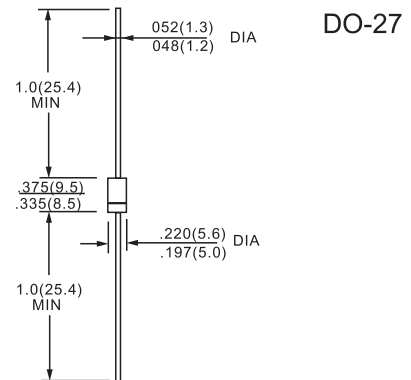


FEATURES

- Low profile, axial leaded outline
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability



Dimensions in inches and (millimeters)

MECHANICAL DATA :

- * Case : DO-201AD Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 1.1 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%.

RATING	SYMBOL	31DQ03	31DQ04	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	40	V
Maximum DC Blocking Voltage	V_{DC}	30	40	V
Maximum Average Forward Current at Ambient Temperature , $T_c = 48\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	3.3		A
Maximum Non-repetitive Peak Forward Surge Current (50 Hz, Sine wave, 10ms)	I_{FSM}	120		A
Maximum Forward Voltage at $I_F = 3.0\text{ A}$	V_F	0.55		V
Maximum Reverse Current at $V_R = V_{RRM}$, $T_j = 25^{\circ}\text{C}$	I_R	3.0		mA
Junction Temperature Range	T_J	- 40 to + 150		$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	- 40 to + 150		$^{\circ}\text{C}$

RATINGS AND CHARACTERISTIC CURVES 31DQ03 THRU 31DQ04

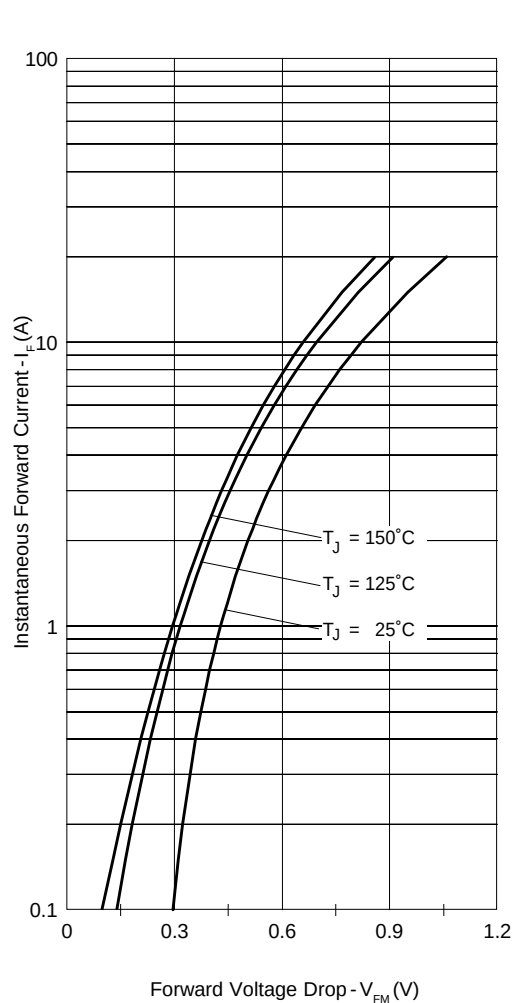


Fig. 1 - Max. Forward Voltage Drop Characteristics

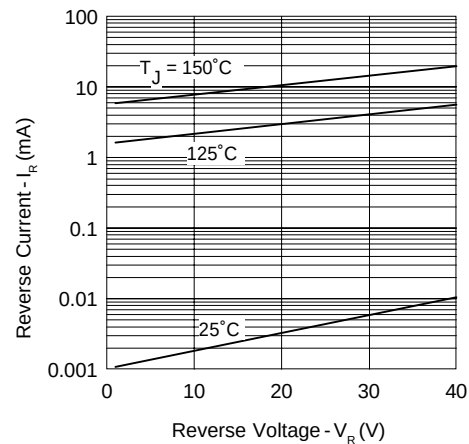


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage

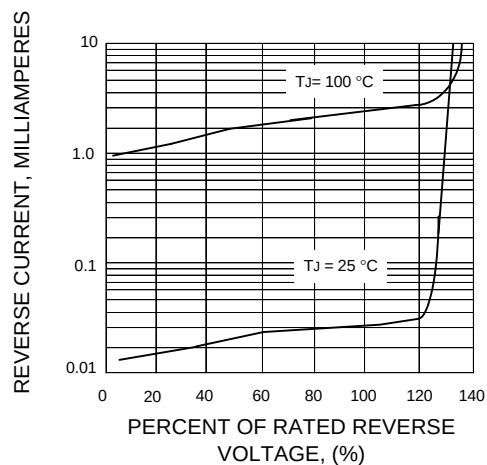


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

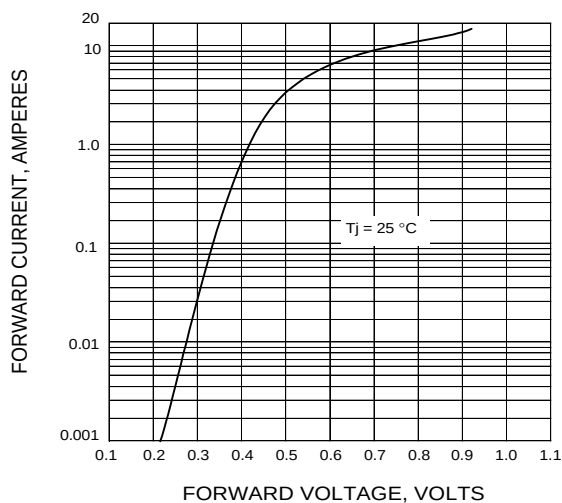


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

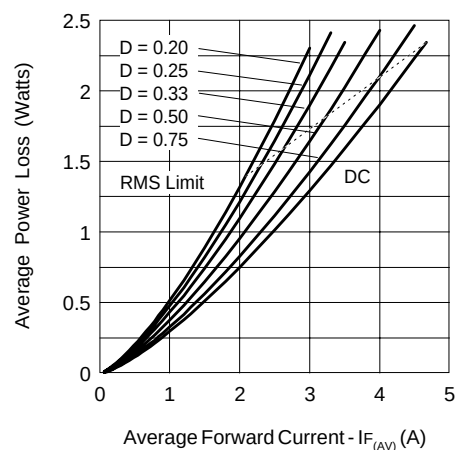


Fig. 5 - Forward Power Loss Characteristics

(2) Formula used: $T_C = T_J - (P_d + P_{d_{REV}}) \times R_{thJC}$;

P_d = Forward Power Loss = $I_{F(AV)} \times V_{FM}$ @ $(I_{F(AV)} / D)$ (see Fig. 6);

$P_{d_{REV}}$ = Inverse Power Loss = $V_{R1} \times I_R (1 - D)$; I_R @ $V_{R1} = 80\%$ rated V_R