

Surface Mount Power Splitter/Combiner

ADP-2-122-75+

2 Way-0° 75Ω 5 to 1250 MHz



CASE STYLE: CD636

Features

- wideband, 5 to 1250 MHz
- low insertion loss, 0.9 dB typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

Applications

- DOCSIS® 3.1 Systems
- cellular
- VHF/UHF
- communication systems
- CATV

+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"	500, 1000

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1250	MHz
Insertion Loss, above 3.0 dB	5-50	—	0.25	0.5	dB
	50-1000	—	0.75	1.2	
	1000-1250	—	1.00	1.6	
Isolation	5-50	17	20	—	dB
	50-1000	18	22	—	
	1000-1250	17	19	—	
Phase Unbalance	5-50	—	0.5	1.0	Degree
	50-1000	—	1.5	3.5	
	1000-1250	—	2.0	4.0	
Amplitude Unbalance	5-50	—	0.1	0.2	dB
	50-1000	—	0.15	0.3	
	1000-1250	—	0.2	0.4	
VSWR (Port S)	5-1000	—	1.15	1.30	:1
	1000-1250	—	1.25	1.35	
VSWR (Port 1 and Port 2)	5-1000	—	1.25	1.4	:1
	1000-1250	—	1.2	1.4	

Maximum Ratings

Parameter	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	0.125 W max.

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

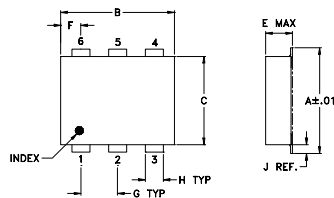
Pin Connections

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

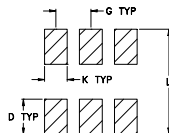
Electrical Schematic



Outline Drawing



PCB Land Pattern

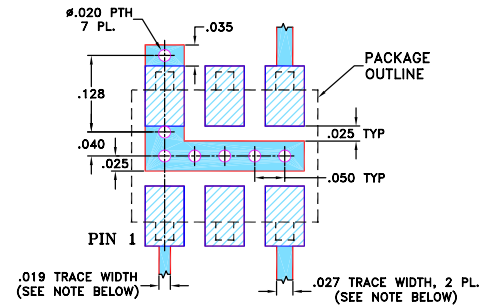


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
272	.310	.220	.100	.162	.055	.100
3.91	7.87	5.59	2.54	4.11	1.40	2.54
H	J	K	L	wt		
030	.026	.065	.300	grams		
1.76	0.66	1.65	7.62	0.25		

Demo Board MCL P/N: TB-243 Suggested PCB Layout (PL-141)



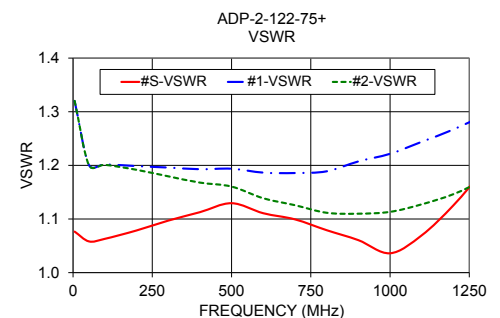
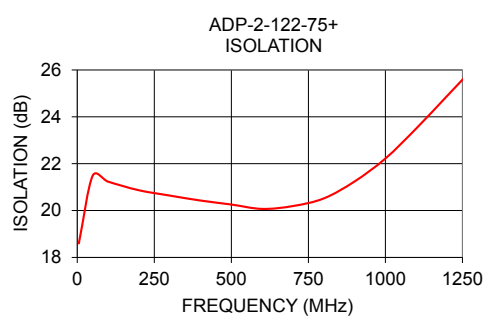
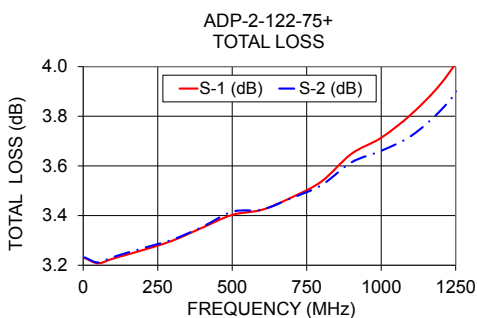
- NOTES:** 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS .030" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5	3.23	3.23	0.00	18.60	0.03	1.08	1.32	1.32
50	3.21	3.21	0.00	21.49	0.17	1.06	1.20	1.20
100	3.23	3.23	0.01	21.23	0.33	1.06	1.20	1.20
200	3.26	3.27	0.01	20.87	0.66	1.08	1.20	1.19
300	3.30	3.30	0.00	20.64	0.93	1.10	1.20	1.18
400	3.35	3.35	0.00	20.43	1.21	1.11	1.19	1.17
500	3.40	3.42	0.01	20.26	1.43	1.13	1.19	1.16
600	3.42	3.42	0.00	20.07	1.56	1.11	1.19	1.14
700	3.47	3.47	0.00	20.19	1.68	1.10	1.19	1.13
800	3.54	3.52	0.01	20.52	1.80	1.08	1.19	1.11
900	3.65	3.61	0.03	21.24	1.76	1.06	1.21	1.11
1000	3.71	3.66	0.05	22.22	1.84	1.04	1.22	1.11
1100	3.81	3.72	0.09	23.50	1.90	1.07	1.24	1.13
1200	3.93	3.82	0.11	24.89	1.96	1.13	1.27	1.15
1300	4.10	3.97	0.13	26.28	1.92	1.19	1.29	1.17

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



Additional 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-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp