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Power Divider, 2-way, 2-8 GHz, SMA Female, 50 Ω

WM2PD-2-8-S



This 2-way power divider provides reliable broadband signal splitting from 2 to 8 GHz for general-purpose RF and microwave applications. Designed to offer a practical balance of electrical performance and cost, it is well suited for Wi-Fi and WLAN systems, UAV and drone communications, ISM-band equipment, radar and sensing systems, wireless infrastructure, laboratory test setups, and general signal distribution. The divider provides good isolation, amplitude and phase balance, and impedance match across the operating band, making it an economical choice for everyday RF system integration where metrology-grade performance is not required.

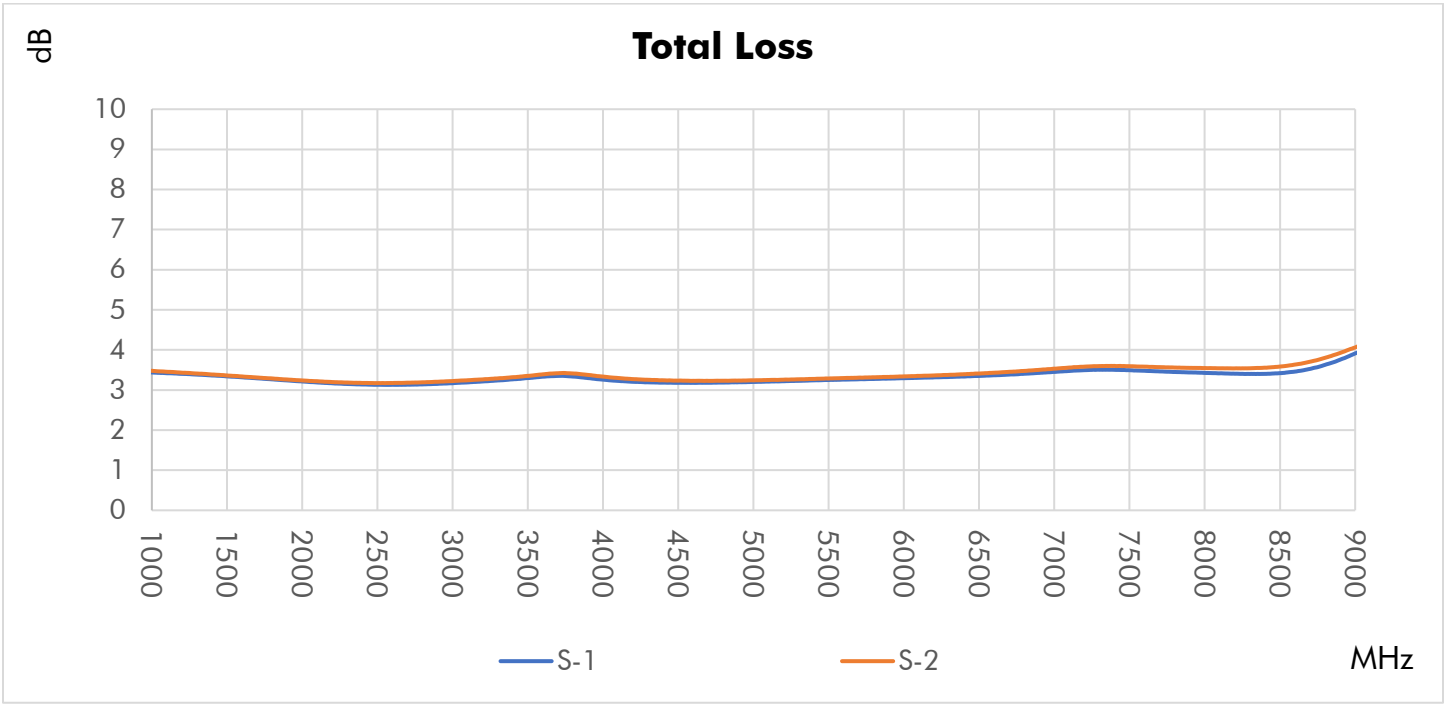
Parameter		Min	Typ.	Max	Unit
Frequency Range		2	-	8	GHz
Impedance		-	50	-	Ω
Return Loss (Port S)		15	18	-	dB
Return Loss (Port 1-2)		15	18	-	dB
Insertion Loss (above 3.0 dB)		-	0.4	1.0	dB
Isolation	2-6 GHZ 6-8 GHz	20 18	23 21	-	dB
Amplitude Unbalance (±)[1]		-	0.1	0.5	dB
Phase Unbalance (±)[1]		-	0.8	6	Degree
Input Power (CW)[2]		-	-	30	W

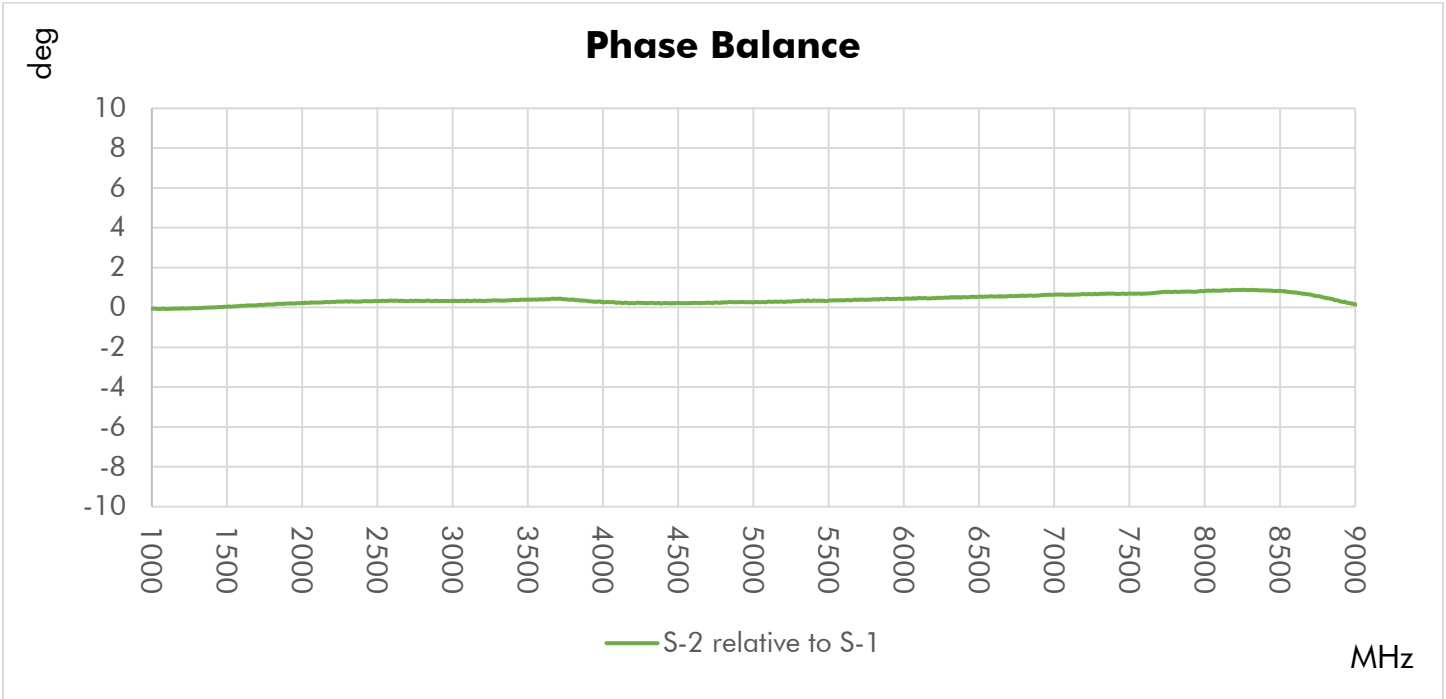
Mechanical and Environmental Specifications

