

SURFACE MOUNT SUPER FAST GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE - 50 to 600 Volts
FORWARD CURRENT - 3.0 Amperes

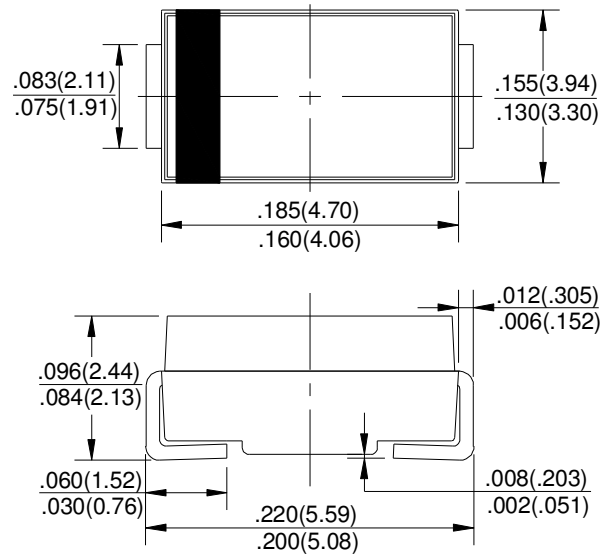
FEATURES

- 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: Color band denotes cathode
- Weight: 0.003 ounces, 0.093 grams
- Mounting position: Any

SMB



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 | ES3AB | ES3BB | ES3DB | ES3GB | ES3JB | 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) | 3.0 | | | | | A |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | I _{FSM} | 100 | | | | | A |
| Peak Forward Voltage at 3.0A DC | V _F | 0.95 | | 1.3 | | 1.70 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @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 | 70 | | | 45 | | pF |
| Typical Thermal Resistance (Note3) | R _{θJA} | 20 | | | | | °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 to ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

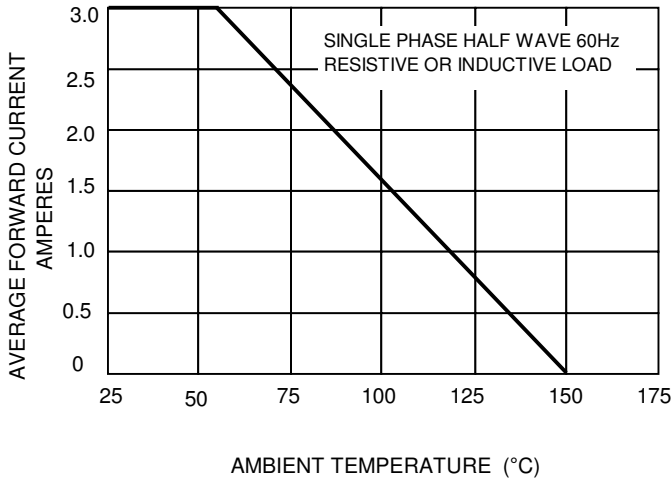


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

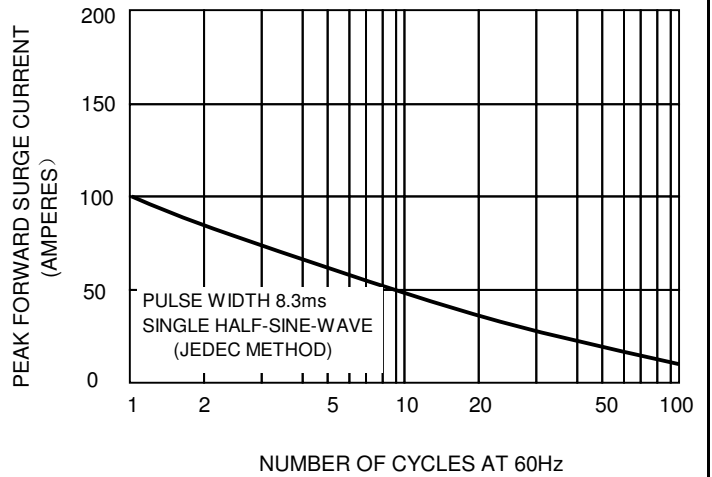


FIG.3 – TYPICAL JUNCTION CAPACITANCE

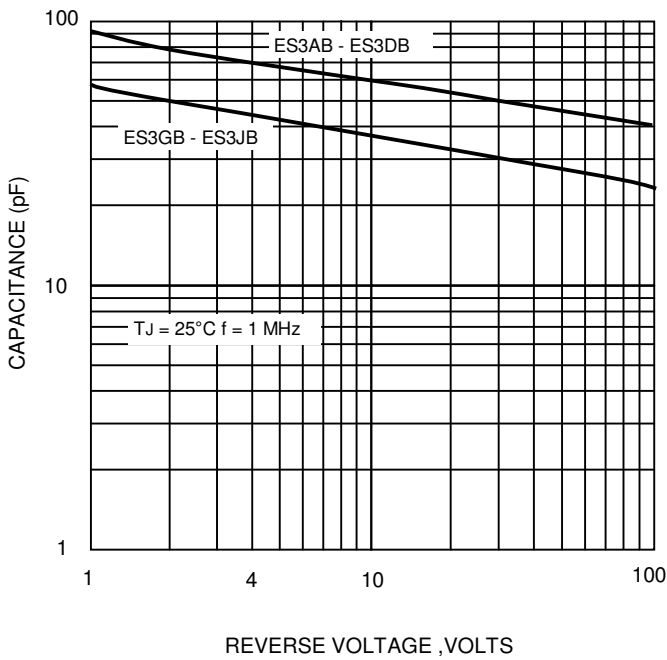


FIG.4-TYPICAL FORWARD CHARACTERISTICS

