Surface Mount ower Splitter/Combiner ADP-2-122-75+

Features

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



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



Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Тур.	Max.	Unit	
Frequency Range		5		1250	MHz	
	5-50	_	0.25	0.5		
Insertion Loss, above 3.0 dB	50-1000	_	0.75	1.2	dB	
	1000-1250	_	1.00	1.6		
	5-50	17	20	_	dB	
Isolation	50-1000	18	22	_		
	1000-1250	17	19	_		
	5-50	_	0.5	1.0		
Phase Unbalance	50-1000	_	1.5	3.5	Degree	
	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		
VCMD (Dowt 1 and Dowt 0)	5-1000	_	1.25	1.4	:1	
VSWR (Port 1 and Port 2)	1000-1250	_	1.2	1.4	.!	

Maximum Ratings

3	
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.

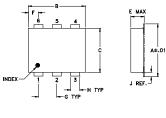
Pin Connections

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

Electrical Schematic



Outline Drawing

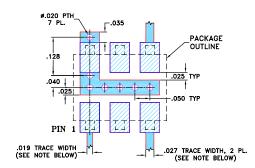




Outline Dimensions (inch)

G	F	E	D	С	В	Α
.100	.055	.162	.100	.220	.310	272
2.54	1.40	4.11	2.54	5.59	7.87	3.91
wt			L	K	J	Н
grams			.300	.065	.026	030
0.25			7.62	1.65	0.66) 76

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



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.

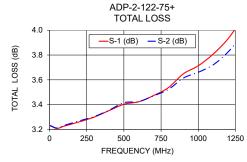
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

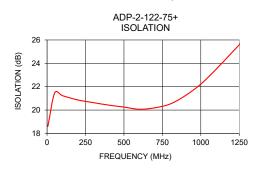
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

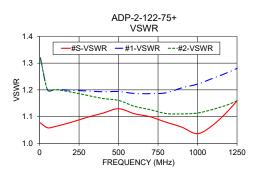
Typical Performance Data

Total Loss¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
S-1	S-2						
3.23	3.23	0.00	18.60	0.03	1.08	1.32	1.32
3.21	3.21	0.00	21.49	0.17	1.06	1.20	1.20
3.23	3.23	0.01	21.23	0.33	1.06	1.20	1.20
3.26	3.27	0.01	20.87	0.66	1.08	1.20	1.19
3.30	3.30	0.00	20.64	0.93	1.10	1.20	1.18
3.35	3.35	0.00	20.43	1.21	1.11	1.19	1.17
3.40	3.42	0.01	20.26	1.43	1.13	1.19	1.16
3.42	3.42	0.00	20.07	1.56	1.11	1.19	1.14
3.47	3.47	0.00	20.19	1.68	1.10	1.19	1.13
3.54	3.52	0.01	20.52	1.80	1.08	1.19	1.11
3.65	3.61	0.03	21.24	1.76	1.06	1.21	1.11
3.71	3.66	0.05	22.22	1.84	1.04	1.22	1.11
3.81	3.72	0.09	23.50	1.90	1.07	1.24	1.13
3.93	3.82	0.11	24.89	1.96	1.13	1.27	1.15
4.10	3.97	0.13	26.28	1.92	1.19	1.29	1.17
	3.23 3.23 3.23 3.26 3.30 3.35 3.40 3.42 3.47 3.54 3.65 3.71 3.81	(dB) S-1 S-2 3.23 3.23 3.21 3.21 3.23 3.23 3.26 3.27 3.30 3.35 3.40 3.42 3.42 3.42 3.42 3.42 3.47 3.54 3.52 3.65 3.61 3.71 3.66 3.81 3.72 3.93 3.82	(dB) Unbalance (dB) S-1 S-2 3.23 3.23 0.00 3.21 3.21 0.00 3.23 3.23 0.01 3.26 3.27 0.01 3.30 3.30 0.00 3.45 3.35 0.00 3.40 3.42 0.01 3.42 3.42 0.00 3.47 3.47 0.00 3.54 3.52 0.01 3.65 3.61 0.03 3.71 3.66 0.05 3.81 3.72 0.09 3.93 3.82 0.11	(dB) Unbalance (dB) S-1 S-2 3.23 3.23 0.00 18.60 3.21 3.21 0.00 21.49 3.23 3.23 0.01 21.23 3.26 3.27 0.01 20.87 3.30 3.30 0.00 20.64 3.35 3.35 0.00 20.64 3.40 3.42 0.01 20.26 3.42 3.42 0.00 20.07 3.47 3.47 0.00 20.19 3.54 3.52 0.01 20.52 3.65 3.61 0.03 21.24 3.71 3.66 0.05 22.22 3.81 3.72 0.09 23.50 3.93 3.82 0.11 24.89	(dB) Unbalance (dB) (dB) Unbalance (deg.) S-1 S-2 S-2 S-2 S-2 3.23 3.23 0.00 18.60 0.03 3.21 3.21 0.00 21.49 0.17 3.23 3.23 0.01 21.23 0.33 3.26 3.27 0.01 20.87 0.66 3.30 3.30 0.00 20.64 0.93 3.40 3.42 0.01 20.26 1.43 3.42 3.42 0.00 20.07 1.56 3.54 3.52 0.01 20.52 1.80 3.54 3.52 0.01 20.52 1.80 3.65 3.61 0.03 21.24 1.76 3.71 3.66 0.05 22.22 1.84 3.81 3.72 0.09 23.50 1.90 3.93 3.82 0.11 24.89 1.96	(dB) Unbalance (dB) (dB) Unbalance (deg.) S S-1 S-2 3.23 3.23 0.00 18.60 0.03 1.08 3.21 3.21 0.00 21.49 0.17 1.06 3.23 3.23 0.01 21.23 0.33 1.06 3.26 3.27 0.01 20.87 0.66 1.08 3.30 3.30 0.00 20.64 0.93 1.10 3.40 3.42 0.01 20.26 1.43 1.13 3.42 3.42 0.00 20.07 1.56 1.11 3.47 3.47 0.00 20.07 1.56 1.11 3.47 3.47 0.00 20.19 1.68 1.10 3.54 3.52 0.01 20.52 1.80 1.08 3.65 3.61 0.03 21.24 1.76 1.06 3.71 3.66 0.05 22.22 1.84 1.04	(dB) Unbalance (dB) (dB) Unbalance (deg.) S 1 S-1 S-2 3.23 0.00 18.60 0.03 1.08 1.32 3.21 3.21 0.00 21.49 0.17 1.06 1.20 3.23 3.23 0.01 21.23 0.33 1.06 1.20 3.26 3.27 0.01 20.87 0.66 1.08 1.20 3.35 3.35 0.00 20.64 0.93 1.10 1.20 3.40 3.42 0.01 20.26 1.43 1.13 1.19 3.42 3.42 0.00 20.07 1.56 1.11 1.19 3.47 3.47 0.00 20.19 1.68 1.10 1.19 3.54 3.52 0.01 20.52 1.80 1.08 1.19 3.65 3.61 0.03 21.24 1.76 1.06 1.21 3.71 3.66 0.05 22.22

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-Circuit's applicable established test performance criteria and measurement instructions.
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