

Surface Mount Power Splitter/Combiner

2 Way-90° 50Ω 20 to 23 MHz

SCPQ-21.4+
SCPQ-21.4



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

Features

- low insertion loss, 0.15 dB typ.
- high isolation, 32 dB typ.

Applications

- HF
- amateur radio
- instrumentation
- balanced amplifiers

CASE STYLE: YY101
PRICE: \$13.95 ea. QTY (1-9)

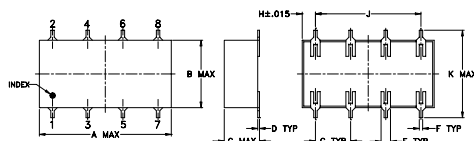
+ RoHS compliant in accordance
with EU Directive (2002/95/EC)

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

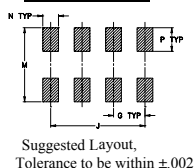
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs less 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ. Min.	Typ. Max.	Max.	Max.
20-23	32 25	0.15 0.5	2.5	1.0

Outline Drawing



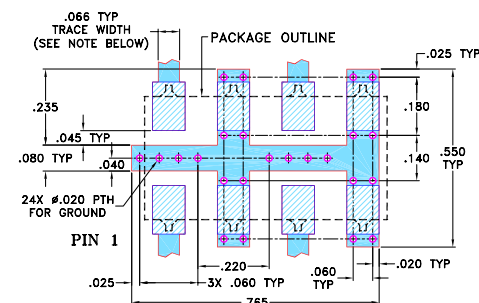
PCB Land Pattern



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

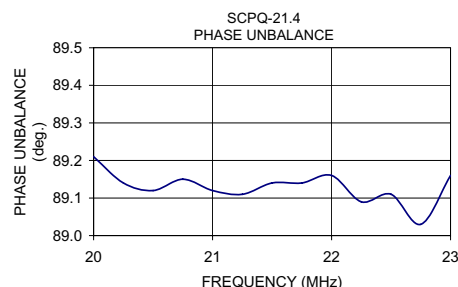
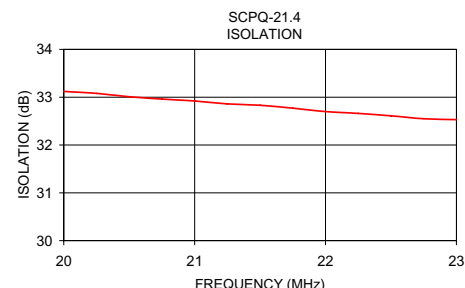
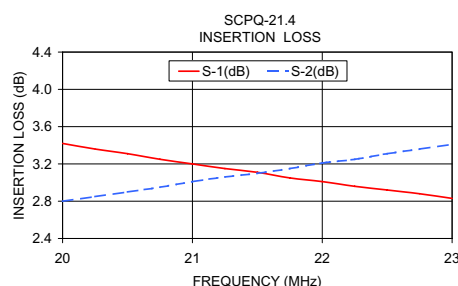
Demo Board MCL P/N: TB-51 Suggested PCB Layout (PL-062)



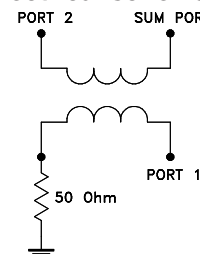
- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2					
20.00	3.42	2.80	0.62	33.12	89.21	1.02	1.02
20.25	3.36	2.85	0.51	33.08	89.14	1.02	1.02
20.50	3.31	2.90	0.41	33.01	89.12	1.02	1.02
20.75	3.25	2.95	0.30	32.96	89.15	1.02	1.02
21.00	3.20	3.01	0.20	32.92	89.12	1.02	1.02
21.25	3.15	3.06	0.09	32.86	89.11	1.02	1.02
21.50	3.11	3.10	0.00	32.83	89.14	1.02	1.02
21.75	3.05	3.15	0.10	32.77	89.14	1.02	1.02
22.00	3.01	3.21	0.20	32.70	89.16	1.02	1.02
22.25	2.96	3.25	0.30	32.66	89.09	1.02	1.02
22.50	2.92	3.31	0.40	32.61	89.11	1.02	1.02
22.75	2.88	3.36	0.48	32.55	89.03	1.02	1.02
23.00	2.83	3.41	0.58	32.53	89.16	1.02	1.02



electrical schematic



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED
The Design Engineers Search Engine
IFIRF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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.

REV. A
M122594
SCPQ-21.4
HY/TD/CP/AM
091229