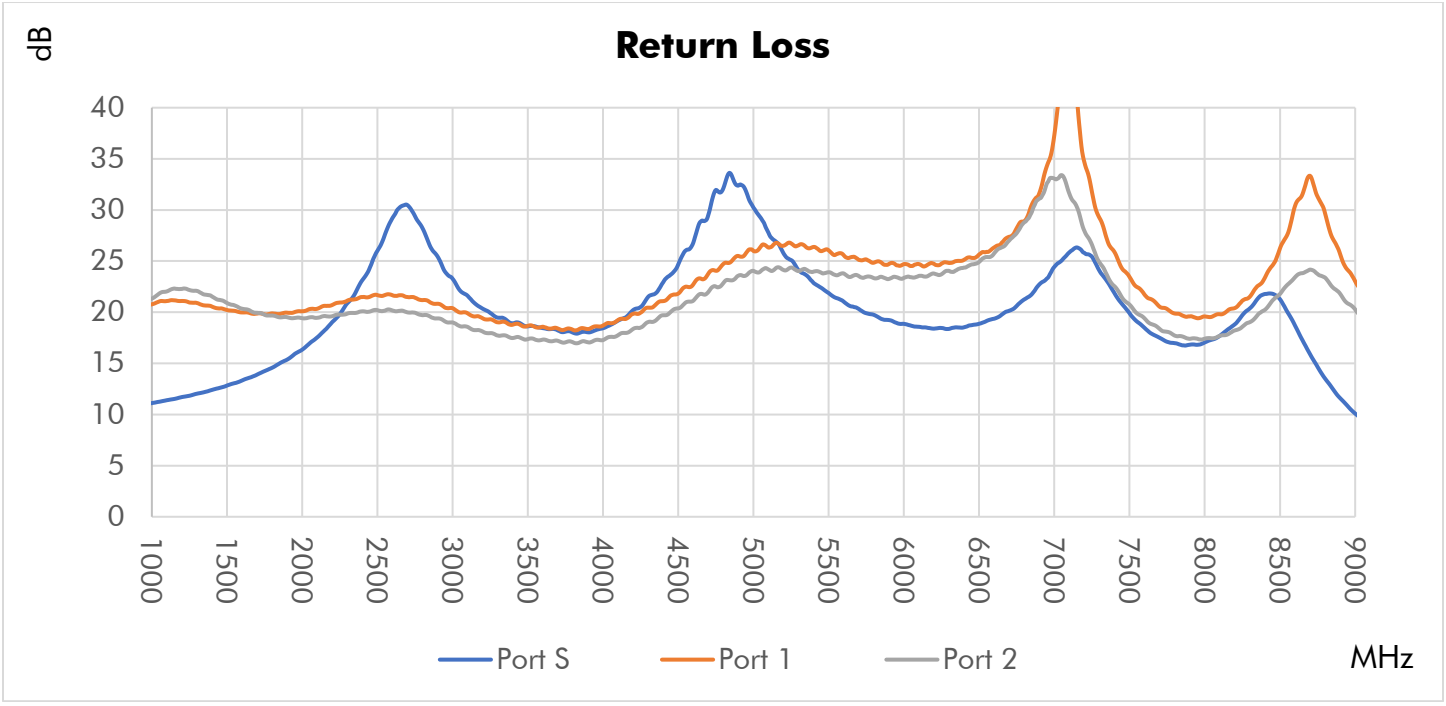
Connector Interface	SMA Female	RoHS Status[4]	RoHS3 Compliant
Operating Temperature[3]	-55 to +85 °C	REACH Status[4]	REACH Unaffected
Storage Temperature	-55 to +100 °C	Enclosure Material	Aluminum
Nominal Weight	27 g (0.95 oz)	Connectors Material	Brass, Gold Plated
Operating Humidity	10-90% (non-condensing)	Contacts Material	Beryllium Copper, Gold Plated
Operating Environment	Indoor Use Only	Insulators Material	Virgin PTFE
HTSUS Code	8548.00.0000	Finish	Green Paint
ECCN	EAR99	Country of Origin	United States of America

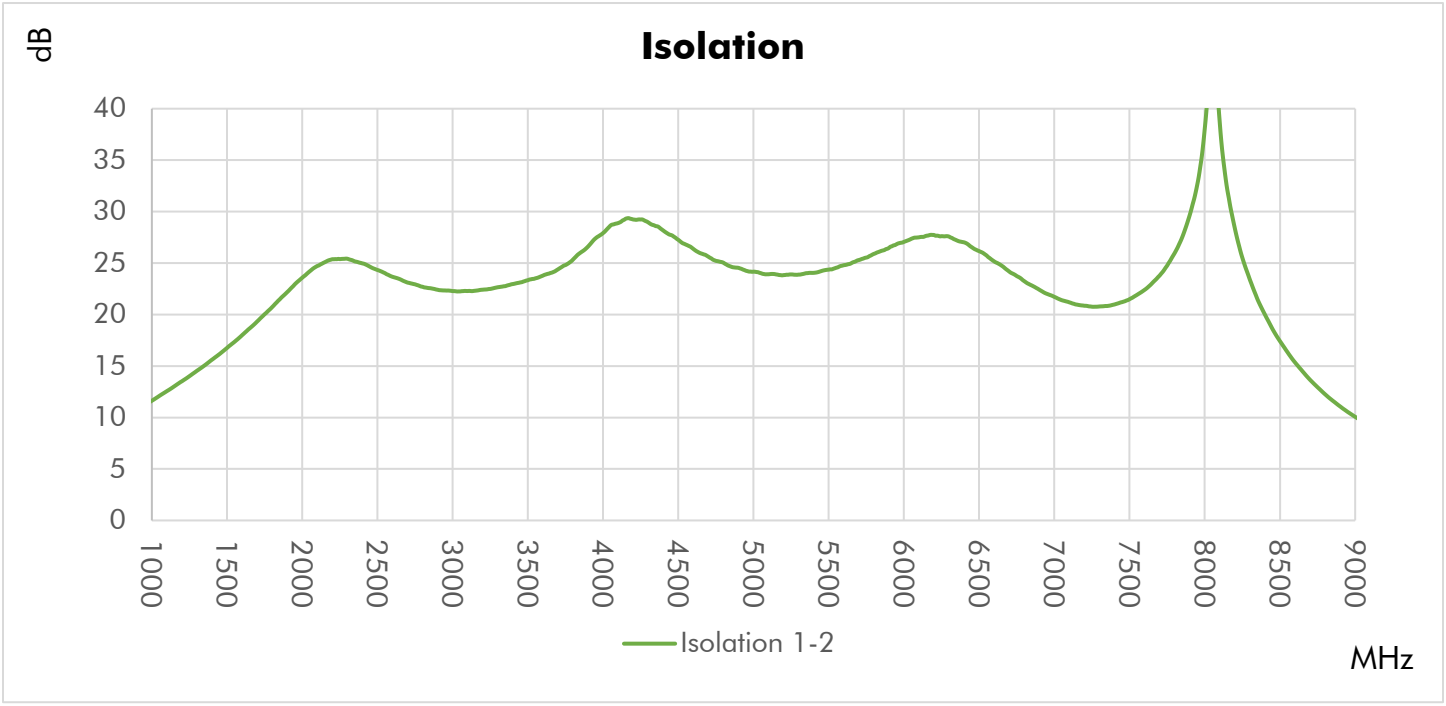
1. With reference to average.
2. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
3. Electrical specifications are tested at +25 °C.
4. To the best of our knowledge at the time of publication.

