

Power Splitter/Combiner

SEPS-4-272+

4 Way-0° 50Ω 690 to 2700 MHz

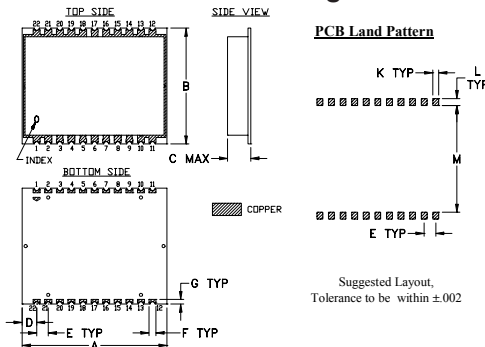
Maximum Ratings

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.
DC Current	1A (250 mA for each port)
Permanent damage may occur if any of these limits are exceeded.	

Pin Connections

SUM PORT	17
PORT 1	3
PORT 2	5
PORT 3	7
PORT 4	9
GROUND	all others

Outline Drawing

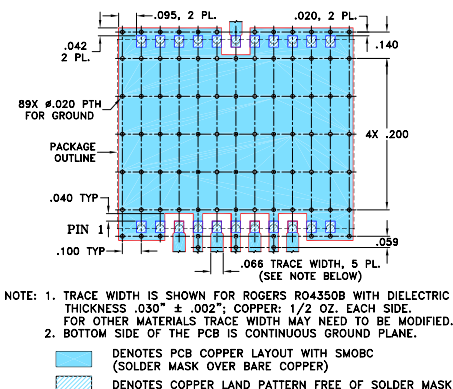


Outline Dimensions (inch mm)

A	B	C	D	E	F	G
1.250	1.000	.200	.125	.100	.060	.040
31.75	25.40	5.08	3.18	2.54	1.52	1.02

H	J	K	L	M	wt
--	--	.050	.060	.920	grams
--	--	1.27	1.52	23.37	4.4

Demo Board MCL P/N: TB-441+ Suggested PCB Layout (PL-273)



NOTE: 1. TRACE WIDTH IS 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.
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

- 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 1.1 typ.
- shielded case
- aqueous washable
- good coplanarity

Applications

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

Electrical Specifications at 25°C

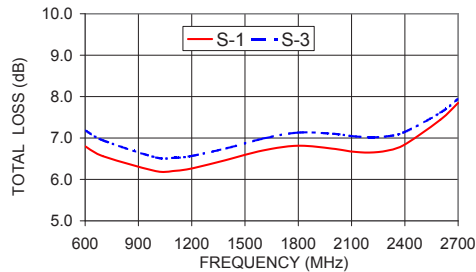
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		690		2700	MHz
Insertion Loss Above 6.0 dB	800-2200 690-2700		1.0 1.5	1.6 2.6	dB
Isolation	690-2700	15	20		dB
Phase Unbalance	690-2700		4	7	Degree
Amplitude Unbalance	690-2700		0.4	0.8	dB
VSWR (Port S)	690-2700		1.5		:1
VSWR (Port 1-4)	690-2700		1.2		:1

Typical Performance Data

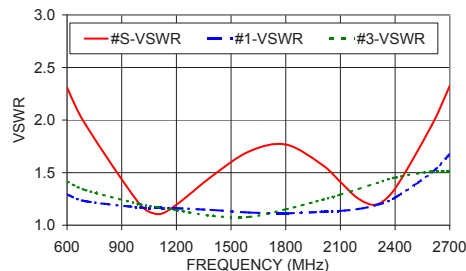
Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
600	6.80	7.23	7.19	6.77	0.46	17.21	17.55	17.13	0.63	2.31	1.29	1.41	1.42	1.30
700	6.56	6.99	6.94	6.54	0.45	19.79	19.35	19.70	0.49	1.96	1.23	1.33	1.33	1.25
1000	6.20	6.58	6.53	6.18	0.39	27.46	26.70	27.06	0.53	1.20	1.17	1.19	1.20	1.19
1100	6.21	6.56	6.52	6.18	0.38	25.76	29.38	25.39	0.67	1.10	1.16	1.16	1.17	1.18
1200	6.27	6.61	6.57	6.24	0.37	23.61	30.76	23.29	0.87	1.19	1.16	1.13	1.14	1.17
1400	6.48	6.79	6.76	6.44	0.35	20.89	29.04	20.61	1.34	1.47	1.14	1.08	1.09	1.15
1600	6.70	7.02	6.98	6.65	0.36	19.94	26.90	19.67	1.89	1.70	1.12	1.07	1.08	1.12
1800	6.81	7.17	7.13	6.77	0.40	20.51	25.91	20.21	2.36	1.77	1.11	1.14	1.15	1.12
2000	6.74	7.15	7.10	6.71	0.43	22.93	25.98	22.57	2.61	1.57	1.13	1.24	1.24	1.14
2100	6.67	7.09	7.05	6.65	0.44	25.05	26.20	24.59	2.67	1.41	1.14	1.29	1.29	1.15
2200	6.65	7.06	7.02	6.62	0.44	27.28	26.23	26.70	2.73	1.25	1.15	1.34	1.34	1.17
2300	6.70	7.09	7.04	6.67	0.42	27.31	25.62	26.86	2.79	1.20	1.19	1.40	1.40	1.20
2400	6.85	7.19	7.15	6.80	0.39	24.87	24.27	24.63	2.89	1.35	1.26	1.45	1.45	1.26
2600	7.44	7.67	7.61	7.37	0.30	20.70	20.83	20.54	3.55	1.95	1.50	1.50	1.51	1.48
2700	7.84	8.01	7.95	7.75	0.26	19.81	19.24	19.58	4.16	2.32	1.67	1.50	1.51	1.64

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

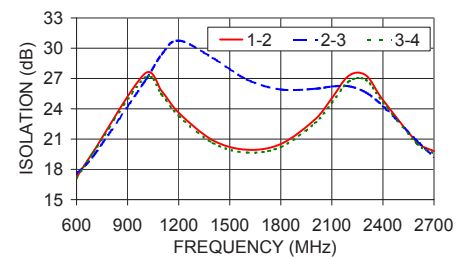
SEPS-4-272+ TOTAL LOSS



SEPS-4-272+ VSWR



SEPS-4-272+ ISOLATION



Electrical Schematic

