

# MURS120

## SURFACE MOUNT ULTRA FAST RECTIFIERS

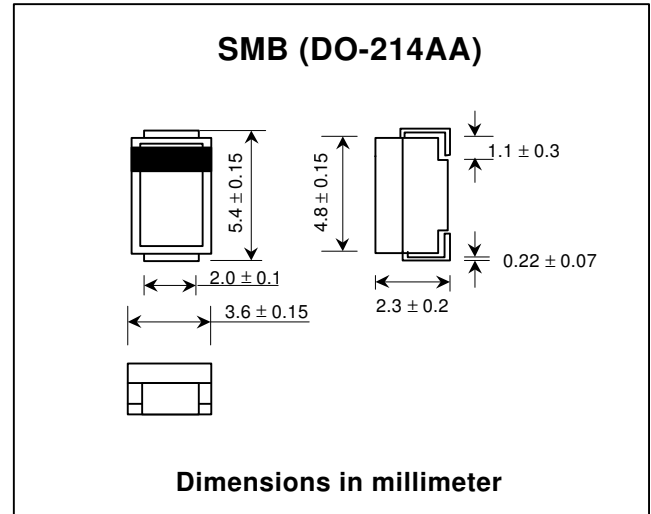
**PRV : 200 Volts**  
**Io : 1.0 Ampere**

### 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



### 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%.

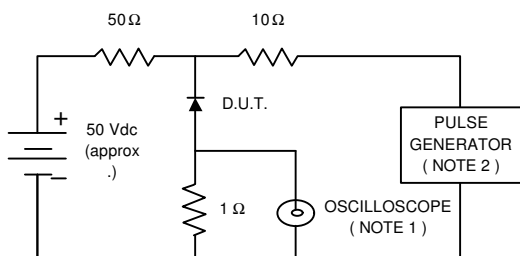
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	VRRM	200	V
Maximum Working Reverse Voltage	VRWM	200	V
Maximum DC Blocking Voltage	VDC	200	V
Maximum Average Forward Current TL = 155 °C	IF(AV)	1.0	A
Maximum Peak Forward Surge Current (Surge applied at rated load conditions, half wave, single phase)	IFSM	40	A
Maximum Forward Voltage at IF = 1 A (Note 1)	VF	0.875	V
Maximum Reverse Current at TJ = 25 °C	IR	2.0	μA
Rated DC Blocking Voltage TJ = 150 °C	IR(H)	50	μA
Maximum Reverse Recovery Time ( Note 2 )	Trr	30	ns
Junction Temperature Range	TJ	- 65 to + 175	°C
Storage Temperature Range	TSTG	- 65 to + 175	°C

#### Notes :

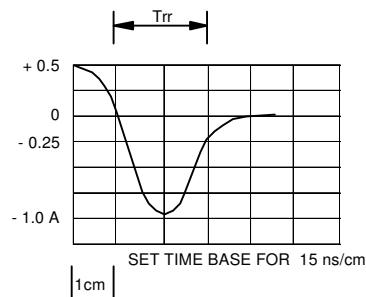
- ( 1 ) Pulse Test : Pulse Width = 300 μs, Duty Cycle ≤ 2.0%
- ( 2 ) Reverse Recovery Test Conditions : IF = 0.5A, IR = 1A ; Irr = 0.25 A

## RATING AND CHARACTERISTIC CURVES ( MURS120 )

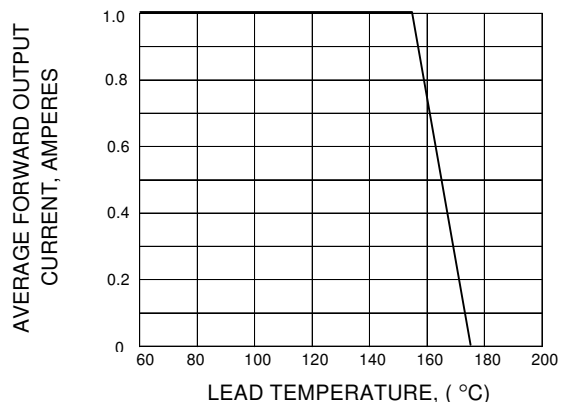
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



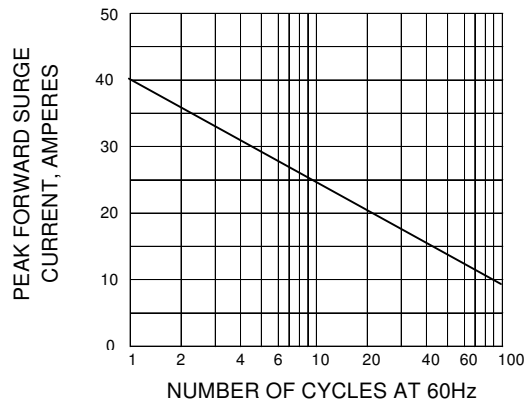
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise Time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



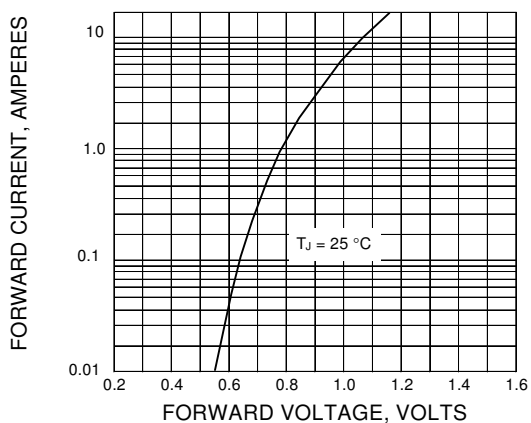
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

