

Engineering Development Model

Power Splitter/Combiner 8 Way-0°

JEPS-8-ED12609/1

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 : BL372

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		0.3		95	MHz
Isolation	0.3 - 3 MHz		30		dB
	3 - 47.5 MHz		26		dB
	47.5 - 95 MHz		26		dB
Insertion Loss Above 9.0 dB	0.3 - 3 MHz		1.20		dB
	3 - 47.5 MHz		1.10		dB
	47.5 - 95 MHz		2.00		dB
Phase Unbalance	0.3 - 3 MHz		1.809		deg.
	3 - 47.5 MHz		0.416		deg.
	47.5 - 95 MHz		0.310		deg.
Amplitude Unbalance	0.3 - 3 MHz		0.315		dB
	3 - 47.5 MHz		0.163		dB
	47.5 - 95 MHz		0.150		dB
VSWR	SUM Port		1.25		(:1)
	OUT Ports		1.40		(:1)

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

PIN CONNECTIONS	
SUM PORT	18
PORT 1	2
PORT 2	4
PORT 3	9
PORT 4	11
PORT 5	14
PORT 6	16
PORT 7	21
PORT 8	23
GND	All Other Pins

Functional Diagram



8 Way-0° Power Splitter/Combiner

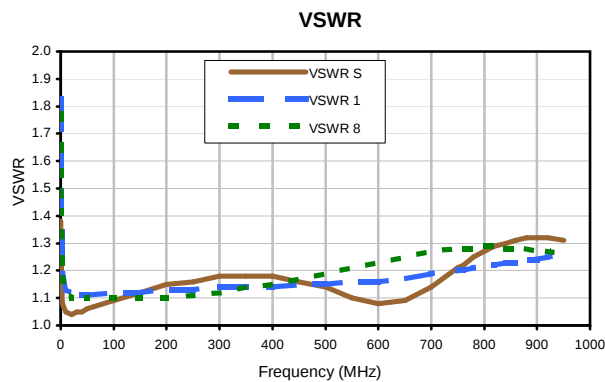
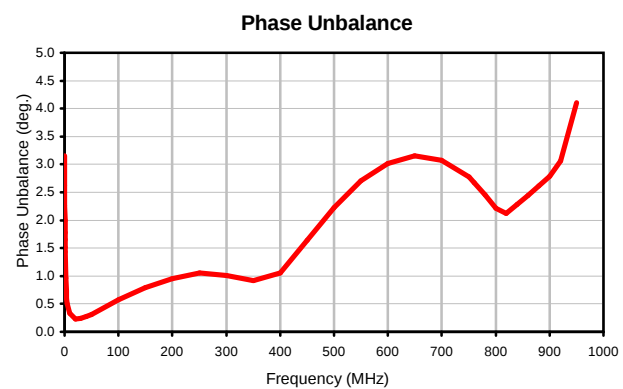
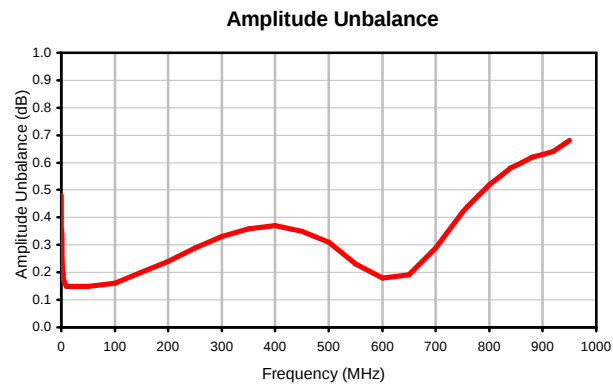
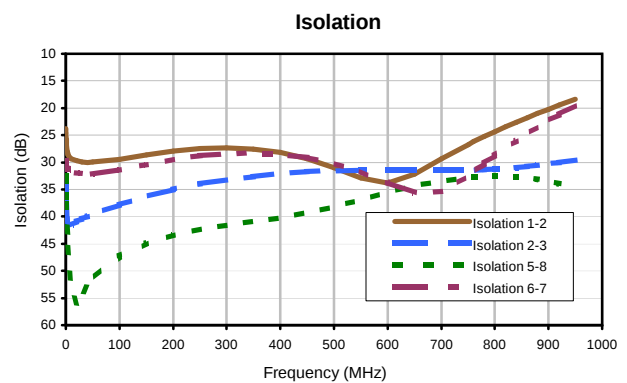
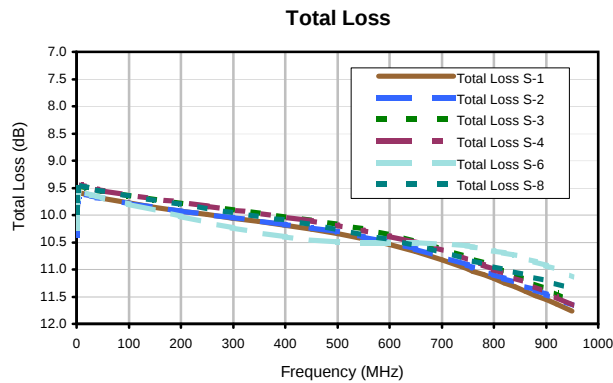
JEPS-8-ED12609/1

