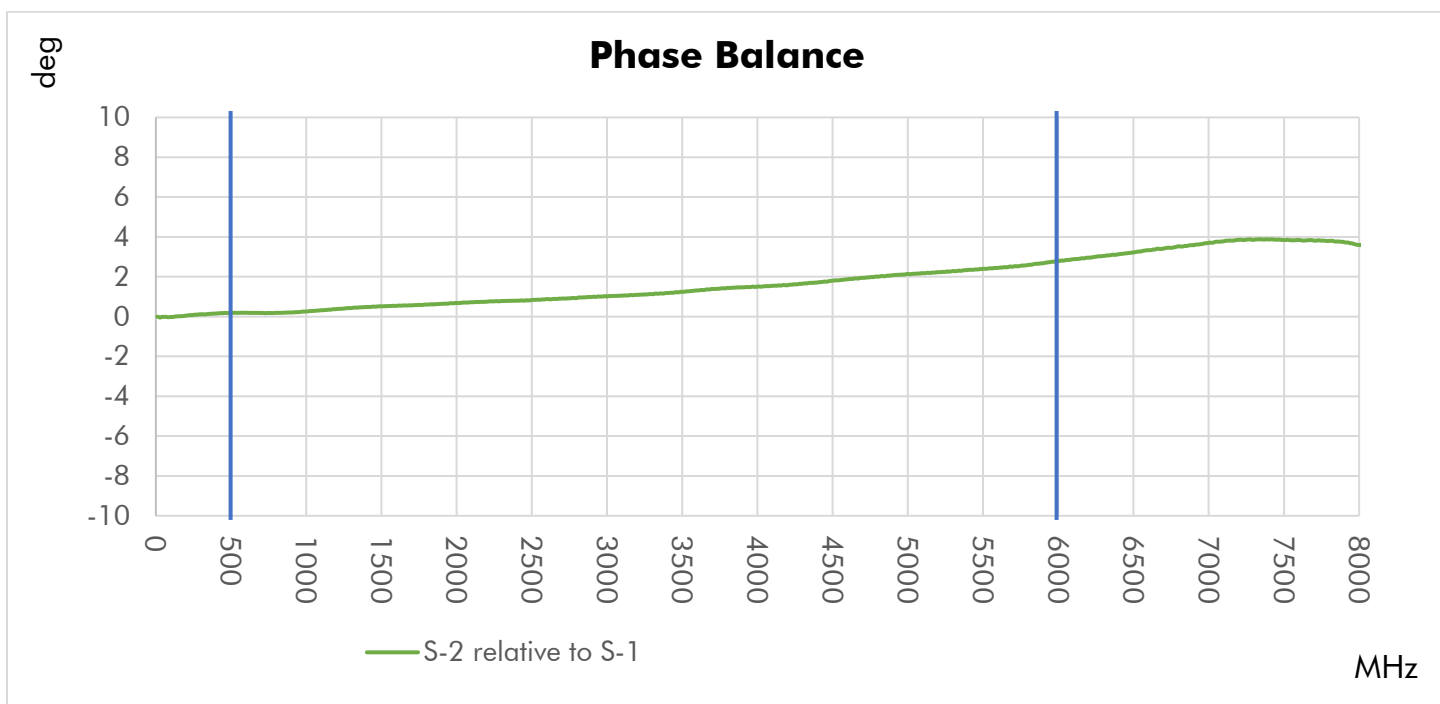
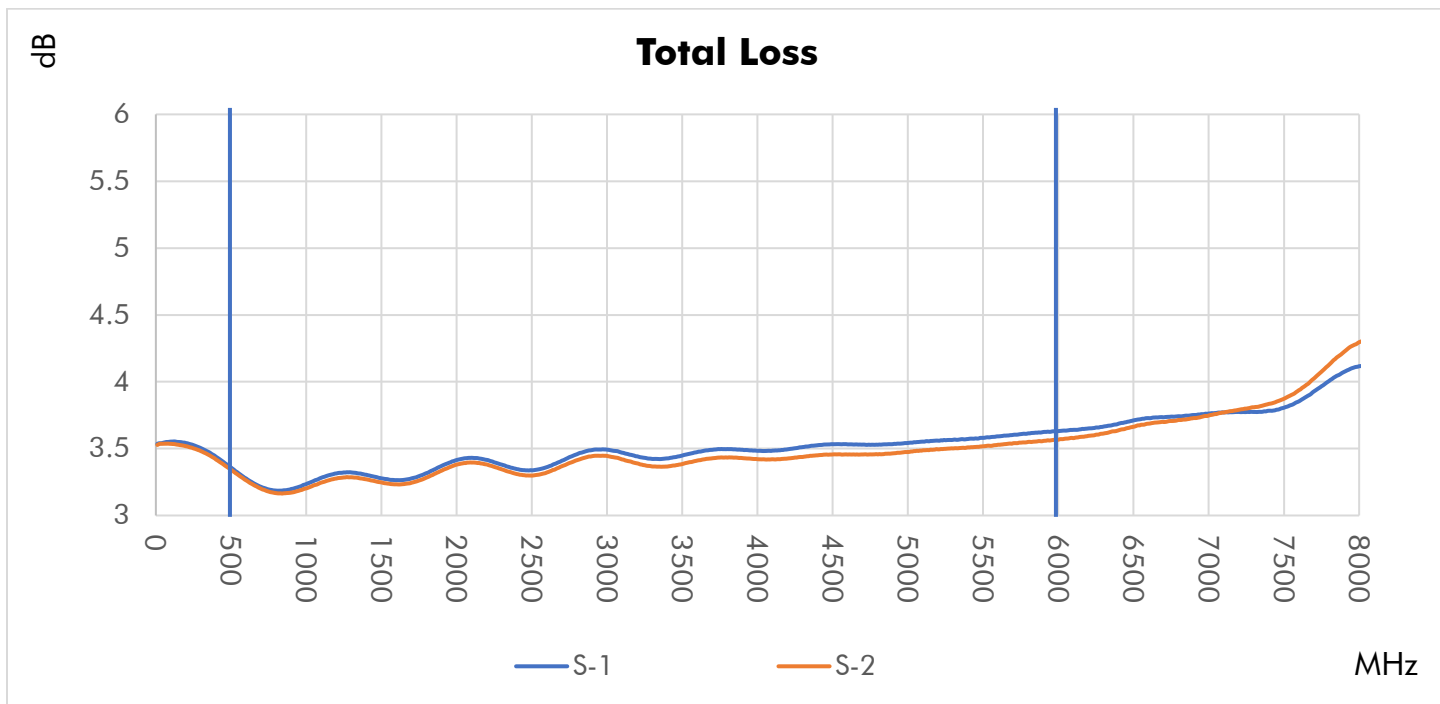
Connector Interface	SMA-Female
Operating Temperature ²	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Weight Estimate	3 oz (85 g)
Humidity	10-90% non-condensing
Environment	Indoors Use Only
CAGE Code	78YZ0

