

# Surface Mount Power Splitter/Combiner

## LRPS-2-980+ LRPS-2-980

2 Way-0° 50Ω 800 to 980 MHz



### Maximum Ratings

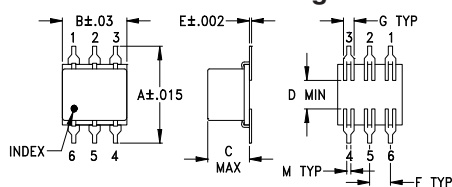
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

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

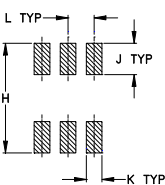
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

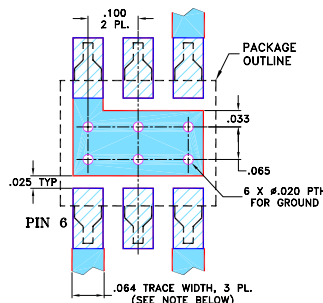


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.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.  
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
□ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- low insertion loss, 0.5 dB typ.
- high isolation, 30 dB typ.

### Applications

- cellular

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.

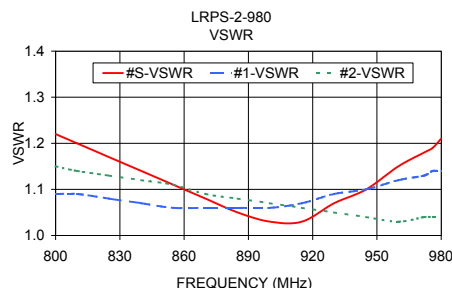
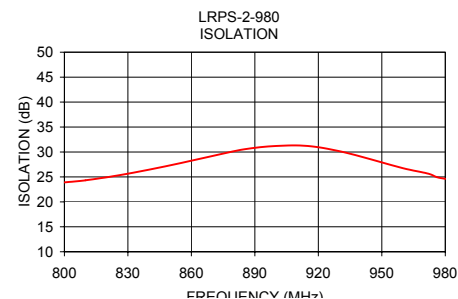
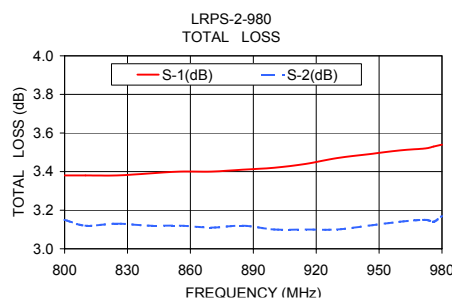
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 3.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min	Typ.	Max.	Max.	Max.
$f_c - f_u$						
800-980	30	18	0.5	1.0	3.0	0.5

### 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						
800.00	3.38	3.15	0.23	23.91	0.02	1.22	1.09	1.15
810.00	3.38	3.12	0.25	24.32	0.04	1.20	1.09	1.14
825.00	3.38	3.13	0.25	25.28	0.06	1.17	1.08	1.13
840.00	3.39	3.12	0.27	26.45	0.02	1.14	1.07	1.12
855.00	3.40	3.12	0.27	27.78	0.07	1.11	1.06	1.11
870.00	3.40	3.11	0.29	29.20	0.14	1.08	1.06	1.09
885.00	3.41	3.12	0.29	30.54	0.41	1.05	1.06	1.08
900.00	3.42	3.10	0.32	31.21	0.63	1.03	1.06	1.07
915.00	3.44	3.10	0.34	31.21	0.69	1.03	1.07	1.06
930.00	3.47	3.10	0.37	30.16	0.91	1.07	1.09	1.05
945.00	3.49	3.12	0.37	28.51	1.01	1.10	1.10	1.04
960.00	3.51	3.14	0.38	26.75	1.14	1.15	1.12	1.03
972.00	3.52	3.15	0.38	25.64	1.36	1.18	1.13	1.04
976.00	3.53	3.14	0.40	24.96	1.31	1.19	1.14	1.04
980.00	3.54	3.17	0.38	24.61	1.50	1.21	1.14	1.04

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



### electrical schematic



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

For detailed performance specs  
& shopping online see web site

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REV. A  
M127604  
LRPS-2-980  
ED-2213  
DJ/TD/CP/AM  
100602