

# Surface Mount Power Splitter/Combiner

3 Way-0° 50Ω 5 to 300 MHz

**JPS-3-1+**  
**JPS-3-1**



CASE STYLE: BH292

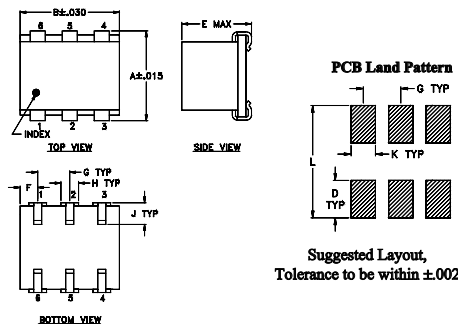
## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.375W 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

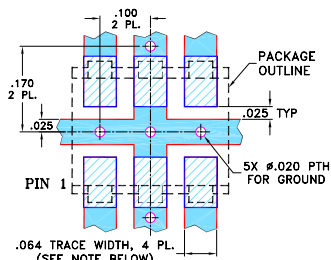
## Outline Drawing



## 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.
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## Features

- wideband, 5 to 300 MHz
- high isolation, 33 dB typ.
- low insertion loss, 0.3 dB typ.

## Applications

- VHF
- defense & federal communications
- amateur & FM radio

## Electrical Specifications

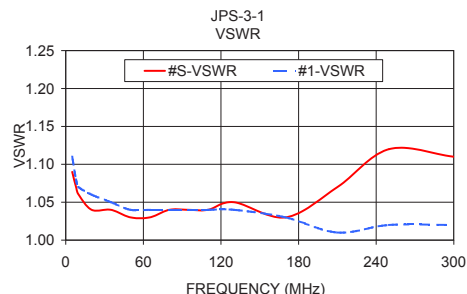
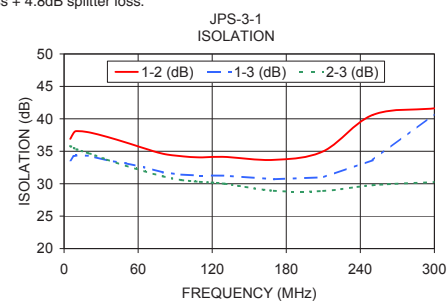
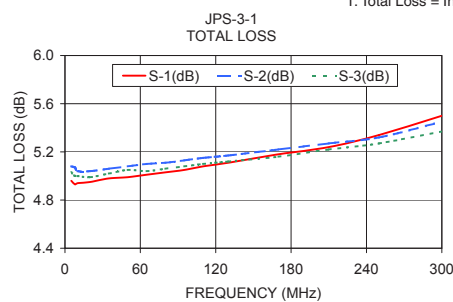
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 4.8 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
f <sub>L</sub> -f <sub>U</sub>																		
5-300	34	25	33	23	32	20	0.3	0.6	0.3	0.7	0.5	1.4	2.0	4.0	6.0	0.4	0.4	0.6

L = low range [f<sub>L</sub> to f<sub>L</sub>/2] M = mid range [10 f<sub>L</sub> to f<sub>L</sub>/2] U = upper range [f<sub>L</sub>/2 to f<sub>U</sub>]

## 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					
5.00	4.96	5.08	5.03	0.12	36.91	33.62	35.80	0.62	1.09	1.11	1.13	1.16
8.00	4.93	5.07	5.00	0.14	37.89	34.24	35.50	0.52	1.07	1.08	1.10	1.14
10.00	4.94	5.04	5.00	0.11	38.11	34.35	35.29	0.36	1.06	1.07	1.10	1.13
20.00	4.95	5.04	4.99	0.09	37.92	34.31	34.69	0.22	1.04	1.06	1.08	1.12
35.00	4.98	5.06	5.02	0.08	37.22	33.58	33.72	0.13	1.04	1.05	1.07	1.11
50.00	4.99	5.08	5.05	0.09	36.36	33.15	32.78	0.13	1.03	1.04	1.06	1.11
65.00	5.01	5.10	5.04	0.08	35.45	32.52	31.94	0.25	1.03	1.04	1.05	1.11
80.00	5.03	5.11	5.06	0.08	34.62	31.74	31.15	0.26	1.04	1.04	1.05	1.10
95.00	5.05	5.13	5.08	0.08	34.24	31.40	30.56	0.14	1.04	1.04	1.05	1.09
110.00	5.08	5.15	5.10	0.07	34.06	31.26	30.29	0.23	1.04	1.04	1.05	1.09
130.00	5.11	5.17	5.12	0.06	34.13	31.25	29.99	0.37	1.05	1.04	1.05	1.08
170.00	5.18	5.22	5.16	0.05	33.68	30.69	28.91	0.41	1.03	1.03	1.07	1.07
210.00	5.24	5.27	5.22	0.05	35.00	30.99	28.88	0.54	1.07	1.01	1.07	1.07
250.00	5.34	5.32	5.27	0.07	40.60	33.64	29.78	0.57	1.12	1.02	1.08	1.08
300.00	5.50	5.45	5.37	0.12	41.62	40.75	30.25	0.91	1.11	1.02	1.12	1.11

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



## electrical schematic

