

Engineering Development Model

Power Splitter/Combiner

2 Way-0°

SCPA-ED13008/1

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 : 99-01-1270

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		15		600	MHz
Isolation	15 - 150 MHz		27		dB
	150 - 300 MHz		23		dB
	300 - 600 MHz		26		dB
Insertion Loss Above 3.0 dB	15 - 150 MHz		0.43		dB
	150 - 300 MHz		0.41		dB
	300 - 600 MHz		0.55		dB
Phase Unbalance	15 - 150 MHz		0.04		deg.
	150 - 300 MHz		0.09		deg.
	300 - 600 MHz		0.05		deg.
Amplitude Unbalance	15 - 150 MHz		0.01		dB
	150 - 300 MHz		0.02		dB
	300 - 600 MHz		0.05		dB
VSWR	SUM Port		1.18		(:1)
	OUT Ports		1.26		(:1)

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

PIN CONNECTIONS	
SUM PORT	5
PORT 1	11
PORT 2	13
CASE GND	1,2,3,4,6,7,8,9,10,12,14

Functional Diagram



2 Way-0° Power Splitter/Combiner

SCPA-ED13008/1

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
15.0	3.54	3.54	0.00	18.18	0.03	15.0	1.31	1.79	1.79
20.0	3.49	3.49	0.01	22.70	0.04	20.0	1.24	1.53	1.53
25.0	3.46	3.46	0.01	26.10	0.03	25.0	1.21	1.42	1.43
30.0	3.44	3.45	0.01	27.51	0.03	30.0	1.18	1.38	1.38
35.0	3.43	3.44	0.01	28.13	0.02	35.0	1.17	1.35	1.36
40.0	3.42	3.43	0.01	28.40	0.02	40.0	1.16	1.34	1.34
45.0	3.42	3.42	0.00	28.59	0.03	45.0	1.15	1.32	1.32
50.0	3.41	3.41	0.00	28.77	0.04	50.0	1.15	1.31	1.31
55.0	3.41	3.41	0.01	28.96	0.04	55.0	1.15	1.30	1.30
60.0	3.40	3.41	0.01	29.09	0.05	60.0	1.14	1.29	1.29
70.0	3.39	3.40	0.01	29.34	0.05	70.0	1.14	1.27	1.27
80.0	3.39	3.40	0.01	29.36	0.05	80.0	1.14	1.25	1.25
90.0	3.39	3.39	0.01	29.12	0.05	90.0	1.14	1.24	1.24
100.0	3.39	3.39	0.00	28.67	0.05	100.0	1.14	1.22	1.22
150.0	3.38	3.39	0.00	25.82	0.09	150.0	1.15	1.16	1.16
200.0	3.40	3.39	0.01	23.86	0.07	200.0	1.15	1.11	1.11
250.0	3.41	3.40	0.02	22.81	0.08	250.0	1.13	1.07	1.07
300.0	3.43	3.41	0.02	22.45	0.10	300.0	1.11	1.04	1.03
350.0	3.46	3.43	0.03	23.01	0.09	350.0	1.08	1.07	1.06
400.0	3.50	3.46	0.04	24.67	0.07	400.0	1.07	1.12	1.11
410.0	3.51	3.47	0.04	25.19	0.06	410.0	1.08	1.13	1.12
420.0	3.52	3.48	0.04	25.80	0.06	420.0	1.09	1.14	1.14
430.0	3.53	3.49	0.04	26.49	0.06	430.0	1.10	1.16	1.15
440.0	3.54	3.50	0.04	27.26	0.06	440.0	1.12	1.17	1.17
450.0	3.55	3.51	0.05	28.13	0.05	450.0	1.14	1.18	1.18
460.0	3.57	3.52	0.05	29.00	0.03	460.0	1.16	1.20	1.19
470.0	3.59	3.54	0.05	29.78	0.02	470.0	1.18	1.21	1.21
480.0	3.60	3.55	0.05	30.31	0.03	480.0	1.21	1.22	1.22
490.0	3.62	3.57	0.05	30.32	0.03	490.0	1.23	1.24	1.24
500.0	3.65	3.59	0.05	29.78	0.02	500.0	1.26	1.25	1.25
600.0	4.07	4.00	0.07	17.98	0.06	600.0	1.76	1.39	1.39

