SURFACE MOUNT

Power Splitter/Combiner SCA-4-15-75+

4 Way-0° 75Ω 10 to 1500 MHz

FEATURES

- Wideband, 10-1500 MHz
- High isolation, 25 dB typ.
- Excellent amplitude unbalance, 0.3 dB typ.



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

- Cable
- Cellular
- UHF/VHF receivers/transmitters

ELECTRICAL SPECIFICATIONS AT 25°C[1]

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		10		1500	MHz
Insertion Loss, above 6.0 dB	10-40 40-900 900-1200 1200-1500		0.5 1.2 1.4 2.0	1.5 2.0 2.8 3.2	dB
Isolation	10-40 40-900 900-1200 1200-1500	14 17 15 14	19 25 19 18		dB
Phase Unbalance	10-40 40-900 900-1200 1200-1500			8 9 12 16	Degree
Amplitude Unbalance	10-40 40-900 900-1200 1200-1500			0.8 0.9 1.0 1.1	dB

1.Tested on Evaluation Board TB-SCA-4-15-75+

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



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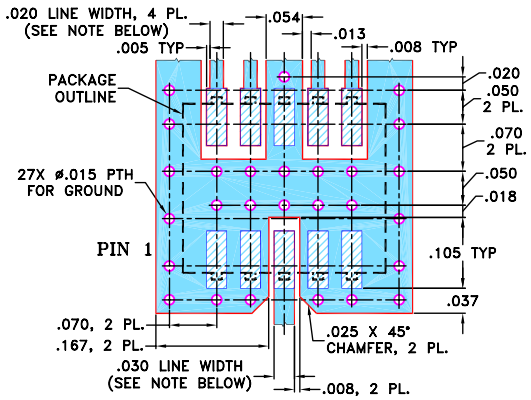
PIN CONNECTIONS

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

*PRODUCT MARKING: SCA-4-15-75

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

EVALUATION BOARD MCL P/N: TB-SCA-4-15-75+
SUGGESTED PCB LAYOUT (PL-133)

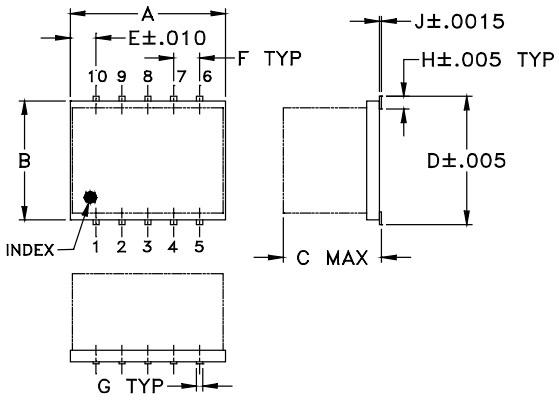


NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS 0.030" ± 0.002", COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

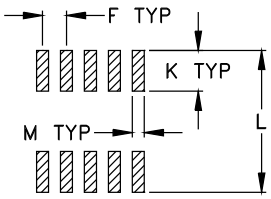
DENOTES PCB COPPER LAYOUT

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

SURFACE MOUNT

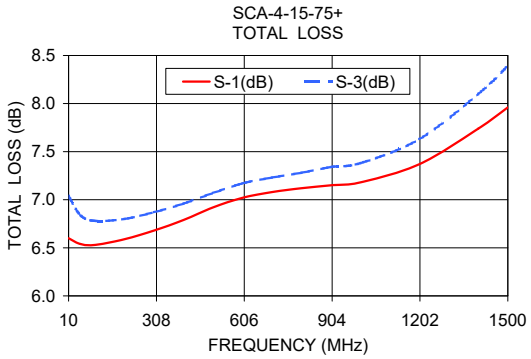
Power Splitter/Combiner SCA-4-15-75+

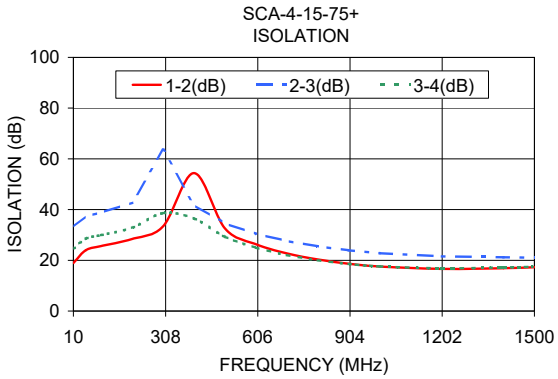
4 Way-0° 75Ω 10 to 1500 MHz

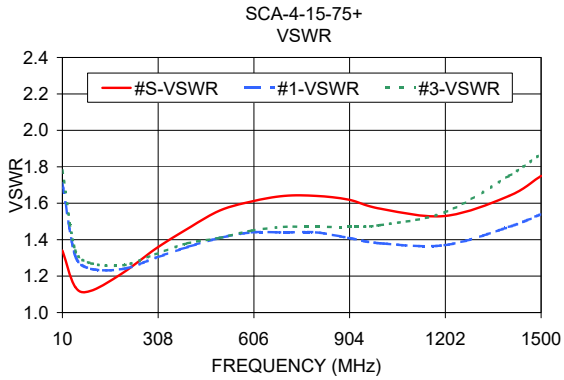
TYPICAL PERFORMANCE DATA

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
10.00	6.60	6.58	7.04	7.04	0.46	18.93	33.15	24.46	3.23	1.34	1.71	1.71	1.78	1.77
50.00	6.54	6.52	6.84	6.84	0.33	24.00	37.42	28.57	1.28	1.14	1.31	1.31	1.34	1.34
100.00	6.53	6.50	6.78	6.79	0.29	25.61	38.79	29.94	1.03	1.12	1.24	1.24	1.27	1.27
200.00	6.59	6.55	6.80	6.81	0.26	28.39	42.71	32.82	1.14	1.22	1.24	1.25	1.26	1.25
300.00	6.68	6.64	6.87	6.89	0.25	33.44	63.57	38.60	1.35	1.35	1.30	1.33	1.32	1.29
400.00	6.79	6.75	6.96	6.98	0.23	54.37	41.78	36.45	1.59	1.46	1.36	1.41	1.38	1.33
500.00	6.92	6.88	7.07	7.10	0.22	32.57	34.56	29.28	1.80	1.56	1.41	1.46	1.41	1.37
600.00	7.02	6.99	7.17	7.20	0.21	26.35	30.46	25.00	1.95	1.61	1.44	1.51	1.45	1.41
700.00	7.08	7.05	7.23	7.26	0.21	22.74	27.61	22.08	2.03	1.64	1.44	1.52	1.47	1.43
800.00	7.12	7.11	7.28	7.32	0.22	20.33	25.49	20.01	2.15	1.64	1.44	1.52	1.47	1.42
900.00	7.15	7.15	7.34	7.38	0.23	18.67	23.94	18.56	2.28	1.62	1.41	1.51	1.47	1.41
1000.00	7.18	7.18	7.38	7.44	0.26	17.56	22.79	17.59	2.42	1.57	1.38	1.50	1.48	1.40
1200.00	7.37	7.41	7.63	7.69	0.33	16.62	21.54	16.86	2.76	1.53	1.37	1.55	1.55	1.43
1400.00	7.74	7.82	8.10	8.17	0.43	16.90	21.18	17.19	2.88	1.64	1.47	1.73	1.75	1.54
1500.00	7.96	8.06	8.39	8.47	0.52	17.28	21.05	17.47	2.75	1.75	1.54	1.84	1.87	1.61

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