WERBEL MICROWAVE LLC
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Resistive Divider, DC-7.2GHz, 9-way, SMA-Female

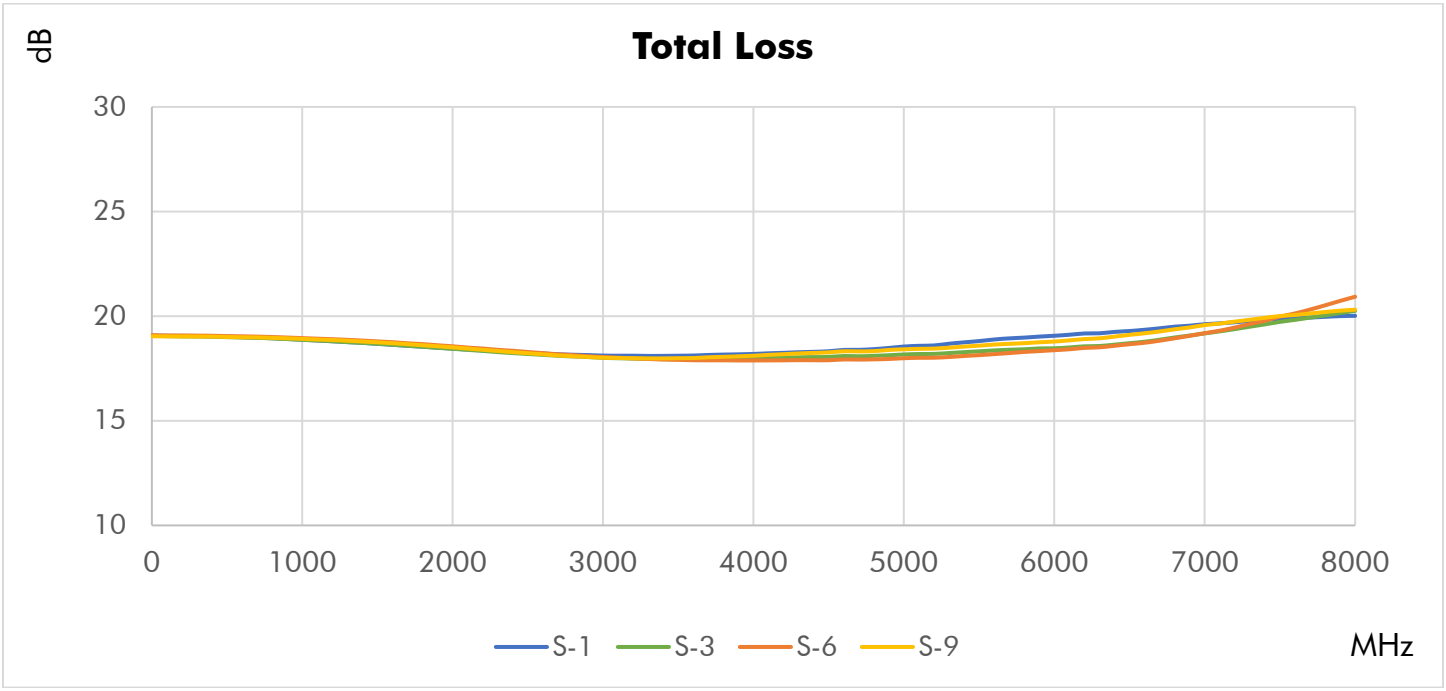
WMRD09-7.2-S

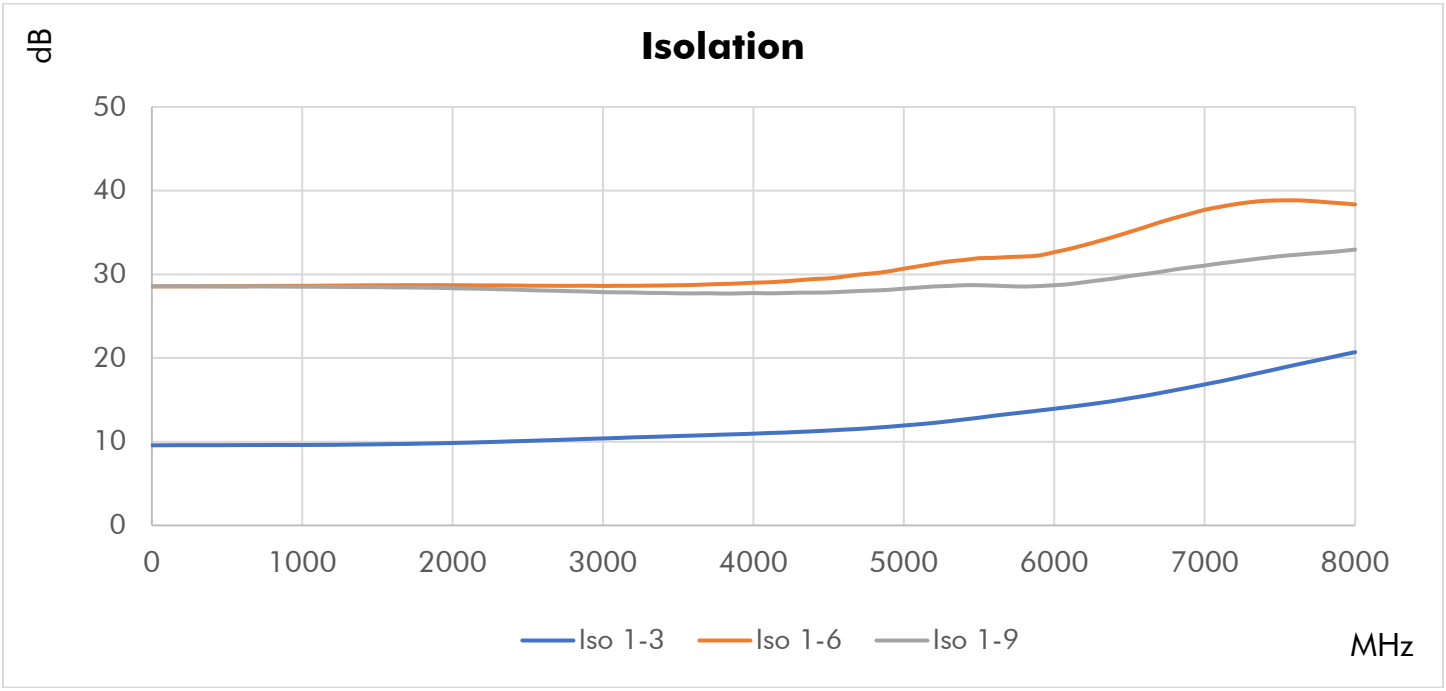
Specifications		Min.	Typ.	Max.	Units
Frequency		DC		7.2	GHz
Impedance			50		Ohm
Return Loss	(Port S)	9.5	12		dB
Return Loss	(Port 1-9)	9.5	14		dB
Insertion Loss	(Total Measured Loss)		19.1	21.9	dB
Isolation	(Within Groups: 1-2-3 : 4-5-6 : 7-8-9) (Between Groups: 1-2-3 : 4-5-6 : 7-8-9)		9.5 28.5		dB
Input Power (CW)[1] up to +30°C; derate linearly to +25dBm at +85°C.				+30	dBm

