

Surface Mount Power Splitter/Combiner

4 Way-0° 50Ω

1 to 400 MHz

SCP-4-1+
SCP-4-1



CASE STYLE: YY101
PRICE: \$24.95 ea. QTY (1-9)

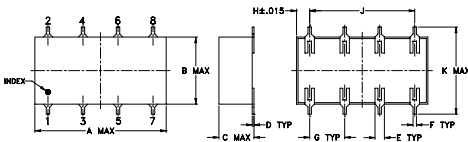
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.25W max.
Permanent damage may occur if any of these limits are exceeded.	

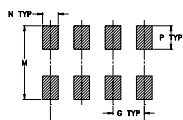
Pin Connections

SUM PORT	3
PORT 1	2
PORT 2	4
PORT 3	6
PORT 4	8
GROUND	1,5,7

Outline Drawing



PCB Land Pattern

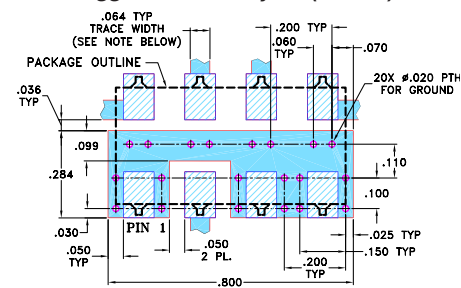


Suggested Layout,
Tolerance to be within ±.002

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-36 Suggested PCB Layout (PL-073)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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

Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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

- wideband, 1 to 400 MHz
- good isolation, 26 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.

Applications

- VHF/UHF
- receivers/transmitters
- communication systems
- instrumentation

Electrical Specifications at 25°C

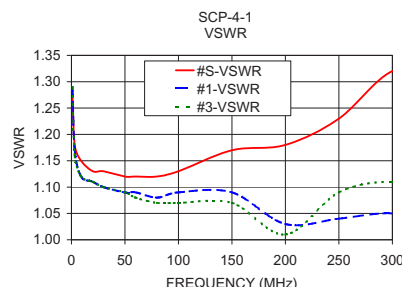
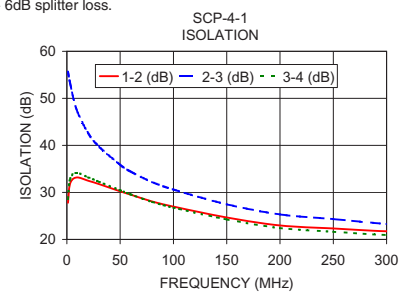
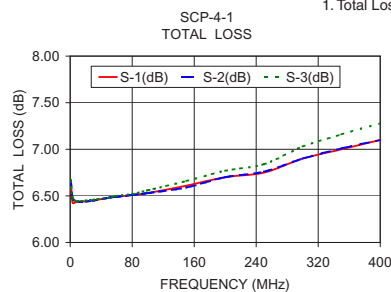
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 6 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L	M	U	L	M	U	L	M	U	L	M	U
f_L - f_U	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.
1-400	32	22	26	18	21	17	0.4	1.2	0.6	1.2	1.0	1.5

L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR				
	S-1	S-2	S-3	S-4		1-2	2-3	3-4		S	1	2	3	4
1.00	6.66	6.66	6.67	6.67	0.01	27.78	55.66	28.57	0.12	1.27	1.29	1.29	1.29	1.29
3.00	6.43	6.48	6.48	6.48	0.02	31.87	53.23	32.88	0.13	1.18	1.17	1.17	1.16	1.16
9.00	6.44	6.44	6.44	6.45	0.01	33.17	47.65	34.15	0.06	1.15	1.12	1.12	1.12	1.12
20.00	6.44	6.44	6.45	6.44	0.01	32.49	42.58	33.20	0.05	1.13	1.11	1.11	1.11	1.11
30.00	6.45	6.45	6.46	6.46	0.02	31.78	39.78	32.28	0.07	1.13	1.10	1.11	1.10	1.10
50.00	6.48	6.48	6.48	6.49	0.02	30.23	35.87	30.45	0.14	1.12	1.09	1.10	1.09	1.10
60.00	6.49	6.49	6.50	6.51	0.01	29.51	34.42	29.57	0.20	1.12	1.09	1.09	1.08	1.09
80.00	6.51	6.51	6.52	6.53	0.01	28.07	32.20	27.97	0.31	1.12	1.08	1.08	1.07	1.07
100.00	6.53	6.53	6.56	6.55	0.01	26.98	30.61	26.75	0.35	1.13	1.09	1.07	1.07	1.07
150.00	6.61	6.59	6.66	6.65	0.02	24.67	27.47	24.26	0.41	1.17	1.09	1.05	1.07	1.04
200.00	6.70	6.70	6.77	6.75	0.03	22.97	25.32	22.42	0.43	1.18	1.03	1.01	1.01	1.03
250.00	6.75	6.76	6.84	6.82	0.05	22.33	24.33	21.63	0.55	1.23	1.04	1.04	1.09	1.07
300.00	6.90	6.90	7.03	6.99	0.08	21.73	23.29	20.94	0.57	1.32	1.05	1.04	1.11	1.10
350.00	7.00	7.01	7.16	7.10	0.12	21.67	22.74	20.73	0.53	1.32	1.03	1.05	1.09	1.11
400.00	7.10	7.10	7.28	7.22	0.14	22.15	22.57	20.86	0.58	1.34	1.12	1.15	1.23	1.15

1. Total Loss = Insertion Loss + 6dB splitter loss.



Electrical Schematic

