

## SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50--- 600 V

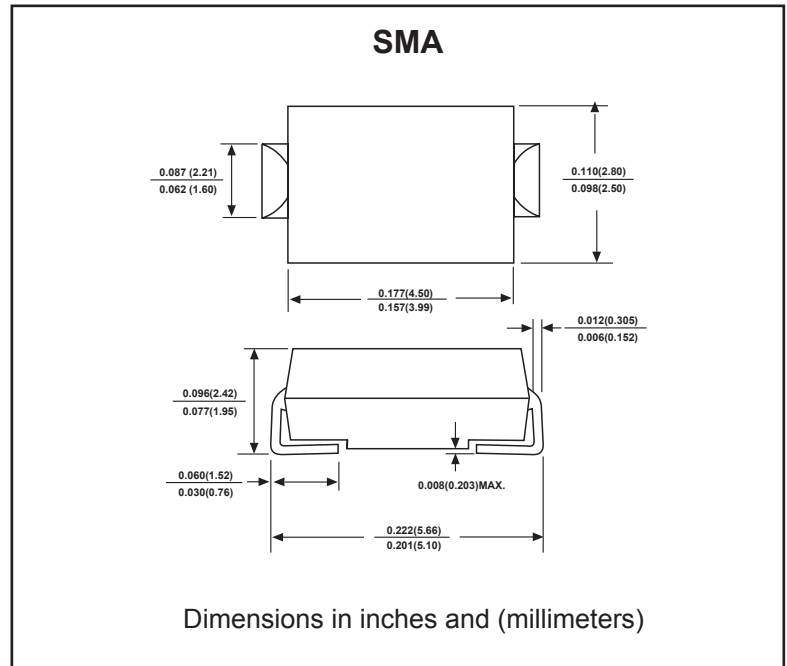
CURRENT: 1.0 A

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Super fast switching for high efficiency
- Low reverse leakage
- Built-in strain relief,ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed:  
250 C/10 seconds at terminals

### MECHANICAL DATA

- Case: SMA molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any



### MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

		ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1H	ES1J	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	560	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current, 375"(9.5mm) Lead Length at $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0								A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.0			1.3		1.7			V
Maximum reverse current at rated DC blocking voltage	@ $T_A=25$	5.0								$\mu\text{A}$
	@ $T_A=100$	50.0								
Maximum reverse recovery time (Note1)	$t_{rr}$	35								ns
Typical junction capacitance (Note2)	$C_J$	15								pF
Typical thermal resistance(Note3)	$R_{\theta JA}$	60								$^\circ\text{C/W}$
Operating junction temperature range	$T_j$	- 55 ---- + 125								$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150								$^\circ\text{C}$

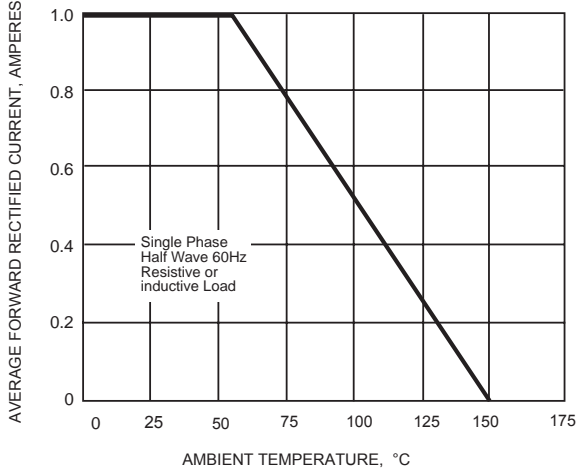
**Note:** 1.Reverse recovery condition  $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$

2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

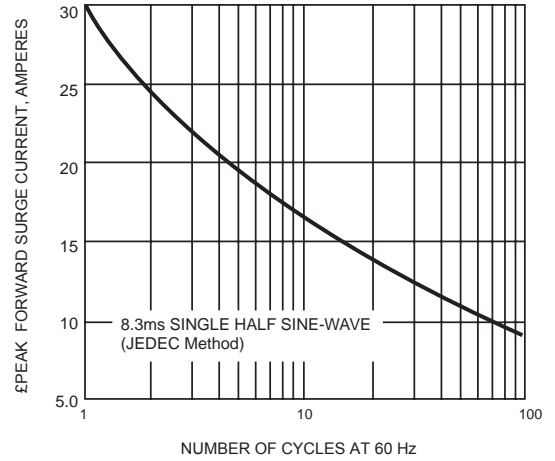
3.P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES

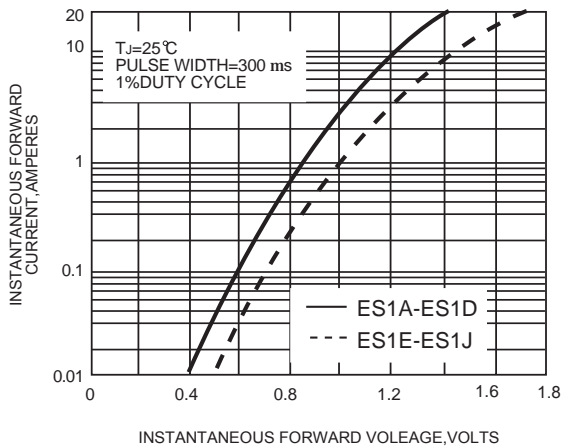
**FIG. 1- FORWARD CURRENT DERATING CURVE**



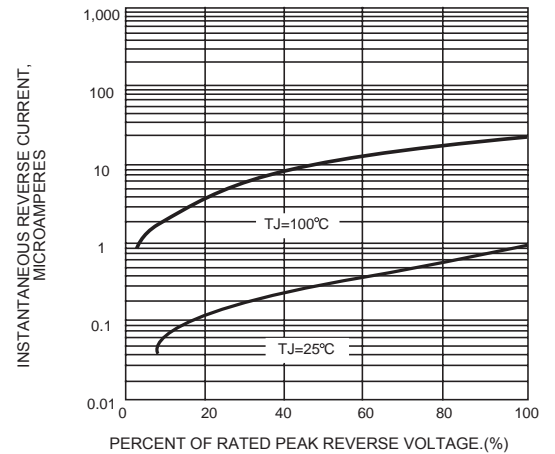
**FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



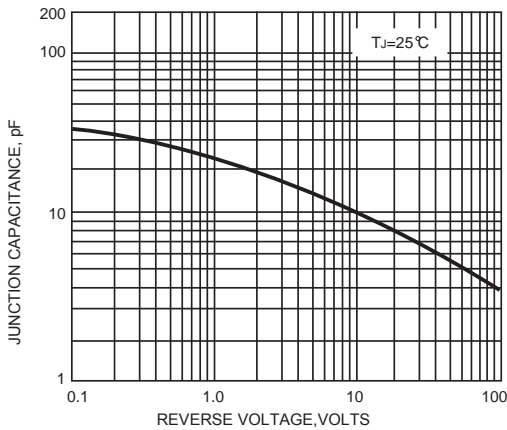
**FIG. 3-TYPICAL INSTANTANEOUS FORWARD**



**FIG. 4-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 5-TYPICAL JUNCTION CAPACITANCE**



**FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

