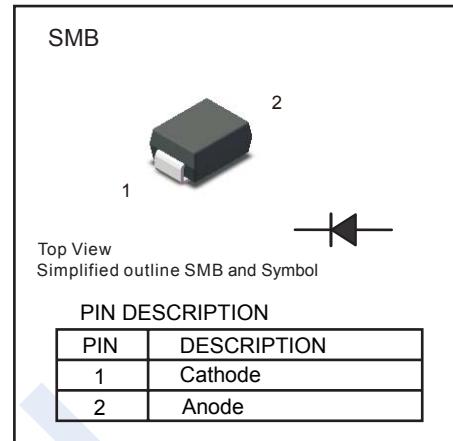


Super Fast Rectifier

MURS140 ~ MURS160

■ Features

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 35A Peak
- Ideally Suited for Automated Assembly



■ Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbol	MUSR140	MURS160	Unit
Repetitive Peak Reverse Voltage	V_{RRM}			V
Working Peak Reverse Voltage	V_{RMW}	400	600	
DC Blocking Voltage	V_R			
RMS Reverse Voltage	$V_{R(RMS)}$	283	424	
Instantaneous Forward Voltage at $I_F=1.0A$	V_{FM}	1.25		
Maximum Average Forward Rectified Current @ $T_T = 120^\circ C$	I_O	1.0		A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	35		
Maximum DC Reverse Current $T_A=25^\circ C$ at rated DC blocking voltage $T_A=150^\circ C$	I_{RM}	5 150		μA
Reverse Recovery Time (Note 1)	t_{rr}	50		ns
Forward Recovery Time (Note 2)	t_{fr}	50		
Typical Junction Capacitance (Note 3)	C_j	45		pF
Typical Thermal Resistance, Junction to Terminal (Note 4)	$R_{\theta JT}$	13		$^\circ C/W$
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to 175		$^\circ C$

Notes: 1. Measured with $I_F = 0.5A$, $I_R = 1.0A$, $I_r = 0.25A$. See Figure 5.

