High Power
Bi-Directional Coupler

50Ω  23dB Coupling  DC Pass  800 to 1000 MHz

Maximum Ratings
Operating Temperature  -55°C to 100°C
Storage Temperature  -55°C to 100°C
DC Current  2A

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

Pin Connections
INPUT  1
OUTPUT  2
COUPLED (forward)  4
COUPLED (reverse)  3
GROUND  5

Outline Drawing

Outline Dimensions (inch mm)
A  B  C  D  E  F  G
70  .32  .13  .66  .100  .500  .022
17.78  8.19  3.19  1.24  2.54  12.70  .56
H  J  K  L  M  wt
.060  .040  .360  .670  .175  grams
1.52  1.02  9.14  17.02  4.45  .68

Demo Board MCL P/N: TB-398
Suggested PCB Layout (PL-260)

Features
• high power handling, 100 watts max.
• low mainline loss, 0.06 dB typ.
• excellent VSWR, 1.15:1 typ.
• excellent directivity, 27 dB typ.

Applications
• cellular

Bi-Directional Coupler Electrical Specifications

<table>
<thead>
<tr>
<th>FREQ. (MHz)</th>
<th>COUPLING (dB)</th>
<th>MAINLINE LOSS1 (dB)</th>
<th>DIRECTIVITY (dB)</th>
<th>VSWR (:1)</th>
<th>POWER INPUT (W)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800-1000</td>
<td>23.5±0.8</td>
<td>±1.3</td>
<td>0.06 0.25</td>
<td>27 19</td>
<td>1.15 100</td>
</tr>
<tr>
<td>800-900</td>
<td>24.0±0.8</td>
<td>±0.7</td>
<td>0.06 0.25</td>
<td>27 19</td>
<td>1.15 100</td>
</tr>
<tr>
<td>900-1000</td>
<td>23.0±0.8</td>
<td>±0.6</td>
<td>0.06 0.25</td>
<td>27 19</td>
<td>1.15 100</td>
</tr>
</tbody>
</table>

1. Mainline loss includes theoretical power loss at coupled port.

Suggested Layout, Tolerance to be within ±0.002

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/MCLStore/terms.jsp

www.minicircuits.com  P.O. Box 350166, Brooklyn, NY 11235-0003  (718) 934-4500  sales@minicircuits.com

RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications