



PINGWEI ENTERPRISE

SF31 THRU SF38

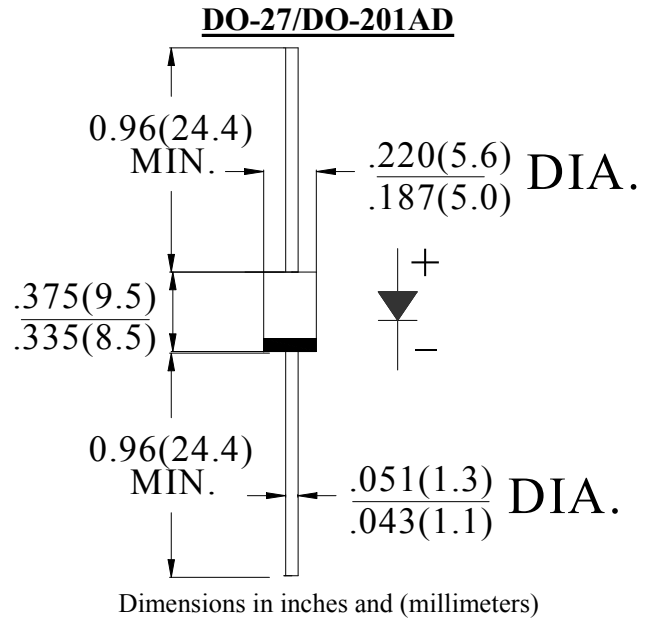
3.0AMPS. SUPER FAST RECTIFIERS

FEATURE

- . High current capability
- . Low forward voltage drop
- . Low power loss, high efficiency
- . High surge capability
- . High temperature soldering guaranteed
260°C /10sec/ 0.375" lead length at 5 lbs tension
- . Super fast recovery time for high efficiency.

MECHANICAL DATA

- . Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- . Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- . Polarity: color band denotes cathode
- . Mounting position: any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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 | SYM BOL | SF 31 | SF 32 | SF 33 | SF 34 | SF 35 | SF 36 | SF 37 | SF 38 | units |
|---|-------------|--------------|----------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 105 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC blocking Voltage | V_{DC} | 50 | 100 | 150 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_A = 55^\circ\text{C}$ | $I_{F(AV)}$ | 3.0 | | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 90.0 | | | | | | | | A |
| Maximum Instantaneous forward Voltage at 3.0A DC | V_F | 0.95 | | | 1.3 | | 1.7 | | | V |
| Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at rated DC blocking voltage @ $T_A = 100^\circ\text{C}$ | I_R | 5.0 100.0 | | | | | | | | μA |
| Maximum Reverse Recovery Time (Note 1) | t_{rr} | 35 | | | | | | | | nS |
| Typical Junction Capacitance (Note 2) | C_J | 100 | | | | 80 | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{(JA)}$ | 50 | | | | | | | | $^\circ\text{C/W}$ |
| Storage Temperature | T_{STG} | -55 to +150 | | | | | | | | $^\circ\text{C}$ |
| Operation Junction Temperature | T_J | -55 to +150 | | | | | | | | $^\circ\text{C}$ |

Note:

1. Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 0.375" (9.5mm) lead length, vertical P.C.Board Mounted.

