

Directional Coupler, 0.95-2.45 GHz, 30 dB, SMA Female

WMC-0.95-2.45-30dB-S



This directional coupler operates from 0.95 to 2.45 GHz and is well suited for L-band and lower microwave applications requiring reliable signal sampling and monitoring. The frequency range covers many GPS/GNSS, telemetry, navigation, communications, and wireless systems, making the coupler a practical choice for test equipment, signal monitoring, transmitter applications, and general RF system integration. Its broadband coverage also supports applications spanning cellular, ISM, and other communications bands within the operating range.

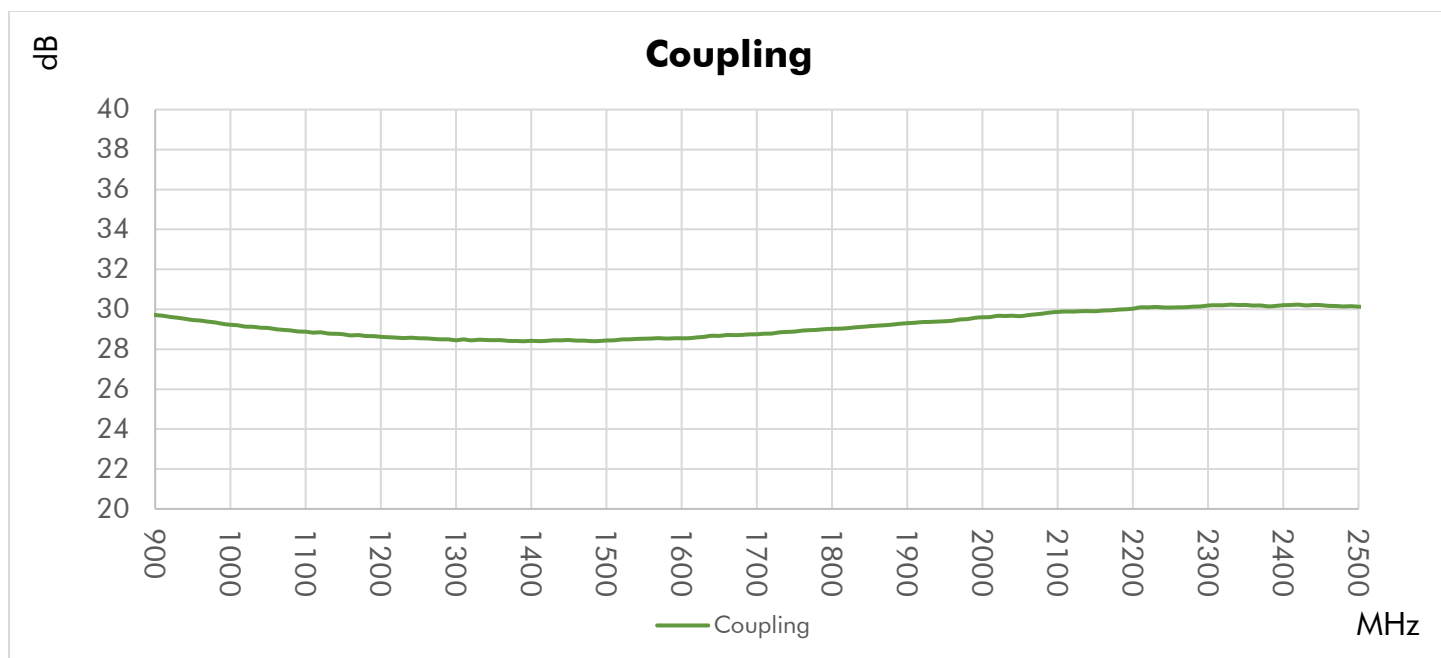
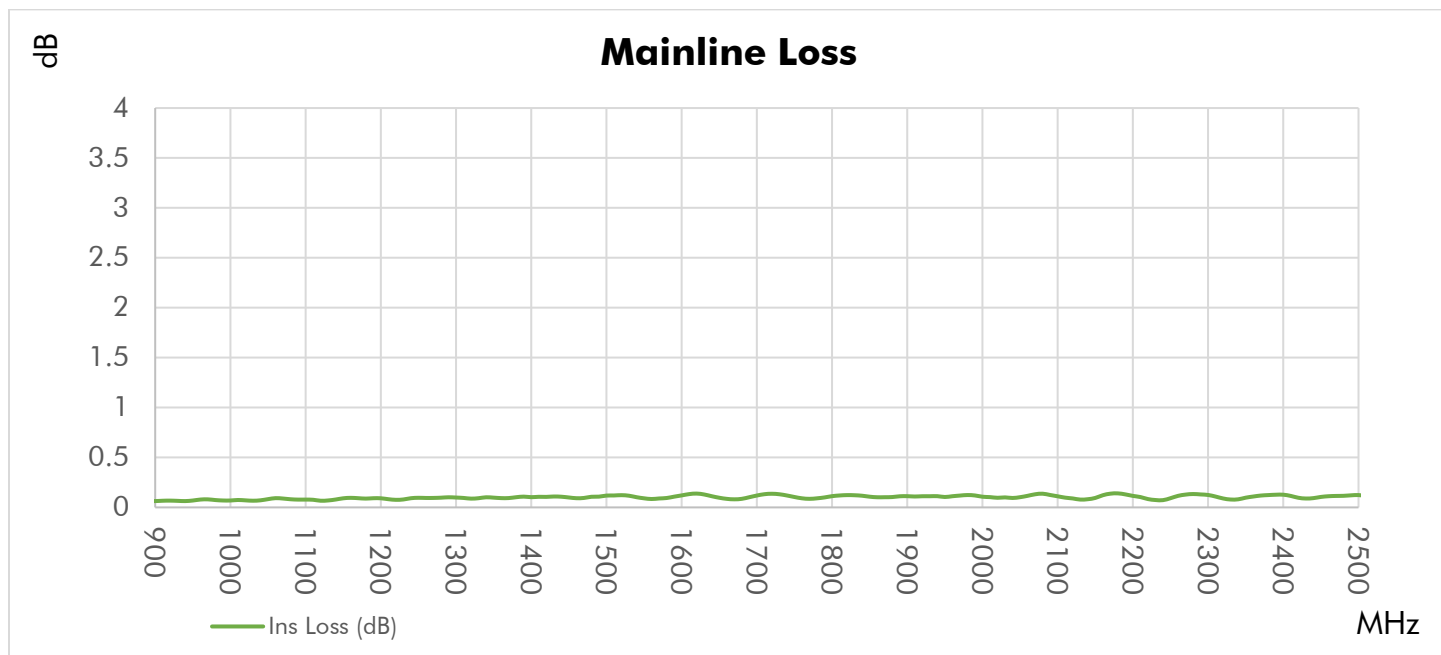
Parameter	Min.	Typ.	Max.	Unit
Frequency Range	0.95	-	2.45	GHz
Impedance	50			Ω
Coupling	-	30	± 1.25	dB
Frequency Sensitivity (Flatness)	-	± 0.75	-	dB
Mainline Loss ¹	-	0.12	0.20	dB
Directivity	20	25	-	dB
Mainline Return Loss	21	25	-	dB
Secondary Line Return Loss	21	25	-	dB
Isolation	-	55	-	dB
Forward Power (CW) ²	-	-	50	W
Reverse Power (CW) ²	-	-	50	W
Termination Power	-	-	1	W
DC Current	Input-Output			A

