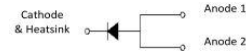


# 20A, 45V Low Forward Voltage Schottky Rectifier

## FEATURES

- Trench MOS Schottky barrier diode
- Low forward voltage drop
- Low profile - typical body height 1.1 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant
- Halogen-free according to IEC 61249-2-21 definition

## TO-277B


**RoHS  
COMPLIANT**
**HALOGEN  
FREE**


## MECHANICAL DATA

- Case: TO-277B
- Case material: molding compound meets UL 94V-0 flammability rating

## TYPICAL APPLICATION

General purpose use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

## MAXIMUM RATINGS

$T_A=25^\circ\text{C}$  unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	45	V
Average Forward Rectified Current	$I_{F(AV)}$	20	A
Peak forward surge current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	400	A
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$  unless otherwise noted

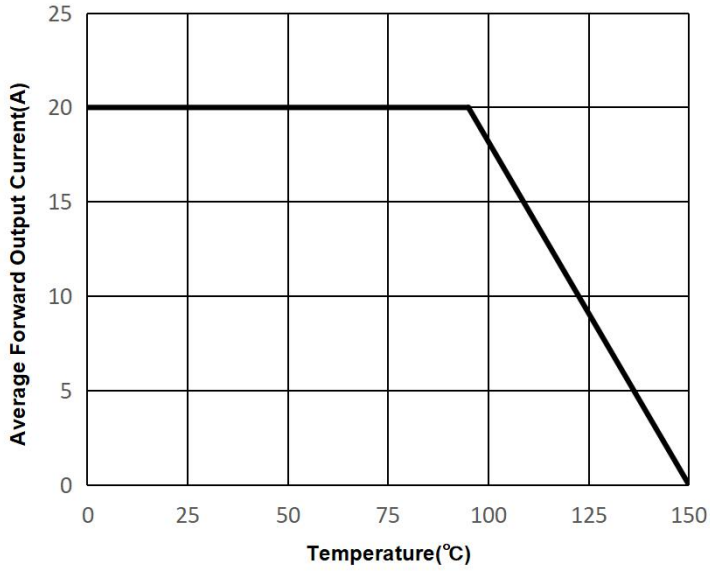
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=10\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	0.44	0.47	V
	$T_A=125^\circ\text{C}$		0.4	0.43	
Forward Voltage@ $I_F=20\text{A}$	$T_A=25^\circ\text{C}$		0.48	0.52	
	$T_A=125^\circ\text{C}$		0.42	0.45	
Reverse Current @ $V_{RRM}$	$T_A=25^\circ\text{C}$	$I_R$	35	70	uA
	$T_A=125^\circ\text{C}$		20	50	mA
Typical Thermal Resistance		$R_{\theta JA}$	103		$^\circ\text{C/W}$

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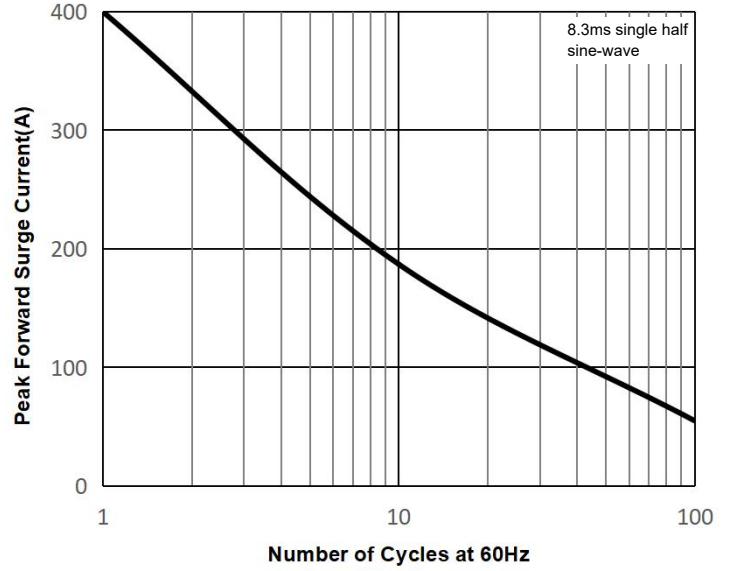
## RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$  unless otherwise noted

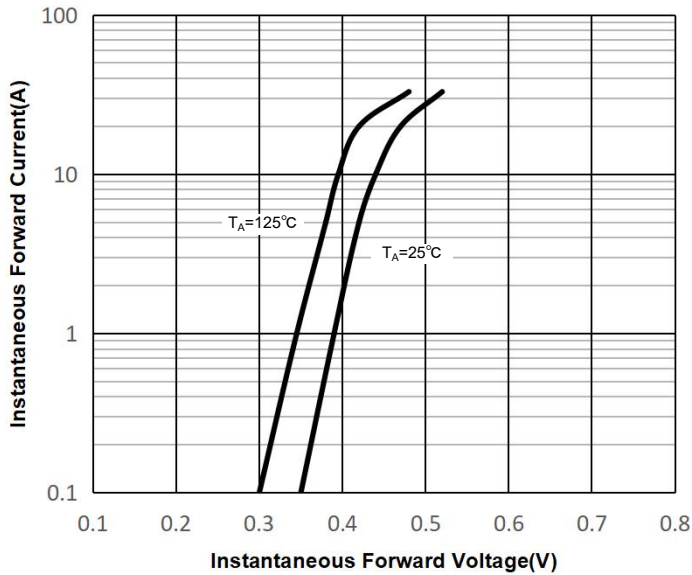
**FIG.1: Forward Output Current Derating Curve**



