

Ultra-Small Ceramic Power Splitter/Combiner

SCN-2-35+ SCN-2-35

2 Way-0° 50Ω

2825 to 3700 MHz



Maximum Ratings

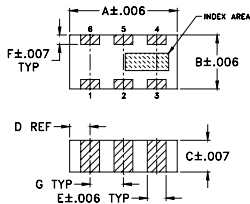
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	4W* max.

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

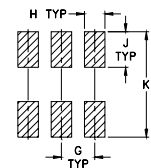
Pin Connections

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

Outline Drawing



PCB Land Pattern

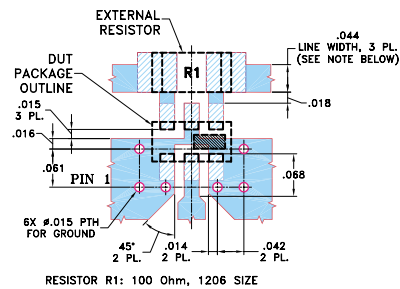


Suggested Layout,
Tolerance to be within ±0.02

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	wt
.126	.063	.035	.024	.022	.011	.039	.024	.042	.123	grams
3.20	1.60	0.89	0.61	0.56	0.28	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, 0.4 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 0.8 deg. typ.
- high isolation, 28 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

- amateur radio
- defense
- wireless communication

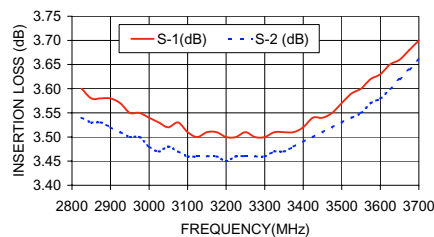
Splitter Electrical Specifications

MODEL NO.	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.		
SCN-2-35(+)	2825-3700 3200-3500	0.4	1.3	22 13	1.0 4.0	0.1 0.3	18	20		
		0.4	1.0	28 18	0.8 4.0	0.1 0.3	20	23		

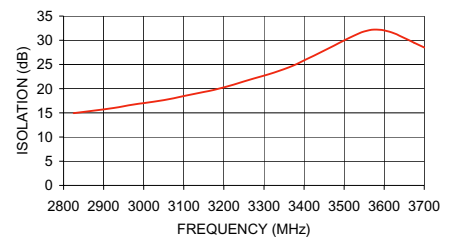
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	Return Loss (dB)		
	S-1	S-2				S	1	2
2825.00	3.60	3.54	0.06	14.94	0.28	15.39	47.26	31.96
2900.00	3.58	3.52	0.05	15.70	0.22	16.46	41.52	34.99
3000.00	3.54	3.48	0.05	17.02	0.21	18.99	33.34	47.87
3100.00	3.51	3.46	0.05	18.47	0.17	21.86	29.16	39.50
3200.00	3.50	3.45	0.05	20.26	0.14	26.24	25.93	31.34
3300.00	3.50	3.46	0.04	22.71	0.14	30.10	23.20	26.54
3450.00	3.54	3.51	0.04	27.85	0.12	21.96	20.06	21.98
3500.00	3.57	3.53	0.04	29.97	0.13	20.04	19.24	20.75
3550.00	3.60	3.55	0.04	31.81	0.11	18.22	18.51	19.70
3575.00	3.62	3.57	0.05	32.20	0.09	17.56	18.24	19.31
3600.00	3.63	3.58	0.05	32.06	0.06	17.00	17.98	18.95
3625.00	3.65	3.60	0.05	31.43	0.04	16.42	17.72	18.61
3650.00	3.66	3.62	0.05	30.50	0.01	15.80	17.43	18.26
3675.00	3.68	3.64	0.04	29.47	0.02	15.18	17.13	17.88
3700.00	3.70	3.66	0.04	28.52	0.03	14.65	16.85	17.50

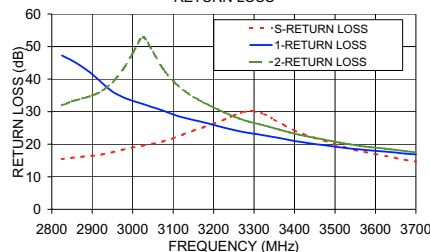
SCN-2-35
INSERTION LOSS



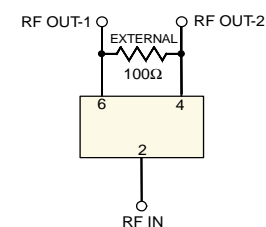
SCN-2-35
ISOLATION



SCN-2-35
RETURN LOSS



electrical schematic



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RF/IF MICROWAVE COMPONENTS

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