

# Surface Mount Power Splitter/Combiner

## JCPS-8-850+ JCPS-8-850

8 Way-0° 50Ω 10 to 850 MHz



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	0.875W max.

### 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

### Features

- wideband, 10 to 850 MHz
- aqueous washable
- shielded metal case
- J-leads for good solderability & strain relief

### Applications

- VHF/UHF
- cellular
- instrumentation
- communication systems

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

### 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
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
10-850	34	20	25	17	20	15	0.8	1.5	1.0	2.5	1.8	3.0	5	10	20	0.6	0.7	1.0

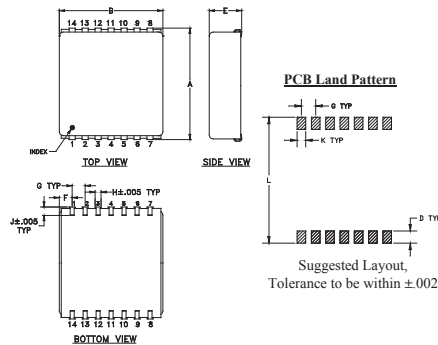
L = low range [ $f_L$  to 10  $f_L$ ] M = mid range [10  $f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

### 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			
	10.00	9.97	9.88	9.85	9.85	9.83		9.84	0.14	37.47	45.11			
30.00	9.94	9.85	9.82	9.83	9.81	9.83	0.13	35.88	47.49	35.30	33.43	1.07	1.14	1.18
50.00	9.99	9.90	9.85	9.87	9.87	9.88	0.14	33.43	47.78	33.03	32.56	1.07	1.14	1.18
80.00	10.06	9.96	9.92	9.93	9.94	9.94	0.14	30.18	45.86	29.90	30.72	1.08	1.14	1.17
150.00	10.20	10.08	10.05	10.05	10.08	10.08	0.15	25.88	42.07	25.65	27.12	1.14	1.12	1.15
300.00	10.51	10.35	10.32	10.32	10.39	10.36	0.19	20.60	35.90	20.40	21.65	1.24	1.05	1.08
410.00	10.71	10.51	10.48	10.47	10.61	10.54	0.24	19.46	33.82	19.25	19.70	1.29	1.01	1.02
430.00	10.73	10.54	10.50	10.48	10.64	10.57	0.25	19.55	33.59	19.32	19.00	1.29	1.02	1.02
500.00	10.81	10.59	10.56	10.55	10.75	10.63	0.26	20.04	33.93	19.84	18.67	1.29	1.05	1.05
575.00	10.87	10.66	10.61	10.63	10.88	10.70	0.30	21.63	35.15	21.98	18.29	1.26	1.09	1.10
675.00	10.92	10.76	10.66	10.70	11.05	10.77	0.43	23.04	36.83	26.33	18.19	1.19	1.13	1.16
775.00	11.03	10.95	10.77	10.86	11.32	10.89	0.62	21.47	38.45	25.87	18.10	1.13	1.16	1.21
820.00	11.10	11.05	10.81	10.91	11.44	10.93	0.71	19.95	39.36	22.83	18.03	1.11	1.18	1.24
840.00	11.20	11.16	10.90	11.02	11.59	11.02	0.78	19.15	39.94	21.31	18.03	1.12	1.19	1.25
850.00	11.25	11.23	10.94	11.08	11.67	11.05	0.82	18.91	40.13	20.89	18.03	1.12	1.19	1.26

1. Total Loss = Insertion Loss + 9dB splitter loss.

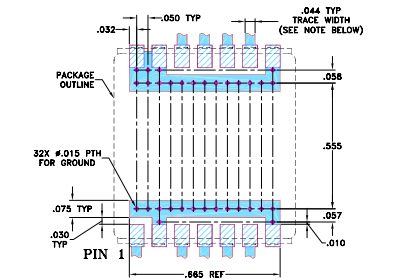
### Outline Drawing



### 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		

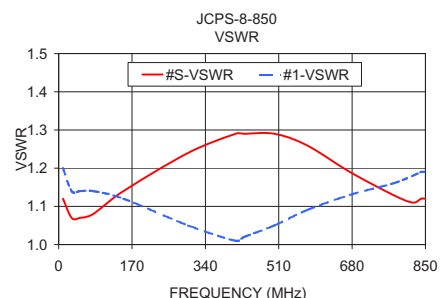
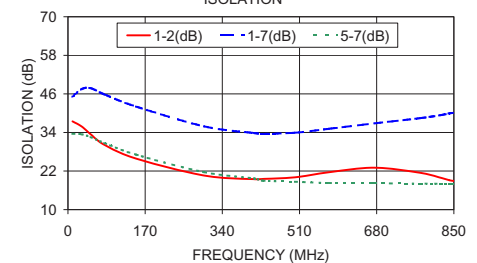
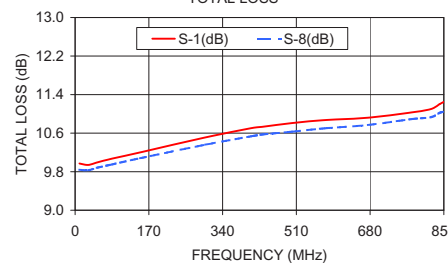
### Demo Board MCL P/N: TB-134 Suggested PCB Layout (PL-037)



- NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015"; 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.  
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### electrical schematic

