

Power Splitter/Combiner

SEPS-8-272+

8 Way-0° 50Ω 700 to 2700 MHz

Maximum Ratings

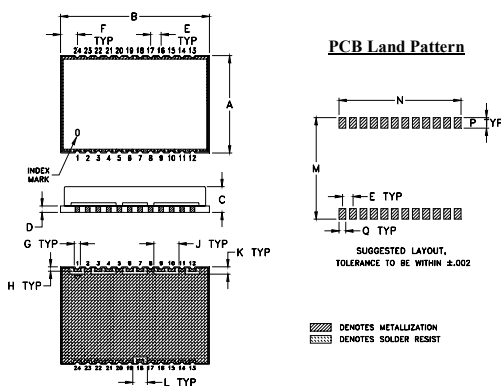
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	5W max.
Internal Dissipation	0.5W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	18
PORT 1	1
PORT 2	3
PORT 3	4
PORT 4	6
PORT 5	7
PORT 6	9
PORT 7	10
PORT 8	12
GROUND	all others

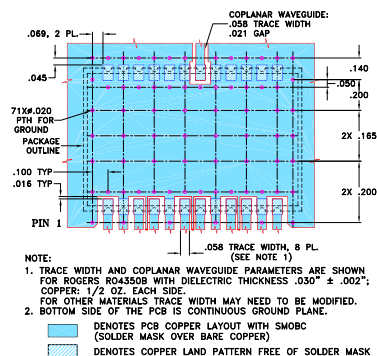
Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
.93	1.42	.25	.063	.100	.160	.060	.040
23.62	36.07	6.35	1.60	2.54	4.06	1.52	1.02
J	K	L	M	N	P	Q	wt
.240	.070	.140	.970	1.165	.100	.065	grams
6.10	1.78	3.56	24.64	29.59	2.54	1.65	6.5

Demo Board MCL P/N: TB-583+ Suggested PCB Layout (PL-388)



- NOTE:
- TRACE WIDTH AND COPLANAR WAVEGUIDE PARAMETERS ARE 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.
 - 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

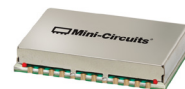
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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

- good isolation, 20 dB typ.
- good output matching, VSWR 1.35 typ.
- shielded case
- aqueous washable
- good coplanarity

Applications

- cellular
- ISM
- CATV
- GPS
- PCS
- wireless communication system



CASE STYLE: BL1543

+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		700		2700	MHz
Insertion Loss (above theoretical 9.0 dB)	900-2400 700-2700	— —	1.8 2.8	2.8 4.9	dB
Isolation	900-2400 700-2700	14 10	20 14	— —	dB
Phase Unbalance	900-2400 700-2700	— —	7.0 10	16 19	Degree
Amplitude Unbalance	900-2400 700-2700	— —	0.6 1.2	1.2 2.1	dB
VSWR (Port S)	900-2400 700-2700	— —	1.7 1.7	— —	:1
VSWR (Port 1-8)	900-2400 700-2700	— —	1.35 1.35	— —	:1

