Surface Mount

Power Splitter/Combiner

ADP-2-20

2 Way-0° 50Ω 20 to 2000 MHz

CASE STYLE: CD542

Maximum Ratings

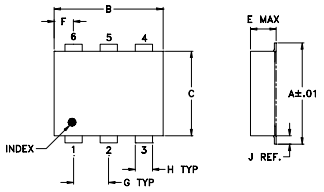
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.125W max.

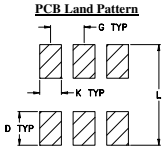
Permanent damage may occur if any of these limits are exceeded.

Pin Connections

SUM PORT	1
PORT 1	3
PORT 2	4
GROUND	6
NOT USED	2,5

Outline Drawing





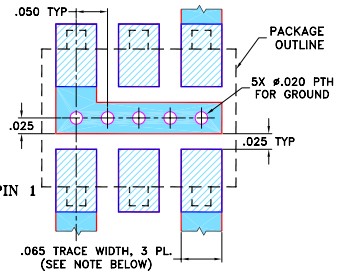
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.272	.310	.220	.100	.112	.055	.100
6.91	7.87	5.59	2.54	2.84	1.40	2.54

H	J	K	L	wt
.030	.026	.065	.300	grams
0.76	0.66	1.65	7.62	0.20

Demo Board MCL P/N: TB-48+
Suggested PCB Layout (PL-035)



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

Features

- low insertion loss, 0.7 dB typ.
- excellent insertion loss flatness, 0.4 dB peak to peak
- excellent amplitude unbalance, 0.1 dB typ.
- good phase unbalance, 1.1 deg. typ.
- aqueous washable
- protected under U.S. Patent 6,133,525

Applications

- instrumentation
- PCS/cellular
- GPS

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 3.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U	L	M	U
f_L-f_U	Typ.	Min	Typ.	Min	Typ.	Min	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
20-2000	18	15	18	15	18	15	0.5	0.8	0.7	1.0	0.8	1.5	2.0	3.0	5.0	0.2	0.3	0.7

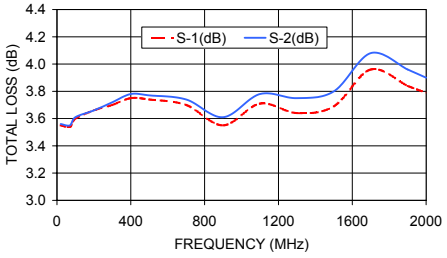
L = 20-200 MHz M = 200-1000 MHz U = 1000-2000 MHz

Typical Performance Data

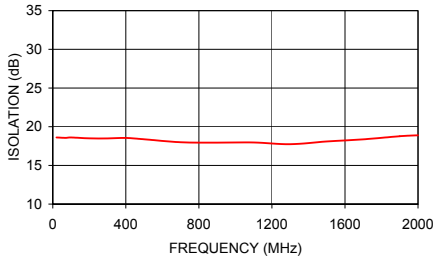
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
20.00	3.55	3.56	0.00	18.61	0.00	1.98	1.55	1.55
70.00	3.54	3.55	0.01	18.56	0.18	1.98	1.56	1.56
100.00	3.60	3.61	0.01	18.61	0.19	1.97	1.56	1.56
200.00	3.66	3.66	0.00	18.50	0.45	1.97	1.57	1.58
300.00	3.70	3.72	0.02	18.49	0.59	1.97	1.58	1.59
400.00	3.75	3.78	0.02	18.55	0.68	1.98	1.59	1.60
500.00	3.74	3.77	0.03	18.38	0.88	1.98	1.60	1.61
700.00	3.70	3.74	0.03	17.99	1.04	2.00	1.60	1.62
900.00	3.55	3.61	0.06	17.94	1.35	2.01	1.61	1.63
1100.00	3.71	3.78	0.06	17.96	1.43	2.00	1.60	1.64
1300.00	3.64	3.75	0.11	17.74	1.43	1.95	1.58	1.63
1500.00	3.69	3.80	0.11	18.09	1.32	1.87	1.55	1.61
1700.00	3.96	4.08	0.12	18.37	1.26	1.75	1.50	1.58
1900.00	3.84	3.96	0.12	18.77	1.05	1.60	1.42	1.53
2000.00	3.79	3.90	0.11	18.89	0.78	1.52	1.38	1.51

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

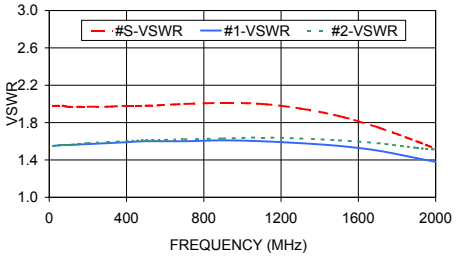
ADP-2-20+
TOTAL LOSS



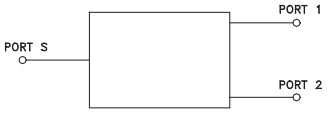
ADP-2-20+
ISOLATION



ADP-2-20+
VSWR



electrical schematic



Notes

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