

Engineering Development Model

Power Splitter/Combiner

ZX10Q-ED13193/2

2 Way-90°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



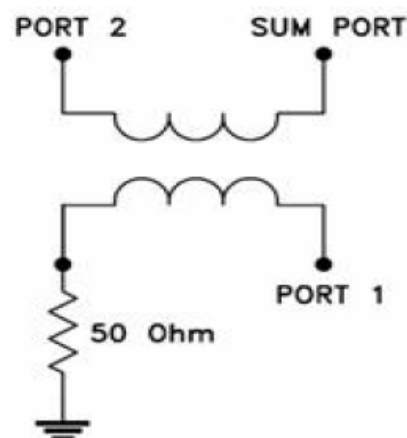
CASE STYLE : GW1052

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		500		1400 MHz
Isolation	500-1400 MHz		18	dB
Insertion Loss Average of Coupled Outputs above 3.0 dB	500-1400 MHz		0.40	dB
Phase Unbalance	500-1400 MHz		1.00	deg.
Amplitude Unbalance	500-1400 MHz		0.65	dB
VSWR	SUM Port		1.35	(:1)
	OUT Ports		1.21	(:1)

MAXIMUM RATINGS	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C

COAXIAL CONNECTIONS	
SUM PORT	1
PORT 1 (90°)	2
PORT 2 (0°)	3
50 TERM. EXTERNAL	4

Functional Diagram



2 Way-90° Power Splitter/Combiner

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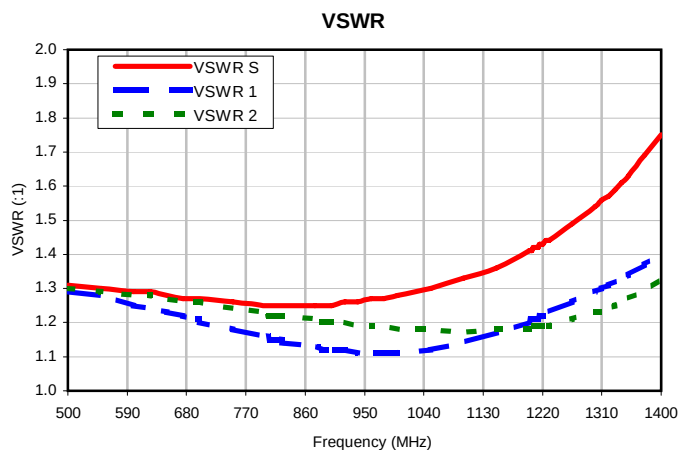
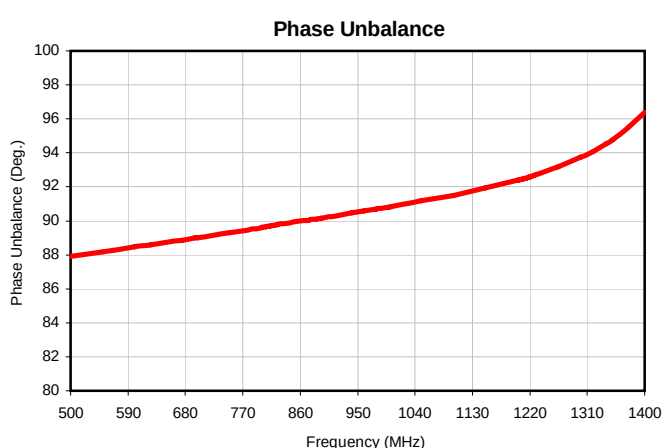
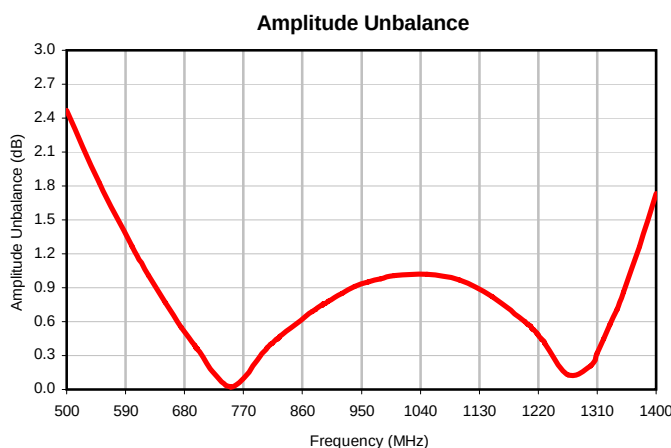
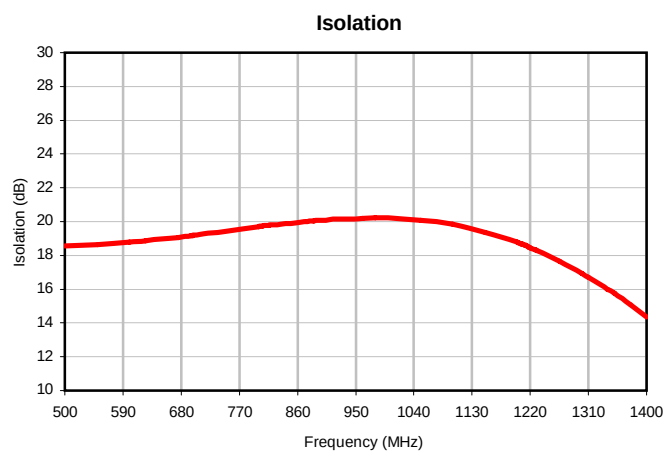
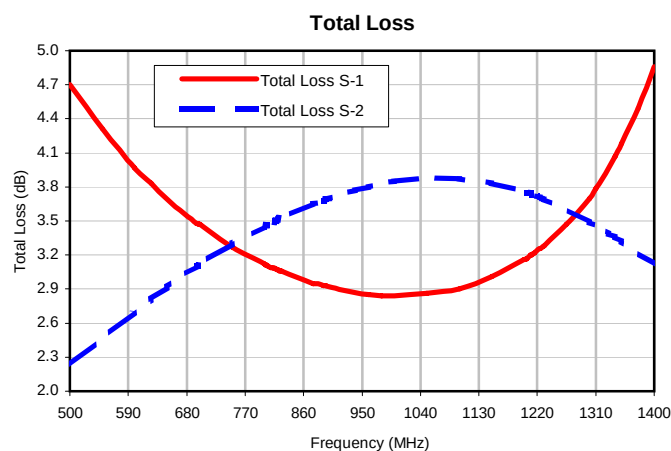
Typical Performance Data

