

20A, 120V Low Forward Voltage Schottky Rectifiers

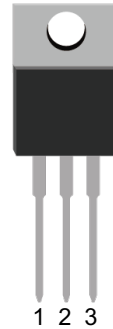
FEATURES

- Trench MOS schottky barrier rectifiers
- Low forward voltage drop
- High efficiency, low power loss
- High temperature soldering guaranteed:
270°C/10 seconds for TO-220AB and ITO-220AB
260°C/10 seconds for TO-263AB
- RoHS compliant

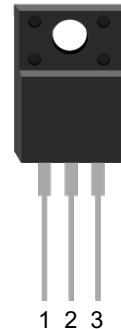
MECHANICAL DATA

- Case: TO-220AB, ITO-220AB, TO-263AB
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: as marked on case body

TO-220AB



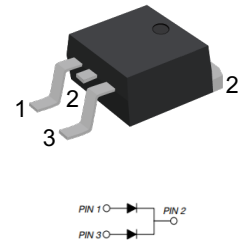
ITO-220AB



RoHS
COMPLIANT

HALOGEN
FREE
AVAILABLE

TO-263AB



P/N	Package
ST20120CT	TO-220AB
ST20120FCT	ITO-220AB
ST20120TA	TO-263AB

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}	120	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}	160	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	0.58	0.63	V
	$T_A=125^{\circ}\text{C}$		0.52	0.57	
Forward Voltage@ $I_F=10\text{A}$	$T_A=25^{\circ}\text{C}$		0.78	0.82	
	$T_A=125^{\circ}\text{C}$		0.7	0.74	
Reverse Current @ V_{RRM}	$T_A=25^{\circ}\text{C}$	I_R	10	50	μA
	$T_A=125^{\circ}\text{C}$		5	35	mA
Typical Thermal Resistance TO-220AB, TO-263AB ITO-220AB		$R_{\theta JC}$	2 4		$^{\circ}\text{C}/\text{W}$

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RATINGS AND CHARACTERISTIC CURVES