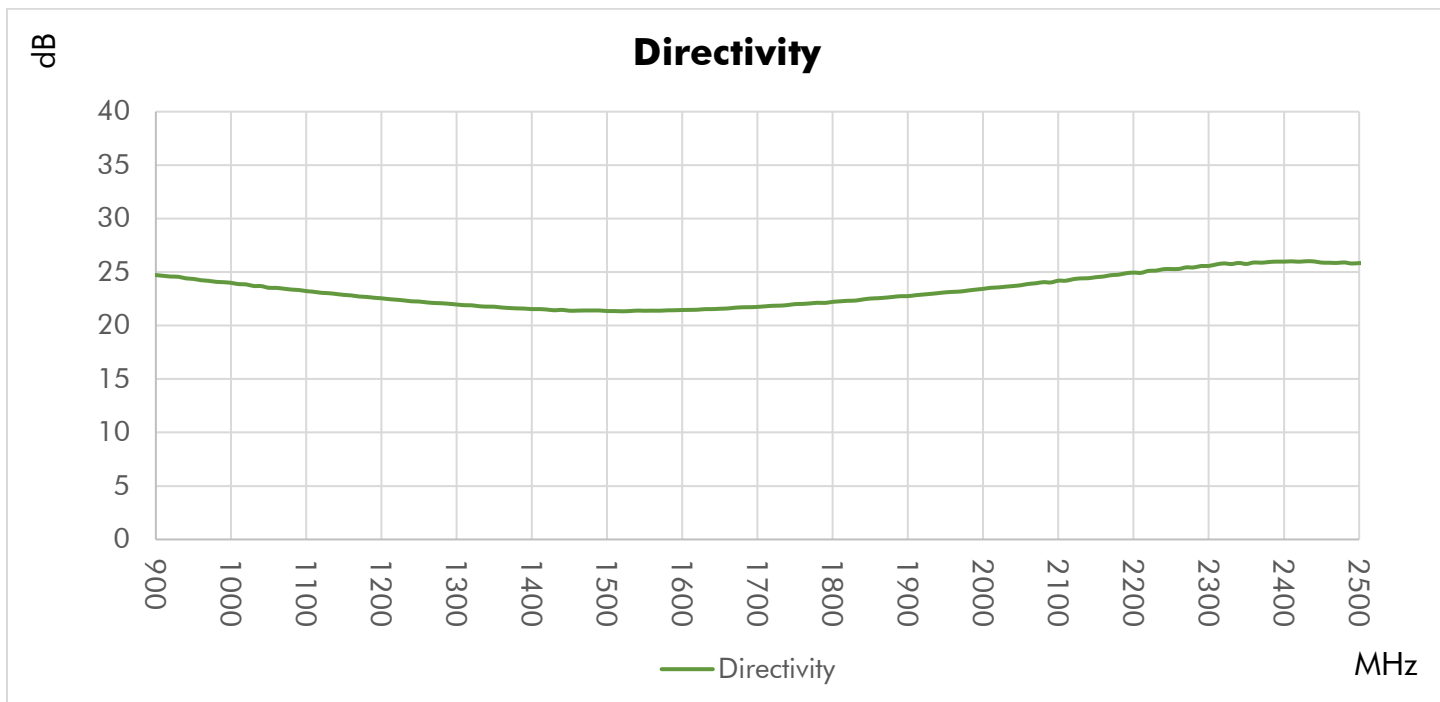
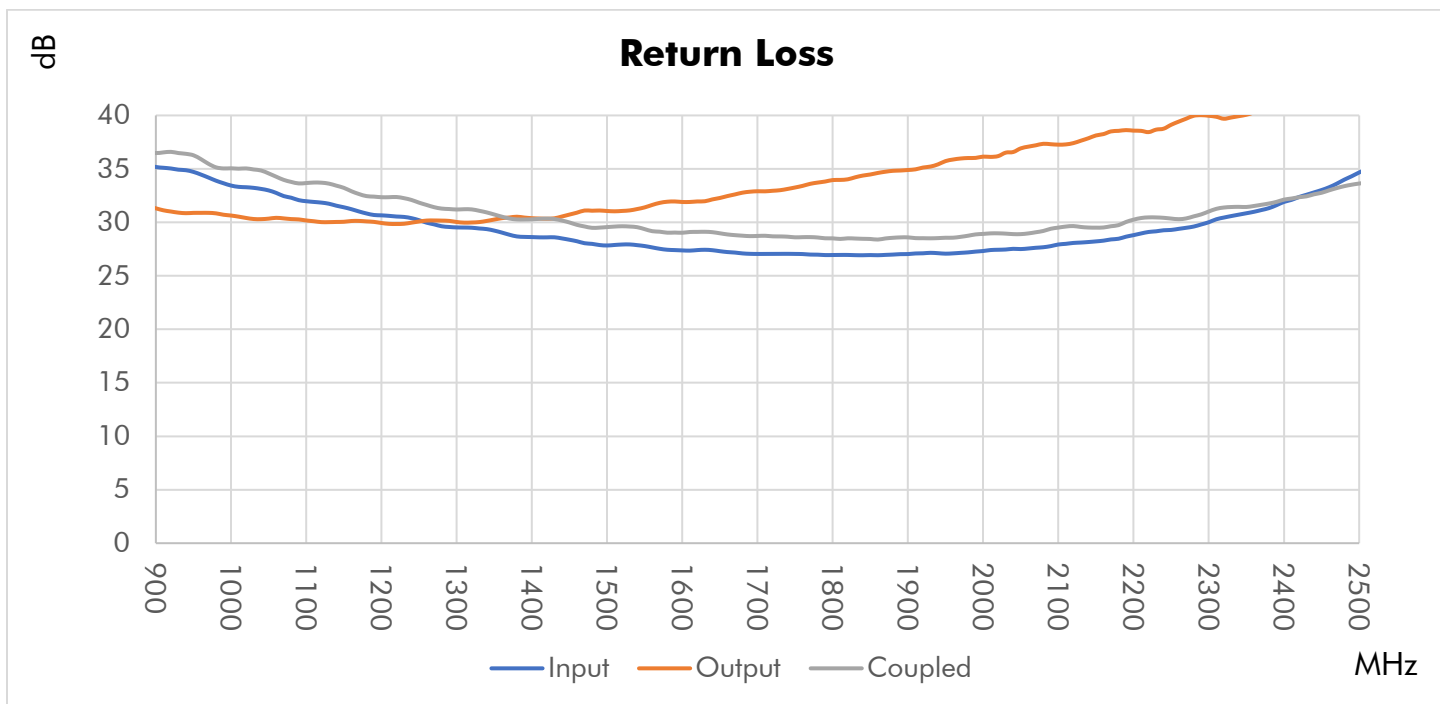
Connector Interface	SMA Female
Operating Temperature ³	-55 to +85 °C
Storage Temperature	-55 to +100 °C
Nominal Weight	28 g (1 oz)
Operating Humidity	10-90% (non-condensing)
Operating Environment	Indoor Use Only
HTSUS Code	8525.50.3035
ECCN	EAR99

