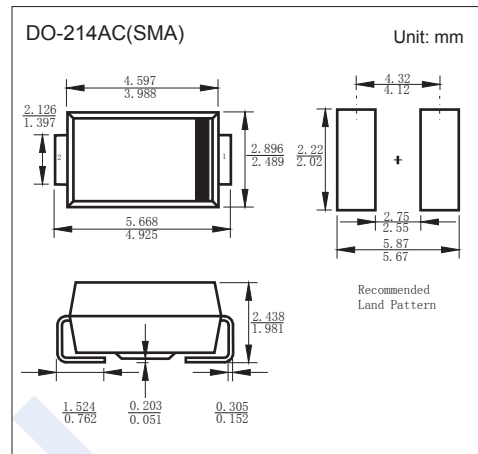


Rectifier Diodes

MURS120

■ Features

- Glass Passivated Die Construction
 - Super-Fast Recovery Time For High Efficiency
 - Low Forward Voltage Drop and High Current Capability
 - Surge Overload Rating to 40A Peak
 - Ideally Suited for Automated Assembly
 - Plastic Material: UL Flammability
- Classification Rating 94V-0

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	200	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	141	
Average Rectified Output Current $T_T=155^\circ\text{C}$ $T_T=145^\circ\text{C}$	I_o	1	A
		2	
Non-Repetitive Peak Forward Surge Current	I_{FSM}	40	
Forward Voltage @ $I_F = 1\text{A}, T_J = 25^\circ\text{C}$ @ $I_F = 1\text{A}, T_J = 150^\circ\text{C}$	V_F	0.875	V
		0.71	
Peak Reverse Current @ $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_a = 150^\circ\text{C}$	I_R	2	μA
		50	
Reverse Recovery Time (Note.1)	t_{rr}	25	ns
Forward Recovery Time (Note.2)		25	
Typical Junction Capacitance (Note.3)	C_J	60	pF
Thermal Resistance Junction to Terminal	$R_{\theta JT}$	13	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	175	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-65 to 175	

Note.1: Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$. See Figure 5.

Note.2: Measured with $I_F = 1.0\text{A}$, $di/dt = 100\text{A}/\mu\text{s}$, Duty Cycle $\leq 2\%$

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

■ Marking

Marking	U1DB
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Rectifier Diodes

MURS120

■ Typical Characteristics

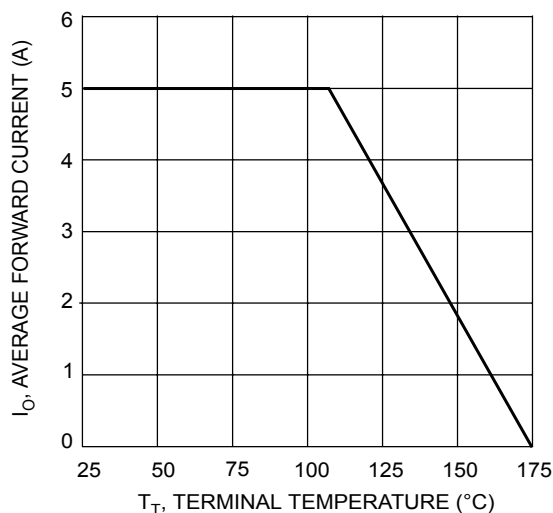


Fig. 1 Forward Current Derating Curve

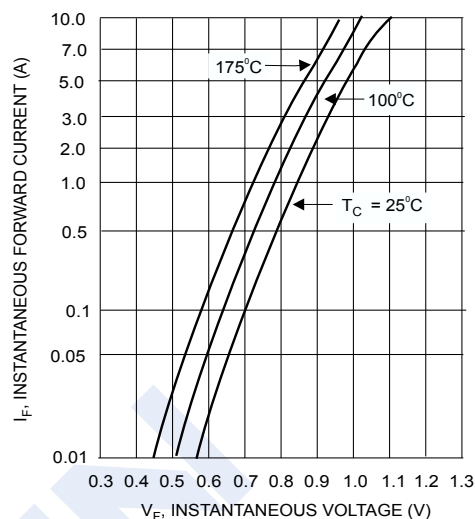


Fig. 2 Typical Forward Current

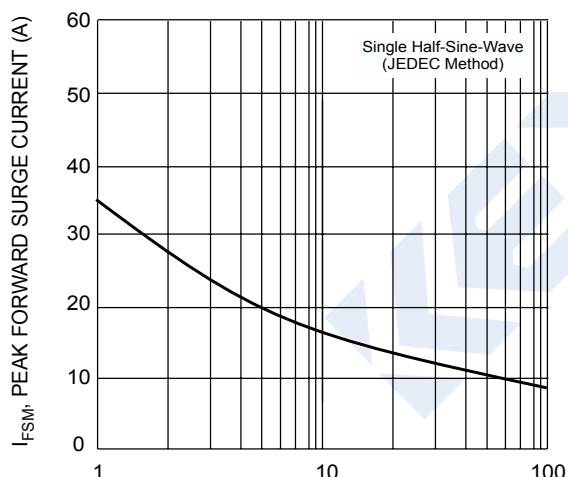


Fig. 3 Surge Current Derating Curve

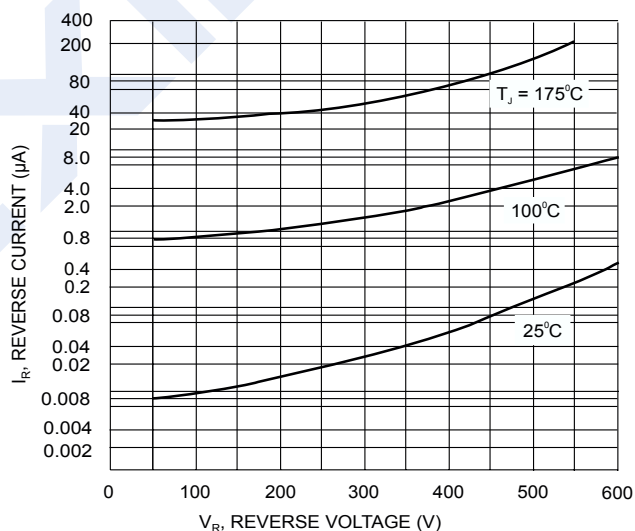
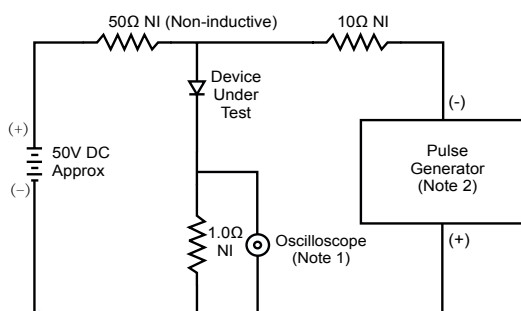
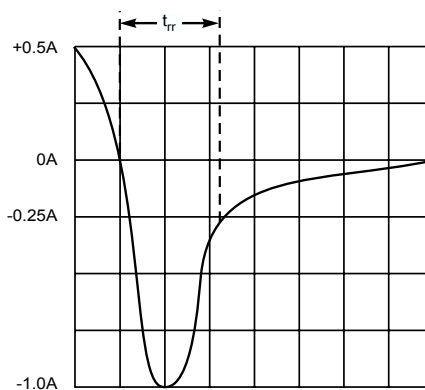


Fig. 4 Typical Reverse Current



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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit