Surface Mount

Power Splitter/Combiner

SC4PS-33+

4 Way-0° 50Ω 300 to 3000 MHz

CASE STYLE: CK1704

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.20W max.

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	10
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4
GROUND	ALL OTHER

Features

- wideband, 300 to 3000 MHz, useable from 100 to 3600 MHz
- low insertion loss, 1.6 dB typ.
- good isolation, 17 dB typ.
- good amplitude unbalance, 0.4 dB typ.

Applications

- communication systems
- CATV
- cellular, GPS, PCS
- VHF/UHF/receivers/transmitters

+RoHS Compliant

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

Electrical Specifications at 25°C

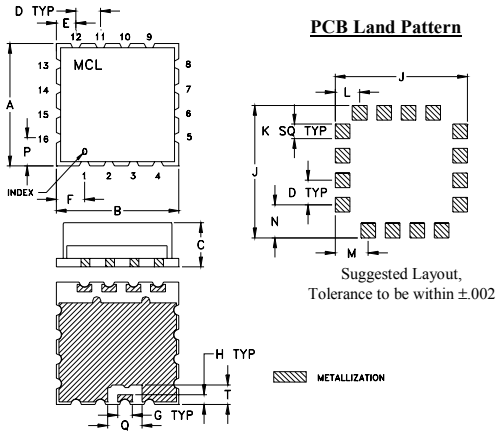
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		300	—	3000	MHz
Insertion Loss Above 6.0 dB	300 - 2700 2700 - 3000	—	1.6 2.6	3.1 3.8	dB
Isolation	300 - 3000	12	17	—	dB
Phase Unbalance	300 - 2700 2700 - 3000	— —	7 12	15 20	Degree
Amplitude Unbalance	300 - 2700 2700 - 3000	—	0.4 0.7	0.9 1.2	dB
VSWR (Port S)	300 - 3000	—	2.1	—	:1
VSWR (Port 1-4)	300 - 3000	—	1.5	—	:1

Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB) S-1	S-2	S-3	S-4	Amp. Unbal. (dB)	Isolation (dB) 1-2	2-3	2-4	Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
300.0	7.20	7.22	7.09	7.09	0.13	15.56	19.89	16.67	1.15	2.46	1.28	1.28	1.29	1.27
500.0	7.18	7.20	7.06	7.04	0.17	15.90	21.83	17.28	1.71	2.32	1.31	1.31	1.33	1.31
700.0	7.26	7.28	7.11	7.07	0.21	16.14	24.40	17.66	2.06	2.29	1.38	1.38	1.41	1.38
900.0	7.43	7.44	7.27	7.21	0.23	16.28	27.19	17.78	2.29	2.34	1.47	1.47	1.52	1.48
1100.0	7.60	7.60	7.42	7.36	0.25	16.48	30.54	17.90	2.55	2.39	1.57	1.57	1.62	1.58
1300.0	7.71	7.67	7.49	7.43	0.28	17.02	34.52	18.43	2.93	2.35	1.65	1.65	1.71	1.66
1500.0	7.62	7.58	7.40	7.33	0.29	18.04	29.99	19.63	3.31	2.16	1.70	1.67	1.74	1.70
1700.0	7.48	7.33	7.18	7.13	0.35	20.26	23.77	22.45	3.84	1.82	1.66	1.62	1.71	1.67
1900.0	7.32	7.06	6.96	6.90	0.41	24.66	19.55	28.42	4.71	1.41	1.57	1.52	1.60	1.56
2100.0	7.29	6.94	6.90	6.84	0.45	35.91	16.89	31.12	5.70	1.12	1.48	1.41	1.50	1.45
2300.0	7.54	7.12	7.14	7.08	0.46	32.14	15.43	24.09	7.01	1.37	1.46	1.34	1.45	1.39
2500.0	7.96	7.46	7.52	7.48	0.51	25.62	14.83	20.89	8.66	1.71	1.46	1.33	1.44	1.38
2700.0	8.48	7.89	7.95	7.89	0.59	22.85	14.80	19.22	10.64	2.00	1.47	1.32	1.43	1.36
2900.0	8.95	8.25	8.26	8.18	0.77	21.31	15.32	18.31	12.58	2.21	1.47	1.29	1.40	1.33
3000.0	9.14	8.39	8.38	8.28	0.86	20.49	15.86	17.91	13.44	2.26	1.48	1.28	1.39	1.33

1. Total Loss = Insertion Loss + 6dB splitter loss.

Outline Drawing

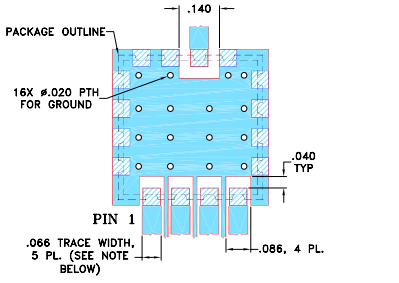


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J
.500 12.70	.500 12.70	.180 4.57	.100 2.54	.080 2.03	.115 2.92	.060 1.52	.040 1.02	.540 13.72

K	L	M	N	P	Q	T	wt.
.060 1.52	.100 2.54	.135 3.43	.135 3.43	.115 2.92	.140 3.56	.080 2.03	grams 1.0

Demo Board MCL P/N: TB-652+
Suggested PCB Layout (PL-368)

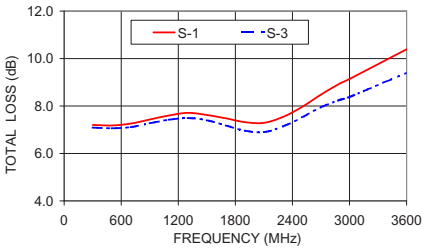


NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

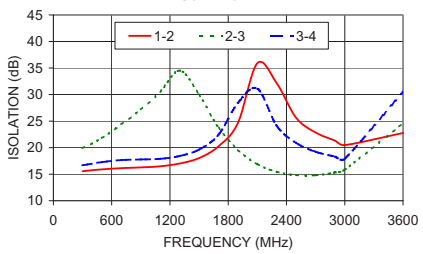
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

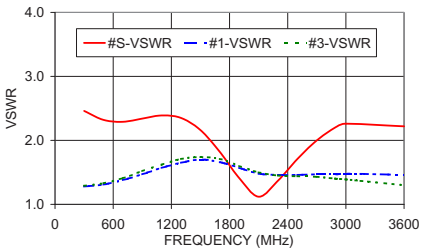
SC4PS-33+
TOTAL LOSS



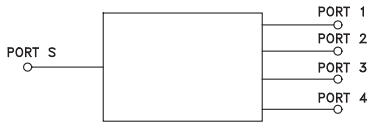
SC4PS-33+
ISOLATION



SC4PS-33+
VSWR



electrical schematic



Notes

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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