

# Surface Mount Power Splitter/Combiner

## LRPS-2-1+ LRPS-2-1

2 Way-0° 50Ω 5 to 500 MHz



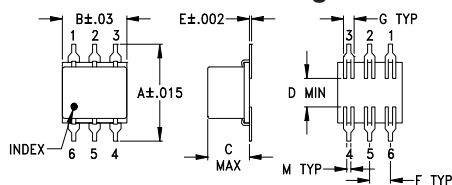
### Maximum Ratings

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.	

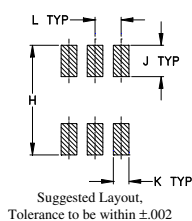
### Pin Connections

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

### Outline Drawing



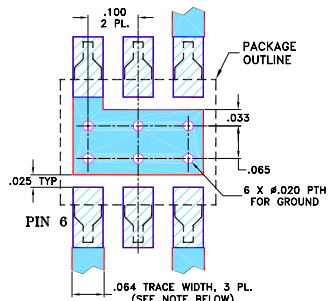
### PCB Land Pattern



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.400	.31	.200	.10	.010	.100	.050
10.16	7.87	5.08	2.54	0.25	2.54	1.27
H	J	K	L	M		wt
.420	.120	.060	.100	.020		grams
10.67	3.05	1.52	2.54	0.51		0.55

### Demo Board MCL P/N: TB-94 Suggested PCB Layout (PL-236)



- 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.  
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- low insertion loss, 0.3 dB typ.
- high isolation, 33 dB typ.

### Applications

- VHF/UHF
- instrumentation
- communications systems

CASE STYLE: QQQ130  
PRICE: \$8.95 ea. QTY. (10-49)

+ 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

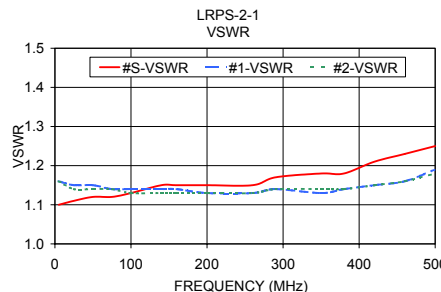
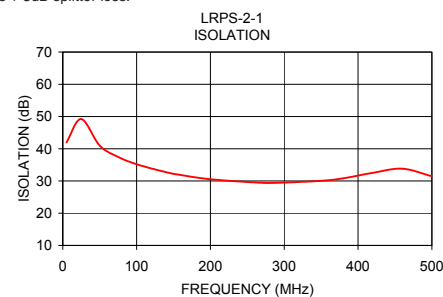
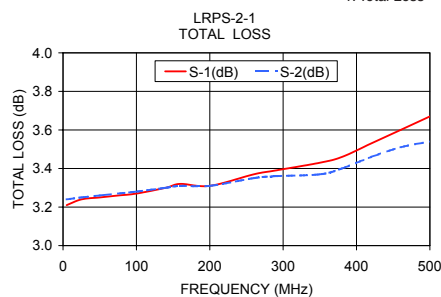
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
$f_c - f_u$	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
5-500	50	25	33	24	30	23	0.25	0.5	0.3	0.6	0.5	1.2	1.0	2.0	3.0	0.15	0.2	0.3

L = 5-50 MHz M = 50-250 MHz U = 250-500 MHz

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
5.00	3.21	3.24	0.02	41.95	0.05	1.10	1.16	1.16
25.00	3.24	3.25	0.01	49.21	0.01	1.11	1.15	1.14
50.00	3.25	3.26	0.01	40.99	0.08	1.12	1.15	1.14
75.00	3.26	3.27	0.01	37.46	0.11	1.12	1.14	1.14
100.00	3.27	3.28	0.00	35.20	0.11	1.13	1.14	1.13
140.00	3.30	3.30	0.00	32.73	0.14	1.15	1.14	1.13
160.00	3.32	3.31	0.00	31.85	0.20	1.15	1.14	1.13
200.00	3.31	3.31	0.01	30.54	0.22	1.15	1.13	1.13
260.00	3.37	3.35	0.03	29.54	0.18	1.15	1.13	1.13
290.00	3.39	3.36	0.03	29.42	0.26	1.17	1.14	1.14
350.00	3.43	3.37	0.06	30.05	0.38	1.18	1.13	1.14
380.00	3.46	3.40	0.05	30.83	0.40	1.18	1.14	1.14
420.00	3.53	3.46	0.07	32.52	0.37	1.21	1.15	1.15
460.00	3.60	3.51	0.09	33.81	0.28	1.23	1.16	1.16
500.00	3.67	3.54	0.13	31.45	0.23	1.25	1.19	1.18

1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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).

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100602