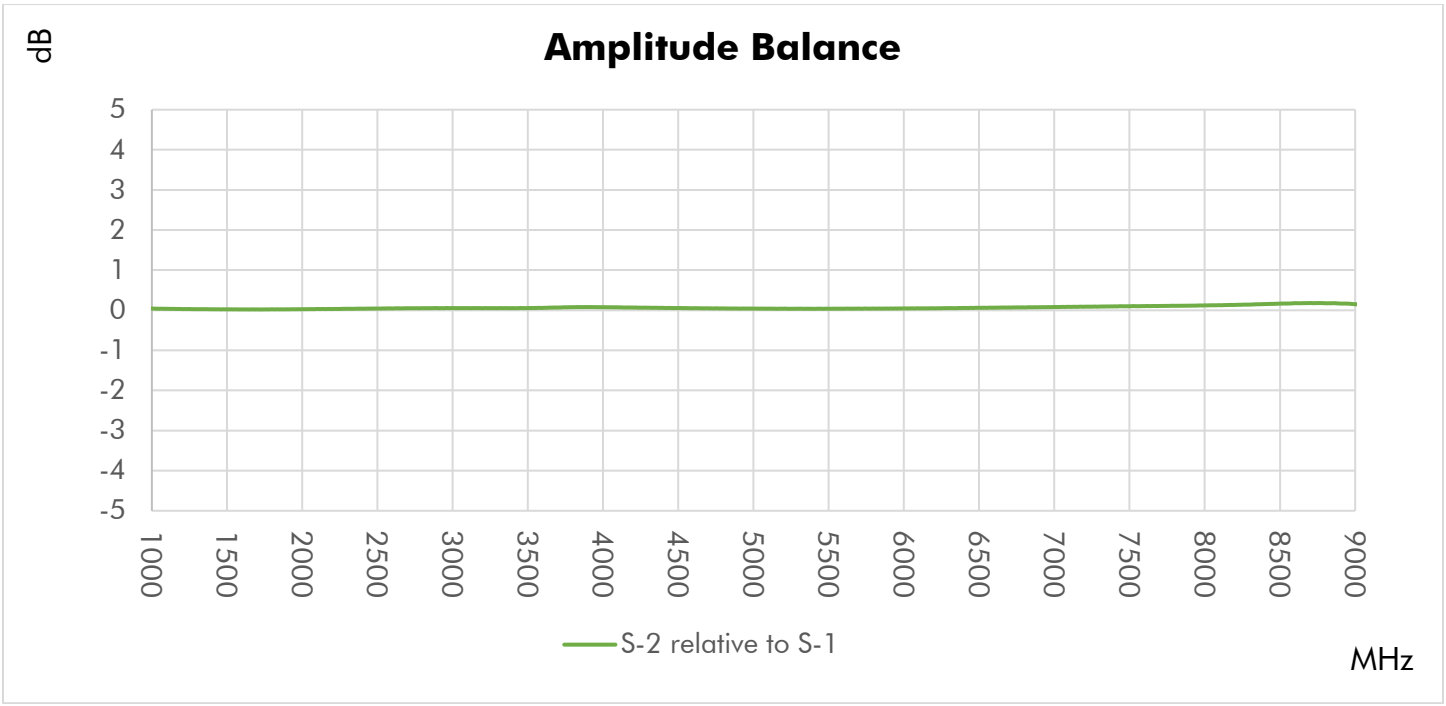
Typical Performance at +25 °C



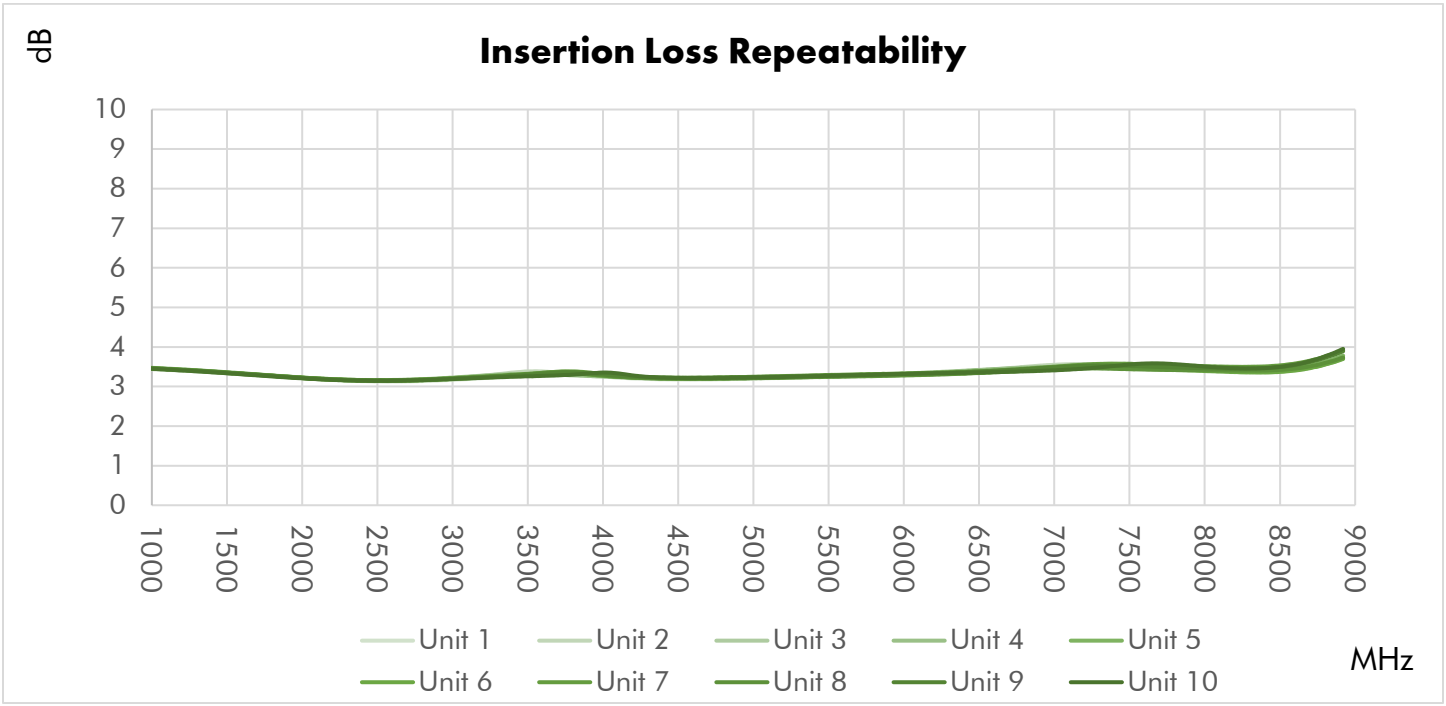


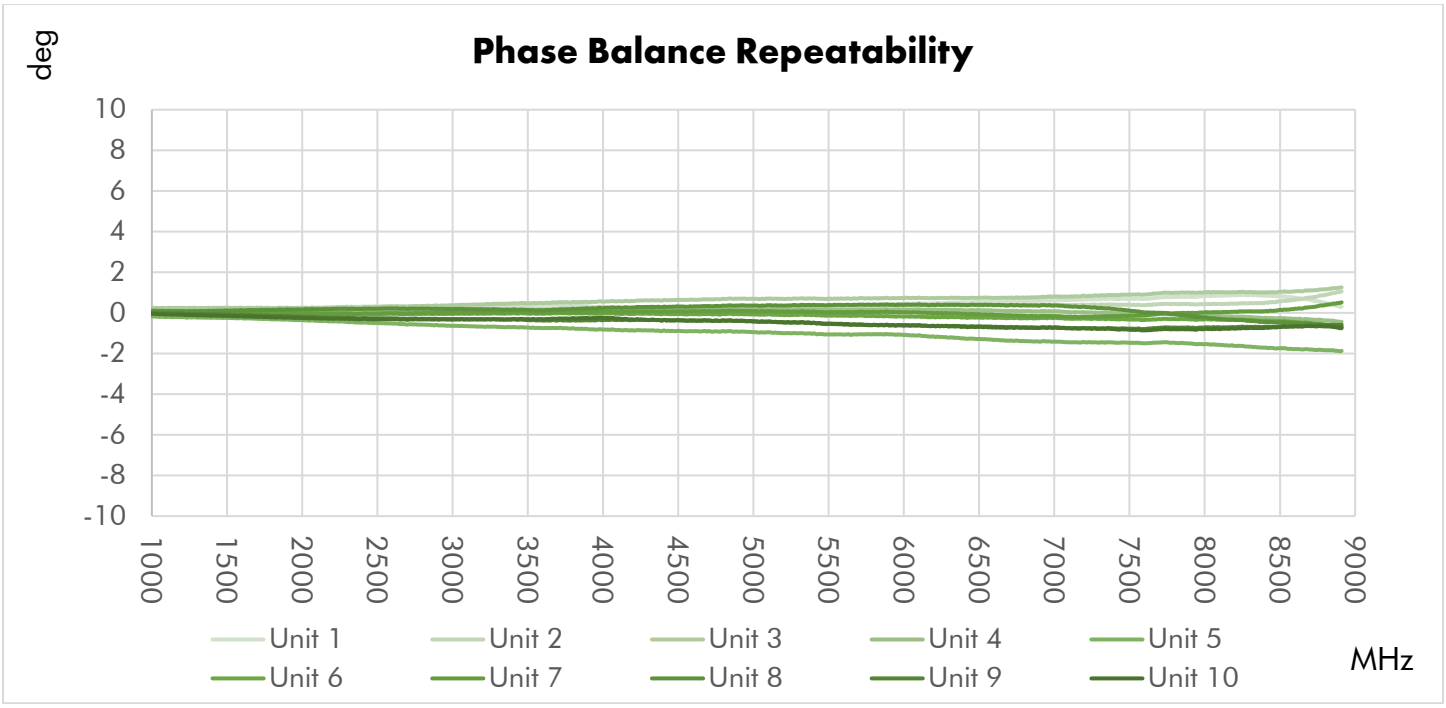

Return Loss
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Port S
Port 1
Port 2
MHz