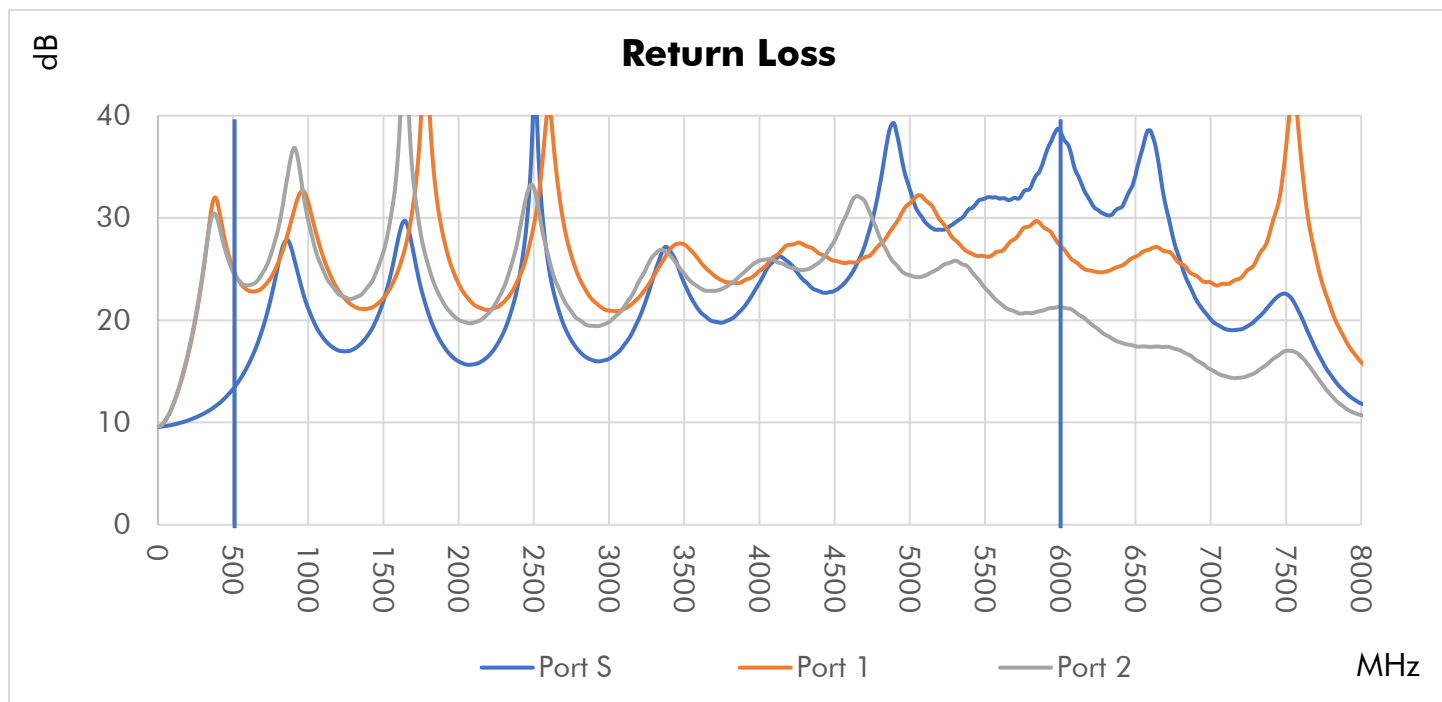
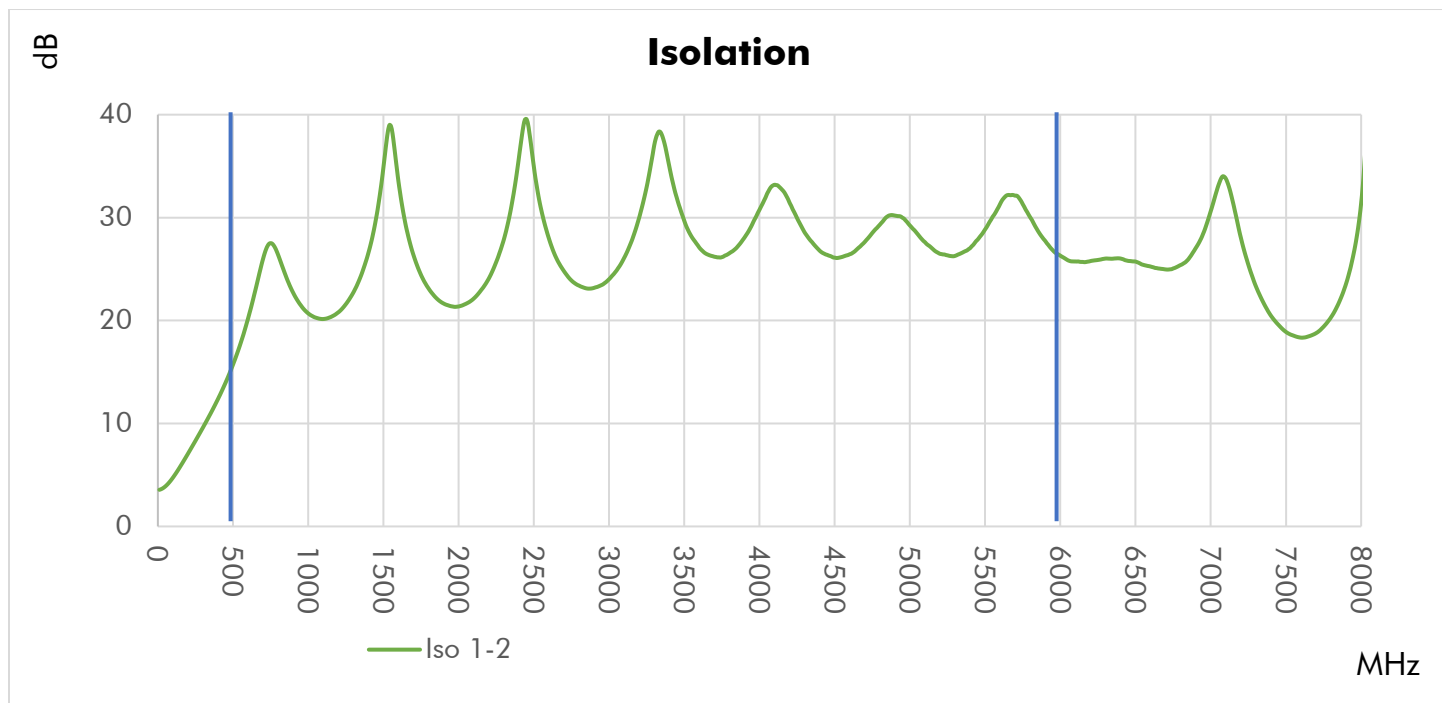
1. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
2. Electrical specifications at +25 °C only.
3. To the best of our knowledge at the time of publication.

Materials

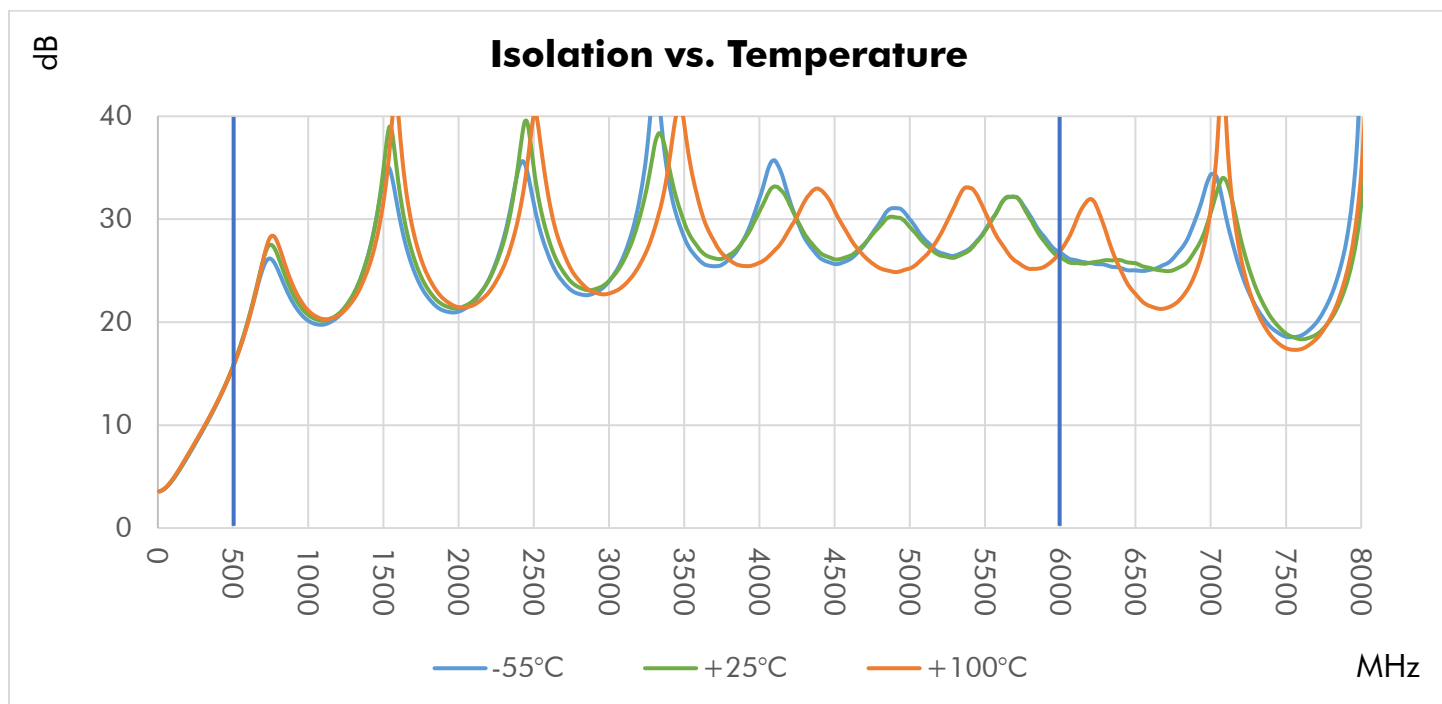
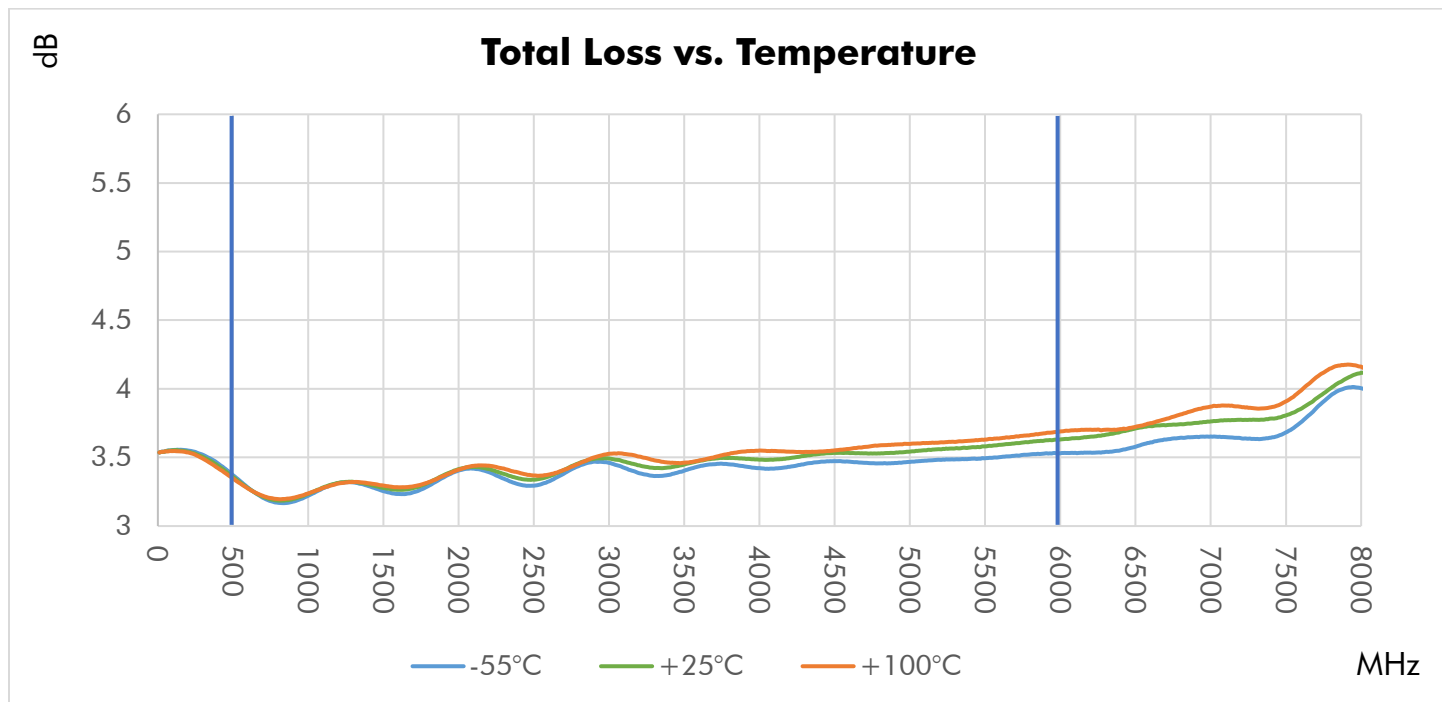
RoHS Compliant ³	Yes
REACH Compliant ³	Yes
Enclosure	Aluminum
Connectors	Brass, Gold Plated
Contacts	Be Cu, Gold Plated
Insulators	PTFE
Finish	Green Paint

