

MBD1047-E28X Planar Tunnel Diode



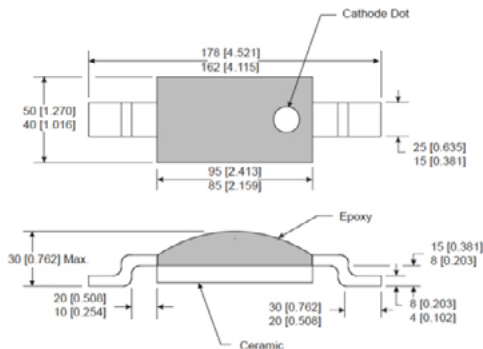
Technical Characteristics

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

Product Description
EclipseMDI MBD1047-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 MBD1047 is also available in hermetic (E28) ceramic packages.

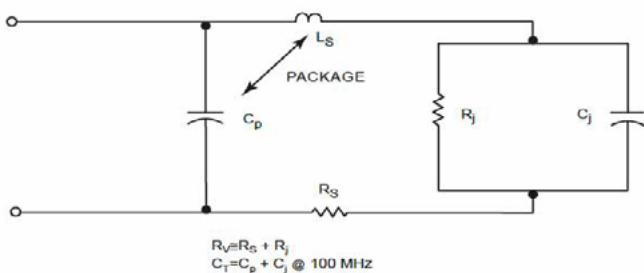
Maximum Ratings
Storage Temperature.....-65° to +125°C
Operating Temperature.....-65° to +110°C
Input Power Handling.....+17dBm CW or 3 ERG spike
Soldering Temperature.....+160° C

E28X Non-Hermetic

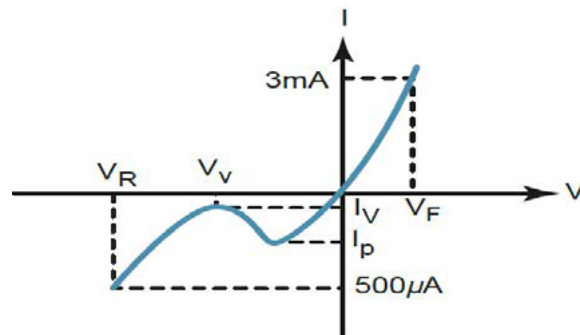


Parameters	Specifications				
	Conditions	MIN	Typical	MAX	UNITS
I_p		100		150	μA
C_j	$V_r = V_v$ $f = 100 \text{ MHz}$.30	pF
$K[Y]$	$P_{in} = -20 \text{ dBm}$ $R_{Load} = 10 \text{ K}$ $f = 10 \text{ GHz}$		1000		mV/mW
R_v			180		Ω Ohms
I_p/I_v		2.5			
V_r	$I_f = 500 \mu A$		420		mV
V_f	$I_f = 3 \text{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

Product Export Classification

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