

Surface Mount

Power Splitter/Combiner

SCPA-8-13-75+

8 Way-0° 75Ω 5 to 1000 MHz

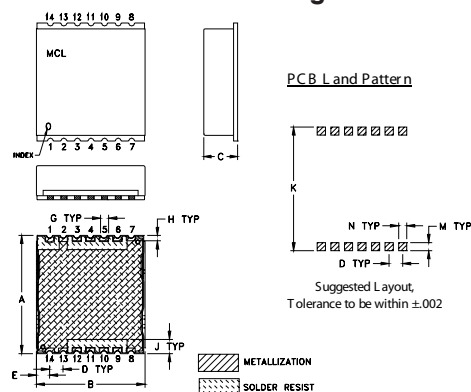
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.875W max.
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
PORT 3	5
PORT 4	6
PORT 5	9
PORT 6	10
PORT 7	11
PORT 8	12
GROUND	2,7,8,13,14

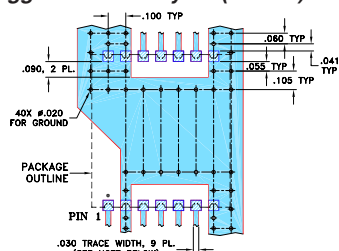
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
.870	.800	.250	.100	.097	-	.060	.040
22.10	20.32	6.35	2.54	2.46	-	1.52	1.02
J	K	L	M	N	P	wt	
.105	.910	-	.060	.060	-	grams	
2.67	23.11	-	1.52	1.52	-	2.85	

Demo Board MCL P/N: TB-487+ Suggested PCB Layout (PL-295)



- NOTE: 1. TRACE WIDTH IS SHOWN FOR OAK-602 WITH DIELECTRIC THICKNESS .022" ± .0015"; 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

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, 5 to 1000 MHz
- good isolation, 25 dB typ.
- aqueous washable
- shielded metal case

Applications

- VHF/UHF
- CATV
- instrumentation
- cellular



CASE STYLE: HU1371
PRICE: \$59.95 ea. QTY. (1-9)

+RoHS Compliant

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

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1000	MHz
Insertion Loss (above theoretical 9.0 dB)	5 - 50	—	0.9	1.5	dB
	50 - 500	—	1.6	2.5	
	500 - 1000	—	2.6	3.5	
Isolation	5 - 50	25	30	—	dB
	50 - 500	15	20	—	
	500 - 1000	15	20	—	
Phase Unbalance	5 - 50	—	0.7	8.0	Degree
	50 - 500	—	5.0	9.0	
	500 - 1000	—	9.0	10.0	
Amplitude Unbalance	5 - 50	—	0.1	0.3	dB
	50 - 500	—	0.4	0.8	
	500 - 1000	—	0.8	2.0	
VSWR (Port S)	5 - 50	—	1.4	—	:1
	50 - 500	—	1.3	—	
	500 - 1000	—	1.5	—	
VSWR (Port 1-8)	5 - 50	—	1.3	—	:1
	50 - 500	—	1.2	—	
	500 - 1000	—	1.4	—	

