

40A, 45V Low Forward Voltage Schottky Rectifier

FEATURES

- Planar MOS schottky barrier diode
- Low forward voltage drop
- High temperature soldering guaranteed: 270°C/10 seconds
- RoHS compliant

MECHANICAL DATA

- Case: TO-247
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

TYPICAL APPLICATION

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

MAXIMUM RATINGS

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

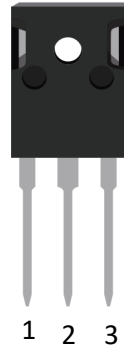
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Average Forward Rectified Current	$I_{F(AV)}$	40	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I_{FSM}	300	A
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

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

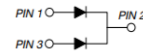
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=20\text{A}$	$T_A=25^\circ\text{C}$	V_F	0.48	0.51	V
	$T_A=125^\circ\text{C}$		0.41	0.44	V
Reverse Current @ V_{RRM}	$T_A=25^\circ\text{C}$	I_R	100	300	μA
	$T_A=125^\circ\text{C}$		60	150	mA
Typical Thermal Resistance		$R_{\theta JC}$	0.9		$^\circ\text{C/W}$

TO-247



RoHS
COMPLIANT

HALOGEN
FREE
AVAILABLE



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RATINGS AND CHARACTERISTIC CURVES

