

ES2A THRU ES2J

SURFACE MOUNT FAST ULTRAFAST RECTIFIER

VOLTAGE: 50 TO 600V

CURRENT: 2.0A



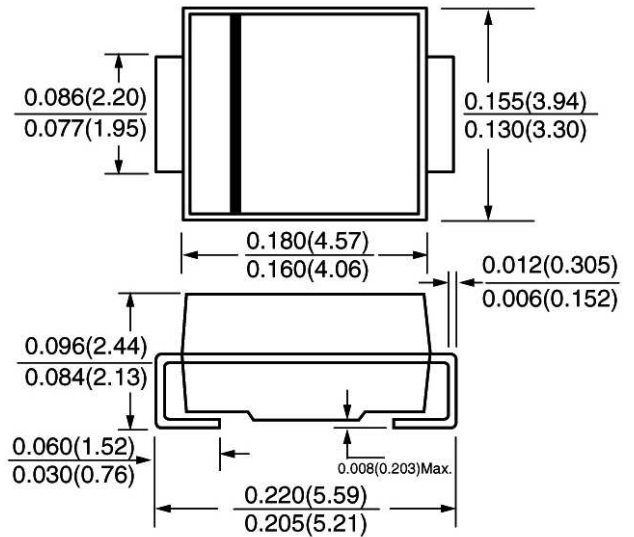
FEATURE

Ideal for surface mount pick and place application
 Low profile package
 Built-in strain relief
 High surge capability
 High temperature soldering guaranteed
 260°C/10sec/at terminals
 Glass passivated chip
 Ultrafast recovery time for high efficiency

MECHANICAL DATA

Terminal: Solder plated, solderable per MIL-STD-750,
 Method 2026
 Case: JEDEC DO-214AC molded plastic body over
 passivated chip
 Polarity: color band denotes cathode

SMB / DO-214AA



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated,
 for capacitive load, derate current by 20%)

| | SYMBOL | ES2A | ES2B | ES2C | ES2D | ES2G | ES2J | units |
|---|-----------------------------------|---------------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{rrm} | 50 | 100 | 150 | 200 | 400 | 600 | V |
| Maximum RMS Voltage | V _{rms} | 35 | 70 | 105 | 140 | 280 | 420 | V |
| Maximum DC blocking Voltage | V _{dc} | 50 | 100 | 150 | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified at T _L =100°C | I _{f(av)} | 2.0 | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine- wave superimposed on rated load | I _{fsm} | 50.0 | | | | | | A |
| Maximum Instantaneous Forward Voltage at rated forward current 2.0A | V _f | 0.92 | | | | 1.25 | 1.7 | V |
| Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C | I _r | 10.0 350.0 | | | | | | µA |
| Maximum Reverse Recovery Time (Note1) | T _{rr} | 15 | | | | 25 | 35 | nS |
| Typical Junction Capacitance (Note 2) | C _j | 18.0 | | | | | | pF |
| Typical Thermal Resistance (Note 3) | R _{th(jl)} | 20.0 | | | | | | °C/W |
| Storage and Operating Junction Temperature | T _{stg} , T _j | -55 to +150 | | | | | | °C |

Note:

- Reverse Recovery Condition I_f =0.5A, I_r =1.0A, I_{rr} =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0V_{dc}
- Thermal Resistance from Junction to terminal mounted on 5×5mm copper pad area

