MNM2xx Series
Schottky Mixer Diodes
Medium Barrier

Features
- Multi Junction Chip Design
- Low Noise
- Small Junction Capacitance

Description
The MNM2xx Series of medium barrier Schottky diodes are metal semiconductor junction devices that have a typical short reverse recovery time. This allows their use at high microwave frequencies when the performance of the n-type may be reduced. The forward I-V of Schottky diodes is determined by the junction metal used. For every different metal selection there is a different forward voltage characteristic or “Barrier Height”. The devices are best suited for applications through 26 GHz and are ideally suited for use in mixers, detectors, doublers, and modulators.

Electrical Characteristics\(^1,2\): \(T_A = +25^\circ C\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Breakdown Voltage @ 10 (\mu A) ((V_{BR}))</th>
<th>Forward Voltage @ 1 mA ((V_f))</th>
<th>Junction Capacitance @ 0 V, 1 MHz ((C_J))</th>
<th>Series Resistance @ 5 mA ((R_S))</th>
<th>Tangential Signal Sensitivity ((T_{SS}))</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(\text{Min.})</td>
<td>(\text{Max.})</td>
<td>(\text{Typ.})</td>
<td>(\text{Typ.})</td>
<td>(\text{Typ.})</td>
</tr>
<tr>
<td>MNM200</td>
<td>3</td>
<td>0.40</td>
<td>0.14</td>
<td>20</td>
<td>52</td>
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<tr>
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<td>0.14</td>
<td>20</td>
<td>50</td>
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<td>0.14</td>
<td>20</td>
<td>48</td>
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<tr>
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<tr>
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<tr>
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<td>0.15</td>
<td>20</td>
<td>50</td>
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<tr>
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<td>20</td>
<td>48</td>
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<tr>
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<tr>
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<tr>
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</table>

Static Sensitivity
These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

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DC-0018475
Schottky Mixer Diodes  
Medium Barrier  

Absolute Maximum Ratings @ +25°C

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Rating</th>
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<tbody>
<tr>
<td>Power Dissipation</td>
<td>250 mW</td>
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<tr>
<td></td>
<td>Derate linearly to 0 @ +150°C</td>
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<tr>
<td>Operating Temperature</td>
<td>-55°C to +150°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-65°C to +200°C</td>
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</table>

Forward Current vs. Forward Voltage

Outline (CS10)

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