Surface Mount

Power Splitter/Combiner

SCPA-8-13-75+

8 Way-0° 75Ω 5 to 1000 MHz

CASE STYLE: HU1371

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

Features

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

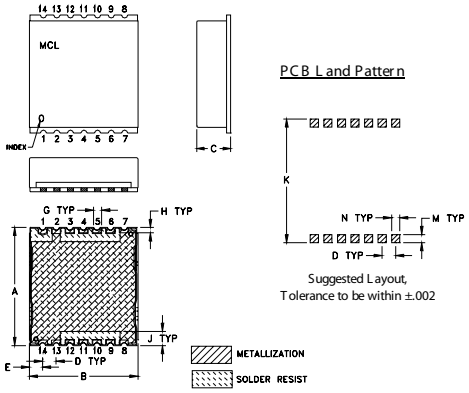
Applications

- VHF/UHF
- CATV
- instrumentation
- cellular

+RoHS Compliant

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

Outline Drawing

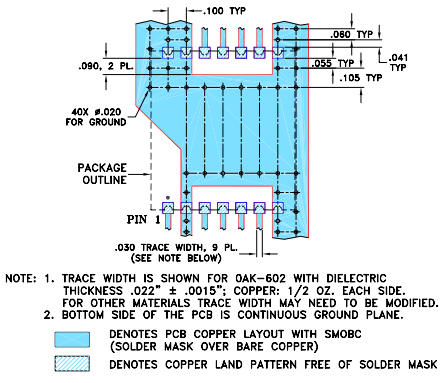


Outline Dimensions (inch / mm)

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.

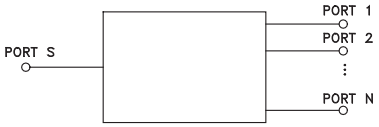
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

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



Notes

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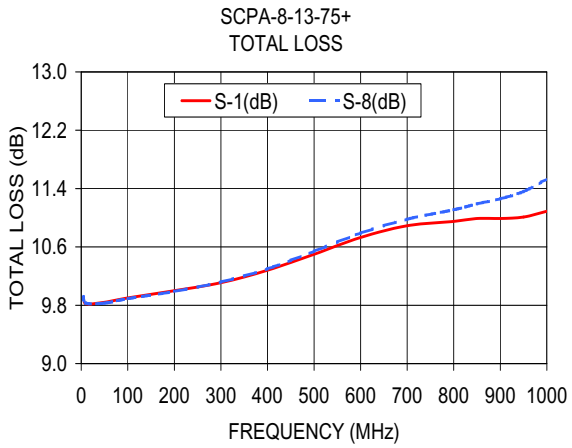
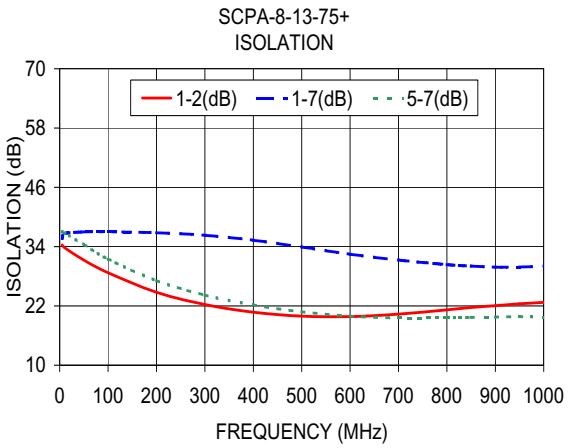
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

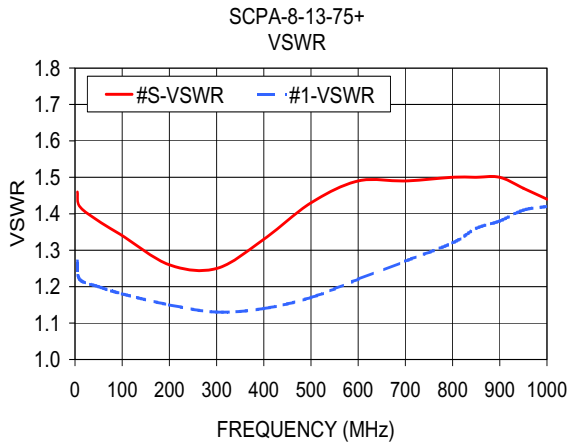
Typical Performance Data

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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