

Ultra-Small Ceramic Power Splitter/Combiner

SCN-2-45+ SCN-2-45

2 Way-0° 50Ω

3700 to 4200 MHz



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

Maximum Ratings

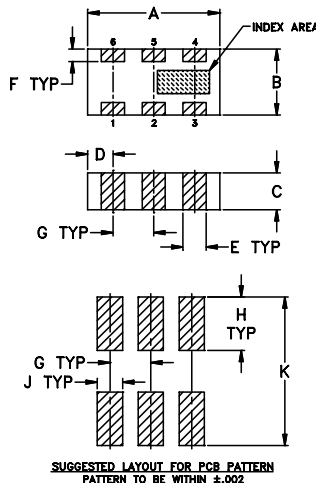
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	4W* max.

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

Pin Connections

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

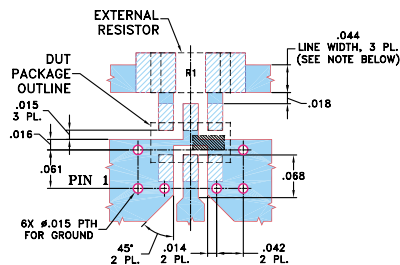
Outline Drawing



Outline Dimensions (inch/mm)

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

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

Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.7 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- excellent phase unbalance, 1.5 deg. typ.
- high isolation, 22 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

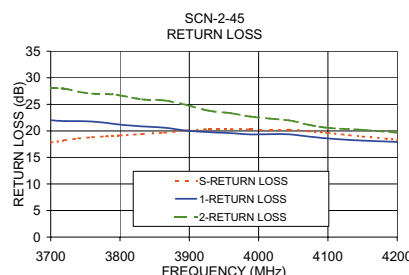
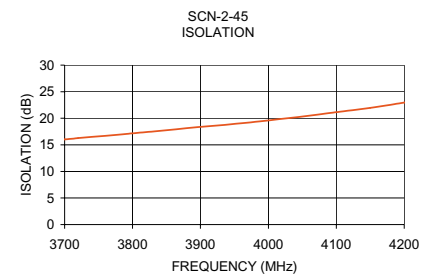
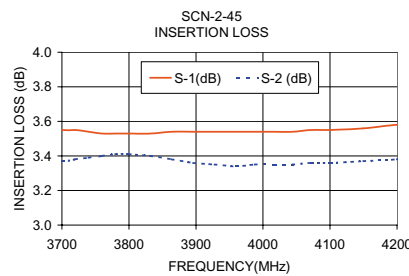
- maritime mobile

Splitter Electrical Specifications

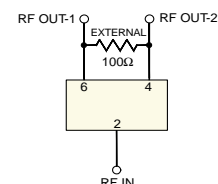
MODEL NO.	FREQUENCY (MHz)	INSERTION LOSS (dB)		ISOLATION (dB)	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)			
		ABOVE 3.0 dB				INPUT Typ.	OUTPUT Typ.				
		Typ.	Max.	Typ. Min.	Typ. Max.			Typ. Max.	Typ. Max.	Typ.	Typ.
SCN-2-45(+)	3700-4200 3800-4100	0.7	1.0	20	13	1.5	4	0.2	0.4	14	17
		0.7	1.0	22	15	1.5	4	0.2	0.4	16	17

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
3700.00	3.55	3.37	0.18	16.04	1.57	17.81	22.02	28.10
3720.00	3.55	3.38	0.17	16.28	1.65	18.21	21.85	27.94
3740.00	3.54	3.39	0.15	16.49	1.66	18.58	21.83	27.36
3760.00	3.53	3.40	0.13	16.69	1.60	18.81	21.77	27.02
3780.00	3.53	3.41	0.12	16.91	1.46	18.96	21.52	26.95
3800.00	3.53	3.41	0.12	17.16	1.31	19.12	21.17	26.69
3864.00	3.54	3.38	0.16	17.92	1.09	19.67	20.59	25.75
3896.00	3.54	3.36	0.18	18.33	1.16	20.06	20.04	24.89
3960.00	3.54	3.34	0.19	19.05	1.26	20.35	19.56	23.33
4016.00	3.54	3.35	0.19	19.83	1.35	20.24	19.39	22.30
4044.00	3.54	3.35	0.19	20.24	1.35	20.20	19.35	21.98
4072.00	3.55	3.36	0.19	20.68	1.35	19.94	18.95	21.14
4100.00	3.55	3.36	0.19	21.14	1.38	19.60	18.59	20.57
4150.00	3.56	3.37	0.19	21.95	1.40	18.95	18.16	20.17
4200.00	3.58	3.38	0.19	22.97	1.44	18.34	17.92	19.66



electrical schematic



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