



**THE DATASHEET OF
AD3PS-1+**





SURFACE MOUNT

Power Splitter/Combiner

AD3PS-1+

Mini-Circuits

3 Way-0° 50Ω 1 to 300 MHz

FEATURES

- Wideband, 1 to 300 MHz
- High Isolation, 35 dB typ.
- Good input port matching VSWR, 1.12 typ.
- Good output port matching VSWR, 1.14 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	—	300	MHz
Insertion Loss above 4.8 dB	1 - 10	—	0.3	0.8	dB
	10 - 150	—	0.4	1.0	
	150 - 300	—	0.8	1.5	
Isolation	1 - 10	23	40	—	dB
	10 - 150	20	35	—	
	150 - 300	18	27	—	
Phase Unbalance	1 - 10	—	—	1	Degree
	10 - 150	—	—	4	
	150 - 300	—	—	6	
Amplitude Unbalance	1 - 10	—	—	0.2	dB
	10 - 150	—	—	0.3	
	150 - 300	—	—	0.5	

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





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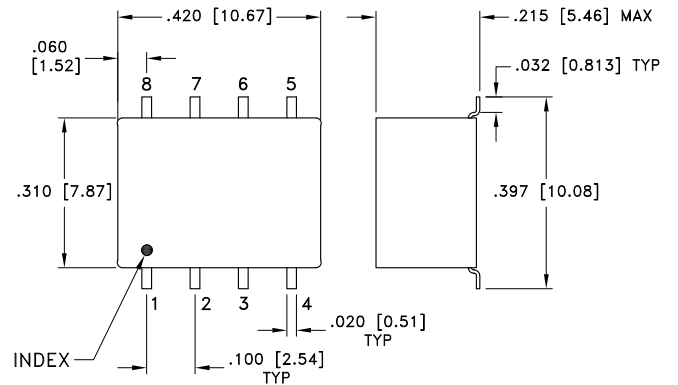
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PIN CONNECTIONS

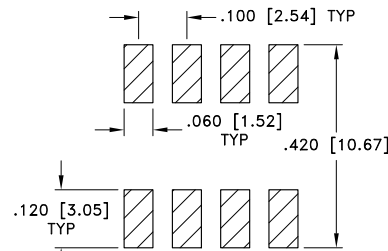
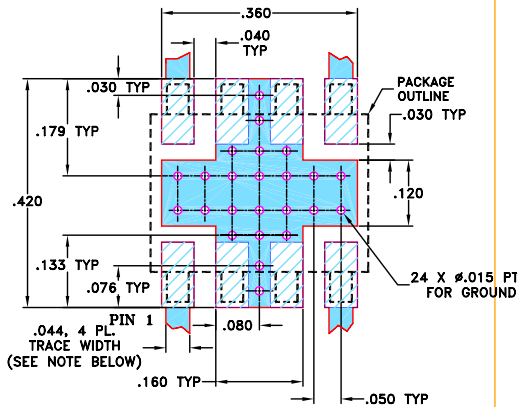
SUM PORT	1
PORT 1	8
PORT 2	5
PORT 3	4
GROUND	2,3,6,7

OUTLINE DRAWING



PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-83
SUGGESTED PCB LAYOUT (PL-063)



SUGGESTED LAYOUT FOR PCB LAND PATTERN
PATTERN TO BE WITHIN ±.002



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

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

- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350B WITH DIELECTRIC THICKNESS 0.020" ± 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

