

# Surface Mount Power Splitter/Combiner

## SCP-4-4+

4 Way-0° 50Ω

800 to 1000 MHz

### Maximum Ratings

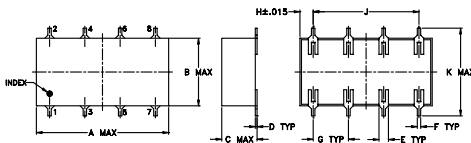
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.25W max.

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

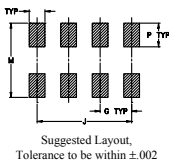
### Pin Connections

SUM PORT	3
PORT 1	2
PORT 2	4
PORT 3	6
PORT 4	8
GROUND	1,5,7

### Outline Drawing



### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.101	.050	.020	.200
19.05	9.65	5.08	0.25	1.27	0.51	5.08
H	J	K	M	N	P	wt
.075	.600	.450	.470	.100	.150	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.6

### Features

- wideband, 800 to 1000 MHz
- good isolation, 24dB typ.

### Applications

- cellular
- receivers/transmitters
- communication system



Generic photo used for illustration purposes only

CASE STYLE: YY101

**+RoHS Compliant**

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

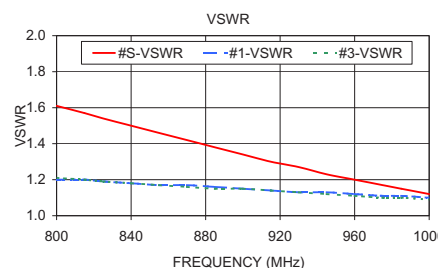
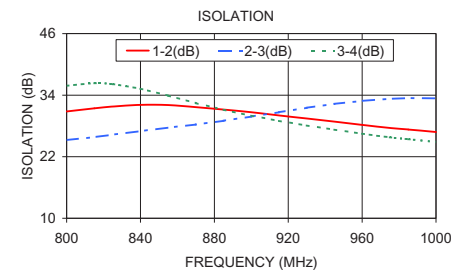
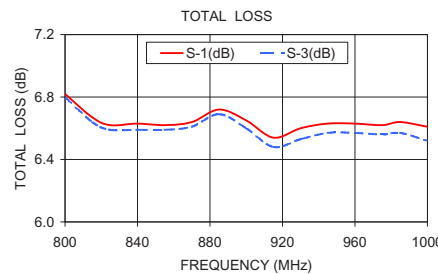
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.
800-1000	24 17	0.7 1.5	12	1.0

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR				
	S-1	S-2	S-3	S-4		1-2	2-3	3-4		S	1	2	3	4
800.00	6.82	6.95	6.80	6.67	0.28	30.82	25.25	35.84	3.22	1.61	1.20	1.24	1.21	1.17
815.00	6.67	6.81	6.64	6.51	0.30	31.43	25.83	36.33	3.13	1.57	1.20	1.23	1.20	1.17
825.00	6.62	6.76	6.59	6.45	0.30	31.78	26.30	36.14	3.19	1.54	1.19	1.23	1.19	1.16
840.00	6.63	6.78	6.59	6.45	0.33	32.11	26.99	35.25	3.18	1.50	1.18	1.22	1.18	1.15
855.00	6.62	6.79	6.59	6.43	0.36	32.07	27.68	33.90	3.21	1.46	1.17	1.21	1.17	1.14
870.00	6.64	6.82	6.61	6.45	0.38	31.66	28.28	32.45	3.28	1.42	1.17	1.20	1.16	1.14
885.00	6.72	6.90	6.69	6.53	0.37	31.19	29.01	31.14	3.38	1.38	1.16	1.19	1.15	1.13
900.00	6.65	6.81	6.60	6.44	0.37	30.67	29.83	30.00	3.30	1.34	1.15	1.18	1.15	1.12
915.00	6.54	6.70	6.48	6.33	0.37	30.05	30.67	28.99	3.35	1.30	1.14	1.17	1.14	1.11
930.00	6.60	6.78	6.53	6.38	0.41	29.46	31.54	28.08	3.34	1.27	1.13	1.17	1.13	1.10
945.00	6.63	6.84	6.57	6.40	0.44	28.84	32.31	27.28	3.44	1.23	1.13	1.16	1.12	1.10
960.00	6.63	6.84	6.57	6.38	0.46	28.21	32.89	26.49	3.49	1.20	1.12	1.15	1.11	1.09
975.00	6.62	6.83	6.56	6.38	0.46	27.61	33.29	25.79	3.42	1.17	1.11	1.14	1.10	1.08
985.00	6.64	6.84	6.57	6.39	0.46	27.30	33.43	25.42	3.48	1.15	1.11	1.14	1.10	1.08
1000.00	6.61	6.81	6.52	6.35	0.45	26.82	33.39	24.88	3.49	1.12	1.10	1.13	1.09	1.07

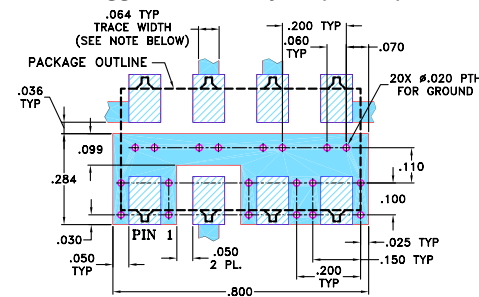
1. Total Loss = Insertion Loss + 6dB splitter loss.



### Electrical Schematic



### Demo Board MCL P/N: TB-36 Suggested PCB Layout (PL-073)



- 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.  
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