

Engineering Development Model

Power Splitter/Combiner

ADP-ED12390/1

2 Way-0°

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 : 99-01-716

ELECTRICAL SPECIFICATIONS 75Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		5		1000	MHz
Isolation	5 - 50 MHz		26		dB
	50 - 500 MHz		26		dB
	500 - 1000 MHz		29		dB
Insertion Loss Above 3.0 dB	5 - 50 MHz		0.30		dB
	50 - 500 MHz		0.40		dB
	500 - 1000 MHz		0.70		dB
Phase Unbalance	5 - 50 MHz		0.008		deg.
	50 - 500 MHz		0.128		deg.
	500 - 1000 MHz		0.790		deg.
Amplitude Unbalance	5 - 50 MHz		0.021		dB
	50 - 500 MHz		0.015		dB
	500 - 1000 MHz		0.012		dB
VSWR	SUM Port		1.10		(:1)
	OUT Ports		1.11		(:1)

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

PIN CONNECTIONS	
SUM PORT	6
PORT 1	4
PORT 2	3
GND EXT	1
NOT USED	2, 5

Functional Diagram



2 Way-0° Power Splitter/Combiner

ADP-ED12390/1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)		AMP. UNBAL. (dB)	ISOLATION (dB)	PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
1.00	3.54	3.52	0.02	18.83	0.04	1.00	1.24	1.46	1.48
5.00	3.36	3.34	0.02	25.45	0.02	5.00	1.12	1.16	1.17
10.00	3.34	3.32	0.02	26.60	0.00	10.00	1.09	1.11	1.12
15.00	3.35	3.33	0.02	26.72	0.01	15.00	1.09	1.10	1.11
20.00	3.35	3.33	0.02	26.62	0.01	20.00	1.08	1.09	1.10
25.00	3.36	3.34	0.02	26.55	0.01	25.00	1.08	1.09	1.10
30.00	3.36	3.34	0.02	26.48	0.01	30.00	1.08	1.09	1.10
35.00	3.37	3.34	0.02	26.45	0.01	35.00	1.08	1.09	1.10
40.00	3.37	3.35	0.02	26.38	0.00	40.00	1.08	1.09	1.10
45.00	3.38	3.35	0.03	26.38	0.01	45.00	1.08	1.09	1.10
50.00	3.38	3.36	0.02	26.38	0.00	50.00	1.08	1.09	1.10
55.00	3.38	3.36	0.02	26.37	0.00	55.00	1.08	1.09	1.10
60.00	3.39	3.36	0.02	26.40	0.01	60.00	1.08	1.09	1.10
70.00	3.39	3.37	0.02	26.40	0.01	70.00	1.08	1.09	1.10
80.00	3.40	3.38	0.02	26.39	0.00	80.00	1.08	1.09	1.10
90.00	3.40	3.38	0.02	26.41	0.03	90.00	1.08	1.09	1.10
100.00	3.41	3.39	0.02	26.43	0.02	100.00	1.08	1.09	1.10
200.00	3.46	3.45	0.01	26.42	0.13	200.00	1.08	1.09	1.09
300.00	3.54	3.54	0.00	26.53	0.28	300.00	1.08	1.08	1.09
400.00	3.70	3.71	0.01	28.58	0.40	400.00	1.07	1.11	1.12
500.00	3.68	3.68	0.01	29.55	0.53	500.00	1.06	1.12	1.12
600.00	3.70	3.71	0.01	28.73	0.62	600.00	1.07	1.11	1.11
700.00	3.74	3.75	0.01	28.36	0.76	700.00	1.08	1.11	1.11
800.00	3.85	3.86	0.01	28.91	0.80	800.00	1.08	1.13	1.12
900.00	3.97	3.99	0.02	29.94	0.90	900.00	1.10	1.15	1.14
925.00	4.00	4.01	0.01	30.23	0.88	925.00	1.11	1.16	1.14
950.00	4.04	4.05	0.01	30.53	0.86	950.00	1.11	1.17	1.14
975.00	4.07	4.09	0.02	31.00	0.89	975.00	1.12	1.17	1.15
1000.00	4.11	4.12	0.01	31.40	0.87	1000.00	1.13	1.17	1.15
1025.00	4.14	4.16	0.01	31.55	0.84	1025.00	1.14	1.18	1.16
1050.00	4.19	4.20	0.01	31.54	0.88	1050.00	1.15	1.19	1.16
1075.00	4.23	4.24	0.01	31.31	0.85	1075.00	1.16	1.20	1.17
1100.00	4.28	4.30	0.02	30.66	0.84	1100.00	1.18	1.20	1.18
1150.00	4.40	4.41	0.01	28.45	0.78	1150.00	1.22	1.22	1.19
1200.00	4.54	4.56	0.02	25.83	0.78	1200.00	1.26	1.22	1.21
1250.00	4.74	4.76	0.02	23.34	0.67	1250.00	1.32	1.25	1.24
1300.00	4.97	5.00	0.03	20.97	0.59	1300.00	1.39	1.25	1.27
1425.00	5.84	5.88	0.04	16.02	0.35	1425.00	1.67	1.32	1.39
1550.00	7.10	7.17	0.07	12.35	0.01	1550.00	2.11	1.39	1.55
1675.00	8.95	9.07	0.12	9.70	0.56	1675.00	2.77	1.52	1.73
1800.00	11.68	11.88	0.20	7.89	1.18	1800.00	3.67	1.72	1.89

