

# MBD1047-E28 Planar Tunnel Diode

## Technical Characteristics

### Product Features

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

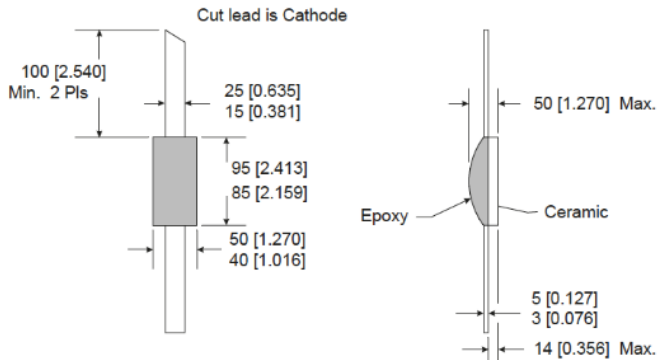
### Product Description

EclipseMDI MBD1047-E28, is a zero-bias, rugged Planar Tunnel Diode constructed with Germanium Planar. This tunnel diode exhibits excellent temperature stability, wide video bandwidth. The MBD1047 is also available in non-hermetic (E28X) ceramic packages.

### Maximum Ratings

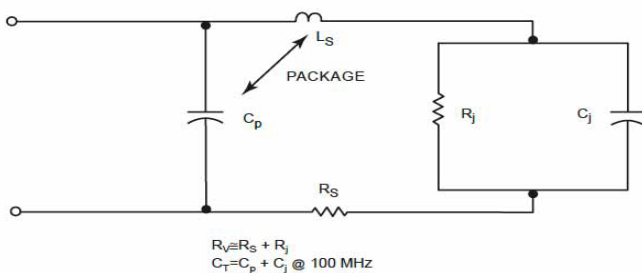
- Storage Temperature.....-65° to +125°C
- Operating Temperature.....-65° to +110°C
- Input Power Handling.....+17dBm CW or 3 ERG spike
- Soldering Temperature.....+160° C

## E28 Non-Hermetic

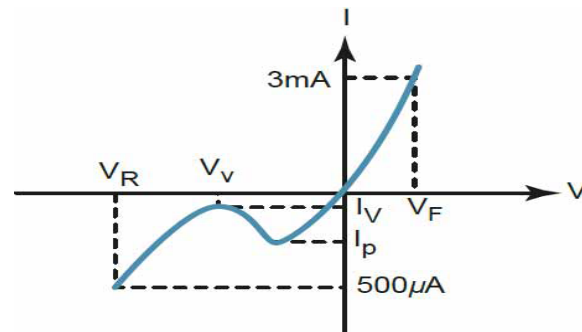


Parameters	Specifications				UNITS
	Conditions	MIN	Typical	MAX	
$I_p$		100		150	$\mu A$
$C_j$	$V_r = V_v$ , $f = 100 \text{ MHz}$			.30	pF
$K[Y]$	$P_{in} = -20 \text{ dBm}$ $R_{Load} = 10K$ , $f = 10 \text{ GHz}$		1000		mV/mW
$R_v$			180		$\Omega$ Ohms
$I_p/I_v$		2.5			
$V_r$	$I_f = 500 \mu A$		420		mV
$V_f$	$I_f = 3 \text{ mA}$			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: 8542330000