

SURFACE MOUNT GLASS SUPERFAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - **50** to **600** Volts
FORWARD CURRENT - **1.0** Amperes

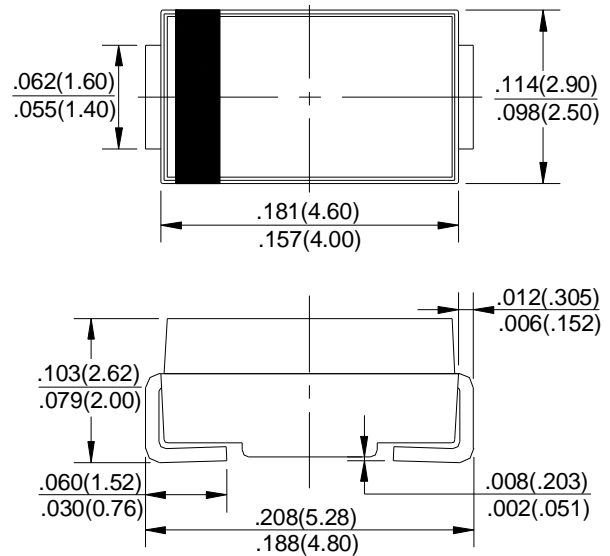
FEATURES

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

MECHANICAL DATA

- Case: Molded Plastic
- Polarity: Indicated by cathode band
- Weight: 0.002 ounces, 0.064 grams
- Mounting position: Any

SMA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave ,60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | ES1A | ES1B | ES1D | ES1G | ES1J | UNIT |
|---|-------------------|-------------|------|------|------|------|------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | V |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current @T _A =55 °C | I _(AV) | 1.0 | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | I _{FSM} | 30 | | | | | A |
| Peak Forward Voltage at 1.0A DC | V _F | 0.95 | | 1.25 | | 1.70 | V |
| Maximum DC Reverse Current @T _J =25°C at Rated DC Blocking Voltage @T _J =100°C | I _R | 5.0 | | | | | μA |
| Maximum Reverse Recovery Time(Note 1) | T _{RR} | 35 | | | | | nS |
| Typical Junction Capacitance (Note2) | C _J | 30 | | | 25 | | pF |
| Typical Thermal Resistance (Note3) | R _{θJA} | 40 | | | | | °C/W |
| Operating Temperature Range | T _J | -55 to +150 | | | | | °C |
| Storage Temperature Range | T _{STG} | -55 to +150 | | | | | °C |

NOTES: 1.Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC

3.Thermal resistance junction of ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

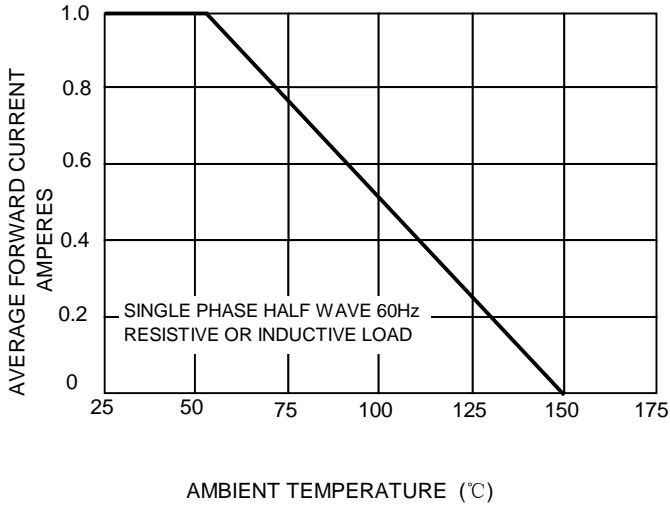


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

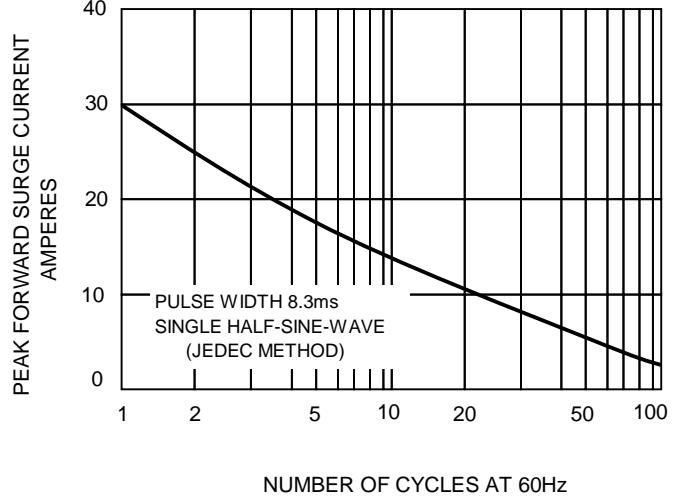


FIG.3 – TYPICAL JUNCTION CAPACITANCE

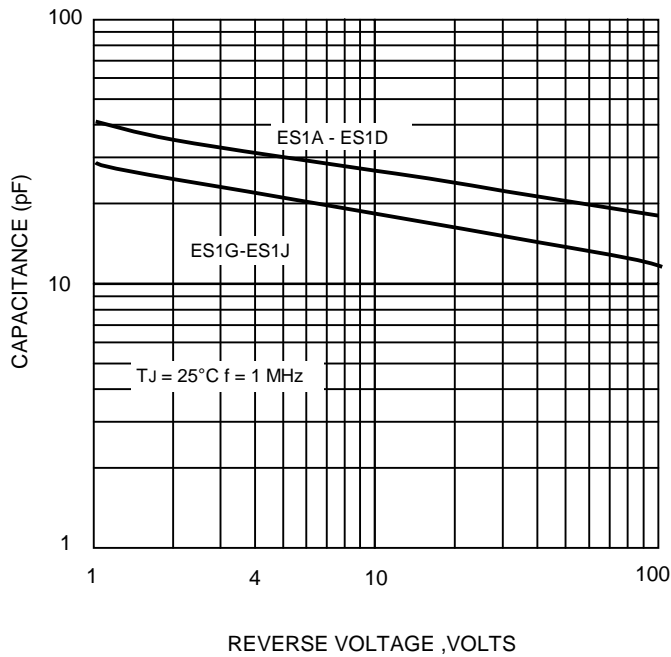


FIG.4-TYPICAL FORWARD CHARACTERISTICS

