Ultra-Small Ceramic

Power Splitter/Combiner

2 Way-0° 50Ω 1850 to 2200 MHz

SCN-2-22+
SCN-2-22



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

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

Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 3000

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W* max.

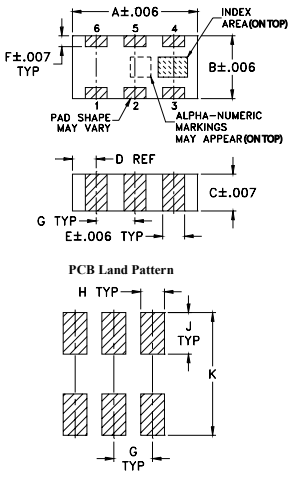
*Derate linearly to 6W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

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

Product Marking: C

Outline Drawing

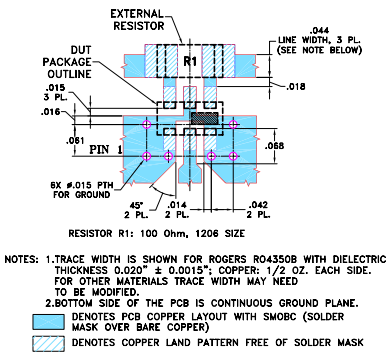


Outline Dimensions (inch / mm)

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

Features

- isolation resistor, external 100 ohms
- low insertion loss, 0.5 dB typ.
- excellent amplitude unbalance, 0.2 dB typ.
- good phase unbalance, 2.0 deg. typ.
- high isolation, 24 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
- protected by US patent 6,967,544

Applications

- PCS
- DCS
- UMTS

Electrical Specifications

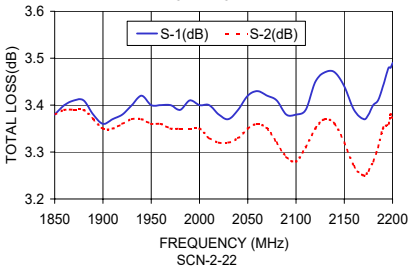
FREQUENCY (MHz)	INSERTION LOSS (dB) ABOVE 3.0 dB		ISOLATION (dB)		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		RETURN LOSS (dB)	
	Typ.	Max.	Typ.	Min.	Typ.	Max.	Typ.	Max.	INPUT Typ.	OUTPUT Typ.
1850-2200	**0.5**	**0.9**	**22**	**17**	**2.0**	**5.0**	**0.25**	**0.4**	**16**	**19**
1900-2100	0.5	0.9	24	20	2.0	5.0	0.2	0.4	16	19

Typical Performance Data

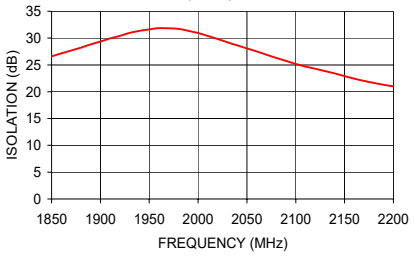
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	1	2
1850.00	3.38	3.38	0.00	26.59	1.79	15.38	19.40	18.78
1880.00	3.41	3.39	0.02	28.23	1.77	15.56	19.08	17.95
1900.00	3.36	3.35	0.01	29.36	1.82	15.75	19.08	17.95
1930.00	3.40	3.37	0.03	30.97	1.80	16.13	18.78	18.22
1950.00	3.40	3.36	0.04	31.63	1.84	16.33	18.78	17.95
1980.00	3.39	3.35	0.04	31.70	1.82	16.54	18.78	17.45
2000.00	3.40	3.35	0.06	30.96	1.82	16.75	18.78	17.69
2030.00	3.37	3.32	0.05	29.22	2.01	16.98	18.49	17.69
2050.00	3.42	3.35	0.07	28.07	1.96	17.21	18.49	17.21
2080.00	3.41	3.32	0.09	26.32	1.82	17.45	18.49	17.45
2100.00	3.38	3.28	0.10	25.17	2.05	17.69	18.49	17.45
2130.00	3.47	3.37	0.09	23.83	1.97	17.95	18.49	17.21
2150.00	3.44	3.32	0.12	22.91	1.93	17.95	18.49	16.98
2180.00	3.40	3.28	0.12	21.63	2.11	18.22	18.49	17.21
2200.00	3.49	3.37	0.12	20.99	2.02	18.22	18.49	17.21

1. Total Loss = Insertion Loss + 3dB splitter loss.

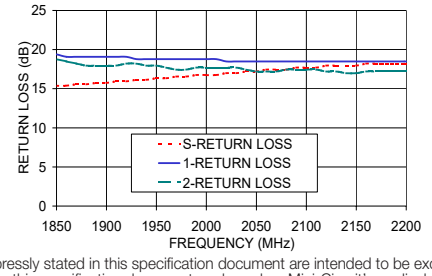
SCN-2-22
TOTAL LOSS



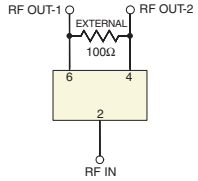
SCN-2-22
ISOLATION



SCN-2-22
RETURN LOSS



electrical schematic



Notes

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