

Surface Mount

# Power Splitter/Combiner

## JS4PS-1+ JS4PS-1

4 Way-0° 50Ω 80 to 520 MHz



Generic photo used for illustration purposes only

CASE STYLE: BJ360

+RoHS Compliant

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

### Maximum Ratings

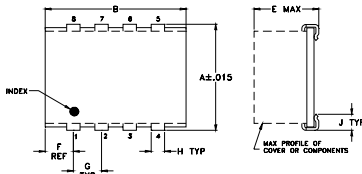
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.75W max.
Internal Dissipation	0.5W max.

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

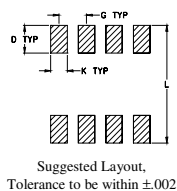
### Pin Connections

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

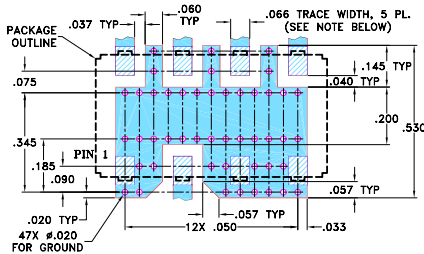
### Outline Dimensions (inch/mm)

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:
- 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.
  - 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

#### 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/WCLStore/terms.jsp](http://www.minicircuits.com/WCLStore/terms.jsp)

### 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

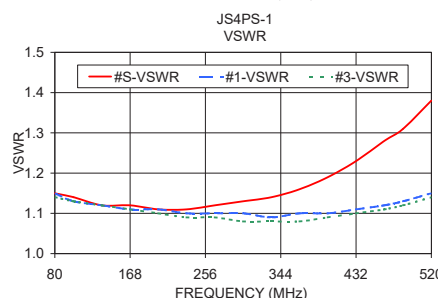
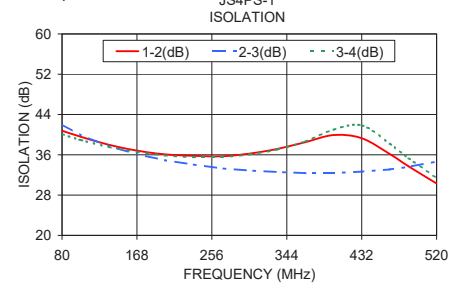
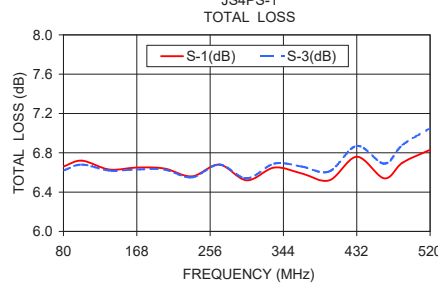
### Electrical Specifications

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

