

# Surface Mount Power Splitter/Combiner

5 Way-0° 50Ω 1 to 400 MHz

## AD5PS-1+



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

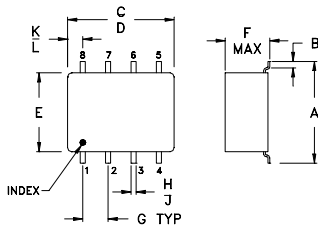
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.4W max.

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

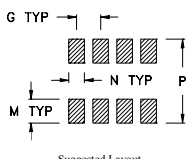
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

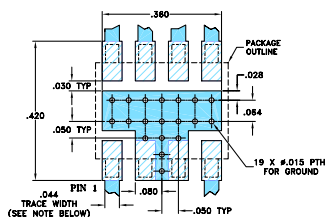


Soldered 1 point

### 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	wt
.015	.025	.035	.075	.120	.060	.420	grams
0.38	0.64	0.89	1.91	3.05	1.52	10.67	0.45

### Demo Board MCL P/N: TB-82 Suggested PCB Layout (PL-088)



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

### Features

- wideband, 1 to 400 MHz
- high isolation, 27 dB typ.
- good input port matching VSWR, 1.22 typ.
- good output port matching VSWR, 1.12 typ.
- small surface mount package

### Applications

- VHF-TV
- aircraft communications

### Electrical Specifications

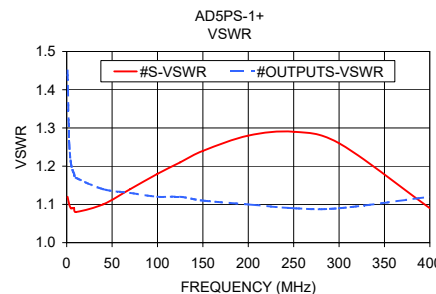
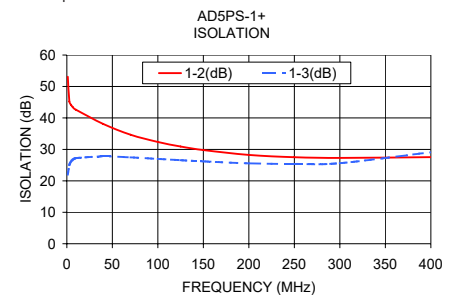
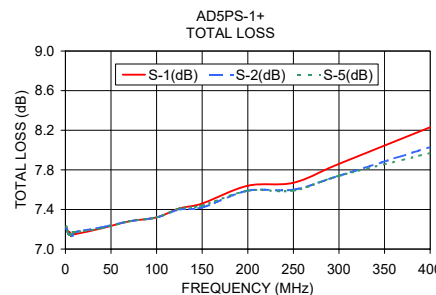
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 7.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
1-400	35	18	25	20	27	20	0.15	0.5	0.3	1.0	0.8	1.8	1	6	9	0.3	0.4	0.6

L = 1-10 MHz M = 10-200 MHz U = 200-400 MHz

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)					Amp. Unbal. (dB)	Isolation (dB)					Phase Unbal. (deg.)	VSWR S	VSWR OUTPUTS	
	S-1	S-2	S-3	S-4	S-5		1-2	1-3	2-3	3-5	4-5				
	1.00	7.22	7.21	7.23	7.21		7.23	0.02	53.10	21.98	39.65			21.51	33.16
2.80	7.18	7.16	7.15	7.16	7.16	0.03	45.24	25.05	43.27	24.73	38.07	0.13	1.10	1.26	
4.60	7.17	7.15	7.14	7.16	7.14	0.03	44.17	26.12	44.25	25.93	40.51	0.26	1.09	1.21	
6.40	7.13	7.14	7.14	7.16	7.15	0.03	43.48	26.69	44.52	26.55	41.81	0.24	1.09	1.19	
8.20	7.16	7.14	7.17	7.16	7.17	0.03	42.90	27.02	44.57	26.94	42.66	0.24	1.09	1.18	
10.00	7.15	7.17	7.14	7.16	7.17	0.03	42.60	27.25	44.11	27.17	43.01	0.17	1.08	1.17	
40.00	7.21	7.22	7.22	7.19	7.21	0.03	38.08	27.77	38.44	27.75	37.68	0.85	1.10	1.14	
70.00	7.28	7.28	7.29	7.29	7.28	0.01	34.66	27.46	34.77	27.36	33.71	1.42	1.14	1.13	
100.00	7.32	7.32	7.30	7.31	7.32	0.02	32.37	26.97	32.32	26.77	31.14	2.12	1.18	1.12	
125.00	7.41	7.40	7.40	7.41	7.41	0.02	30.92	26.57	30.86	26.33	29.64	2.27	1.21	1.12	
150.00	7.46	7.42	7.40	7.41	7.44	0.07	29.80	26.19	29.75	25.89	28.46	2.89	1.24	1.11	
200.00	7.64	7.59	7.56	7.55	7.59	0.09	28.24	25.57	28.17	25.17	26.79	3.75	1.28	1.10	
250.00	7.67	7.60	7.54	7.55	7.59	0.12	27.51	25.39	27.46	24.88	25.94	4.46	1.29	1.09	
300.00	7.86	7.74	7.69	7.69	7.74	0.18	27.29	25.61	27.29	25.03	25.56	5.14	1.26	1.09	
400.00	8.23	8.03	7.90	7.88	7.97	0.34	27.54	29.08	27.87	27.64	25.67	6.12	1.09	1.12	

1. Total Loss = Insertion Loss + 7dB splitter loss.



### electrical schematic



### Notes

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