

# Power Splitter/Combiner

## SCPQ-150+

2 Way-90° 50Ω 95 to 150 MHz

### Maximum Ratings

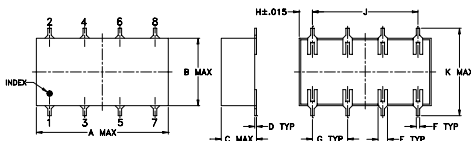
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

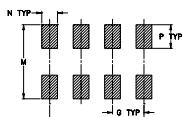
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

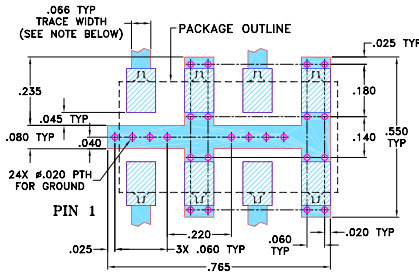


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.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 RO4350B 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-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)

### Features

- low insertion loss, 0.3 dB typ.
- good isolation, 22 dB typ.

### Applications

- VHF
- modulators
- signal processing
- image rejection mixer



CASE STYLE: YY101

### +RoHS Compliant

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

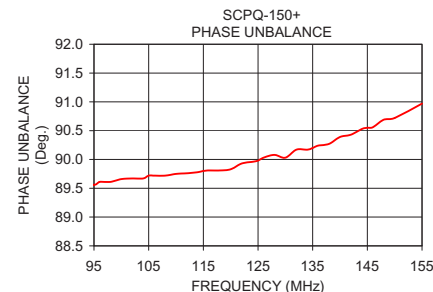
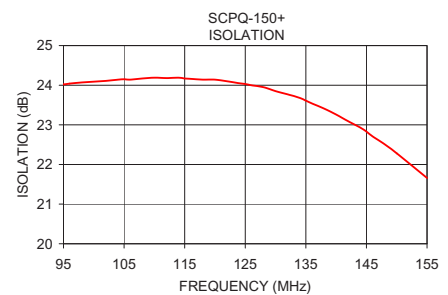
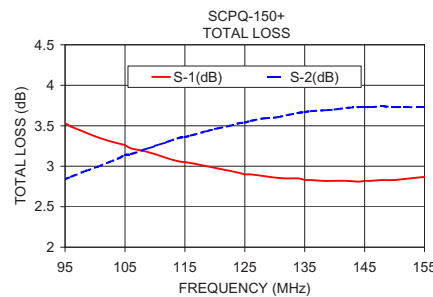
### Electrical Specifications

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.
95-150	22 18	0.3 0.7	3	1.2

### 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						
95	3.53	2.84	0.69	24.02	89.56	1.13	1.12	1.17
100	3.37	2.98	0.39	24.09	89.66	1.13	1.12	1.17
105	3.26	3.14	0.12	24.15	89.72	1.14	1.12	1.18
110	3.15	3.25	0.11	24.19	89.75	1.14	1.12	1.18
115	3.05	3.36	0.32	24.17	89.80	1.14	1.12	1.19
120	2.98	3.46	0.48	24.14	89.83	1.14	1.12	1.19
125	2.90	3.54	0.64	24.03	89.98	1.14	1.13	1.20
130	2.86	3.60	0.74	23.85	90.03	1.14	1.13	1.21
135	2.83	3.67	0.83	23.61	90.20	1.15	1.13	1.21
138	2.82	3.69	0.87	23.41	90.27	1.15	1.13	1.22
140	2.82	3.70	0.88	23.26	90.39	1.15	1.13	1.22
144	2.81	3.73	0.92	22.93	90.53	1.15	1.14	1.23
146	2.82	3.73	0.91	22.71	90.56	1.16	1.14	1.24
148	2.83	3.74	0.91	22.51	90.69	1.16	1.14	1.24
150	2.83	3.73	0.90	22.28	90.72	1.16	1.14	1.25

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



### electrical schematic

