

# Ultra-Small Ceramic Power Splitter/Combiner

## SCN-2-35+ SCN-2-35

2 Way-0° 50Ω

2825 to 3700 MHz



CASE STYLE: FV1206-1  
PRICE: \$ 2.50 ea. QTY (10-49)  
\$ 0.99 ea. QTY (100)

### 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.

### Pin Connections

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

### Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 0.8 deg. typ.
- high isolation, 28 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
- patent pending

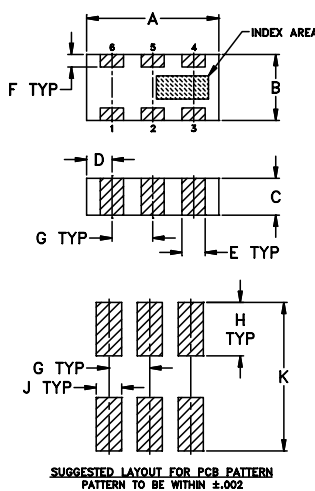
### Applications

- amateur radio
- defense
- wireless communication

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

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

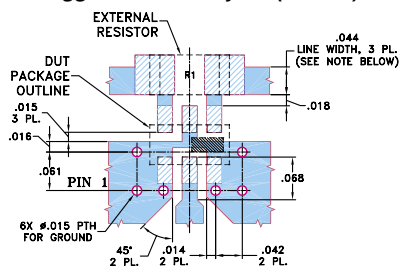
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.126	.063	.037	.024	.022	.012
3.20	1.60	0.94	0.61	0.56	0.30
G	H	J	K	wt	
.039	.042	.024	.123	grams	
0.99	1.07	0.61	3.12	.020	

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



- NOTE:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020" ± .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
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

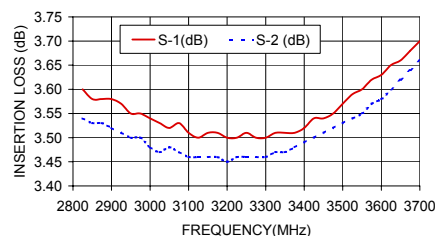
### Splitter Electrical Specifications

MODEL NO.	FREQUENCY (MHz)	INSERTION LOSS (dB)		ISOLATION (dB)	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)	RETURN LOSS (dB)	
		Typ.	Max.				INPUT Typ.	OUTPUT Typ.
SCN-2-35(+)	2825-3700 3200-3500	0.4	1.3	22 13 28 18	1.0 4.0 0.8 4.0	0.1 0.3 0.1 0.3	18	20
		0.4	1.0				20	23

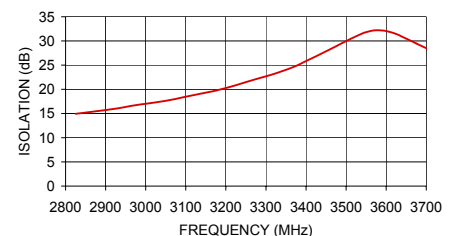
### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	1	2
2825.00	3.60	3.54	0.06	14.94	0.28	15.39	47.26	31.96
2900.00	3.58	3.52	0.05	15.70	0.22	16.46	41.52	34.99
3000.00	3.54	3.48	0.05	17.02	0.21	18.99	33.34	47.87
3100.00	3.51	3.46	0.05	18.47	0.17	21.86	29.16	39.50
3200.00	3.50	3.45	0.05	20.26	0.14	26.24	25.93	31.34
3300.00	3.50	3.46	0.04	22.71	0.14	30.10	23.20	26.54
3450.00	3.54	3.51	0.04	27.85	0.12	21.96	20.06	21.98
3500.00	3.57	3.53	0.04	29.97	0.13	20.04	19.24	20.75
3550.00	3.60	3.55	0.04	31.81	0.11	18.22	18.51	19.70
3575.00	3.62	3.57	0.05	32.20	0.09	17.56	18.24	19.31
3600.00	3.63	3.58	0.05	32.06	0.06	17.00	17.98	18.95
3625.00	3.65	3.60	0.05	31.43	0.04	16.42	17.72	18.61
3650.00	3.66	3.62	0.05	30.50	0.01	15.80	17.43	18.26
3675.00	3.68	3.64	0.04	29.47	0.02	15.18	17.13	17.88
3700.00	3.70	3.66	0.04	28.52	0.03	14.65	16.85	17.50

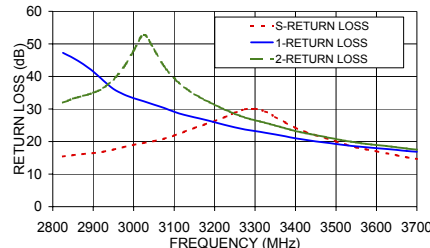
SCN-2-35  
INSERTION LOSS



SCN-2-35  
ISOLATION



SCN-2-35  
RETURN LOSS



### electrical schematic