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

FIG.1: Forward Output Current Derating Curve

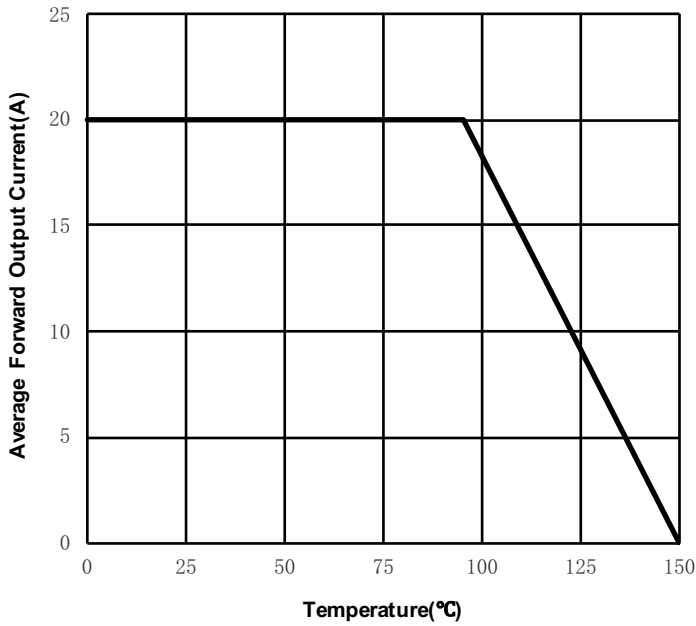


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

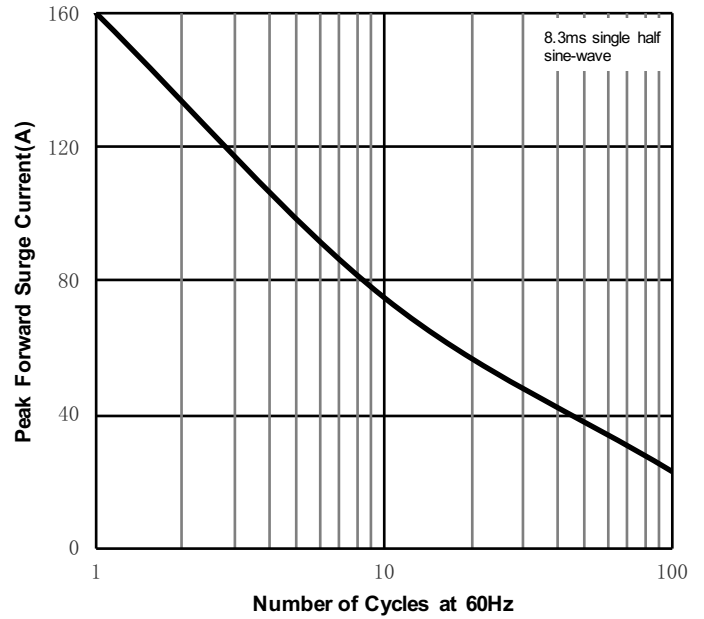


FIG.3: Typical Forward Characteristics

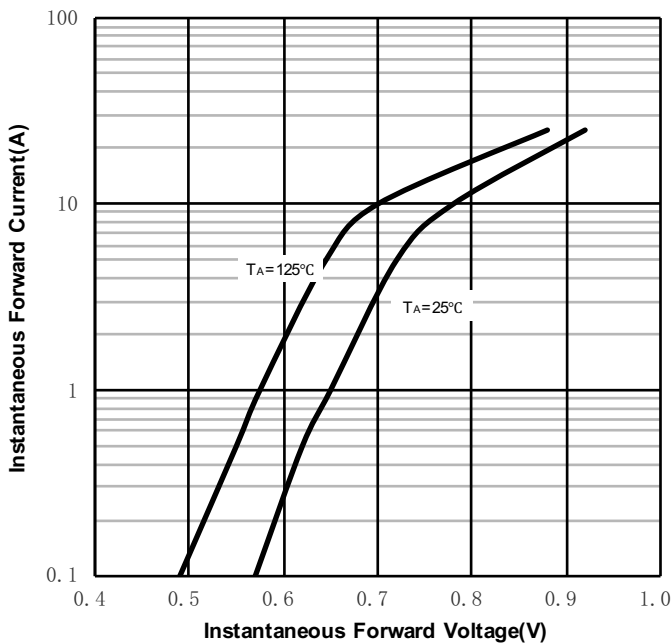
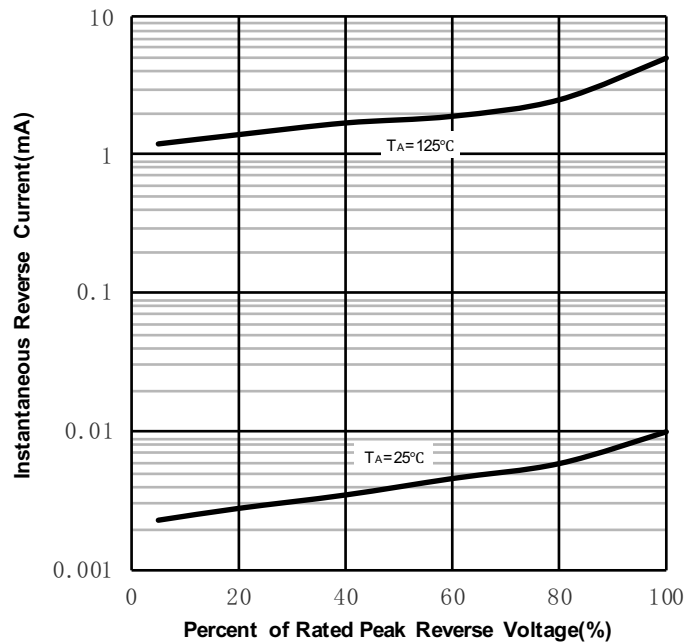