RATINGS AND CHARACTERISTIC CURVES ES2A THRU ES2J

Fig. 1 – Maximum Forward Current Derating Curve

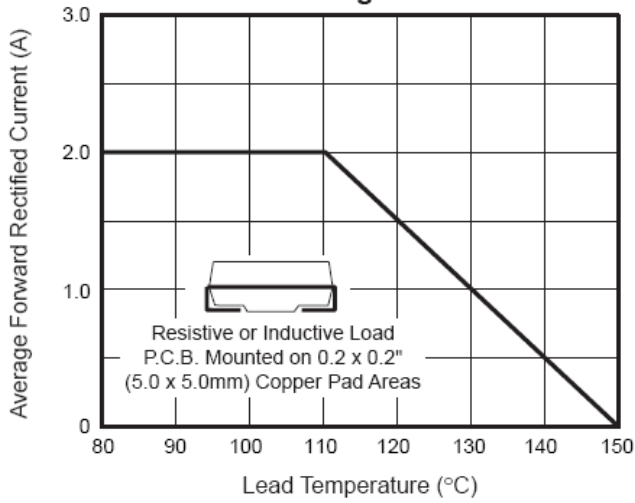


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

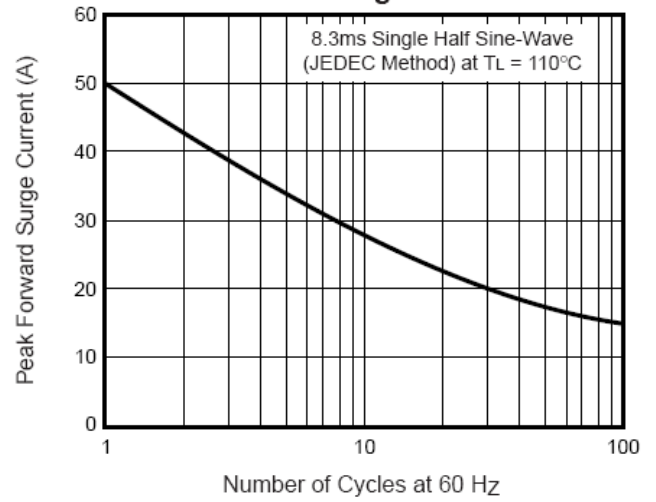


Fig. 3 – Typical Instantaneous Forward Characteristics

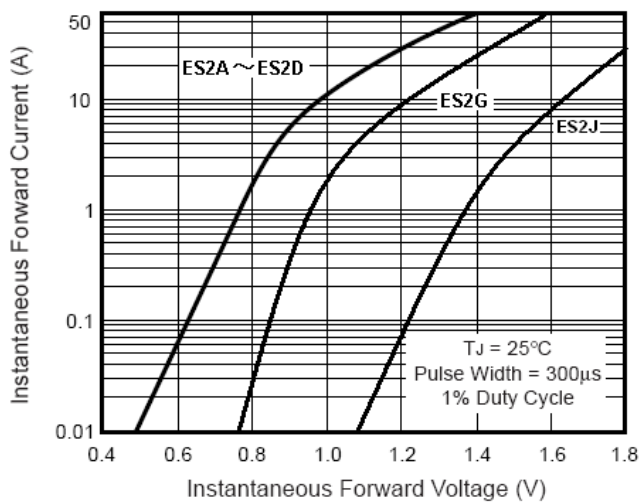


Fig. 4 – Typical Reverse Leakage Characteristics

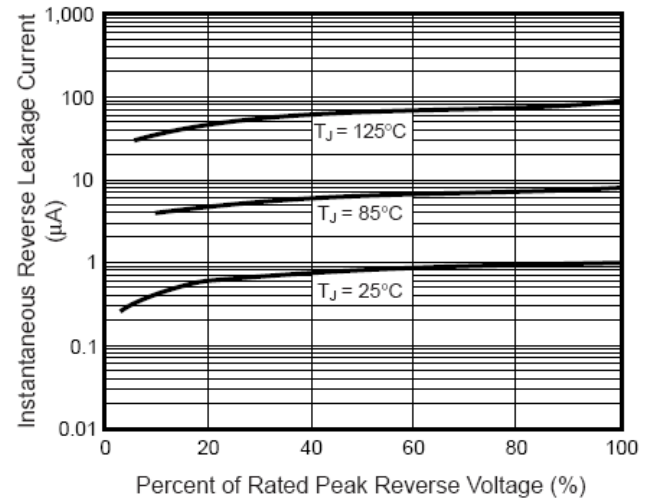


Fig. 5 – Typical Junction Capacitance

