

# MURS120

**PRV : 200 Volts**  
**Io : 1.0 Ampere**

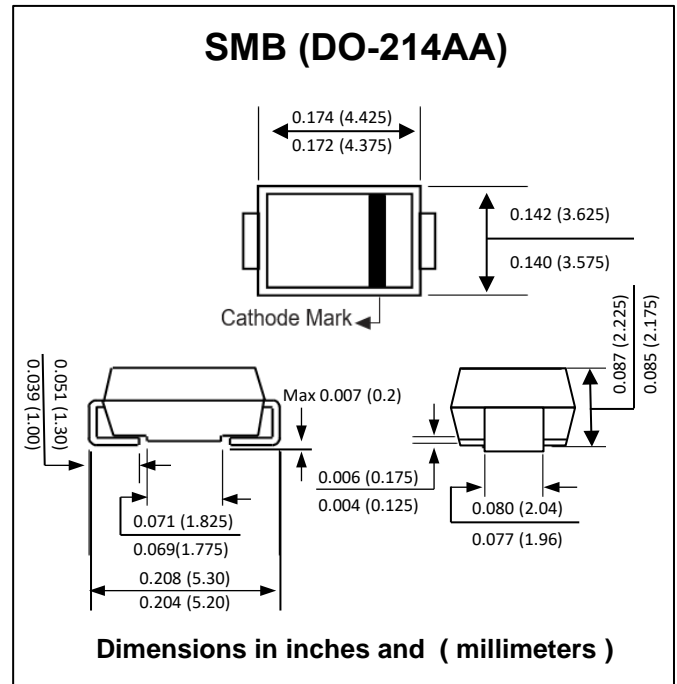
### FEATURES :

- \* 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%.

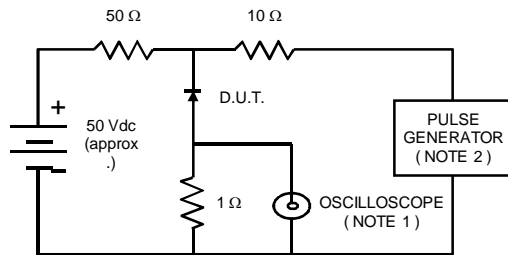
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	200	V
Maximum Working Reverse Voltage	VRWM	200	V
Maximum DC Blocking Voltage	VDC	200	V
Maximum Average Forward Current $T_L = 155\text{ }^\circ\text{C}$	IF(AV)	1.0	A
Maximum Peak Forward Surge Current (Surge applied at rated load conditions, half wave, single phase)	IFSM	40	A
Maximum Forward Voltage at $I_F = 1\text{ A}$ (Note 1)	VF	0.875	V
Maximum Reverse Current at $T_J = 25\text{ }^\circ\text{C}$	IR	2.0	$\mu\text{A}$
Rated DC Blocking Voltage $T_J = 150\text{ }^\circ\text{C}$	IR(H)	50	$\mu\text{A}$
Maximum Reverse Recovery Time ( Note 2 )	Trr	30	ns
Junction Temperature Range	TJ	- 65 to + 175	$^\circ\text{C}$
Storage Temperature Range	TSTG	- 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 :  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$  ;  $I_{rr} = 0.25\text{ A}$

## RATING AND CHARACTERISTIC CURVES ( MURS120 )

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.

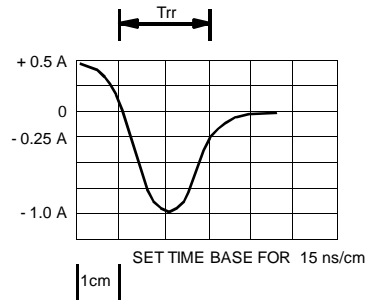


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

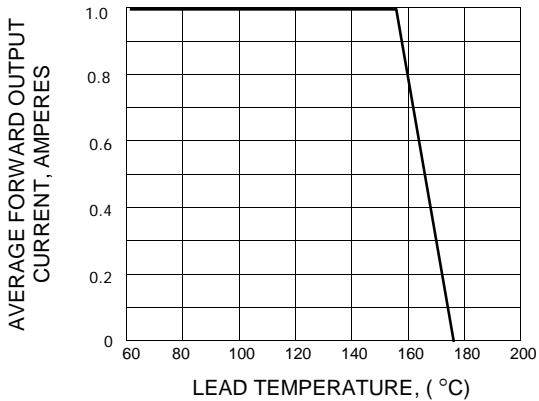


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

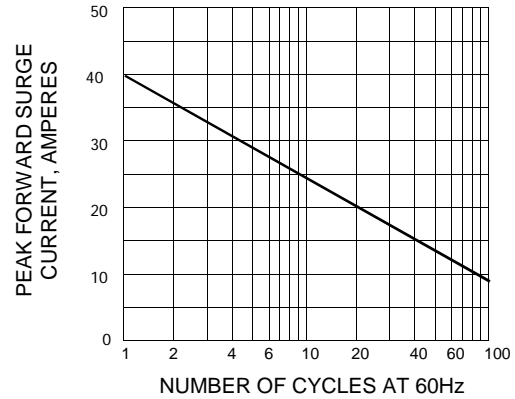


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

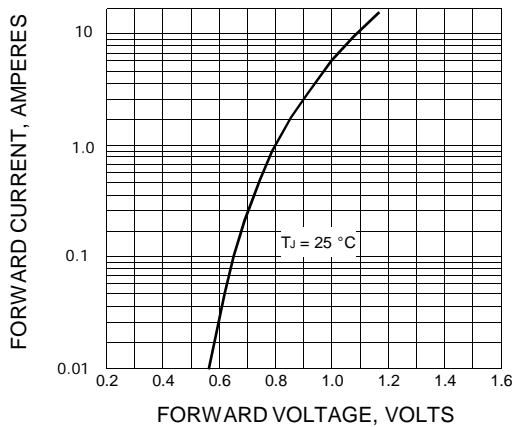


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

