

5A, 45V Low Forward Voltage Schottky Rectifier

FEATURES

- Planar MOS Schottky barrier diode
- Low power loss, high efficiency
- Ideal for automated placement
- 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

SMB

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

MECHANICAL DATA

- Case: SMB
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: color band denotes cathode end

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}	45	V
Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I_{FSM}	160	A
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

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

Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=5\text{A}$	$T_A=25^\circ\text{C}$	V_F	0.39	0.42	V
	$T_A=125^\circ\text{C}$		0.34	0.37	
Reverse Current @ V_{RRM}	$T_A=25^\circ\text{C}$	I_R	60	100	μA
	$T_A=125^\circ\text{C}$		35	80	
Typical Thermal Resistance		$R_{\theta JA}$	75		°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

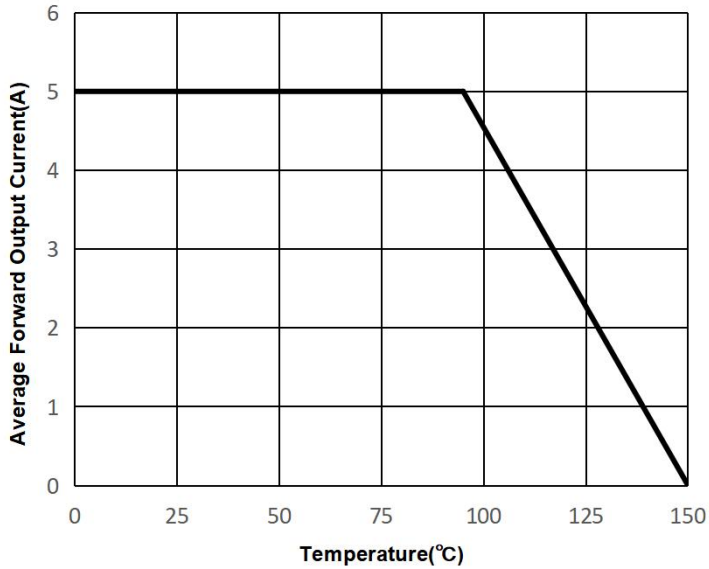


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

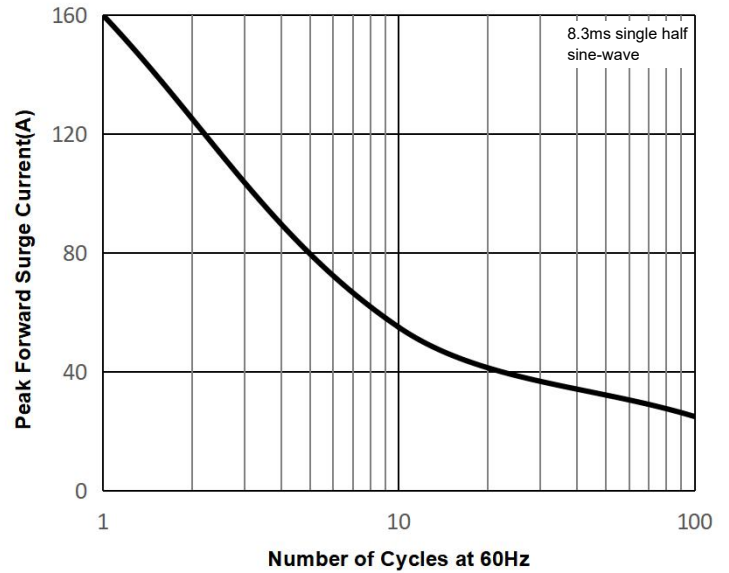


FIG.3: Typical Forward Characteristics

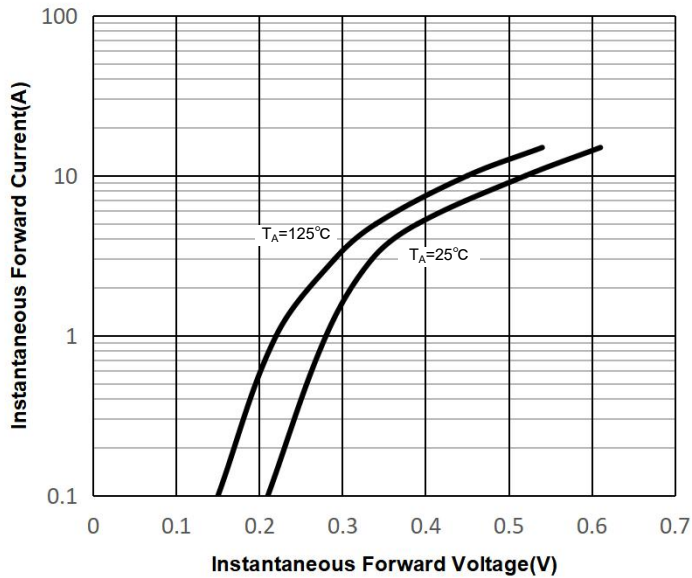
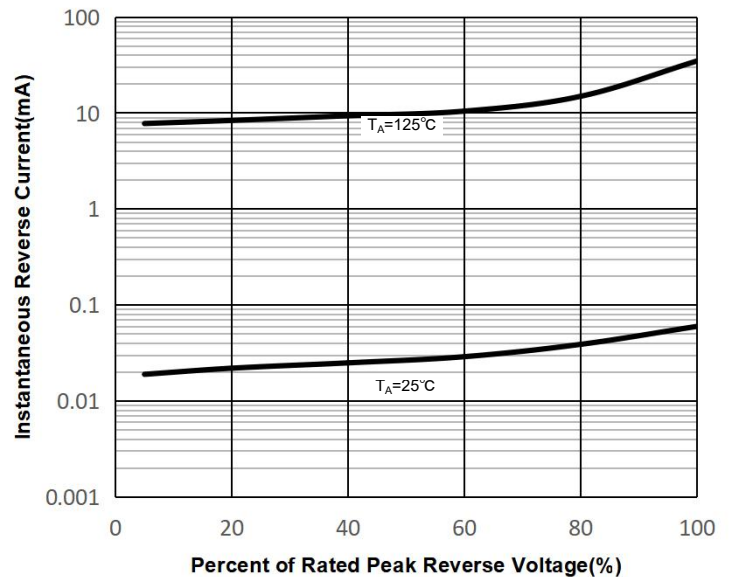
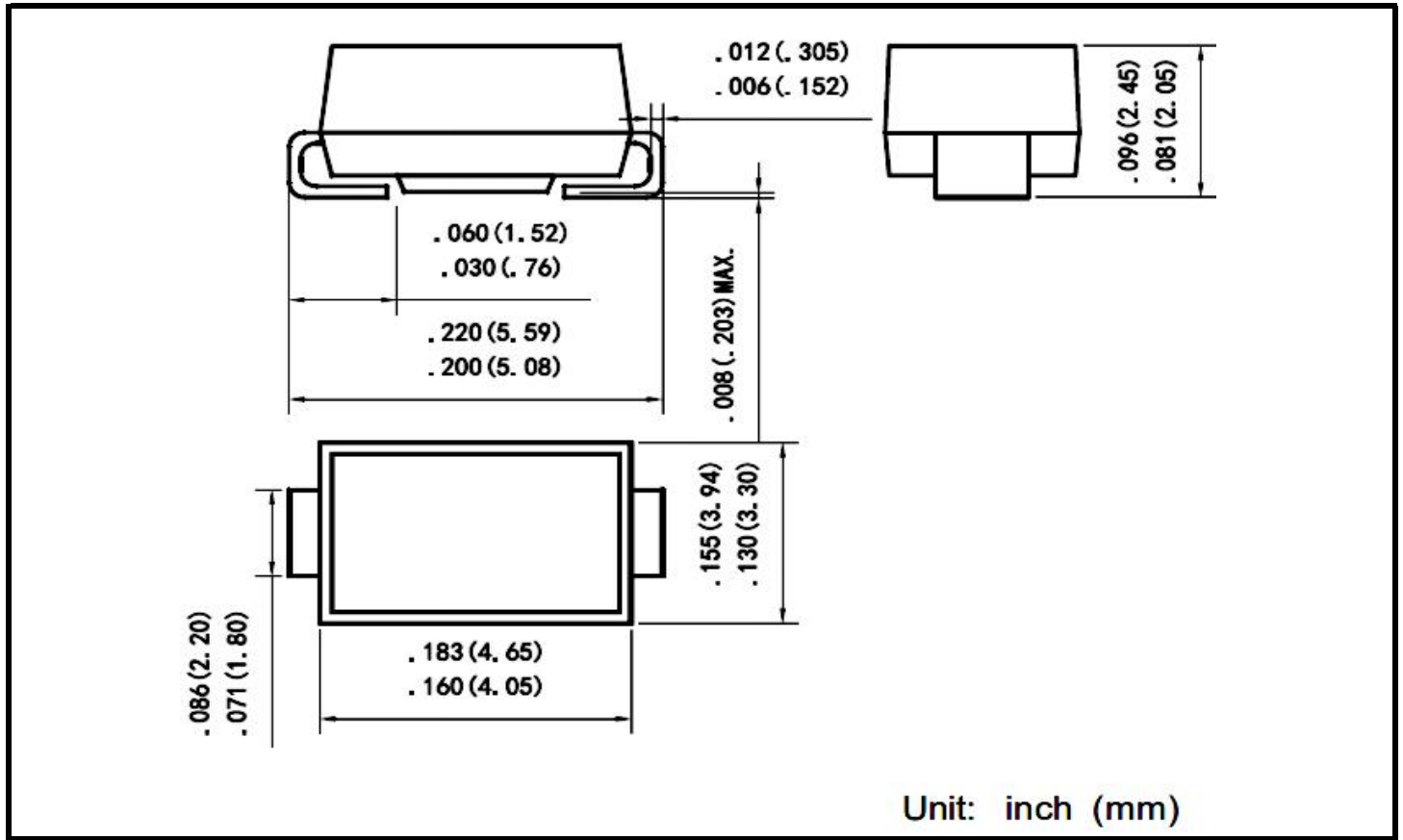


FIG.4: Typical Reverse Characteristics



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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
SMB	3,000	6,000	48,000