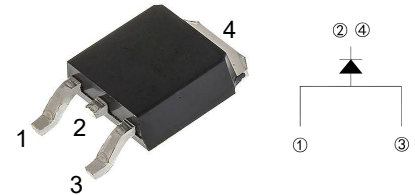


## Schottky Barrier Rectifier Diodes in TO-252

### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications



### Mechanical Data

- **Case:** TO-252 (plastic package).  
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**  
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:  
260 °C/10 sec. at terminals

### Applications

- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible power supply

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

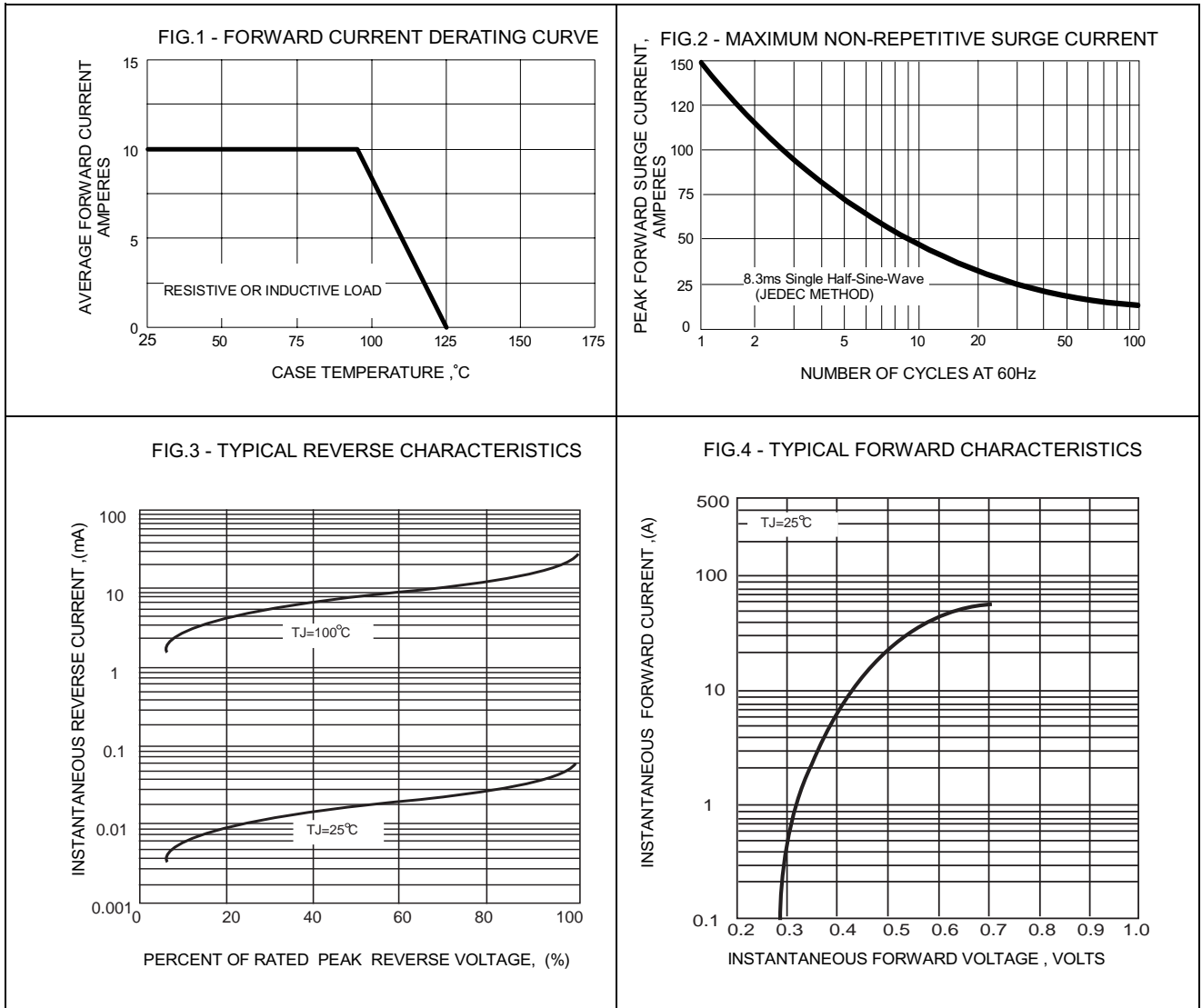
Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak repetitive reverse voltage	45	V
$V_{RWM}$	Working peak reverse voltage		
$V_R$	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	31.5	V
$I_O$	Average rectified output current@ $T_c=125^\circ\text{C}$	10	A
$I_{FSM}$	Non-Repetitive peak forward surge current 8.3ms half sine wave	150	A
$R_{\theta JC}$	Typical thermal resistance	4.5	°C/W
$T_j$	Junction temperature	-55~+150	°C
$T_{stg}$	Storage temperature	-55~+150	°C