RATING AND CHARACTERISTIC CURVES (SF31 THRU SF38)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

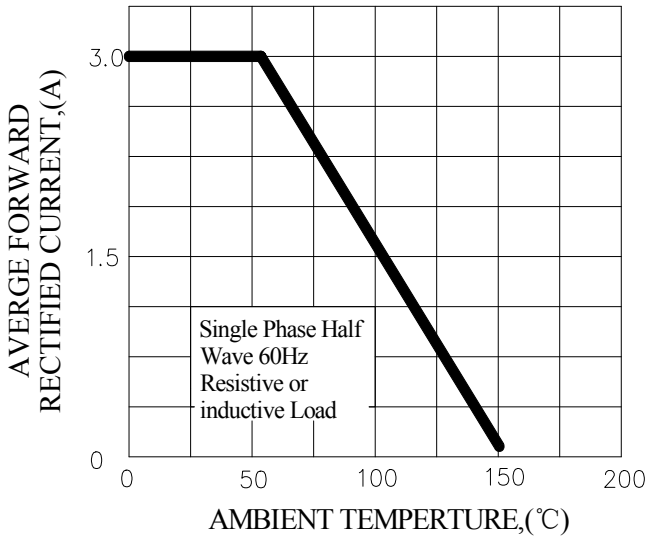


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

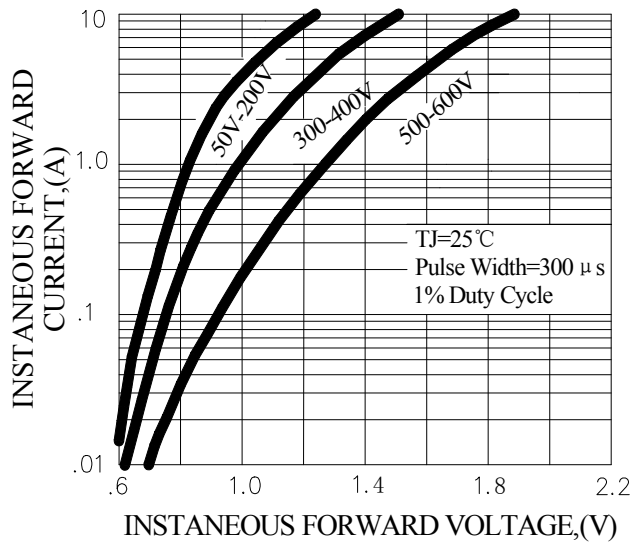


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

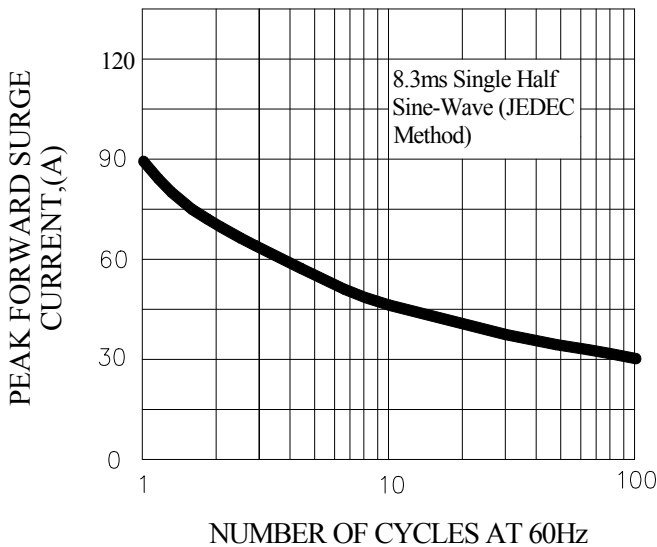


FIG.4-TYPICAL REVERSE CHARACTERISTICS

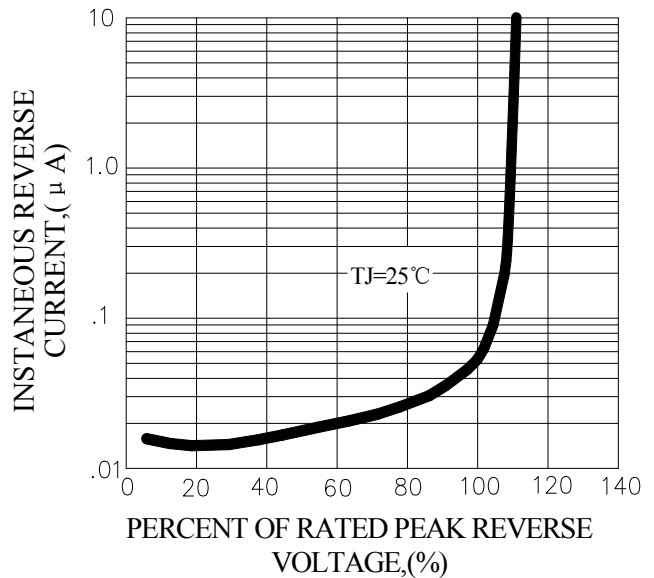
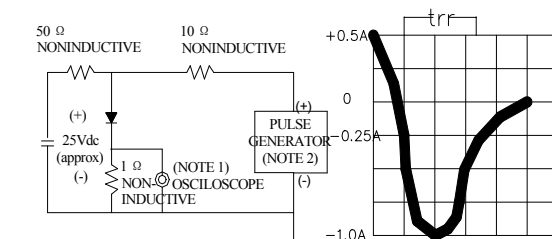


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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