RoHS Status ⁴	RoHS3 Compliant
REACH Status ⁴	REACH Unaffected
Enclosure Material	Aluminum
Connectors Material	Stainless Steel
Contacts Material	Beryllium Copper, Gold Plated
Insulators Material	Virgin PTFE
Finish	Green Paint

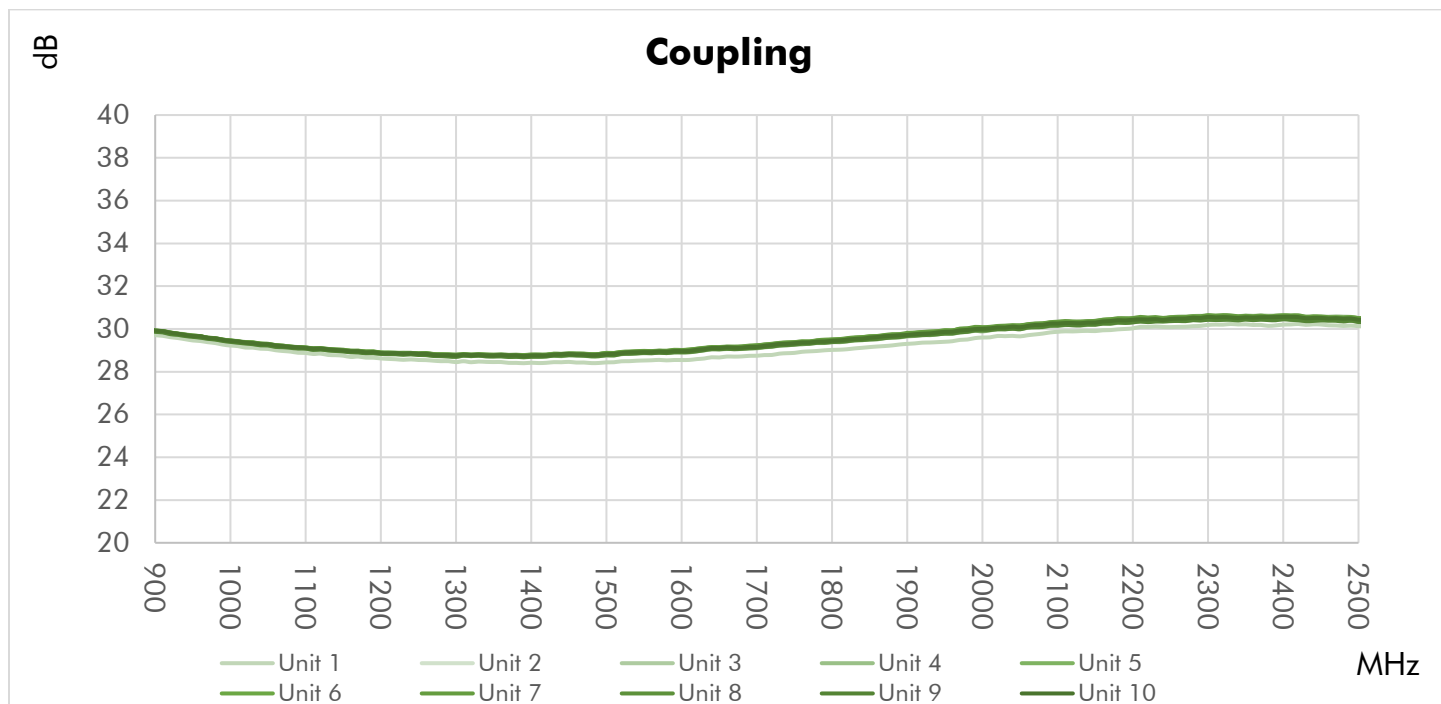
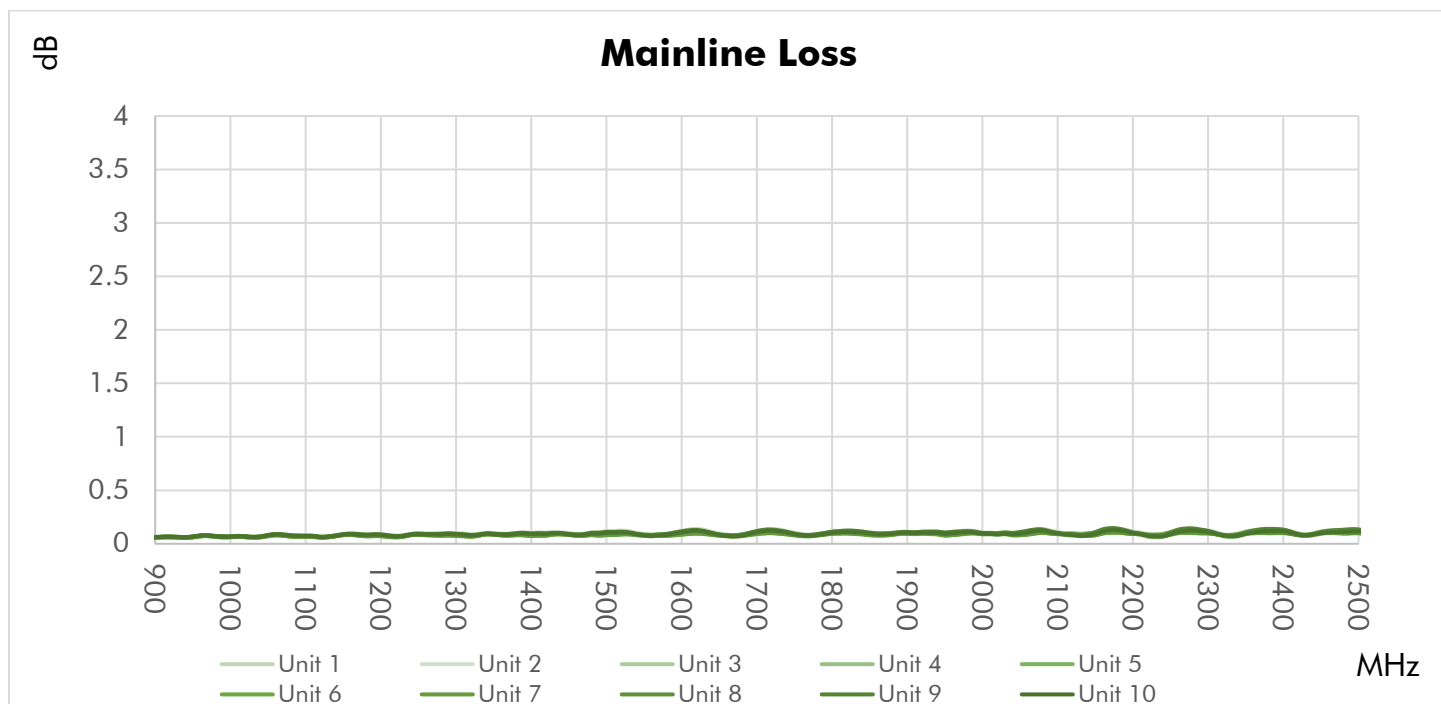
1. Mainline loss includes coupling loss.
2. All output ports should be terminated in a 50-ohm load with 1.2:1 max VSWR.
3. Electrical specifications are at +25 °C.
4. To the best of our knowledge at the time of publication.

