

Ultra-Small Ceramic Power Splitter/Combiner

SCN-3-16+ SCN-3-16

3 Way-0° 50Ω

950 to 1600 MHz

Maximum Ratings

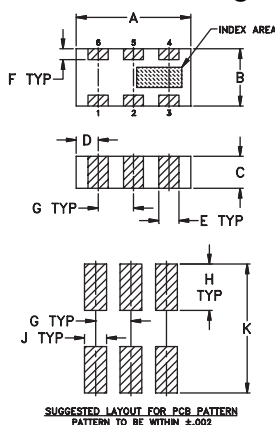
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	15W* max.

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

Pin Connections

SUM PORT	2
PORT 1	6
PORT 2	5
PORT 3	4
GROUND	1,3
PORT 1-2, 2-3	resistor external 124 OHMS
PORT 1-3	resistor external 127 OHMS

Outline Drawing

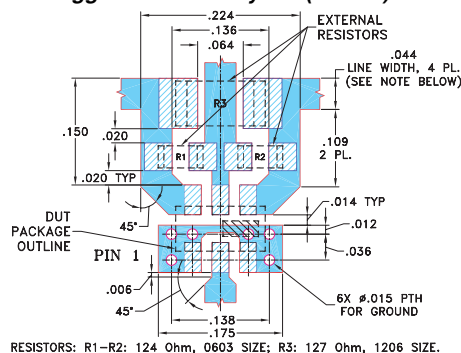


Outline Dimensions (inch)

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-303 Suggested PCB Layout (PL-171)



RESISTORS: R1-R2: 124 Ohm, 0603 SIZE; R3: 127 Ohm, 1206 SIZE.

NOTE:

- 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.
- RESISTOR LAND PATTERNS ARE SHOWN AS PER IPC-SM-782A.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Features

- isolation resistors, external
- low insertion loss, 0.6 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- very good phase unbalance, 3 deg. typ.
- high isolation, 15 dB typ.
- excellent power handling, 15W 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

- DSS
- WLAN
- satellite communication
- line of sight communication
- GSM, GPS
- ISM applications
- defense applications



CASE STYLE: FV1206-1

PRICE: \$3.95 ea. QTY (10-49)

\$3.25 ea. QTY (100)

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

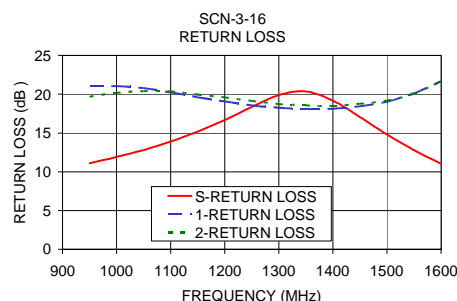
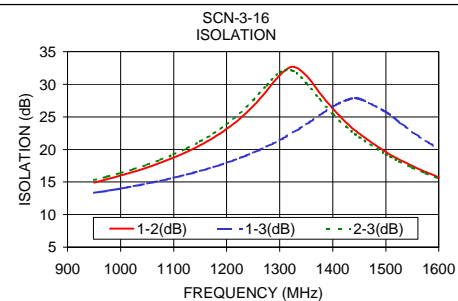
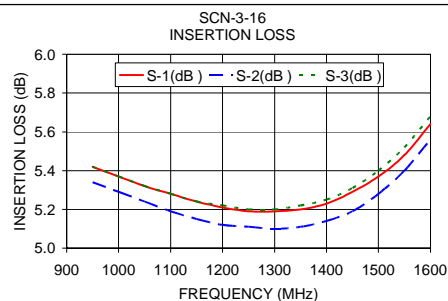
See our web site for RoHS Compliance methodologies and qualifications.

Splitter Electrical Specifications

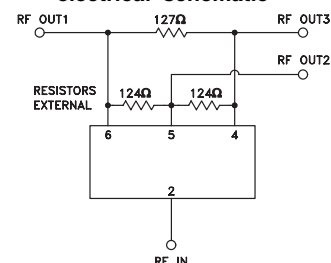
MODEL NO.	FREQUENCY (MHz)	INSERTION LOSS (dB)		ISOLATION (dB)		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)	
		ABOVE 4.8 dB		Typ. Min.		Typ. Max.		Typ. Max.		INPUT Typ. OUTPUT Typ.	
SCN-3-16(+)	950-1600 1200-1400	0.6	1.2	15	11	3	5	0.2	0.5	14	20
		0.3	0.8	20	14	2	5	0.2	0.4	17	19

Typical Performance Data

Freq. (MHz)	Insertion Loss (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	Return Loss (dB)		
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2
950.00	5.42	5.34	5.42	0.08	14.93	13.32	15.30	1.94	11.10	21.04	19.70
1000.00	5.37	5.29	5.37	0.08	15.99	13.99	16.38	2.02	11.91	21.04	20.18
1050.00	5.32	5.24	5.32	0.08	17.23	14.75	17.66	2.12	12.81	20.79	20.41
1100.00	5.28	5.19	5.28	0.09	18.74	15.64	19.23	2.21	13.90	20.24	20.37
1150.00	5.24	5.15	5.24	0.09	20.65	16.70	21.23	2.32	15.20	19.62	19.96
1200.00	5.21	5.12	5.22	0.09	23.15	17.95	23.86	2.42	16.68	19.07	19.59
1250.00	5.19	5.11	5.20	0.10	26.68	19.50	27.55	2.53	18.37	18.56	19.14
1300.00	5.19	5.10	5.20	0.10	31.40	21.43	31.87	2.61	19.89	18.26	18.75
1350.00	5.20	5.11	5.22	0.11	31.35	23.85	30.21	2.66	20.36	18.11	18.57
1400.00	5.23	5.14	5.25	0.11	26.27	26.57	25.45	2.77	19.18	18.14	18.49
1450.00	5.29	5.19	5.31	0.11	22.42	27.77	21.90	2.89	17.07	18.44	18.78
1500.00	5.37	5.28	5.40	0.12	19.61	25.76	19.26	2.91	14.81	19.03	19.18
1550.00	5.48	5.40	5.52	0.12	17.45	22.72	17.20	2.94	12.80	20.12	20.07
1600.00	5.64	5.56	5.68	0.12	15.72	20.10	15.54	2.99	11.01	21.67	21.69



electrical schematic



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