

Power Splitter/Combiner

SCPQ-180+

2 Way-90° 50Ω 120 to 180 MHz

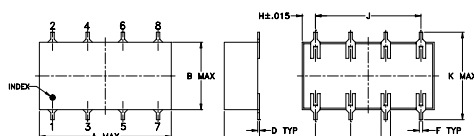
Maximum Ratings

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	

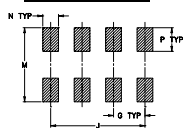
Pin Connections

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



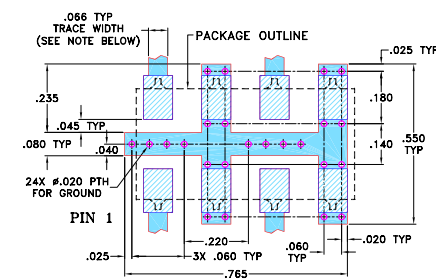
Suggested Layout,
Tolerance to be within ± 002

Outline Dimensions (inch)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

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" $\pm$.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

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-Circuit's website at www.minicircuits.com/MC/Store/terms_iso

Features

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

Applications

- VHF-TV
- IF signal processing
- modulators

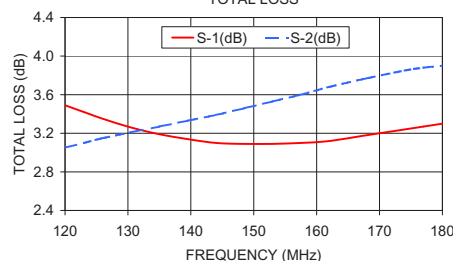
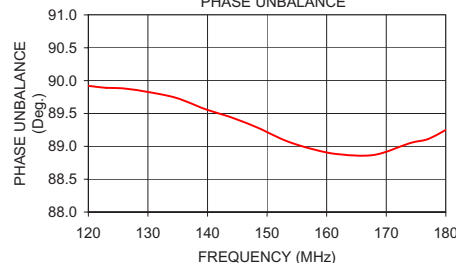
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_c - f_u$	Typ. Min.	Typ. Max.	Max.	Max.
120-180	20 16	0.3 0.7	3	1.2

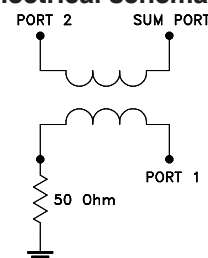
Typical Performance Data

Frequency (MHz)	Total Loss¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
120.00	3.49	3.05	0.44	25.26	89.92	1.17	1.27	1.10
123.00	3.42	3.10	0.32	25.20	89.89	1.17	1.28	1.09
126.00	3.35	3.15	0.20	25.14	89.88	1.17	1.28	1.09
130.50	3.26	3.21	0.05	25.05	89.82	1.17	1.29	1.08
135.00	3.19	3.27	0.08	24.94	89.73	1.18	1.29	1.08
139.50	3.14	3.33	0.19	24.81	89.57	1.18	1.30	1.07
144.00	3.10	3.39	0.29	24.66	89.44	1.18	1.31	1.08
148.50	3.09	3.46	0.37	24.50	89.28	1.18	1.31	1.08
153.00	3.09	3.53	0.44	24.29	89.09	1.18	1.32	1.09
157.50	3.10	3.60	0.50	24.06	88.96	1.19	1.33	1.11
162.00	3.12	3.68	0.55	23.78	88.88	1.19	1.33	1.12
168.00	3.18	3.77	0.59	23.34	88.87	1.19	1.34	1.14
174.00	3.24	3.85	0.61	22.82	89.05	1.19	1.35	1.16
177.00	3.27	3.88	0.61	22.54	89.11	1.19	1.36	1.17
180.00	3.30	3.90	0.61	22.24	89.25	1.20	1.37	1.18

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

SCPQ-180+
TOTAL LOSSSCPQ-180+
PHASE UNBALANCE

electrical schematic



CASE STYLE: YY161

+RoHS Compliant

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