

Surface Mount

Power Splitter/Combiner

2 Way-0° 75Ω

10 to 1000 MHz

SBTC-2-10-75LX+

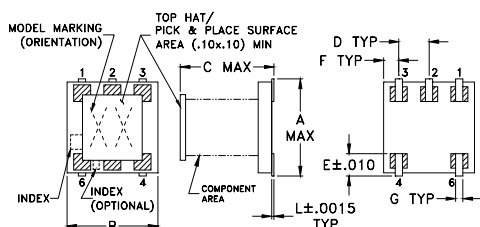
Maximum Ratings

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.

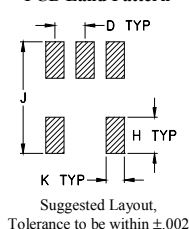
Pin Connections

SUM PORT	6
PORT 1	3
PORT 2	4
GROUND	1,2
NOT USED	5

Outline Drawing



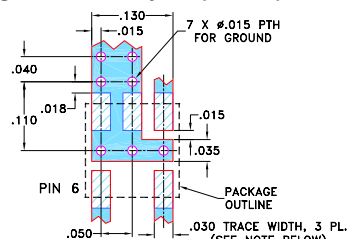
PCB Land Pattern



Outline Dimensions (inch mm)

A	B	C	D	E	F
.166	.150	.155	.050	.037	.025
4.22	3.81	3.94	1.27	0.94	0.64
G	H	J	K	K	wt
.012	.060	.184	.030	.004	grams
0.30	1.52	4.67	0.76	0.10	0.10

Demo Board MCL P/N: TB-277 Suggested PCB Layout (PL-153)



- NOTE: 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

Features

- low insertion loss, 0.8 dB typ.
- excellent amplitude unbalance, 0.15 dB typ.
- very good phase unbalance, 1.0 deg. typ.
- small size, 0.166"x0.150"x0.155"
- temperature stable LTCC base
- small size
- low cost
- aqueous washable
- protected by US patent 6,963,255

Applications

- UHF/VHF receivers/transmitters
- cellular

Electrical Specifications

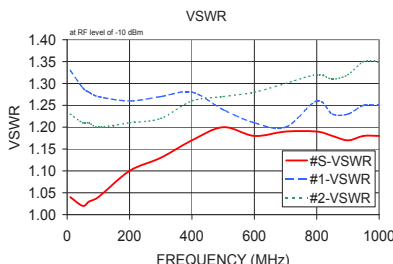
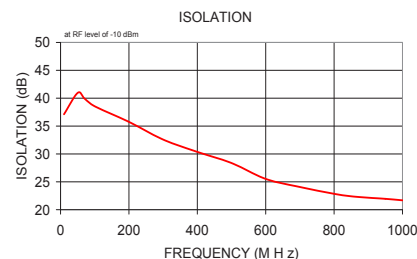
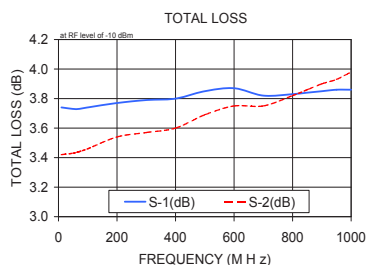
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
f _L -f _U	35	20	28	20	21	17	0.7	1.2	0.6	1.2	0.7	1.4	3	3	5	0.7	0.6	0.6

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

Frequency (MHz)	Total Loss ¹		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	(dB) S-1	(dB) S-2						
10.00	3.74	3.42	0.31	37.11	0.66	1.04	1.33	1.23
50.00	3.73	3.43	0.30	40.95	0.14	1.02	1.29	1.21
70.00	3.73	3.44	0.29	39.94	0.14	1.03	1.28	1.21
100.00	3.74	3.46	0.29	38.55	0.13	1.04	1.27	1.20
200.00	3.77	3.54	0.22	35.75	0.09	1.10	1.26	1.21
300.00	3.79	3.57	0.22	32.58	0.54	1.13	1.27	1.22
400.00	3.80	3.60	0.20	30.37	0.60	1.17	1.28	1.26
500.00	3.85	3.69	0.16	28.37	0.64	1.20	1.24	1.27
600.00	3.87	3.75	0.12	25.52	0.74	1.18	1.21	1.28
700.00	3.82	3.75	0.07	24.07	0.75	1.19	1.20	1.30
800.00	3.83	3.82	0.03	22.85	0.77	1.19	1.26	1.32
850.00	3.84	3.86	0.03	22.40	0.73	1.18	1.23	1.31
900.00	3.85	3.90	0.06	22.15	0.69	1.17	1.23	1.32
950.00	3.86	3.93	0.08	21.95	0.64	1.18	1.25	1.35
1000.00	3.86	3.98	0.11	21.68	0.58	1.18	1.25	1.35

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



electrical schematic



For detailed performance specs & shopping online see web site

Mini-Circuits
ISO 9001 ISO 14001 AS 9100 CERTIFIED

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IF/RF MICROWAVE COMPONENTS

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REV. OR
M136168
SBTC-2-10-75LX+
ED-9226C1
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