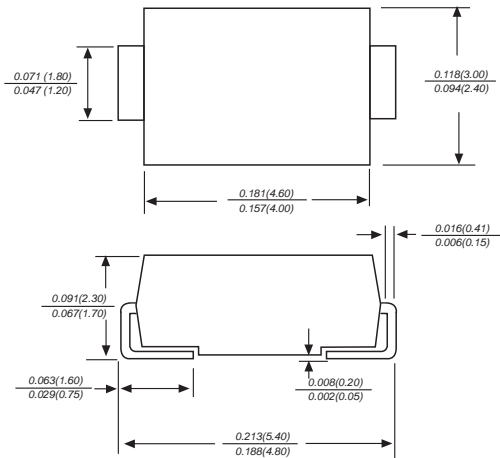


# ES2A THRU ES2J

## SURFACE SUPER FAST MOUNT RECTIFIER

Reverse Voltage - 50 to 600 Volts    Forward Current - 2.0 Ampere

### DO-214AC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals
- ◆ Glass passivated chip junction

### MECHANICAL DATA

**Case:** JEDEC DO-214AC molded plastic body over passivated chip  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.002 ounce, 0.07 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

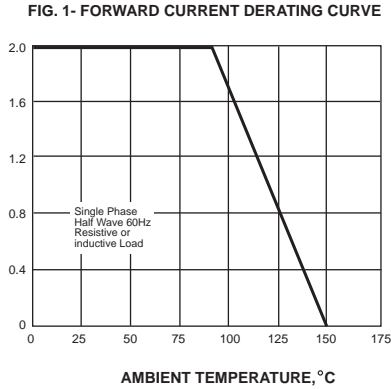
Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|   | SYMBOLS         | ES2A        | ES2B | ES2C | ES2D | ES2G | ES2H | ES2J | UNITS              |
|---|-----------------|-------------|------|------|------|------|------|------|--------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 50          | 100  | 150  | 200  | 400  | 500  | 600  | VOLTS              |
| Maximum RMS voltage   | $V_{RMS}$       | 35          | 70   | 105  | 140  | 280  | 350  | 480  | VOLTS              |
| Maximum DC blocking voltage   | $V_{DC}$        | 50          | 100  | 150  | 200  | 400  | 500  | 600  | VOLTS              |
| Maximum average forward rectified current at $T_L=90^\circ\text{C}$                                       | $I_{(AV)}$      | 2.0         |      |      |      |      |      |      | Amp                |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)       | $I_{FSM}$       | 50.0        |      |      |      |      |      |      | Amps               |
| Maximum instantaneous forward voltage at 2.0A   | $V_F$           | 0.95        |      |      | 1.25 |      | 1.70 |      | Volts              |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 5.0<br>50.0 |      |      |      |      |      |      | $\mu\text{A}$      |
| Maximum reverse recovery time (NOTE 1)  | $t_{rr}$        | 35          |      |      |      |      |      |      | ns                 |
| Typical junction capacitance (NOTE 2)   | $C_J$           | 15.0        |      |      |      |      |      |      | pF                 |
| Typical thermal resistance (NOTE 3)   | $R_{\theta JA}$ | 50.0        |      |      |      |      |      |      | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range  | $T_J, T_{STG}$  | -65 to +150 |      |      |      |      |      |      | $^\circ\text{C}$   |

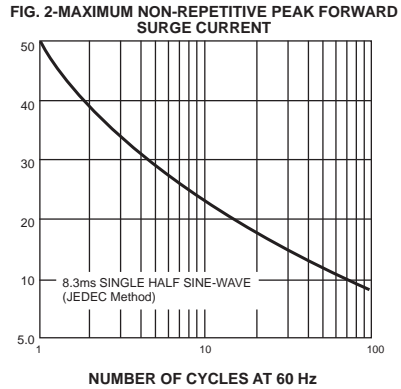
**Note:** 1. Reverse recovery condition  $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$   
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES ES2A THRU ES2J

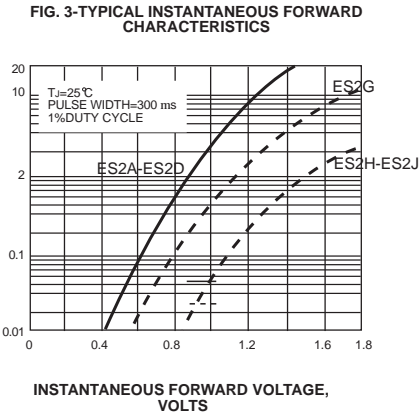
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES



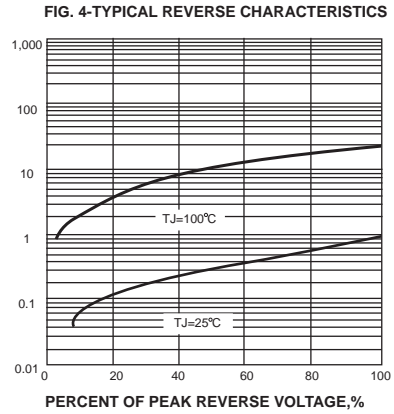
PEAK FORWARD SURGE CURRENT, AMPERES



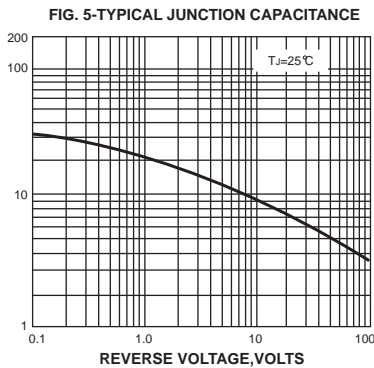
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, °C/W