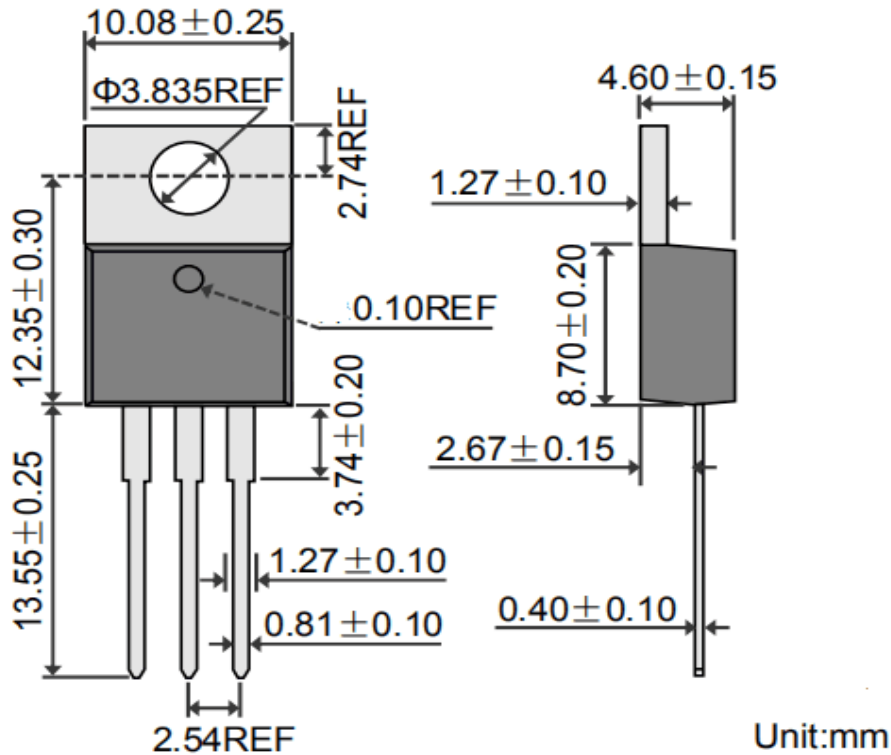
FIG.4: Typical Reverse Characteristics



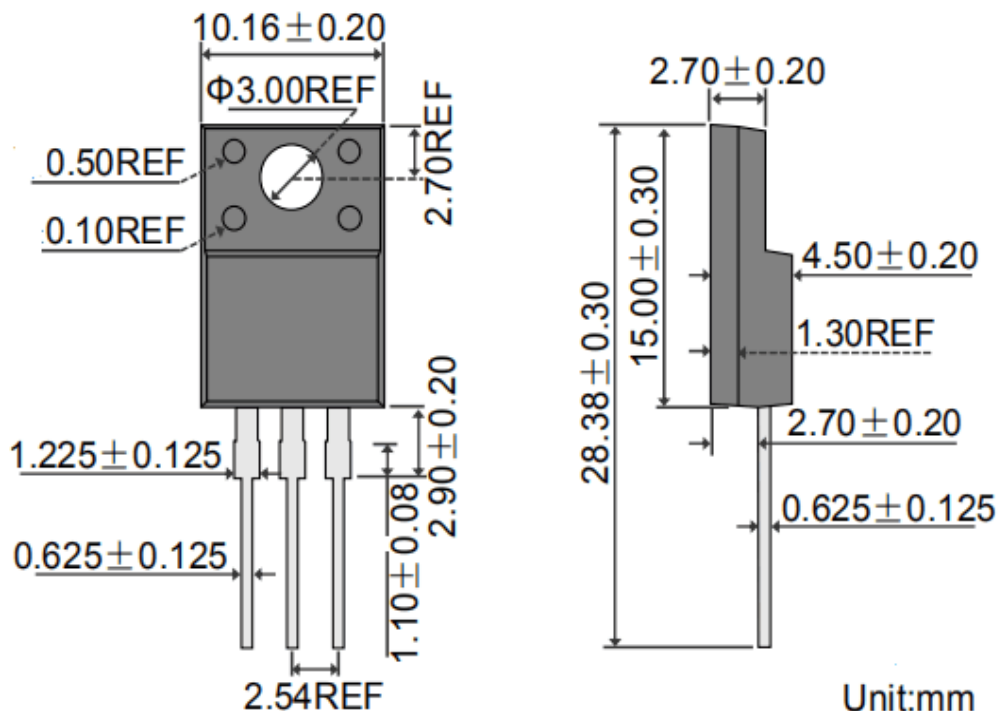
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PACKAGE OUTLINE DIMENSIONS

