

Power Splitter/Combiner

SCP-4-1W+

4 Way-0° 50Ω

10 to 650 MHz

Maximum Ratings

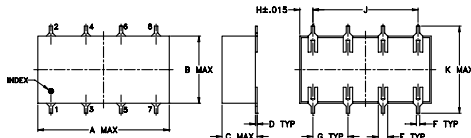
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.25W max.

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

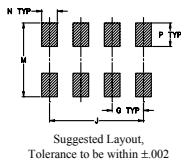
Pin Connections

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

Outline Drawing



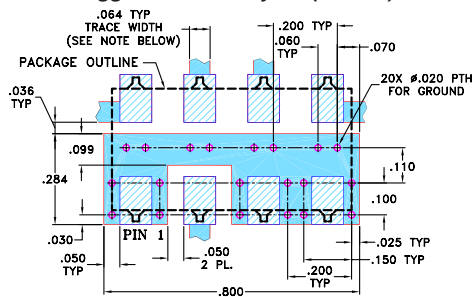
PCB Land Pattern



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.
■ 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

- wideband, 10 to 650 MHz
- excellent amplitude unbalance, 0.4 dB typ.

Applications

- VHF/UHF
- receivers/transmitters
- federal and defense communication



Generic photo used for illustration purposes only

CASE STYLE: YY101

+RoHS Compliant

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

Electrical Specifications

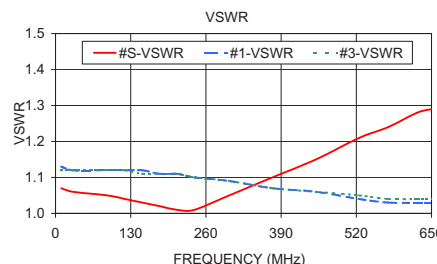
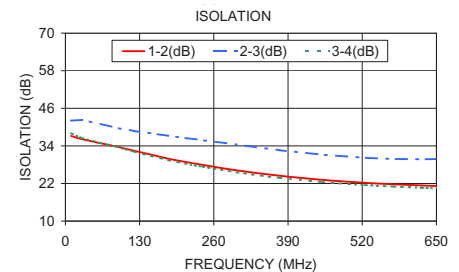
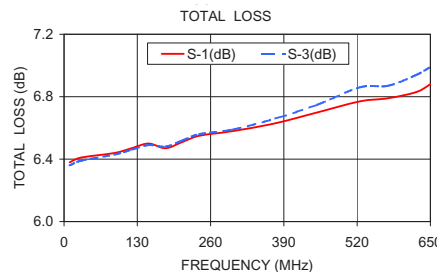
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 6 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
f_L - f_U	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
10-650	34	28	23	18	21	15	0.7	1.0	0.9	1.5	1.1	1.9	3	7	12	0.2	0.4	0.7

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	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
10.00	6.38	6.36	6.36	6.36	0.02	37.18	42.07	38.05	0.07	1.07	1.13	1.13	1.12	1.12
30.00	6.41	6.39	6.39	6.38	0.02	36.10	42.30	36.46	0.12	1.06	1.12	1.12	1.12	1.12
90.00	6.44	6.43	6.43	6.42	0.02	33.76	39.74	33.67	0.43	1.05	1.12	1.12	1.12	1.12
120.00	6.47	6.46	6.46	6.44	0.03	32.46	38.76	32.19	0.58	1.04	1.12	1.12	1.12	1.12
150.00	6.50	6.49	6.49	6.47	0.03	31.21	38.02	30.82	0.70	1.03	1.12	1.12	1.11	1.12
180.00	6.47	6.47	6.48	6.45	0.03	29.92	37.23	29.49	0.85	1.02	1.11	1.11	1.11	1.11
210.00	6.51	6.52	6.52	6.49	0.04	28.87	36.52	28.36	0.95	1.01	1.11	1.11	1.11	1.11
240.00	6.55	6.56	6.56	6.52	0.04	27.96	35.86	27.40	1.10	1.01	1.10	1.11	1.10	1.10
300.00	6.58	6.59	6.59	6.54	0.05	26.21	34.39	25.59	1.33	1.05	1.09	1.09	1.09	1.09
375.00	6.63	6.65	6.66	6.58	0.08	24.48	32.64	23.81	1.69	1.10	1.07	1.08	1.07	1.08
450.00	6.70	6.75	6.75	6.63	0.12	23.16	31.19	22.46	1.94	1.15	1.06	1.07	1.06	1.06
525.00	6.77	6.86	6.86	6.70	0.15	22.23	30.20	21.51	2.32	1.21	1.04	1.05	1.05	1.04
575.00	6.79	6.88	6.87	6.69	0.19	21.76	29.83	21.04	2.45	1.24	1.03	1.05	1.04	1.04
625.00	6.83	6.95	6.94	6.73	0.22	21.37	29.74	20.65	2.66	1.28	1.03	1.05	1.04	1.03
650.00	6.88	7.01	6.99	6.77	0.25	21.19	29.79	20.47	2.73	1.29	1.03	1.05	1.04	1.03

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



Electrical Schematic

