

# Power Splitter/Combiner

## ADP-2-20+

2 Way-0° 50Ω 20 to 2000 MHz



Generic photo used for illustration purposes only

CASE STYLE: CD542

**+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"	10, 20, 50, 100, 200, 500
13"	1000

### Maximum Ratings

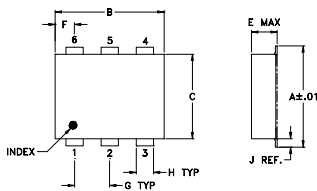
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

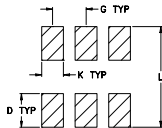
### Pin Connections

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

### Outline Drawing



#### PCB Land Pattern

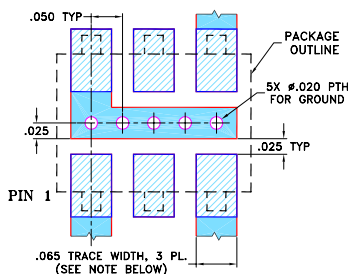


Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	
.272	.310	.220	.100	.112	.055	.100	
6.91	7.87	5.59	2.54	2.84	1.40	2.54	
H	J	K	L				wt
.030	.026	.065	.300				grams
0.76	0.66	1.65	7.62				0.20

### 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

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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, 0.7 dB typ.
- excellent insertion loss flatness, 0.4 dB peak to peak
- excellent amplitude unbalance, 0.1 dB typ.
- good phase unbalance, 1.1 deg. typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

### Applications

- instrumentation
- PCS/cellular
- GPS

### Electrical Specifications

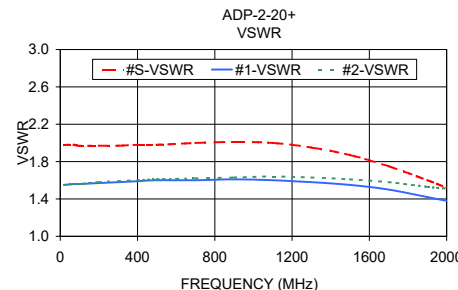
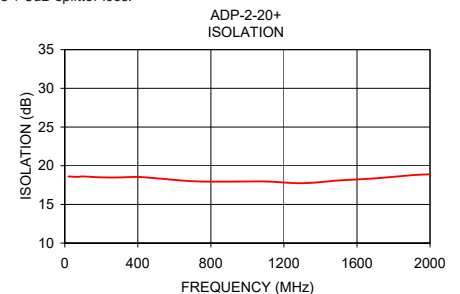
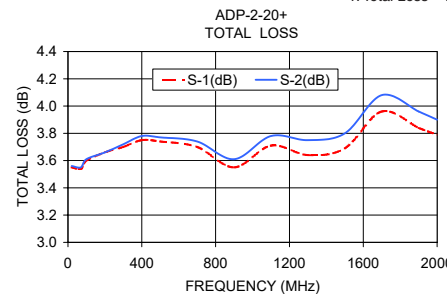
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 3.0 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)								
	L	M	U	L	M	U	L	M	U	L	M	U						
f <sub>c</sub> -f <sub>u</sub>	Typ. Min	Typ. Min	Typ. Min	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.						
20-2000	18	15	18	15	18	15	0.5	0.8	0.7	1.0	0.8	1.5	2.0	3.0	5.0	0.2	0.3	0.7

L = 20-200 MHz M = 200-1000 MHz U = 1000-2000 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						
20.00	3.55	3.56	0.00	18.61	0.00	1.98	1.55	1.55
70.00	3.54	3.55	0.01	18.56	0.18	1.98	1.56	1.56
100.00	3.60	3.61	0.01	18.61	0.19	1.97	1.56	1.56
200.00	3.66	3.66	0.00	18.50	0.45	1.97	1.57	1.58
300.00	3.70	3.72	0.02	18.49	0.59	1.97	1.58	1.59
400.00	3.75	3.78	0.02	18.55	0.68	1.98	1.59	1.60
500.00	3.74	3.77	0.03	18.38	0.88	1.98	1.60	1.61
700.00	3.70	3.74	0.03	17.99	1.04	2.00	1.60	1.62
900.00	3.55	3.61	0.06	17.94	1.35	2.01	1.61	1.63
1100.00	3.71	3.78	0.06	17.96	1.43	2.00	1.60	1.64
1300.00	3.64	3.75	0.11	17.74	1.43	1.95	1.58	1.63
1500.00	3.69	3.80	0.11	18.09	1.32	1.87	1.55	1.61
1700.00	3.96	4.08	0.12	18.37	1.26	1.75	1.50	1.58
1900.00	3.84	3.96	0.12	18.77	1.05	1.60	1.42	1.53
2000.00	3.79	3.90	0.11	18.89	0.78	1.52	1.38	1.51

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



### electrical schematic

