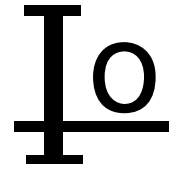


ES1A THRU ES1J



1.0 AMP SUPER FAST RECTIFIERS



FEATURES

- * Low forward voltage drop
- * High current capability
- * High reliability
- * High surge current capability
- * Lead Free Finish/RoHS Compliant

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL94V-0 rate flamer retardant
- * Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.066 grams

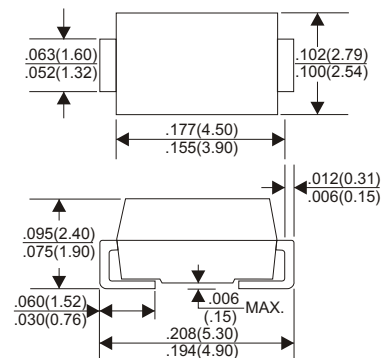
VOLTAGE RANGE

50 to 600 Volts

CURRENT

1.0 Ampere

DO-214AC



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

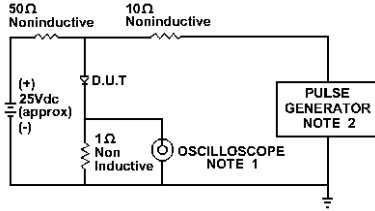
Rating at 25°C ambient temperature unless otherwise specified.
 Single phase half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| TYPE NUMBER | ES1A | ES1B | ES1C | ES1D | ES1E | ES1G | ES1J | UNITS |
|--|------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length at Ta=55°C | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage at 1.0A | 0.95 | | 1.25 | | 1.7 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage Ta=25°C | 5.0 | | | | | | | µA |
| Maximum DC Reverse Current at Rated DC Blocking Voltage Ta=100°C | 50 | | | | | | | µA |
| Maximum Reverse Recovery Time (Note 1) | 35 | | | | | | | nS |
| Typical Junction Capacitance (Note 2) | 10 | | | | | | | pF |
| Operating and Storage Temperature Range Tj, TSTG | -65 — +150 | | | | | | | °C |

NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (ES1A THRU ES1J)



NOTE:1. Rise Time = 7ns max.
 Input Impedance = 1 megohm. 22pF
 2. Rise Time = 10ns max.
 Source Impedance = 50 Ohms

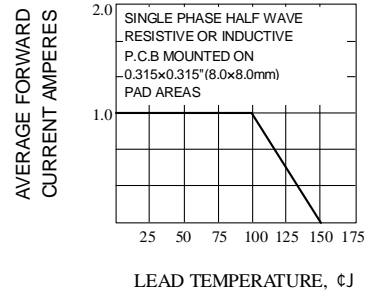
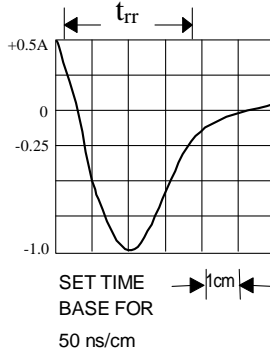


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

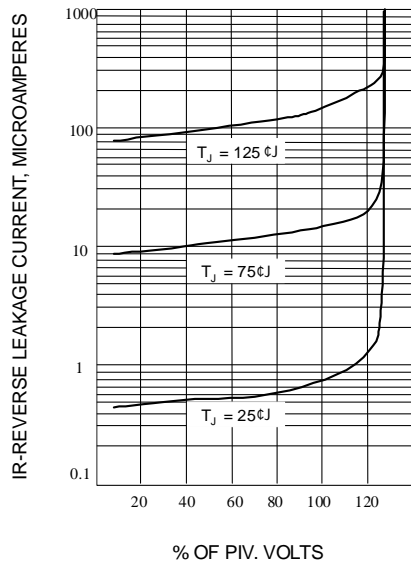


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

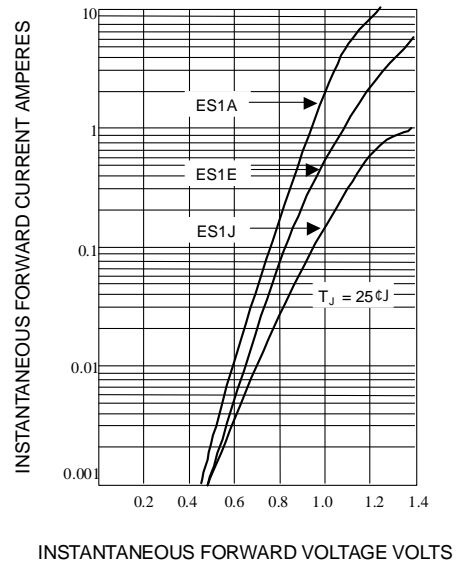


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

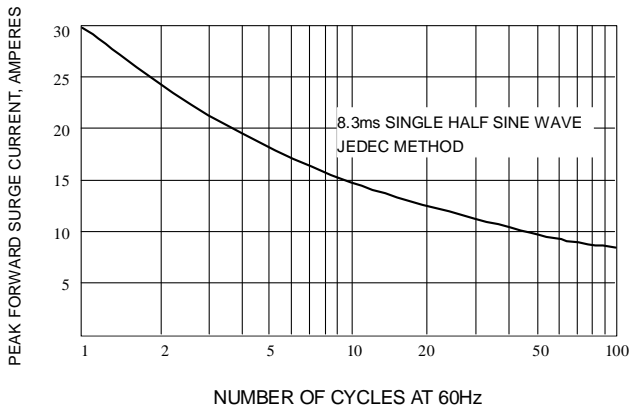


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

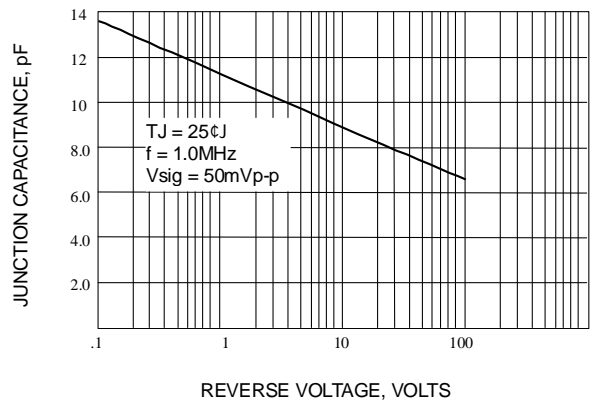


Fig. 6-TYPICAL JUNCTION CAPACITANCE