SURFACE MOUNT

Power Splitter/Combiner ADQ-180+

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

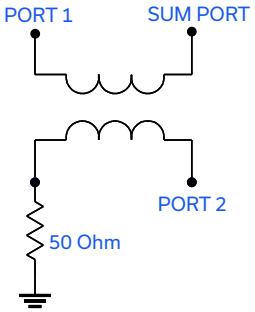
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range	—	120	—	180	MHz
Insertion Loss Avg. of Coupled Outputs above 3 dB	120-180	—	0.2	0.7	dB
Isolation	120-180	20	35	—	dB
Phase Unbalance	120-180	—	—	6	Degree
Amplitude Unbalance	120-180	—	—	1.5	dB

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
240515

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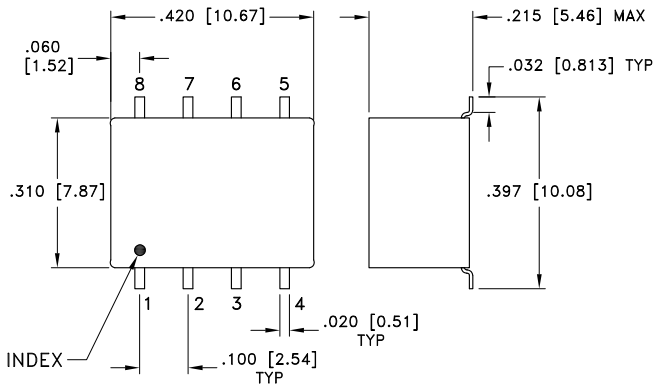
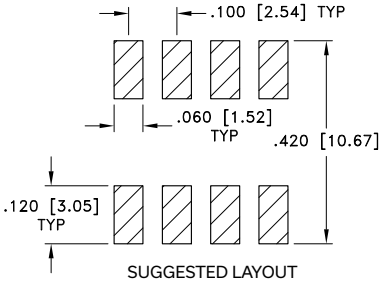
PIN CONNECTIONS

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

OUTLINE DRAWING



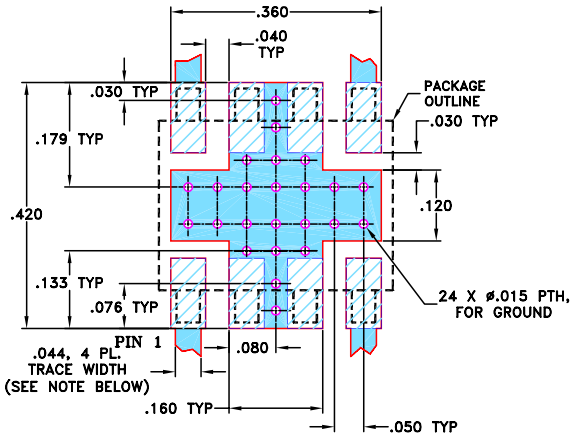


Weight: .40 gram
Dimensions are in inches [mm]. Tolerances: 2 Pl. ±.01; 3Pl.±.005 Inch

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

PRODUCT MARKING: N/A

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

TAPE & REEL INFORMATION: F10

SURFACE MOUNT

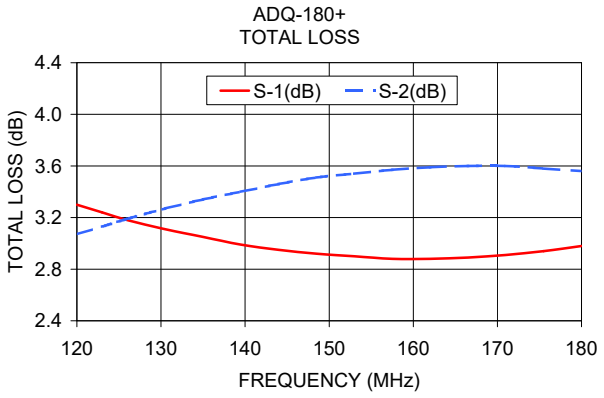
Power Splitter/Combiner ADQ-180+

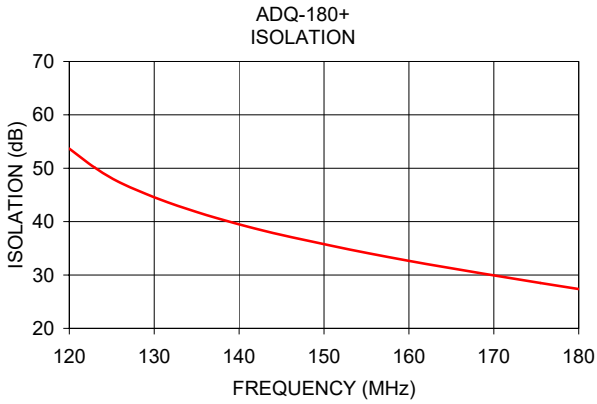
2 Way-90° 50Ω 120 to 180 MHz

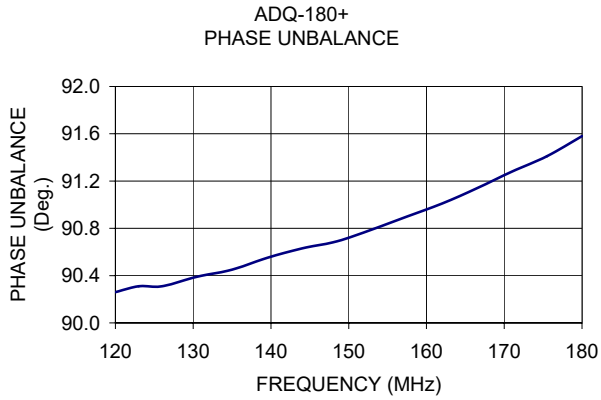
TYPICAL PERFORMANCE DATA

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