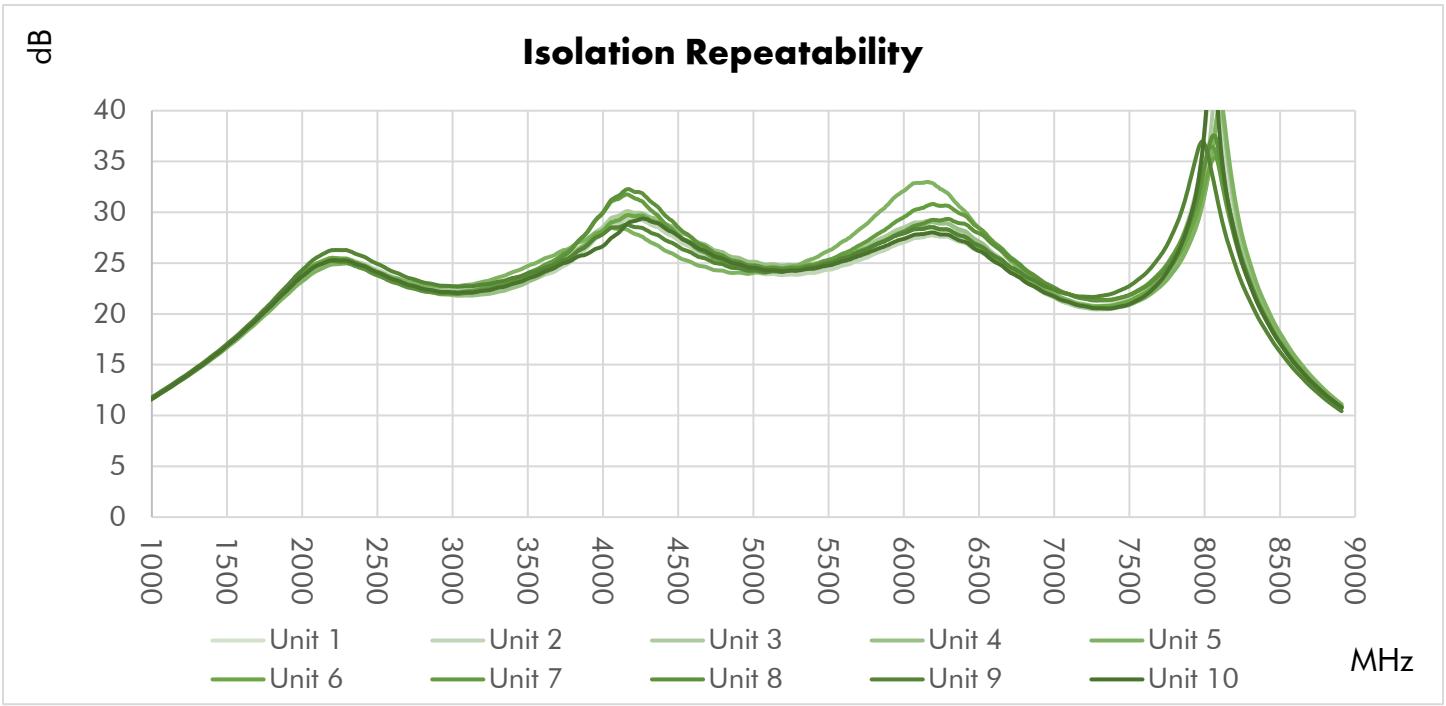

Isolation
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Isolation 1-2
MHz

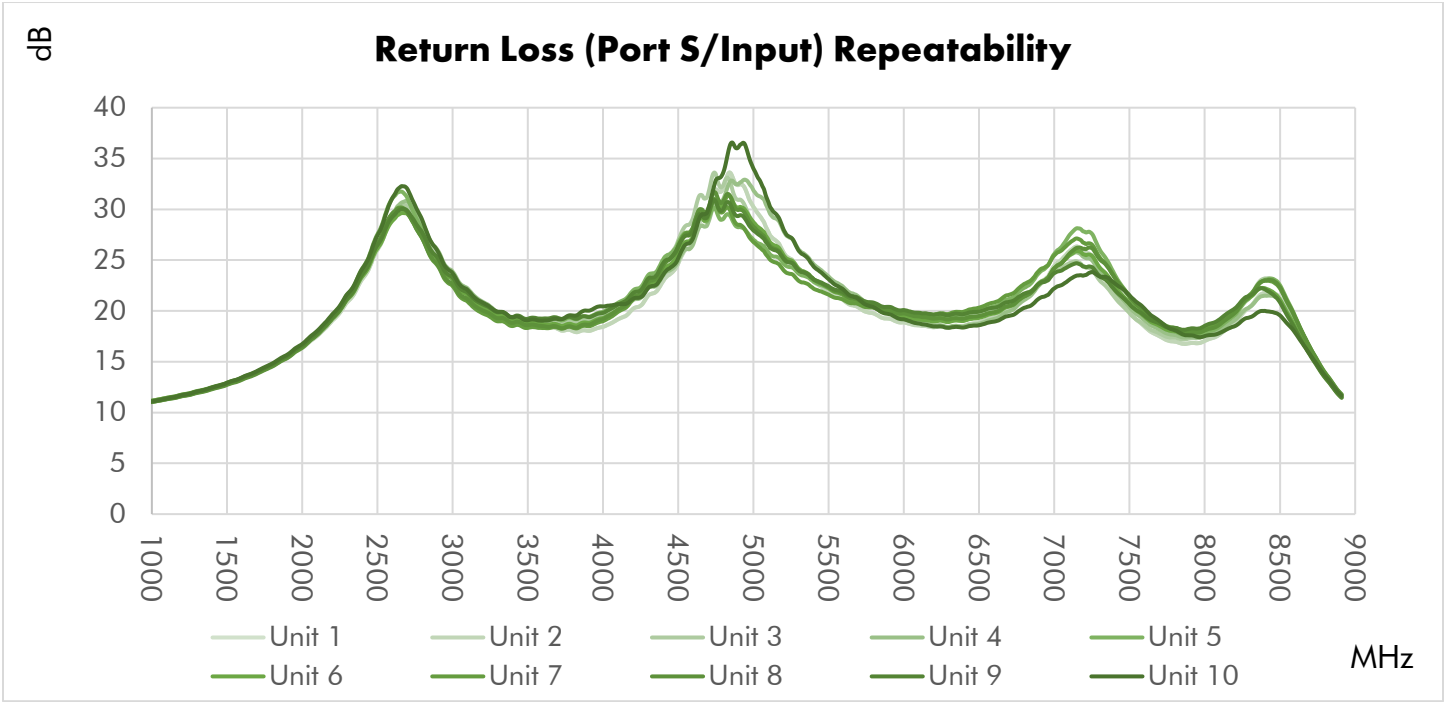


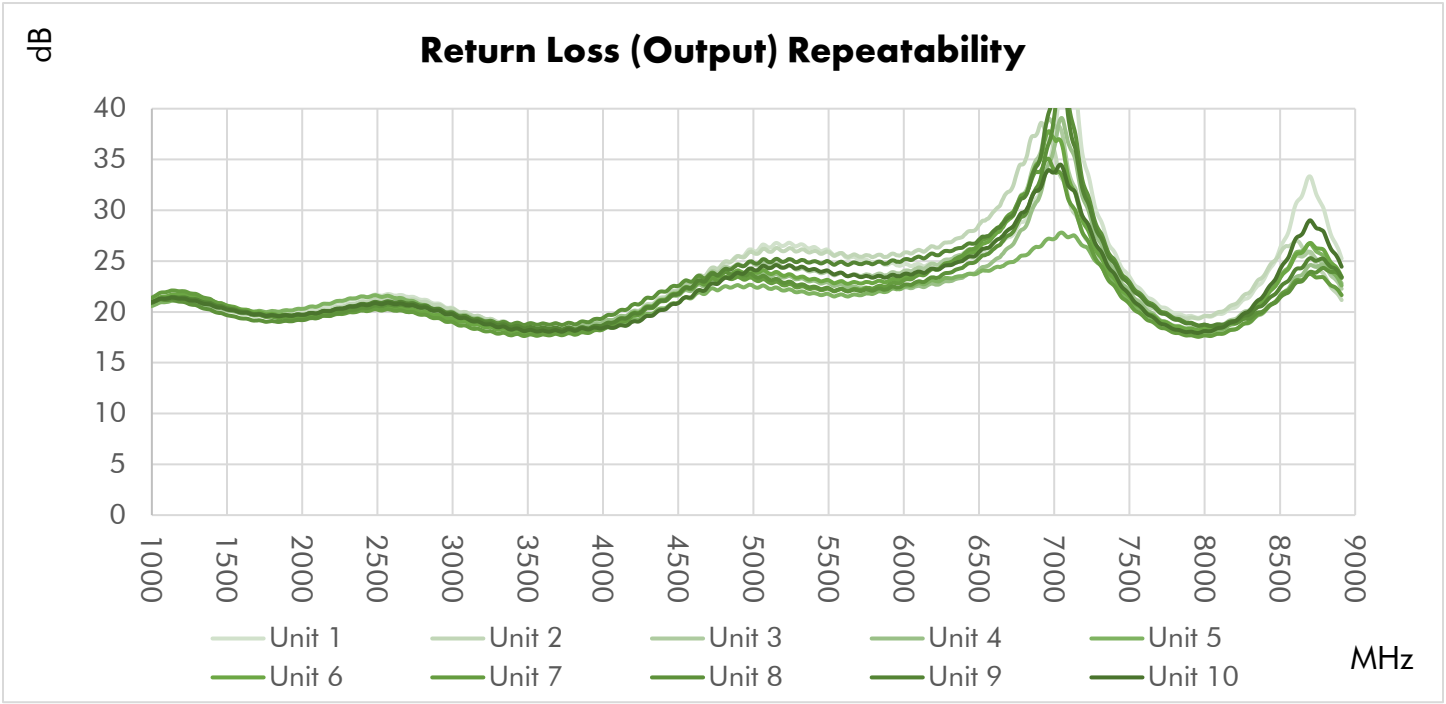
Repeatability in Production



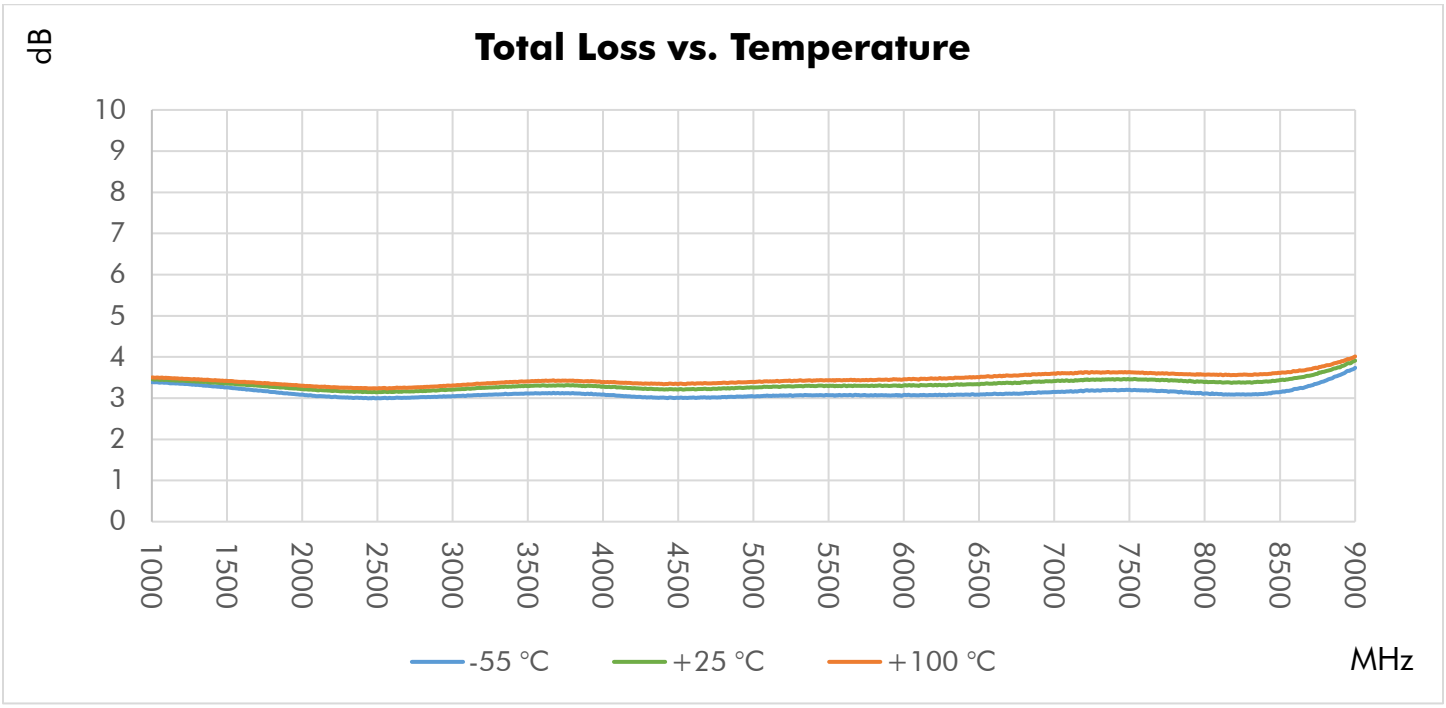

