



**SURFACE MOUNT**

# Power Splitter/Combiner

## ADQ-22+

Mini-Circuits

2 Way-90° 50Ω 95 to 200 MHz

### FEATURES

- Low Insertion Loss, 0.3 dB Typ.
- High Isolation, 28 dB Typ.
- Excellent VSWR, 1.10 Typ.
- Small Size



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

- Point to Point Microwave Link

### ELECTRICAL SPECIFICATIONS

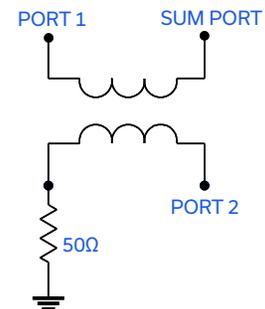
Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range			95		200	MHz
Insertion Loss Avg. of Coupled Outputs above 3 dB		95-200		0.3	0.6	dB
Isolation		95-200	24	28		dB
Phase Unbalance		95-200		2	6	Degree
Amplitude Unbalance		95-200		0.7	1.6	dB
VSWR	S-Port	95-200		1.1		:1
	Output	95-200		1.1		

### ABSOLUTE MAXIMUM RATINGS

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
Power Input (as a Splitter)	1 W Max.

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

### ELECTRICAL SCHEMATIC



REV. C  
ECO-019621  
ADQ-22+  
MCL NY  
251103





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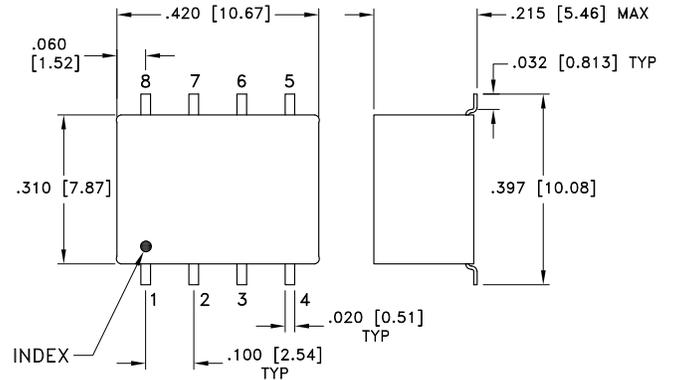
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### PIN CONNECTIONS

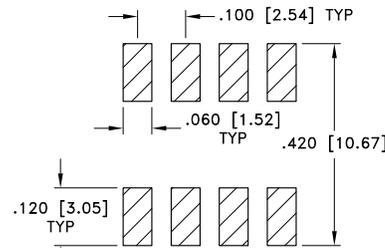
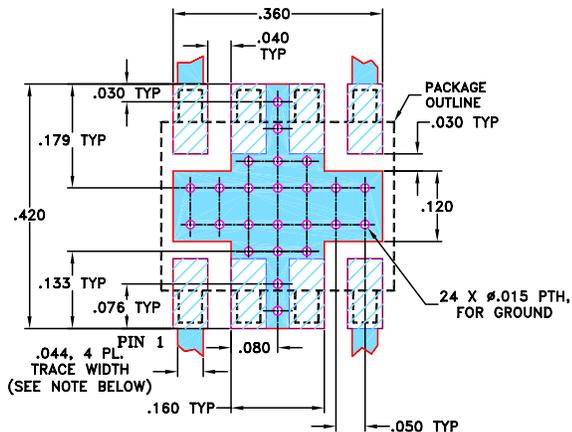
SUM PORT	1
PORT 1 (0°)	5
PORT 2 (+90°)	8
GROUND EXTERNAL	2,3,6,7
50Ω TERM EXTERNAL	4

### OUTLINE DRAWING



PRODUCT MARKING: ADQ-22+

DEMO BOARD MCL P/N: TB-ADQ-22+  
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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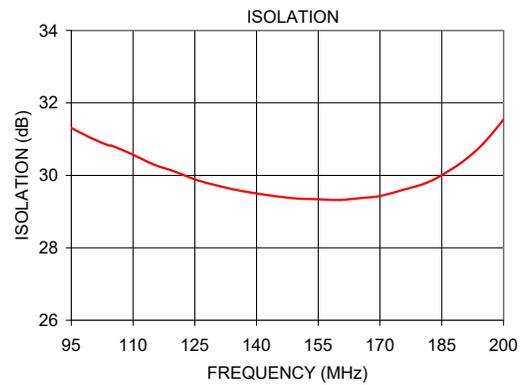
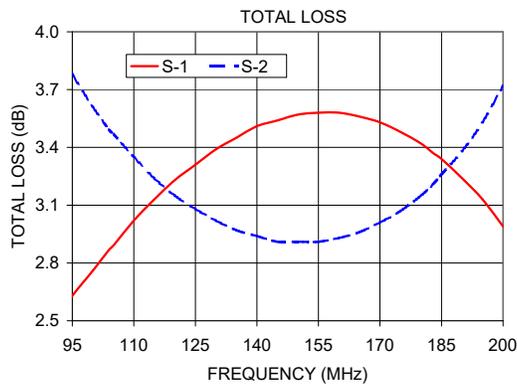
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### TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR (:1)		
	S-1	S-2				S	1	2
95	2.63	3.78	1.15	31.31	90.78	1.09	1.09	1.06
100	2.76	3.61	0.85	31.02	90.87	1.09	1.09	1.06
105	2.89	3.47	0.57	30.81	90.96	1.09	1.09	1.06
110	3.02	3.35	0.33	30.57	91.06	1.09	1.09	1.06
120	3.23	3.15	0.08	30.11	91.27	1.10	1.10	1.06
130	3.39	3.02	0.37	29.73	91.48	1.10	1.10	1.06
140	3.51	2.94	0.57	29.50	91.70	1.10	1.10	1.06
150	3.57	2.91	0.66	29.36	91.97	1.10	1.10	1.06
160	3.58	2.93	0.65	29.32	92.23	1.10	1.10	1.06
170	3.53	3.01	0.52	29.43	92.53	1.11	1.11	1.05
180	3.42	3.15	0.26	29.74	92.88	1.11	1.11	1.05
185	3.34	3.26	0.08	30.01	93.05	1.11	1.10	1.05
190	3.24	3.38	0.14	30.37	93.26	1.11	1.10	1.05
195	3.13	3.53	0.41	30.87	93.48	1.11	1.10	1.04
200	2.99	3.72	0.72	31.54	93.71	1.11	1.10	1.04

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](http://www.minicircuits.com/terms/viewterm.html)