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-3	S-4	S-6	S-8		1-2	2-3	5-8	6-7			S	1	8
0.3	10.37	10.37	9.91	9.89	10.25	9.94	0.48	23.77	32.69	32.57	29.71	3.15	0.3	1.38	1.83	1.77
0.4	10.23	10.23	9.84	9.83	10.14	9.86	0.40	24.59	33.71	34.10	30.07	2.63	0.4	1.31	1.68	1.63
0.5	10.14	10.13	9.79	9.77	10.07	9.80	0.36	25.24	34.52	35.20	30.41	2.26	0.5	1.27	1.59	1.55
0.6	10.08	10.07	9.76	9.74	10.01	9.76	0.34	25.75	35.26	35.92	30.71	1.99	0.6	1.24	1.54	1.50
0.7	10.03	10.02	9.73	9.71	9.97	9.73	0.32	26.15	35.90	36.46	30.91	1.78	0.7	1.22	1.50	1.46
0.8	9.99	9.98	9.71	9.69	9.94	9.70	0.30	26.45	36.53	36.93	31.03	1.65	0.8	1.21	1.47	1.43
0.9	9.95	9.95	9.68	9.67	9.91	9.68	0.28	26.71	37.04	37.27	31.15	1.51	0.9	1.19	1.44	1.41
1.0	9.92	9.92	9.66	9.65	9.88	9.66	0.27	26.91	37.56	37.63	31.23	1.43	1.0	1.18	1.42	1.39
2.0	9.74	9.74	9.54	9.53	9.70	9.54	0.21	27.89	40.46	40.51	31.34	0.96	2.0	1.12	1.29	1.27
3.0	9.67	9.67	9.49	9.48	9.63	9.49	0.19	28.30	41.32	42.91	31.30	0.73	3.0	1.09	1.23	1.21
4.0	9.63	9.63	9.47	9.46	9.59	9.47	0.18	28.53	41.57	44.95	31.28	0.60	4.0	1.08	1.19	1.18
5.0	9.61	9.62	9.46	9.45	9.58	9.46	0.17	28.72	41.61	46.65	31.33	0.51	5.0	1.07	1.17	1.16
10.0	9.60	9.60	9.47	9.45	9.57	9.46	0.15	29.29	41.59	52.43	31.64	0.33	10.0	1.05	1.13	1.12
20.0	9.62	9.62	9.49	9.48	9.60	9.49	0.15	29.72	40.91	56.14	31.97	0.23	20.0	1.04	1.12	1.10
30.0	9.65	9.65	9.52	9.50	9.63	9.51	0.15	29.90	40.45	54.60	32.11	0.24	30.0	1.05	1.11	1.10
40.0	9.67	9.68	9.55	9.53	9.66	9.54	0.15	29.99	40.01	52.74	32.17	0.27	40.0	1.05	1.11	1.10
50.0	9.69	9.70	9.57	9.55	9.68	9.56	0.15	29.98	39.60	51.40	32.13	0.31	50.0	1.06	1.11	1.10
100.0	9.78	9.79	9.65	9.64	9.80	9.65	0.16	29.44	37.79	47.23	31.39	0.57	100.0	1.09	1.12	1.10
150.0	9.86	9.86	9.72	9.71	9.91	9.73	0.20	28.65	36.25	44.86	30.37	0.79	150.0	1.12	1.12	1.10
200.0	9.93	9.93	9.79	9.77	10.02	9.80	0.24	27.95	35.00	43.39	29.44	0.95	200.0	1.15	1.13	1.10
250.0	9.99	9.99	9.85	9.84	10.13	9.88	0.29	27.50	33.97	42.30	28.73	1.05	250.0	1.16	1.13	1.11
