

# NON-CATALOG

## Surface Mount Power Splitter/Combiner

### SCP-4-122-75+

4 Way-0° 75Ω 5 to 1250 MHz



CASE STYLE: YY161

#### Features

- wideband, 5 to 1250 MHz
- high isolation, 25 dB typ
- excellent amplitude unbalance, 0.4 dB typ.

#### Applications

- DOCSIS® 3.1 Systems
- cellular
- CATV
- receivers/transmitters

**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

**Available Tape and Reel at no extra cost**

Reel Size	Devices/Reel
13"	500

#### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1250	MHz
Insertion Loss, above 6.0 dB	5-100	—	0.6	1.0	dB
	100-1000	—	1.1	1.9	
Isolation	1000-1250	—	2.0	2.9	dB
	5-1000	16	25	—	
Phase Unbalance	1000-1250	14	18	—	dB
	5-100	—	1.0	3.0	
Amplitude Unbalance	100-1000	—	6.0	12.0	Degree
	1000-1250	—	9.0	16.0	
VSWR (Port S)	5-1000	—	0.5	0.9	dB
	1000-1250	—	0.9	1.5	
VSWR (Port 1 - 4)	5-1000	—	1.22	1.32	:1
	1000-1250	—	1.28	1.49	
VSWR (Port 1 - 4)	5-1000	—	1.28	1.57	:1
	1000-1250	—	1.57	2.32	

#### Maximum Ratings

Parameter	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.

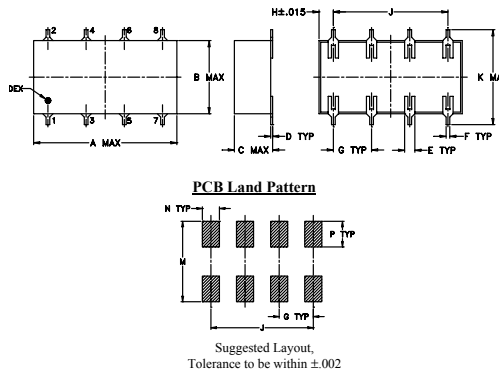
#### Pin Connections

Function	Pin Number
SUM PORT	3
PORT 1	2
PORT 2	4
PORT 3	6
PORT 4	8
GND	1,5,7

#### Electrical Schematic



### Outline Drawing



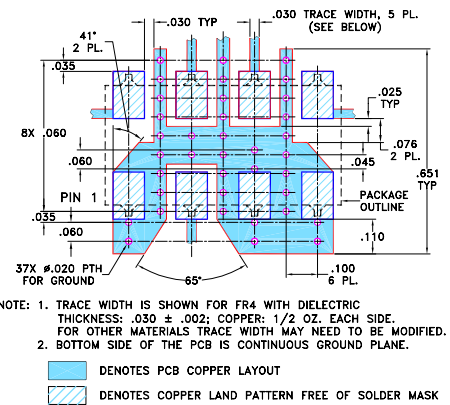
### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

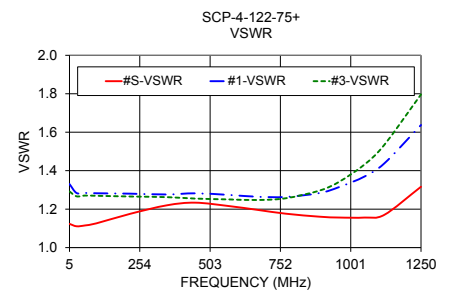
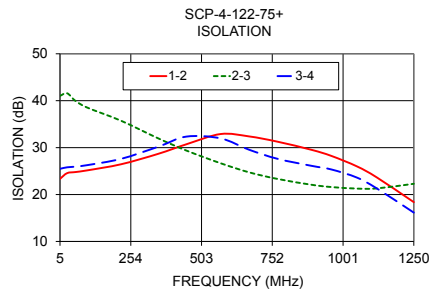
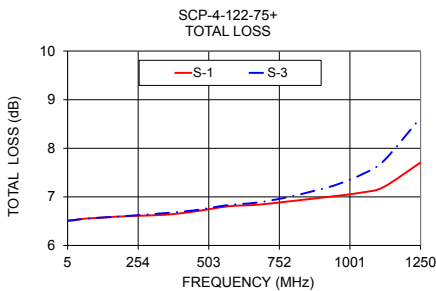
### Demo Board MCL P/N: TB-184 Suggested PCB Layout (PL-175)



### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
5	6.51	6.52	6.51	6.51	0.01	23.35	41.04	25.49	0.04	1.12	1.33	1.33	1.29	1.29
30	6.53	6.52	6.52	6.52	0.01	24.56	41.58	25.80	0.21	1.11	1.28	1.28	1.27	1.26
60	6.55	6.55	6.55	6.55	0.00	24.80	39.92	25.94	0.43	1.12	1.28	1.29	1.27	1.27
100	6.57	6.57	6.56	6.57	0.01	25.14	38.55	26.26	0.69	1.13	1.28	1.29	1.27	1.27
220	6.60	6.62	6.61	6.61	0.02	26.46	35.72	27.61	1.54	1.18	1.28	1.29	1.27	1.27
350	6.63	6.69	6.67	6.67	0.06	28.67	31.99	30.18	2.29	1.22	1.28	1.29	1.26	1.28
450	6.70	6.77	6.72	6.72	0.07	30.72	29.37	32.35	2.87	1.23	1.28	1.29	1.25	1.28
570	6.80	6.90	6.83	6.83	0.10	32.89	26.67	31.97	3.65	1.22	1.27	1.28	1.25	1.29
670	6.84	6.97	6.88	6.86	0.13	32.39	24.74	29.56	4.45	1.20	1.26	1.28	1.25	1.29
770	6.90	7.08	6.98	6.95	0.19	31.27	23.33	27.62	5.21	1.18	1.26	1.30	1.26	1.30
890	6.98	7.24	7.15	7.09	0.26	29.53	22.08	26.12	6.22	1.16	1.28	1.33	1.30	1.34
960	7.02	7.34	7.26	7.19	0.31	28.23	21.60	25.34	6.90	1.16	1.31	1.36	1.34	1.39
1050	7.10	7.49	7.48	7.37	0.40	26.00	21.27	23.61	7.81	1.16	1.37	1.42	1.43	1.48
1120	7.20	7.66	7.74	7.59	0.54	23.64	21.31	21.29	8.47	1.17	1.44	1.50	1.53	1.59
1250	7.71	8.31	8.63	8.39	0.92	18.38	22.30	16.15	9.57	1.32	1.64	1.68	1.80	1.85

1. Total Loss = Insertion Loss + 6dB splitter loss.



### Additional Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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