Ultra-Small Ceramic

Power Splitter/Combiner

SCN-2-15+
SCN-2-15

2 Way-0° 50Ω 1100 to 1450 MHz

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

+ 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.

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

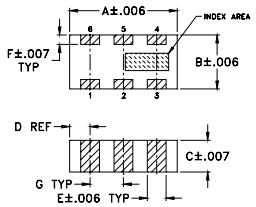
Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.4 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- excellent phase unbalance, 1.5 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

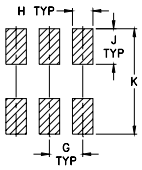
Applications

- satellite distribution
- GPS

Outline Drawing



PCB Land Pattern



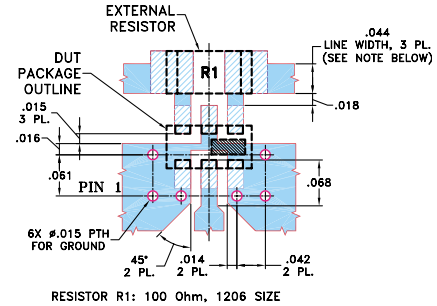
Suggested Layout,
Tolerance to be within ±.002

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)



RESISTOR R1: 100 Ohm, 1206 SIZE

NOTES: 1.TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELE(THICKNESS 0.020" ± 0.0015"; COPPER: 1/2 OZ. EACH SID 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)

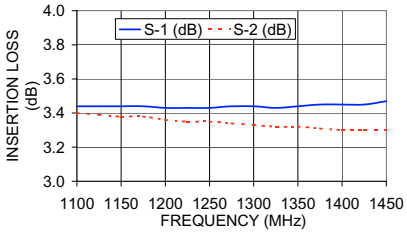
Splitter Electrical Specifications

MODEL NO.	FREQUENCY (MHz)	INSERTION LOSS (dB) ABOVE 3.0 dB Typ.	INSERTION LOSS (dB) ABOVE 3.0 dB Max.	ISOLATION (dB) Typ.	ISOLATION (dB) Min.	PHASE UNBALANCE (Degrees) Typ.	PHASE UNBALANCE (Degrees) Max.	AMPLITUDE UNBALANCE (dB) Typ.	AMPLITUDE UNBALANCE (dB) Max.	RETURN LOSS (dB) INPUT Typ.	RETURN LOSS (dB) OUTPUT Typ.
SCN-2-15(+)	**1100-1450**	**0.5**	**0.8**	**23**	**17**	**1.5**	**3.0**	**0.25**	**0.4**	**15**	**17.5**
	1200-1375	0.4	0.7	25	20	1.5	3.0	0.2	0.3	16	18

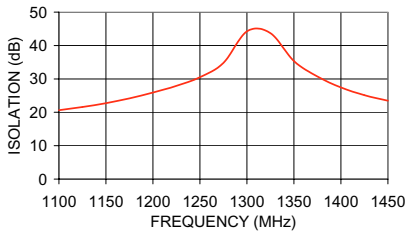
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB) S-1	Insertion Loss (dB) S-2	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB) S	Return Loss (dB) 1	Return Loss (dB) 2
1100	3.44	3.40	0.04	20.64	0.93	14.81	21.38	19.84
1125	3.44	3.39	0.05	21.59	0.94	15.05	20.89	19.39
1150	3.44	3.38	0.06	22.71	0.95	15.24	20.50	19.00
1175	3.44	3.38	0.06	24.17	0.97	15.54	20.27	18.79
1200	3.43	3.36	0.07	25.92	1.01	15.97	20.03	18.62
1225	3.43	3.35	0.08	27.91	1.02	16.34	19.67	18.31
1250	3.43	3.35	0.08	30.52	1.05	16.58	19.32	17.96
1275	3.44	3.34	0.10	34.80	1.07	16.85	19.09	17.72
1300	3.44	3.33	0.11	44.22	1.10	17.25	18.93	17.59
1325	3.43	3.32	0.11	43.71	1.11	17.66	18.69	17.39
1350	3.44	3.32	0.12	35.34	1.15	17.98	18.41	17.12
1375	3.45	3.31	0.14	30.72	1.17	18.20	18.21	16.91
1400	3.45	3.30	0.15	27.43	1.18	18.46	18.11	16.83
1425	3.45	3.30	0.15	25.13	1.20	18.73	17.98	16.74
1450	3.47	3.30	0.17	23.47	1.25	18.83	17.75	16.53

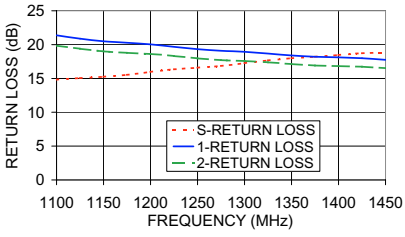
SCN-2-15
INSERTION LOSS



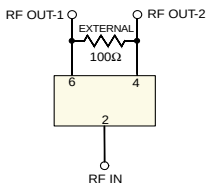
SCN-2-15
ISOLATION



SCN-2-15
RETURN LOSS



electrical schematic



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