FREQ.	TOTAL LOSS ¹		AMP. UNBAL.	ISOLATION	PHASE UNBAL.	FREQ.	VSWR		
(MHz)	(dB)		(dB)	(dB)	(Deg.)	(MHz)	(:1)		
	S-1	S-2		1-2			S	1	2
500.0	4.70	2.23	2.47	18.55	87.92	500.0	1.31	1.29	1.30
550.0	4.31	2.47	1.83	18.63	88.19	550.0	1.30	1.28	1.29
600.0	3.97	2.70	1.27	18.78	88.48	600.0	1.29	1.25	1.28
625.0	3.83	2.81	1.01	18.86	88.60	625.0	1.29	1.24	1.28
650.0	3.69	2.92	0.77	18.96	88.72	650.0	1.28	1.23	1.27
675.0	3.57	3.02	0.55	19.07	88.87	675.0	1.27	1.22	1.26
695.0	3.48	3.10	0.39	19.18	88.99	695.0	1.27	1.21	1.26
696.0	3.48	3.10	0.38	19.18	88.99	696.0	1.27	1.21	1.26
697.0	3.48	3.10	0.37	19.18	88.99	697.0	1.27	1.21	1.26
698.0	3.47	3.11	0.36	19.18	89.01	698.0	1.27	1.21	1.26
699.0	3.47	3.11	0.36	19.20	89.01	699.0	1.27	1.21	1.26
700.0	3.47	3.12	0.35	19.20	89.01	700.0	1.27	1.20	1.26
750.0	3.27	3.30	0.02	19.44	89.31	750.0	1.26	1.18	1.24
800.0	3.12	3.45	0.33	19.71	89.62	800.0	1.25	1.16	1.23
802.0	3.11	3.46	0.34	19.72	89.63	802.0	1.25	1.16	1.23
804.0	3.11	3.46	0.35	19.73	89.64	804.0	1.25	1.16	1.22
806.0	3.10	3.47	0.37	19.74	89.65	806.0	1.25	1.15	1.22
810.0	3.09	3.48	0.39	19.76	89.68	810.0	1.25	1.15	1.22
812.0	3.09	3.49	0.40	19.77	89.69	812.0	1.25	1.15	1.22
814.0	3.08	3.49	0.41	19.77	89.70	814.0	1.25	1.15	1.22
816.0	3.08	3.50	0.42	19.79	89.71	816.0	1.25	1.15	1.22
818.0	3.07	3.50	0.43	19.80	89.73	818.0	1.25	1.15	1.22
820.0	3.07	3.51	0.44	19.80	89.74	820.0	1.25	1.15	1.22
822.0	3.06	3.52	0.45	19.82	89.76	822.0	1.25	1.15	1.22
824.0	3.06	3.52	0.46	19.81	89.77	824.0	1.25	1.15	1.22
825.0	3.06	3.52	0.47	19.82	89.78	825.0	1.25	1.14	1.22
875.0	2.95	3.65	0.69	20.01	90.06	875.0	1.25	1.13	1.21
880.0	2.95	3.66	0.71	20.04	90.08	880.0	1.25	1.13	1.21
885.0	2.94	3.67	0.73	20.04	90.11	885.0	1.25	1.12	1.20
890.0	2.93	3.68	0.75	20.07	90.14	890.0	1.25	1.12	1.20
891.0	2.93	3.68	0.75	20.06	90.15	891.0	1.25	1.12	1.20
892.0	2.93	3.68	0.76	20.07	90.15	892.0	1.25	1.12	1.20