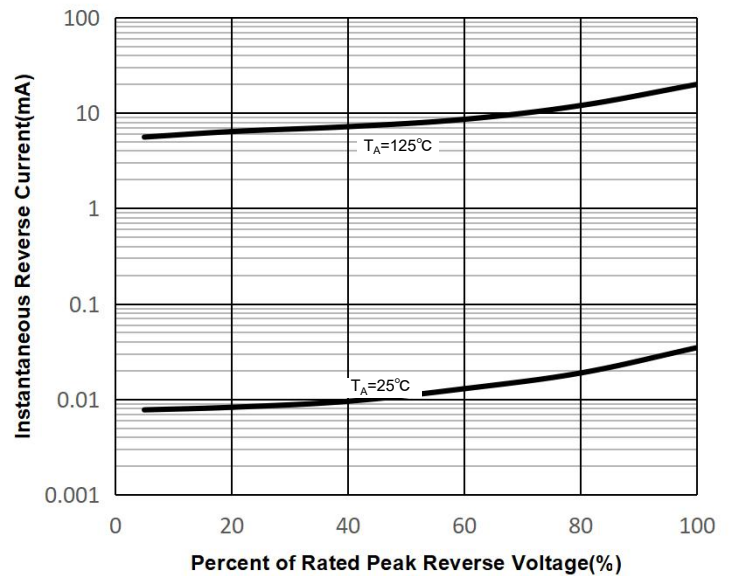
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

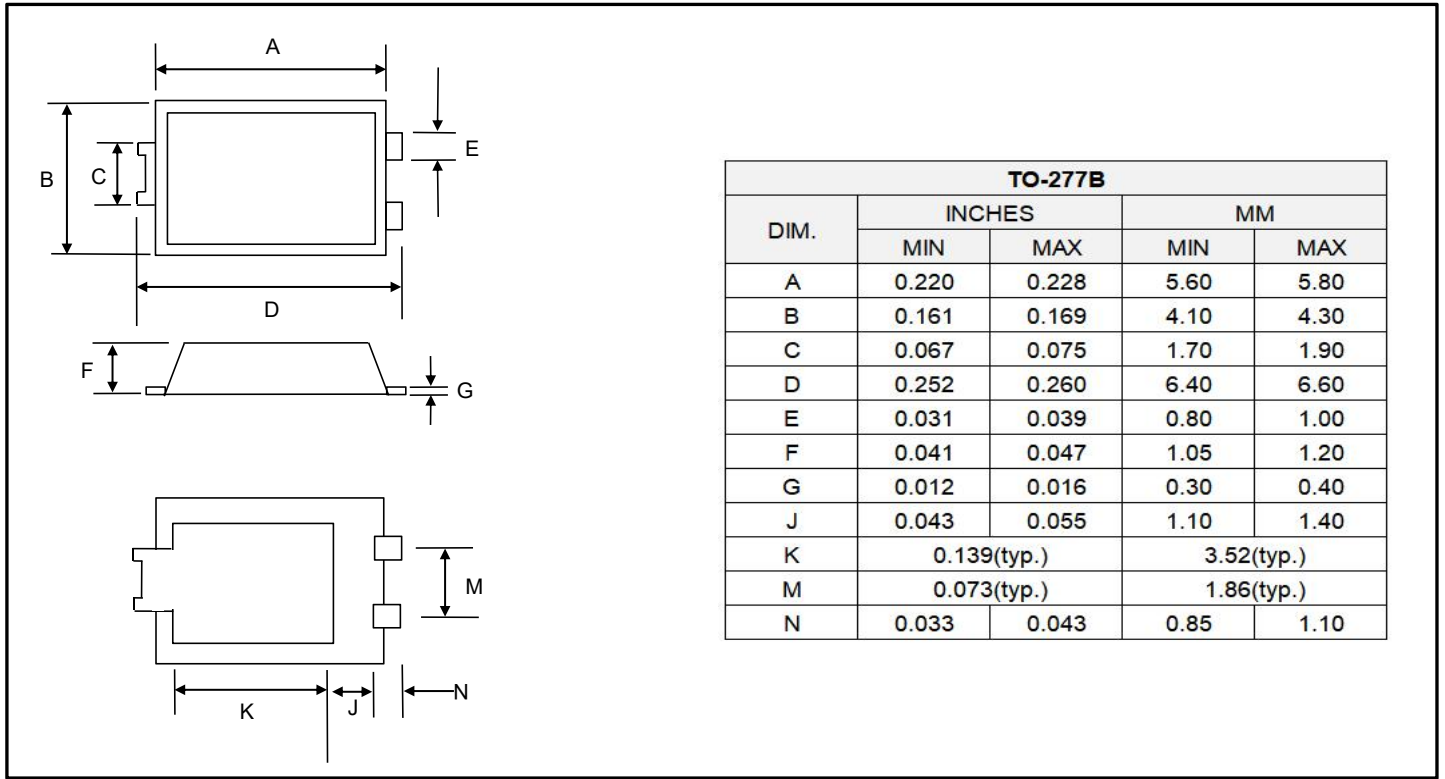


**FIG.4: Typical Reverse Characteristics**



# 20A, 45V Low Forward Voltage Schottky Rectifier

## PACKAGE OUTLINE DIMENSIONS



## PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
TO-277B	5,000	10,000	80,000