

# Ultra-Small Ceramic Power Splitter/Combiner

## SCN-2-19+ SCN-2-19

2 Way-0° 50Ω

1425 to 1900 MHz



### Maximum Ratings

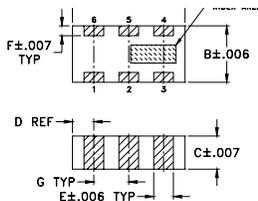
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W* max.

\*derate linearly to 6W at 100°C ambient.

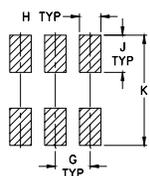
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within +.002

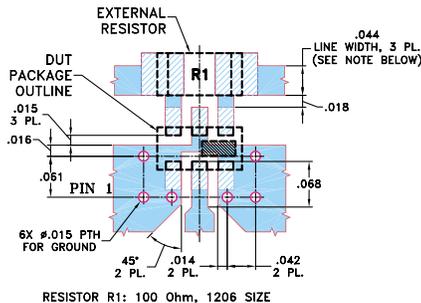
### Outline Dimensions (inch)

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.  
□ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

### Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- good phase unbalance, 2.0 deg. typ.
- high isolation, 25 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
- patent pending

### Applications

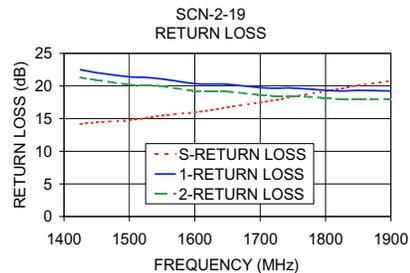
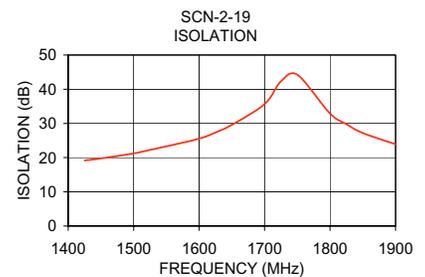
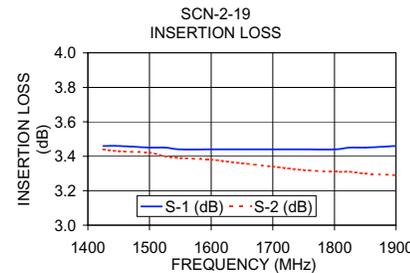
- GPS
- PCN

### Splitter Electrical Specifications

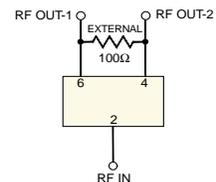
MODEL NO.	FREQUENCY (MHz)	INSERTION LOSS (dB) ABOVE 3.0 dB		ISOLATION (dB)		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)	
		Typ.	Max.	Typ.	Min.	Typ.	Max.	Typ.	Max.	INPUT Typ.	OUTPUT Typ.
SCN-2-19(+)	1425-1900 1550-1800	0.5	0.9	23	17	2.5	4.0	0.25	0.4	15	18
		0.5	0.9	25	20	2.0	4.0	0.2	0.4	19	18

### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
						S	1 2	
1425.00	3.46	3.44	0.02	19.16	0.79	14.18	22.49	21.29
1450.00	3.46	3.43	0.02	19.76	0.80	14.44	22.04	20.91
1500.00	3.45	3.42	0.04	21.22	0.83	14.77	21.40	20.21
1525.00	3.45	3.40	0.03	22.26	0.82	15.10	21.32	20.15
1550.00	3.44	3.39	0.05	23.29	0.81	15.47	21.07	19.97
1600.00	3.44	3.38	0.05	25.56	0.85	15.99	20.37	19.24
1625.00	3.44	3.37	0.06	27.34	0.86	16.31	20.30	19.16
1650.00	3.44	3.36	0.07	29.60	0.87	16.75	20.25	19.15
1700.00	3.44	3.34	0.09	35.62	0.93	17.48	19.76	18.62
1725.00	3.44	3.33	0.10	42.32	0.95	17.87	19.67	18.44
1750.00	3.44	3.32	0.11	44.21	0.93	18.35	19.69	18.45
1800.00	3.44	3.31	0.12	32.86	0.96	19.18	19.36	18.17
1825.00	3.45	3.31	0.13	29.78	0.99	19.60	19.24	17.98
1850.00	3.45	3.30	0.14	27.19	1.00	20.10	19.32	18.01
1900.00	3.46	3.29	0.17	23.89	1.02	20.74	19.24	17.94



### electrical schematic



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