**FEATURES:**
- Excellent Performance
- Small Size, Surface Mount
- Building Block For:
  - Power Amplifiers
  - Image Rejection Mixers
  - I & Q / SSB Modulators
  - Phase Shifters & More...

**SPECIFICATIONS (Rev. B 10/22/13)**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>450 MHz ±5%</td>
</tr>
<tr>
<td>Insertion Loss (dB) *</td>
<td>Typ. 0.3, Max. 0.4</td>
</tr>
<tr>
<td>Amplitude Unbalance</td>
<td>Typ. 0.5, Max. 0.8</td>
</tr>
<tr>
<td>Phase Unbalance (Deg.)</td>
<td>Typ. 2.0, Max. 3</td>
</tr>
<tr>
<td>Isolation (dB)</td>
<td>Typ. 20, Min. 17</td>
</tr>
<tr>
<td>Power Rating</td>
<td>1 Watt (Max.)</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ohms (Nom.)</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.35:1 (Typ.)</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40 to +85 °C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-55 to +100 °C</td>
</tr>
</tbody>
</table>

* Insertion loss is the average loss of the 2 coupling values in excess of the theoretical 3 dB coupling.

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**Port Configuration**

<table>
<thead>
<tr>
<th>Input</th>
<th>Isolated*</th>
<th>+90° Output</th>
<th>0° Output</th>
<th>GND,**</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>3,4</td>
</tr>
</tbody>
</table>

* Terminate ISOLATED port in 50 Ohms EXTERNALLY.
** Ground Externally
90° HYBRID
SURFACE MOUNT MODEL: SQ-67

10% BANDWIDTH

Fc = 450 MHz

Data @ 25°C

PERFORMANCE PLOTS
90° HYBRID
SURFACE MOUNT MODEL: SQ-67

10% BANDWIDTH

Fc = 450 MHz

Data @ 25ºC

PERFORMANCE PLOTS

Frequency (MHz)

Phase Unbalance (deg.)

Return Loss (dB)

Frequency (MHz)
90° HYBRID
SURFACE MOUNT MODEL: SQ-67

10% BANDWIDTH

Fc = 450 MHz

Data @ 25°C

PERFORMANCE PLOTS

Group Delay (nSec)

Frequency (MHz)