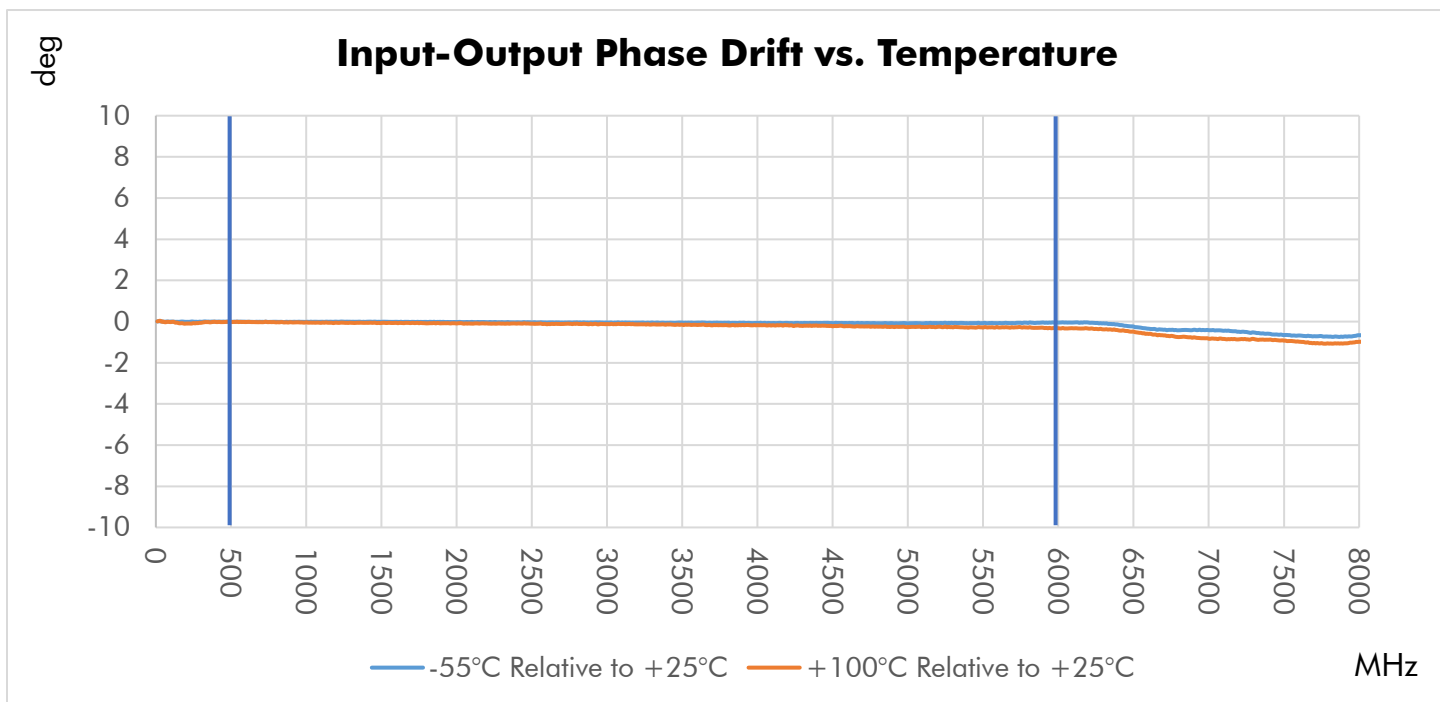
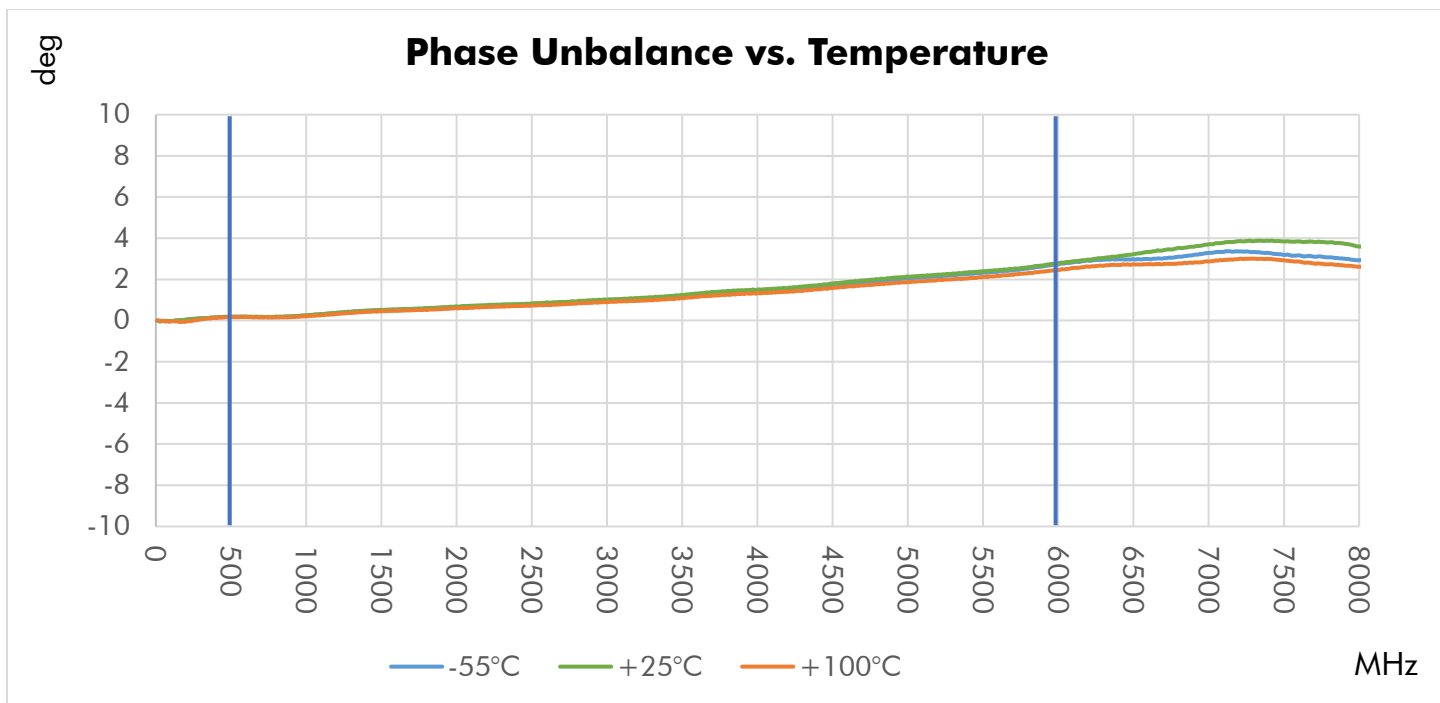
Typical Performance at +25 °C

