

## RFPS - SC4PS - 33

### 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



### electrical schematic

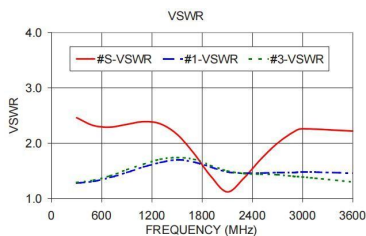
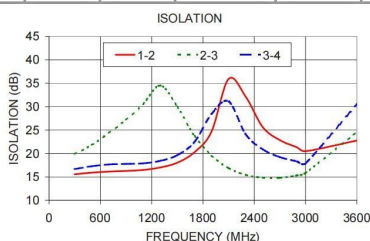


### Electrical Specifications at 25°C

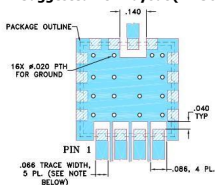
Parameter	Frequency(MHz)	Min.	Typ.	Max.	Unit
Frequency Range		300	-	3000	MHz
Insertion Loss Above 6.0 dB	300-2700	-	1.6	3.1	dB
	2700-3000	-	2.6	3.8	
Isolation	300-3000	12	17	-	dB
	1000-2000	20			
Phase Unbalance	300-2700	-	7	15	Degree
	2700-3000	-	12	20	
Amplitude Unbalance	300-2700	-	0.4	0.9	dB
	2700-3000	-	0.7	1.2	
VSWR (Port S)	300-3000	-	2.1	-	:1
VSWR (Port 1-4)	300-3000	-	1.5	-	:1

### Typical Performance Data (TEST CONDITIONS: INPUT POWER = 0dBm @ Temperature = +25°C)

Freq. (MHz)	Total Loss (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWRS		
	S-1	S-2	S-3		1-2	2-3	2-4		S	1	2
300	7.20	7.22	7.09	0.03	15.56	19.89	16.67	1.15	2.46	1.28	1.28
500	7.18	7.20	7.06	0.17	15.90	21.83	17.28	1.71	2.32	1.31	1.31
700	7.26	7.28	7.11	0.21	16.14	24.40	17.66	2.06	2.29	1.38	1.38
1000	7.43	7.44	7.27	0.23	20.50	27.19	21.06	2.29	2.34	1.47	1.47
1100	7.60	7.60	7.42	0.25	21.13	30.54	22.63	2.55	2.39	1.57	1.57
1300	7.71	7.67	7.49	0.28	21.95	34.52	23.14	2.93	2.35	1.65	1.65
1500	7.62	7.58	7.40	0.29	22.54	32.99	22.63	3.31	2.16	1.67	1.67
1700	7.48	7.33	7.18	0.35	20.26	29.26	22.45	3.84	1.82	1.62	1.62
2000	7.32	7.06	6.96	0.41	24.66	21.35	28.42	4.71	1.41	1.52	1.52
2100	7.29	6.94	6.90	0.45	35.91	16.89	31.12	5.70	1.12	1.41	1.41
2300	7.54	7.12	7.14	0.46	32.14	15.43	24.09	7.01	1.37	1.34	1.34
2500	7.96	7.46	7.52	0.51	25.62	14.83	20.89	8.66	1.71	1.33	1.33
2700	8.48	7.89	7.95	0.59	22.85	14.80	19.22	10.64	2.00	1.32	1.32
2900	8.95	8.25	8.26	0.77	21.31	15.32	18.31	12.58	2.21	1.29	1.29
3000	9.14	8.39	8.38	0.86	20.49	15.86	17.91	13.44	2.26	1.28	1.28



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



- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .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 BASE COPPER)  
 ■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Maximum Ratings

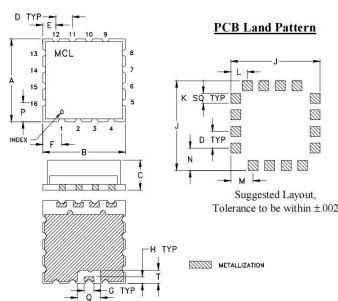
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.2W max.

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

### Pin Connections

SUNPORT	10
PORT1	1
PORT2	2
PORT3	3
PORT4	4
GROUND	ALLOTTHER

### Outline Drawing



### Outline Dimensions: Unit (mm)

A	12.70	B	12.70
C	4.57	D	2.54
E	2.03	F	2.92
G	1.52	H	1.02
J	13.72	K	1.52
L	2.54	M	3.43
N	3.43	P	2.92
Q	3.56	T	2.03
wt	1.0		