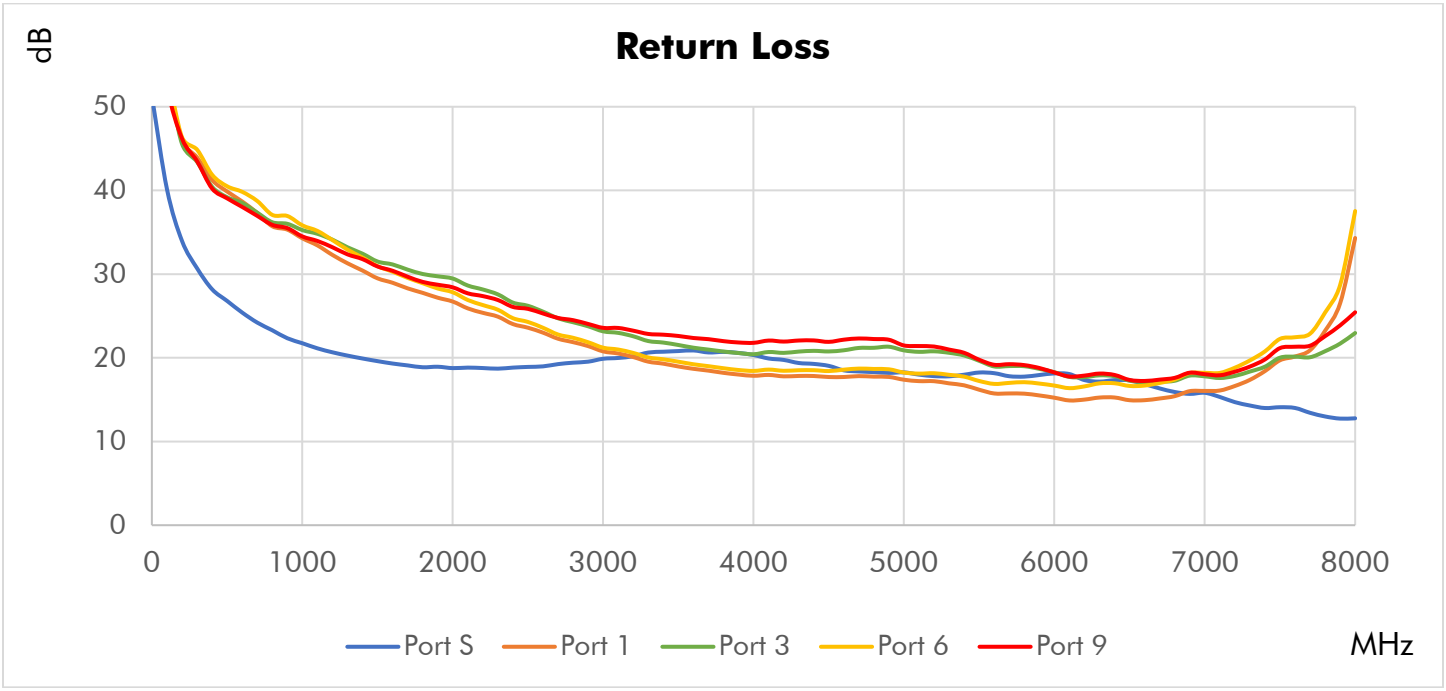
Connector Interface	SMA-Female	RoHS Status[3]	RoHS3 Compliant
Operating Temperature[2]	-40 to +85 °C	REACH Status[3]	REACH Unaffected
Storage Temperature	-55 to +100 °C	Enclosure Material	Aluminum
Nominal Weight	60.8 g (2.14 oz)	Connectors Material	Brass, Gold Plated
Operating Humidity	10-90% (non-condensing)	Contacts Material	Beryllium Copper, Gold Plated
Operating Environment	Indoor Use Only	Insulators Material	Virgin PTFE
CAGE Code	78YZ0	Finish	Green Paint

