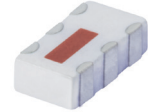


# Power Splitter/Combiner

2 Way-0° 50Ω 800 to 1175 MHz

## SCN-2-11+ SCN-2-11



Generic photo used for illustration purposes only  
CASE STYLE: FV1206-1

**+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" 20, 50, 100, 200, 500, 1000, 3000

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W* max.

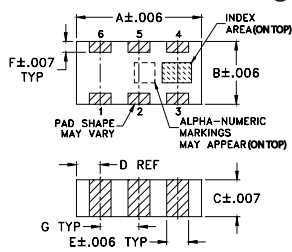
\*Derate linearly to 6W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

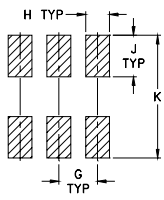
SUM PORT	2
PORT 1	6
PORT 2	4
GROUND	1,3,5
PORT 1-2	resistor external 100 OHMS

### Product Marking: A

### Outline Drawing



### PCB Land Pattern

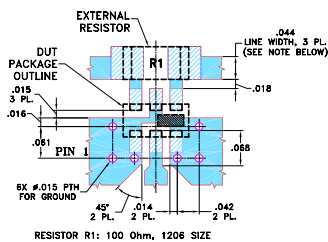


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch / mm)

A	B	C	D	E	F	
.126	.063	.035	.024	.022	.011	
3.20	1.60	0.89	0.61	0.56	0.28	
G	H	J	K			wt
.039	.024	.042	.123			grams
0.99	0.61	1.07	3.12			.020

Demo Board MCL P/N: TB-252  
Suggested PCB Layout (PL-129)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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.  
3. DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### 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-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

- isolation resistor, external 100 ohms
- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1.0 deg. typ.
- high isolation, 22 dB typ.
- excellent power handling, 20W as splitter
- small size, 0.12"x0.06"x0.035"
- ESD non-sensitive
- temperature stable LTCC technology
- wrap around terminations for excellent solderability
- low cost
- protected by US patent 6,967,544

### Applications

- GSM
- ISM
- cellular

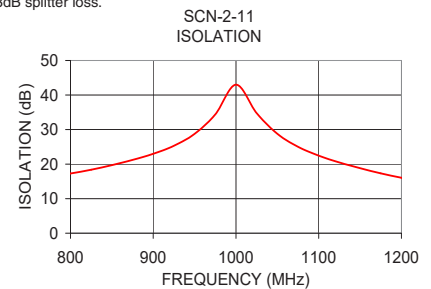
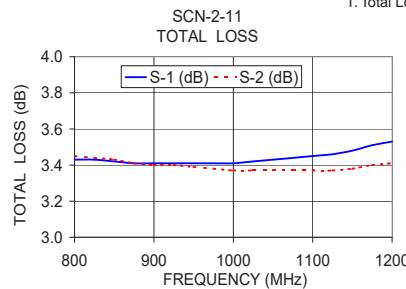
### Electrical Specifications

FREQUENCY (MHz)	INSERTION LOSS (dB) ABOVE 3.0 dB		ISOLATION (dB)		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)	
	Typ.	Max.	Typ.	Min.	Typ.	Max.	Typ.	Max.	INPUT Typ.	OUTPUT Typ.
800-1175	0.5	0.8	20	15	1.0	3.0	0.1	0.3	16	18
875-1125	0.5	0.8	22	18	1.0	3.0	0.1	0.3	16	20

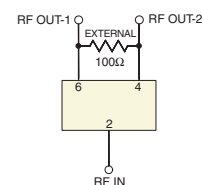
### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	1	2
800.00	3.43	3.45	0.02	17.28	0.11	15.07	25.43	25.41
825.00	3.43	3.44	0.01	18.38	0.13	15.48	24.60	24.52
850.00	3.42	3.43	0.01	19.70	0.14	16.10	23.86	23.88
875.00	3.41	3.41	0.00	21.21	0.14	16.72	23.02	23.11
900.00	3.41	3.40	0.01	22.98	0.15	17.14	22.19	22.21
925.00	3.41	3.40	0.01	25.31	0.14	17.53	21.56	21.46
950.00	3.41	3.39	0.02	28.76	0.12	18.16	21.09	20.97
975.00	3.41	3.38	0.03	34.40	0.14	19.00	20.59	20.53
1000.00	3.41	3.37	0.04	42.99	0.16	19.65	20.02	19.96
1025.00	3.42	3.37	0.05	34.77	0.20	19.92	19.53	19.39
1050.00	3.43	3.37	0.06	28.77	0.23	20.08	19.20	19.01
1100.00	3.45	3.37	0.08	22.45	0.27	20.43	18.61	18.40
1125.00	3.46	3.37	0.09	20.49	0.31	20.22	18.29	18.00
1150.00	3.48	3.38	0.10	18.83	0.34	19.53	18.05	17.69
1175.00	3.51	3.40	0.11	17.34	0.36	18.61	17.90	17.54

1. Total Loss = Insertion Loss + 3dB splitter loss.



### electrical schematic



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