

Power Splitter/Combiner

TCP-2-33+

2 Way-0° 50Ω 1000 to 3000 MHz

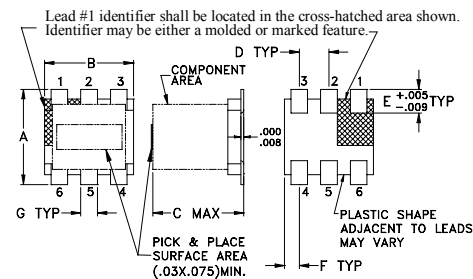
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.
Permanent damage may occur if any of these limits are exceeded.	

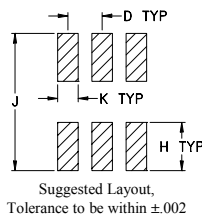
Pin Connections

SUM PORT	2,5,6
PORT 1	3
PORT 2	4
GROUND	1
EXT. RESISTOR 200Ω	3,4

Outline Drawing



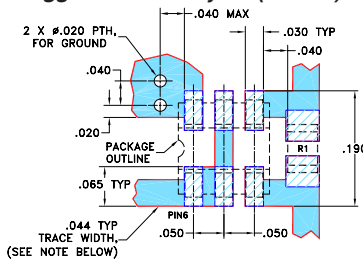
PCB Land Pattern



Outline Dimensions (inch/mm)

A	B	C	D	E	F
.160	.150	.160	.050	.040	.025
4.06	3.81	4.06	1.27	1.02	0.64
G	H	J	K		wt
.028	.065	.190	.030		grams
0.71	1.65	4.83	0.76		0.15

Demo Board MCL P/N: TB-464+ Suggested PCB Layout (PL-357)



RESISTOR R1: 200 ± 1% Ohm, 0805 SIZE

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

- low insertion, 0.8 dB typ.
- excellent amplitude unbalance, 0.3 dB typ.
- very good phase unbalance, 1.0 deg. typ.
- external resistor required
- aqueous washable
- leads for excellent solderability
- low cost

Applications

- cellular
- PCN
- GPS

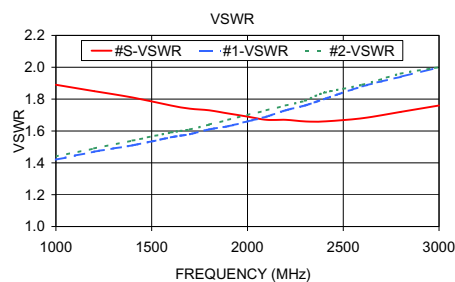
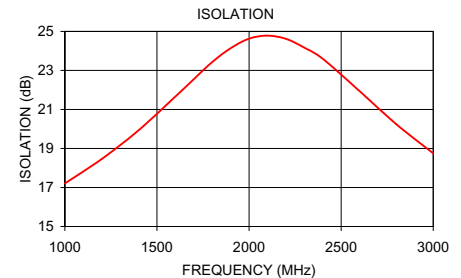
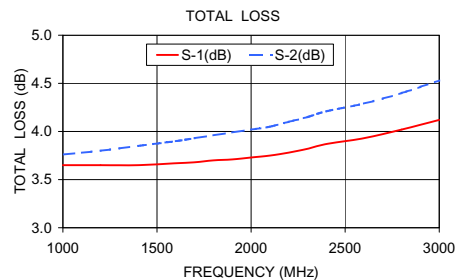
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)	INSERTION LOSS (dB) ABOVE 3.0 dB	PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ. Min	Typ. Max.	Max.	Max.
1000-3000	18 15	0.8 1.9	5.0	0.9

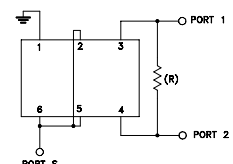
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2					
1000.00	3.65	3.76	0.11	17.21	0.35	1.89	1.44
1200.00	3.65	3.80	0.15	18.46	0.37	1.85	1.47
1400.00	3.65	3.85	0.20	19.93	0.41	1.81	1.51
1600.00	3.67	3.90	0.23	21.66	0.50	1.76	1.56
1700.00	3.68	3.93	0.25	22.55	0.53	1.74	1.58
1800.00	3.70	3.96	0.26	23.43	0.59	1.73	1.61
1900.00	3.71	3.99	0.28	24.14	0.65	1.71	1.63
2000.00	3.73	4.02	0.29	24.63	0.74	1.69	1.66
2100.00	3.75	4.05	0.30	24.78	0.82	1.67	1.69
2200.00	3.78	4.10	0.31	24.62	0.91	1.67	1.73
2300.00	3.82	4.15	0.32	24.17	0.97	1.66	1.76
2400.00	3.87	4.21	0.34	23.60	1.16	1.66	1.80
2600.00	3.93	4.29	0.35	21.94	1.27	1.68	1.88
2800.00	4.02	4.40	0.38	20.24	1.45	1.72	1.94
3000.00	4.12	4.53	0.41	18.75	1.73	1.76	2.00

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



electrical schematic



MODEL	R (Ohm)
TCP-2-25	475
TCP-2-33	200
TCP-2-33W+	475
TCP-2-272+	475

For detailed performance specs & shopping online see web site

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IF/RF MICROWAVE COMPONENTS

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DY/CP/AM
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