

Power Splitter/Combiner

SCP-4-4-75+

4 Way-0° 75Ω

10 to 1000 MHz

Maximum Ratings

Operating Temperature -40°C to 85°C

<u>Storage Temperature</u>	-55°C to 100°C
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Power Input (as a splitter) 1W max.

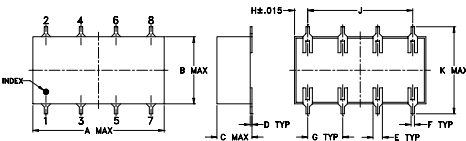
Internal Dissipation	0.375W max.
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Permanent damage may occur if any of these limits are exceeded

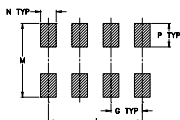
Pin Connections

SUM PORT	3
PORT 1	2
PORT 2	4
PORT 3	6
PORT 4	8
GROUND	1,5,7

Outline Drawing



PCB Land Pattern

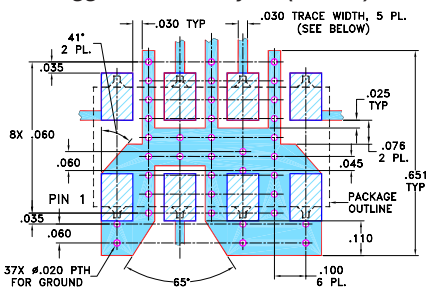


Suggested Layout,
Tolerance to be within $\pm.002$

Outline Dimensions (inch)

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)



NOTE: 1. TRACE WIDTH IS SHOWN FOR FR4 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 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Notes

A. 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.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Features

- wideband, 10 to 1000 MHz
- high isolation, 32 dB typ
- excellent amplitude unbalance, 0.4 dB typ.

Applications

- cellular
- CATV
- receivers/transmitters



CASE STYLE: YY161

+RoHS Compliant

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

Electrical Specifications

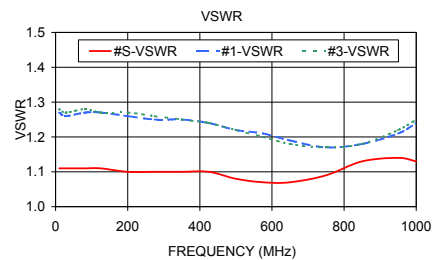
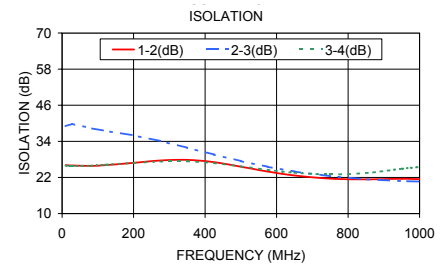
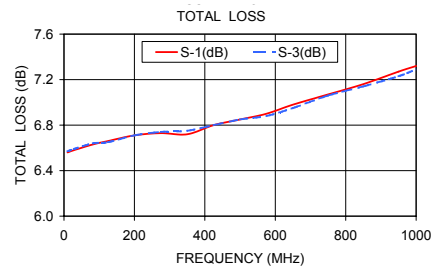
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 6 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
f _l -f _u	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
10-1000	36	20	32	18	24	14	0.5	1.0	0.65	1.3	0.8	2.0	3	6	12	0.2	0.4	0.9

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)	Total Loss' (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR	VSWR	VSWR	VSWR	VSWR
	S-1	S-2	S-3	S-4		S	1	2		3	4			
10.00	6.56	6.48	6.57	6.50	0.09	26.09	39.05	25.95	0.09	1.11	1.27	1.27	1.28	1.28
28.00	6.58	6.51	6.59	6.53	0.08	25.99	39.79	25.80	0.07	1.11	1.26	1.26	1.27	1.27
82.00	6.63	6.56	6.64	6.58	0.08	25.86	38.34	25.94	0.11	1.11	1.27	1.27	1.28	1.26
125.00	6.66	6.58	6.65	6.58	0.08	26.12	37.42	26.25	0.20	1.11	1.27	1.27	1.27	1.26
200.00	6.71	6.64	6.71	6.63	0.08	26.87	35.99	26.84	0.20	1.10	1.26	1.27	1.27	1.26
275.00	6.73	6.67	6.74	6.63	0.11	27.64	34.09	27.28	0.26	1.10	1.25	1.26	1.26	1.25
350.00	6.72	6.68	6.75	6.65	0.10	27.84	31.86	27.36	0.27	1.10	1.25	1.26	1.25	1.24
425.00	6.80	6.77	6.80	6.68	0.13	27.09	29.59	26.76	0.34	1.10	1.24	1.25	1.24	1.22
500.00	6.85	6.82	6.85	6.71	0.15	25.59	27.43	25.69	0.37	1.08	1.22	1.24	1.22	1.21
575.00	6.90	6.89	6.88	6.73	0.17	23.96	25.56	24.52	0.52	1.07	1.21	1.22	1.20	1.19
650.00	6.98	6.99	6.95	6.78	0.22	22.67	23.98	23.58	0.59	1.07	1.19	1.21	1.18	1.17
750.00	7.07	7.14	7.06	6.85	0.29	21.62	22.43	23.02	0.94	1.09	1.17	1.20	1.17	1.15
850.00	7.16	7.28	7.14	6.89	0.39	21.38	21.37	23.46	1.76	1.13	1.18	1.22	1.18	1.15
950.00	7.27	7.45	7.23	6.92	0.52	21.57	20.80	24.89	2.57	1.14	1.21	1.26	1.22	1.17
1000.00	7.32	7.55	7.29	6.96	0.59	21.44	20.64	25.48	3.07	1.13	1.24	1.29	1.25	1.21

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



Electrical Schematic

