

MBD2047-E28X Planar Tunnel Diode



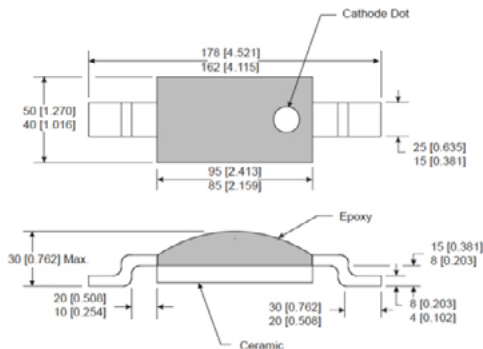
Technical Characteristics

| Product Features |
|--------------------------------------|
| Rugged Germanium Planar Construction |
| Excellent Temperature Stability |
| No DC Bias Required |
| Wide Video Bandwidth |
| MIL-STD-190500 & 883 Qualified |

| Product Description |
|---|
| EclipseMDI MBD2047-E28X, is a zero-bias, rugged Planar Tunnel Diode constructed with Germanium Planar. This tunnel diode exhibits excellent temperature stability, wide video bandwidth and is MIL STD-190500 & MIL-STD-883C qualified. The MBD2047 is also available in hermetic (E28) ceramic packages. |

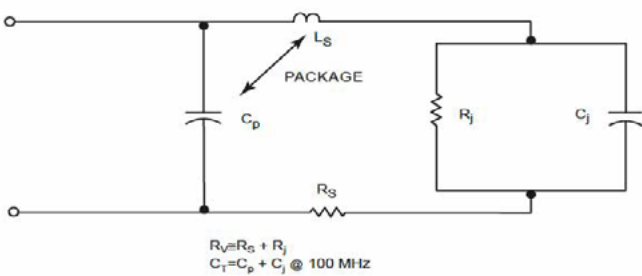
| Maximum Ratings |
|--|
| Storage Temperature.....-65° to +125°C |
| Operating Temperature.....-65° to +110°C |
| Input Power Handling.....+17dBm CW or 3 ERG spike |
| Soldering Temperature.....+160° C |

E28X Non-Hermetic

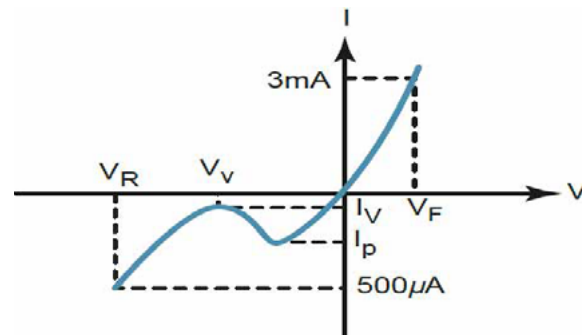


| Parameters | Specifications | | | | UNITS |
|------------|---|-----|---------|-----|---------------|
| | Conditions | MIN | Typical | MAX | |
| I_p | | 200 | | 250 | μA |
| C_j | $V_r = V_v$ $f = 100 \text{ MHz}$ | | | .30 | pF |
| $K[Y]$ | $P_{in} = -20 \text{ dBm}$ $R(\text{Load}) = 10 \text{ K}$ $f = 10 \text{ GHz}$ | | 900 | | mV/mW |
| R_v | | | 160 | | Ω Ohms |
| I_p/I_v | | 2.5 | | | |
| V_r | $I_f = 500 \mu A$ | | 410 | | mV |
| V_f | $I_f = 3 \text{ mA}$ | | | 130 | 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 RFICs.

Product Export Classification

ECCN: EAR 99 (unless otherwise specified)
 HTS: 8542330000