¹Total Loss = Insertion Loss + 3dB Splitter Loss

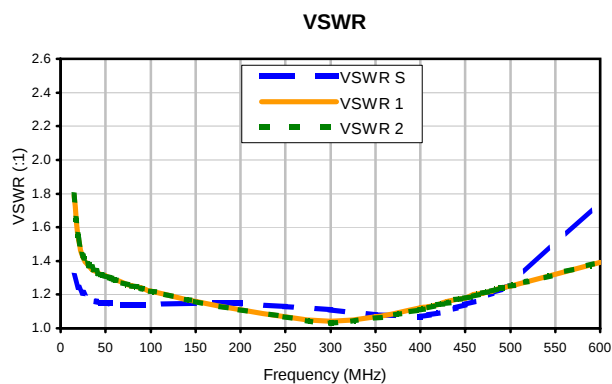
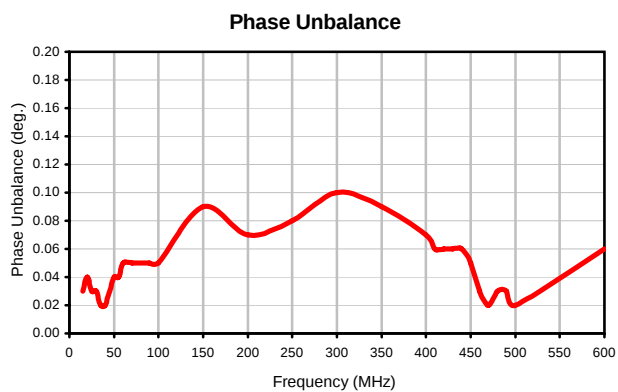
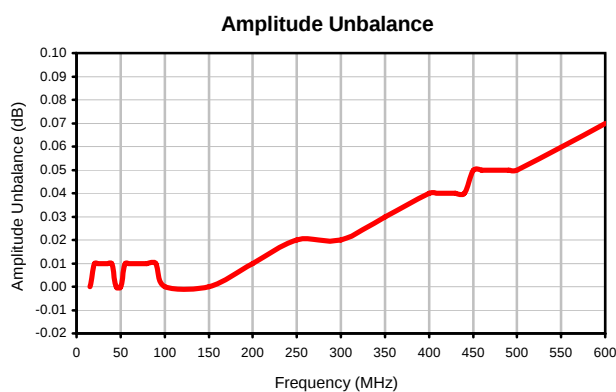
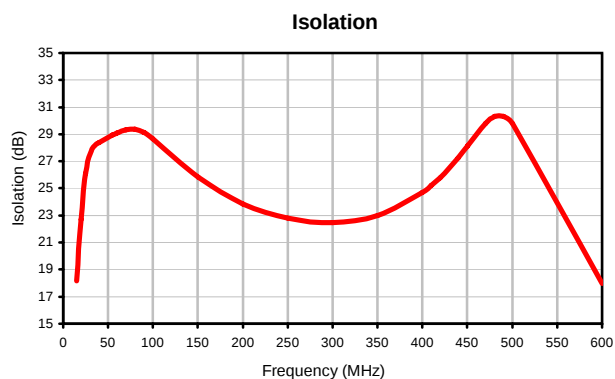
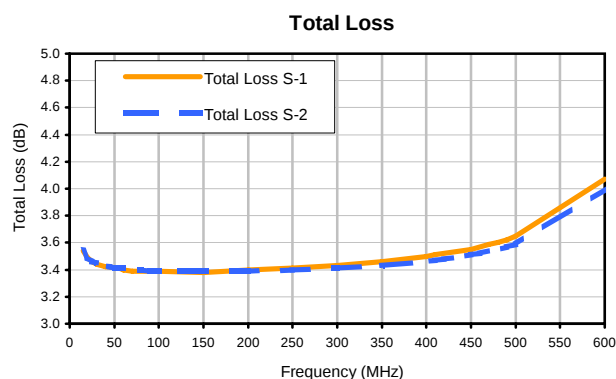


P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 • Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site
 The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS

REV. X2
 SCPA-ED13008/1
 9/13/2010
 Page 1 of 1

Typical Performance Curves





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