

# Surface Mount Power Splitter/Combiner

## SCPQ-10.5+ SCPQ-10.5

2 Way-90° 50Ω 9 to 11 MHz



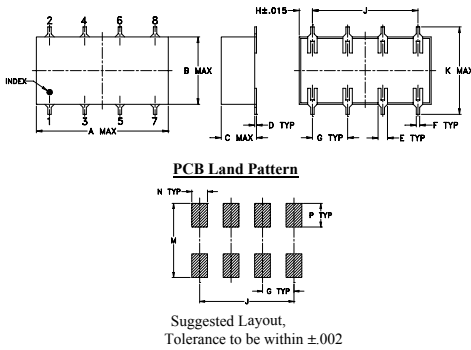
### Maximum Ratings

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

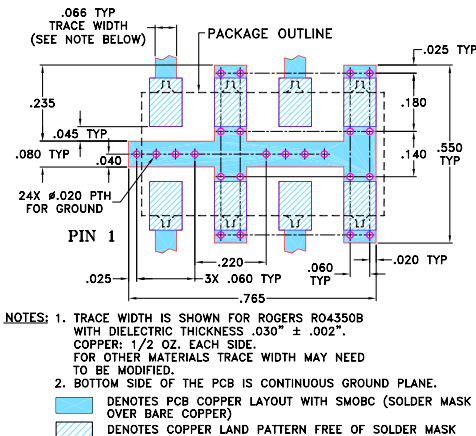
### Outline Drawing



### 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)



### Features

- low insertion loss, 0.15 dB typ.
- high isolation, 31 dB typ.

### Applications

- HF
- signal processing
- balanced amplifier
- modulators

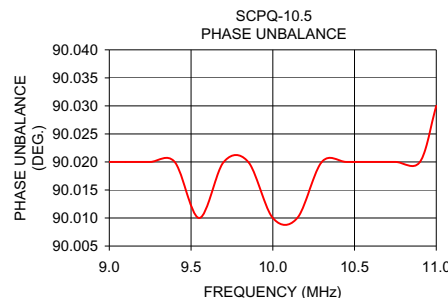
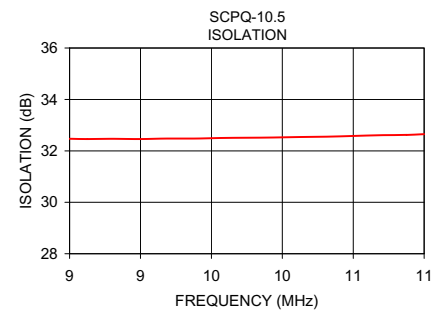
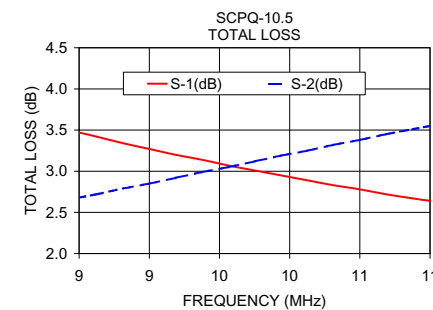
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.
9-11	31 20	0.15 0.7	3	1.2

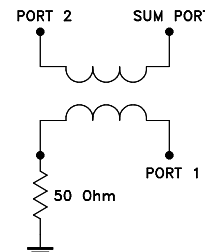
### Typical Performance Data

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						
9.00	3.47	2.68	0.79	32.47	90.02	1.03	1.03	1.03
9.10	3.42	2.72	0.70	32.46	90.02	1.03	1.03	1.03
9.25	3.34	2.79	0.56	32.47	90.02	1.03	1.03	1.03
9.40	3.27	2.85	0.42	32.46	90.02	1.03	1.03	1.03
9.55	3.20	2.92	0.28	32.48	90.01	1.03	1.03	1.03
9.70	3.14	2.99	0.15	32.48	90.02	1.03	1.03	1.03
9.85	3.07	3.05	0.02	32.50	90.02	1.03	1.03	1.04
10.00	3.01	3.12	0.11	32.51	90.01	1.03	1.03	1.04
10.15	2.95	3.19	0.23	32.52	90.01	1.03	1.03	1.04
10.30	2.89	3.25	0.36	32.54	90.02	1.03	1.03	1.04
10.45	2.83	3.32	0.48	32.55	90.02	1.03	1.03	1.04
10.60	2.78	3.38	0.60	32.58	90.02	1.03	1.03	1.04
10.75	2.72	3.45	0.72	32.61	90.02	1.03	1.03	1.04
10.90	2.67	3.51	0.84	32.62	90.02	1.03	1.03	1.04
11.00	2.64	3.55	0.92	32.65	90.03	1.03	1.03	1.04

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



### electrical schematic



For detailed performance specs & shopping online see web site



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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](http://www.minicircuits.com/MCLStore/terms.jsp).

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