300.0	10.06	10.05	9.91	9.90	10.23	9.95	0.33	27.36	33.20	41.59	28.34	1.01	300.0	1.18	1.14	1.12
350.0	10.12	10.11	9.97	9.97	10.33	10.03	0.36	27.57	32.59	40.94	28.23	0.92	350.0	1.18	1.14	1.14
400.0	10.19	10.18	10.03	10.04	10.40	10.10	0.37	28.19	32.10	40.20	28.46	1.05	400.0	1.18	1.14	1.15
450.0	10.26	10.24	10.10	10.11	10.46	10.18	0.35	29.31	31.74	39.24	29.08	1.64	450.0	1.16	1.15	1.17
500.0	10.34	10.31	10.18	10.19	10.49	10.27	0.31	30.97	31.53	38.15	30.14	2.22	500.0	1.14	1.15	1.19
550.0	10.43	10.40	10.26	10.28	10.50	10.36	0.23	32.90	31.44	36.85	31.67	2.71	550.0	1.10	1.16	1.21
600.0	10.54	10.50	10.36	10.39	10.50	10.45	0.18	33.83	31.41	35.52	33.70	3.02	600.0	1.08	1.16	1.23
650.0	10.67	10.62	10.48	10.51	10.51	10.56	0.19	32.16	31.46	34.34	35.60	3.15	650.0	1.09	1.17	1.25
700.0	10.82	10.76	10.62	10.65	10.53	10.68	0.29	29.35	31.48	33.42	35.38	3.07	700.0	1.14	1.19	1.27
750.0	10.99	10.92	10.78	10.82	10.57	10.81	0.42	26.69	31.46	32.81	32.39	2.77	750.0	1.21	1.20	1.28
760.0	11.03	10.96	10.81	10.85	10.59	10.84	0.44	26.19	31.44	32.73	31.67	2.67	760.0	1.22	1.20	1.28
780.0	11.10	11.03	10.88	10.92	10.62	10.89	0.48	25.25	31.38	32.62	30.20	2.45	780.0	1.25	1.21	1.28
800.0	11.17	11.10	10.96	11.00	10.66	10.95	0.52	24.35	31.28	32.57	28.76	2.21	800.0	1.27	1.22	1.29
820.0	11.25	11.17	11.03	11.07	10.70	11.00	0.55	23.48	31.14	32.59	27.35	2.12	820.0	1.29	1.22	1.29
840.0	11.32	11.24	11.11	11.15	10.74	11.05	0.58	22.63	30.98	32.69	25.99	2.28	840.0	1.30	1.23	1.28
860.0	11.40	11.31	11.19	11.23	10.80	11.10	0.60	21.81	30.77	32.87	24.70	2.44	860.0	1.31	1.23	1.28
880.0	11.48	11.38	11.27	11.32	10.86	11.15	0.62	21.01	30.53	33.13	23.47	2.61	880.0	1.32	1.24	1.28
900.0	11.55	11.46	11.35	11.41	10.93	11.21	0.63	20.23	30.28	33.48	22.29	2.79	900.0	1.32	1.24	1.27
920.0	11.64	11.54	11.44	11.50	11.00	11.26	0.64	19.46	30.00	33.95	21.17	3.06	920.0	1.32	1.25	1.27
950.0	11.77	11.66	11.60	11.66	11.14	11.36	0.68	18.34	29.58	34.85	19.60	4.11	950.0	1.31	1.26	1.26

