

Surface Mount

# Power Splitter/Combiner

## SCA-4-15-75+

4 Way-0° 75Ω 10 to 1500 MHz



CASE STYLE: DZ943  
PRICE: \$7.95 ea. QTY. (10)

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	10, 20, 50, 100, 200
13"	500, 1000

### Maximum Ratings

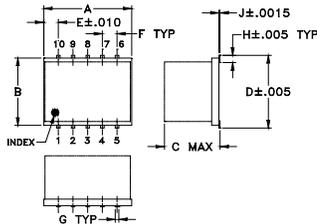
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Internal Dissipation	0.375W max.

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

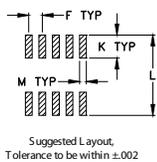
### Pin Connections

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

### Outline Drawing



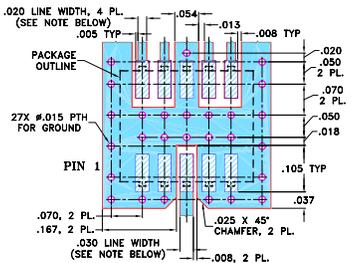
### PCB Land Pattern



### Outline Dimensions (inch/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	

### Demo Board MCL P/N: TB-247 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

### 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-Circuit's 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- wideband, 10-1500 MHz
- high isolation, 25 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.

### Applications

- cable
- cellular
- UHF/VHF receivers/transmitters

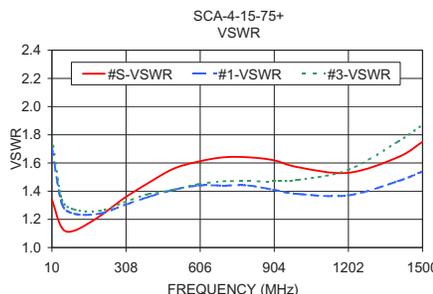
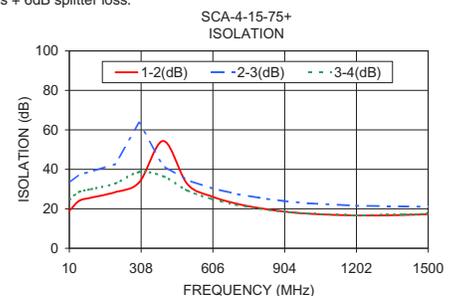
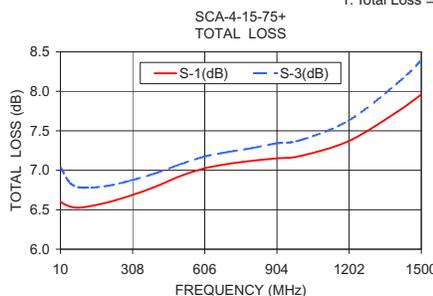
### Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.		
$f_c - f_u$					Max.	Max.
10-1500						
10-40	19	14	0.5	1.5	8	0.8
40-900	25	17	1.2	2.0	9	0.9
900-1200	19	15	1.4	2.8	12	1.0
1200-1500	18	14	2.0	3.2	16	1.1

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (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						
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 + 6dB splitter loss.



### electrical schematic



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REV. G  
M145299  
ED-10856/2  
SCA-4-15-75+  
WZ/TC/CP/AM  
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