

Surface Mount

# Power Splitter/Combiner

## AD6PS-1+

6 Way-0° 50Ω 2 to 250 MHz



Generic photo used for illustration purposes only

CASE STYLE: CJ725

+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
13"	500

### Maximum Ratings

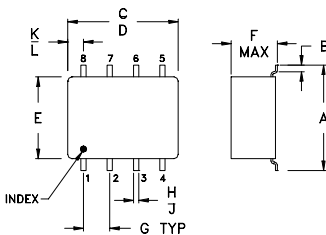
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.5W max.

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

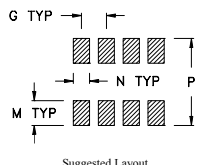
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

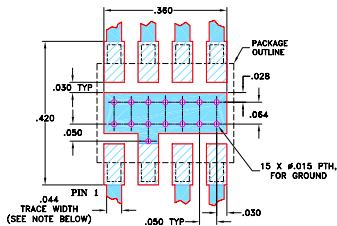


Disconnected I output

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.397	.032	.385	.435	.310	.215	.100
10.08	0.81	9.78	11.05	7.87	5.46	2.54
H	J	K	L	M	N	P
.015	.025	.035	.075	.120	.060	.420
0.38	0.64	0.89	1.91	3.05	1.52	10.67
						wt grams
						0.45

### Demo Board MCL P/N: TB-84 Suggested PCB Layout (PL-089)



NOTE: TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.020" ± 0.0015", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.

- DENOTES PCB COPPER LAYOUT
- 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

- wideband, 2 to 250 MHz
- high isolation, 30 dB typ.
- good input port matching VSWR, 1.20 typ.
- good output port matching VSWR, 1.10 typ.
- small surface mount package

### Applications

- VHF-TV

### Electrical Specifications

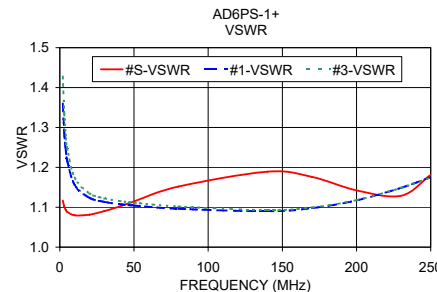
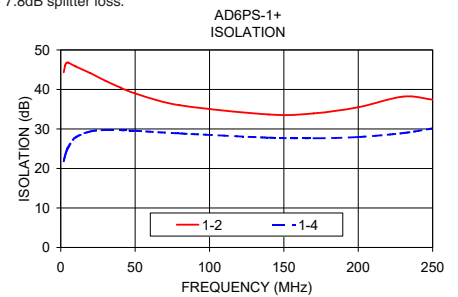
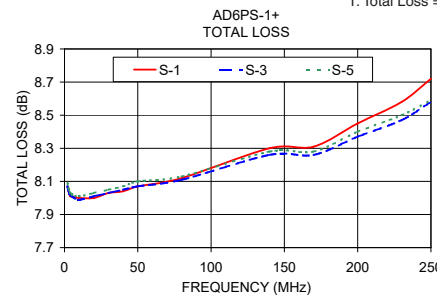
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 7.8 dB			PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)					
	L	M	U	L	M	U	L	M	U	L	M	U			
$f_c - f_u$	Typ.	Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Min.	Typ. Max.	Typ. Max.	Typ. Max.	Max.	Max.	Max.	Max.	Max.	Max.
2-250	35	17	30 20	27	20		0.2 0.6	0.2 1.0	0.6 1.5	2	6	9	0.3	0.4	0.6

L = 2-20 MHz M = 20-125 MHz U = 125-250 MHz

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)			Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbal. (deg.)	VSWR S	VSWR OUTPUTS	
	S-1	S-3	S-5		Adjacent	Opposite				
	2.00	8.07	8.07		8.09	0.02			44.32	21.86
3.00	8.03	8.03	8.05	0.02	46.13	23.38	0.15	1.10	1.33	
4.00	8.01	8.02	8.03	0.02	46.77	24.50	0.14	1.09	1.28	
5.00	8.01	8.01	8.02	0.01	46.81	25.38	0.22	1.09	1.25	
10.00	8.00	7.99	8.01	0.02	45.82	27.85	0.32	1.08	1.17	
20.00	8.00	8.01	8.03	0.03	44.12	29.38	0.52	1.08	1.13	
30.00	8.03	8.03	8.05	0.02	42.21	29.73	0.80	1.09	1.12	
40.00	8.04	8.05	8.07	0.03	40.48	29.69	0.98	1.10	1.12	
50.00	8.07	8.07	8.10	0.03	39.00	29.54	1.28	1.11	1.11	
80.00	8.12	8.11	8.13	0.03	36.01	28.87	2.03	1.15	1.10	
140.00	8.30	8.26	8.28	0.04	33.66	27.80	3.30	1.19	1.09	
170.00	8.31	8.26	8.28	0.06	33.93	27.65	3.95	1.18	1.10	
200.00	8.45	8.37	8.40	0.08	35.49	27.95	4.50	1.14	1.12	
230.00	8.58	8.47	8.50	0.11	38.19	28.94	4.94	1.13	1.15	
250.00	8.72	8.58	8.59	0.17	37.43	30.14	5.29	1.18	1.17	

1. Total Loss = Insertion Loss + 7.8dB splitter loss.



### electrical schematic



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