

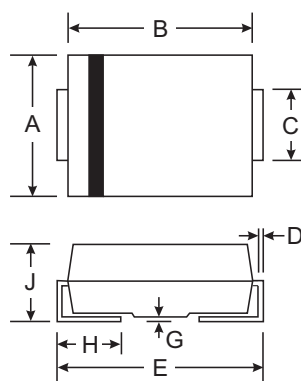
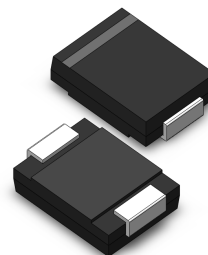
VOLTAGE RANGE: 50 - 600V
CURRENT: 3.0 A

Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0

Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)



| SMC/DO-214AB | | |
|----------------------|------|------|
| Dim | Min | Max |
| A | 5.59 | 6.22 |
| B | 6.60 | 7.11 |
| C | 2.75 | 3.18 |
| D | 0.15 | 0.31 |
| E | 7.75 | 8.13 |
| G | 0.10 | 0.20 |
| H | 0.76 | 1.52 |
| J | 2.00 | 2.62 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

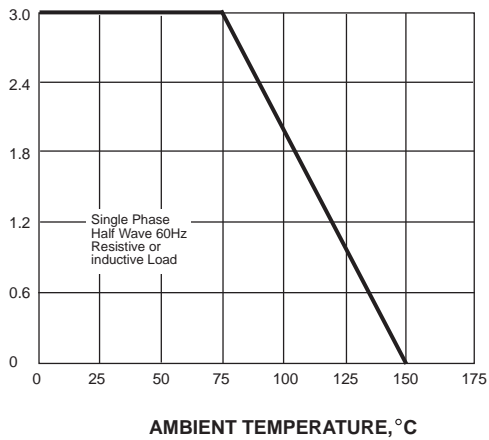
| Characteristic | Symbol | ES3A | ES3B | ES3C | ES3D | ES3E | ES3G | ES3J | Unit | |
|--|-----------------------------------|-------------|------|------|------|------|------|------|------|---|
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | | |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V | |
| DC Blocking Voltage | V _R | | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V | |
| Average Rectified Output Current @ T _L = 75°C | I _O | 3.0 | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 100 | | | | | | | | A |
| Forward Voltage @ I _F = 3.0A | V _{FM} | 0.95 | | | | 1.25 | | 1.7 | V | |
| Peak Reverse Current @ T _A = 25°C At Rated DC Blocking Voltage @ T _A = 100°C | I _{RM} | | | | | 5.0 | | | μA | |
| | | | | | | 500 | | | | |
| Reverse Recovery Time (Note 1) | t _{rr} | | | | | 35 | | | nS | |
| Typical Junction Capacitance (Note 2) | C _j | | | | | 45 | | | pF | |
| Typical Thermal Resistance (Note 3) | R _{θJL} | | | | | 16 | | | °C/W | |
| Operating and Storage Temperature Range | T _j , T _{STG} | -65 to +150 | | | | | | | °C | |

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See figure 5.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
 3. Mounted on P.C. Board with 8.0mm² land area.

RATINGS AND CHARACTERISTIC CURVES ES3A THRU ES3J

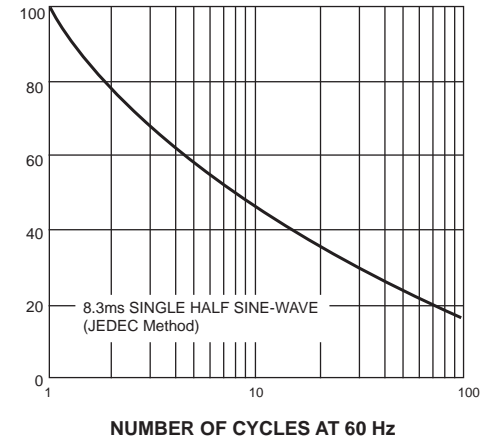
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



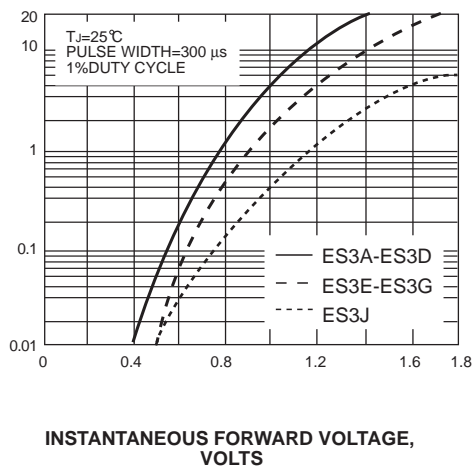
PEAK FORWARD SURGE CURRENT, AMPERES

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



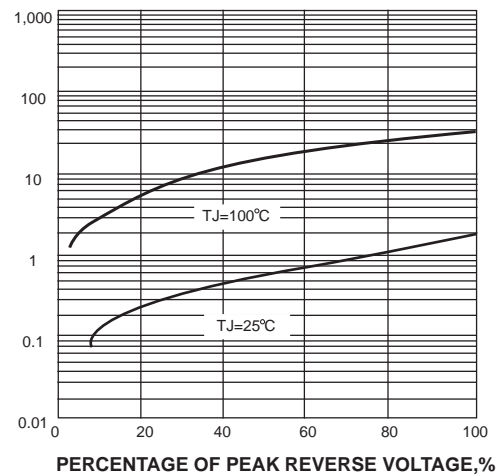
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



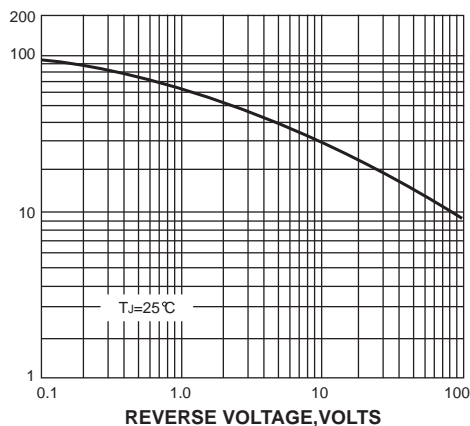
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