Phase Balance Repeatability
deg
10
8
6
4
2
0
-2
-4
-6
-8
-10
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 9
Unit 10
MHz

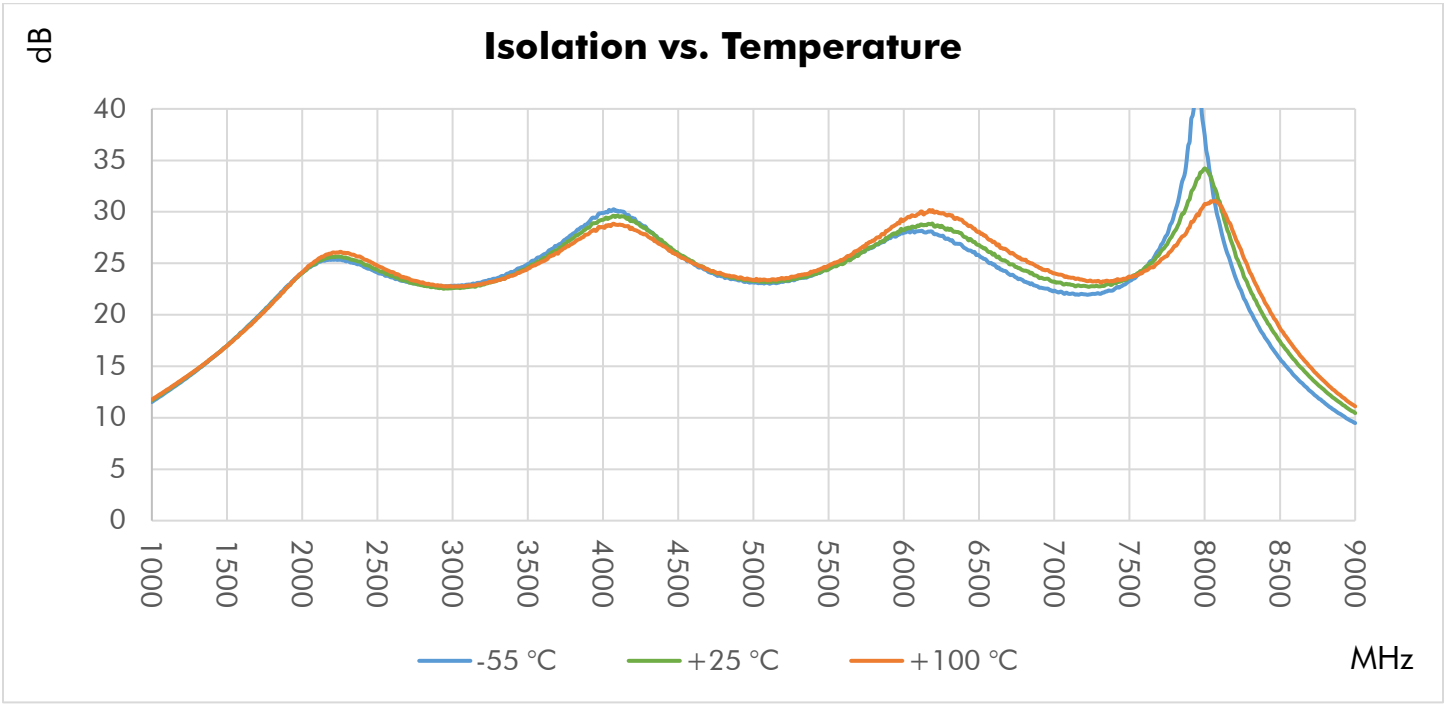

Isolation Repeatability
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 9
Unit 10
MHz

