

# Power Splitter/Combiners

SBTC-2-10-75+

SBTC-2-10-75L+

2 Way-0° 75Ω

10 to 1000 MHz



No Leads

CASE STYLE: AT790  
PRICE: \$3.49 ea. QTY (25)  
\$2.69 ea. QTY (1000)



Leads

CASE STYLE: AT1029  
PRICE: \$3.64 ea. QTY (25)  
\$2.84 ea. QTY (1000)

## Maximum Ratings

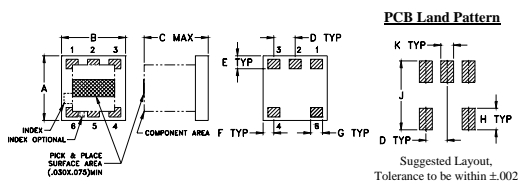
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.125W max.

## Pin Connections

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

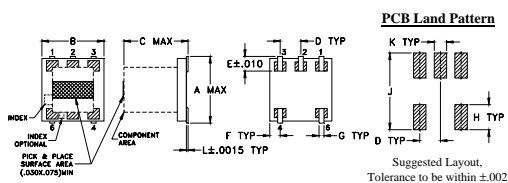
## Outline Drawing / Dimensions (inch/mm)

### AT790 (SBTC-2-10-75+)



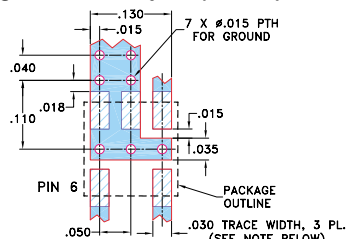
	A	B	C	D	E	F	G	H	J	K	wt.
	.150	.150	.150	.050	.030	.025	.028	.050	.160	.030	grams
	3.81	3.81	3.81	1.27	0.76	0.64	0.71	1.27	4.06	0.76	.10

### AT1029 (SBTC-2-10-75L+)



	A	B	C	D	E	F	G	H	J	K	L	wt.
	.166	.150	.155	.050	.037	.025	.012	.060	.184	.030	.004	grams
	4.22	3.81	3.94	1.27	0.94	0.64	0.30	1.52	4.67	0.76	0.10	.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.  
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
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
- protected by US patent 6,963,255

## Applications

- cellular
- UHF/VHF receivers/transmitters

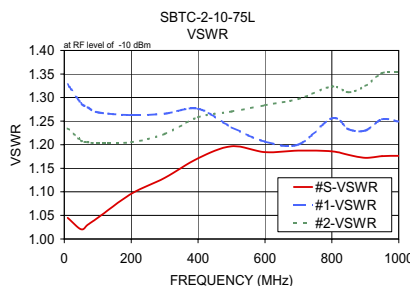
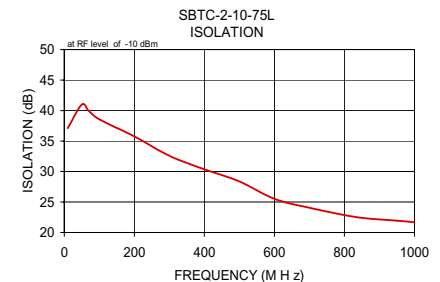
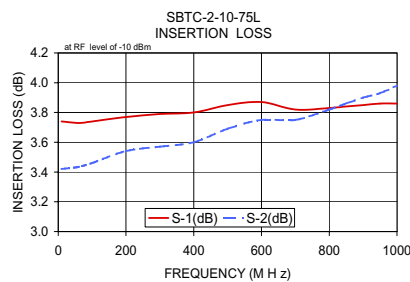
## Splitter Electrical Specifications

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 <sub>L</sub> -f <sub>U</sub>																		
10-1000	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<sub>L</sub> to 10 f<sub>L</sub>]M = mid range [10 f<sub>L</sub> to f<sub>U</sub>/2]U = upper range [f<sub>U</sub>/2 to f<sub>U</sub>]

## Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 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



## electrical schematic

