

4.0AMP HIGH EFFICIENCY RECTIFIERS

Reverse Voltage - 2000V

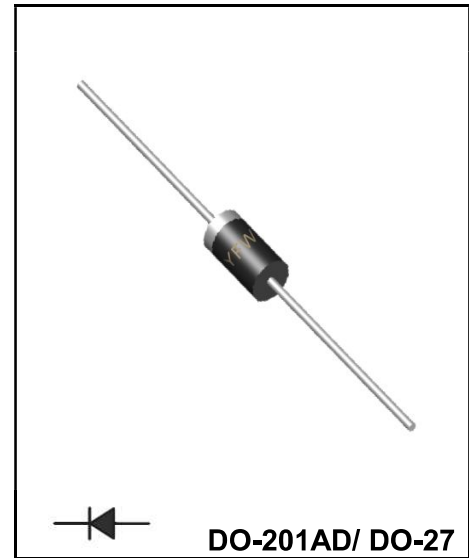
Forward Current - 4.0A

FEATURES

- Low cost
- Diffused junction
- Low Leakage
- Low forward voltage drop
- High current capability
- Easily cleaned with Freon. Alcohol. Isopropanol and solvents
- The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- Case: JEDEC DO - 27. molded plastic
- Terminals: Axial leads. Solderable per
- MIL - STD - 20 Method 208
- Polarity: Color band denotes cathode
- Weight: 0.04 ounce. 1.10 grams
- 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%

| Parameter | SYMBOL | FR420 | UNITS |
|--|-----------------|------------|---------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 2000 | V |
| Maximum RMS Voltage | V_{RMS} | 1400 | V |
| Maximum DC Blocking Voltage | V_{DC} | 2000 | V |
| Maximum Average Forward Rectified Current 9.5mm Lead Length. $T_A = 75^{\circ}C$ | $I_{(AV)}$ | 4.0 | A |
| Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated $T_j = 125^{\circ}C$ | I_{FSM} | 150 | A |
| Maximum Forward Voltage at 4.0A DC | V_F | 1.45 | V |
| Maximum Reverse Current $T_A = 25^{\circ}C$ | I_R | 5.0 | μA |
| at Rated DC Blocking Voltage $T_A = 100^{\circ}C$ | | 100.0 | |
| Maximum reverse recovery time (Note1) | t_{rr} | 60 | ns |
| Typical Junction Capacitance (Note 2) | C_j | 30 | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JA}$ | 20 | $^{\circ}C/W$ |
| Operating Junction Temperature Range | T_j | -55 to 150 | $^{\circ}C$ |
| Storage Temperature Range | T_{STG} | -55 to 150 | $^{\circ}C$ |

NOTE: 1. Reverse recovery condition $I_F = 0.5A$ $I_R = 1.0$ $I_{rr} = 0.25A$

2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient.