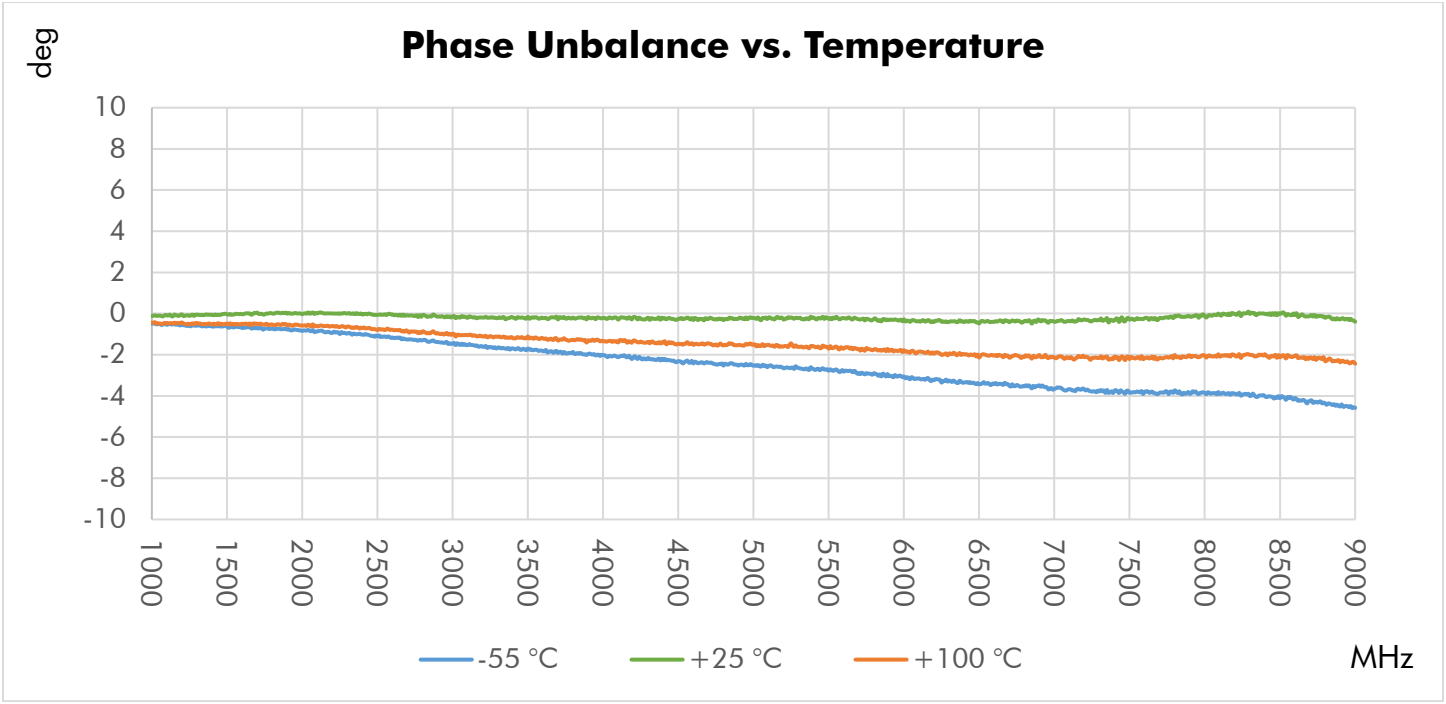

Return Loss (Port S/Input) Repeatability
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 9
Unit 10
MHz

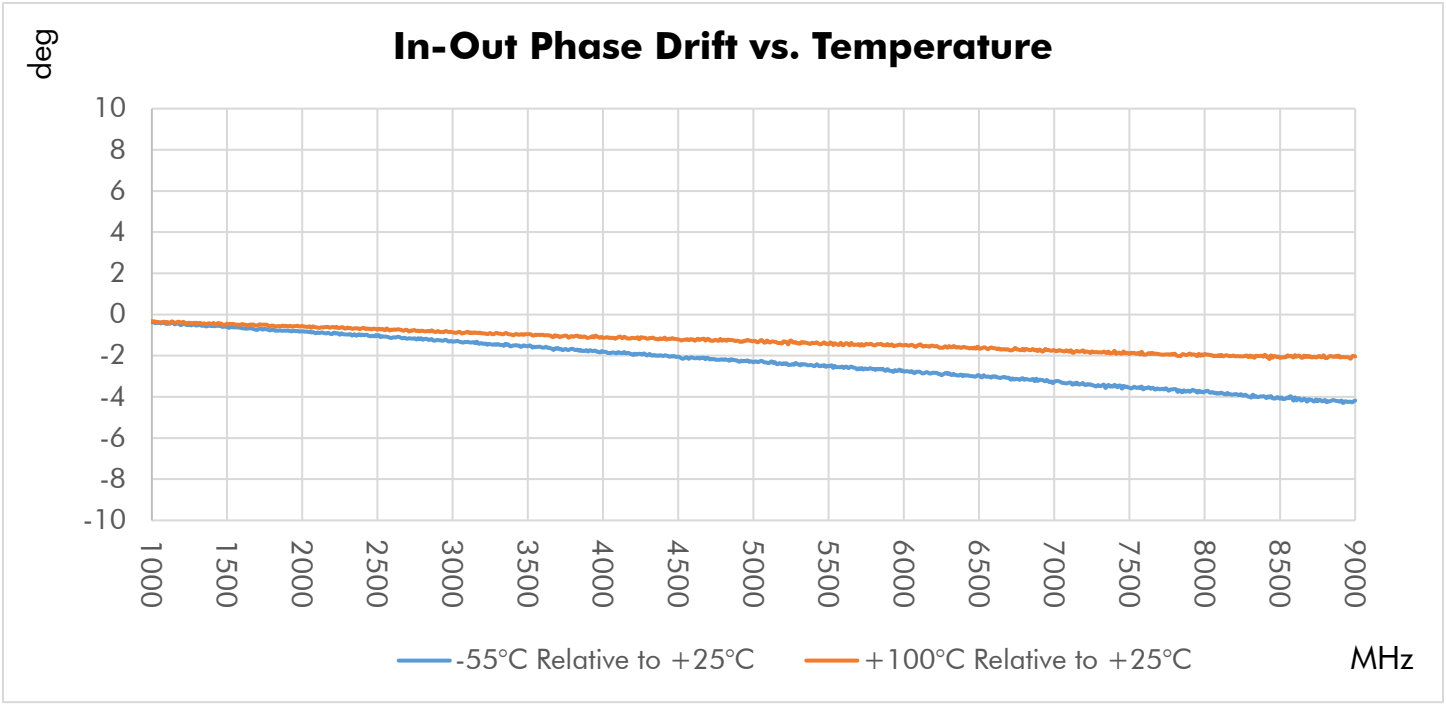

Return Loss (Output) Repeatability
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 9
Unit 10
MHz

