THE DATASHEET OF

SCA-4-132+

SURFACE MOUNT

Power Splitter/Combiner SCA-4-132+

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 website for 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.

Power Splitter/Combiner SCA-4-132+

4 Way-0° 50Ω 5 to 1300 MHz

ELECTRICAL SPECIFICATIONS AT 25°C[1]

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

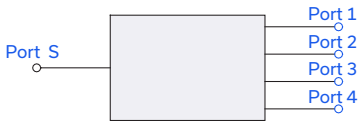
1.Tested on Evaluation Board TB-SCA-4-132+

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



SURFACE MOUNT

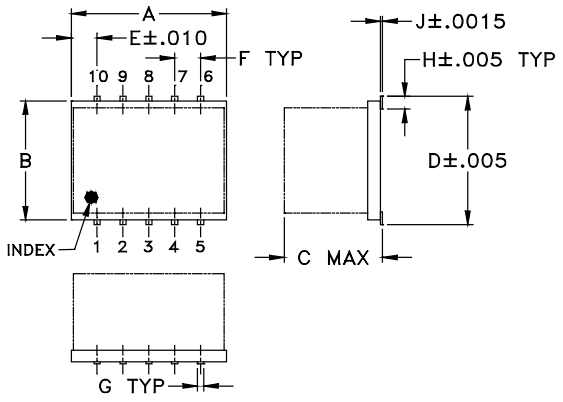
Power Splitter/Combiner SCA-4-132+

4 Way-0° 50Ω 5 to 1300 MHz

PIN CONNECTIONS

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

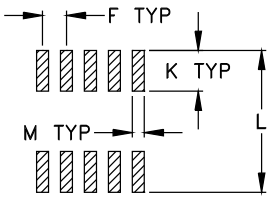
OUTLINE DRAWING



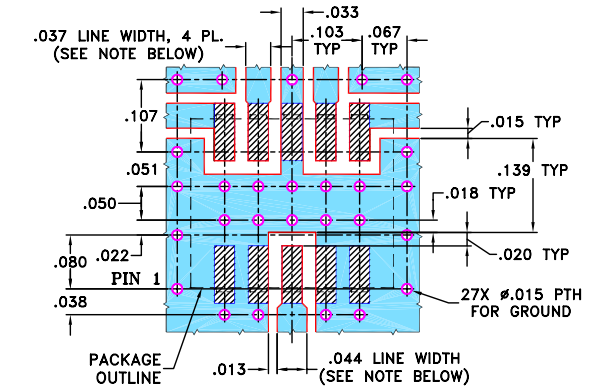
*PRODUCT MARKING: SCA-4-132

*Marking may contain other features or characters for internal lot control

PCB Land Pattern



EVALUATION BOARD MCL P/N: TB-SCA-4-132+
SUGGESTED PCB LAYOUT (PL-124)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 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 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

SURFACE MOUNT

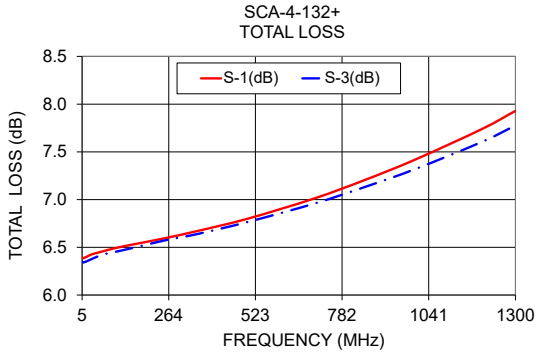
Power Splitter/Combiner SCA-4-132+

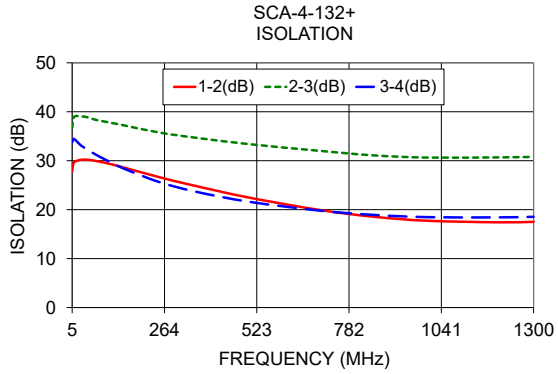
4 Way-0° 50Ω 5 to 1300 MHz

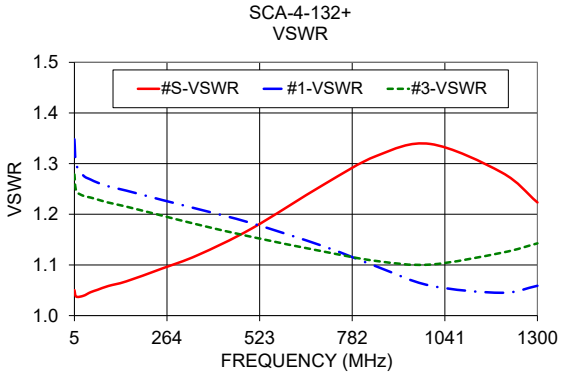
TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss[1] (dB)				Amplitude Unbalance (dB)	Isolation (dB)			Phase Unbalance (deg.)	VSWR (:1)				
	S-1	S-2	S-3	S-4		1-2	1-3	2-3		S	1	2	3	4
5	6.40	6.23	6.35	6.50	0.27	27.82	36.68	33.76	0.60	1.05	1.35	1.30	1.28	1.33
10	6.39	6.23	6.34	6.49	0.26	29.62	38.90	34.44	0.27	1.04	1.30	1.25	1.25	1.29
30	6.42	6.26	6.37	6.53	0.27	30.18	39.07	33.10	0.16	1.04	1.28	1.23	1.24	1.28
50	6.44	6.29	6.40	6.56	0.27	30.18	38.82	32.17	0.20	1.05	1.27	1.23	1.23	1.27
70	6.46	6.31	6.43	6.58	0.27	29.96	38.36	31.29	0.19	1.05	1.26	1.22	1.23	1.27
100	6.49	6.34	6.45	6.61	0.27	29.53	37.94	30.15	0.28	1.06	1.26	1.22	1.22	1.26
150	6.52	6.37	6.49	6.65	0.28	28.61	37.22	28.39	0.32	1.07	1.25	1.21	1.22	1.25
250	6.59	6.45	6.57	6.72	0.28	26.62	35.74	25.63	0.50	1.09	1.23	1.20	1.20	1.23
350	6.67	6.52	6.64	6.80	0.28	24.87	34.71	23.70	0.63	1.12	1.21	1.19	1.18	1.21
500	6.80	6.63	6.77	6.94	0.30	22.48	33.40	21.63	0.85	1.17	1.18	1.18	1.16	1.17
700	7.01	6.82	6.96	7.14	0.31	19.93	32.01	19.80	1.16	1.26	1.14	1.15	1.13	1.11
850	7.21	6.99	7.13	7.30	0.32	18.56	31.09	18.94	1.37	1.32	1.10	1.12	1.11	1.06
1000	7.42	7.17	7.32	7.49	0.32	17.74	30.64	18.47	1.65	1.34	1.06	1.09	1.10	1.03
1200	7.74	7.47	7.60	7.76	0.29	17.42	30.68	18.43	2.06	1.28	1.04	1.10	1.12	1.07
1300	7.93	7.65	7.78	7.91	0.28	17.51	30.78	18.54	2.29	1.22	1.06	1.13	1.14	1.10

1. Total Loss = Insertion Loss + 6.0 dB splitter 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/terms/viewterm.html

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View SCA-4-132+ on WIN SOURCE
- Mini-Circuits Information

Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management