

# SE3A - SE3M

**PRV : 50 - 1000 Volts**  
**Io : 3.0 Amperes**

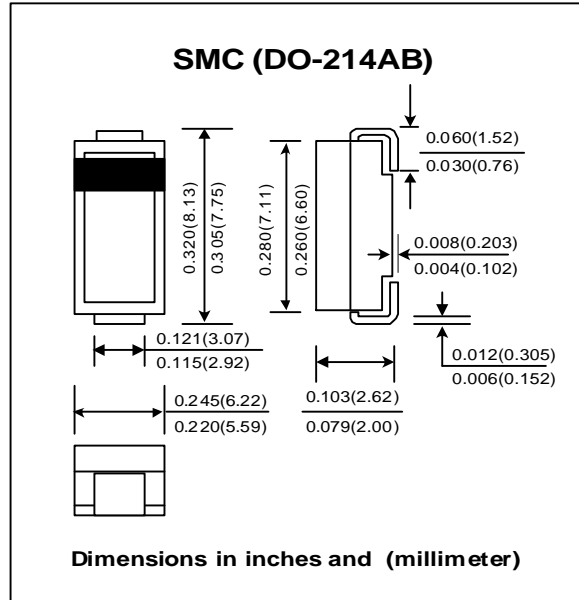
## FEATURES :

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

## MECHANICAL DATA :

- \* Case : SMC 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

# 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%.

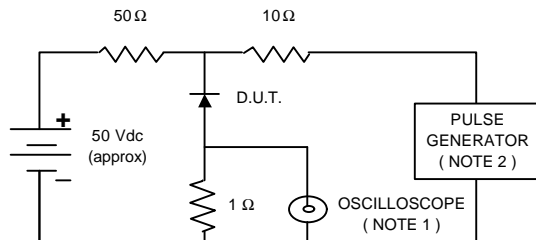
RATING	SYMBOL	SE3A	SE3B	SE3D	SE3E	SE3G	SE3J	SE3K	SE3M	UNIT	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	600	800	1000	V	
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	700	V	
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	1000	V	
Maximum Average Forward Current Ta = 55 °C	IF(AV)	3.0								A	
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	150								A	
Maximum Forward Voltage at IF = 3.0 A	VF	1.1					1.7				V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	IR	10								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 ( SE3A - SE3M )

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.

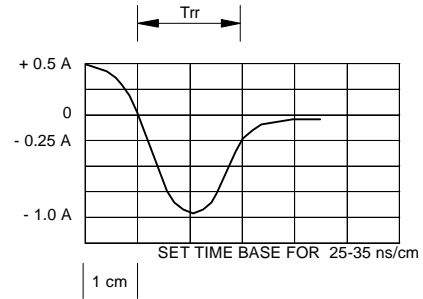


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

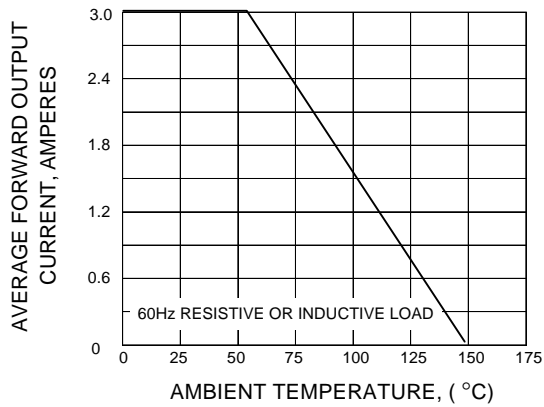


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

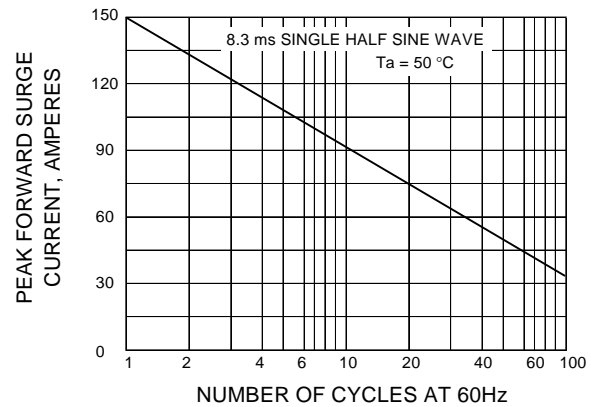


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

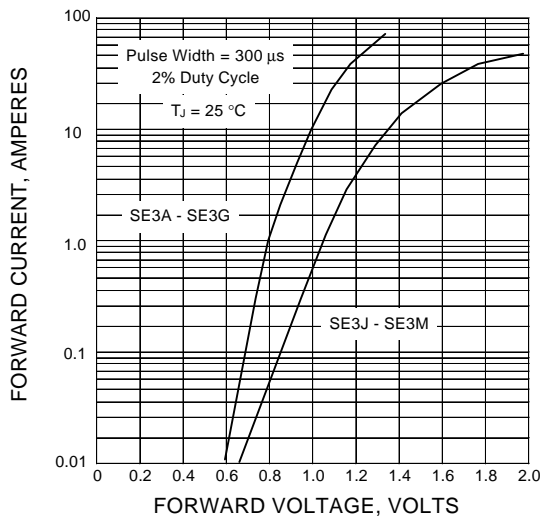


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

