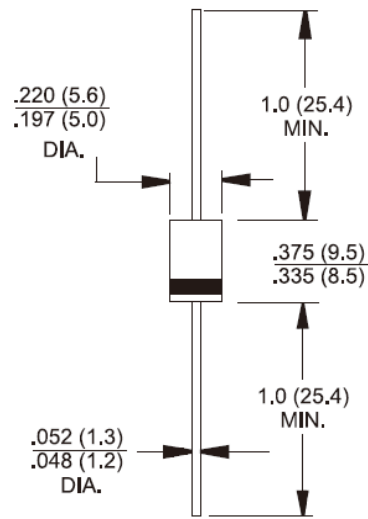


**DO-201AD**

**Dimensions in inches and (millimeters)**
**Marking Diagram**


- 31DFX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

**Features**

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

**Mechanical Data**

- ✧ Cases: Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2 grams

**Maximum Ratings and Electrical Characteristics**

Rating 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%

Type Number	Symbol	31DF4	31DF6	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	400	600	V
Maximum RMS Voltage	$V_{RMS}$	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	400	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 29^\circ C$ @ $T_L = 109^\circ C$	$I_{F(AV)}$	1.2 3.0		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	45		A
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	$V_F$	1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A = 25^\circ C$ @ $T_A = 125^\circ C$	$I_R$	20 100		$\mu A$
Maximum Reverse Recovery Time (Note 2)	$T_{rr}$	35		nS
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	80		$^\circ C/W$
Operating Temperature Range	$T_J$	- 40 to + 150		$^\circ C$
Storage Temperature Range	$T_{STG}$	- 40 to + 150		$^\circ C$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 3: Thermal Resistance from Junction to Ambient .375"(9.5mm) Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (31DF4 THRU 31DF6)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

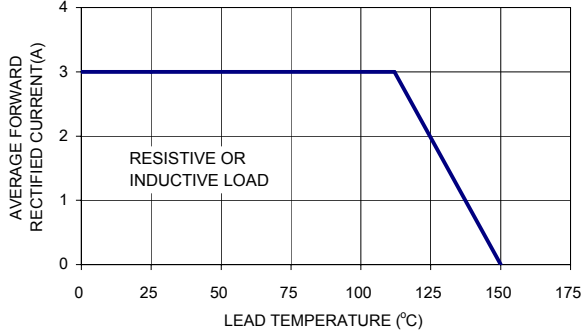


FIG. 2- TYPICAL FORWARD CHARACTERISRICS

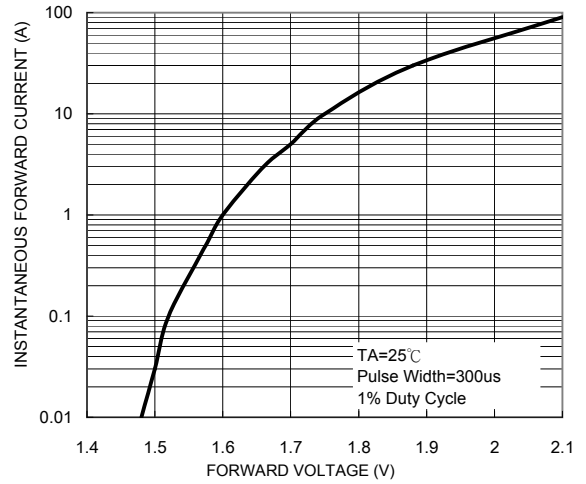


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

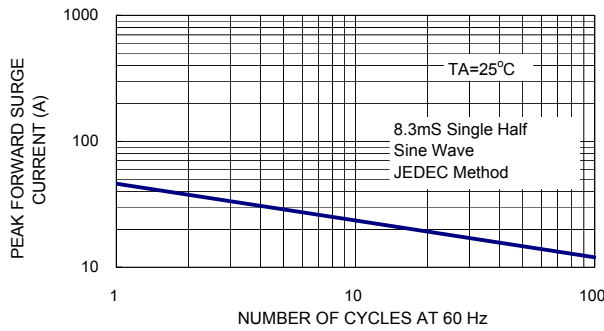


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

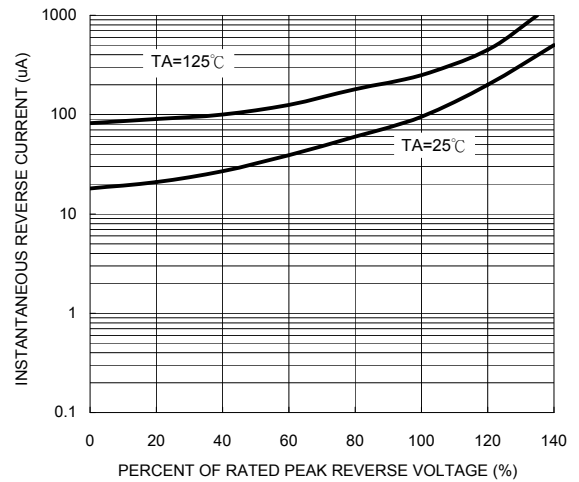


FIG. 5- TYPICAL JUNCTION CAPACITANCE

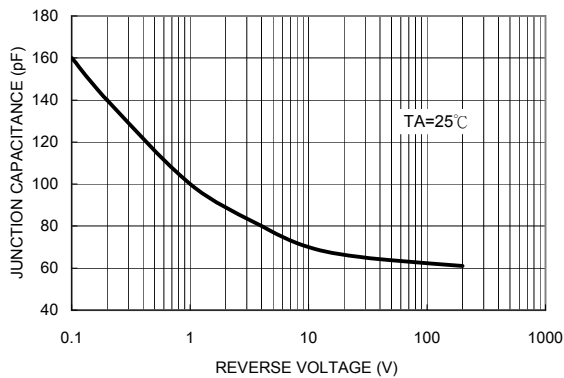


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

