

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50--- 600 V

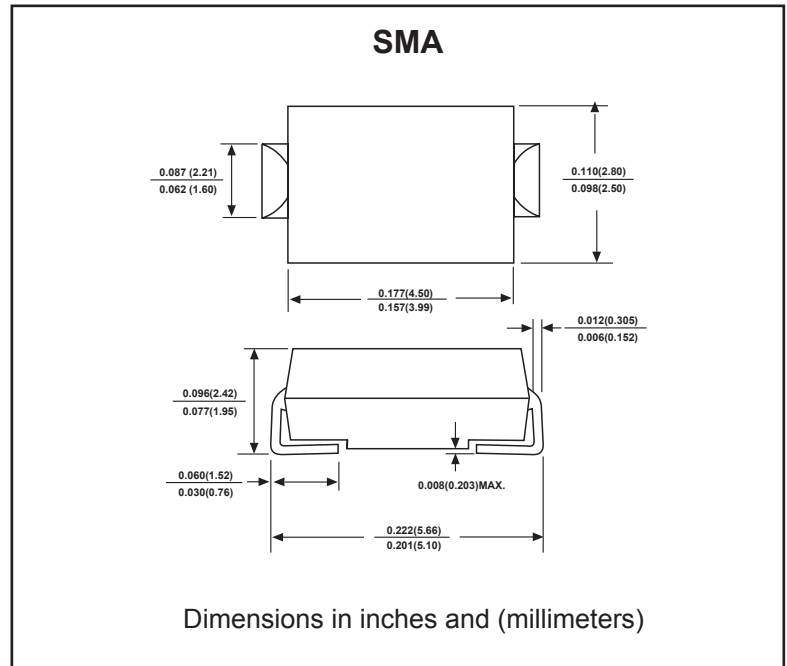
CURRENT: 1.0 A

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 | | | | | | | | μA |
| | @ $T_A=100$ | 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

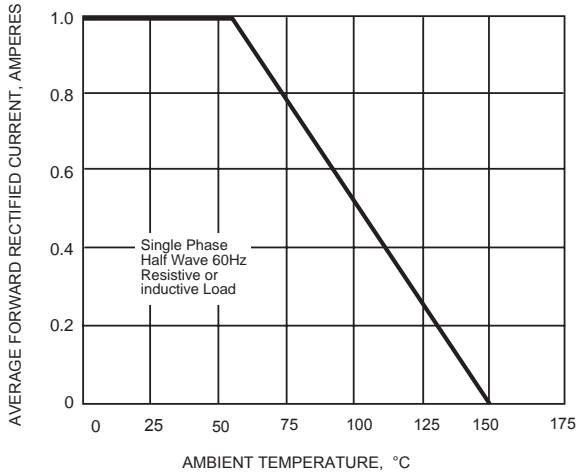


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

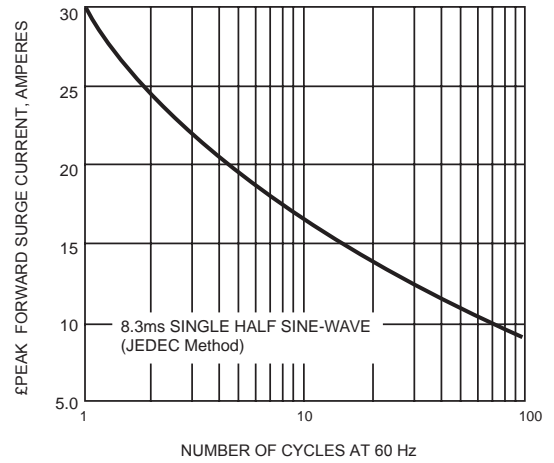


FIG. 3-TYPICAL INSTANTANEOUS FORWARD

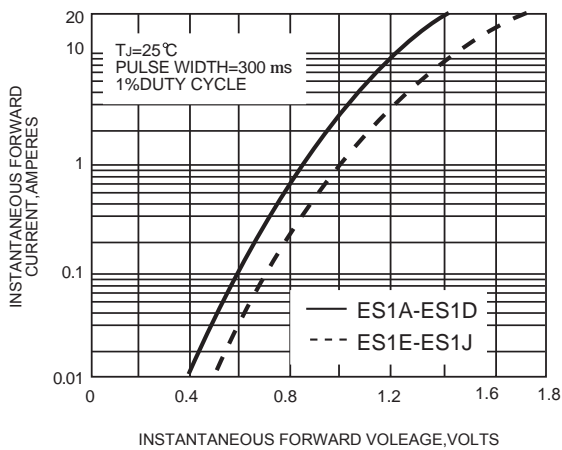


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

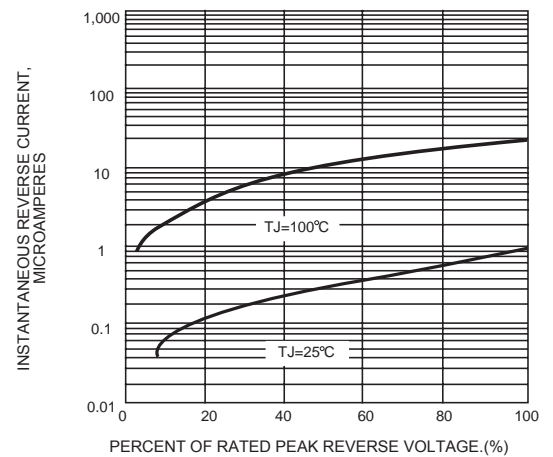


FIG. 5-TYPICAL JUNCTION CAPACITANCE

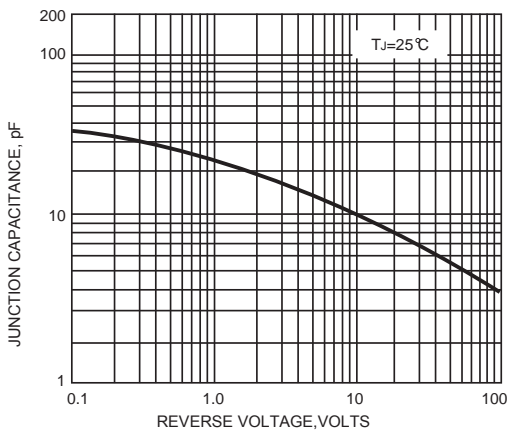


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

