

# Surface Mount Power Splitter/Combiner

## SCP-4-4+ SCP-4-4

4 Way-0° 50Ω

800 to 1000 MHz



### Maximum Ratings

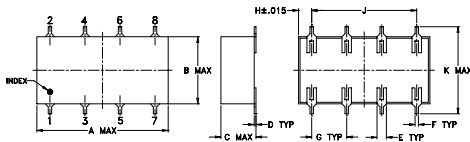
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.25W max.

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

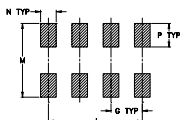
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.10	.050	.020	.200
19.05	9.65	5.08	2.54	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

CASE STYLE: YY101

PRICE: \$21.95 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.

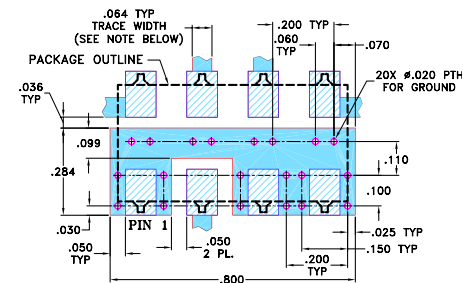
### Electrical Specifications

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

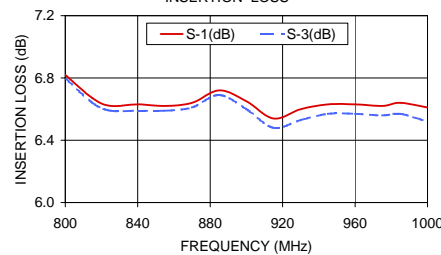
Freq. (MHz)	Insertion Loss (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
800.00	6.82	6.95	6.80	6.67	0.28	30.82	25.25	35.84	3.22	1.61	1.20	1.24	1.21	1.17
815.00	6.67	6.81	6.64	6.51	0.30	31.43	25.83	36.33	3.13	1.57	1.20	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

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

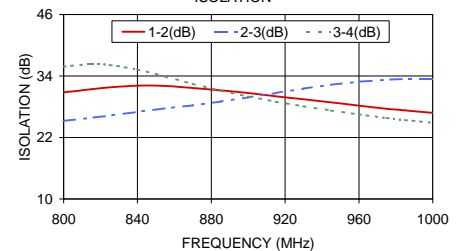


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.  
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

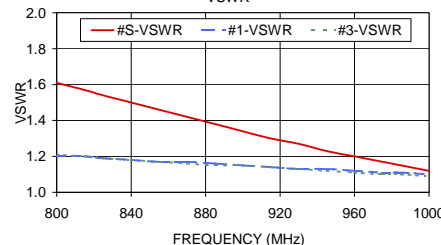
SCP-4-4  
INSERTION LOSS



SCP-4-4  
ISOLATION



SCP-4-4  
VSWR



### Electrical Schematic



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits 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-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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