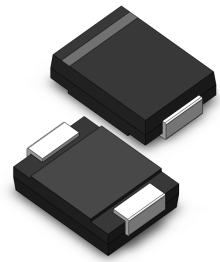
# SS5A - SS5M

## SURFACE MOUNT SUPER FAST RECTIFIER DIODES

**VOLTAGE RANGE: 50 - 1000V**
**CURRENT: 5.0 A**



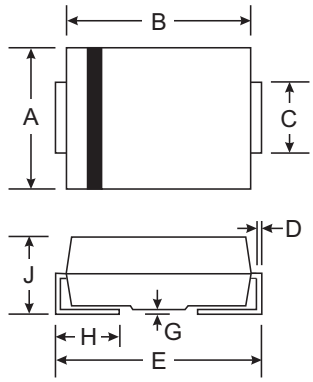
## Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Super fast recovery time

## Mechanical Data

- Case : SMC (DO-214AB),Molded plastic
- Epoxy : UL94V-O rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.21 gram

RoHS COMPLIANT




| SMC/DO-214AB | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 5.59 | 6.22 |
| **B** | 6.60 | 7.11 |
| **C** | 2.75 | 3.18 |
| **D** | 0.15 | 0.31 |
| **E** | 7.75 | 8.13 |
| **G** | 0.10 | 0.20 |
| **H** | 0.76 | 1.52 |
| **J** | 2.00 | 2.62 |
| **All Dimensions in mm** | | |

## Maximum Ratings and Electrical Characteristics

$T_A$ = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic | Symbol | SS5A | SS5B | SS5C | SS5D | SS5E | SS5G | SS5J | SS5K | SS5M | Unit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Current Ta = 55 °C | $I_{F(AV)}$ | 5.0 | | | | | | | | | A |
| Maximum Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 135 | | | | | | | | | A |
| Maximum Peak Forward Voltage at $I_F$ = 5.0 A. | $V_F$ | 0.95 | | | | 1.7 | | | 4.0 | | V |
| Maximum DC Reverse Current Tj = 25 °C | $I_R$ | 10 | | | | | | | | | µA |
| at Rated DC Blocking Voltage Tj = 100 °C | $I_{R(H)}$ | 500 | | | | | | | | | 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 |

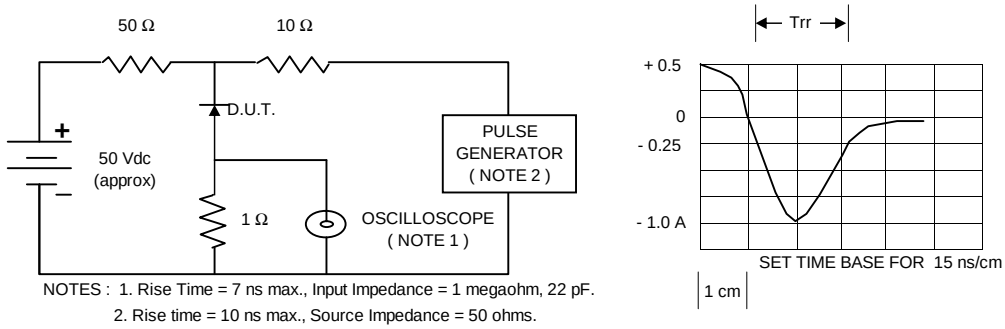
**Notes :**

( 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 ( SS5A - SS5M )

**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**

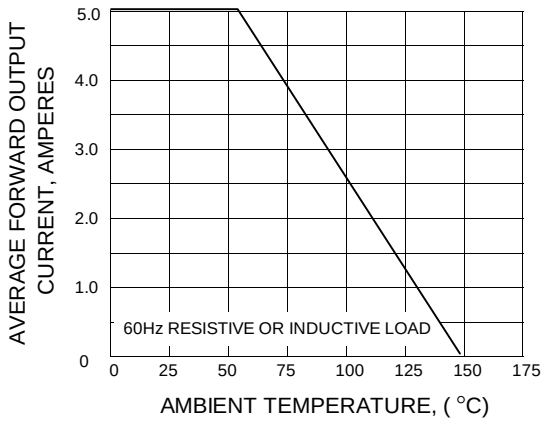



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

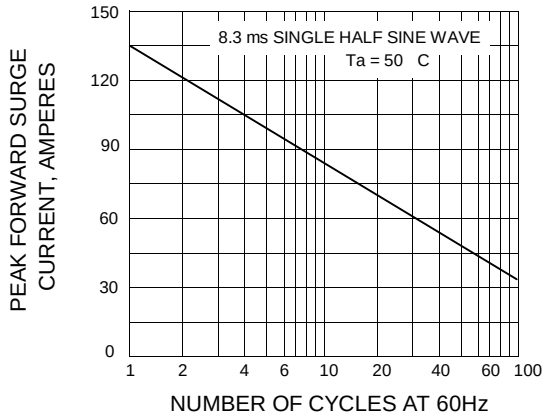



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**

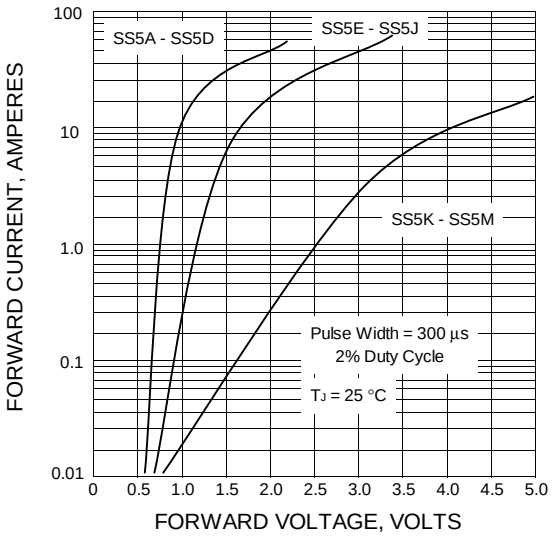



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

