

# Surface Mount Power Splitter/Combiner

## JS4PS-1+ JS4PS-1

4 Way-0° 50Ω 80 to 520 MHz



### Maximum Ratings

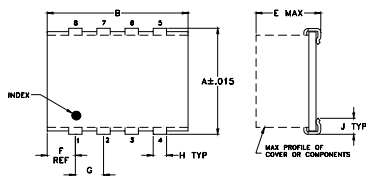
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.75W max.
Internal Dissipation	0.5W max.

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

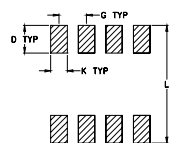
### Pin Connections

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

### Outline Drawing



#### PCB Land Pattern



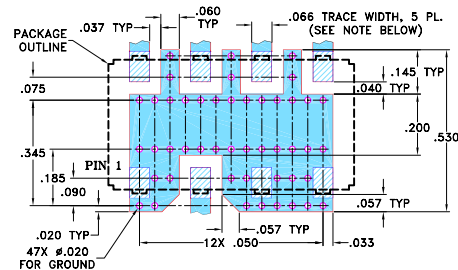
Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch mm)

A	B	C	D	E	F	G
.450	.800	--	.100	.250	.100	.200
11.43	20.32	--	2.54	6.35	2.54	5.08

H	J	K	L	wt
.047	.065	.065	.480	grams
1.19	1.65	1.65	12.19	1.7

### Demo Board MCL P/N: TB-215 Suggested PCB Layout (PL-101)



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.030" ± 0.002"; 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

### Features

- high isolation, 35 dB typ.
- good input matching, VSWR 1.2 typ.
- good output matching VSWR, 1.1 typ.
- aqueous washable
- shielded case

### Applications

- VHF/UHF
- receivers/transmitters
- instrumentation

CASE STYLE: BJ360

PRICE: \$19.95 ea. QTY. (1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

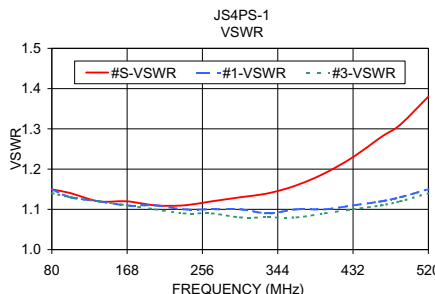
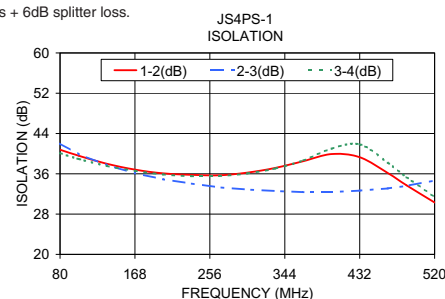
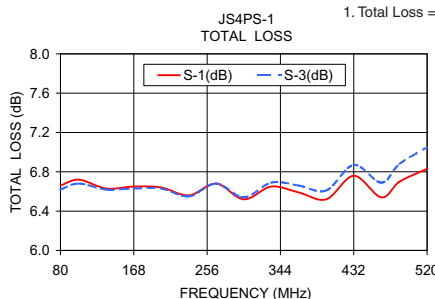
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 6.0 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_L$ - $f_U$	Typ. Min.	Typ. Max.	Max.	Max.
80-520	35 20	0.8 1.5	5	0.5

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
80.00	6.66	6.66	6.62	6.69	0.07	40.78	42.03	40.10	0.14	1.15	1.15	1.14	1.14	1.14
102.00	6.72	6.71	6.68	6.67	0.04	39.58	39.87	38.93	0.30	1.14	1.13	1.13	1.13	1.13
135.00	6.63	6.63	6.62	6.71	0.09	37.99	37.74	37.56	0.30	1.12	1.12	1.12	1.12	1.12
168.00	6.65	6.65	6.63	6.69	0.06	36.83	36.11	36.58	0.34	1.12	1.11	1.11	1.11	1.11
201.00	6.64	6.65	6.63	6.67	0.04	36.10	34.92	35.88	0.36	1.11	1.11	1.10	1.10	1.10
234.00	6.56	6.55	6.55	6.71	0.16	35.80	34.07	35.54	0.34	1.11	1.10	1.10	1.09	1.09
267.00	6.68	6.68	6.68	6.66	0.02	35.71	33.31	35.56	0.55	1.12	1.10	1.09	1.09	1.09
300.00	6.52	6.52	6.54	6.68	0.17	36.23	32.88	36.07	0.61	1.13	1.10	1.09	1.08	1.08
333.00	6.65	6.65	6.69	6.73	0.08	37.17	32.59	37.05	0.59	1.14	1.09	1.09	1.08	1.08
366.00	6.59	6.60	6.66	6.64	0.07	38.51	32.35	38.66	0.54	1.16	1.10	1.09	1.08	1.08
399.00	6.52	6.53	6.61	6.66	0.14	39.93	32.37	40.99	0.65	1.19	1.10	1.09	1.09	1.08
432.00	6.76	6.78	6.87	6.74	0.13	39.29	32.67	41.86	0.55	1.23	1.11	1.10	1.10	1.09
465.00	6.54	6.56	6.69	6.66	0.15	36.15	33.10	38.20	0.67	1.28	1.12	1.12	1.11	1.11
487.00	6.70	6.72	6.88	6.69	0.20	33.71	33.61	35.32	0.66	1.31	1.13	1.13	1.12	1.12
520.00	6.83	6.84	7.05	6.75	0.30	30.30	34.67	31.43	0.77	1.38	1.15	1.15	1.14	1.14

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



### electrical schematic



**Mini-Circuits**  
ISO 9001 ISO 14001 AS 9100 CERTIFIED  
IF/RF MICROWAVE COMPONENTS

For detailed performance specs & shipping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at [minicircuits.com](http://minicircuits.com)

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