

Power Splitter/Combiner

SCPQ-60

2 Way-90° 50Ω 30 to 60 MHz



CASE STYLE: YY101

Maximum Ratings

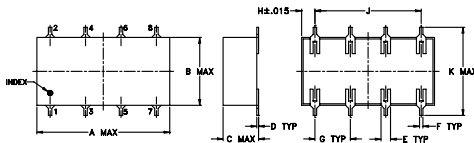
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

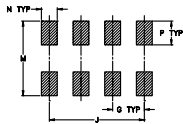
Pin Connections

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

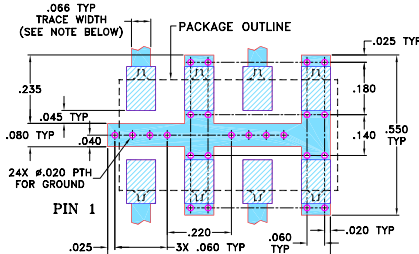


Suggested Layout, Tolerance to be within ±.002

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 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-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

Features

- low insertion loss, 0.15 dB typ.
- high isolation, 30 dB typ.
- excellent phase unbalance 1 deg. typ.
- excellent VSWR 1.10:1 typ.

Applications

- VHF
- signal processing
- image reject mixers

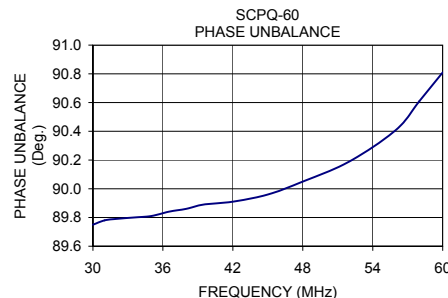
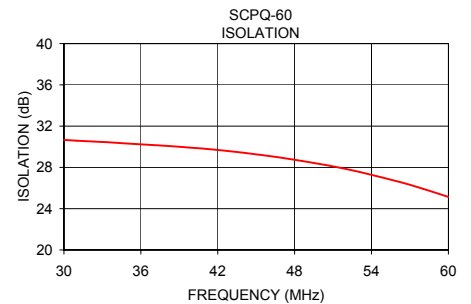
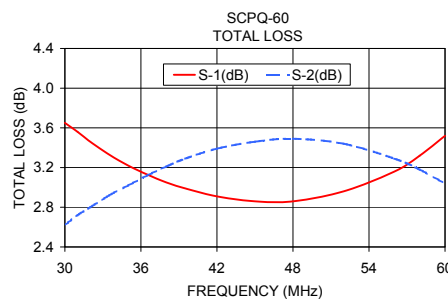
Electrical Specifications

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.
30-60	30 20	0.15 0.7	3	1.5

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
30.00	3.65	2.62	1.03	30.67	89.75	1.04	1.04	1.03
31.00	3.56	2.72	0.84	30.59	89.78	1.04	1.04	1.03
32.00	3.46	2.80	0.66	30.53	89.79	1.04	1.04	1.03
33.50	3.33	2.92	0.42	30.43	89.80	1.04	1.04	1.03
35.00	3.22	3.02	0.20	30.31	89.81	1.03	1.04	1.03
36.50	3.13	3.12	0.01	30.20	89.84	1.03	1.04	1.03
38.00	3.05	3.21	0.16	30.09	89.86	1.03	1.04	1.04
39.50	2.99	3.29	0.30	29.95	89.89	1.03	1.04	1.04
42.00	2.91	3.39	0.48	29.69	89.91	1.03	1.04	1.04
45.00	2.86	3.46	0.60	29.26	89.96	1.02	1.04	1.05
48.00	2.86	3.49	0.63	28.74	90.05	1.02	1.04	1.07
52.00	2.96	3.44	0.48	27.85	90.19	1.02	1.05	1.09
56.00	3.16	3.29	0.13	26.65	90.41	1.03	1.06	1.11
58.00	3.32	3.18	0.14	25.93	90.61	1.04	1.07	1.13
60.00	3.52	3.04	0.48	25.14	90.81	1.05	1.08	1.14

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



electrical schematic

