



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SF301

THRU

SF304

TECHNICAL SPECIFICATIONS OF SUPER FAST RECTIFIER

VOLTAGE RANGE - 50 to 200 Volts

CURRENT - 30 Amperes

FEATURES

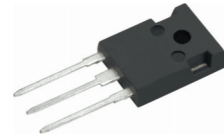
- * Low switching noise
- * Low forward voltage drop
- * Low thermal resistance
- * High current capability
- * Super fast switching speed
- * High reliability
- * Good for switching mode circuit

MECHANICAL DATA

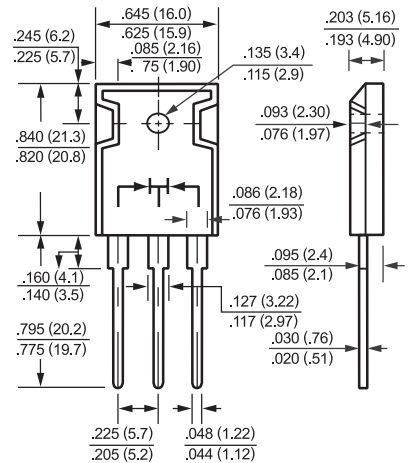
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Mounting position: Any
- * Weight: 5.60 grams

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%.



TO-3P



| | SYMBOL | SF301 | SF302 | SF303 | SF304 | UNITS |
|---|-----------------------------------|--------------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 150 | 200 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 150 | 200 | Volts |
| Maximum Average Forward Rectified Current at T _c = 100°C | I _O | 30 | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 300 | | | | Amps |
| Maximum Instantaneous Forward Voltage at 15.0A DC | V _F | 1.0 | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @T _c = 25°C | 10 | | | | uAmps |
| | @T _c = 100°C | 500 | | | | uAmps |
| Maximum Reverse Recovery Time (Note 1) | t _{rr} | 35 | | | | nSec |
| Typical Thermal Resistance | R _{θJC} | 1 | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C _J | 120 | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to + 150 | | | | °C |

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.

RATING AND CHARACTERISTIC CURVES (SF301 THRU SF304)

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

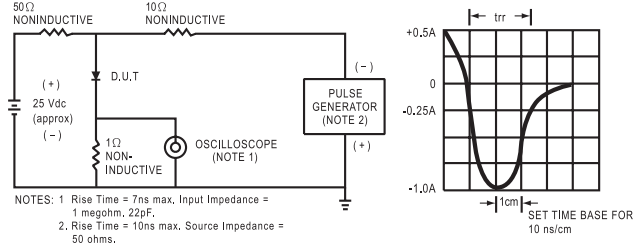


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

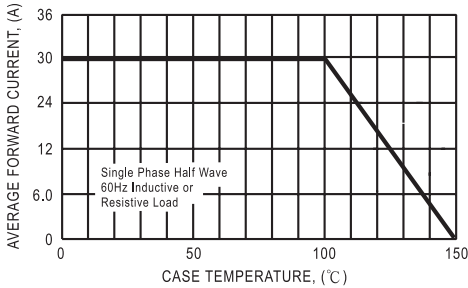


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

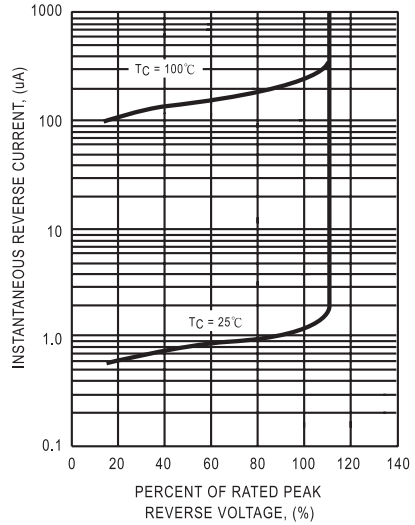


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

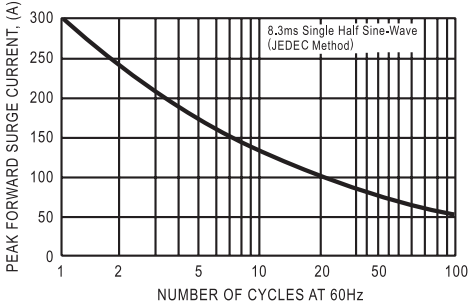


FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

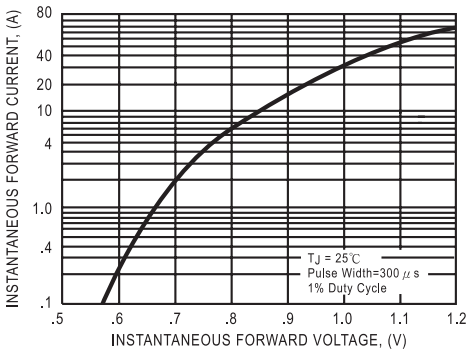
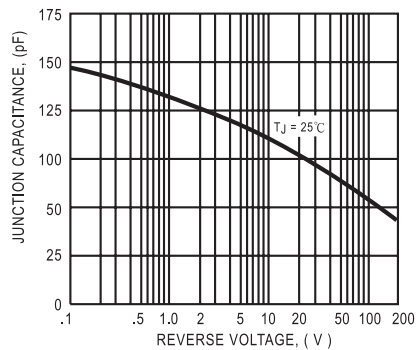


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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