

Surface Mount Power Splitter/Combiner

ADQ-180+ ADQ-180

2 Way-90° 50Ω 120 to 180 MHz

Maximum Ratings

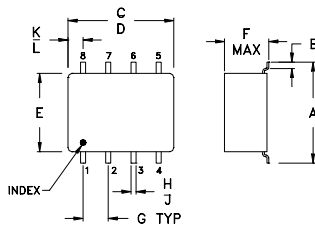
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.

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

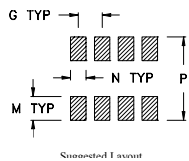
Pin Connections

SUM PORT	1
PORT 1 (+90°)	8
PORT 2 (0°)	4
GROUND	2,3,6,7
50 OHM TERM EXTERNAL	5

Outline Drawing



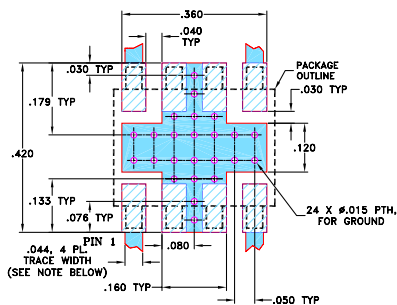
PCB Land Pattern



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	
.397	.032	.385	.435	.310	.215	.100	
10.08	0.81	9.78	11.05	7.87	5.46	2.54	
H	J	K	L	M	N	P	wt
.015	.025	.035	.075	.120	.060	.420	grams
0.38	0.64	0.89	1.91	3.05	1.52	10.67	0.45

Demo Board MCL P/N: TB-83 Suggested PCB Layout (PL-063)



- 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

- excellent amplitude unbalance, 0.6 dB typ. and phase unbalance, 0.7 deg. typ.
- very low insertion loss, 0.2 dB typ.
- small surface mount package
- protected under U.S. Patent 6,133,525

Applications

- VHF TV

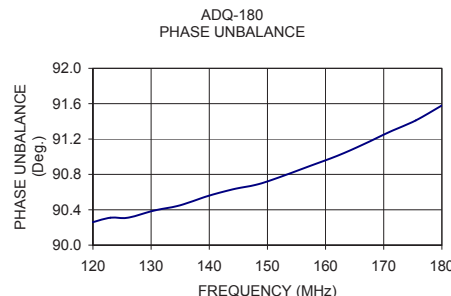
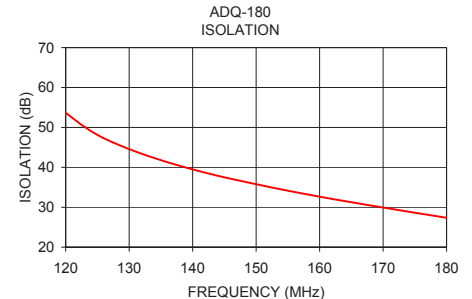
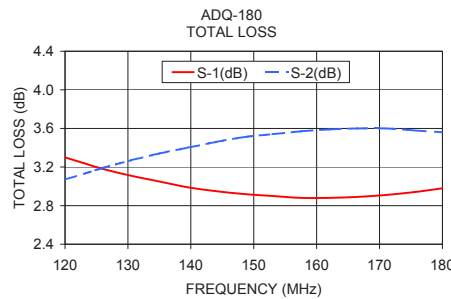
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) Avg. of Coupled Outputs ABOVE 3 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
	Typ.	Min.	Typ.	Max.		
$f_c - f_u$					Max.	Max.
120-180	35	20	0.2	0.7	6	1.5

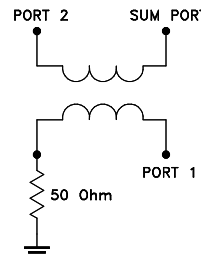
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
120.00	3.30	3.07	0.23	53.66	90.26	1.04	1.03	1.05
123.00	3.24	3.13	0.11	50.12	90.31	1.04	1.03	1.05
126.00	3.18	3.19	0.01	47.30	90.31	1.04	1.03	1.05
130.50	3.11	3.27	0.16	44.27	90.39	1.03	1.03	1.05
135.00	3.05	3.34	0.30	41.81	90.45	1.03	1.03	1.06
139.50	2.99	3.40	0.41	39.71	90.55	1.03	1.03	1.06
144.00	2.95	3.46	0.51	37.87	90.63	1.03	1.03	1.06
148.50	2.92	3.51	0.59	36.28	90.69	1.03	1.03	1.06
153.00	2.90	3.54	0.65	34.78	90.79	1.03	1.03	1.06
157.50	2.88	3.57	0.69	33.39	90.90	1.03	1.03	1.06
162.00	2.88	3.59	0.71	32.08	91.01	1.04	1.04	1.07
166.50	2.89	3.60	0.71	30.85	91.14	1.04	1.04	1.07
171.00	2.91	3.60	0.69	29.66	91.28	1.05	1.05	1.08
175.50	2.94	3.58	0.64	28.50	91.41	1.05	1.06	1.08
180.00	2.98	3.56	0.57	27.36	91.58	1.06	1.06	1.09

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



electrical schematic



For detailed performance specs & shopping online see web site



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

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