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

Typical Performance at +25 °C





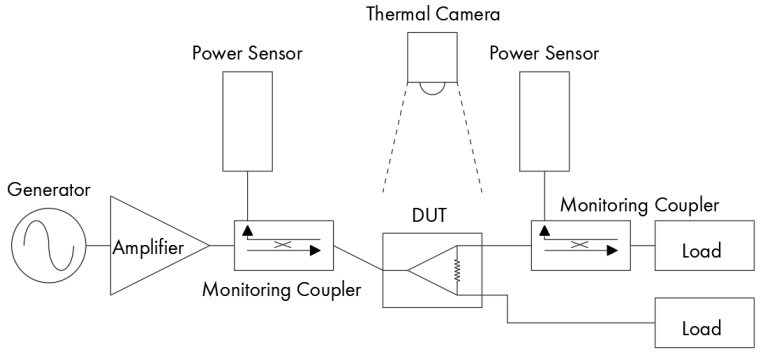
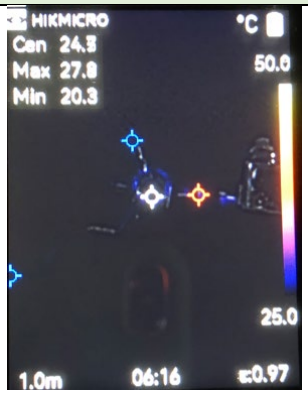
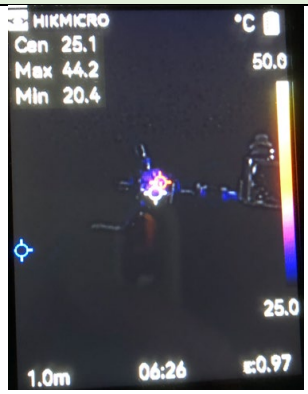


Repeatability in Production

Reliability Testing

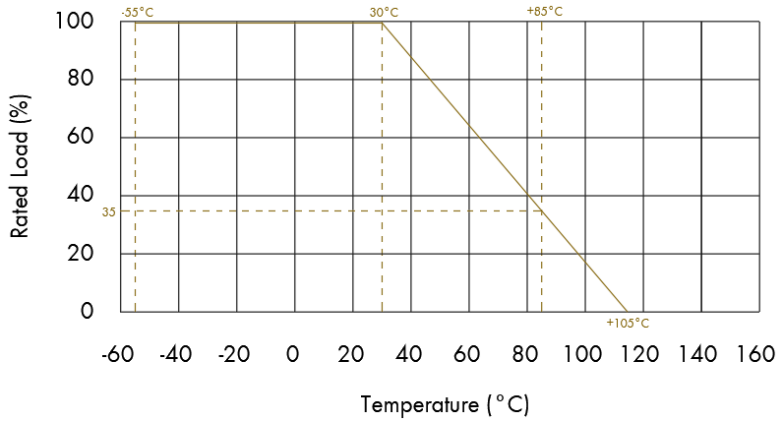
RF power test was performed to determine the input power required to produce a nominal temperature rise of 20°C at the hottest point. The test was performed at room temperature without forced air. A heatsink was not used unless it came standard with the product.

Model WMRD03-7.2-S is shown. Derivative models' details arrived at by similarity until they are individually tested and datasheets updated.

Forward Direction RF Power Test Setup Diagram	Initial Temperature	Final Temperature
	 (RF power applied from the right)	 (RF power applied from the right)

- 0.6 watts CW (shown above) at 500MHz was applied to the DUT input for a duration of 10 minutes.
- The DUT temperature increased from 24.3°C (initial, center marker) to 44.2°C (final, max marker), resulting in a 19.9°C rise.
- 1 watt CW at 500MHz produced a rise temperature of 35°C after 10 minutes.

