Ultra-Small Ceramic

Power Splitter/Combiner

2 Way-0° 50Ω 2225 to 2700 MHz

SCN-2-27+
SCN-2-27

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.
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

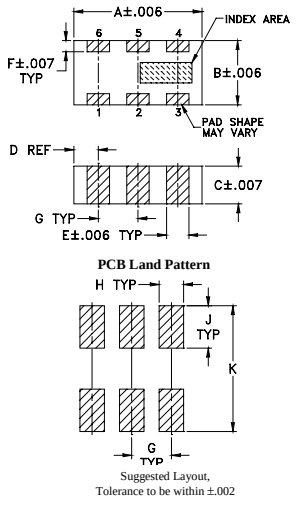
Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.4 dB typ.
- good amplitude unbalance, 0.4 dB typ.
- good phase unbalance, 2.5 deg. typ.
- high isolation, 23 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

- ISM
- MMDS
- WLAN

Outline Drawing

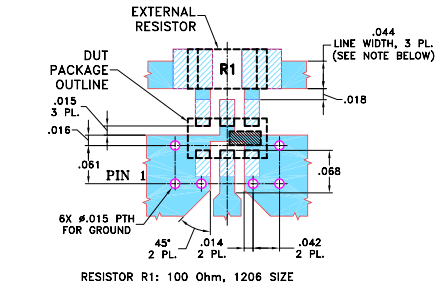


Outline Dimensions (inch / mm)

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

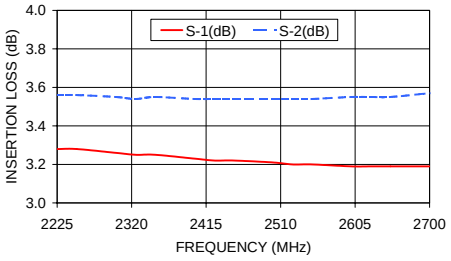
Electrical Specifications

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.
2225-2700	**0.5**	**1.1**	**21**	**17**	**3.5**	**6.0**	**0.6**	**0.8**	**19**	**17**
2325-2600	0.4	1.0	23	20	2.5	6.0	0.4	0.7	20	17

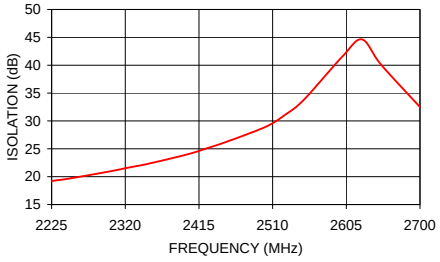
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	1	2
2225.00	3.28	3.56	0.28	19.22	1.19	18.80	19.57	18.80
2250.00	3.28	3.56	0.28	19.72	1.20	16.63	19.71	18.53
2300.00	3.26	3.55	0.29	20.95	1.23	17.52	19.55	18.29
2325.00	3.25	3.54	0.29	21.66	1.25	17.87	19.57	18.38
2350.00	3.25	3.55	0.30	22.34	1.26	18.35	19.32	18.25
2400.00	3.23	3.54	0.31	24.00	1.29	19.42	19.03	17.87
2425.00	3.22	3.54	0.32	25.09	1.31	20.01	19.18	18.00
2450.00	3.22	3.54	0.32	26.24	1.32	20.51	19.15	18.04
2500.00	3.21	3.54	0.33	28.89	1.35	22.26	18.78	17.67
2525.00	3.20	3.54	0.34	30.99	1.36	23.15	18.95	17.77
2550.00	3.20	3.54	0.34	33.77	1.38	24.04	19.11	17.94
2600.00	3.19	3.55	0.36	41.56	1.40	26.15	18.77	17.69
2625.00	3.19	3.55	0.36	44.63	1.41	27.91	18.81	17.68
2650.00	3.19	3.55	0.36	40.07	1.44	29.70	19.08	17.90
2700.00	3.19	3.57	0.38	32.50	1.46	30.72	19.11	17.87

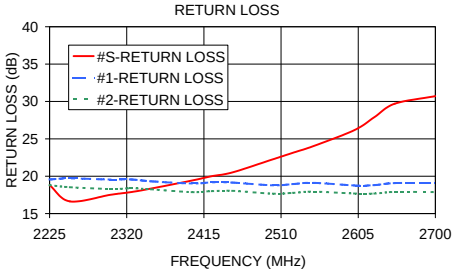
SCN-2-27
INSERTION LOSS



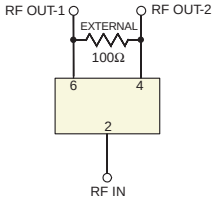
SCN-2-27
ISOLATION



SCN-2-27
RETURN LOSS



electrical schematic



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