

Surface Mount

# Power Splitter/Combiner

## JPS-2-1-75+ JPS-2-1-75

2 Way-0° 75Ω 5 to 500 MHz



Generic photo used for illustration purposes only

CASE STYLE: BH292

**+RoHS Compliant**

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

### Maximum Ratings

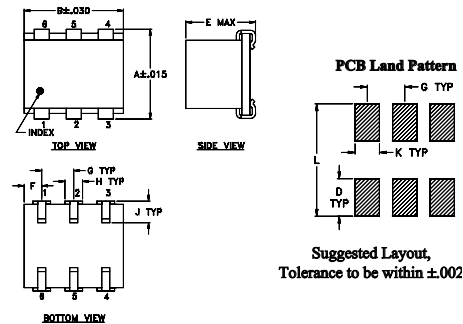
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

### Pin Connections

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

### Outline Drawing



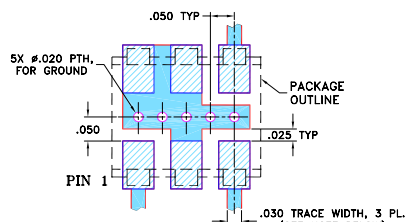
### Outline Dimensions (inch/mm)

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-169 Suggested PCB Layout (PL-054)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. 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

- A. 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.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. 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

- low insertion, 0.15 dB typ.
- excellent insertion loss flatness, 0.2 dB peak to peak
- excellent amplitude unbalance, 0.05 dB typ.
- very good phase unbalance, 0.1 deg. typ.
- excellent VSWR 1.1:1 typ. all ports.
- J-leads for excellent solderability and strain relief

### Applications

- cable tv
- UHF transmitters/receivers

### Electrical Specifications

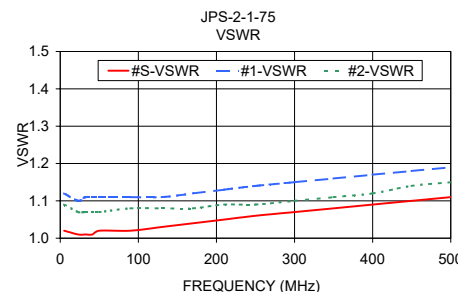
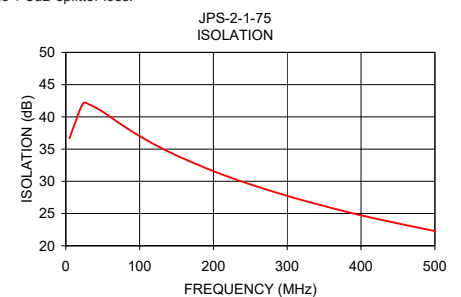
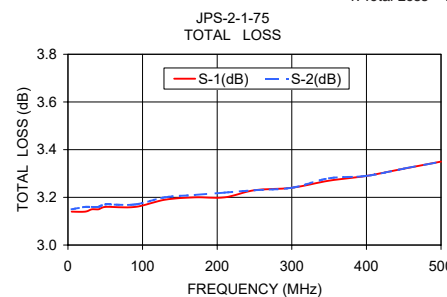
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
f <sub>c</sub> -f <sub>u</sub>																		
5-500	25	18	35	20	20	18	0.15	0.5	0.15	0.7	0.25	0.7	1.0	2.0	3.0	0.1	0.2	0.4

L = 5-50 MHz M = 50-250 MHz U = 250-500 MHz

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.14	3.15	0.01	36.69	0.04	1.02	1.12	1.09
23.00	3.14	3.16	0.02	42.03	0.06	1.01	1.10	1.07
32.00	3.15	3.16	0.01	41.88	0.08	1.01	1.11	1.07
41.00	3.15	3.16	0.01	41.39	0.01	1.01	1.11	1.07
50.00	3.16	3.17	0.01	40.78	0.01	1.02	1.11	1.07
90.00	3.16	3.17	0.01	37.71	0.06	1.02	1.11	1.08
130.00	3.19	3.20	0.01	35.12	0.08	1.03	1.11	1.08
170.00	3.20	3.21	0.01	32.99	0.18	1.04	1.12	1.08
210.00	3.20	3.22	0.02	31.13	0.07	1.05	1.13	1.09
250.00	3.23	3.23	0.01	29.52	0.21	1.06	1.14	1.09
300.00	3.24	3.24	0.01	27.74	0.20	1.07	1.15	1.10
350.00	3.27	3.28	0.01	26.17	0.20	1.08	1.16	1.11
400.00	3.29	3.29	0.00	24.72	0.19	1.09	1.17	1.12
450.00	3.32	3.32	0.00	23.46	0.12	1.10	1.18	1.14
500.00	3.35	3.35	0.00	22.28	0.17	1.11	1.19	1.15

1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic