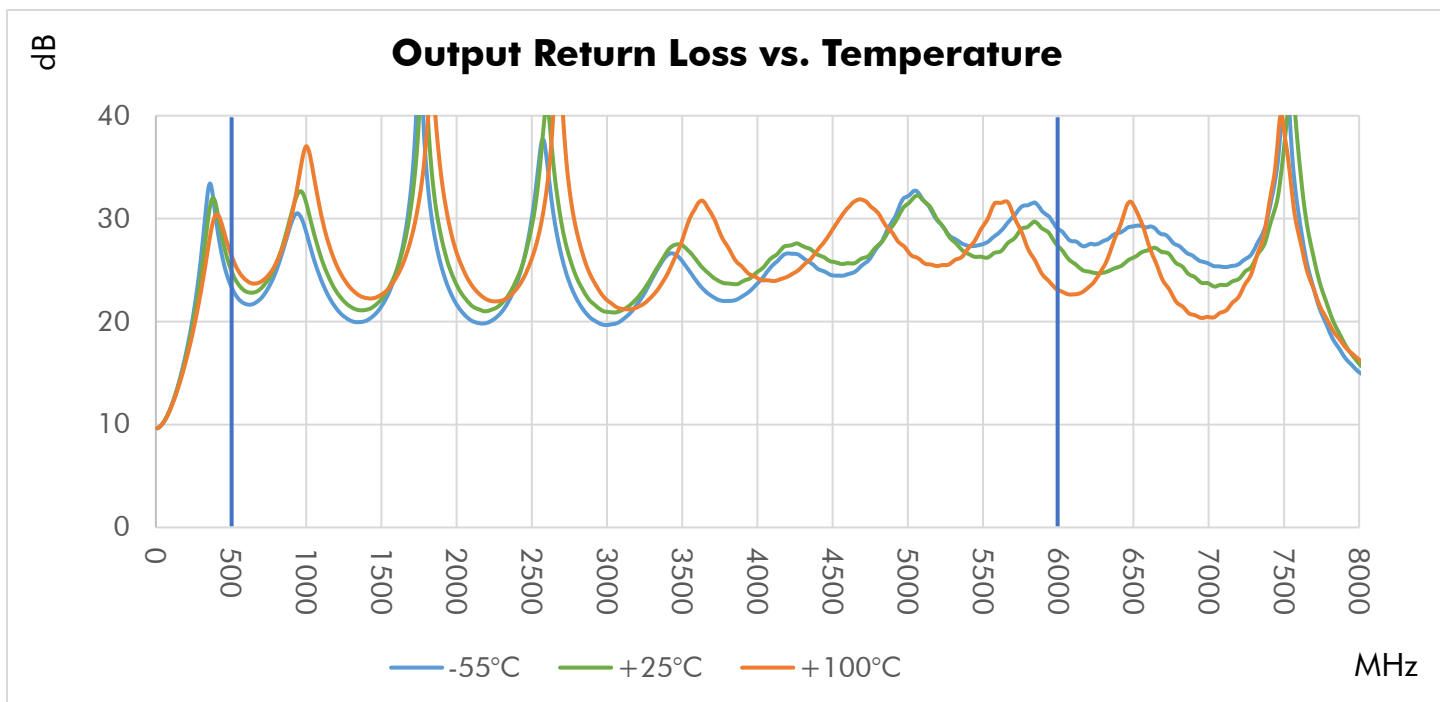
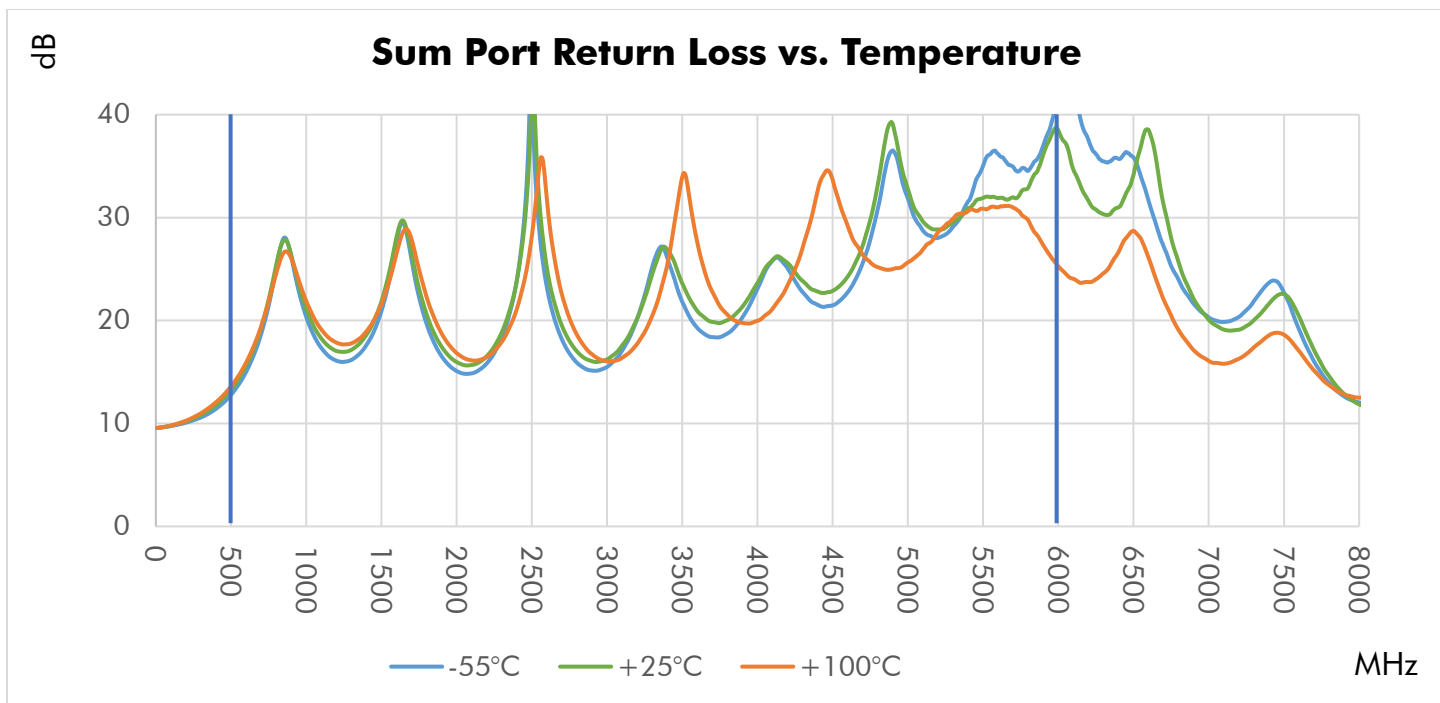




