

# Power Splitter/Combiner

## ADP-2-1W+

2 Way-0° 50Ω 1 to 650 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD636

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200
13"	500, 1000

### Maximum Ratings

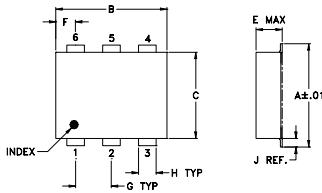
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	2W max.
Internal Dissipation	0.125W max.

Permanent damage may occur if any of these limits are exceeded.

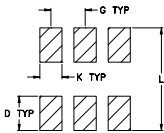
### Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
GROUND	6
NOT USED	2,5

### Outline Drawing



### PCB Land Pattern

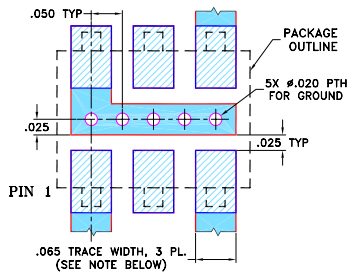


Suggested Layout, Tolerance to be within ±.002

### 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-48+ Suggested PCB Layout (PL-035)



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

### Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- low insertion loss, 0.25 dB typ.
- excellent amplitude unbalance, 0.01 dB typ.
- very good phase unbalance, 0.2 deg. typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

### Applications

- VHF/UHF receivers/transmitters

### Electrical Specifications

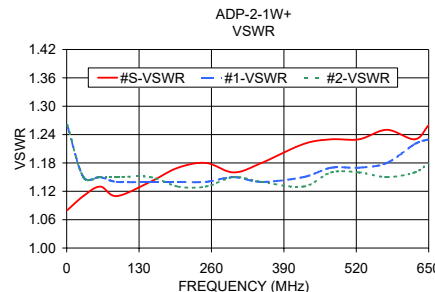
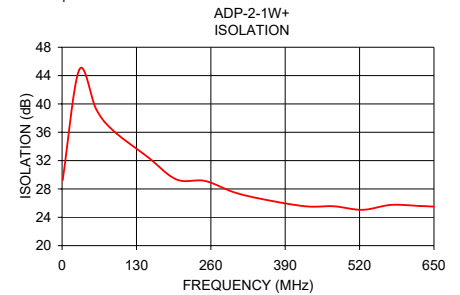
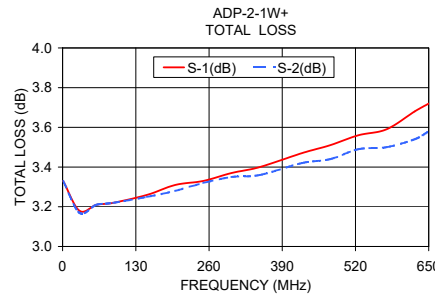
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)			
	L		M		U		L		M		U		L	M	U	L	M	U	
	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.	
f <sub>c</sub> -f <sub>u</sub>																			
1-650	30	20	30	20	24	20	0.2	0.8	0.25	0.8	0.5	1.0	2.0	2.0	3.0	0.15	0.2	0.3	

L = 1-10 MHz M = 10-325 MHz U = 325-650 MHz

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
1.00	3.33	3.33	0.00	29.22	0.03	1.08	1.26	1.26
30.00	3.18	3.17	0.01	44.81	0.03	1.11	1.15	1.15
60.00	3.21	3.21	0.00	39.19	0.01	1.13	1.15	1.15
90.00	3.22	3.22	0.00	36.18	0.00	1.11	1.14	1.15
150.00	3.26	3.25	0.01	32.49	0.12	1.14	1.14	1.15
200.00	3.31	3.28	0.03	29.34	0.09	1.17	1.14	1.13
250.00	3.33	3.32	0.02	29.13	0.06	1.18	1.14	1.13
300.00	3.37	3.35	0.02	27.54	0.17	1.16	1.15	1.15
350.00	3.40	3.36	0.04	26.57	0.09	1.18	1.14	1.14
425.00	3.47	3.42	0.05	25.55	0.28	1.22	1.15	1.13
475.00	3.51	3.44	0.07	25.55	0.30	1.23	1.17	1.16
525.00	3.56	3.49	0.07	25.05	0.30	1.23	1.17	1.16
575.00	3.59	3.50	0.09	25.75	0.30	1.25	1.18	1.15
625.00	3.68	3.54	0.14	25.60	0.47	1.23	1.22	1.16
650.00	3.72	3.58	0.14	25.51	0.52	1.26	1.23	1.18

1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic

