

# MBD3047-E28 Planar Tunnel Diode



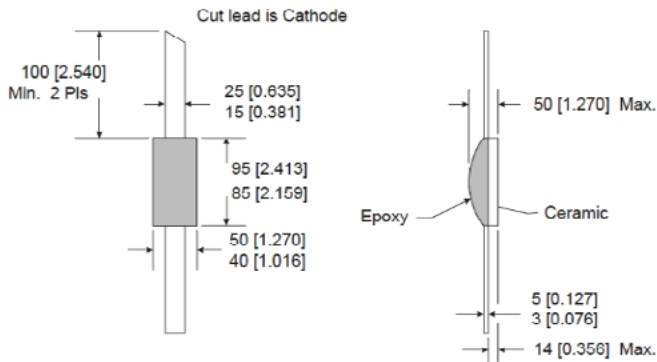
## Technical Characteristics

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

Product Description
EclipseMDI MBD3047-E28, 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 MBD3047 is also available in hermetic (E28X) ceramic packages.

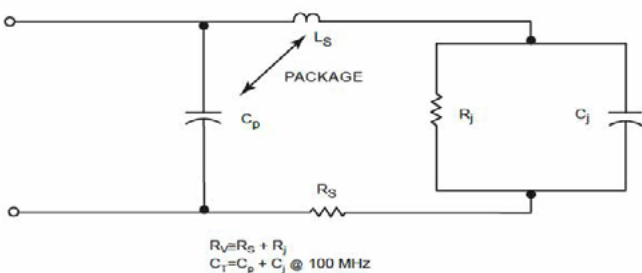
Maximum Ratings
Storage Temperature.....-65° to +125°C
Operating Temperature.....-65° to +110°C
Input Power Handling.....+17dBm CW or 3 ERG spike
Soldering Temperature.....+160° C

## E28 Non-Hermetic

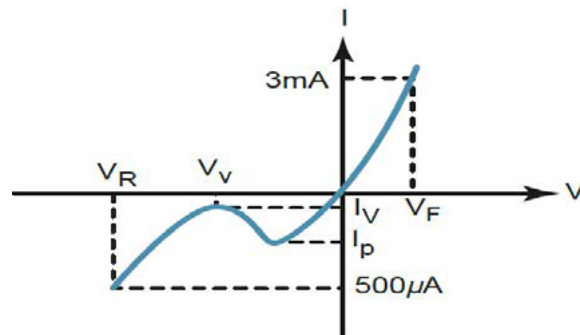


Parameters	Specifications				UNITS
	Conditions	MIN	Typical	MAX	
$I_p$		300		350	$\mu A$
$C_j$	$V_r = V_v$ , $f = 100 \text{ MHz}$			.30	pF
$K[Y]$	$P_{in} = -20 \text{ dBm}$ $R_{Load} = 10K$ , $f = 10 \text{ GHz}$		550		mV/mW
$R_v$			110		$\Omega$ Ohms
$I_p/I_v$		2.5			
$V_r$	$I_f = 500 \mu A$		400		mV
$V_f$	$I_f = 3 \text{ mA}$			125	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