

# Surface Mount Power Splitter/Combiner

## SCPQ-85C+

2 Way-90° 50Ω 55 to 85 MHz

### Maximum Ratings

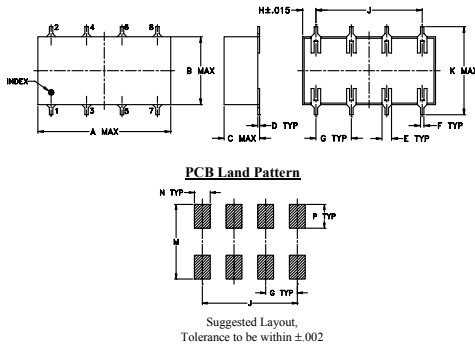
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

### Pin Connections

SUM PORT	1
PORT 1 (+90°)	2
PORT 2 (0°)	6
GROUND	3,4,7,8
50 OHM TERM EXTERNAL	5

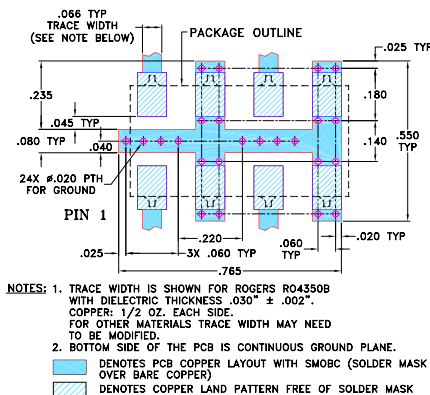
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.010	.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

### Demo Board MCL P/N: TB-51 Suggested PCB Layout (PL-062)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .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.  
C. 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/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- low insertion loss, 0.3 dB typ.
- high isolation, 30 dB typ.

### Applications

- VHF
- modulators
- balanced amplifiers
- signal processing



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

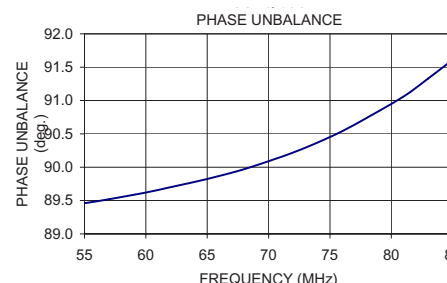
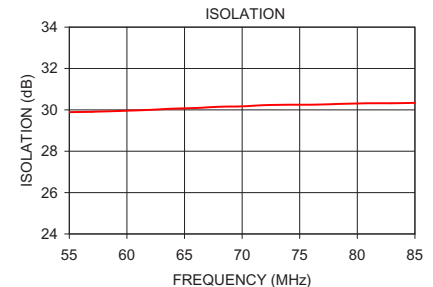
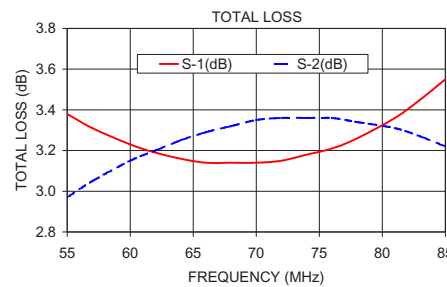
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.
55-85	30 20	0.3 0.6	3	0.6

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
55.00	3.38	2.97	0.41	29.89	89.46	1.04	1.03	1.04
57.00	3.31	3.05	0.26	29.91	89.52	1.04	1.03	1.04
60.00	3.23	3.15	0.08	29.96	89.62	1.04	1.03	1.05
62.00	3.19	3.20	0.01	30.00	89.70	1.04	1.04	1.05
64.00	3.16	3.25	0.09	30.06	89.78	1.05	1.04	1.05
66.00	3.14	3.29	0.15	30.09	89.87	1.05	1.04	1.06
68.00	3.14	3.32	0.18	30.15	89.97	1.05	1.04	1.06
70.00	3.14	3.35	0.21	30.17	90.09	1.06	1.05	1.06
72.00	3.15	3.36	0.21	30.23	90.22	1.06	1.05	1.07
74.00	3.18	3.36	0.18	30.25	90.37	1.07	1.05	1.07
76.00	3.21	3.36	0.14	30.25	90.54	1.07	1.06	1.07
78.00	3.26	3.34	0.08	30.28	90.74	1.08	1.06	1.08
81.00	3.36	3.31	0.05	30.32	91.06	1.09	1.07	1.08
83.00	3.45	3.27	0.18	30.32	91.33	1.10	1.07	1.09
85.00	3.55	3.22	0.32	30.34	91.61	1.10	1.08	1.09

1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic

