

# Surface Mount Power Splitter/Combiner

## ADP-2-4+ ADP-2-4

2 Way-0° 50Ω 10 to 1000 MHz



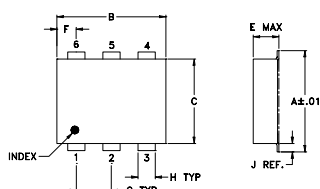
### Maximum Ratings

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.

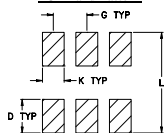
### Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
GROUND	6
Externally connect together & isolate	2,5

### Outline Drawing



#### PCB Land Pattern

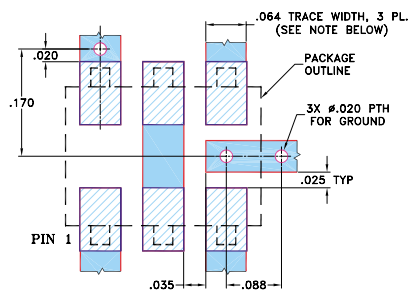


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	
.272	.310	.220	.100	.162	.055	.100	
6.91	7.87	5.59	2.54	4.11	1.40	2.54	
H	J	K	L				wt
.030	.026	.065	.300				grams
0.76	0.66	1.65	7.62				0.25

### Demo Board MCL P/N: TB-208 Suggested PCB Layout (PL-116)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; 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 WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance, 0.10 dB typ.
- very good phase unbalance, 0.5 deg. typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

### Applications

- instrumentation
- cellular

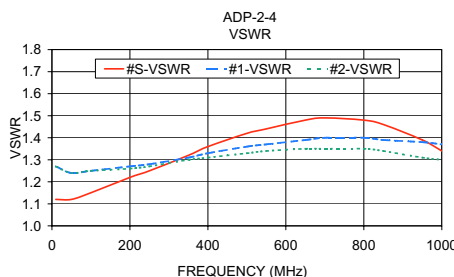
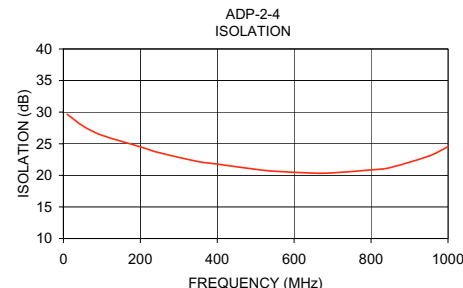
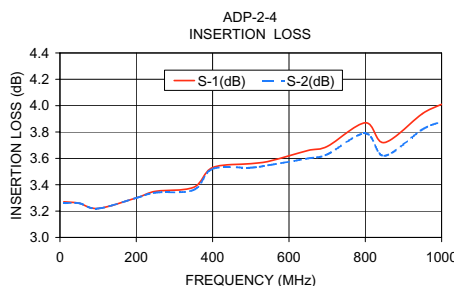
### Electrical Specifications

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						
$f_c - f_u$	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
10-1000	25	20	23	16	19	14	0.3	0.5	0.4	0.9	0.8	1.5	1.0	3.0	5.0	0.15	0.2	0.4

L = 10-100 MHz M = 100-500 MHz U = 500-1000 MHz

### 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						
10.00	3.27	3.26	0.01	29.66	0.03	1.12	1.27	1.27
50.00	3.26	3.26	0.00	27.85	0.05	1.12	1.24	1.24
100.00	3.22	3.22	0.00	26.35	0.13	1.15	1.25	1.25
200.00	3.30	3.30	0.00	24.51	0.21	1.22	1.27	1.26
250.00	3.35	3.34	0.01	23.57	0.21	1.25	1.28	1.27
350.00	3.38	3.36	0.02	22.19	0.32	1.32	1.31	1.30
400.00	3.53	3.52	0.01	21.78	0.36	1.36	1.33	1.31
500.00	3.56	3.53	0.03	20.95	0.44	1.42	1.36	1.33
550.00	3.58	3.55	0.03	20.65	0.50	1.44	1.37	1.34
650.00	3.66	3.60	0.05	20.35	0.54	1.48	1.39	1.35
700.00	3.69	3.63	0.07	20.39	0.62	1.49	1.40	1.35
800.00	3.87	3.79	0.08	20.86	0.70	1.48	1.40	1.35
850.00	3.72	3.62	0.10	21.23	0.76	1.46	1.39	1.34
950.00	3.94	3.82	0.12	23.04	0.78	1.39	1.38	1.31
1000.00	4.01	3.88	0.13	24.55	0.90	1.34	1.37	1.30



### electrical schematic



**Mini-Circuits®**  
ISO 9001 ISO 14001 CERTIFIED

ALL NEW  
minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

RF/IF MICROWAVE COMPONENTS

REV. D  
M102713  
ED-7386/3  
ADP-2-4  
HY/TD/CP  
070424