

ER3A THRU ER3J

SURFACE MOUNT SUPERFAST RECTIFIER
VOLTAGE - 50 - 600 Volts CURRENT - 3.0 Amperes

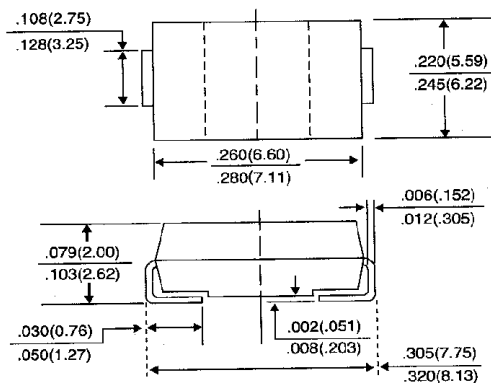
FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated junction
- High temperature soldering:
260°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic
Terminals: Solder plated solderable per MIL-STD-750, Method 2026
Polarity: Indicated by cathode band
Standard Packaging: 16mm tape (EIA-481)
Weight: 0.007 ounces, 0.21 gram

SMC/DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| | SYMBOLS | ER3A | ER3B | ER3C | ER3D | ER3E | ER3G | ER3J | UNITS |
|---|----------------------------------|-------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | VOLTS |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 420 | VOLTS |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 600 | VOLTS |
| Maximum Average Forward Rectified Current at T _L = 75°C | I _(AV) | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 100 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 3.0A | V _F | 0.95 | | | | 1.25 | | 1.7 | Volts |
| Maximum DC Reverse Current T _A = 25°C at Rated DC Blocking Voltage T _A = 100°C | | 5.0 200 | | | | | | | μA |
| Maximum Reverse Recovery (NOTE 1) | T _{RR} | 35.0 | | | | | | | Ns |
| Typical Junction Capacitance (NOTE 2) | C _J | 45.0 | | | | | | | pf |
| Typical Thermal Resistance (NOTE 3) | RθJL | 16 | | | | | | | °C/W |
| Operating and Storage Temp | T _J ,T _{STG} | -50 to +150 | | | | | | | °C |

NOTES:

1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.
3. 8.0mm² (.013mm thick) land areas.

RATING AND CHARACTERISTIC CURVES ER3A THRU ER3J

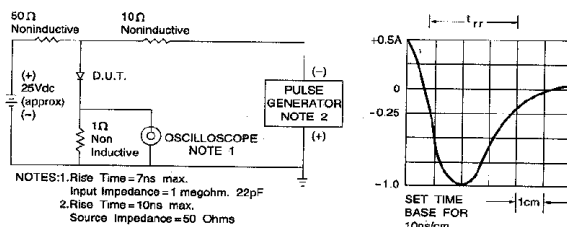


FIG. 1 - REVERSE RECOVERY TIME CHARACTERISTIC
AND TEST DIAGRAM

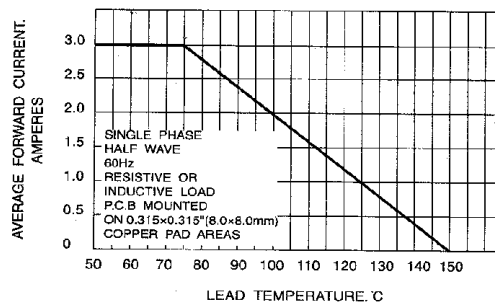


FIG. 2 - MAXIMUM AVERAGE
FORWARD CURRENT RATING

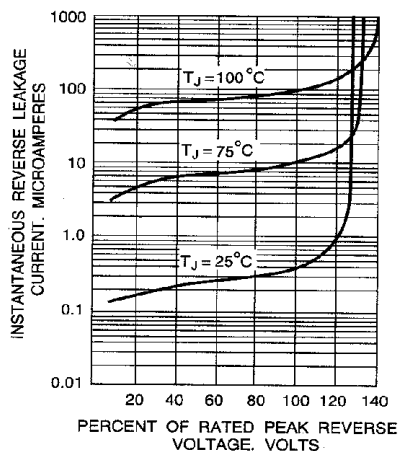


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

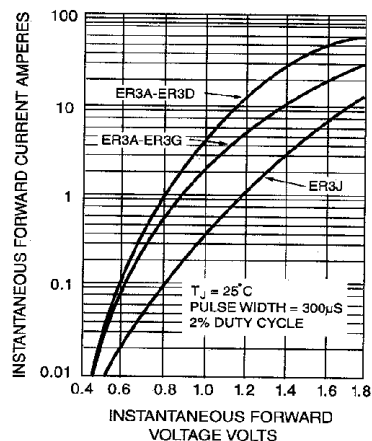


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

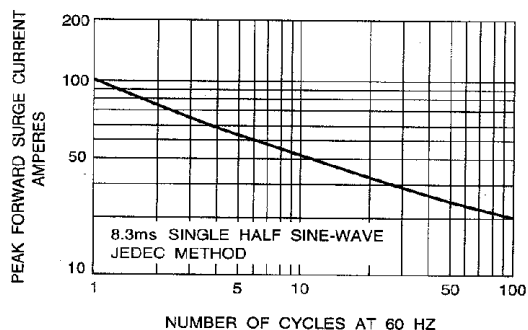


FIG. 5 - MAXIMUM NON-REPETITIVE
PEAK FORWARD SURGE CURRENT

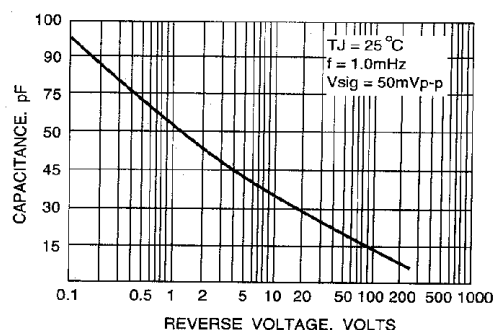


FIG. 6 - TYPICAL JUNCTION CAPACITANCE