

**SURFACE MOUNT  
SUPER FAST RECTIFIERS**

REVERSE VOLTAGE - **50 to 400** Volts  
FORWARD CURRENT - **3.0** Amperes

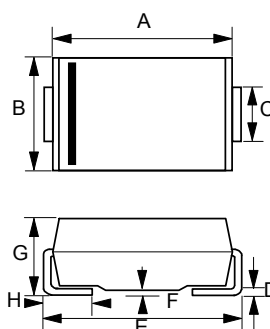
**FEATURES**

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current

**MECHANICAL DATA**

- Case : Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity : Color band denotes cathode
- Weight : 0.007 ounces, 0.21 grams

**SMC**



| SMC                          |      |      |
|------------------------------|------|------|
| DIM.                         | MIN. | MAX. |
| A                            | 6.60 | 7.11 |
| B                            | 5.59 | 6.22 |
| C                            | 2.92 | 3.18 |
| D                            | 0.15 | 0.31 |
| E                            | 7.75 | 8.13 |
| F                            | 0.05 | 0.20 |
| G                            | 2.01 | 2.50 |
| H                            | 0.76 | 1.52 |
| All Dimensions in millimeter |      |      |

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

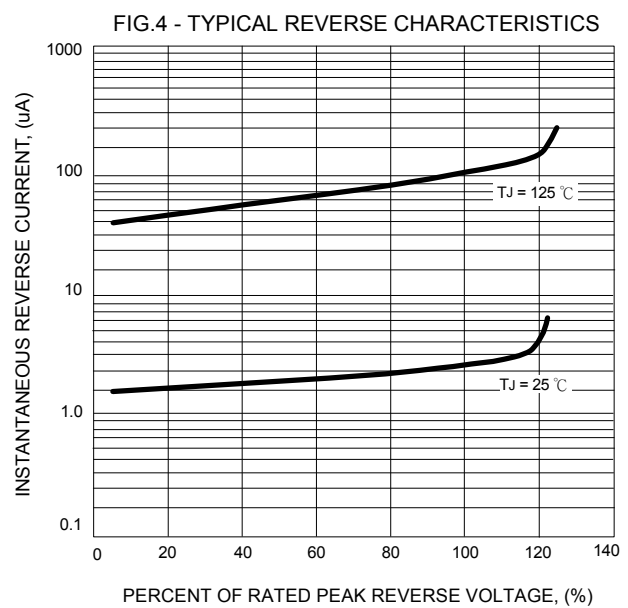
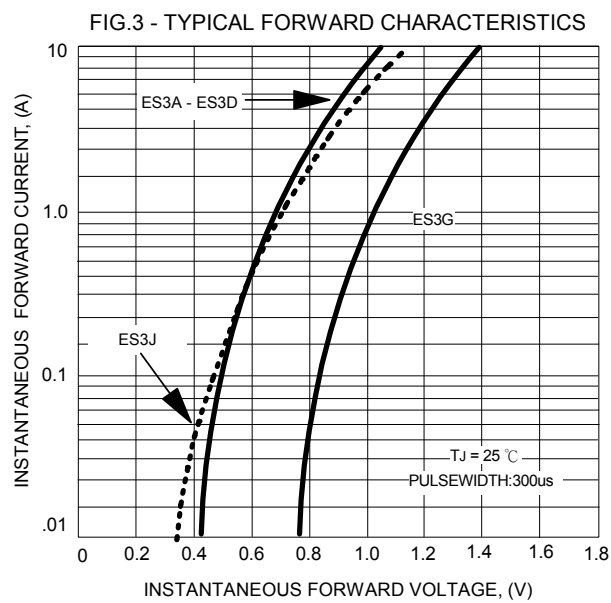
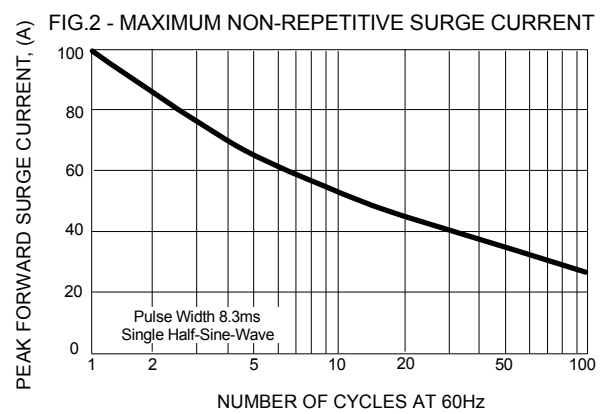
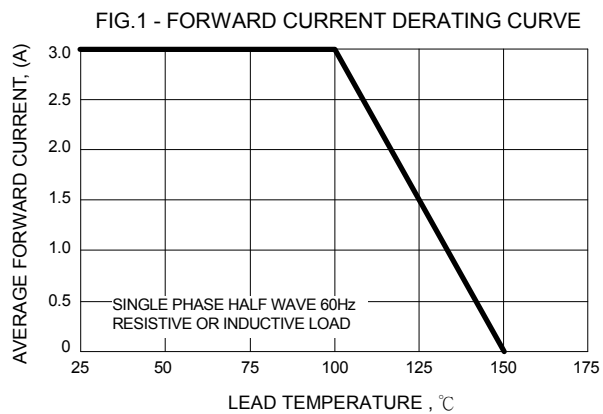
| CHARACTERISTICS                                                                    | SYMBOL            | ES3A            | ES3B | ES3C | ES3D | ES3G | ES3J            | UNIT             |
|------------------------------------------------------------------------------------|-------------------|-----------------|------|------|------|------|-----------------|------------------|
| Maximum Recurrent Peak Reverse Voltage                                             | V <sub>RRM</sub>  | 50              | 100  | 150  | 200  | 400  | 600             | V                |
| Maximum RMS Voltage                                                                | V <sub>RMS</sub>  | 35              | 70   | 105  | 140  | 280  | 420             | V                |
| Maximum DC Blocking Voltage                                                        | V <sub>DC</sub>   | 50              | 100  | 150  | 200  | 400  | 600             | V                |
| Maximum Average Forward Rectified Current @TL =110°C                               | I <sub>(AV)</sub> | 3.0             |      |      |      |      |                 | A                |
| Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load | I <sub>FSM</sub>  | 100             |      |      |      |      |                 | A                |
| Peak Forward Surge Current 1ms single half sine-wave @Tj=25°C                      | I <sub>FSM</sub>  | 200             |      |      |      |      |                 | A                |
| I <sup>2</sup> t Rating for fusing (3ms≤t ≤8.3ms)                                  | I <sup>2</sup> t  | 41.5            |      |      |      |      |                 | A <sup>2</sup> S |
| Maximum forward Voltage at 3.0A DC                                                 | V <sub>F</sub>    | 0.92            |      |      |      | 1.25 | 1.30            | V                |
| Maximum DC Reverse Current @TJ =25 °C<br>at Rated DC Blocking Voltage @TJ=125 °C   | I <sub>R</sub>    | 10<br>500       |      |      |      |      |                 | uA               |
| Maximum Reverse Recovery Time (Note 1)                                             | T <sub>RR</sub>   | 25<br>20 (Typ.) |      |      |      |      | 35<br>30 (Typ.) | ns               |
| Typical Junction Capacitance (Note 2)                                              | C <sub>J</sub>    | 45              |      |      |      |      |                 | pF               |
| Typical Thermal Resistance (Note 3)                                                | Rθ JL             | 10              |      |      |      |      | 15              | °C/W             |
|                                                                                    | Rθ JA             | 50              |      |      |      |      |                 | °C/W             |
| Operating Temperature Range                                                        | T <sub>J</sub>    | -55 to + 150    |      |      |      |      |                 | °C               |
| Storage Temperature Range                                                          | T <sub>STG</sub>  | -55 to + 150    |      |      |      |      |                 | °C               |

NOTES : 1. Reverse Recovery Test Conditions : I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A.

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

3. Thermal Resistance junction to Lead and Ambient.

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