



Mini-Circuits

SURFACE MOUNT

Power Splitter/Combiner

AD4PS-1+

4 Way-0° 50Ω 1 to 500 MHz

FEATURES

- Wideband, 1 to 500 MHz
- High Isolation, 30 dB typ.
- Good input port matching VSWR, 1.12 typ.
- Good output port matching VSWR, 1.10 typ.
- Small size



Generic photo used for illustration purposes only

CASE STYLE: CJ725

+RoHS Compliant

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

APPLICATIONS

- VHF-TV
- Aircraft Communications

ELECTRICAL SPECIFICATIONS

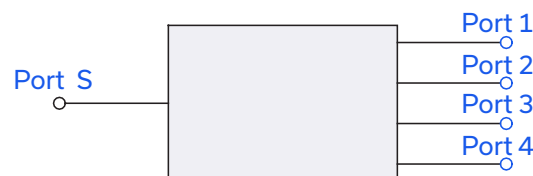
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range	—	1	—	500	MHz
Insertion Loss, above 6.0 dB	1 - 10	—	0.4	1.2	dB
	10 - 250	—	0.5	1.2	
	250 - 500	—	0.8	1.8	
Isolation	1 - 10	18	32	—	dB
	10 - 250	20	30	—	
	250 - 500	18	25	—	
Phase Unbalance	1 - 10	—	—	2	Degree
	10 - 250	—	—	5	
	250 - 500	—	—	7	
Amplitude Unbalance	1 - 10	—	—	0.4	dB
	10 - 250	—	—	0.5	
	250 - 500	—	—	0.8	

ABSOLUTE 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	0.25W Max.

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

ELECTRICAL SCHEMATIC

REV. K
ECO-019621
AD4PS-1+
MCL NY
231031



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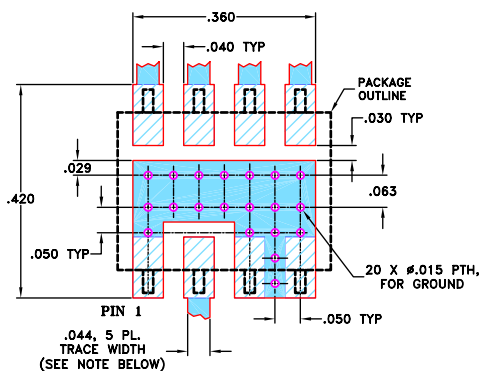
4 Way-0° 50Ω 1 to 500 MHz

OUTLINE DRAWING

SUM PORT	2
PORT 1	8
PORT 2	7
PORT 3	6
PORT 4	5
GROUND	1,3,4

PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-81
SUGGESTED PCB LAYOUT (PL-072)

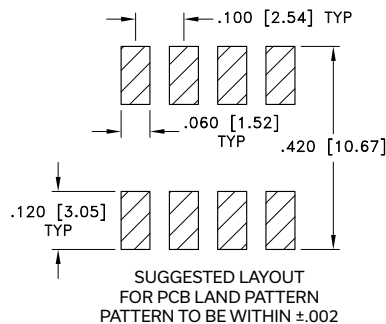
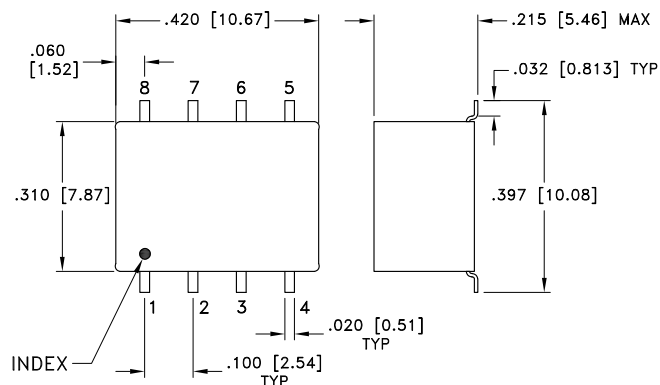


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" $\pm$ 0.0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

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

 METALLIZATION

Weight: .40 gram
Dimensions are in inches [mm]. Tolerances: 2 Pl. $\pm .01$; 3Pl. $\pm .005$ Inch

Notes:

