



SURFACE MOUNT

Power Splitter/Combiner

ADQ-90+

Mini-Circuits

2 Way-90° 50Ω 55 to 90 MHz

FEATURES

- Good Isolation, 26 dB Typ.
- Good Input Port Matching VSWR, 1.12 Typ.
- Good Output Port Matching VSWR, 1.10 Typ.
- Excellent Phase Unbalance, 1 Deg. Typ.
- Small Surface Mount Package
- 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
- Image Rejection
- IF Signal Processing

ELECTRICAL SPECIFICATIONS

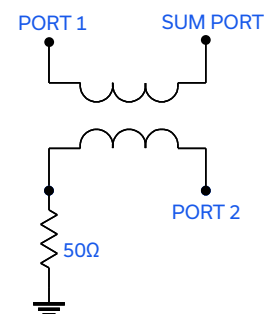
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		55		90	MHz
Insertion Loss Avg. of Coupled Outputs above 3 dB	55-90		0.2	0.7	dB
Isolation	55-90	20	26		dB
Phase Unbalance	55-90			4	Degree
Amplitude Unbalance	55-90			1.2	dB

ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Power Input (as a Splitter)	0.5 W Max.

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

ELECTRICAL SCHEMATIC



REV. F
ECO-019621
ADQ-32W+
MCL NY
251103





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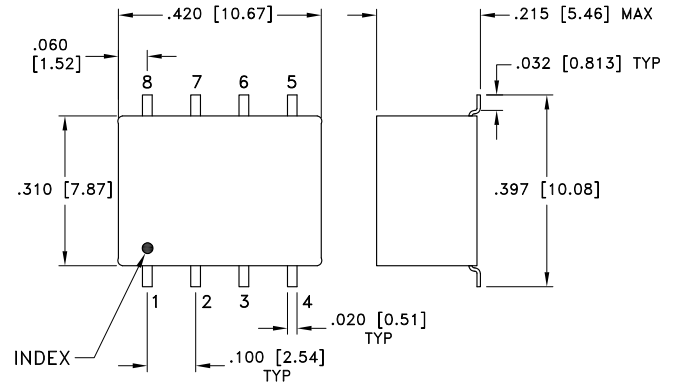
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PIN CONNECTIONS

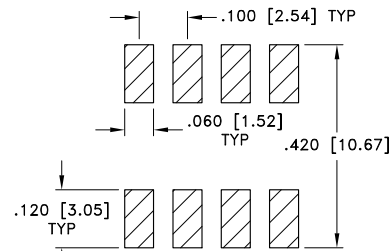
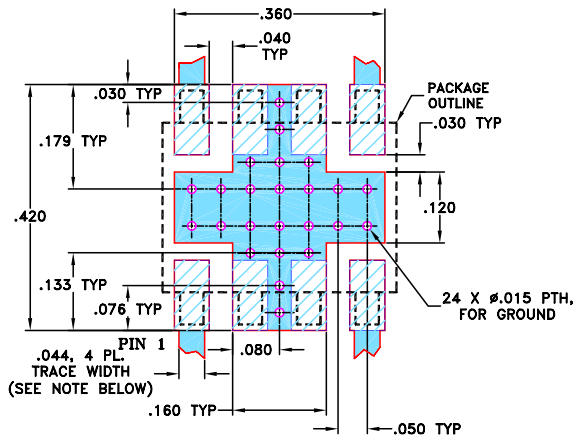
SUM PORT	1
PORT 1 (+90°)	8
PORT 2 (0°)	4
GROUND EXTERNAL	2,3,6,7
50Ω TERM EXTERNAL	5

