

# SE1A -SE1M

**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

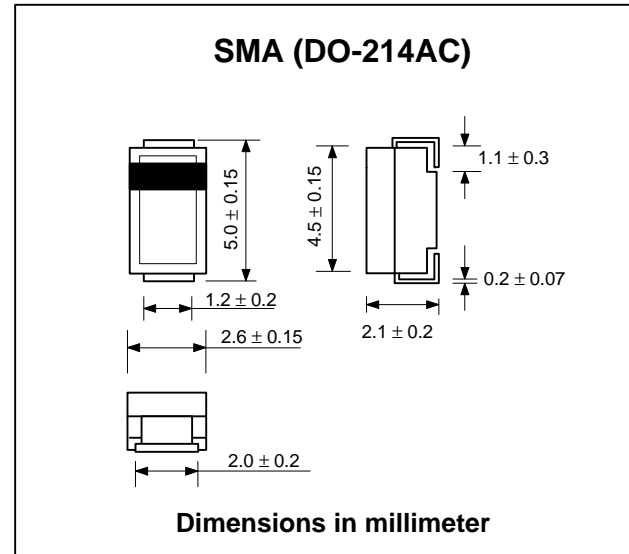
## FEATURES :

- \* High current capability
- \* 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
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.067 gram

# SURFACE MOUNT HIGH EFFICIENT RECTIFIERS



## 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%.

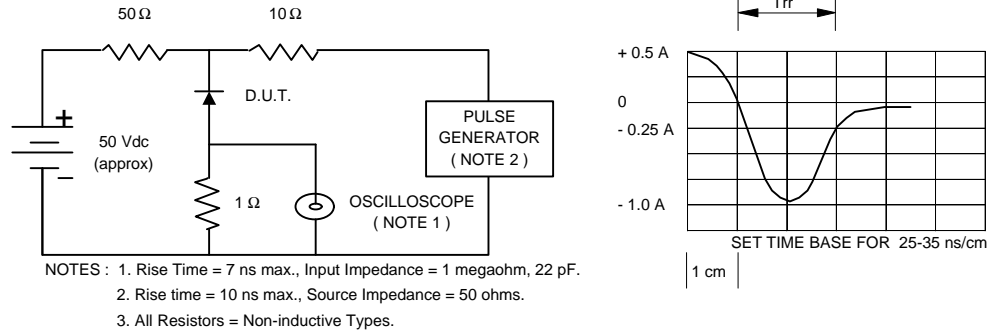
| RATING  | SYMBOL | SE1A          | SE1B | SE1D | SE1E | SE1G | SE1J | SE1K | SE1M | UNIT |
|---|--------|---------------|------|------|------|------|------|------|------|------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM   | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000 | V    |
| Maximum RMS Voltage   | VRMS   | 35            | 70   | 140  | 210  | 280  | 420  | 560  | 700  | V    |
| Maximum DC Blocking Voltage   | VDC    | 50            | 100  | 200  | 300  | 400  | 600  | 800  | 1000 | V    |
| Maximum Average Forward Current Ta = 55 °C  | IF(AV) | 1.0           |      |      |      |      |      |      |      | A    |
| Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method) | IFSM   | 30            |      |      |      |      |      |      |      | A    |
| Maximum Forward Voltage at IF = 1.0 A   | VF     | 1.1           |      |      | 1.7  |      | 2.2  |      |      | V    |
| Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C                            | IR     | 5             |      |      |      |      |      |      |      | µA   |
|   | IR(H)  | 50            |      |      |      |      |      |      |      | µA   |
| Maximum Reverse Recovery Time ( Note 1 )  | Trr    | 50            |      |      |      |      | 75   |      |      | ns   |
| Typical Junction Capacitance ( Note 2 )   | CJ     | 50            |      |      |      |      |      |      |      | pf   |
| Junction Temperature Range  | TJ     | - 65 to + 150 |      |      |      |      |      |      |      | °C   |
| Storage Temperature Range   | TSTG   | - 65 to + 150 |      |      |      |      |      |      |      | °C   |

### Notes :

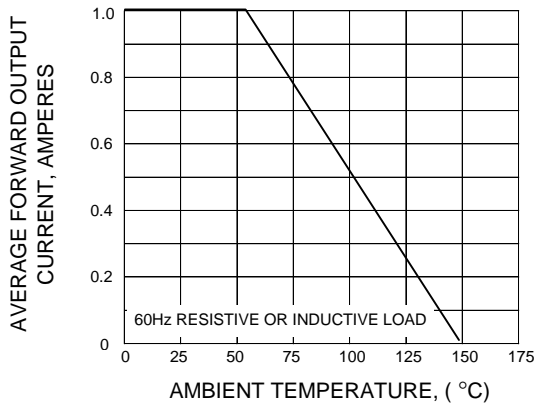
- ( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( SE1A - SE1M )

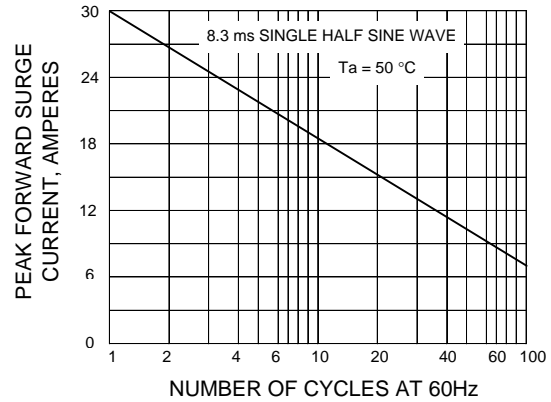
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



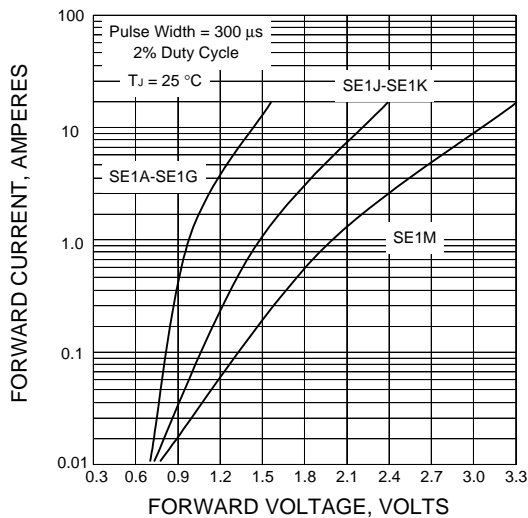
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