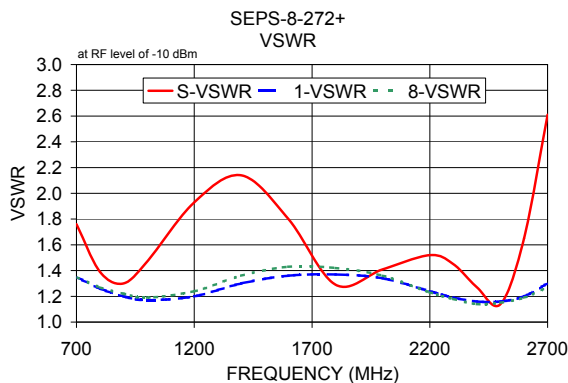
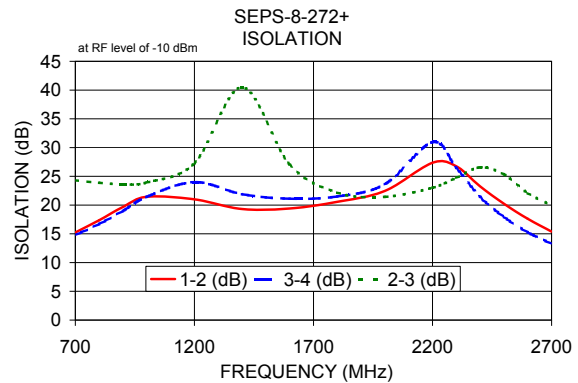
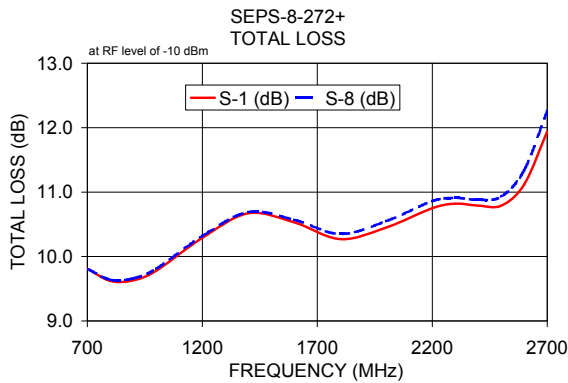
Electrical Schematic



Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)						Amplitude Unbalance (dB)	Isolation (dB)				Phase Unbalance (deg.)	S	VSWR	
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	2-3	3-4	5-6			1	8
700	9.81	9.85	9.82	9.85	9.77	9.81	0.08	15.23	24.31	14.78	14.44	2.83	1.76	1.35	1.35
800	9.62	9.66	9.64	9.69	9.60	9.64	0.09	17.37	23.87	16.70	16.28	3.30	1.39	1.26	1.27
900	9.63	9.68	9.65	9.71	9.62	9.66	0.09	19.67	23.63	18.97	18.45	3.80	1.30	1.20	1.22
1000	9.78	9.83	9.79	9.87	9.77	9.81	0.10	21.44	23.93	21.44	20.79	4.37	1.47	1.17	1.19
1200	10.29	10.34	10.25	10.35	10.23	10.32	0.13	20.99	27.25	24.01	23.62	5.37	1.93	1.20	1.24
1400	10.67	10.73	10.53	10.65	10.52	10.69	0.20	19.31	40.50	21.89	21.86	5.81	2.14	1.30	1.36
1600	10.53	10.60	10.38	10.52	10.35	10.57	0.25	19.40	27.02	21.11	21.14	5.55	1.80	1.36	1.43
1800	10.27	10.35	10.21	10.35	10.15	10.35	0.25	20.57	22.16	21.49	21.62	5.16	1.29	1.37	1.42
2000	10.45	10.50	10.42	10.54	10.34	10.55	0.28	22.47	21.42	23.62	23.69	4.93	1.41	1.34	1.36
2200	10.75	10.78	10.63	10.78	10.59	10.86	0.33	27.36	23.01	30.95	33.18	5.67	1.52	1.24	1.23
2300	10.82	10.83	10.69	10.87	10.66	10.91	0.36	26.73	24.76	26.46	28.78	6.07	1.45	1.19	1.18
2400	10.79	10.77	10.73	10.94	10.71	10.88	0.47	23.25	26.56	21.43	22.87	7.25	1.27	1.16	1.14
2500	10.79	10.75	10.90	11.13	10.91	10.93	0.68	20.22	25.34	17.94	19.08	8.51	1.14	1.16	1.15
2600	11.12	11.05	11.44	11.68	11.50	11.34	0.92	17.62	22.07	15.26	16.23	9.50	1.65	1.20	1.19
2700	11.94	11.83	12.47	12.70	12.61	12.26	1.22	15.38	19.96	13.28	14.14	10.63	2.61	1.30	1.27

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



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