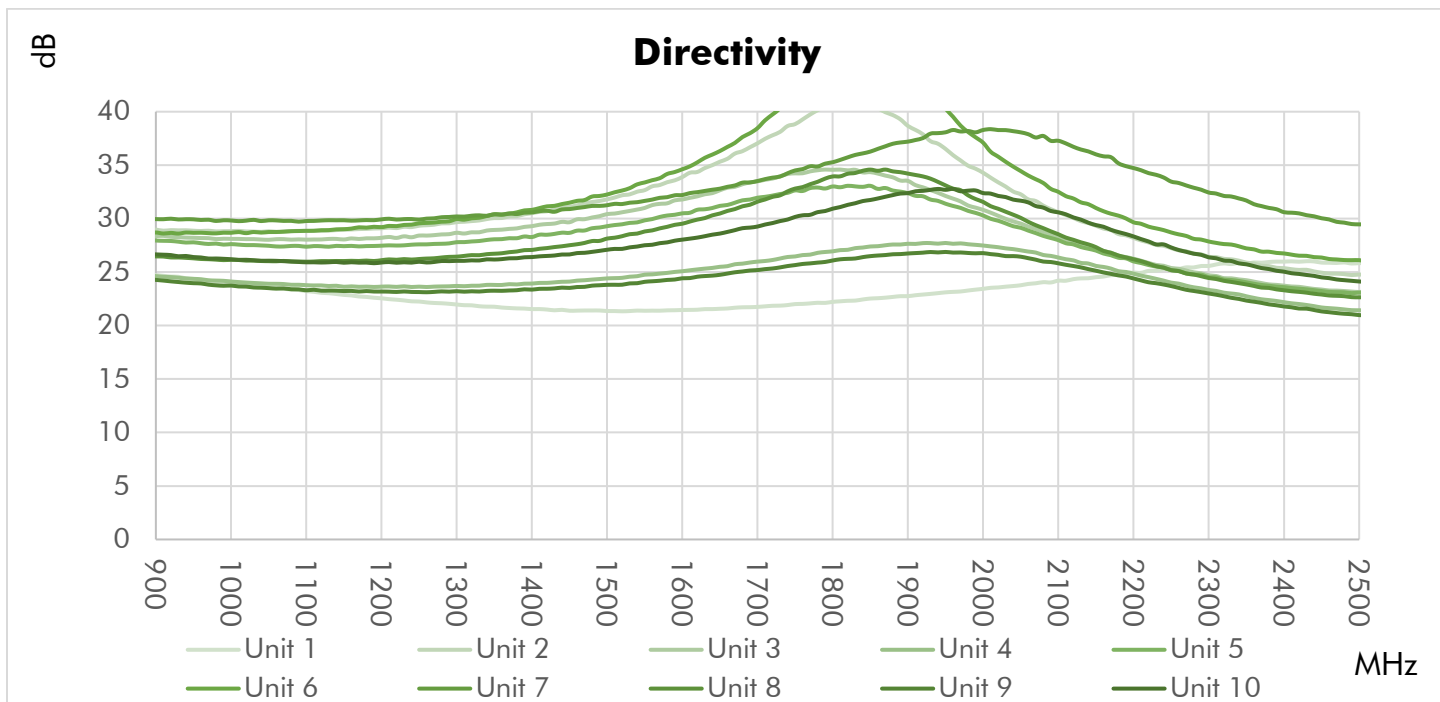
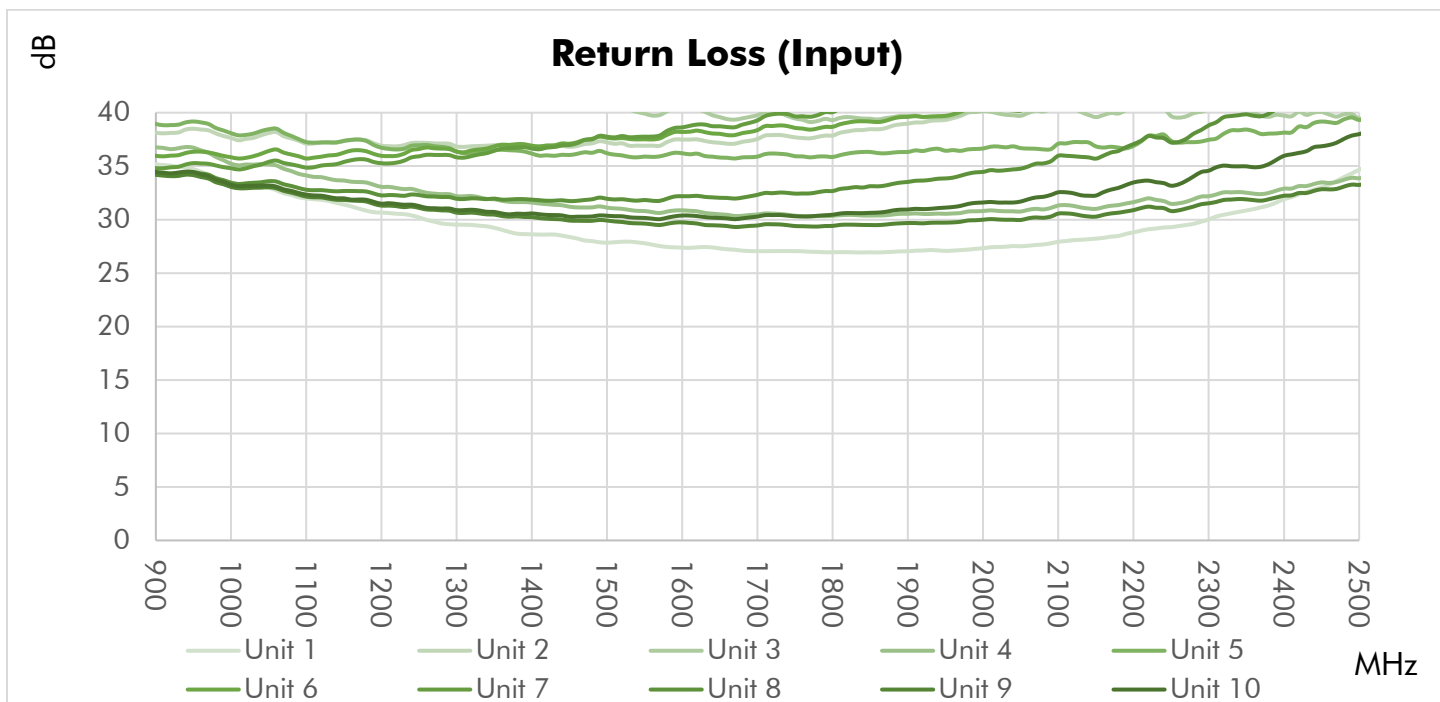
Typical Performance at +25 °C