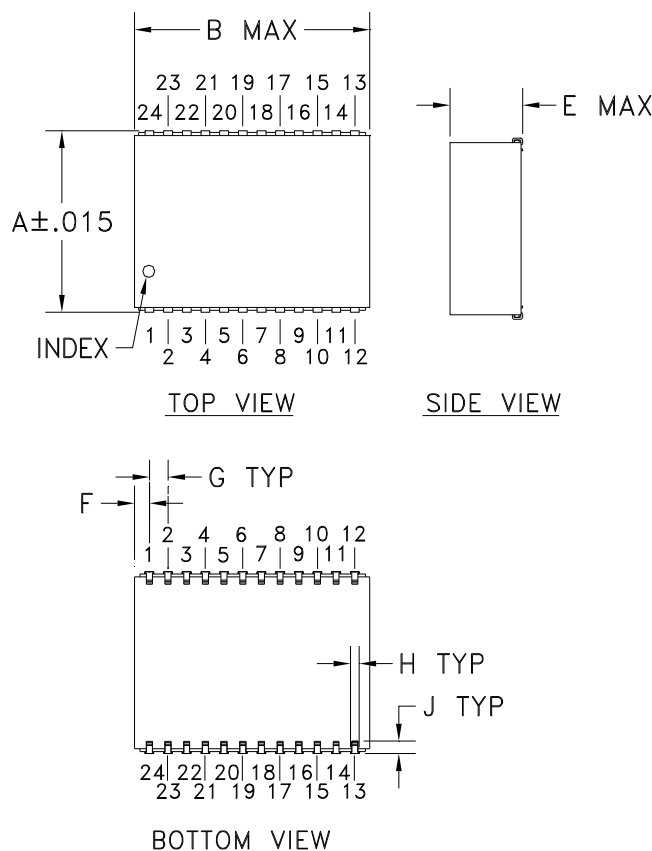
¹Total Loss = Insertion Loss + 9dB Splitter Loss

Typical Performance Curves

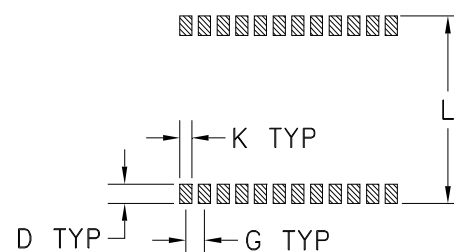


Outline Dimensions

BL372



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

CASE #	A	B	C	D	E	F	G	H	J	K	L	WT. GRAM
BL372	.940 (23.88)	1.426 (36.22)	-- --	.100 (2.54)	.250 (6.35)	.163 (4.14)	.100 (2.54)	.047 (1.19)	.065 (1.65)	.065 (1.65)	.970 (24.64)	6.4

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .01$; 3Pl. $\pm .005$

Notes:

- Case material: Copper-Nickel alloy.
- Base material: Printed wiring laminate.
- Termination finish:
 - For RoHS Case Styles: Tin plate over Nickel plate. All models, (+) suffix.
 - For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.

Mini-Circuits®
ISO 9001 ISO 14001 CERTIFIED

ALL NEW
minicircuits.com

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

RF/IF MICROWAVE COMPONENTS



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