



SURFACE MOUNT

Power Splitter/Combiner

SCA-4-132+

Mini-Circuits

4 Way-0° 50Ω 5 to 1300 MHz

THE BIG DEAL

- Wideband, 5 to 1300 MHz
- High isolation, 25 dB
- Good matching VSWR, 1.2:1
- Excellent amplitude unbalance, 0.3 dB



Generic photo used for illustration purposes only
CASE STYLE: DZ943

+RoHS Compliant

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

APPLICATIONS

- Cellular
- UHF/VHF receivers/transmitters

PRODUCT OVERVIEW

Mini-Circuits' SCA-4-132+ is a surface-mount 4-way 0° splitter/combiner covering the 5 to 1300 MHz frequency range, supporting bandwidth requirements for cellular, UHF/VHF receivers/transmitters and more. This model can handle up to 0.5W RF input power as a splitter and provides high isolation, good VSWR and low amplitude unbalance. The unit comes housed in a miniature plastic package (0.35 x 0.28 x 0.20") mounted on a 10-lead ceramic base with wrap-around terminations for excellent solderability.

KEY FEATURES

Feature	Advantages
Wideband, 5 to 1300 MHz	Suitable for many broadband applications.
Low insertion loss, 1.2 dB	The combination of 0.5W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
Good matching VSWR, 1.2:1	Provides excellent thru-path transmission with low signal reflection.
High isolation, 25 dB	Minimizes interference between input ports.
Low amplitude unbalance, 0.3 dB	Low amplitude unbalance makes this splitter/combiner Ideal for parallel path/multichannel systems.





ELECTRICAL SPECIFICATIONS AT 25°C

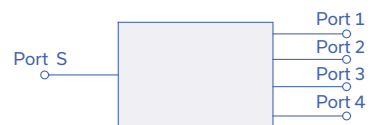
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5		1300	MHz
Insertion Loss, above 6.0 dB	5-500		0.8	1.5	dB
	500-1000		1.2	2.4	
	1000-1300		2.0	2.8	
Isolation	5-1000	15	21		dB
	1000-1300	13	18		
Phase Unbalance	5-500		2.0	5	Degree
	500-1000		4.0	11	
	1000-1300		8.0	15	
Amplitude Unbalance	5-1000		0.5	0.9	dB
	1000-1300		0.7	1.2	
VSWR (Port S)	5-500		1.22	1.32	:1
	500-1300		1.28	1.49	
VSWR (Port 1-4)	5-500		1.57	1.79	:1
	500-1300		1.40	1.65	

MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.375W max.

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

ELECTRICAL SCHEMATIC



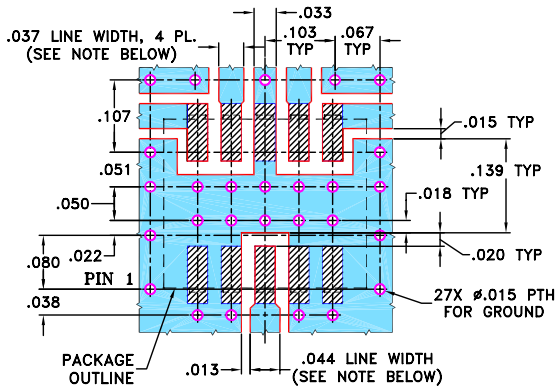


PIN CONNECTIONS

SUM PORT	3
PORT 1	6
PORT 2	7
PORT 3	9
PORT 4	10
GROUND	1,2,4,5,8

PRODUCT MARKING: N/A

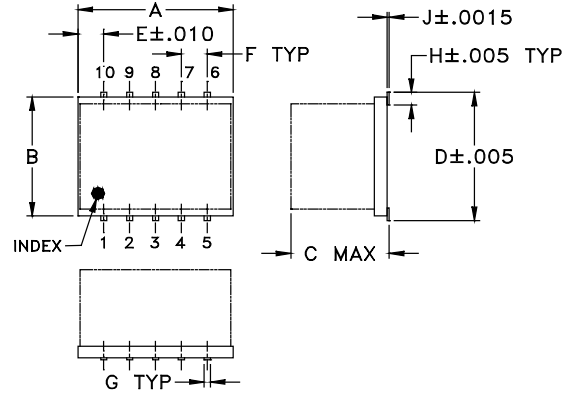
DEMO BOARD MCL P/N: TB-238
SUGGESTED PCB LAYOUT (PL-124)



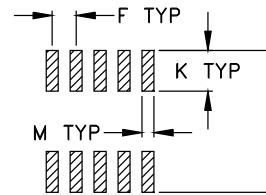
NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS 0.020 ± 0.0015 ", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

OUTLINE DRAWING



PCB Land Pattern



OUTLINE DIMENSIONS (Inches/mm)

A	B	C	D	E	F	G
.30	.250	.190	.266	.050	.050	.012
7.62	6.35	4.83	6.76	1.27	1.27	0.30
H	J	K	L	M	wt	
.029	.004	.085	.296	.030	grams	
0.74	0.10	2.16	7.52	0.76	0.5	

TAPE & REEL INFORMATION: F34