

GLASS PASSIVATED SUPER FAST RECTIFIER
VOLTAGE RANGE 50 to 600 Volts CURRENT 30 Ampere

FEATURES

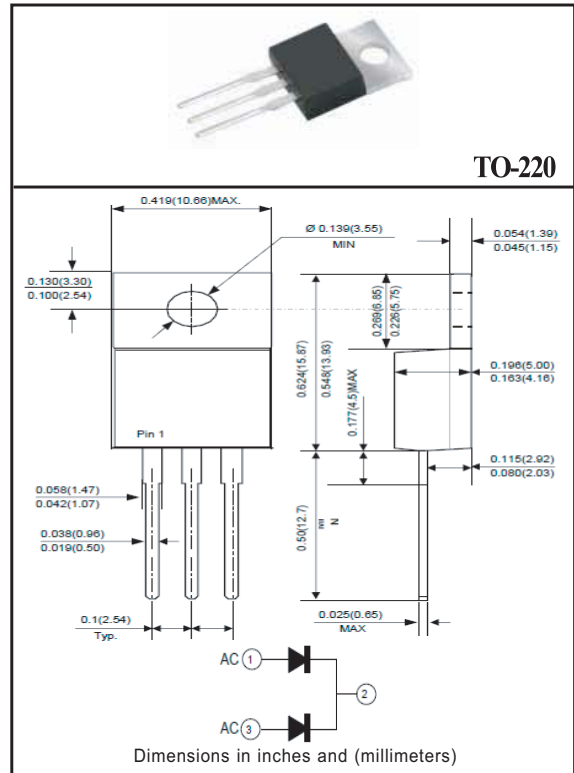
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High-reliability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: TO-220 molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature.



MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | SF301C | SF302C | SF303C | SF304C | SF305C | SF306C | SF307C | 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 _c = 100°C | I _O | 30.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 300 | | | | | | | Amps |
| Current Squared Time | I ² t | 373.5 | | | | | | | A ² /Sec |
| Typical Thermal Resistance | R _{θJC} | 3 | | | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C _J | 120 | | | | | 100 | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | °C |

ELECTRICAL CHARACTERISTICS(At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | SF301C | SF302C | SF303C | SF304C | SF305C | SF306C | SF307C | UNITS | |
|---|-------------------------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| Maximum Instantaneous Forward Voltage at 15.0A DC | V _F | 1.0 | | | | 1.35 | | 1.70 | Volts | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @T _c = 25°C | 10 | | | | | | | 500 | uAmps |
| | @T _c = 100°C | | | | | | | | | |
| Maximum Reverse Recovery Time (Note 1) | t _{rr} | 35 | | | | | 50 | | nSec | |

- NOTES : 1. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. Suffix "A" =Common Anode.
 4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