Electrical Schematic



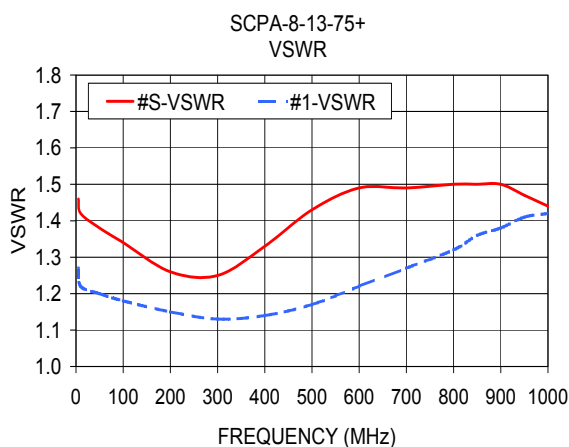
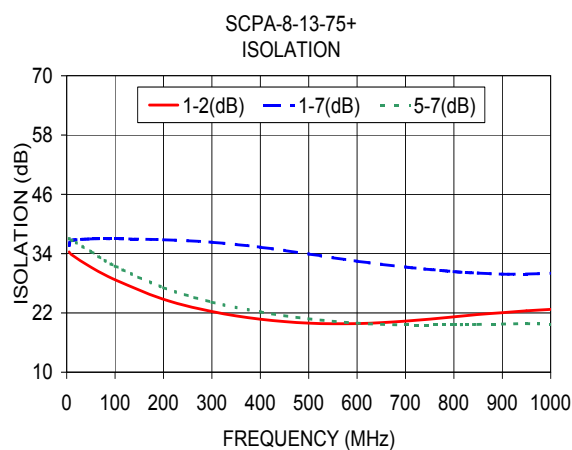
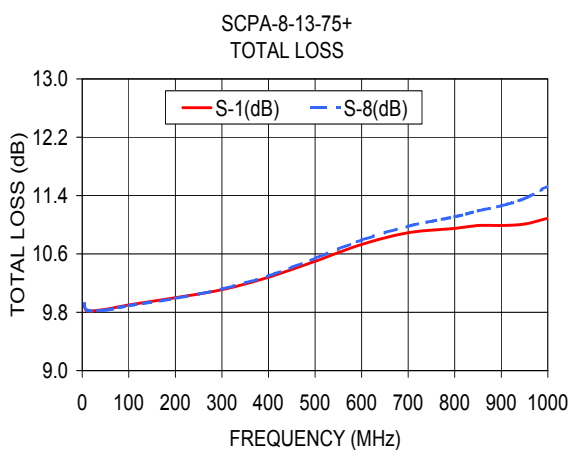
REV. OR
M122074
ED-13425/1
SCPA-8-13-75+
WZ/CP/AM
141009



Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)						Ampl. Unbl. (dB)	Isolation (dB)				Phase Unbl. (deg.)	VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7				
5.00	9.90	9.90	9.90	9.91	9.92	9.92	0.02	34.37	35.64	34.45	37.06	0.14	1.46	1.27	1.27
10.00	9.82	9.81	9.82	9.82	9.83	9.83	0.02	33.79	36.66	33.56	36.77	0.12	1.42	1.22	1.22
50.00	9.84	9.84	9.84	9.84	9.84	9.83	0.01	31.27	36.97	31.29	34.40	0.35	1.38	1.20	1.20
100.00	9.90	9.89	9.90	9.89	9.89	9.89	0.01	28.71	37.01	28.71	31.47	0.79	1.34	1.18	1.18
200.00	10.00	9.98	9.98	9.95	9.99	9.99	0.04	24.77	36.81	24.71	27.11	1.62	1.26	1.15	1.14
300.00	10.11	10.08	10.08	10.03	10.11	10.12	0.09	22.28	36.30	22.15	24.19	2.32	1.25	1.13	1.11
400.00	10.28	10.24	10.23	10.14	10.28	10.30	0.17	20.74	35.30	20.52	22.21	2.94	1.33	1.14	1.11
500.00	10.50	10.44	10.42	10.31	10.48	10.54	0.23	19.94	33.93	19.72	20.82	3.45	1.43	1.17	1.15
600.00	10.73	10.64	10.58	10.49	10.68	10.79	0.30	19.83	32.47	19.67	19.94	3.92	1.49	1.22	1.21
700.00	10.89	10.77	10.72	10.65	10.88	10.98	0.32	20.34	31.29	20.52	19.57	4.40	1.49	1.27	1.28
800.00	10.95	10.83	10.77	10.77	11.04	11.11	0.34	21.22	30.36	22.23	19.60	4.86	1.50	1.32	1.35
850.00	10.99	10.87	10.76	10.83	11.08	11.19	0.43	21.69	30.07	23.37	19.68	5.23	1.50	1.36	1.38
900.00	10.99	10.89	10.77	10.87	11.15	11.26	0.50	22.06	29.84	24.47	19.75	5.61	1.50	1.38	1.41
950.00	11.01	10.92	10.79	10.92	11.25	11.36	0.56	22.44	29.87	25.39	19.85	6.16	1.47	1.41	1.44
1000.00	11.09	11.01	10.81	11.01	11.36	11.53	0.72	22.72	30.03	26.02	19.73	6.85	1.44	1.42	1.47

1. Total Loss = Insertion Loss + 9dB splitter theoretical loss.



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