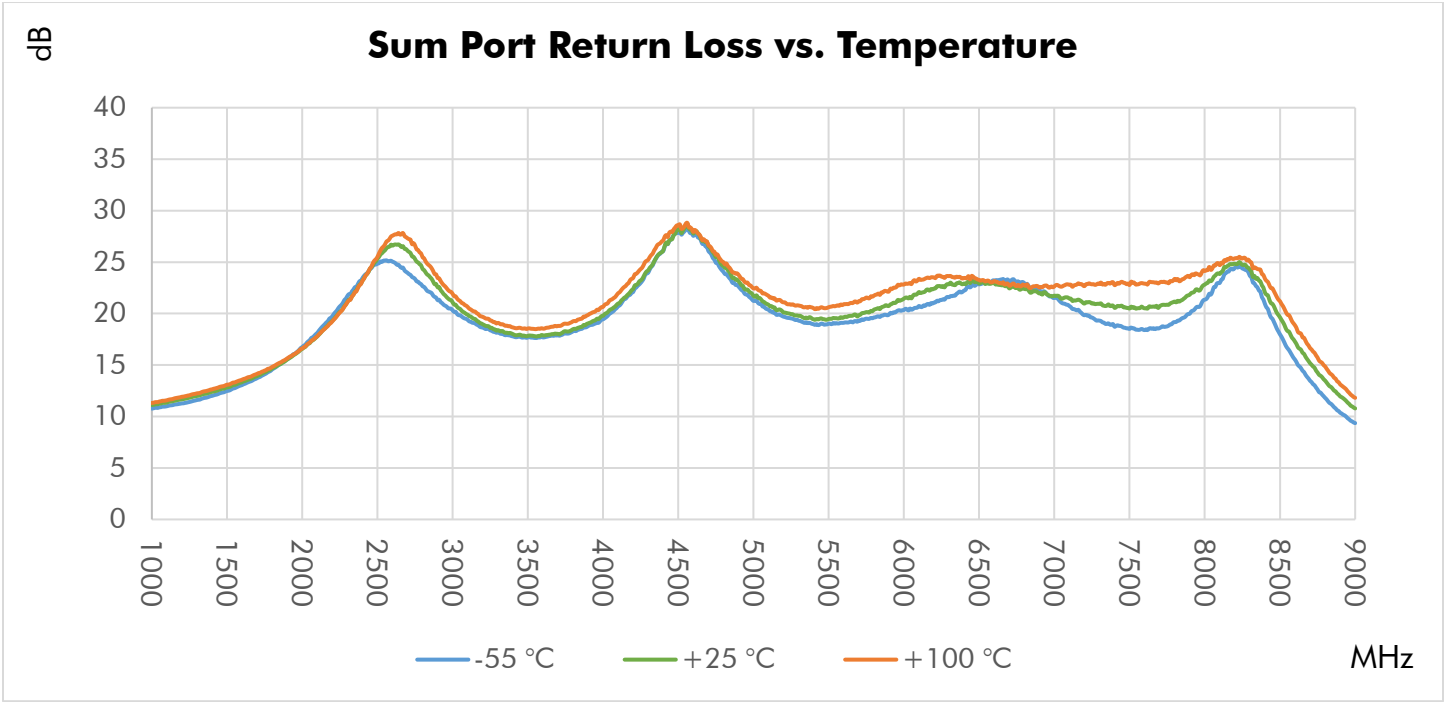
Typical Performance Over Temperature

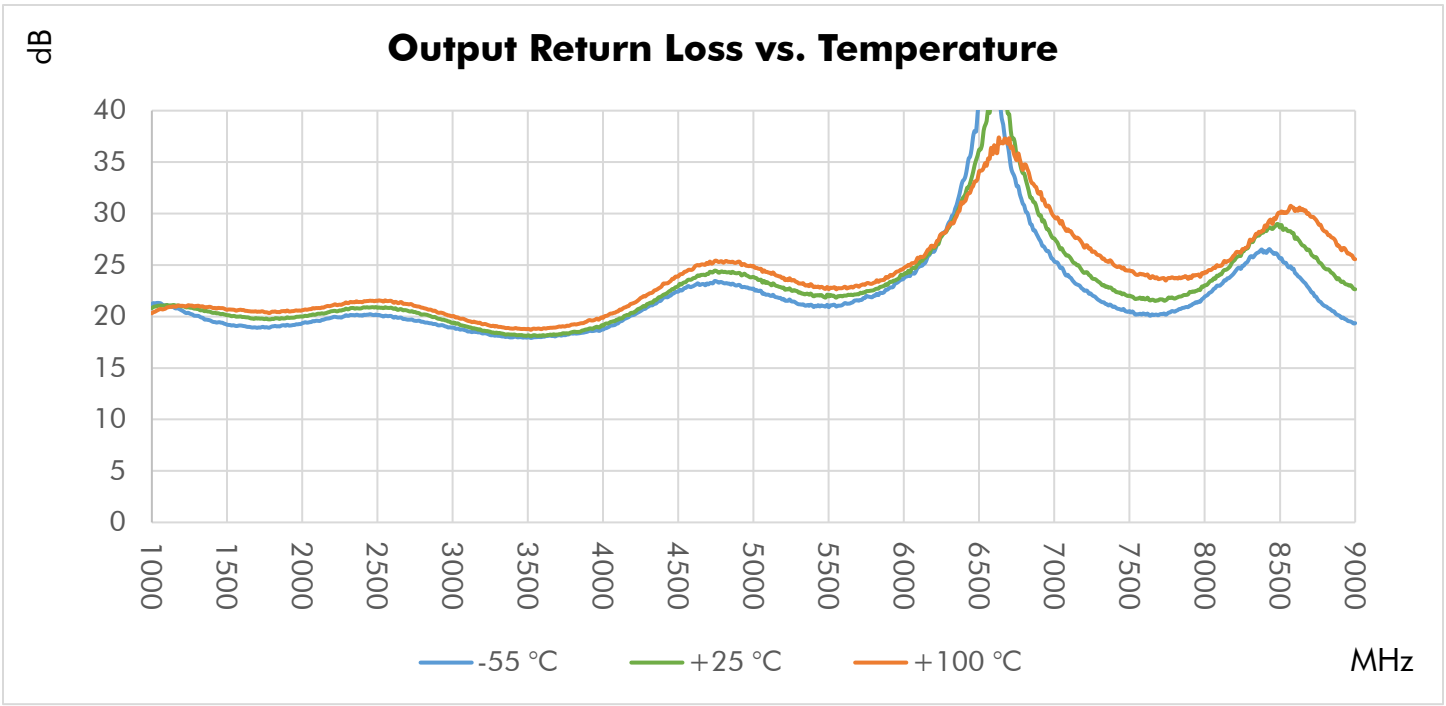


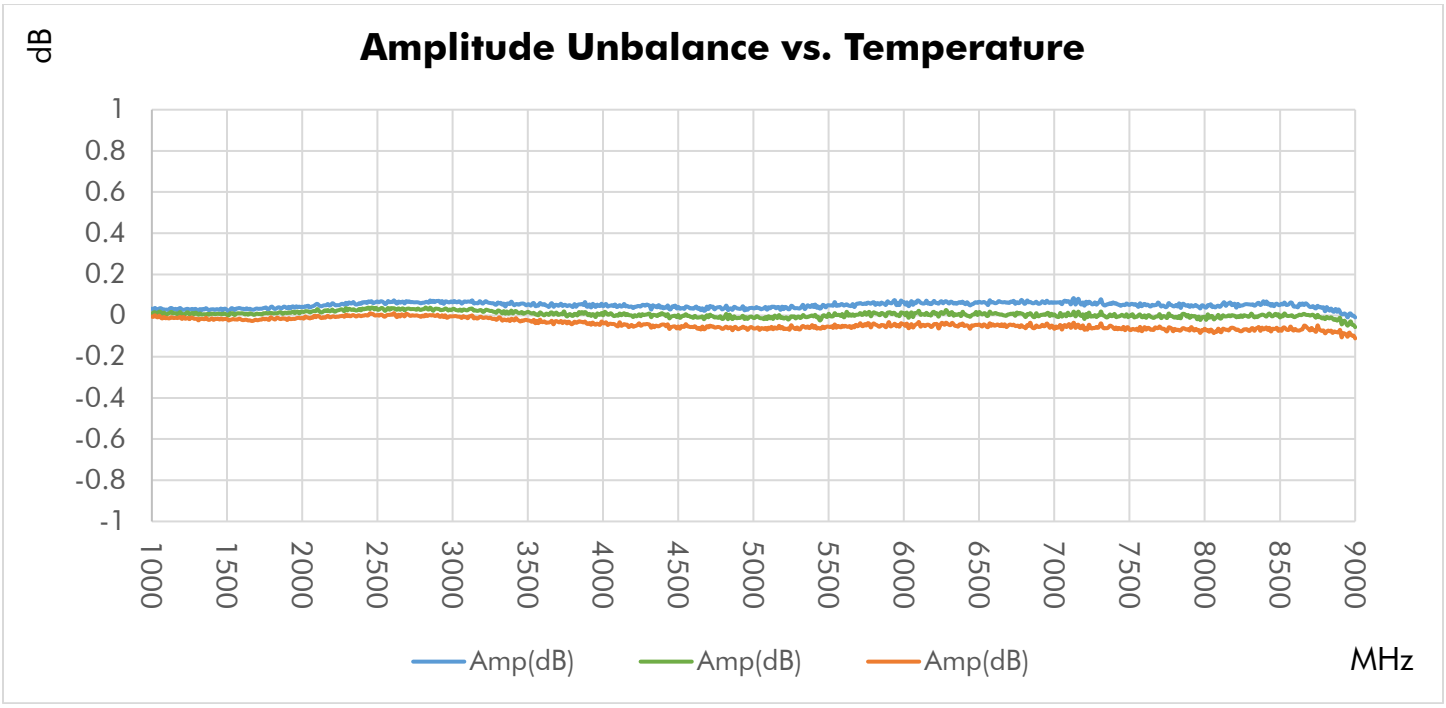



Phase Unbalance vs. Temperature
deg
10
8
6
4
2
0
-2
-4
-6
-8
-10
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
-55 °C
+25 °C
+100 °C
MHz


In-Out Phase Drift vs. Temperature
deg
10
8
6
4
2
0
-2
-4
-6
-8
-10
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
-55°C Relative to +25°C
+100°C Relative to +25°C
MHz


Sum Port Return Loss vs. Temperature
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
-55 °C
+25 °C
+100 °C
MHz

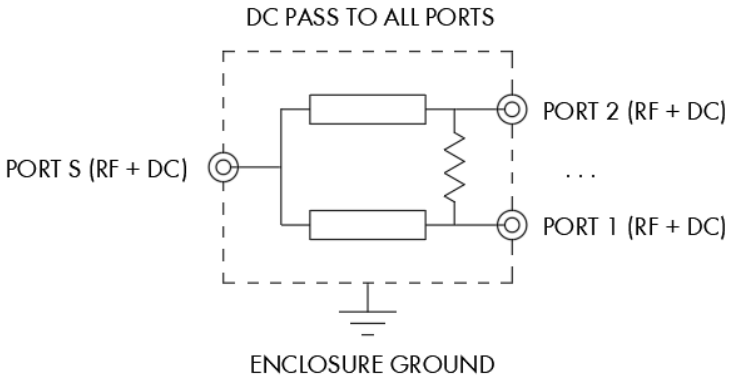

Output Return Loss vs. Temperature
dB
40
35
30
25
20
15
10
5
0
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
-55 °C
+25 °C
+100 °C
MHz


Amplitude Unbalance vs. Temperature
dB
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
8500
9000
Amp(dB)
Amp(dB)
Amp(dB)
MHz

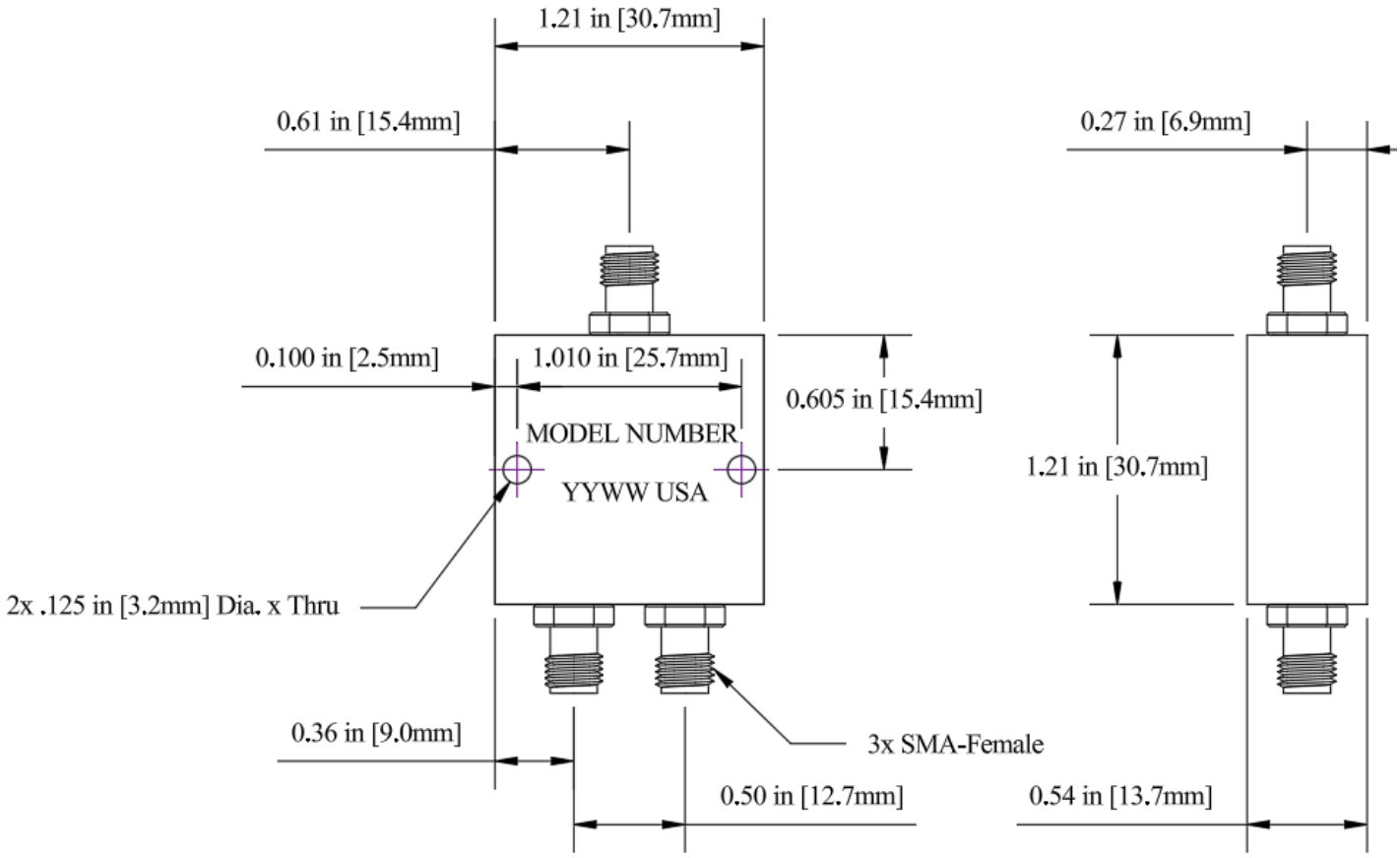
Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Total Loss (dB)		Isolation (dB)
	Port S	Port 1	Port 2	S-1	S-2	1-2
1000	11.11	20.77	21.34	3.44	3.48	11.63
1500	12.83	20.21	20.90	3.34	3.36	16.76
2000	16.35	20.10	19.42	3.21	3.24	23.58
2500	26.02	21.67	20.20	3.13	3.17	24.33
3000	23.26	20.39	19.00	3.17	3.22	22.28
3500	18.62	18.67	17.37	3.30	3.35	23.34
4000	18.44	18.70	17.28	3.26	3.33	27.92
4500	24.69	21.83	20.38	3.18	3.23	27.26
5000	30.22	25.99	24.04	3.20	3.24	24.17
5500	21.87	26.04	23.91	3.25	3.29	24.36
6000	18.86	24.71	23.36	3.29	3.34	27.06
6500	18.87	25.65	24.92	3.35	3.41	26.16
7000	24.44	37.33	33.07	3.45	3.53	21.72
7500	19.90	23.45	20.74	3.49	3.59	21.49
8000	17.05	19.59	17.41	3.43	3.55	38.06
8500	21.27	26.24	21.78	3.42	3.58	17.42
9000	10.09	23.03	20.27	3.91	4.06	10.07

Simplified Electrical Schematic



Outline Dimensions



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

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