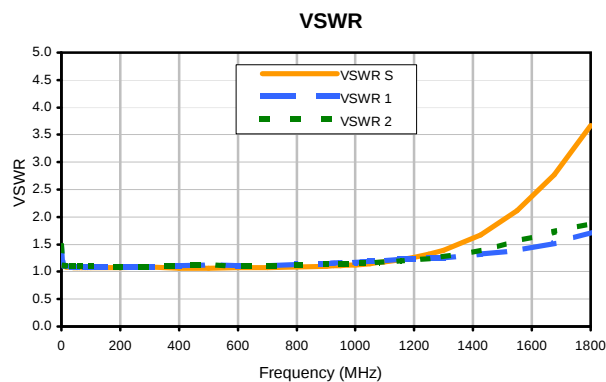
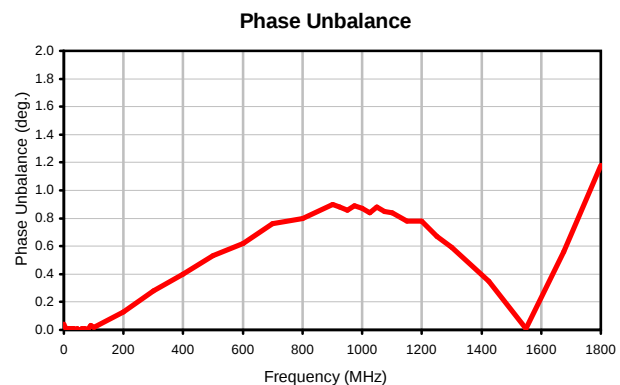
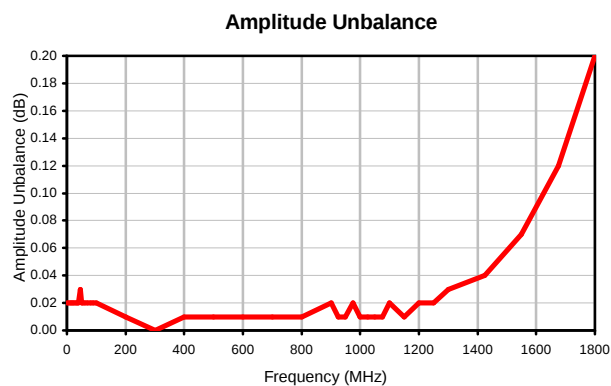
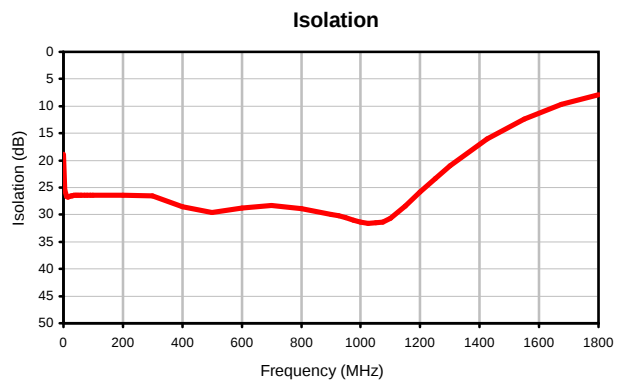
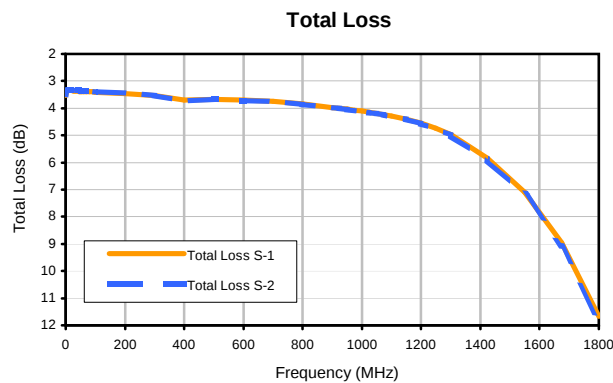
¹ Total Loss = Insertion Loss + 3dB Splitter Loss

REV. X2
ADP-ED12390/1
100707
Page 1 of 1

2 Way-0° Power Splitter/Combiner

ADP-ED12390/1

Typical Performance Curves



REV. X2
ADP-ED12390/1
100707
Page 1 of 1



Mini-Circuits®

RF/MICROWAVE COMPONENTS • ISO 9001 ISO 14001 AS9100 CERTIFIED • RoHS compliant
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

The Design Engineers Search Engine finds the model you need, instantly • For detailed performance specs & shopping online see





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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Humidity	90 to 95% RH, 240 hours, 50°C	MIL-STD-202, Method 103, Condition A, Except 50°C and end-point electrical test done within 12 hours
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107, Condition A-3, except +100°C
Solder Reflow Heat	Sn-Pb Eutetic Process: 225°C peak Pb-Free Process 245° - 250°C peak	J-STD-020, Table 4-1, 4-2 and 5-2, Figure 5-1
Solderability	10X Magnification	J-STD-002, 95% Coverage
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	50g, 11 ms, 1/2-sine, 18 shocks: 3 each direction, each of 3 axes	MIL-STD-202, Method 213, Condition A
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C	MIL-STD-202, Method 215