2. Measured with $I_F = 1.0A$, $di/dt = 100A/\mu s$, Duty Cycle $\leq 2.0\%$

3. Measured at 1.0MHz and applied reverse voltage of 0V DC.

4. Unit mounted on PC board with 5.0 mm² (0.013 mm thick) copper pads as heat sink.

MURS140 ~ MURS160

■ Typical Characteristics

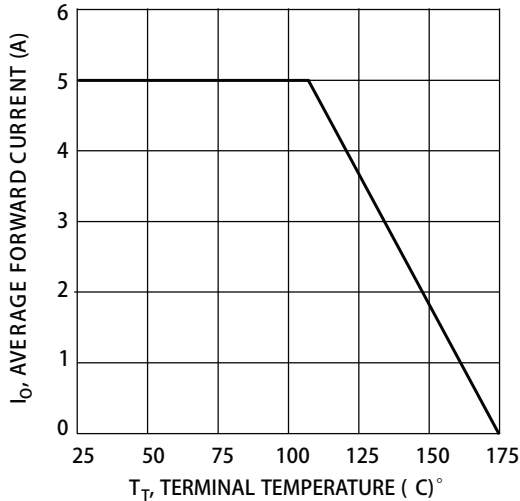


Fig. 1 Forward Current Derating Curve

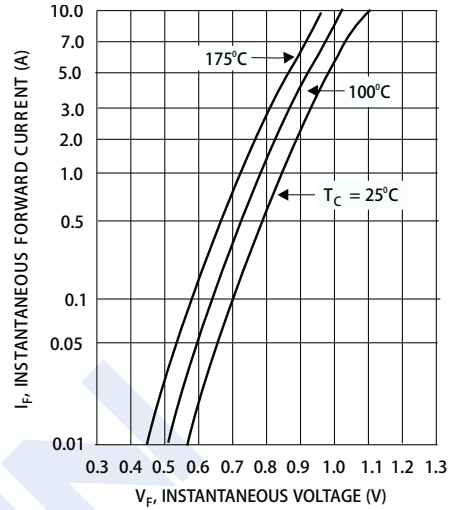


Fig. 2 Typical Forward Current

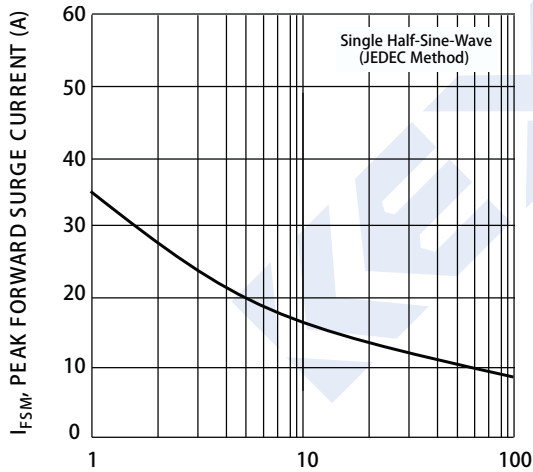


Fig. 3 Surge Current Derating Curve

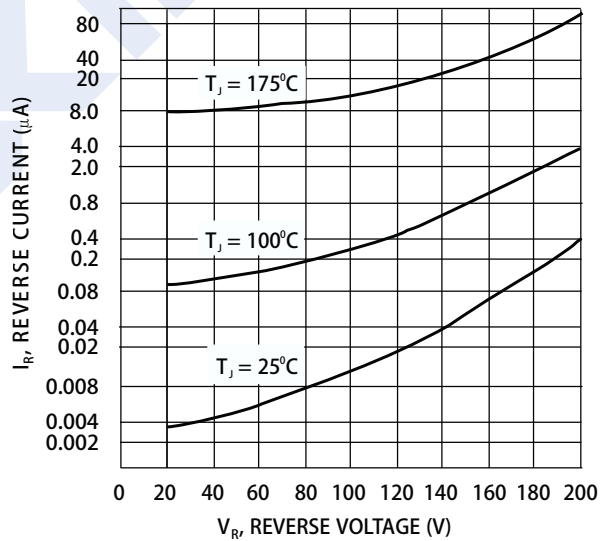
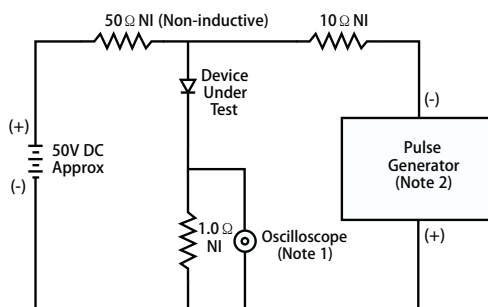


Fig. 4 Typical Reverse Current



Notes:
 1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.

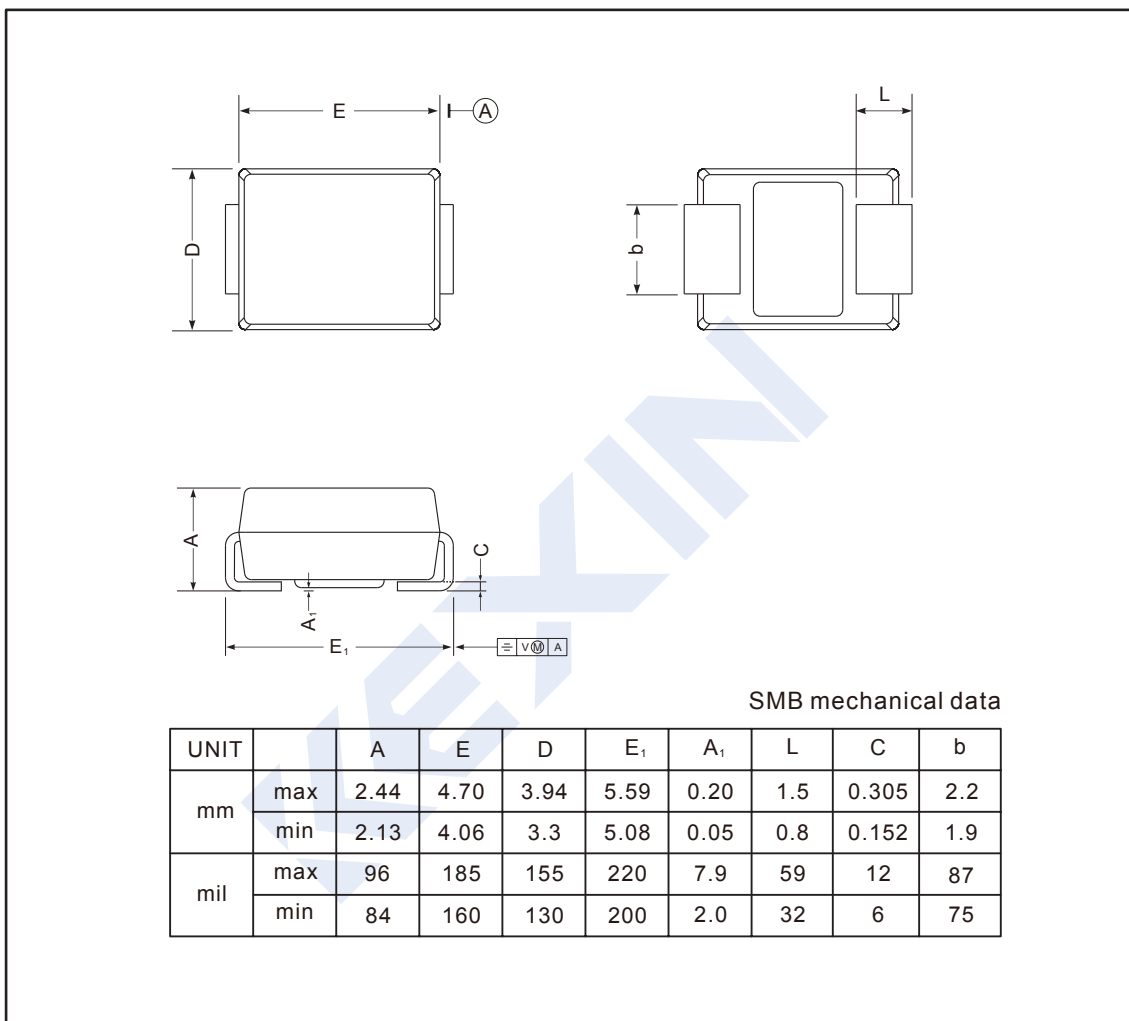
Fig. 5 Reverse Recover y Time Characteristic and Test Circuit

MURS140 ~ MURS160

■ Package Outline Dimensions

Plastic surface mounted package; 2 leads

SMB



■ The Recommended Mounting Pad Size