893.0	2.93	3.69	0.76	20.07	90.16	893.0	1.25	1.12	1.20
894.0	2.93	3.69	0.76	20.08	90.17	894.0	1.25	1.12	1.20
900.0	2.92	3.70	0.78	20.09	90.19	900.0	1.25	1.12	1.20
920.0	2.89	3.74	0.85	20.15	90.32	920.0	1.26	1.12	1.20
940.0	2.87	3.77	0.91	20.17	90.46	940.0	1.26	1.11	1.19
960.0	2.85	3.80	0.95	20.20	90.57	960.0	1.27	1.11	1.19
980.0	2.84	3.83	0.98	20.22	90.70	980.0	1.27	1.11	1.19
1000.0	2.84	3.85	1.01	20.22	90.81	1000.0	1.28	1.11	1.18
1050.0	2.86	3.88	1.02	20.07	91.17	1050.0	1.30	1.12	1.18
1100.0	2.90	3.87	0.97	19.83	91.50	1100.0	1.33	1.14	1.17
1150.0	3.01	3.83	0.82	19.36	91.94	1150.0	1.36	1.17	1.18
1200.0	3.16	3.76	0.60	18.77	92.39	1200.0	1.41	1.20	1.18
1202.0	3.16	3.75	0.59	18.75	92.40	1202.0	1.41	1.21	1.19
1204.0	3.17	3.75	0.58	18.73	92.42	1204.0	1.41	1.21	1.19
1206.0	3.18	3.75	0.57	18.69	92.44	1206.0	1.42	1.21	1.19
1208.0	3.19	3.74	0.56	18.66	92.45	1208.0	1.42	1.21	1.19
1210.0	3.20	3.74	0.54	18.64	92.48	1210.0	1.42	1.21	1.19
1212.0	3.20	3.73	0.53	18.59	92.49	1212.0	1.42	1.21	1.19
1214.0	3.21	3.73	0.52	18.58	92.52	1214.0	1.42	1.21	1.19
1216.0	3.22	3.73	0.51	18.52	92.55	1216.0	1.43	1.22	1.19
1218.0	3.23	3.72	0.49	18.48	92.57	1218.0	1.43	1.22	1.19
1220.0	3.24	3.72	0.48	18.46	92.59	1220.0	1.43	1.22	1.19
1225.0	3.26	3.71	0.44	18.37	92.65	1225.0	1.44	1.22	1.19
1227.6	3.27	3.70	0.43	18.32	92.69	1227.6	1.44	1.23	1.19
1230.0	3.28	3.69	0.41	18.29	92.72	1230.0	1.44	1.23	1.19
1265.0	3.47	3.60	0.13	17.64	93.19	1265.0	1.49	1.26	1.21
1300.0	3.70	3.49	0.21	16.93	93.74	1300.0	1.54	1.29	1.23
1310.0	3.79	3.46	0.32	16.71	93.90	1310.0	1.56	1.30	1.23
1320.0	3.87	3.43	0.45	16.48	94.10	1320.0	1.57	1.31	1.24
1330.0	3.97	3.39	0.58	16.24	94.32	1330.0	1.59	1.32	1.25
1340.0	4.07	3.36	0.71	16.00	94.55	1340.0	1.61	1.33	1.26
1350.0	4.18	3.32	0.86	15.74	94.78	1350.0	1.63	1.34	1.27
1375.0	4.49	3.22	1.26	15.06	95.51	1375.0	1.69	1.37	1.29
1400.0	4.86	3.12	1.73	14.35	96.38	1400.0	1.75	1.40	1.33

