

Surface Mount

# Power Splitter/Combiners

**NEW!**  
SBTC-2-20 SBTC-2-20L

2 Way-0° 50Ω

200 to 2000 MHz

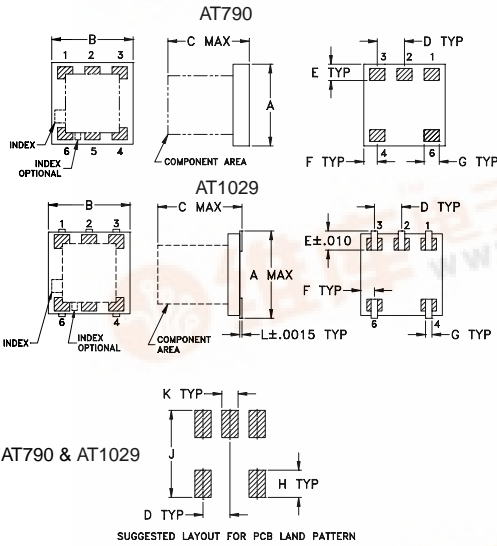
## Maximum Ratings

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

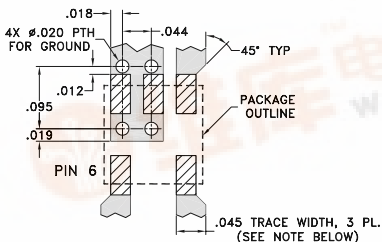
  

AT1029	A	B	C	D	E	F	G	H	J	K	L	wt.
	.166	.150	.155	.050	.037	.025	.012	.060	.184	.030	.004	grams
	4.22	3.81	3.94	1.27	0.94	0.64	0.30	1.52	4.67	0.76	0.10	.10

## 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.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

3. DENOTES PCB COPPER LAYOUT

4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## Features

- wide band frequency, 200-2000 MHz
- excellent amplitude unbalance, 0.2 dB typ.
- small size, 0.166"x0.15"x0.155"
- temperature stable, BLUE CELL™ base
- solder plated leads for excellent solderability
- small size
- low cost
- patent pending

## Applications

- cellular/GSM
- UHF/VHF receivers/transmitters
- PCN/PCS
- GPS
- VSAT



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)

## Splitter Electrical Specifications

FREQ. RANGE (MHz) $f_L$ - $f_U$	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.	Max.	Max.
200-2000	20	14	0.8	2.2	10	0.8
800-1000	22	16	0.5	0.9	3	0.5
500-1500	22	15	0.5	1.5	5	0.7
1800-2000	20	15	1.2	2.2	10	0.6

## Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
200.00	3.56	3.30	0.26	26.85	1.44	1.38	1.58	1.50
300.00	3.57	3.36	0.21	39.72	0.88	1.37	1.44	1.40
400.00	3.55	3.38	0.17	32.31	0.56	1.38	1.35	1.33
500.00	3.58	3.45	0.13	27.04	0.36	1.37	1.29	1.28
600.00	3.62	3.52	0.10	23.52	0.22	1.40	1.25	1.25
800.00	3.58	3.56	0.03	20.65	0.20	1.39	1.17	1.16
1000.00	3.61	3.68	0.07	19.36	0.41	1.37	1.12	1.08
1200.00	3.69	3.84	0.15	19.24	0.93	1.34	1.14	1.04
1400.00	3.76	3.98	0.22	20.40	1.78	1.30	1.23	1.13
1500.00	3.84	4.07	0.23	21.76	2.34	1.29	1.29	1.18
1600.00	3.92	4.16	0.24	24.12	2.94	1.28	1.35	1.23
1700.00	4.02	4.25	0.24	28.51	3.61	1.27	1.40	1.29
1800.00	4.15	4.36	0.21	31.25	4.31	1.27	1.45	1.34
1900.00	4.33	4.49	0.18	26.03	4.98	1.32	1.49	1.38
2000.00	4.57	4.66	0.16	20.75	5.63	1.40	1.51	1.42

