

# Surface Mount Power Splitter/Combiner

## JCPS-8-10+ JCPS-8-10

8 Way-0° 50Ω

5 to 1000 MHz



CASE STYLE: BG291  
PRICE: \$39.95 ea. QTY (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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)	0.5W max.
Internal Dissipation	0.875W max.

### Pin Connections

SUMPORT	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 frequency, 5-1000 MHz
- excellent input matching, VSWR 1.35 typ.
- excellent output matching, VSWR 1.25 typ.
- shielded metal case
- J-leads for good solderability & strain relief
- protected under US patent 6,963,255

### Applications

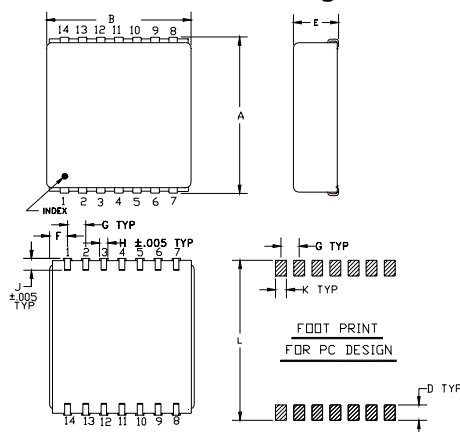
- CATV
- VHF/UHF

### Splitter Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 9 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
f <sub>L</sub> -f <sub>U</sub>	Typ.	Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.						
5-1000	34	20	22	16	20	15	0.5	1.5	1.2	2.2	1.8	3.0	5	10	15	1.0	0.7	1.3

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

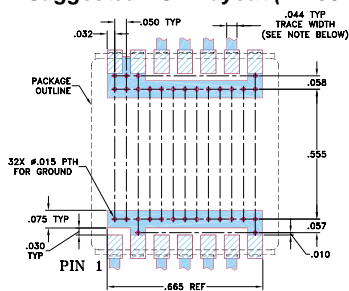
### Outline Drawing



### 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		

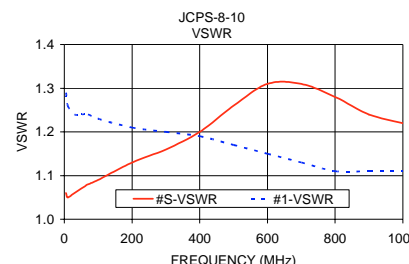
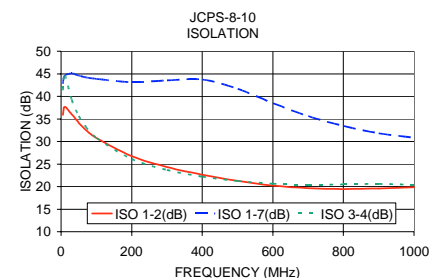
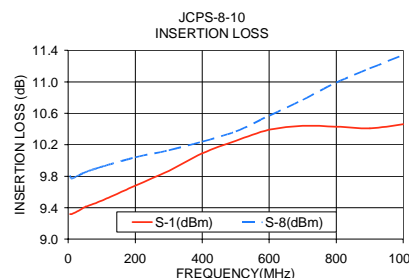
### Demo Board MCL P/N: TB-134 Suggested PCB Layout (PL-037)



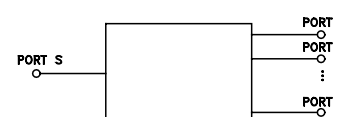
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Typical Performance Data

Frequency (MHz)	Insertion Loss (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	6-7			
5.00	9.32	9.52	9.50	9.68	9.66	9.81	0.48	35.93	42.85	41.38	44.66	1.06	1.29	1.37
10.00	9.32	9.50	9.47	9.65	9.63	9.77	0.45	37.70	44.59	44.75	44.72	1.05	1.26	1.33
30.00	9.36	9.55	9.52	9.69	9.68	9.81	0.45	36.05	45.09	39.23	42.45	1.06	1.24	1.32
50.00	9.41	9.58	9.55	9.72	9.72	9.85	0.45	34.15	44.62	35.64	39.66	1.07	1.24	1.31
70.00	9.44	9.61	9.58	9.74	9.74	9.88	0.44	32.59	44.23	33.28	37.44	1.08	1.24	1.31
100.00	9.49	9.66	9.62	9.78	9.77	9.92	0.42	30.78	43.90	30.81	35.03	1.09	1.23	1.30
200.00	9.68	9.83	9.77	9.92	9.89	10.04	0.36	26.77	43.17	26.11	30.42	1.13	1.21	1.26
300.00	9.87	10.01	9.92	10.06	9.99	10.13	0.36	24.36	43.56	23.70	28.36	1.16	1.20	1.23
400.00	10.09	10.19	10.08	10.19	10.09	10.24	0.39	22.64	43.75	22.22	27.44	1.20	1.19	1.19
500.00	10.25	10.35	10.22	10.32	10.21	10.37	0.40	21.29	41.70	21.25	26.98	1.26	1.17	1.15
600.00	10.39	10.50	10.39	10.50	10.39	10.57	0.41	20.26	38.51	20.65	26.76	1.31	1.15	1.12
700.00	10.44	10.58	10.51	10.65	10.60	10.77	0.39	19.65	35.63	20.44	26.89	1.31	1.13	1.09
800.00	10.43	10.60	10.62	10.79	10.80	10.99	0.56	19.47	33.44	20.50	27.74	1.28	1.11	1.06
900.00	10.41	10.62	10.71	10.93	10.99	11.17	0.76	19.61	31.84	20.60	29.88	1.24	1.11	1.06
1000.00	10.46	10.69	10.88	11.12	11.17	11.34	0.88	19.89	30.86	20.42	34.76	1.22	1.11	1.10



### electrical schematic



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