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

FIG.1: Forward Output Current Derating Curve

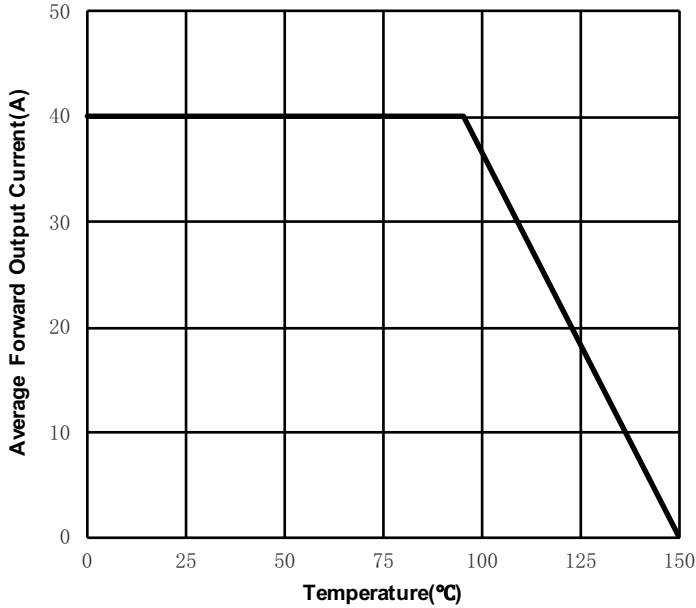


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

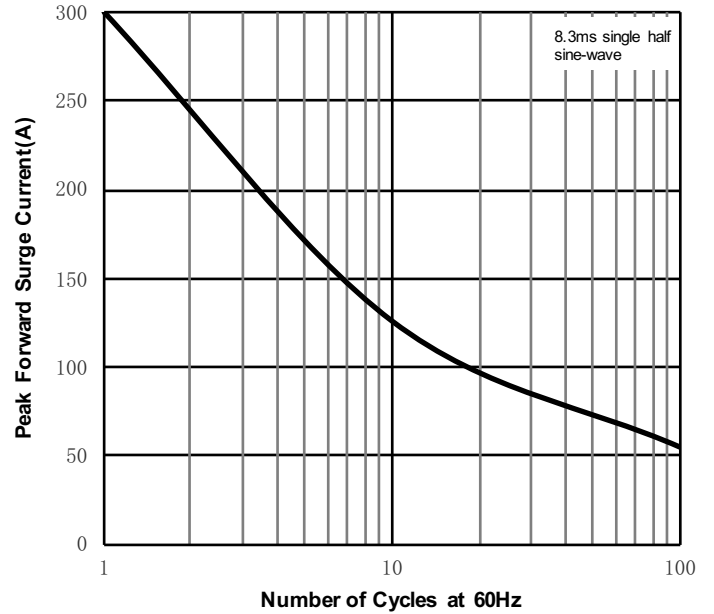


FIG.3: Typical Forward Characteristics

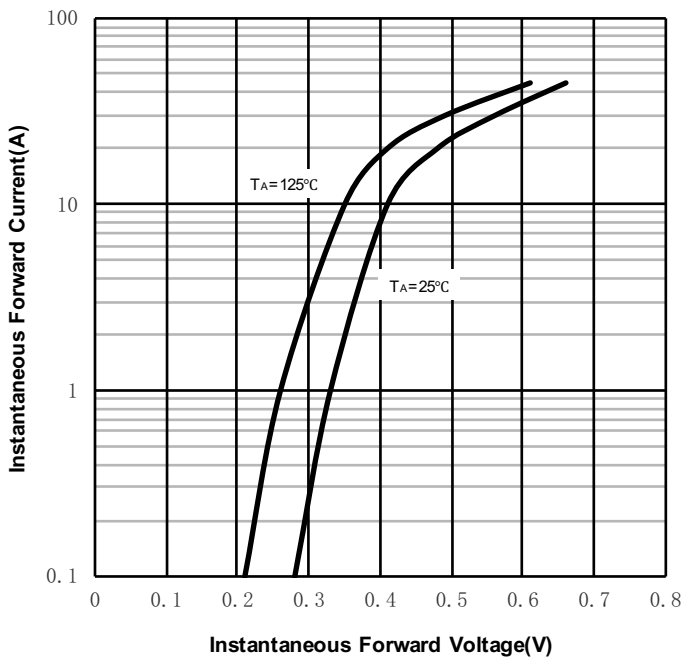
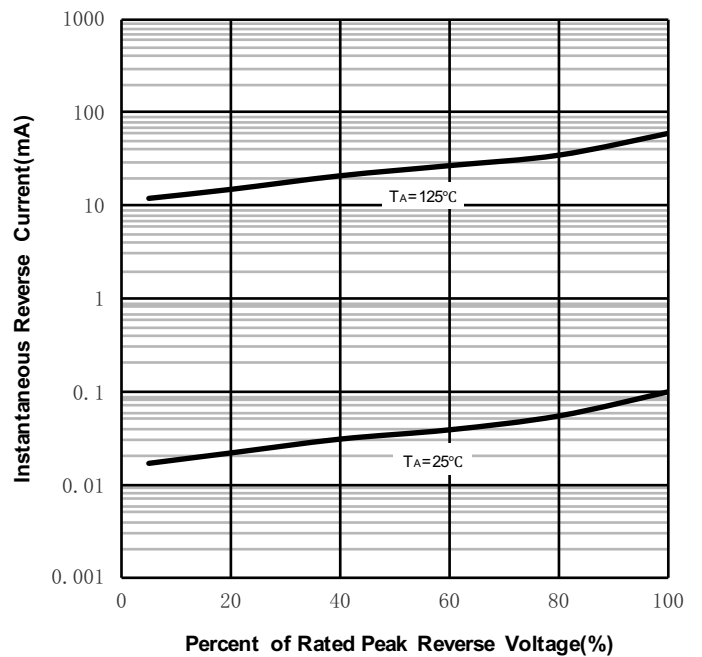
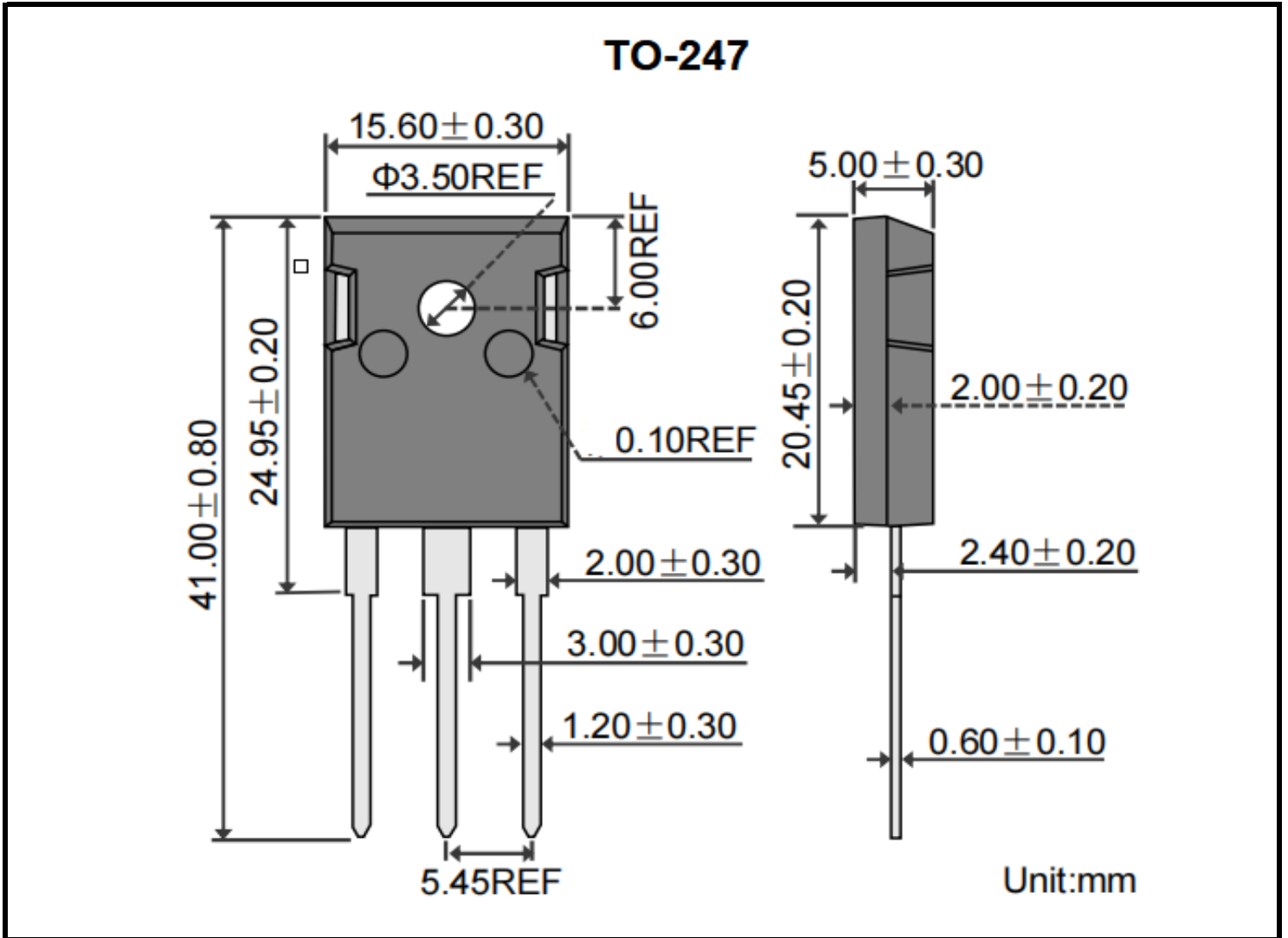


FIG.4: Typical Reverse Characteristics



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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-247	30	360	1,800