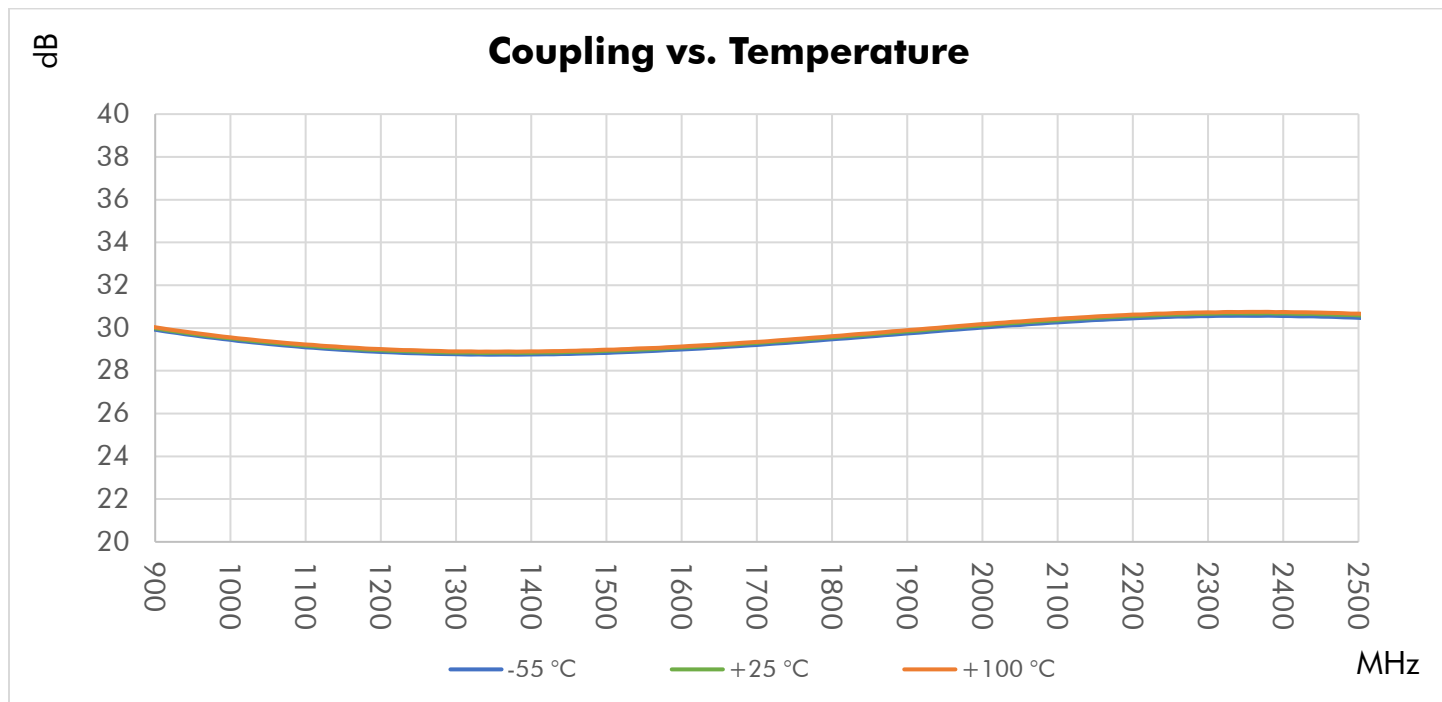
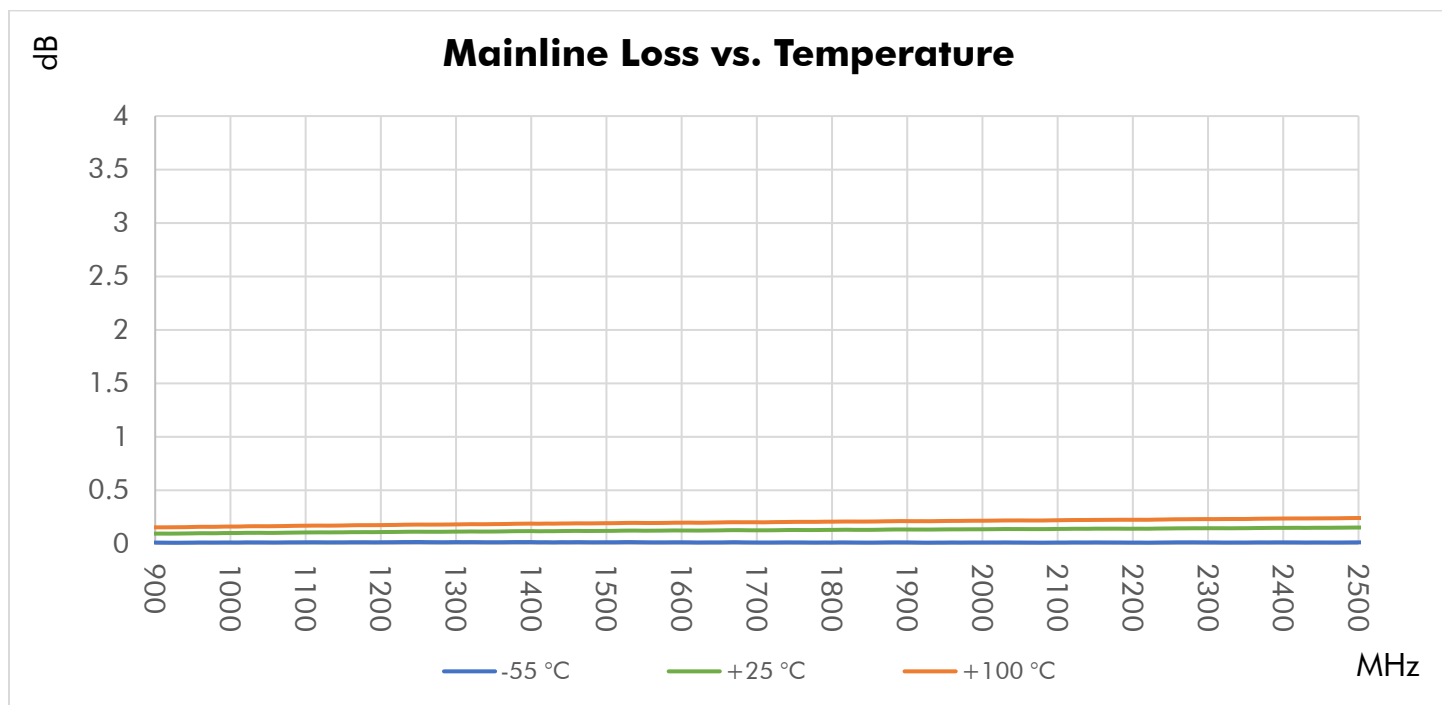


