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# SS1A - SS1J

## SURFACE MOUNT SUPER FAST RECTIFIERS

## PRV : 50 - 600 Volts
## Io : 1.0 Ampere

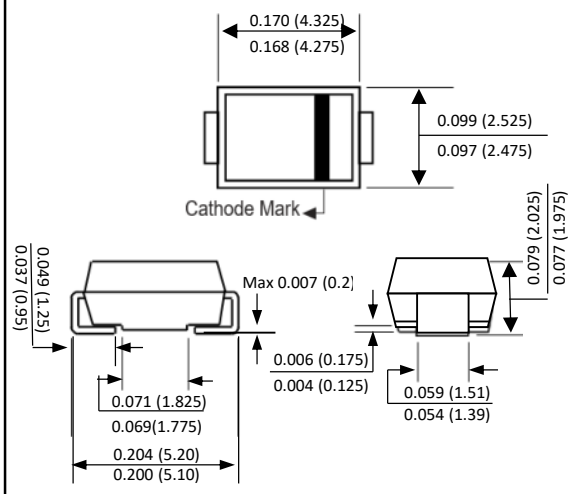
### FEATURES :

* 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 : SMA Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Lead Formed for Surface Mount
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.067 gram

**SMA**




**Dimensions in inches and ( millimeters**

### 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 | SS1A | SS1B | SS1C | SS1D | SS1E | SS1G | SS1J | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Current Ta = 55 °C | $I_{F(AV)}$ | 1.0 | | | | | | | A |
| Maximum Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Maximum Peak Forward Voltage at $I_F$ = 1.0 A | $V_F$ | 0.95 | | | | 1.7 | | | V |
| Maximum DC Reverse Current Ta = 25 °C | $I_R$ | 5.0 | | | | | | | µA |
| at Rated DC Blocking Voltage Ta = 100 °C | $I_{R(H)}$ | 100 | | | | | | | µA |
| Maximum Reverse Recovery Time ( Note 1 ) | Trr | 35 | | | | | | | ns |
| Typical Junction Capacitance ( Note 2 ) | $C_J$ | 50 | | | | | | | pf |
| Junction Temperature Range | $T_J$ | - 65 to + 150 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | - 65 to + 150 | | | | | | | °C |

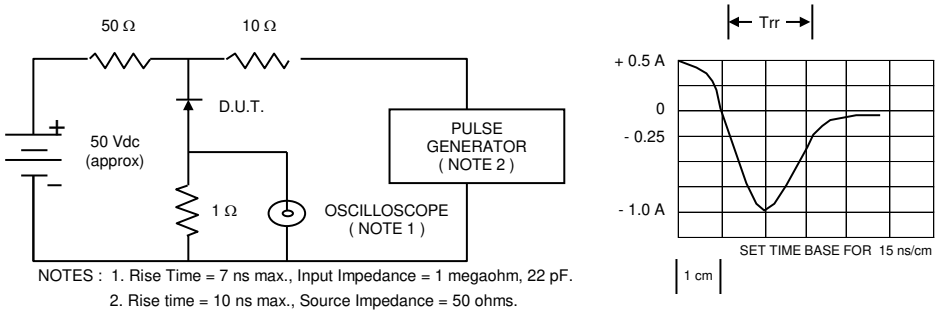
**Notes :**

( 1 ) Reverse Recovery Test Conditions : $I_F$ = 0.5 A, $I_R$ = 1.0 A, Irr = 0.25 A.

( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 $V_{DC}$

## RATING AND CHARACTERISTIC CURVES ( SS1A - SS1J )

**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**

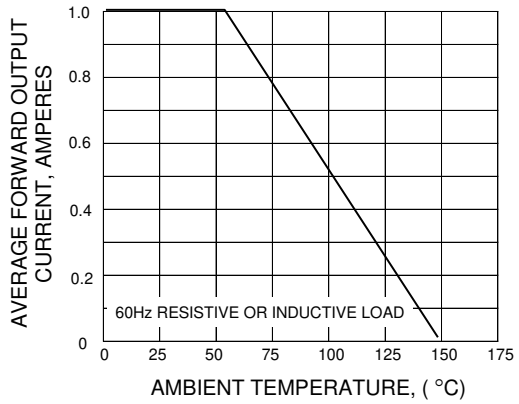



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

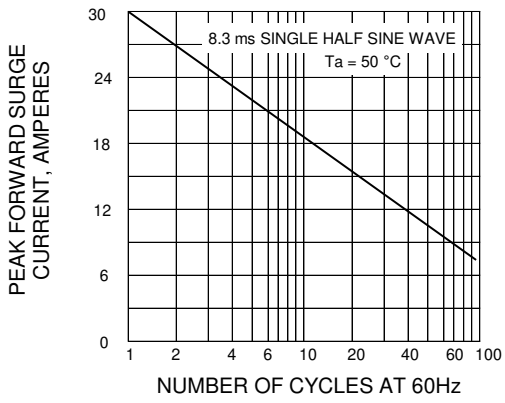



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**

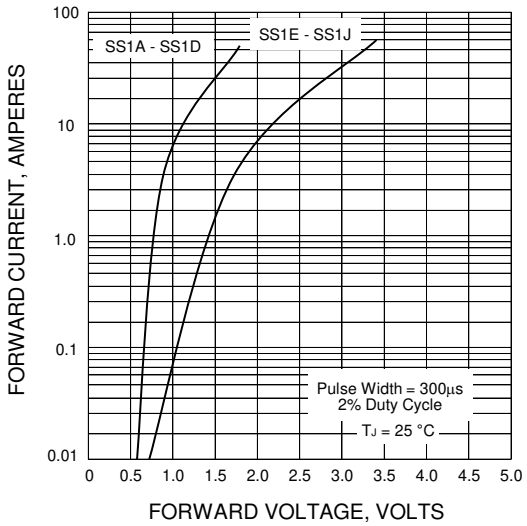



**FIG.5 - TYPICAL VALUE CHARACTERISTICS**

