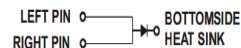


SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

TO-277

- ◆ Trench MOS Schottky barrier diodes
- ◆ 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



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOL	ST10100	UNIT
Marking Code			
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum DC blocking voltage	V_{DC}		
RMS Reverse voltage	V_{RMS}	70	V
Average Rectified Output Current	$I_{(O)}$	10	A
Non-Repetitive Peak Forward Surge Single Half Sine-Wave Superimposed on rated load (JEDEC Method)	I_{FSM}	240	A

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Parameter	Test Conditions	Symbol	Value		Unit
			Typ	Max	
Forward Voltage Drop at 10A	$T_A=25^\circ\text{C}$	V_F	0.60	0.65	V
	$T_A=125^\circ\text{C}$		0.54	0.59	
Peak reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	I_R	25	70	μA
	$T_A=125^\circ\text{C}$		10	50	mA
Typical junction capacitance	4.0 V, 1 MHz	C_J	240		PF
Typical thermal resistance Junction to Ambient		$R_{\theta JA}$	102		$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range		T_J, T_{STG}	-55 to +150		$^\circ\text{C}$

Note: 1. The typical data above is for reference only.

Ratings And Characteristic Curves

FIG.1: Forward Output Current Derating Curve

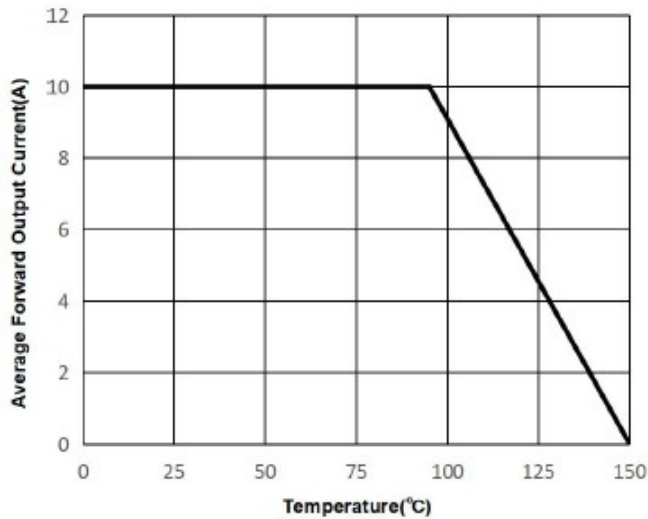


FIG.2: Maximum Non-Repetitive Peak Forward Surge Current

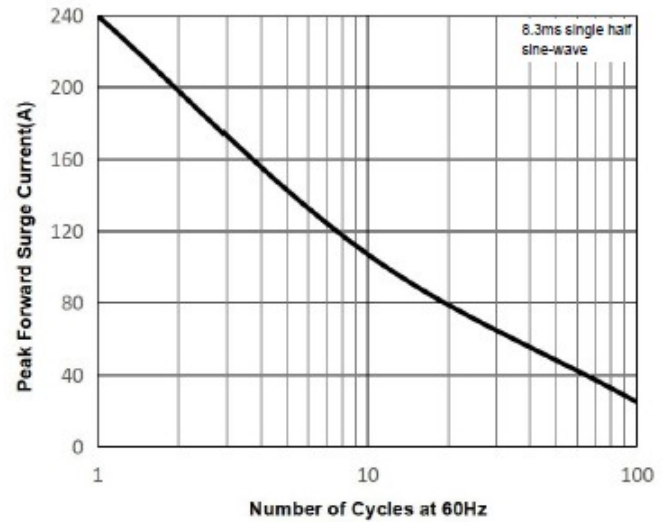


FIG.3: Typical Forward Characteristics

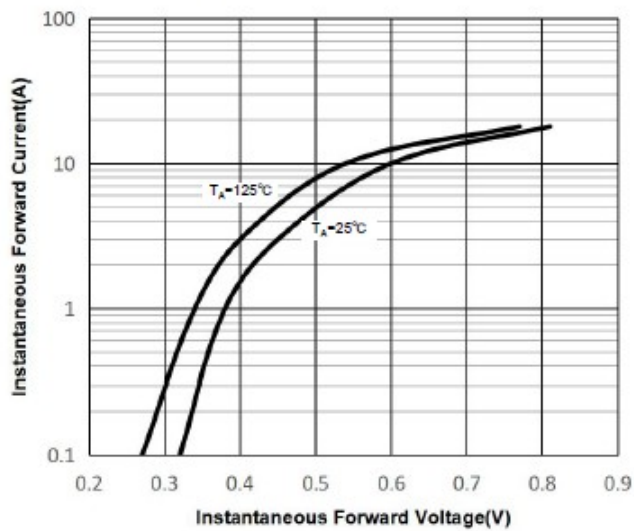
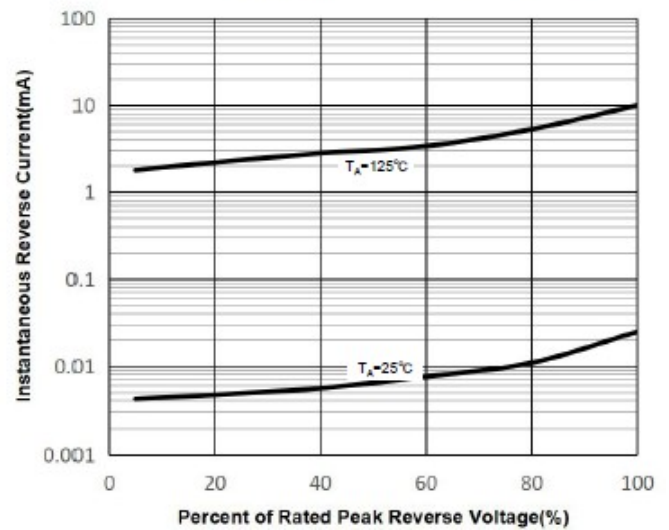


FIG.4: Typical Reverse Characteristics



The curve above is for reference only.