FIG. 1 -- TYPICAL FORWARD CHARACTERISTIC

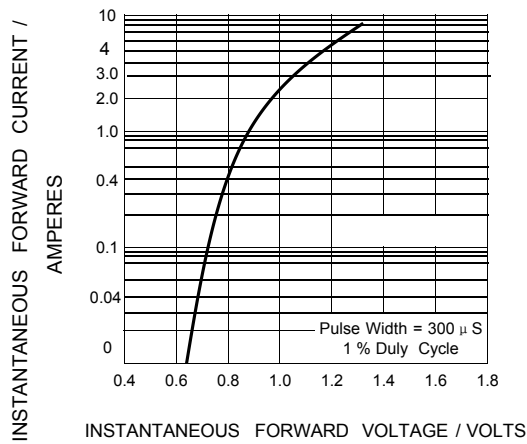


FIG. 2 -- TYPICAL JUNCTION CAPACITANCE

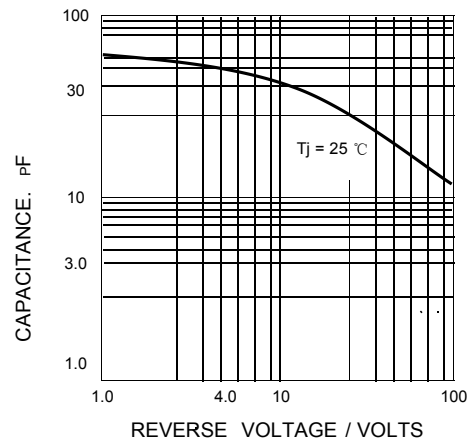


FIG. 3 -- FORWARD CURRENT DERATING

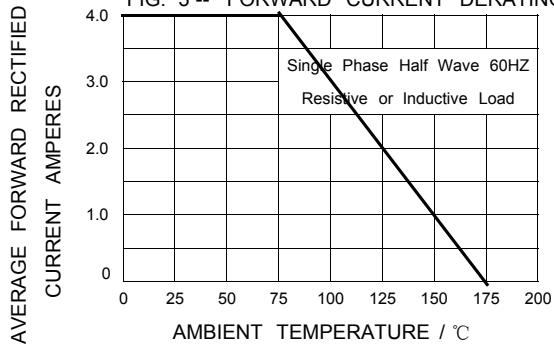


FIG. 4 -- PEAK FORWARD SURGE CURRENT

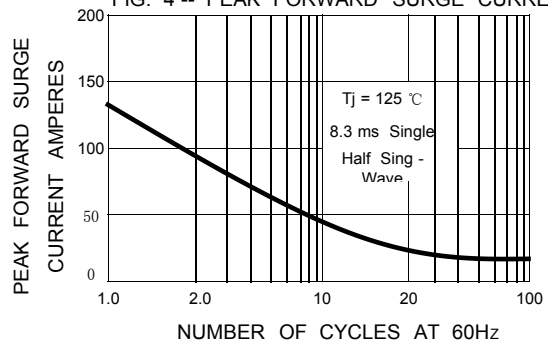
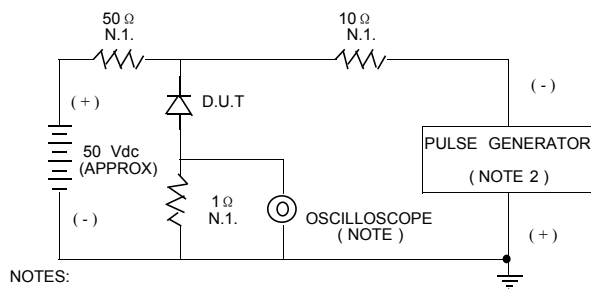
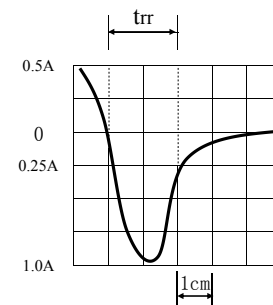


FIG. 5 -- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:

1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM.
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM



SET TIME BASE FOR 25 / 35 ns / cm

Ordering information

| Package | Packing Description | Packing Quantity |
|----------------|---------------------|--|
| DO-201AD/DO-27 | bulk | 250PCS/500PCS/Inner Box 12500PCS/Carton |
| | ammo pack | 1000PCS/1250PCS/Inner Box 10000PCS/12500PCS/Carton |

Package Dimensions

DO-201AD/DO-27

| Dim. | Millimeter(mm) | | INCHES | |
|------|----------------|------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | - | 9.50 | - | 0.370 |
| B | - | 6.40 | - | 0.250 |
| C | 1.20 | 1.30 | 0.048 | 0.052 |
| D | 25.4 | - | 1.00 | - |

The technical drawing shows a side view of the DO-201AD/DO-27 package. Dimension A is the length of the main body. Dimension B is the height of the main body. Dimension C is the thickness of the lead. Dimension D is the length of the lead. Labels include 'Cathode Mark', 'YFW logo', and 'Model name'.

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