

2 Way-0° 75Ω

500 to 1500 MHz

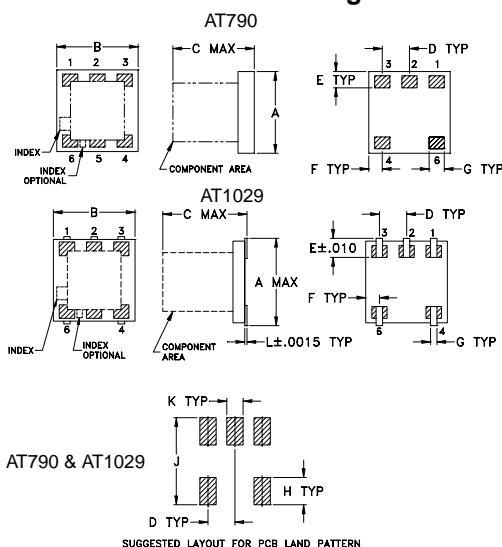
## Maximum Ratings

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



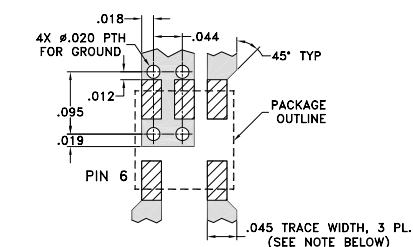
## Outline Dimensions (inch)

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	3.81	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

## Features

- low insertion loss, 0.8 dB typ.
- excellent isolation 28 dB typ.
- very good phase unbalance, 1 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

- VSAT
- internet over satellite modems

## Splitter Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 3.0 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.
500-1500	28 18	0.8 1.5	5	0.9
700-1500	28 20	0.8 1.5	4	0.7

## 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
500.00	4.19	3.61	0.58	21.98	1.92	1.11	1.73	1.57
600.00	4.12	3.63	0.49	25.03	1.30	1.08	1.60	1.50
700.00	3.97	3.58	0.39	27.04	0.91	1.08	1.51	1.42
800.00	3.93	3.61	0.32	30.56	0.59	1.08	1.36	1.35
850.00	3.92	3.63	0.29	32.53	0.44	1.08	1.33	1.33
900.00	3.90	3.64	0.25	33.74	0.29	1.08	1.32	1.31
950.00	3.88	3.66	0.22	35.62	0.20	1.09	1.28	1.29
1000.00	3.86	3.68	0.18	39.45	0.15	1.10	1.22	1.27
1100.00	3.84	3.74	0.10	45.64	0.17	1.11	1.22	1.28
1200.00	3.85	3.81	0.04	43.71	0.19	1.14	1.14	1.24
1250.00	3.83	3.83	0.03	41.60	0.21	1.15	1.10	1.22
1300.00	3.81	3.86	0.05	41.15	0.19	1.17	1.10	1.23
1400.00	3.82	3.95	0.13	42.70	0.21	1.22	1.09	1.26
1450.00	3.83	4.00	0.17	42.33	0.24	1.25	1.11	1.27
1500.00	3.84	4.05	0.21	42.11	0.30	1.28	1.15	1.30