OUTLINE DRAWING



PRODUCT MARKING: ADQ-90+

DEMO BOARD MCL P/N: TB-ADQ-90+ 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 R04350B 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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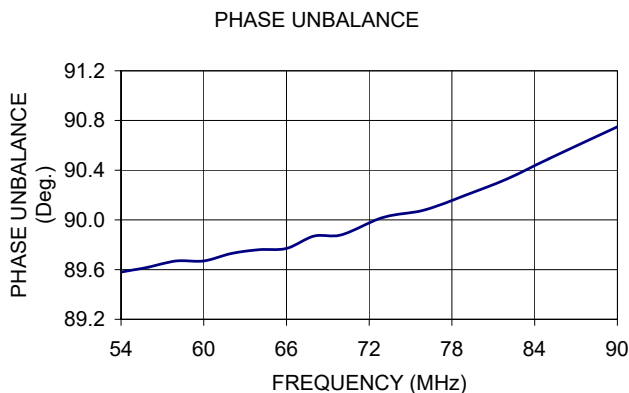
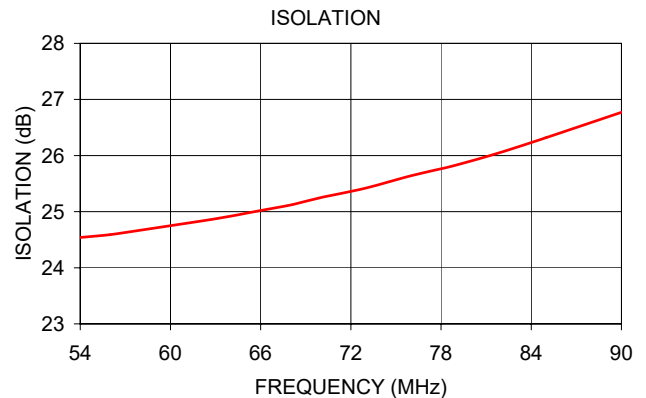
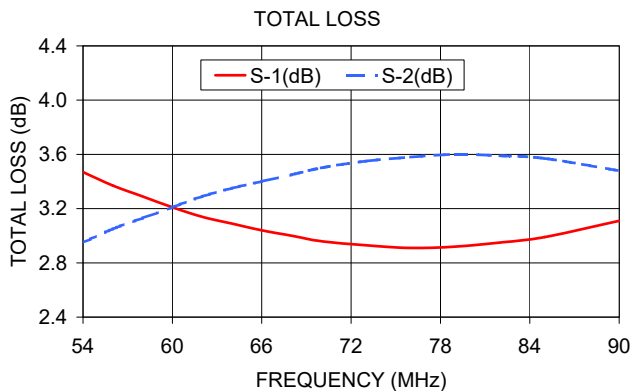
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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR (:1)		
	S-1	S-2				S	1	2
54	3.47	2.95	0.53	24.54	89.58	1.11	1.13	1.11
56	3.37	3.05	0.33	24.59	89.62	1.11	1.13	1.11
58	3.29	3.13	0.16	24.67	89.67	1.11	1.13	1.11
60	3.21	3.21	0.00	24.75	89.67	1.11	1.13	1.11
62	3.14	3.29	0.14	24.83	89.73	1.11	1.13	1.11
64	3.09	3.35	0.26	24.92	89.76	1.10	1.13	1.10
66	3.04	3.40	0.37	25.02	89.77	1.10	1.13	1.10
68	3.00	3.45	0.46	25.12	89.87	1.10	1.13	1.10
70	2.96	3.50	0.54	25.25	89.88	1.09	1.13	1.10
73	2.93	3.55	0.62	25.42	90.02	1.09	1.14	1.10
76	2.91	3.58	0.67	25.64	90.08	1.08	1.14	1.10
79	2.92	3.60	0.67	25.83	90.20	1.08	1.14	1.10
82	2.95	3.59	0.64	26.06	90.33	1.08	1.14	1.10
85	2.99	3.57	0.58	26.32	90.49	1.07	1.15	1.11
90	3.11	3.48	0.37	26.77	90.75	1.06	1.16	1.11

1. Total Loss = Insertion Loss + 3 dB 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