Typical Performance Over Temperature

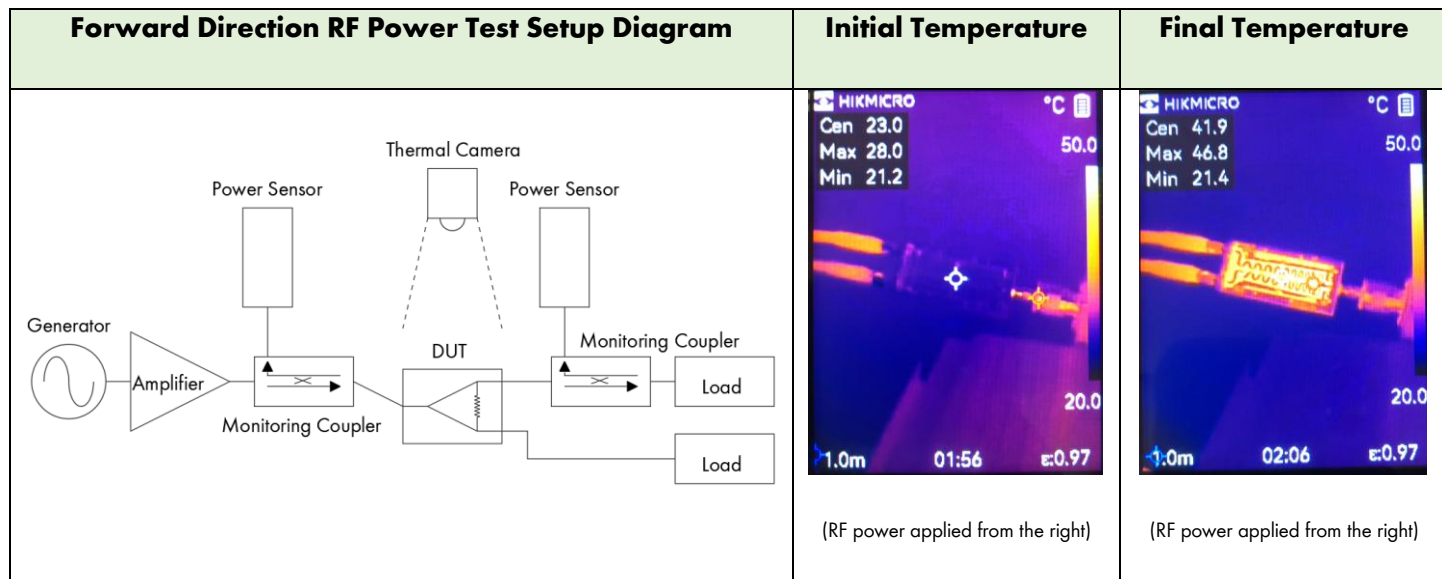




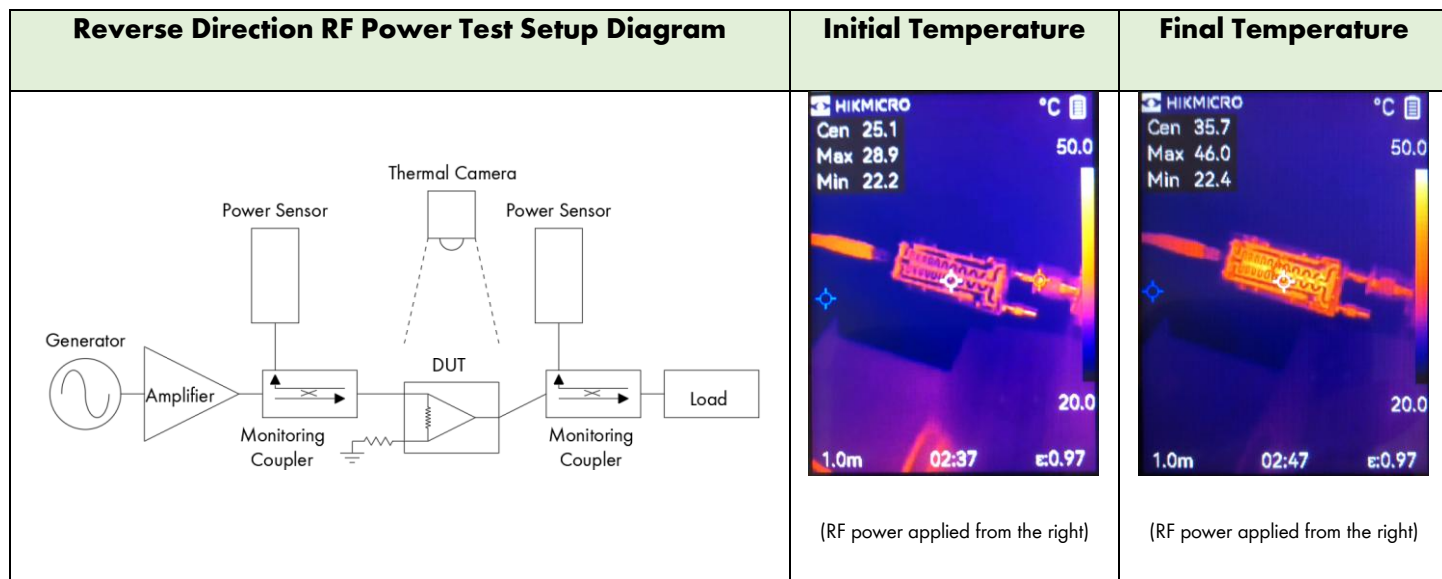


Reliability Testing

RF power test was performed to determine the input power required to produce a nominal temperature rise of 20°C at the hottest point. The test was performed at room temperature without forced air. A heatsink was not used unless it came standard with the product.



- 100 watts CW at 500MHz was applied to the DUT input for a duration of 10 minutes.
- The DUT temperature increased from 23.0°C (initial, center marker) to 46.8°C (final, max marker), resulting in a 23.8°C rise.

