

3A, 45V Low Forward Voltage Schottky Rectifier

FEATURES

- Planar MOS schottky barrier diode
- Low forward voltage drop
- Low reverse leakage
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant, halogen free

SOD-123FS

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

MECHANICAL DATA

- Case: SOD-123FS
- 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	$I_{F(AV)}$	3	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I_{FSM}	80	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	0.43	0.46	V
	$T_A=125^\circ\text{C}$		0.36	0.39	
Reverse Current @ V_{RRM}	$T_A=25^\circ\text{C}$	I_R	50	100	μA
	$T_A=125^\circ\text{C}$		35	70	mA
Typical Thermal Resistance		$R_{\theta JA}$	103		$^\circ\text{C}/\text{W}$

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RATINGS AND CHARACTERISTIC CURVES

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

FIG.1: Forward Output Current Derating Curve

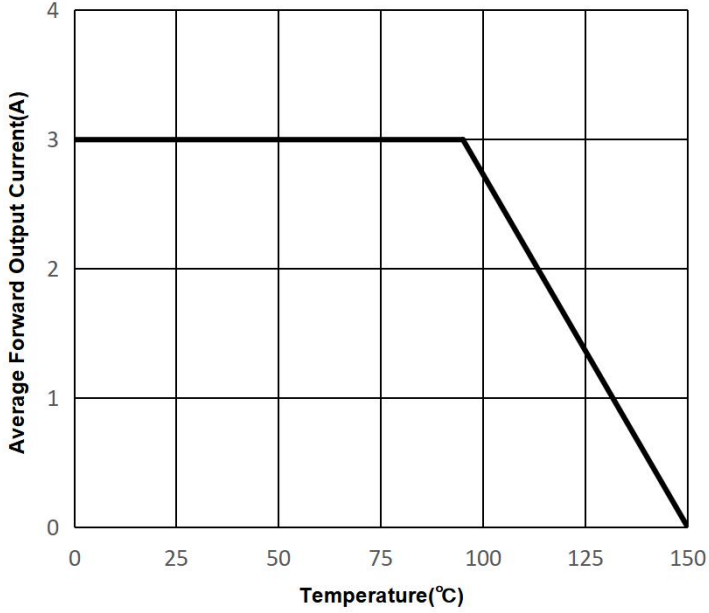


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

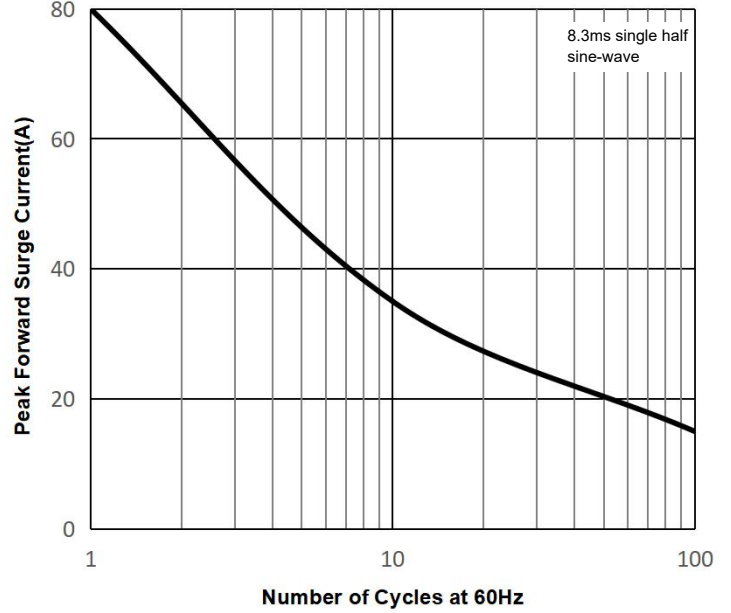


FIG.3: Typical Forward Characteristics

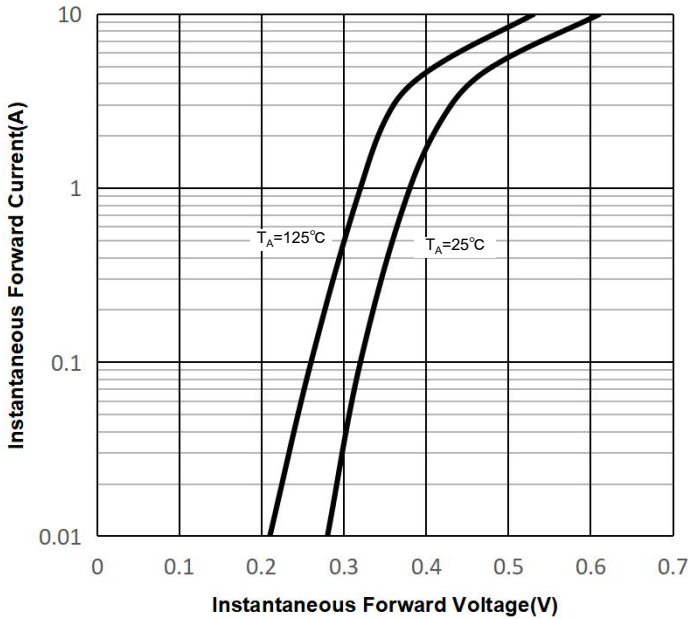
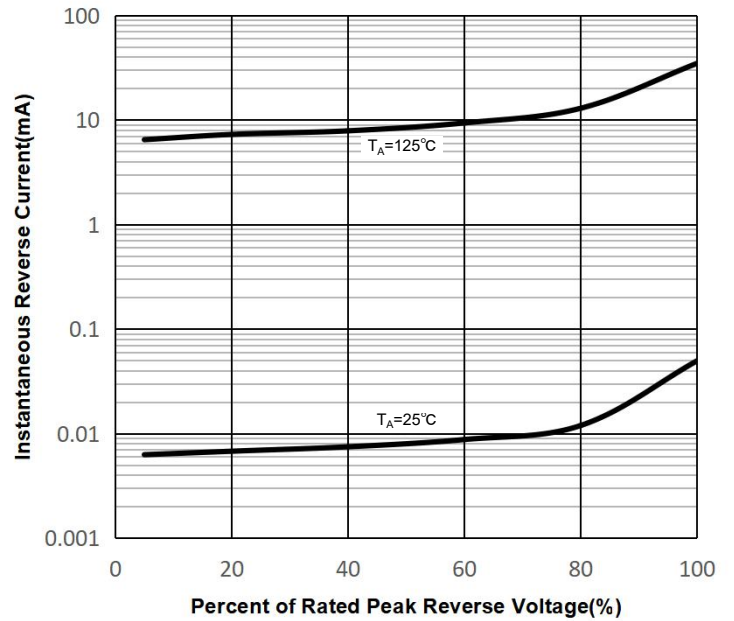
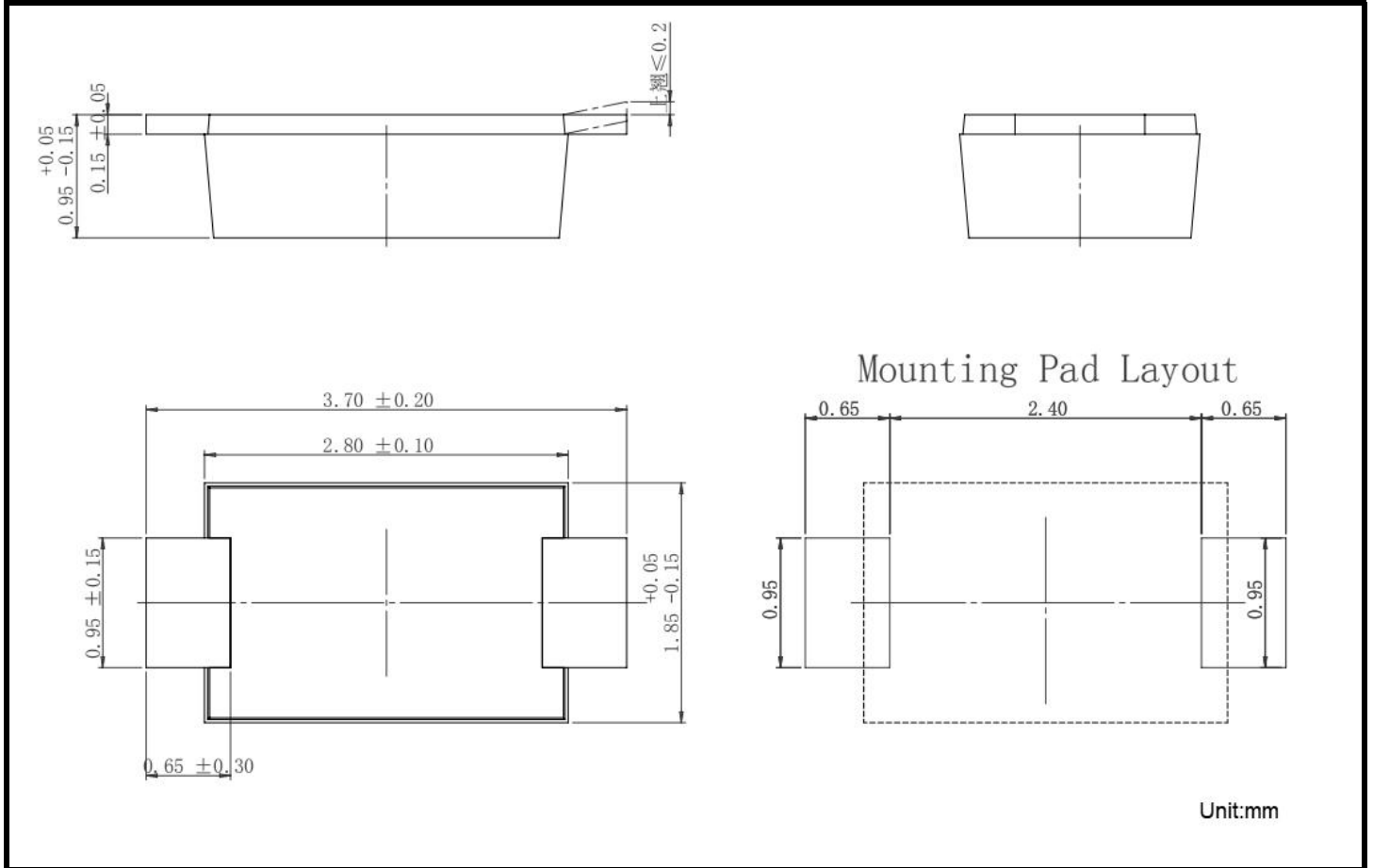


FIG.4: Typical Reverse Characteristics



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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
SOD-123FS	3,000	18,000	144,000