

# MURS220T3

**PRV : 200 Volts**  
**Io : 2.0 Ampere**

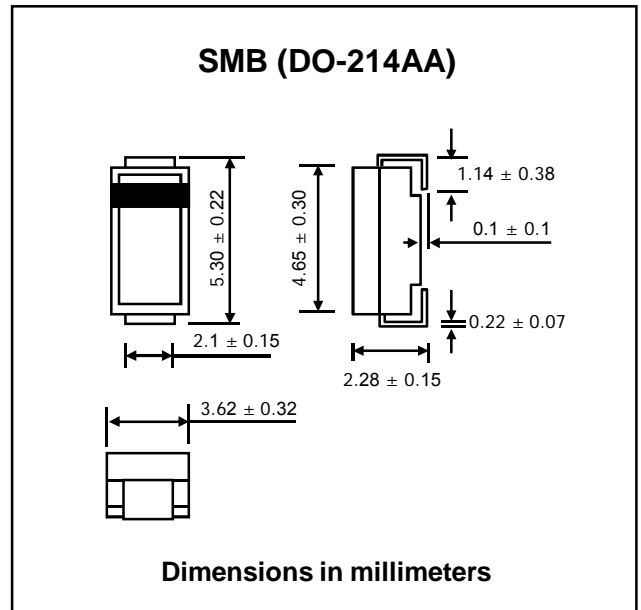
**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Super Fast Recovery Time
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : SMB Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.093 gram

## SURFACE MOUNT ULTRA FAST RECTIFIER



### 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%.

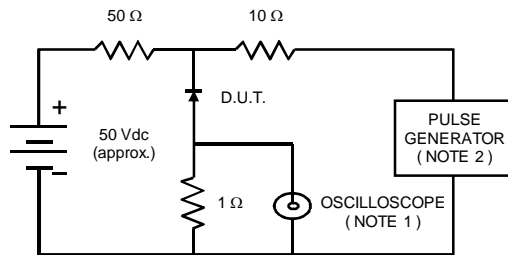
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	V
Maximum Working Reverse Voltage	$V_{RWM}$	200	V
Maximum DC Blocking Voltage	$V_{DC}$	200	V
Maximum Rectified Average Forward Current $T_L = 145\text{ }^\circ\text{C}$	$I_{F(AV)}$	2.0	A
Maximum Peak Forward Surge Current (Surge applied at rated load conditions, half wave, single phase)	$I_{FSM}$	40	A
Maximum Instantaneous Forward Voltage at $I_F = 2.0\text{ A}$ (Note 1)	$V_F$	0.95	V
Maximum Instantaneous Reverse Current at ( Rated DC Voltage, $T_J = 25\text{ }^\circ\text{C}$ ) ( Rated DC Voltage, $T_J = 150\text{ }^\circ\text{C}$ )	$I_R$	2.0	$\mu\text{A}$
	$I_{R(H)}$	50	
Maximum Reverse Recovery Time ( Note 2 )	$T_{rr}$	25	ns
Thermal Resistance - Junction to Lead	$R_{\theta JL}$	13	$^\circ\text{C/W}$
Junction Temperature Range	$T_J$	- 65 to + 175	$^\circ\text{C}$

**Notes :**

- ( 1 ) Pulse Test : Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .
- ( 2 ) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$  ;  $I_R$  to 0.25 A

## RATING AND CHARACTERISTIC CURVES ( MURS220T3 )

FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise Time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.

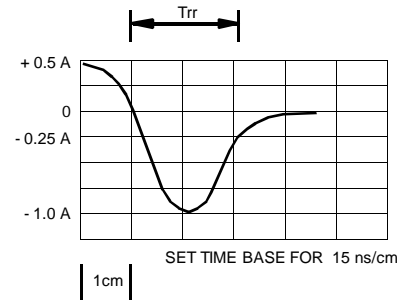


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

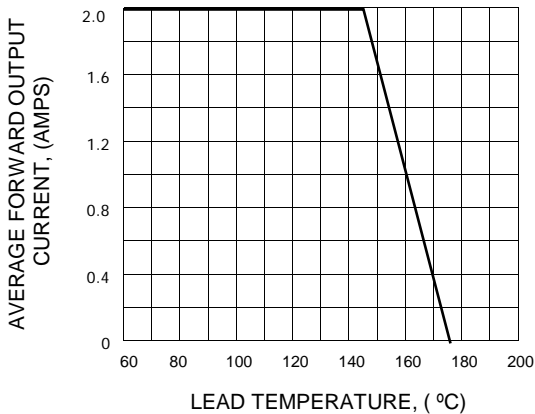


FIG.3 - POWER DISSIPATION

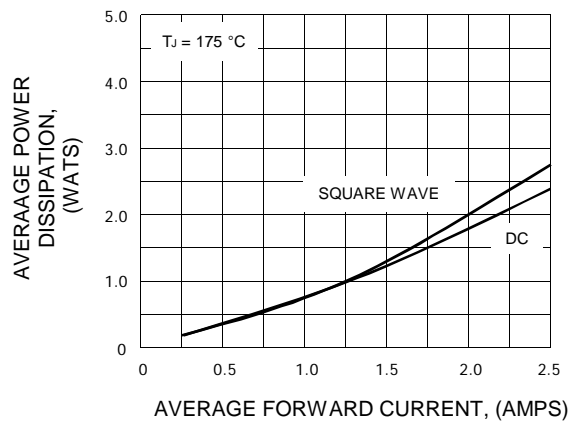


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

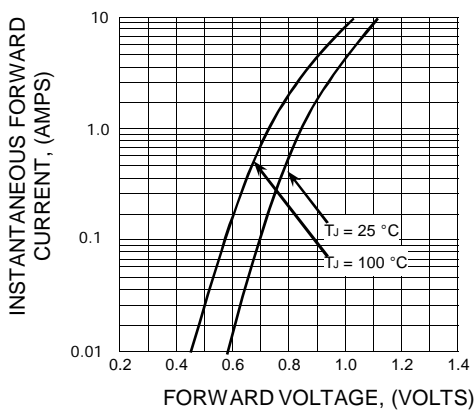


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

