Surface Mount

Power Splitter/Combiners

NEW!

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

2 Way-0° 75Ω 10 to 1000 MHz

No Leads

BLUE CELL™

Leads

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

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

Features

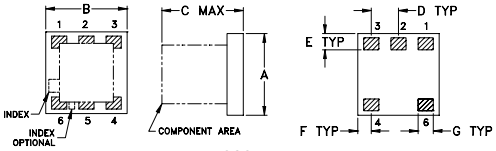
- low insertion loss, 0.8 dB typ.
- excellent amplitude unbalance, 0.15 dB typ.
- very good phase unbalance, 1.0 deg. typ.
- small size, 0.166"x0.150"x0.155"
- temperature stable, BLUE CELL™ base
- solder plated leads for excellent solderability
- small size
- low cost
- patent pending

Applications

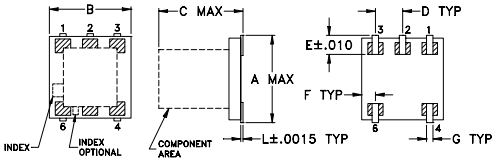
- cellular
- UHF/VHF receivers/transmitters

Outline Drawing

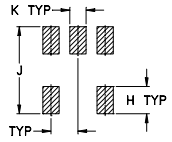
AT790



AT1029



AT790 & AT1029



SUGGESTED LAYOUT FOR PCB LAND PATTERN

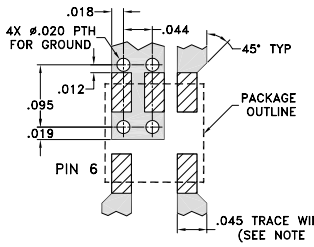
Outline Dimensions (inch / mm)

	A	B	C	D	E	F	G	H	J	K	L	wt.
AT790	.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	.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.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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