

# Power Splitter/Combiners

2 Way-0° 50Ω

1000 to 2500 MHz

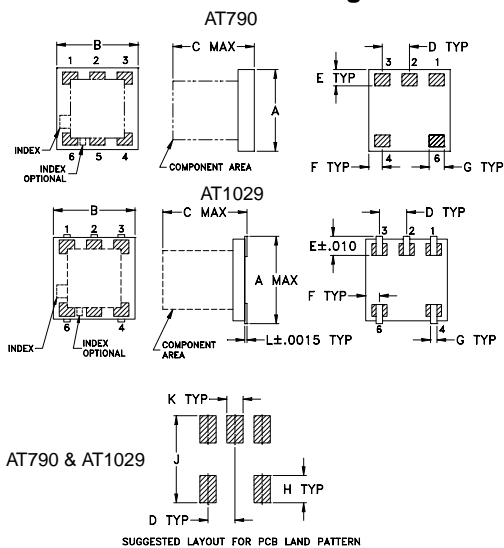
## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W 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)

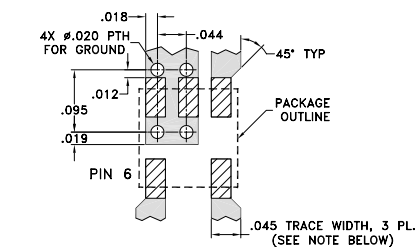
AT790	A	B	C	D	E	F	G	H	J	K	wt. grams
	.150	.150	.150	.050	.030	.025	.028	.050	.160	.030	
	3.81	3.81	3.81	1.27	0.76	0.64	0.71	1.27	4.06	0.76	.10

AT1029	A	B	C	D	E	F	G	H	J	K	L	wt. grams
	.166	.150	.155	.050	.037	.025	.012	.060	.184	.030	.004	
	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

- wide band frequency, 1000-2500 MHz
- excellent amplitude unbalance, 0.2 dB 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

- PCN/PCS
- DECT
- PHS



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)

## 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.
1000-2500	20 14	1.4 2.5	14	1.2
1400-1800	18 14	0.9 1.7	8	0.7
1800-2000	19 16	1.0 1.7	8	0.8

## 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						
1000.00	4.10	3.83	0.28	22.47	2.79	1.72	1.68	1.57
1100.00	4.07	3.85	0.21	21.47	2.54	1.66	1.59	1.51
1200.00	4.05	3.90	0.15	20.62	2.39	1.61	1.51	1.46
1300.00	4.01	3.93	0.08	19.92	2.34	1.56	1.45	1.41
1400.00	3.98	3.96	0.04	19.49	2.36	1.51	1.39	1.36
1500.00	3.96	4.00	0.05	19.21	2.47	1.47	1.33	1.32
1600.00	3.93	4.03	0.10	19.18	2.66	1.42	1.28	1.27
1700.00	3.90	4.06	0.16	19.29	2.92	1.37	1.24	1.23
1800.00	3.88	4.09	0.21	19.68	3.28	1.32	1.21	1.18
1900.00	3.86	4.12	0.27	20.37	3.70	1.26	1.19	1.14
2000.00	3.84	4.16	0.32	21.53	4.23	1.20	1.18	1.10
2100.00	3.83	4.21	0.37	23.36	4.87	1.13	1.18	1.08
2200.00	3.84	4.26	0.42	26.19	5.57	1.06	1.18	1.10
2300.00	3.88	4.34	0.46	28.88	6.36	1.09	1.18	1.15
2500.00	4.08	4.63	0.55	21.85	8.22	1.39	1.15	1.30