TO-220AB

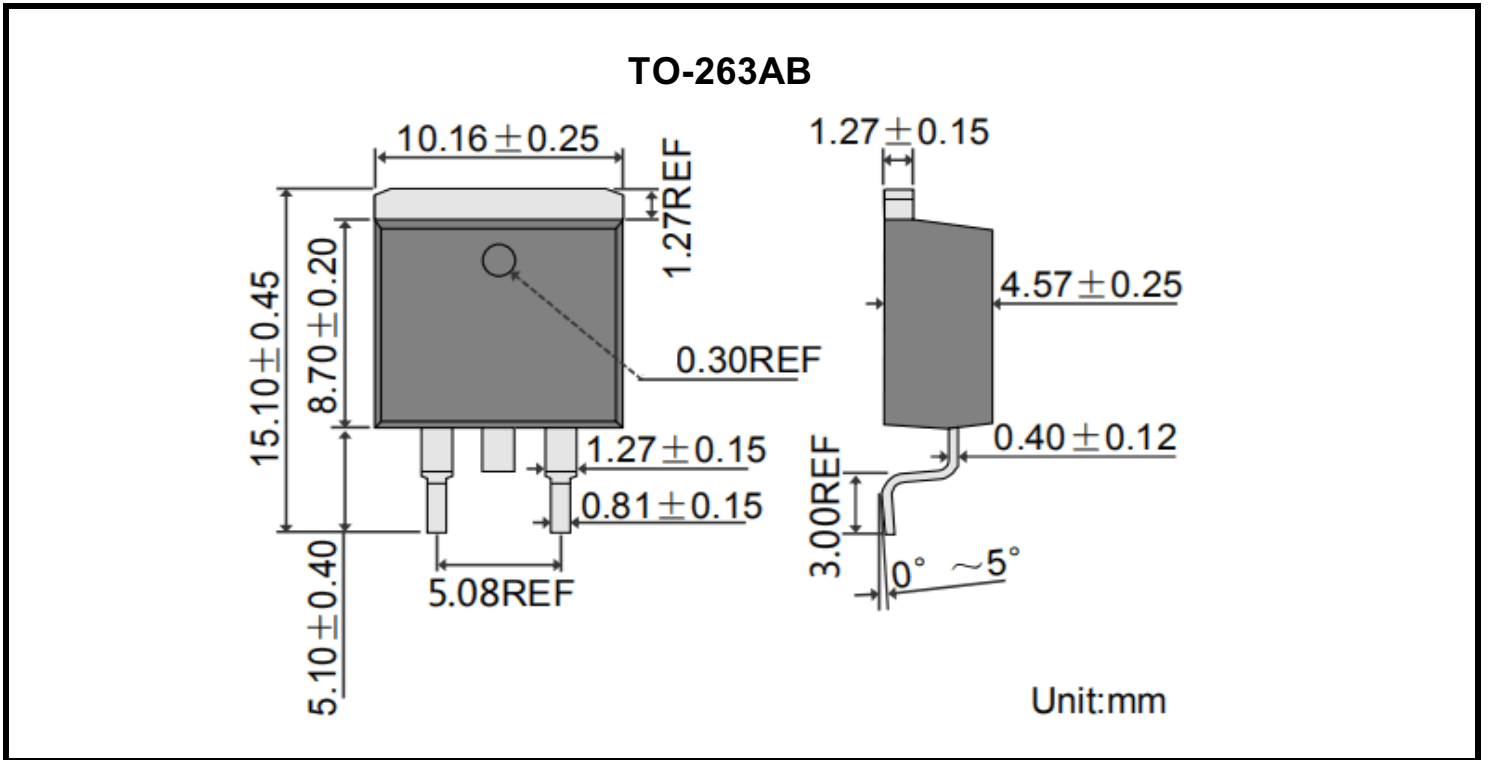


ITO-220AB



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PACKAGE OUTLINE DIMENSIONS



PACKING INFORMATION

Package	Tube(PCS)	Inner Box(PCS)	Carton(PCS)
TO-220AB	50	1,000	5,000
ITO-220AB	50	1,000	5,000
TO-263AB	50	1,000	5,000