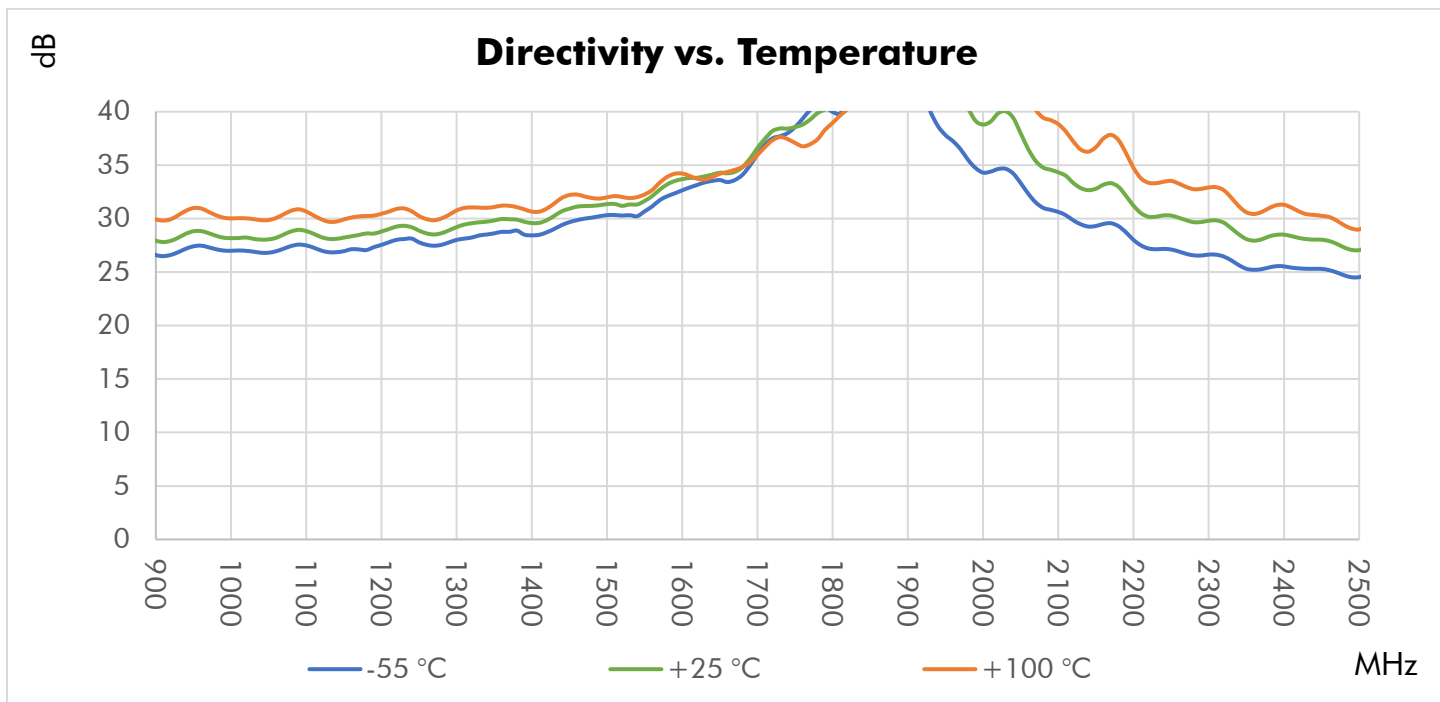
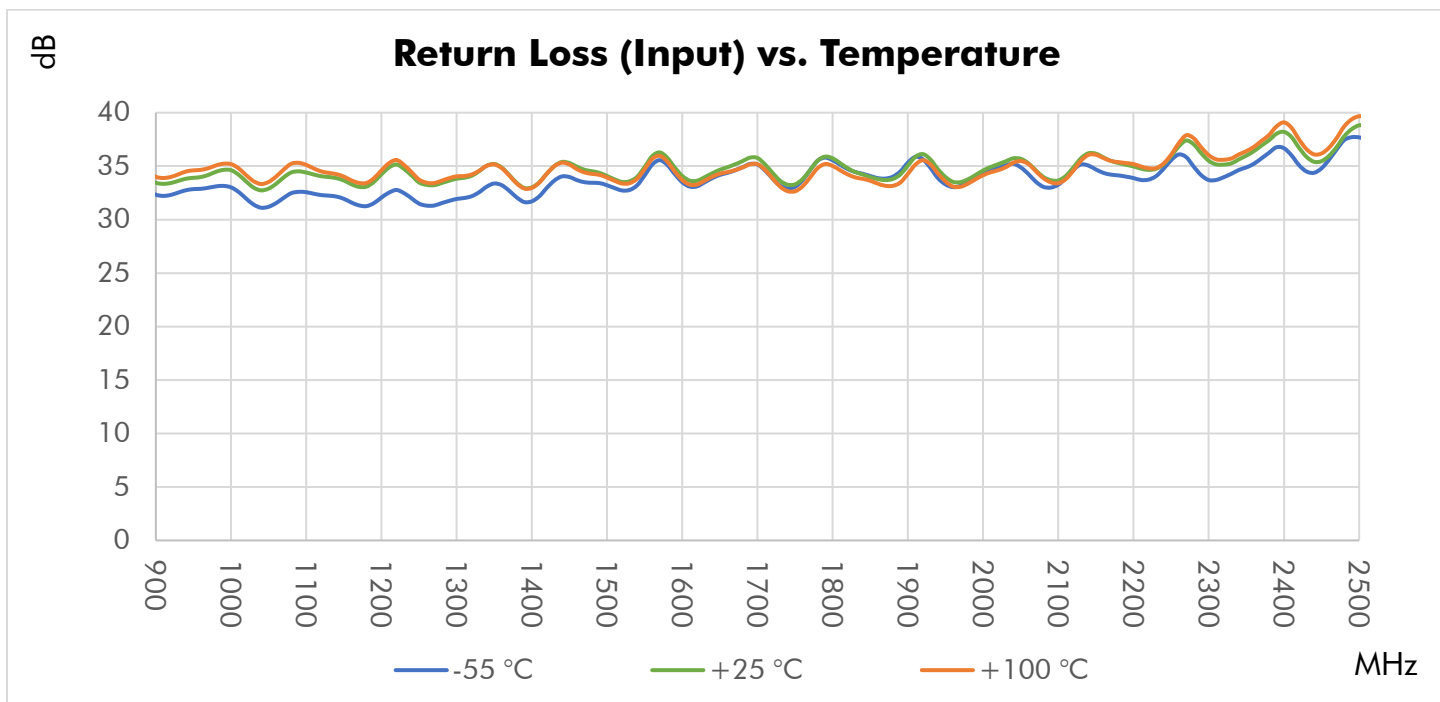
Repeatability Among Random Selection