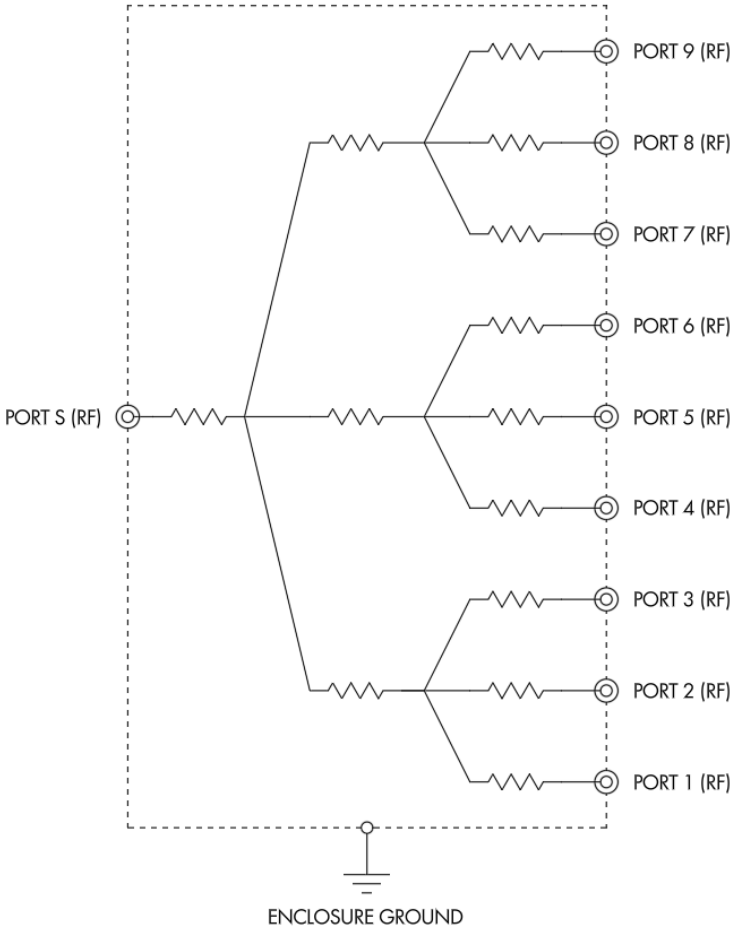
Derating Curve



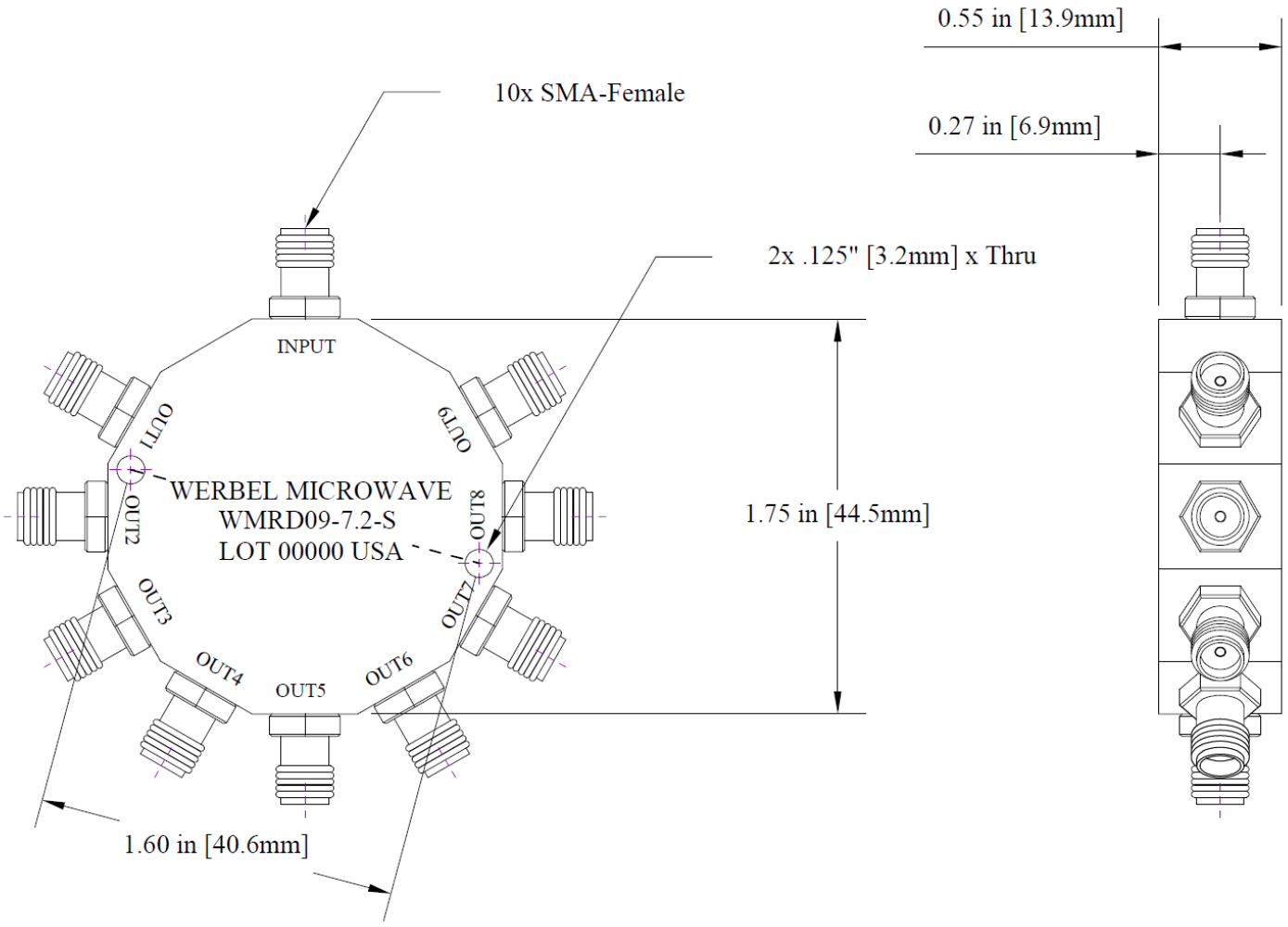
Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)			Isolation (dB)		
	Port S	Port 1	Port 9	S-1	S-5	S-9	1-2	1-5	1-9
1	51.17	56.66	63.69	19.07	19.08	19.04	9.57	28.56	28.56
100	40.11	52.99	52.38	19.06	19.07	19.03	9.58	28.57	28.57
200	33.94	45.98	46.18	19.06	19.07	19.03	9.59	28.57	28.57
300	30.69	43.94	43.49	19.05	19.07	19.03	9.59	28.57	28.57
400	28.18	41.24	40.22	19.04	19.07	19.02	9.59	28.58	28.56
500	26.79	39.86	39.05	19.02	19.06	19.01	9.59	28.58	28.54
600	25.40	38.68	38.03	18.99	19.05	18.99	9.60	28.58	28.54
700	24.21	37.31	36.96	18.97	19.05	18.98	9.60	28.61	28.55
800	23.29	35.72	35.88	18.95	19.03	18.96	9.61	28.61	28.54
900	22.34	35.32	35.50	18.91	19.02	18.94	9.61	28.62	28.53
1000	21.74	34.28	34.50	18.87	19.00	18.91	9.61	28.62	28.52
1500	19.60	29.49	30.91	18.68	18.88	18.75	9.69	28.69	28.47
2000	18.77	26.72	28.42	18.45	18.69	18.51	9.85	28.70	28.34
