

Surface Mount

Power Splitter/Combiners

SBTC-2-10-75 SBTC-2-10-75L

2 Way-0° 75Ω

10 to 1000 MHz

NEW!



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)

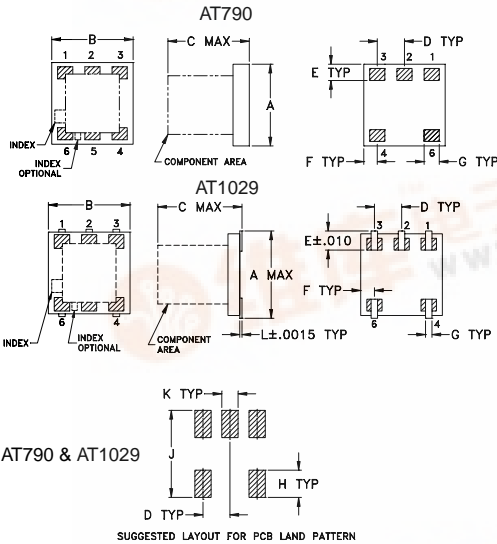
Maximum Ratings

| | |
|-----------------------------|----------------|
| 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



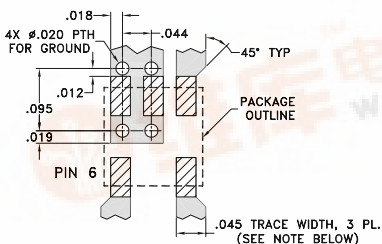
Outline Dimensions (inch/mm)

| AT790 | 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 | 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 |

Reflow Solder Assembly
Silver-bearing solder (Sn/Pb/Ag 62/36/2%) is recommended; however, tin-lead eutectic (Sn/Pb 63/37%) may be used. For temperature profiles, see Application Note AN-40-004

Demo Board MCL P/N: TB-274 Suggested PCB Layout (PL-152)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

○ DENOTES PCB COPPER LAYOUT

○ 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, BLUE CELL™ base
- solder plated leads for excellent solderability
- small size
- low cost
- patent pending

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 | | | | | | |
| f _L -f _U | Typ. Min. | Typ. Min. | Typ. Min. | Typ. Max. | Typ. Max. | Typ. Max. | Max. | Max. | Max. | Max. | Max. | Max. | | | | | | |
| 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_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) | Insertion Loss (dB) S-1 | Insertion 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 |