Typical Performance Over Temperature

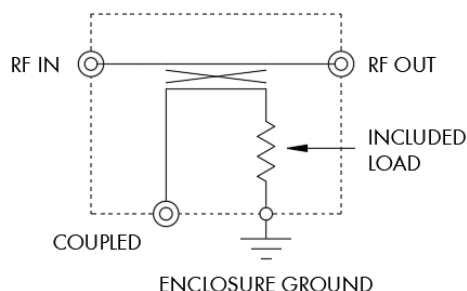




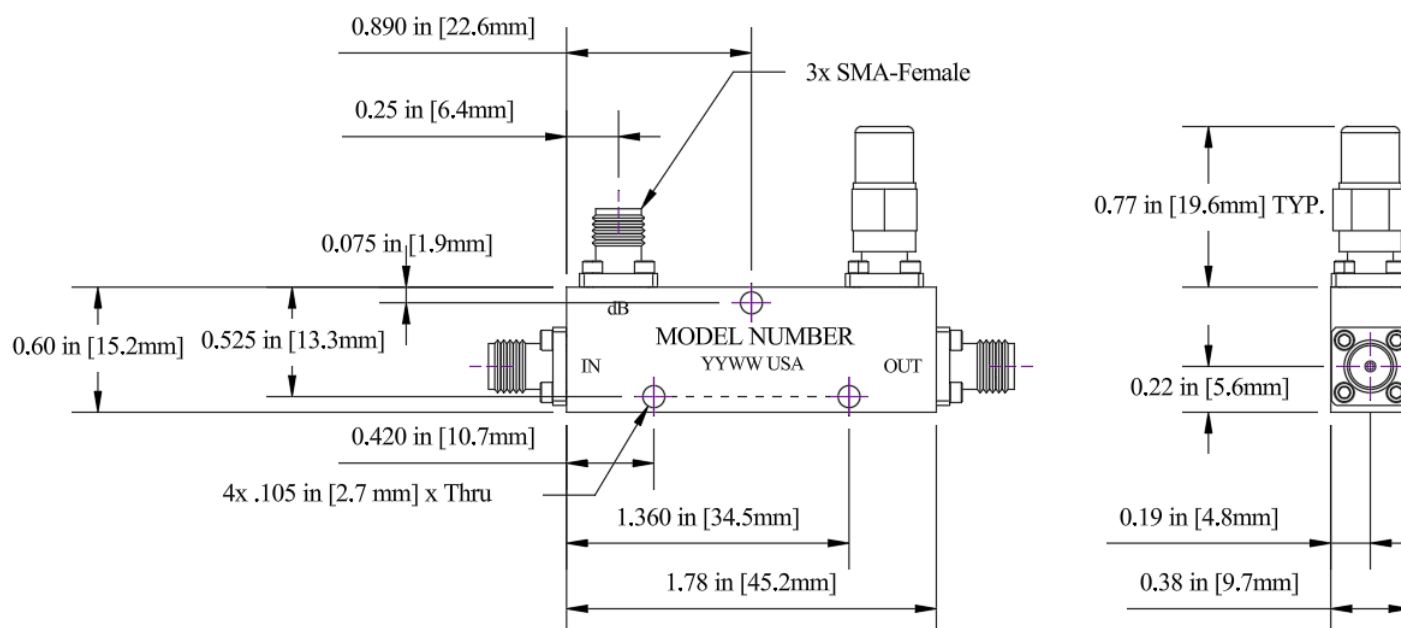
Typical Performance Data

Frequency (MHz)	Return Loss (dB)			Mainline Loss (dB)	Coupling (dB)	Directivity (dB)
	In	Out	Cpl.	In-Out	In-Cpl.	
500	45.4	37.4	43.5	0.05	33.5	27.4
550	44.9	36.1	43.6	0.05	32.8	27.2
600	42.3	35.3	41.8	0.05	32.2	27.0
650	41.9	34.2	41.9	0.05	31.7	26.6
700	39.6	33.6	40.1	0.05	31.2	26.3
750	39.2	32.8	39.8	0.05	30.8	25.9
800	37.2	32.3	38.1	0.06	30.4	25.5
850	36.7	31.6	38.0	0.06	30.0	25.1
900	35.2	31.3	36.5	0.06	29.7	24.7
950	34.7	30.9	36.3	0.07	29.5	24.4
1000	33.4	30.6	35.1	0.07	29.2	24.0
1100	32.0	30.2	33.7	0.08	28.9	23.2
1200	30.7	29.9	32.4	0.09	28.6	22.6
1300	29.5	30.0	31.2	0.10	28.5	22.0
1400	28.6	30.4	30.3	0.10	28.4	21.5
1500	27.8	31.1	29.6	0.12	28.4	21.4
1600	27.4	31.9	29.0	0.12	28.6	21.5
1700	27.1	32.9	28.7	0.12	28.8	21.8
1800	27.0	34.0	28.5	0.11	29.0	22.2
1900	27.0	34.9	28.6	0.11	29.3	22.8
2000	27.3	36.2	28.9	0.11	29.6	23.4
2100	27.9	37.3	29.5	0.11	29.9	24.2
2200	28.8	38.6	30.3	0.12	30.0	25.0
2300	30.0	40.0	31.0	0.12	30.2	25.6
2400	31.9	41.0	32.1	0.13	30.2	26.0
2500	34.7	41.9	33.6	0.12	30.1	25.8
2600	38.9	43.2	35.6	0.12	30.0	25.2
2700	44.5	45.2	37.9	0.11	29.8	24.3
2800	41.3	47.7	39.7	0.10	29.6	23.2
2900	36.1	51.4	39.8	0.10	29.4	22.4
3000	33.0	52.1	38.9	0.11	29.2	21.6

Simplified Electrical Schematic



Outline Dimensions



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

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