### Electrical Characteristics

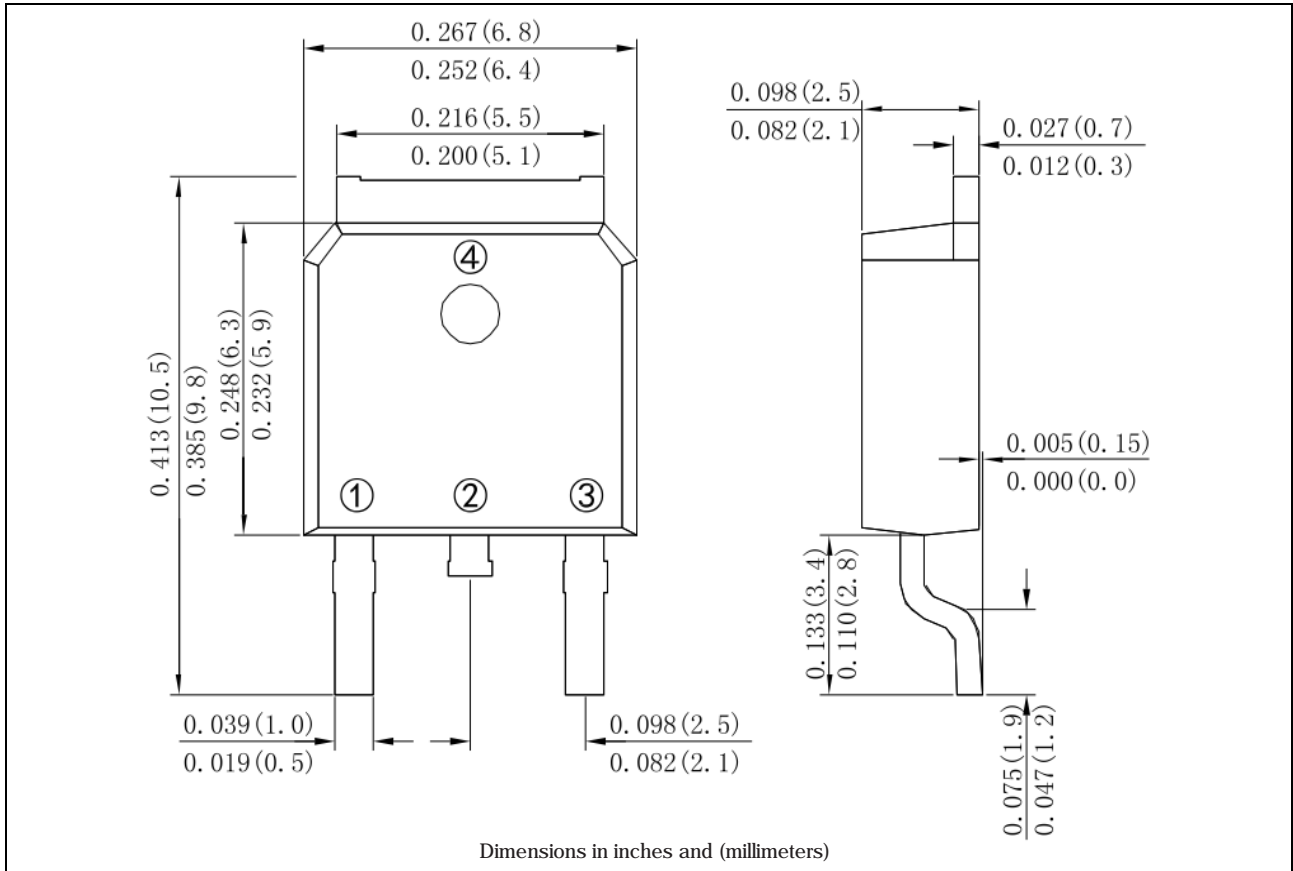
( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1\text{mA}$	45			V
Reverse current	$I_R$	$V_R=45\text{V}, T_A=25^\circ\text{C}$			0.5	mA
Reverse current	$I_R$	$V_R=45\text{V}, T_A=125^\circ\text{C}$			50	mA
Forward voltage	$V_F$	$I_F=10\text{A}, T_c=25^\circ\text{C}$			0.48	V

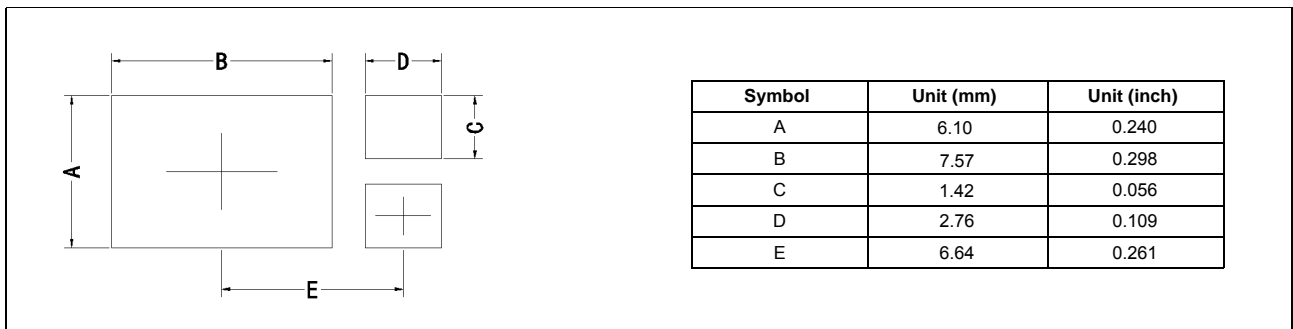
**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



### Package Dimensions



### Pad Dimensions



### Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
MBRS10L45D	TO-252	Tape/Reel	3000PCS/Reel	EIA STD RS-481

### Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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