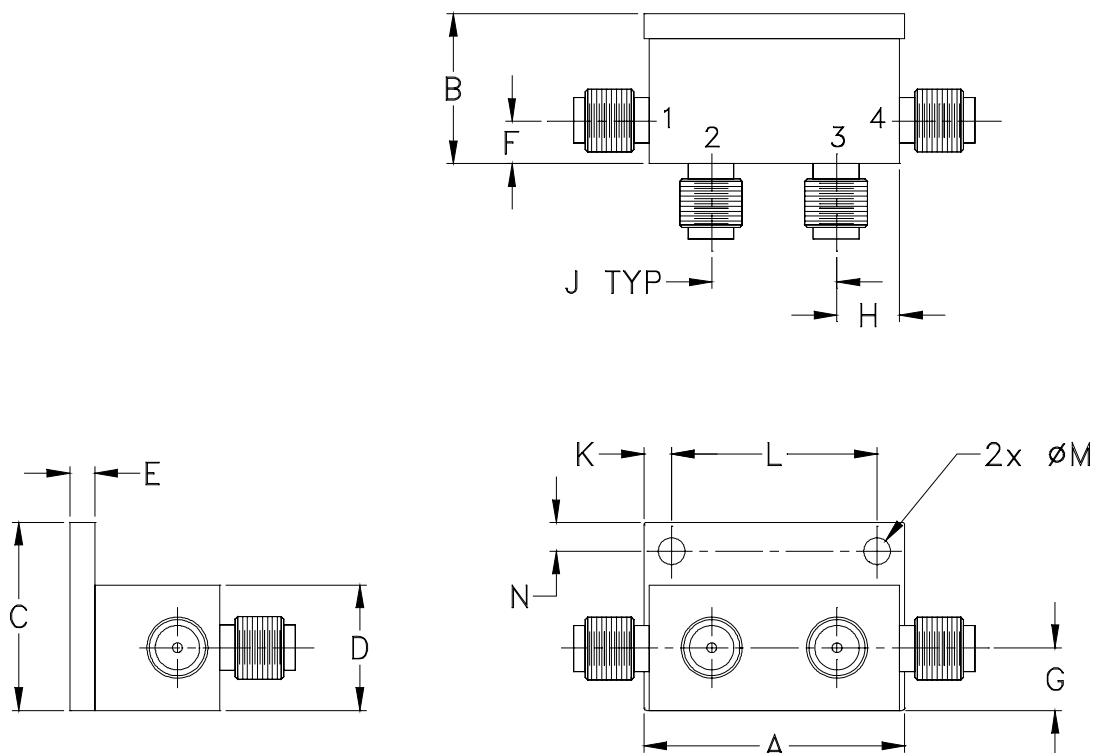
¹Total Loss = Insertion Loss + 3dB Splitter Loss



Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N	WT. GRAM
GW1052	1.04 (26.42)	.60 (15.24)	.75 (19.05)	.50 (12.70)	.10 (2.54)	.17 (4.32)	.25 (6.35)	.25 (6.35)	.50 (12.70)	.11 (2.79)	.820 (20.83)	.106 (2.69)	.12 (3.05)	21.0

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$.

Tolerance on hole size and interaxes dimensions to be $\pm .005$.

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.



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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-40° to 85°C	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I