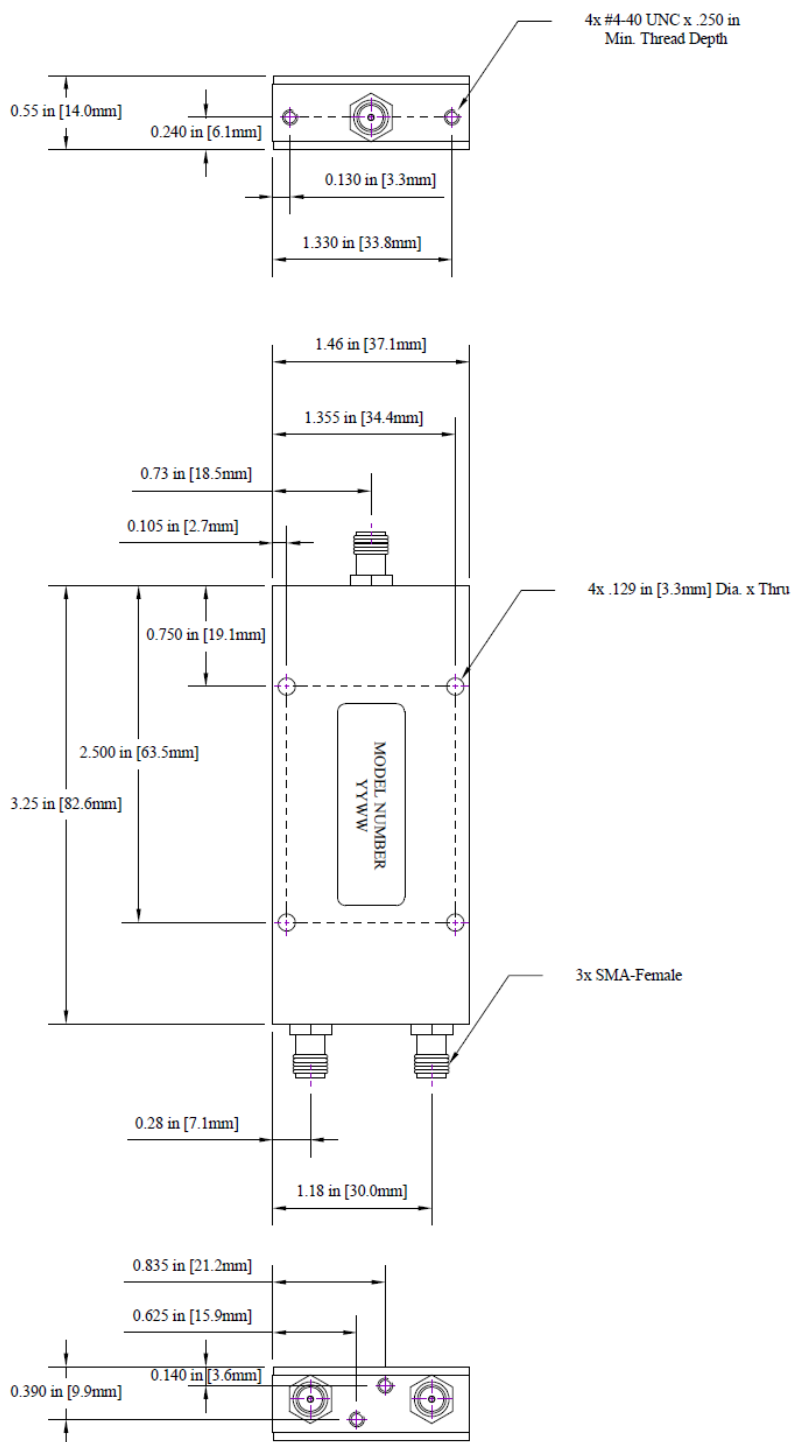


- 4 watts CW at 500MHz was applied to the DUT output for a duration of 10 minutes.
- The DUT temperature increased from 25.1°C (initial, center marker) to 46.0°C (final, max marker), resulting in a 20.9°C rise.

Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 2	S-1	S-2	
500	16.6	30.1	29.8	3.2	3.2	17.7
550	18.4	31.3	31.0	3.2	3.2	20.2
600	20.7	32.4	32.0	3.2	3.2	23.4
650	23.6	32.4	32.0	3.2	3.2	27.8
700	27.3	32.8	32.5	3.1	3.1	35.0
750	31.8	33.4	32.8	3.1	3.2	39.5
800	32.5	33.5	32.6	3.1	3.2	31.1
850	29.6	34.8	33.8	3.2	3.2	27.3
900	27.0	36.5	35.0	3.2	3.2	25.0
950	25.4	38.7	36.8	3.2	3.2	23.8
1000	24.3	43.2	39.6	3.2	3.2	23.1
1500	31.7	32.6	33.1	3.2	3.2	31.3
2000	23.1	34.6	34.2	3.3	3.3	26.1
2500	22.0	31.9	30.3	3.3	3.3	25.3
3000	33.2	37.3	47.7	3.3	3.3	33.9
3500	21.8	30.2	29.7	3.3	3.4	26.1
4000	25.9	38.4	39.8	3.4	3.4	27.1
4500	27.4	29.9	31.5	3.4	3.5	27.8
5000	23.8	30.3	45.6	3.4	3.5	26.7
5500	27.0	30.6	29.4	3.5	3.6	28.0
6000	22.4	28.9	24.6	3.5	3.7	22.8

Outline Dimensions



Outline drawing: OL-2066

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

Tolerances on 2-pl decimals: ± 0.03 . 3-pl decimals: ± 0.015 .

The information contained in this document is accurate to the best of our knowledge and representative of the product described herein at the date of publication. It may be necessary to make modifications to the product and/or documentation of the product. Werbel Microwave LLC reserves the right to make such changes as required without notice. Unless otherwise stated, all specifications and dimensions are nominal. Werbel Microwave LLC does not make any representation or warranty regarding the suitability of the product described herein for any particular purpose or application, and Werbel Microwave LLC does not assume any liability arising out of the use of any part of documentation. This document gives only a description of the product(s) and shall not form part of any contract. Please contact a Werbel Microwave LLC Applications Engineer for the most current specification drawing.

Reliability testing was performed as an internal requalification of the product to substantiate the published specifications, which were previously arrived at by calculation and/or similarity to existing products. The results of these tests are provided as a courtesy and shall not form part of a contract or warranty. While reliability tests may depict the product being tested beyond the published specification ratings for the purpose of stress testing the product, this does not imply that the product should be operating above the rated limits for any length of time. Specifications related to reliability (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.