



# THE DATASHEET OF SR1R



# SR1R

## FAST RECOVERY RECTIFIER DIODE

**PRV : 2000 Volts**

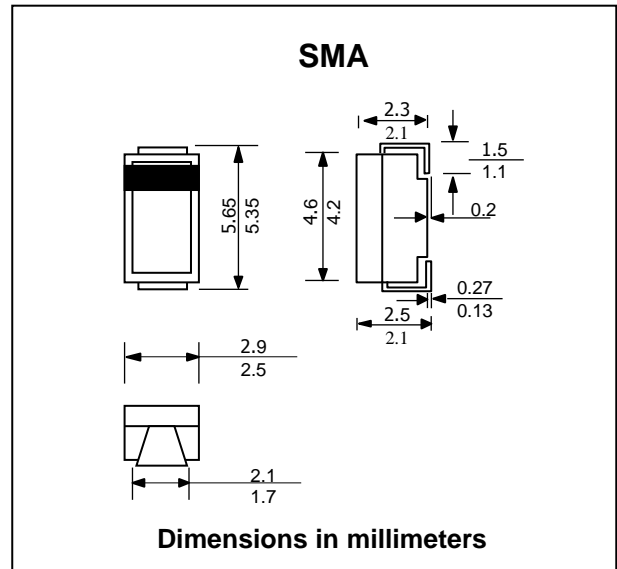
**Io : 0.5 Ampere**

### FEATURES :

- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : SMA Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.060 gram (Approximately)



### 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%.

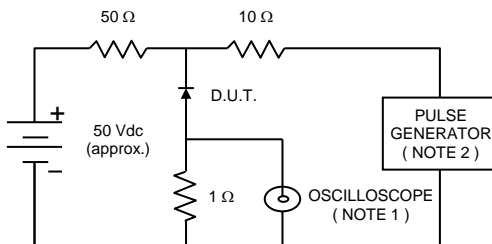
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	2000	V
Maximum RMS Voltage	$V_{RMS}$	1400	V
Maximum DC Blocking Voltage	$V_{DC}$	2000	V
Maximum Average Forward Current $T_a = 75\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	0.5	A
Maximum Peak Forward Surge Current	$I_{FSM}$	30	A
Maximum Peak Forward Voltage at 0.5 A	$V_F$	3.0	V
Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$	$I_R$	5.0	$\mu\text{A}$
	$I_{R(H)}$	50	$\mu\text{A}$
Reverse Recovery Time (Note 1)	$T_{rr}$	200	ns
Junction Capacitance (Note 2)	$C_J$	5.0	pF
Junction Temperature Range	$T_J$	- 40 to + 150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	- 40 to + 150	$^{\circ}\text{C}$

#### Notes :

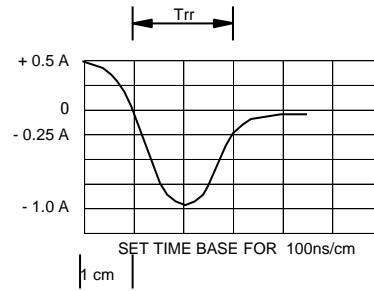
- (1) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_R = 1.0\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( SR1R )

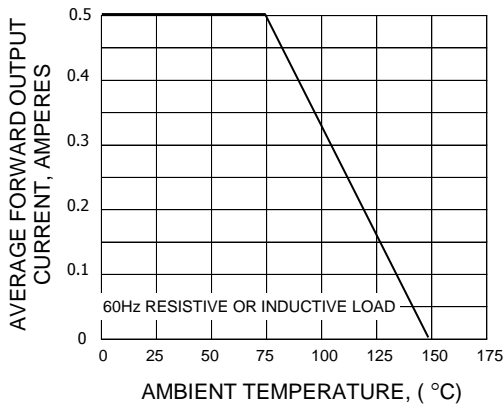
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



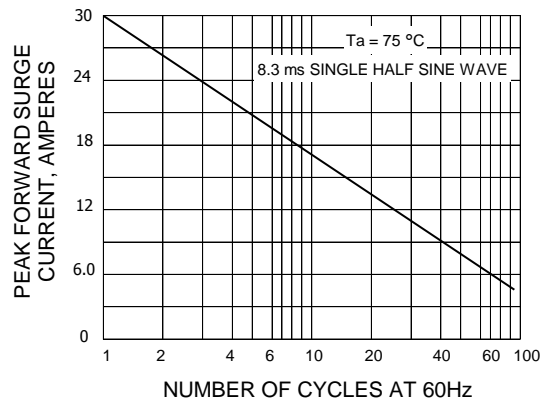
NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



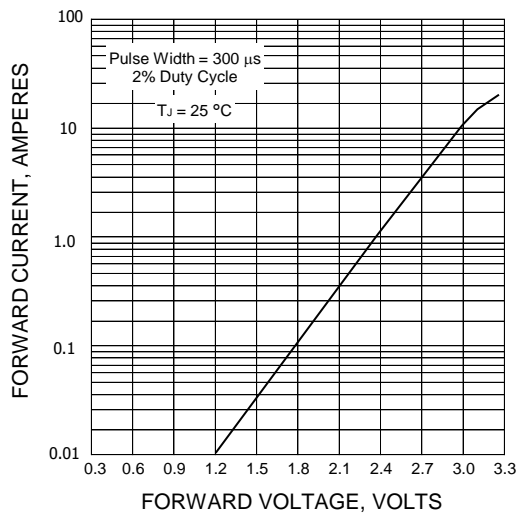
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



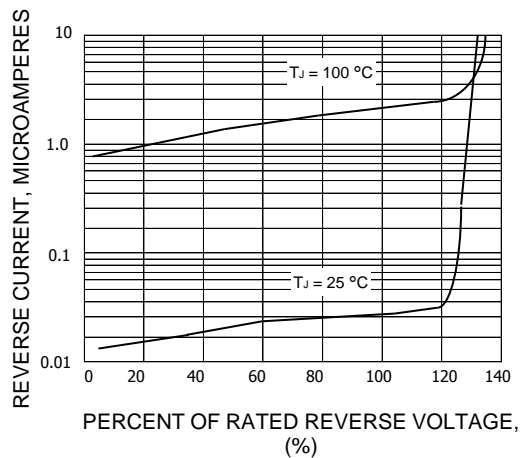
**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**





**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**



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