



**THE DATASHEET OF  
ADQ-22+**





**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

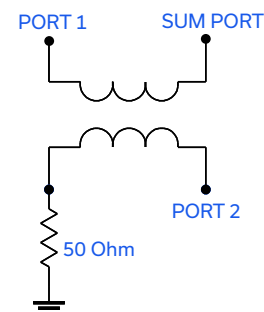
Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		—	95	—	200	MHz
Insertion Loss Avg. of Coupled Outputs above 3 dB		95-200	—	0.3	0.6	dB
Isolation		95-200	24	28	—	dB
Phase Unbalance		95-200	—	2	6	Degree
Amplitude Unbalance		95-200	—	0.7	1.6	dB
VSWR	S-Port	95-200	—	1.1	—	:1
	Output	95-200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

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

### ELECTRICAL SCHEMATIC



REV. C  
ECO-019621  
ADQ-22+  
MCL NY  
231017





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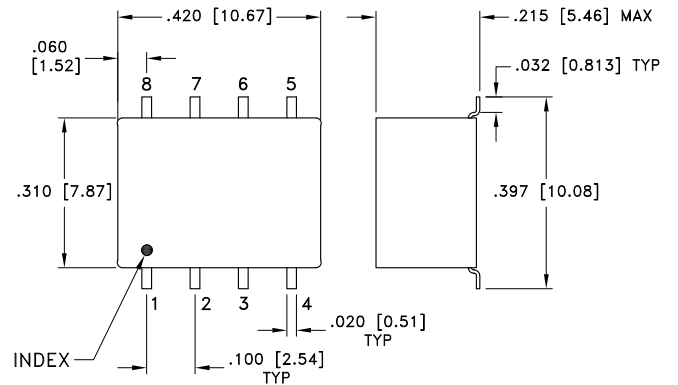
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### PIN CONNECTIONS

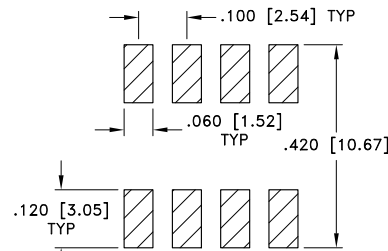
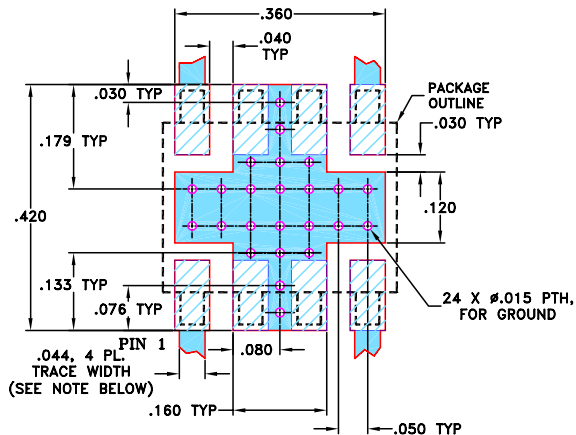
SUM PORT	1
PORT 1 (0°)	5
PORT 2 (+90°)	8
GROUND EXTERNAL	2,3,6,7
50 OHM TERM EXTERNAL	4

### 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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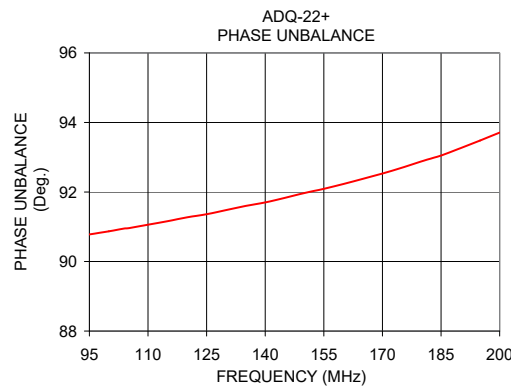
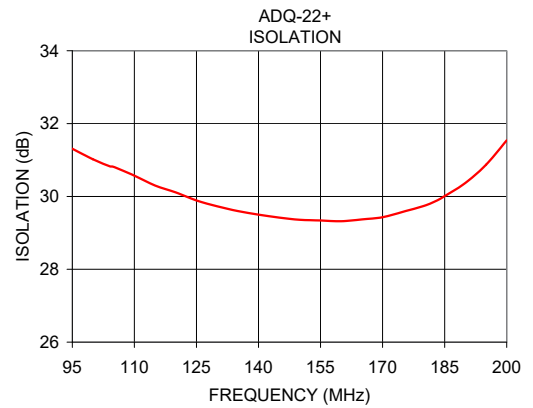
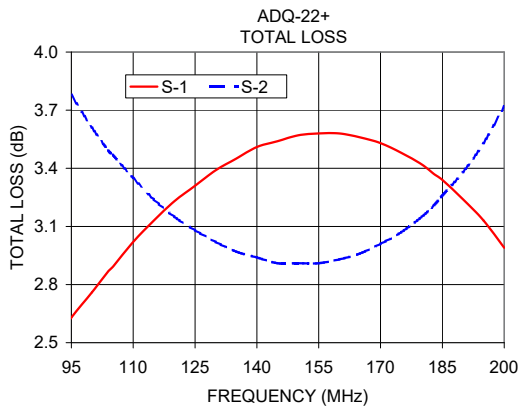
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### TYPICAL PERFORMANCE DATA

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR (:1)		
	S-1	S-2				S	1	2
95.00	2.63	3.78	1.15	31.31	90.78	1.09	1.09	1.06
100.00	2.76	3.61	0.85	31.02	90.87	1.09	1.09	1.06
105.00	2.89	3.47	0.57	30.81	90.96	1.09	1.09	1.06
110.00	3.02	3.35	0.33	30.57	91.06	1.09	1.09	1.06
120.00	3.23	3.15	0.08	30.11	91.27	1.10	1.10	1.06
130.00	3.39	3.02	0.37	29.73	91.48	1.10	1.10	1.06
140.00	3.51	2.94	0.57	29.50	91.70	1.10	1.10	1.06
150.00	3.57	2.91	0.66	29.36	91.97	1.10	1.10	1.06
160.00	3.58	2.93	0.65	29.32	92.23	1.10	1.10	1.06
170.00	3.53	3.01	0.52	29.43	92.53	1.11	1.11	1.05
180.00	3.42	3.15	0.26	29.74	92.88	1.11	1.11	1.05
185.00	3.34	3.26	0.08	30.01	93.05	1.11	1.10	1.05
190.00	3.24	3.38	0.14	30.37	93.26	1.11	1.10	1.05
195.00	3.13	3.53	0.41	30.87	93.48	1.11	1.10	1.04
200.00	2.99	3.72	0.72	31.54	93.71	1.11	1.10	1.04

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



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