

MBD1057-H20 Planar Tunnel Diode



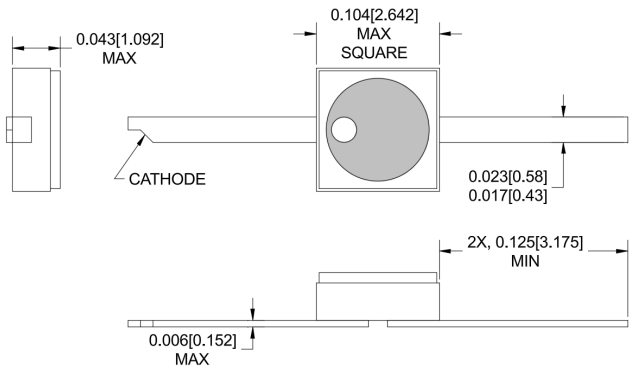
Technical Characteristics

| Product Features                     |
|--------------------------------------|
| Rugged Germanium Planar Construction |
| Excellent Temperature Stability      |
| No DC Bias Required                  |
| Wide Video Bandwidth                 |

| Product Description                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EclipseMDI MBD1057-H20, is a zero-bias, rugged Planar Tunnel Diode constructed with Germanium Planar. This tunnel diode exhibits excellent temperature stability, wide video bandwidth. The MBD1057-H20 is also available in non-hermetic (H20X) ceramic packages. |

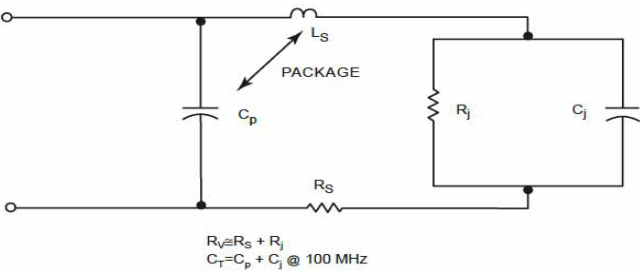
| Maximum Ratings                                      |
|------------------------------------------------------|
| Storage Temperature.....-65° to +125°C               |
| Operating Temperature.....-65° to +110°C             |
| Input Power Handling.....+17dBm CW<br>or 3 ERG spike |
| Soldering Temperature.....+160° C                    |

H20  
[HERMETIC]

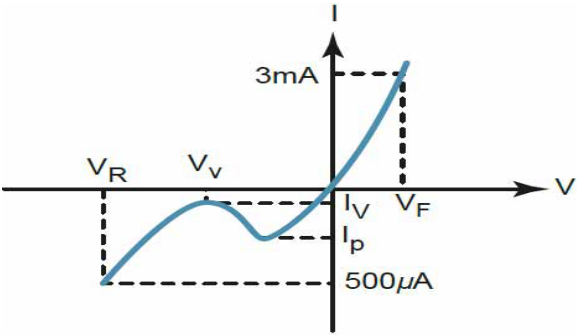


| Parameters                     | Specifications                                      |     |         |     |        |
|--------------------------------|-----------------------------------------------------|-----|---------|-----|--------|
|                                | Conditions                                          | MIN | Typical | MAX | UNITS  |
| I <sub>p</sub>                 |                                                     | 100 |         | 200 | μA     |
| C <sub>j</sub>                 | V <sub>r</sub> =V <sub>v</sub> ,<br>f=100MHz        |     |         | .30 | pF     |
| K[Y]                           | Pin=-20dBm<br>R <sub>L</sub> (Load)=10K,<br>f=10GHz |     | 1000    |     | mV/mW  |
| R <sub>v</sub>                 |                                                     |     | 180     |     | Ω Ohms |
| I <sub>p</sub> /I <sub>v</sub> |                                                     | 2.5 |         |     |        |
| V <sub>r</sub>                 | I <sub>f</sub> =500μA                               |     | 420     |     | mV     |
| V <sub>f</sub>                 | I <sub>f</sub> =3mA                                 |     |         | 135 | mV     |

Diode equivalent circuit



Back diode parameters



About EclipseMDI

ECLIPSE Microdevices is located in San Jose, California. ECLIPSE has been developing high performance analog semiconductors for use in wireless radio frequency (RF), microwave, and millimeter wave for commercial and industrial applications. ECLIPSE has formed a strategic alliances - with foundries that features leading state-of-the-art process technologies and with manufacturing facilities for high-volume production of innovative RFIC's.

Product Export Classification  
ECCN: EAR 99 (unless otherwise specified)  
HTS: 8541.10.0060