RATING AND CHARACTERISTIC CURVES (SF301C THRU SF307C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

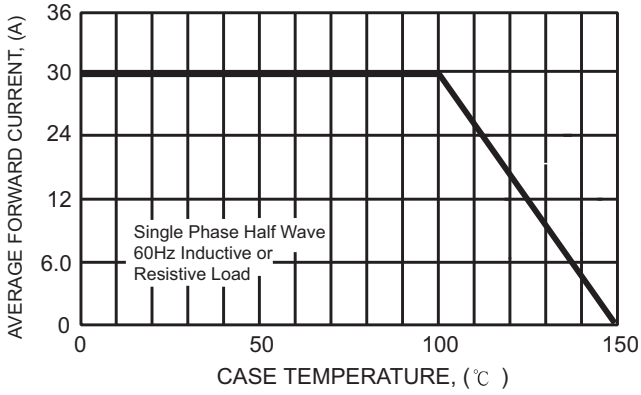


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

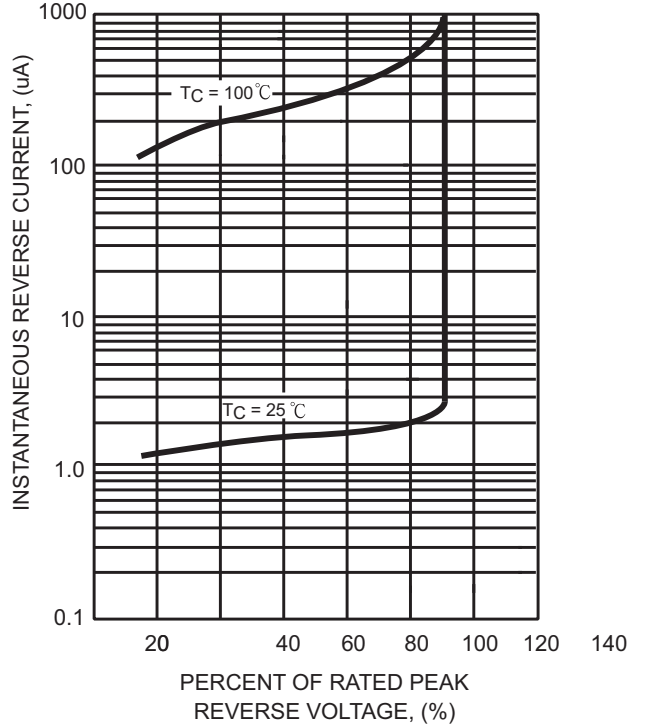


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

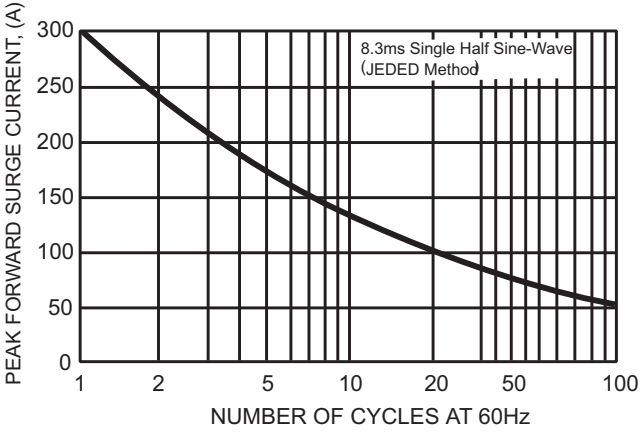


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

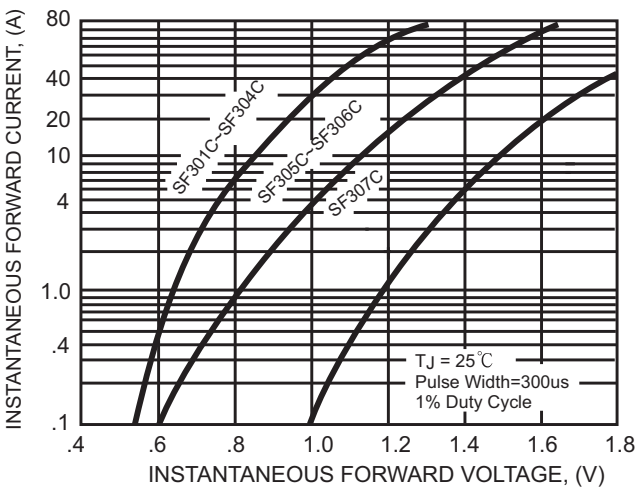
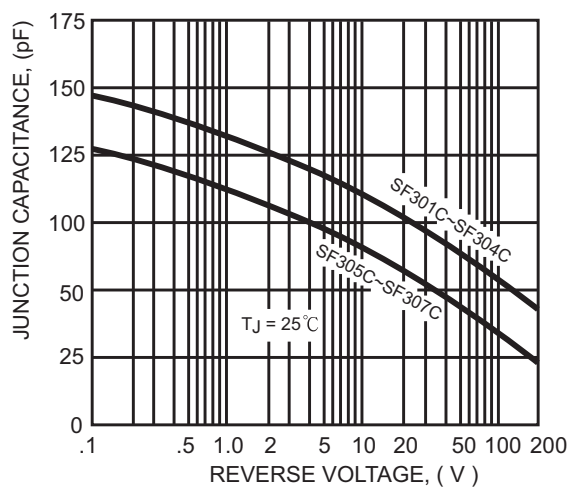
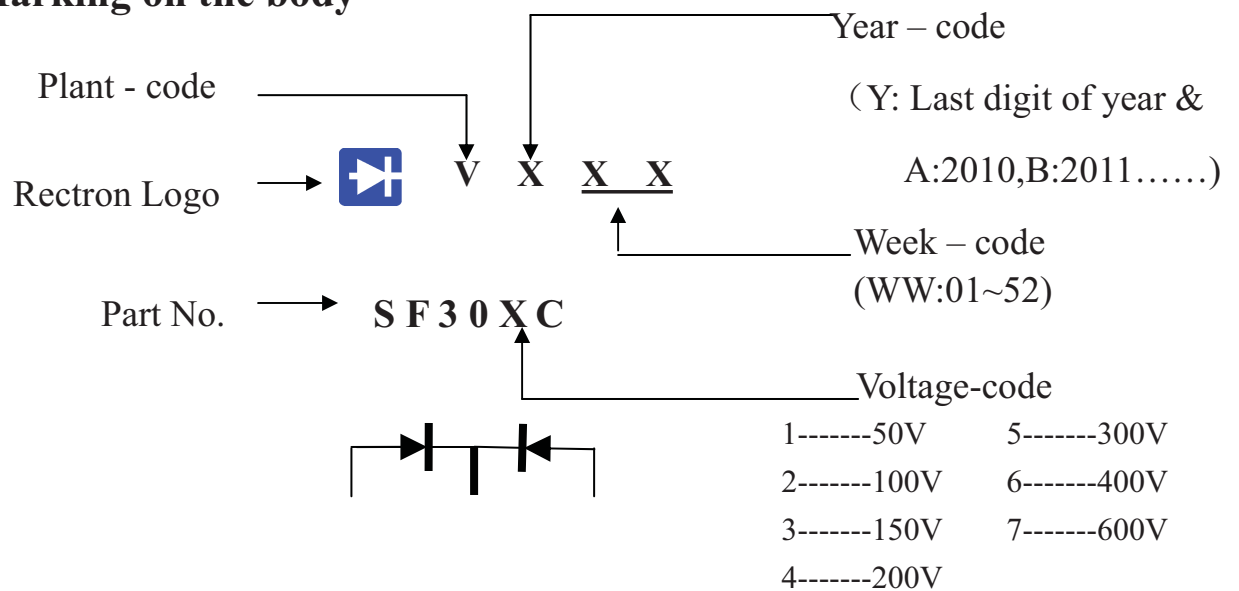


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



2. Marking on the body



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | WEIGHT(Kg) |
|---------|--------------|------------|------------------------|---------------------|---------------|------------|
| TO-220 | -C | 1,000 | 555*150*40 | 580*230*175 | 5,000 | 15.0 |

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