2500	18.91	23.60	25.85	18.25	18.45	18.23	10.10	28.64	28.11
3000	19.89	20.77	23.58	18.12	18.24	18.01	10.39	28.61	27.87
3500	20.81	18.97	22.61	18.11	18.09	17.99	10.68	28.70	27.73
4000	20.33	17.85	21.79	18.20	18.02	18.11	10.96	29.00	27.76
4500	19.04	17.71	21.91	18.32	18.01	18.27	11.34	29.52	27.84
5000	18.26	17.38	21.48	18.55	18.07	18.42	11.94	30.68	28.30
5500	18.25	16.19	19.77	18.81	18.20	18.59	12.87	31.93	28.70
6000	18.14	15.23	18.25	19.06	18.45	18.79	13.94	32.65	28.70
6500	17.31	14.93	17.35	19.29	18.77	19.11	15.19	35.06	29.80
7000	15.82	16.04	18.04	19.62	19.37	19.58	16.85	37.71	31.05
7500	14.10	19.71	21.16	19.88	20.27	20.01	18.77	38.83	32.17
8000	12.77	34.32	25.44	20.02	21.47	20.31	20.70	38.35	32.96

Simplified Electrical Schematic



Outline Dimensions



Outline drawing: OL-R12-09
Dimensions are in inches, [mm] shown for convenience.
Tolerances on 2-pl decimals: ±.03. 3-pl decimals: ± .015.

Group	**A**			**B**			**C**		
Port	1	2	3	4	5	6	7	8	9