

Surface Mount

# Power Splitter/Combiner

## LRPS-2-4J+ LRPS-2-4J

2 Way-0° 50Ω 10 to 1000 MHz



### Maximum Ratings

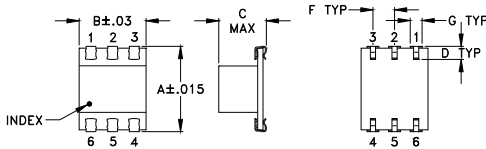
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

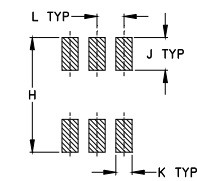
### Pin Connections

SUM PORT	6
PORT 1	4
PORT 2	3
GROUND	1
NOT USED	2,5

### Outline Drawing



### PCB Land Pattern

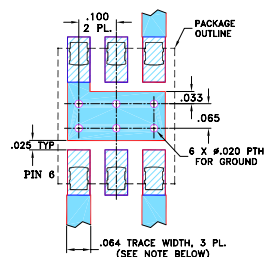


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.390	.31	.225	.060	--	.100	.045
9.91	7.87	5.72	1.52	--	2.54	1.14
H	J	K	L	M		wt
.420	.120	.060	.100	--		grams
10.67	3.05	1.52	2.54	--		0.50

Demo Board MCL P/N: TB-94  
Suggested PCB Layout (PL-058)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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

- low insertion loss, 0.4 dB typ.
- high isolation, 23 dB typ.
- aqueous washable
- J-leads for strain relief and excellent solderability

### Applications

- cellular
- instrumentation
- communications systems

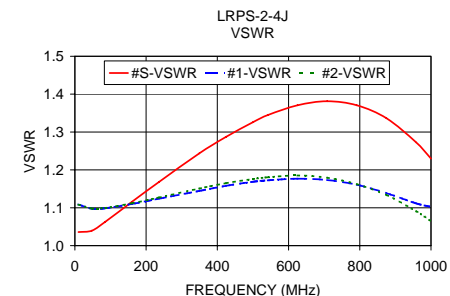
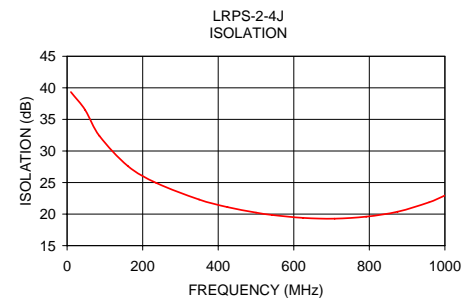
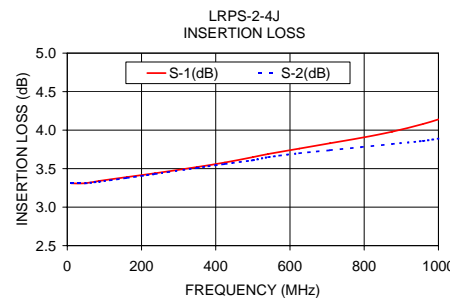
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 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.
f <sub>L</sub> -f <sub>U</sub>	25	20	23	16	19	14	0.3	0.5	0.4	0.9	0.8	1.5	1.0	3.0	5.0	0.15	0.2	0.4

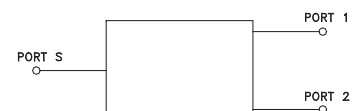
L = 10-100 MHz M = 100-500 MHz U = 500-1000 MHz

### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
10.00	3.31	3.31	0.00	39.33	0.01	1.04	1.11	1.11
47.69	3.31	3.31	0.00	36.50	0.16	1.04	1.10	1.10
85.38	3.34	3.33	0.00	32.39	0.27	1.06	1.10	1.10
160.77	3.39	3.38	0.00	27.60	0.51	1.12	1.11	1.11
236.15	3.44	3.43	0.01	24.93	0.73	1.17	1.12	1.13
349.23	3.52	3.51	0.01	22.30	1.04	1.24	1.14	1.15
424.62	3.58	3.56	0.02	21.10	1.22	1.29	1.16	1.16
500.00	3.65	3.61	0.03	20.23	1.39	1.33	1.17	1.18
541.67	3.69	3.65	0.04	19.87	1.47	1.34	1.17	1.18
625.00	3.76	3.70	0.06	19.39	1.62	1.37	1.18	1.19
708.33	3.83	3.74	0.09	19.28	1.76	1.38	1.17	1.18
791.67	3.90	3.78	0.12	19.59	1.82	1.37	1.16	1.16
875.00	3.98	3.82	0.16	20.38	1.86	1.34	1.14	1.13
958.33	4.08	3.86	0.22	21.87	1.88	1.27	1.11	1.09
1000.00	4.14	3.89	0.25	22.95	1.88	1.23	1.10	1.07



### electrical schematic



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