

# Surface Mount Power Splitter/Combiner

## JPS-3-1W+ JPS-3-1W

3 Way-0° 50Ω 50 to 750 MHz



CASE STYLE: BH292

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Maximum Ratings

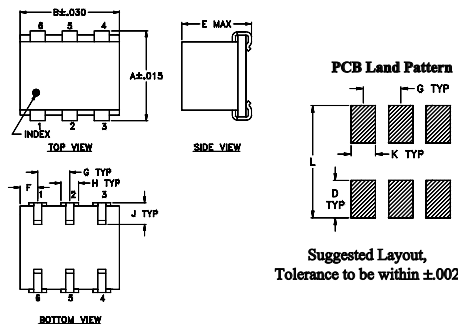
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.5W max.

Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

SUM PORT	1
PORT 1	6
PORT 2	4
PORT 3	3
GROUND	2,5

### Outline Drawing



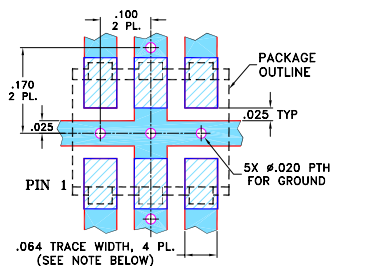
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.280	.310	--	.100	.225	.055	.100
7.11	7.87	--	2.54	5.72	1.40	2.54

H	J	K	L	wt
.047	.065	.065	.300	grams
1.19	1.65	1.65	7.62	0.45

### Demo Board MCL P/N: TB-211 Suggested PCB Layout (PL-097)



- NOTES:
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
    - DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
    - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- wideband, 50 to 750 MHz
- low insertion loss, 0.4 dB typ.
- solder plated J-leads

### Applications

- VHF/UHF
- defense & federal communications

### Electrical Specifications

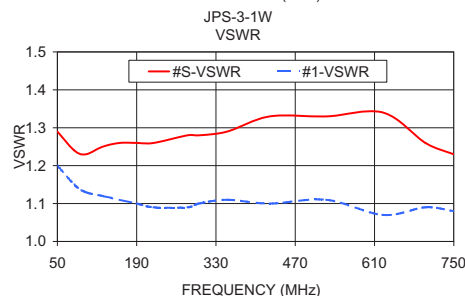
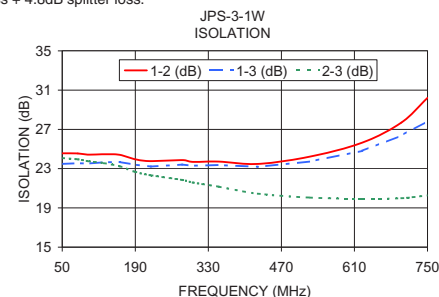
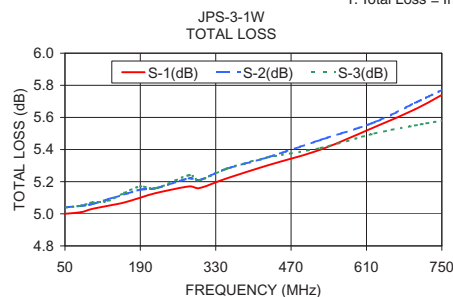
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 4.8 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)					
	L	U	L	U	L	U	L	U				
$f_L$ - $f_U$	Typ.	Min.	Typ.	Min.	Typ.	Max.	Max.	Typ.				
50-750	23	17	25	17	0.4	1.0	0.9	1.4	6	7	0.3	0.6

L = low range [ $f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
50.00	5.00	5.04	5.04	0.04	24.56	23.48	24.08	0.21	1.29	1.20	1.18	1.20
80.00	5.01	5.05	5.05	0.04	24.55	23.55	23.95	0.31	1.24	1.15	1.14	1.15
100.00	5.03	5.06	5.07	0.04	24.43	23.52	23.76	0.51	1.23	1.13	1.13	1.12
130.00	5.05	5.09	5.08	0.04	24.47	23.65	23.56	0.60	1.25	1.12	1.13	1.11
160.00	5.07	5.12	5.13	0.06	24.41	23.68	23.24	0.67	1.26	1.11	1.12	1.10
190.00	5.10	5.15	5.17	0.07	23.95	23.40	22.67	0.78	1.26	1.10	1.11	1.11
220.00	5.13	5.16	5.16	0.04	23.77	23.21	22.32	0.91	1.26	1.09	1.09	1.11
280.00	5.17	5.22	5.24	0.07	23.87	23.42	21.85	1.07	1.28	1.09	1.10	1.10
300.00	5.16	5.21	5.21	0.05	23.69	23.30	21.59	0.99	1.28	1.10	1.11	1.10
350.00	5.22	5.28	5.28	0.06	23.72	23.37	21.16	1.13	1.29	1.11	1.12	1.12
425.00	5.30	5.35	5.35	0.05	23.48	23.19	20.45	1.21	1.33	1.10	1.12	1.12
525.00	5.40	5.46	5.41	0.06	24.23	23.73	20.05	1.32	1.33	1.11	1.10	1.08
625.00	5.54	5.57	5.50	0.08	25.65	24.82	19.93	1.29	1.34	1.07	1.06	1.05
700.00	5.65	5.69	5.55	0.14	27.70	26.38	19.99	1.28	1.26	1.09	1.07	1.06
750.00	5.74	5.77	5.58	0.19	30.21	27.84	20.28	1.05	1.23	1.08	1.04	1.07

1. Total Loss = Insertion Loss + 4.8dB splitter loss.



### electrical schematic

