



ES3A THRU ES3J

3.0 AMP SURFACE MOUNT SUPER FAST RECTIFIERS

FEATURES

- * Ideal for surface mount applications
- * Easy pick and place
- * Built-in strain relief
- * Low forward voltage drop

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Metallurgically bonded construction
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.093 grams

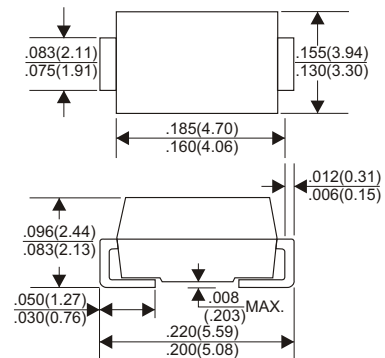
VOLTAGE RANGE

50 to 600 Volts

CURRENT

3.0 Amperes

DO-214AA(SMB)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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 | ES3A | ES3B | ES3C | ES3D | ES3E | ES3G | ES3J | 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 | | | | | | | | 3.0 | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | | | | | | | 80 | A |
| Maximum Instantaneous Forward Voltage at 3.0A | 1.0 | | | | | 1.4 | 1.7 | V | |
| Maximum DC Reverse Current Ta=25°C | | | | | | | | 5.0 | uA |
| at Rated DC Blocking Voltage Ta=100°C | | | | | | | | 50 | uA |
| Maximum Reverse Recovery Time (Note 1) | | | | | | | | 35 | nS |
| Typical Junction Capacitance (Note 2) | | | | | | | | 60 | pF |
| Operating and Storage Temperature Range Tj, Tstg | | | | | | | | -65 — +150 | °C |

NOTES:

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

RATING AND CHARACTERISTIC CURVES (ES3A THRU ES3J)

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



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

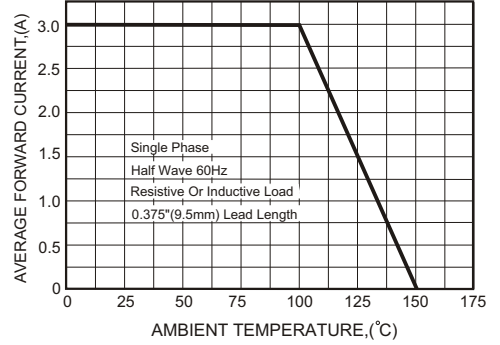


FIG.3-TYPICAL FORWARD CHARACTERISTICS

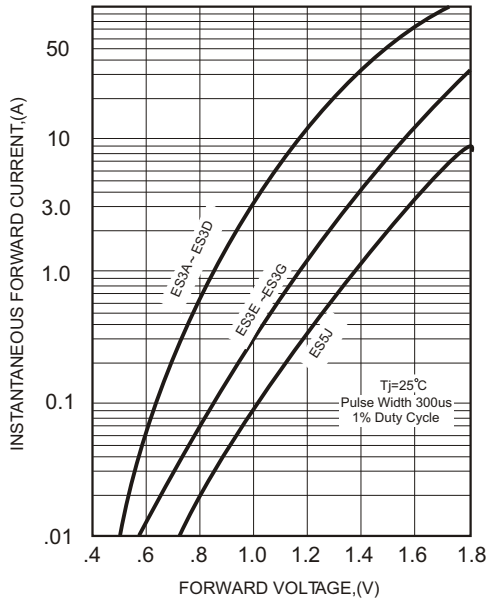


FIG.4-TYPICAL REVERSE CHARACTERISTICS

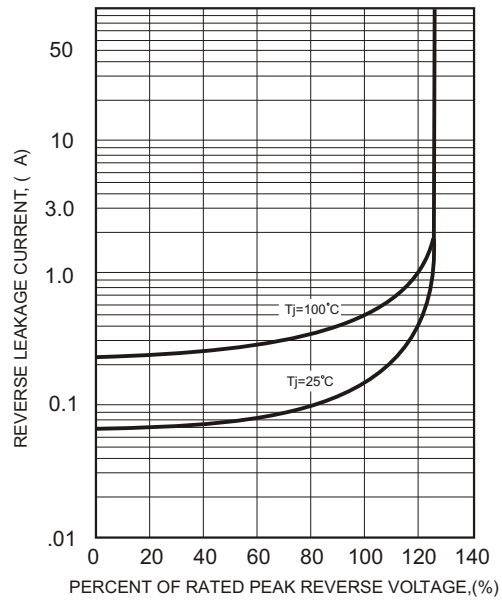


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

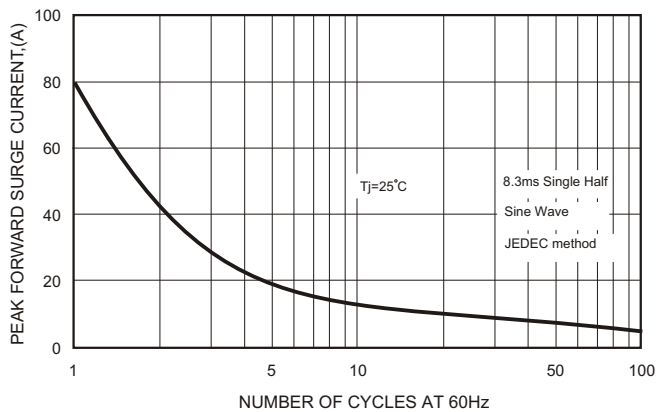
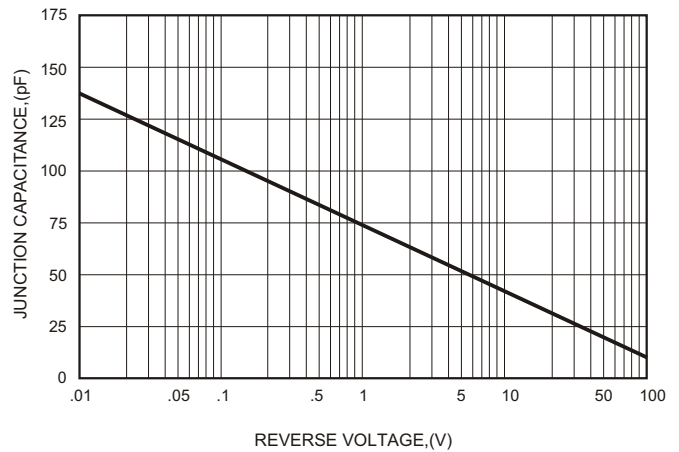


FIG.6-TYPICAL JUNCTION CAPACITANCE



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