

Surface Mount Power Splitter/Combiner

2 Way-0° 75Ω 2 to 500 MHz

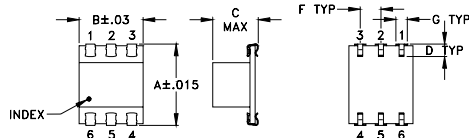
Maximum Ratings

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.

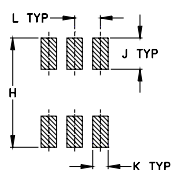
Pin Connections

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

Outline Drawing



PCB Land Pattern



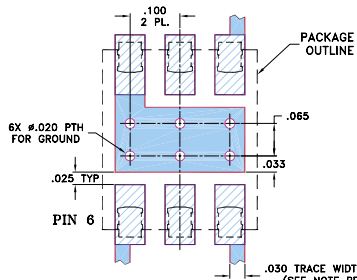
Suggested Layout,
Tolerance to be within ±.002

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-221 Suggested PCB Layout (PL-109)



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, 0.35 dB typ.
- high isolation, 35 dB typ.
- aqueous washable
- J-leads for strain relief and excellent solderability

Applications

- VHF/UHF
- CATV
- communications systems

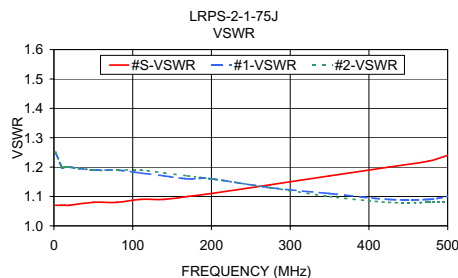
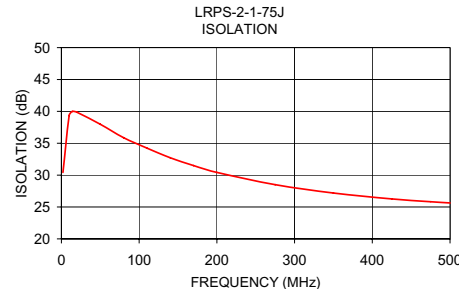
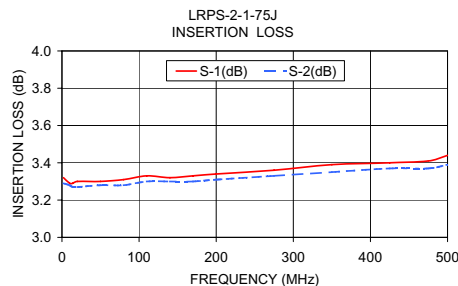
Splitter Electrical Specifications

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	
f _L -f _U	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
2-500	35	18	35	25	27	20	0.3	0.8	0.35	0.6	0.5	1.0	1.0	2.0	3.0	0.15	0.2	0.3

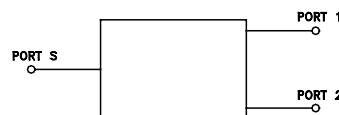
L = 2-20 MHz M = 20-250 MHz U = 250-500 MHz

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						
2.00	3.32	3.29	0.03	30.42	0.05	1.07	1.25	1.25
10.00	3.29	3.28	0.01	39.35	0.00	1.07	1.20	1.20
14.00	3.29	3.27	0.03	39.99	0.01	1.07	1.20	1.20
20.00	3.30	3.27	0.02	39.87	0.05	1.07	1.20	1.20
50.00	3.30	3.28	0.02	37.98	0.01	1.08	1.19	1.19
80.00	3.31	3.28	0.03	35.87	0.11	1.08	1.19	1.19
110.00	3.33	3.30	0.03	34.24	0.17	1.09	1.18	1.19
140.00	3.32	3.30	0.03	32.73	0.18	1.09	1.17	1.18
170.00	3.33	3.30	0.03	31.50	0.24	1.10	1.16	1.17
200.00	3.34	3.31	0.03	30.43	0.22	1.11	1.16	1.16
275.00	3.36	3.33	0.03	28.50	0.38	1.14	1.13	1.13
350.00	3.39	3.35	0.04	27.19	0.40	1.17	1.11	1.10
425.00	3.40	3.37	0.03	26.27	0.49	1.20	1.09	1.08
475.00	3.41	3.37	0.04	25.83	0.48	1.22	1.09	1.08
500.00	3.44	3.39	0.05	25.63	0.49	1.24	1.10	1.08



electrical schematic



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