

# Surface Mount Power Splitter/Combiner

3 Way-0° 50Ω 10 to 300 MHz

LRPS-3-1J+  
LRPS-3-1J



CASE STYLE: QQQ569  
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.

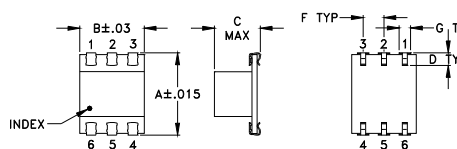
## Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.375W max.
Permanent damage may occur if any of these limits are exceeded.	

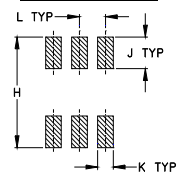
## Pin Connections

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

## Outline Drawing



### PCB Land Pattern

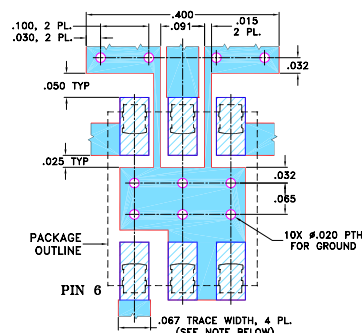


Suggested Layout,  
Tolerance to be within ±.002

## 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-225 Suggested PCB Layout (PL-170)



- 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, 0.3 dB typ.
- good isolation, 25 dB typ.
- aqueous washable
- J-leads for strain relief & excellent solderability

## Applications

- VHF
- defense & federal communications

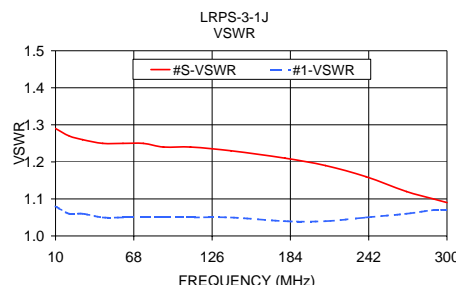
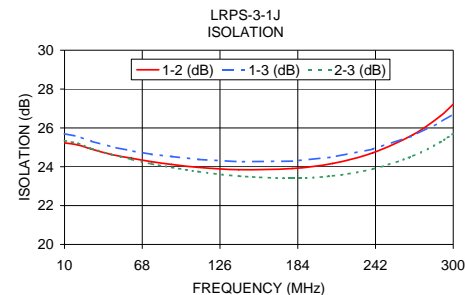
## Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 4.8 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.
10-300	25	20	25	20	25	20	0.2	0.6	0.3	0.8	0.5	1.2	2	3	4	0.1	0.3	0.7

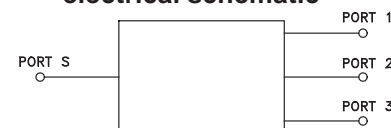
L = low range [ $f_L$  to  $10 f_L$ ] M = mid range [ $10 f_L$  to  $f_U/2$ ] U = upper range [ $f_U/2$  to  $f_U$ ]

## Typical Performance Data

Freq. (MHz)	Insertion Loss (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3
	S-1	S-2	S-3		1-2	1-3	2-3					
10.00	5.09	5.10	5.10	0.01	25.23	25.70	25.35	0.12	1.29	1.08	1.09	1.08
20.00	5.09	5.10	5.10	0.01	25.12	25.56	25.20	0.21	1.27	1.06	1.07	1.07
30.00	5.09	5.10	5.10	0.01	24.91	25.32	24.94	0.31	1.26	1.06	1.06	1.06
45.00	5.09	5.10	5.10	0.01	24.63	25.03	24.63	0.42	1.25	1.05	1.06	1.06
60.00	5.10	5.12	5.11	0.01	24.44	24.82	24.38	0.58	1.25	1.05	1.06	1.06
75.00	5.12	5.13	5.13	0.01	24.26	24.64	24.15	0.69	1.25	1.05	1.05	1.06
90.00	5.13	5.14	5.14	0.01	24.12	24.53	23.97	0.82	1.24	1.05	1.05	1.06
110.00	5.15	5.17	5.17	0.01	23.97	24.38	23.75	1.00	1.24	1.05	1.05	1.06
140.00	5.20	5.21	5.21	0.02	23.85	24.26	23.52	1.18	1.23	1.05	1.05	1.06
180.00	5.26	5.28	5.27	0.02	23.91	24.29	23.41	1.48	1.21	1.04	1.04	1.06
210.00	5.31	5.33	5.31	0.02	24.17	24.50	23.53	1.70	1.19	1.04	1.04	1.06
240.00	5.37	5.40	5.38	0.03	24.72	24.91	23.89	1.84	1.16	1.05	1.04	1.06
270.00	5.44	5.47	5.44	0.03	25.65	25.60	24.56	2.00	1.12	1.06	1.05	1.06
290.00	5.49	5.52	5.49	0.03	26.59	26.28	25.26	2.06	1.10	1.07	1.05	1.06
300.00	5.53	5.55	5.52	0.04	27.22	26.71	25.71	2.09	1.09	1.07	1.06	1.06



## electrical schematic



**Mini-Circuits**  
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