

Surface Mount

# Power Splitter/Combiner

JCPS-8-10-75

8 Way-0° 75Ω 5 to 1000 MHz



Generic photo used for illustration purposes only  
CASE STYLE: BG291

## Maximum Ratings

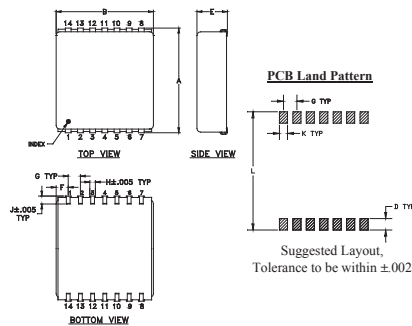
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.62W max.

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

## Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
PORT 3	5
PORT 4	6
PORT 5	9
PORT 6	10
PORT 7	11
PORT 8	12
GROUND	2,7,8,13,14

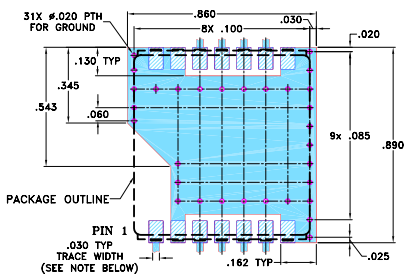
## Outline Drawing



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.870	.800	--	.100	.250	.100	.100
22.10	20.32	--	2.54	6.35	2.54	2.54
H	J	K	L			wt
.047	.065	.065	.890			grams
1.19	1.65	1.65	22.61			4.0

## Demo Board MCL P/N: TB-136 Suggested PCB Layout (PL-074)



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

- 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/WCLStore/terms.jsp](http://www.minicircuits.com/WCLStore/terms.jsp)

## Features

- wideband frequency, 5 to 1000 MHz
- good isolation, 25 dB typ.
- aqueous washable
- shielded metal case
- J-leads for good solderability & strain relief

## Applications

- cellular
- VHF/UHF
- CATV
- communication systems

## Electrical Specifications

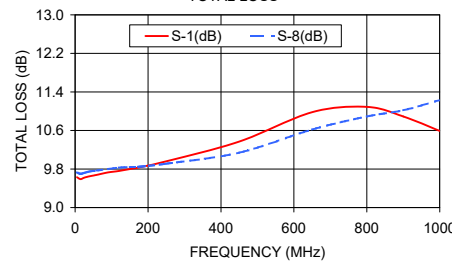
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 9.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
$f_L$ - $f_U$	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
5-1000	34	20	25	15	20	13	0.8	1.5	1.0	2.5	1.8	3.0	3	8	10	0.4	0.5	1.3

L = low range [ $f_L$  to 10  $f_L$ ] M = mid range [10  $f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

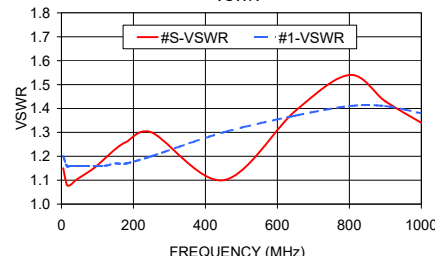
## Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)						Amplitude Unbalance (dB)	Isolation (dB)				VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7			
5.00	9.63	9.66	9.81	9.63	9.81	9.73	0.18	36.86	36.93	38.23	37.80	1.15	1.20	1.20
15.00	9.59	9.62	9.77	9.60	9.76	9.70	0.18	36.96	36.74	37.32	37.54	1.08	1.16	1.17
25.00	9.62	9.64	9.80	9.62	9.77	9.72	0.18	36.13	36.68	36.29	37.18	1.08	1.16	1.17
40.00	9.65	9.68	9.83	9.65	9.80	9.75	0.18	34.98	36.27	34.95	36.47	1.10	1.16	1.17
60.00	9.68	9.71	9.86	9.68	9.82	9.77	0.18	33.54	35.41	33.42	35.16	1.12	1.16	1.16
90.00	9.73	9.74	9.89	9.71	9.83	9.80	0.18	31.75	33.80	31.44	33.40	1.15	1.16	1.16
120.00	9.76	9.77	9.92	9.74	9.84	9.83	0.18	30.21	32.26	29.89	31.80	1.19	1.16	1.15
150.00	9.80	9.80	9.94	9.76	9.82	9.84	0.18	28.91	30.87	28.51	30.40	1.23	1.17	1.15
180.00	9.84	9.82	9.96	9.77	9.82	9.85	0.18	27.75	29.70	27.33	29.19	1.26	1.17	1.14
250.00	9.96	9.91	10.02	9.85	9.80	9.91	0.22	25.45	27.28	25.03	26.79	1.30	1.20	1.15
450.00	10.37	10.22	10.27	10.09	9.79	10.14	0.59	21.16	22.69	20.90	22.48	1.10	1.30	1.20
650.00	10.98	10.76	10.84	10.67	10.23	10.62	0.74	19.97	21.47	20.36	21.55	1.39	1.37	1.30
800.00	11.09	10.96	11.12	11.00	10.65	10.89	0.47	19.16	22.74	20.83	23.52	1.54	1.41	1.36
900.00	10.89	10.91	11.11	11.00	10.86	11.02	0.29	17.26	23.27	19.18	25.71	1.43	1.41	1.38
1000.00	10.59	10.78	11.02	10.92	11.08	11.23	0.64	15.42	22.72	16.92	27.17	1.34	1.38	1.38

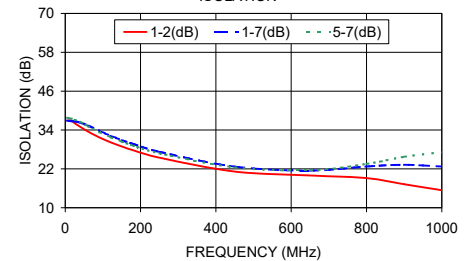
JCPS-8-10-75  
TOTAL LOSS



JCPS-8-10-75  
VSWR



JCPS-8-10-75  
ISOLATION



## electrical schematic

