

# 10A, 100V 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



## MECHANICAL DATA

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

## TYPICAL APPLICATION

General purpose use in AC to DC wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

## MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	240	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@ $I_F=3\text{A}$	$T_A=25^{\circ}\text{C}$	$V_F$	0.45	0.49	V
	$T_A=125^{\circ}\text{C}$		0.4	0.44	
Forward Voltage@ $I_F=10\text{A}$	$T_A=25^{\circ}\text{C}$		0.6	0.65	
	$T_A=125^{\circ}\text{C}$		0.54	0.59	
Reverse Current @ $V_{RRM}$	$T_A=25^{\circ}\text{C}$	$I_R$	25	70	$\mu\text{A}$
	$T_A=125^{\circ}\text{C}$		10	50	mA
Typical Thermal Resistance (junction to ambient)		$R_{\theta JA}$	102		$^{\circ}\text{C}/\text{W}$



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## RATINGS AND CHARACTERISTIC CURVES

T<sub>A</sub>=25°C unless otherwise noted

FIG.1: Forward Output Current Derating Curve

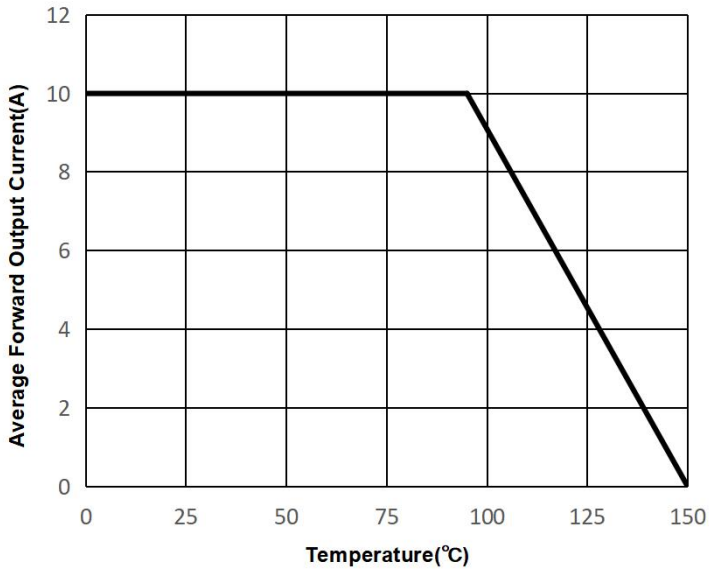


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

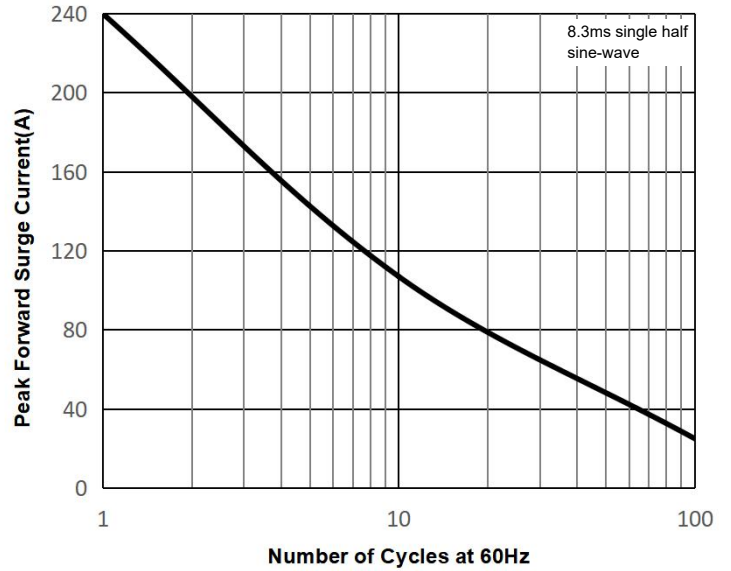


FIG.3: Typical Forward Characteristics

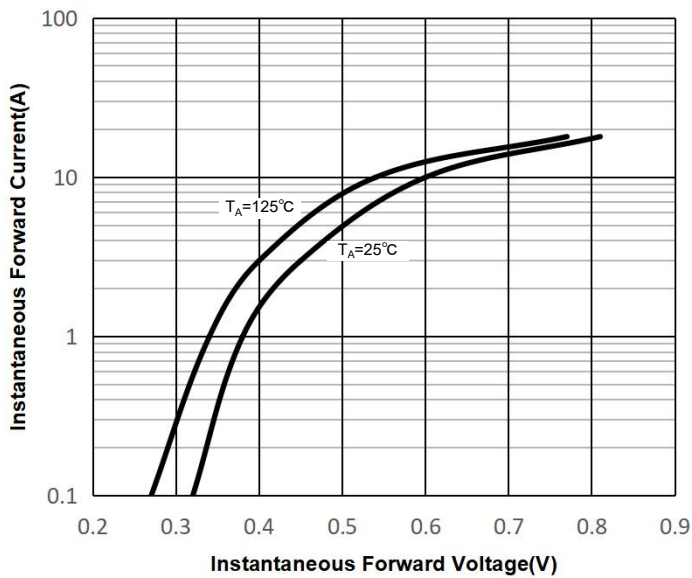
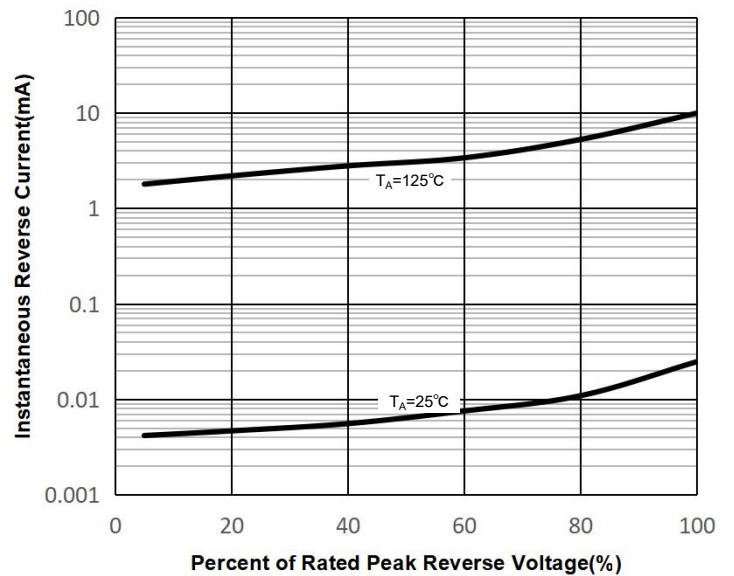
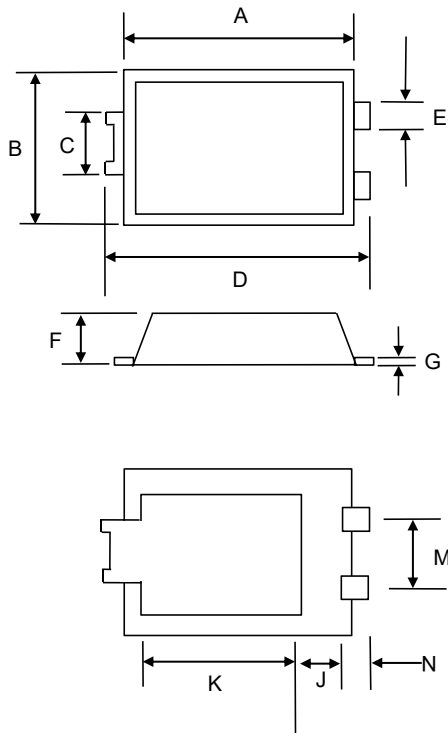


FIG.4: Typical Reverse Characteristics



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## PACKAGE OUTLINE DIMENSIONS



TO-277B				
DIM.	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.220	0.228	5.60	5.80
B	0.161	0.169	4.10	4.30
C	0.067	0.075	1.70	1.90
D	0.252	0.260	6.40	6.60
E	0.031	0.039	0.80	1.00
F	0.041	0.047	1.05	1.20
G	0.012	0.016	0.30	0.40
J	0.043	0.055	1.10	1.40
K	0.139(typ.)		3.52(typ.)	
M	0.073(typ.)		1.86(typ.)	
N	0.033	0.043	0.85	1.10

## PACKING INFORMATION

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

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