

# SE1A -SE1M

# SURFACE MOUNT HIGH EFFICIENT RECTIFIERS

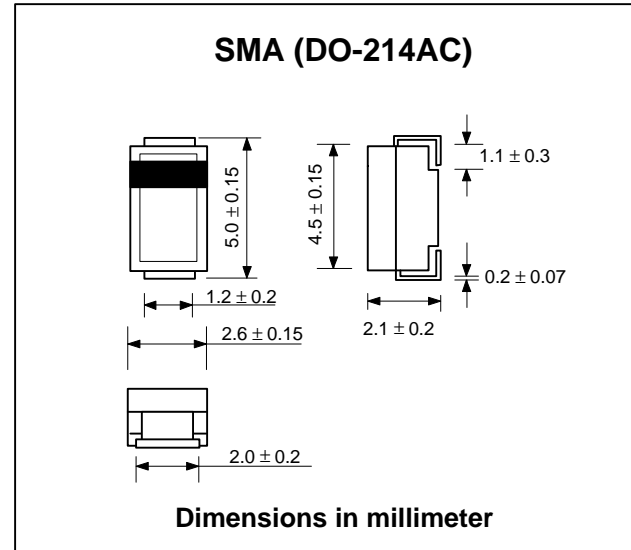
**PRV : 50 - 1000 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

## FEATURES :

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

## 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



## 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%.

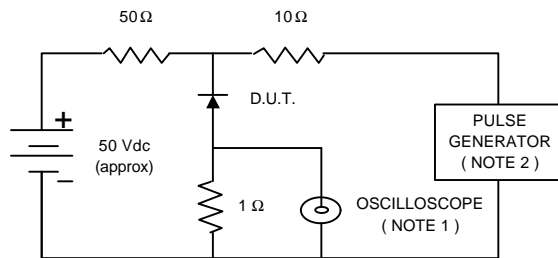
RATING	SYMBOL	SE1A	SE1B	SE1D	SE1E	SE1G	SE1J	SE1K	SE1M	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Current Ta = 55 °C	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				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 :

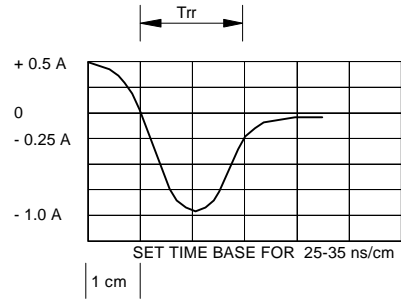
- ( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( SE1A - SE1M )

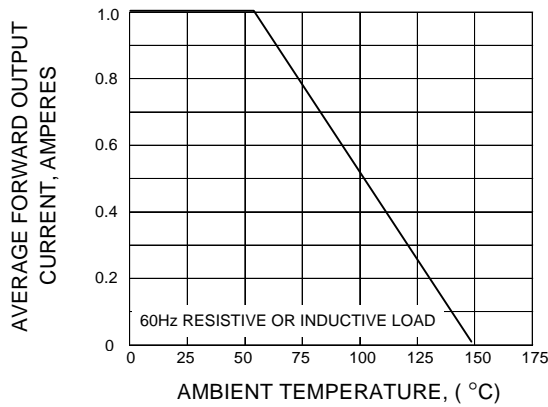
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



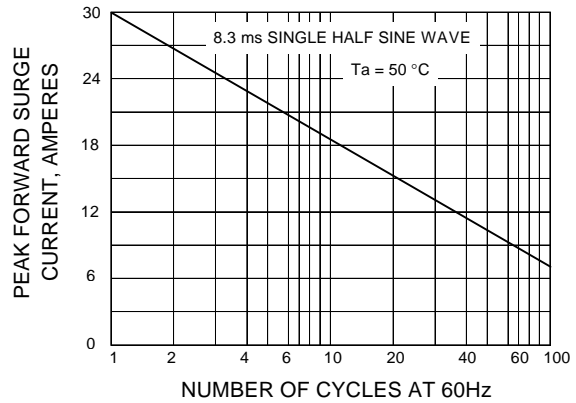
- NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.  
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.  
 3. All Resistors = Non-inductive Types.



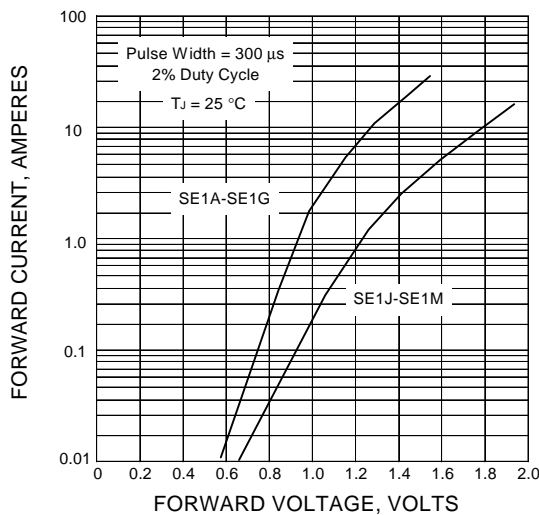
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

