

Ultra-Small Ceramic

# Power Splitter/Combiner

2 Way-0° 50Ω 5500 to 6500 MHz

## SCN-2-65+ SCN-2-65



### Maximum Ratings

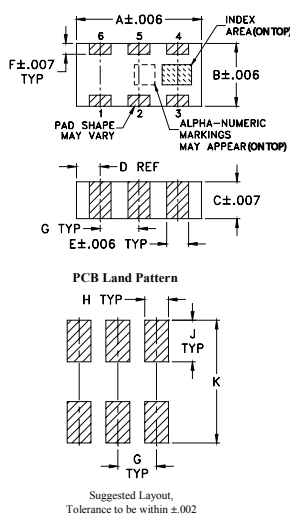
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	4W* max.

\*Derate linearly to 1.3W at 100°C ambient, power input as combiner is limited by rating of external 100Ω Resistor. 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

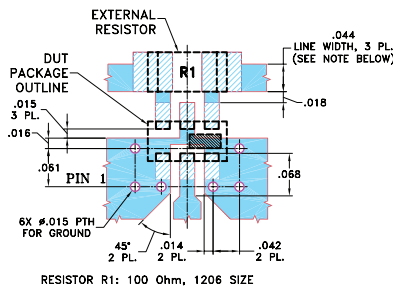
### Outline Drawing



### 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.

- Denotes PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- Denotes COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 2.0 deg. typ.
- high isolation, 17 dB typ.
- excellent power handling, 4W 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

- WLAN
- ISM

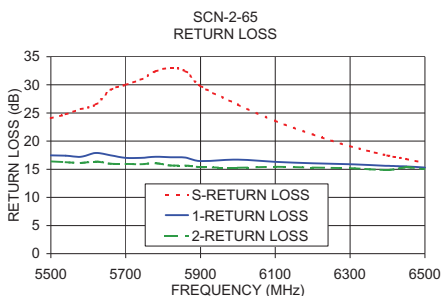
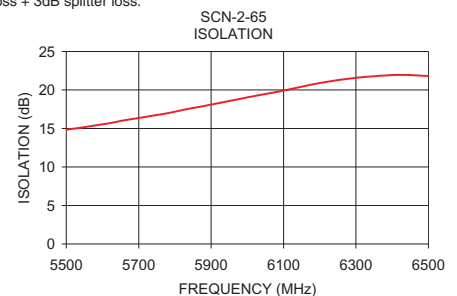
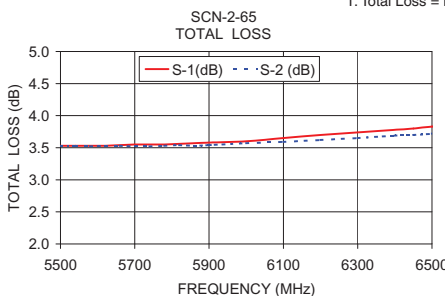
### Electrical Specifications

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.
5500-6500	0.8	1.1	17	11	3	5	0.1	0.4	18	16
5700-5900	0.5	1.0	17	11	2	4	0.1	0.3	22	16

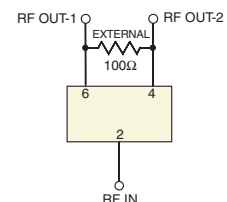
### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	2	
5500.00	3.53	3.52	0.00	14.85	1.24	24.06	17.48	16.39
5540.00	3.53	3.52	0.01	15.10	1.15	24.77	17.41	16.27
5580.00	3.53	3.52	0.01	15.40	1.13	25.71	17.22	16.12
5700.00	3.55	3.52	0.03	16.35	0.93	30.00	17.02	15.95
5740.00	3.55	3.52	0.03	16.68	0.93	30.92	17.03	15.90
5780.00	3.55	3.53	0.03	16.98	0.94	32.42	17.21	16.07
5860.00	3.57	3.53	0.03	17.74	0.83	32.43	17.07	15.68
5900.00	3.58	3.54	0.04	18.11	0.83	29.79	16.46	15.38
6000.00	3.60	3.57	0.04	19.05	0.81	26.48	16.70	15.27
6100.00	3.65	3.59	0.07	19.93	0.70	23.61	16.33	15.44
6200.00	3.70	3.62	0.07	20.91	0.69	21.21	16.06	15.30
6300.00	3.74	3.65	0.08	21.59	0.72	19.11	15.88	15.18
6400.00	3.78	3.69	0.09	21.94	0.67	17.43	15.62	14.88
6450.00	3.80	3.70	0.10	21.93	0.65	16.81	15.51	15.32
6500.00	3.83	3.72	0.11	21.81	0.68	16.15	15.29	15.03

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



### electrical schematic



For detailed performance specs & shopping online see web site

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