

Surface Mount

Power Splitter/Combiner

TCP-2-25+ TCP-2-25

2 Way-0° 50Ω 200 to 2500 MHz



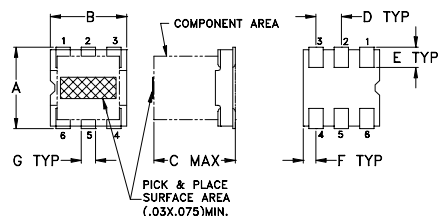
Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.5W max.

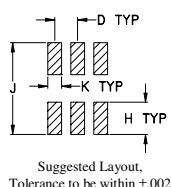
Pin Connections

SUMPORT	2,5,6
PORT 1	3
PORT 2	4
GROUND EXT.	1
EXT. RESISTOR 475Ω	3,4

Outline Drawing



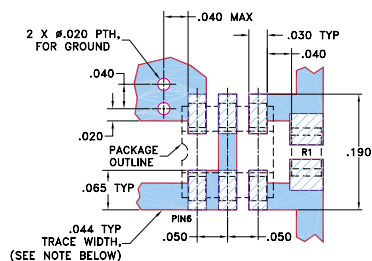
PCB Land Pattern



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-86 Suggested PCB Layout (PL-008)



RESISTOR R1: 475 ± 1% Ohm, 0805 SIZE

- NOTES:
- 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.
 - 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, 0.2 dB typ.
- very good phase unbalance, 1.2 deg. typ.
- external resistor required
- aqueous washable
- leads for excellent solderability
- low cost

Applications

- cellular
- PCN
- GPS

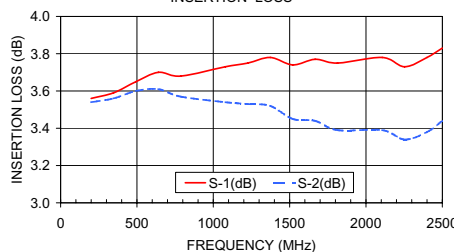
Splitter Electrical Specifications

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.
200-2500	18 10	0.8 1.3	6.0	0.8

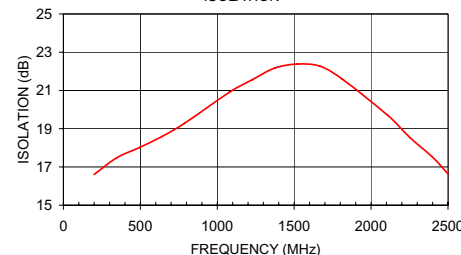
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
200.00	3.56	3.54	0.01	16.61	0.32	1.96	1.54	1.53
346.70	3.59	3.56	0.03	17.48	0.54	1.94	1.55	1.54
493.30	3.65	3.60	0.05	18.01	0.70	1.92	1.58	1.56
640.00	3.70	3.61	0.08	18.59	0.87	1.90	1.62	1.58
786.70	3.68	3.57	0.11	19.28	0.96	1.86	1.65	1.59
1080.00	3.73	3.54	0.19	20.91	1.22	1.85	1.68	1.60
1226.70	3.75	3.53	0.22	21.56	1.33	1.75	1.74	1.63
1373.30	3.78	3.52	0.26	22.17	1.46	1.77	1.73	1.62
1520.00	3.74	3.45	0.29	22.38	1.52	1.73	1.73	1.63
1666.70	3.77	3.44	0.33	22.27	1.64	1.64	1.78	1.65
1813.30	3.75	3.39	0.35	21.59	1.72	1.57	1.77	1.63
2106.70	3.78	3.39	0.39	19.71	1.96	1.44	1.81	1.67
2253.30	3.73	3.34	0.40	18.53	2.18	1.32	1.84	1.70
2400.00	3.78	3.38	0.40	17.51	2.42	1.23	1.90	1.75
2500.00	3.83	3.44	0.39	16.64	2.60	1.19	1.88	1.74

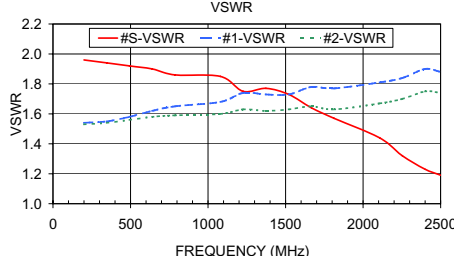
TCP-2-25
INSERTION LOSS



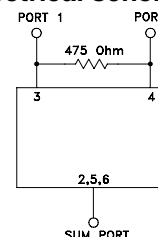
TCP-2-25
ISOLATION



TCP-2-25
VSWR



electrical schematic



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