

Power Splitter/Combiner

SBTC-2-105075X+

2 Way-0° 50/75Ω

50 to 1000 MHz



CASE STYLE: AT1667

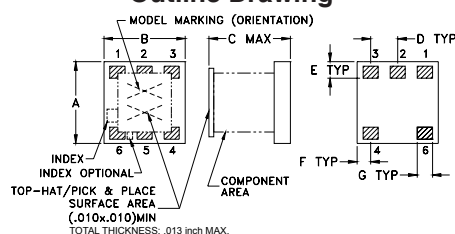
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max.

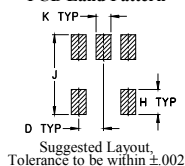
Pin Connections

SUM PORT	6 (50 ohms)
PORT 1	3 (75 ohms)
PORT 2	4 (75 ohms)
GROUND	1,2
NOT USED	5

Outline Drawing



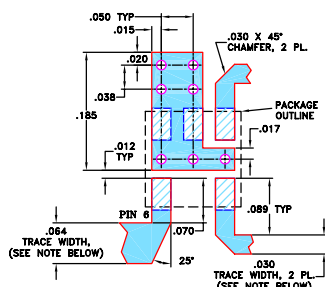
PCB Land Pattern



Outline Dimensions (inch)

A	B	C	D	E	F
.150	.150	.150	.050	.030	.025
3.81	3.81	3.81	1.27	0.76	0.64
G	H	J	K	wt	
.028	.050	.160	.030	grams	
0.71	1.27	4.06	0.76	0.10	

Demo Board MCL P/N: TB-146 Suggested PCB Layout (PL-093)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.030" ± 0.002", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

■ DENOTES PCB COPPER LAYOUT

■ 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

- 50 ohm input, 75 ohm output
- excellent isolation, 20 dB typ.
- very good phase unbalance, 1.0 deg. typ.
- small size, 0.15"x0.15"x0.15"
- temperature stable LTCC base
- small size
- low cost
- aqueous washable
- protected by US patent 6,963,255

Applications

- cable
- 50-75 ohm amplifier splitter

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	
	L	U	L	U	L	U	L	U
	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.
f _L -f _U								
50-1000	25 16	20 15	0.7 1.2	1.0 1.6	3	5	0.6	0.5

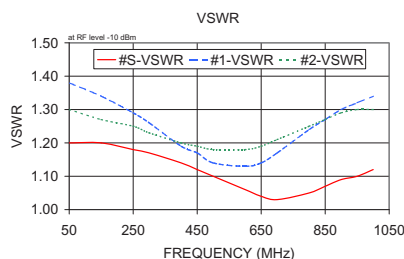
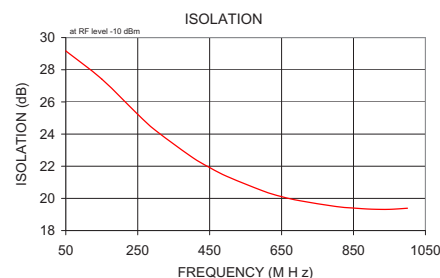
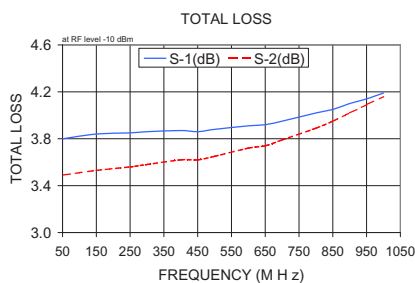
L=50 to 500 MHz

U=500 to 1000 MHz

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB) S-1	Total Loss ¹ (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
50.00	3.80	3.49	0.31	29.17	0.08	1.20	1.38	1.30
150.00	3.84	3.53	0.30	27.42	0.28	1.20	1.34	1.27
250.00	3.85	3.56	0.29	25.23	0.57	1.18	1.29	1.25
300.00	3.86	3.58	0.28	24.22	0.67	1.17	1.26	1.23
400.00	3.87	3.62	0.25	22.58	0.95	1.14	1.19	1.20
450.00	3.86	3.62	0.24	21.92	1.08	1.12	1.17	1.19
500.00	3.88	3.65	0.23	21.35	1.21	1.10	1.14	1.18
600.00	3.91	3.72	0.19	20.45	1.47	1.06	1.13	1.18
650.00	3.92	3.74	0.18	20.11	1.53	1.04	1.14	1.19
700.00	3.95	3.79	0.16	19.86	1.66	1.03	1.17	1.21
800.00	4.02	3.89	0.13	19.50	1.80	1.05	1.24	1.25
850.00	4.05	3.95	0.10	19.40	1.84	1.07	1.27	1.27
900.00	4.10	4.02	0.09	19.33	1.93	1.09	1.30	1.29
950.00	4.14	4.09	0.05	19.32	2.00	1.10	1.32	1.30
1000.00	4.19	4.16	0.03	19.39	1.99	1.12	1.34	1.30

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



electrical schematic