1. Case material: Plastic.
2. Termination Finish: Tin plate over Nickel plate.

TAPE & REEL INFORMATION: F10





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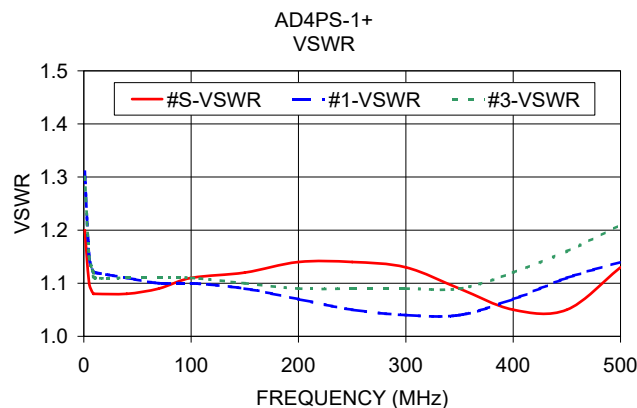
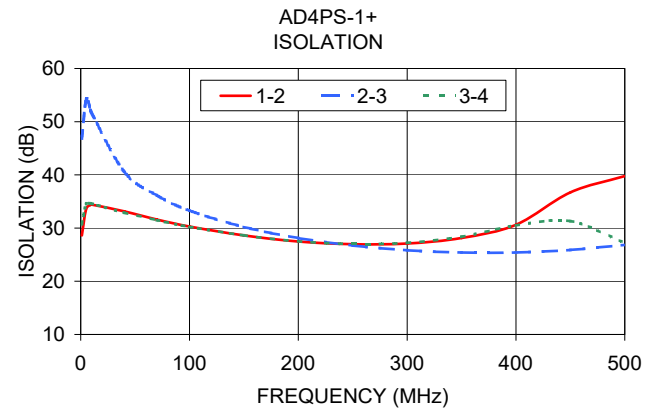
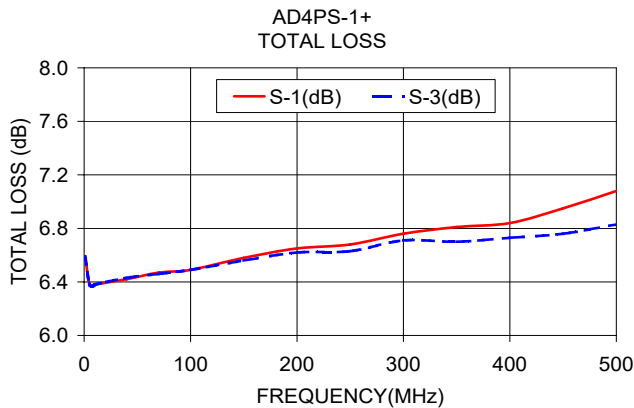
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss ¹ (dB)				Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (deg.)	VSWR (:1)				
	S-1	S-2	S-3	S-3		1-2	2-3	3-4		S	1	2	3	4
1.00	6.59	6.59	6.59	6.59	0.01	28.61	46.82	30.70	0.02	1.20	1.31	1.31	1.30	1.28
5.00	6.38	6.42	6.38	6.38	0.04	33.63	54.15	34.52	0.05	1.10	1.15	1.15	1.15	1.13
9.00	6.37	6.42	6.37	6.37	0.05	34.35	52.09	34.63	0.08	1.08	1.12	1.12	1.12	1.10
10.00	6.38	6.42	6.38	6.38	0.04	34.41	51.62	34.60	0.09	1.08	1.12	1.12	1.11	1.10
40.00	6.42	6.47	6.43	6.43	0.04	33.14	40.57	32.89	0.28	1.08	1.11	1.11	1.11	1.09
70.00	6.47	6.50	6.46	6.46	0.04	31.60	36.15	31.47	0.52	1.09	1.10	1.11	1.11	1.09
100.00	6.49	6.53	6.49	6.49	0.04	30.28	33.28	30.23	0.71	1.11	1.10	1.10	1.11	1.09
150.00	6.58	6.61	6.56	6.56	0.05	28.63	30.21	28.64	1.04	1.12	1.09	1.10	1.10	1.08
200.00	6.65	6.68	6.62	6.62	0.05	27.48	28.12	27.52	1.47	1.14	1.07	1.08	1.09	1.07
250.00	6.68	6.71	6.63	6.62	0.09	26.98	26.73	27.02	1.66	1.14	1.05	1.07	1.09	1.06
300.00	6.76	6.80	6.71	6.70	0.10	27.10	25.83	27.23	1.99	1.13	1.04	1.06	1.09	1.06
350.00	6.81	6.83	6.70	6.68	0.15	28.13	25.41	28.36	2.08	1.09	1.04	1.06	1.09	1.06
400.00	6.84	6.90	6.73	6.68	0.21	30.62	25.41	30.49	2.21	1.05	1.07	1.08	1.12	1.09
450.00	6.95	6.98	6.76	6.73	0.26	36.71	25.89	31.30	2.54	1.05	1.11	1.11	1.16	1.12
500.00	7.08	7.15	6.83	6.77	0.38	39.78	26.85	27.20	3.34	1.13	1.14	1.15	1.21	1.17

1. Total Loss = Insertion Loss + 6dB splitter loss.



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-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/terms/viewterm.html



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