



SURFACE MOUNT

Power Splitter/Combiner

ADQ-180+

Mini-Circuits

2 Way-90° 50Ω 120 to 180 MHz

FEATURES

- Excellent Amplitude Unbalance, 0.6 dB typ. and Phase Unbalance, 0.7 deg. typ.
- Very low Insertion Loss, 0.2 dB typ.
- Small size
- Protected under U.S. Patent 6,133,525



Generic photo used for illustration purposes only

CASE STYLE: CJ725

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our website for methodologies and qualifications

APPLICATIONS

- VHF TV

ELECTRICAL SPECIFICATIONS

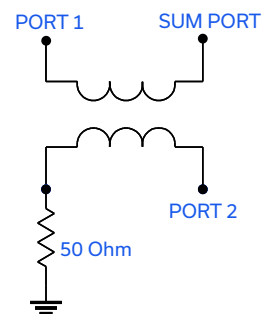
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range	—	120	—	180	MHz
Insertion Loss Avg. of Coupled Outputs above 3 dB	120-180	—	0.2	0.7	dB
Isolation	120-180	20	35	—	dB
Phase Unbalance	120-180	—	—	6	Degree
Amplitude Unbalance	120-180	—	—	1.5	dB

ABSOLUTE MAXIMUM RATINGS

Parameter	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.

ELECTRICAL SCHEMATIC



REV. E
ECO-019621
ADQ-180+
MCL NY
231017





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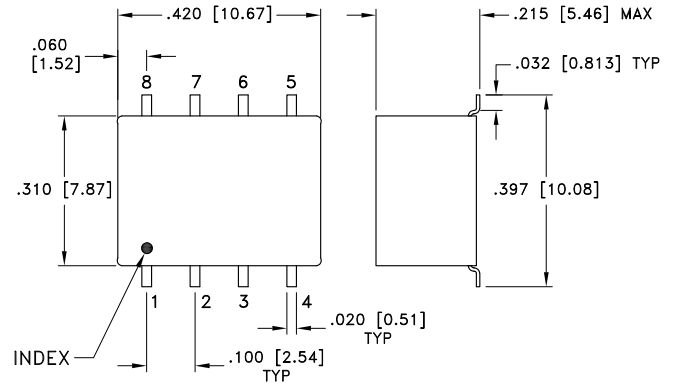
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PIN CONNECTIONS

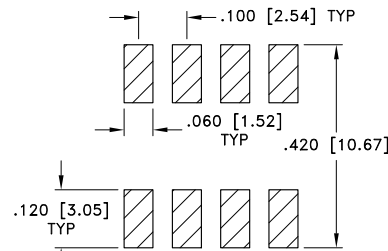
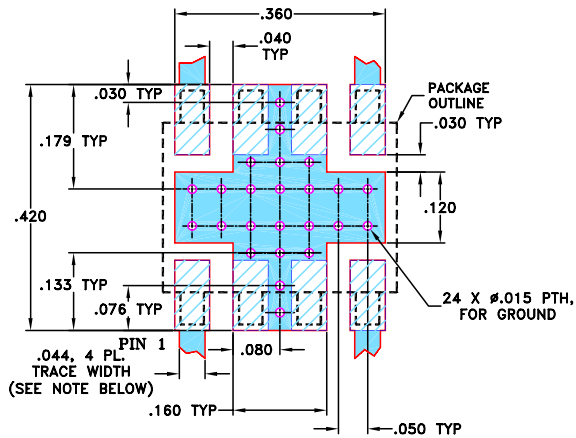
SUM PORT	1
PORT 1 (0°)	8
PORT 2 (+90°)	4
GROUND EXTERNAL	2,3,6,7
50 OHM TERM EXTERNAL	5

OUTLINE DRAWING



PRODUCT MARKING: N/A

DEMO BOARD MCL P/N: TB-83
SUGGESTED PCB LAYOUT (PL-063)



SUGGESTED LAYOUT FOR PCB LAND PATTERN
PATTERN TO BE WITHIN ±.002



Weight: .40 gram
Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.01; 3Pl. ±.005 Inch

- Notes:
1. Case material: Plastic.
 2. Termination Finish: Tin plate over Nickel plate.

- 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

TAPE & REEL INFORMATION: F10



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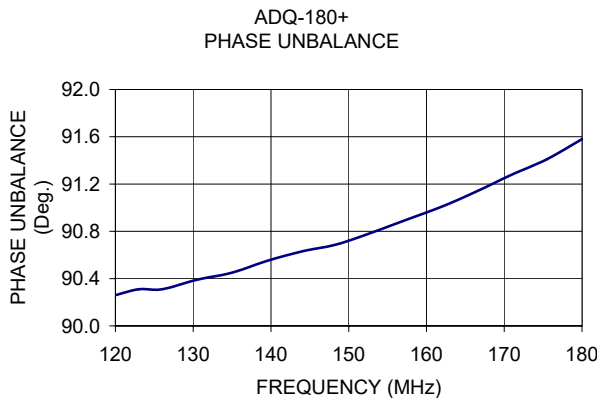
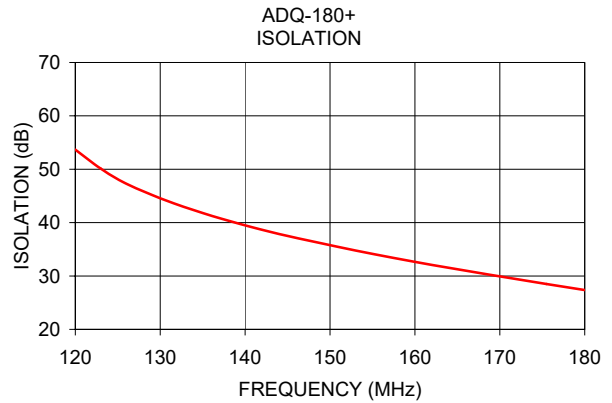
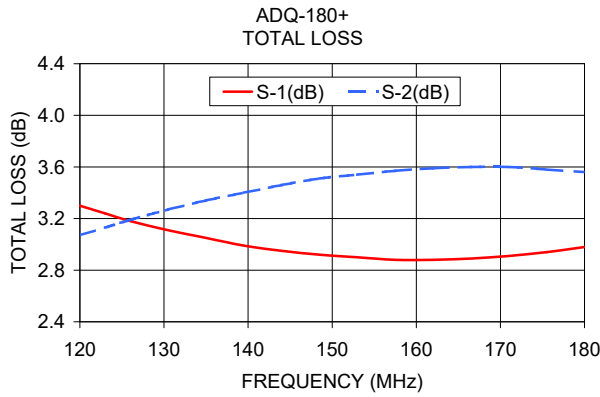
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR (:1)		
	S-1	S-2				S	1	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.



- NOTES**
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
 - B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
 - C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard. Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