TAPE & REEL INFORMATION: F10



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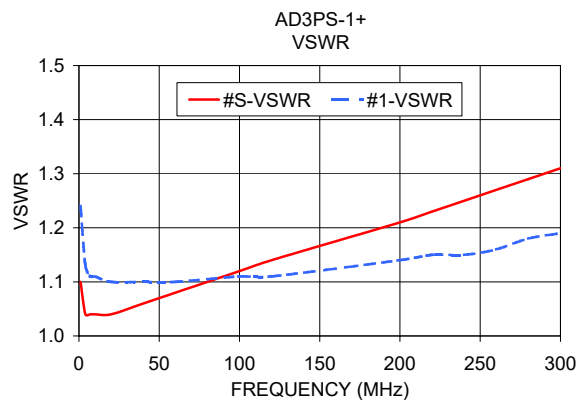
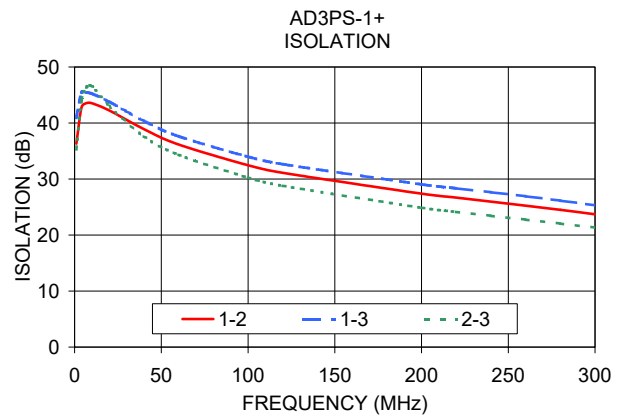
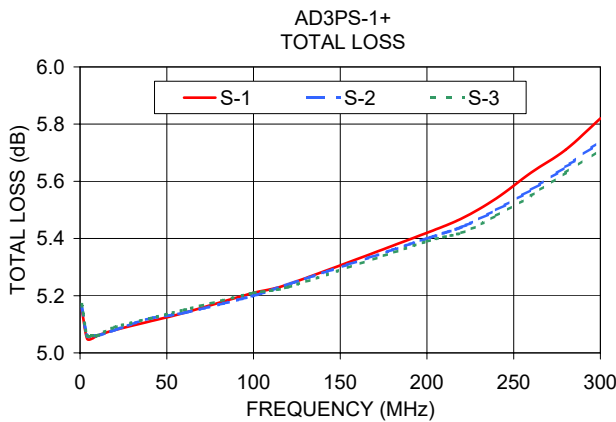
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss ¹ (dB)			Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (deg.)	VSWR (:1)			
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2	3
1.00	5.15	5.16	5.17	0.01	36.32	40.91	35.31	0.04	1.10	1.24	1.26	1.25
4.00	5.05	5.06	5.06	0.01	42.83	45.40	44.11	0.04	1.04	1.13	1.13	1.13
7.00	5.05	5.06	5.06	0.01	43.56	45.44	46.46	0.09	1.04	1.11	1.12	1.12
10.00	5.06	5.06	5.06	0.01	43.53	45.25	46.58	0.11	1.04	1.11	1.11	1.11
20.00	5.08	5.08	5.09	0.01	42.24	43.79	43.05	0.16	1.04	1.10	1.10	1.11
40.00	5.11	5.12	5.12	0.00	38.90	40.37	37.60	0.35	1.06	1.10	1.10	1.10
60.00	5.14	5.14	5.15	0.01	36.16	37.63	34.33	0.51	1.08	1.10	1.11	1.11
100.00	5.21	5.20	5.21	0.00	32.45	33.97	30.23	0.89	1.12	1.11	1.12	1.12
120.00	5.24	5.24	5.23	0.01	31.12	32.66	28.79	1.05	1.14	1.11	1.12	1.12
200.00	5.42	5.40	5.39	0.03	27.39	29.05	24.87	1.69	1.21	1.14	1.16	1.15
220.00	5.47	5.44	5.42	0.05	26.68	28.34	24.14	1.84	1.23	1.15	1.17	1.16
240.00	5.54	5.50	5.48	0.06	25.96	27.65	23.43	1.93	1.25	1.15	1.18	1.17
260.00	5.63	5.57	5.55	0.08	25.24	26.92	22.74	2.15	1.27	1.16	1.19	1.18
280.00	5.71	5.65	5.63	0.09	24.50	26.14	22.04	2.25	1.29	1.18	1.21	1.19
300.00	5.82	5.74	5.71	0.11	23.71	25.31	21.33	2.39	1.31	1.19	1.23	1.21

1. Total Loss = Insertion Loss + 4.8dB 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.
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