UG4A THRU UG4D

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage
50 to 200 V
Forward Current 4 A

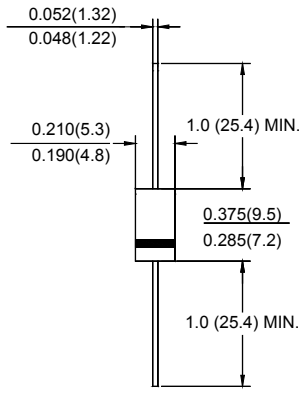
Features

- Ultrafast recovery time for high efficiency
- Soft recovery characteristics
- Excellent high temperature switching
- Glass passivated junction

Mechanical Data

- Case: Molded plastic, DO-201AD
- Terminals: Plated axial leads, solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

DO-201AD



Dimensions in inches and (millimeters)

Absolute Maximum Ratings and Characteristics

Ratings at 25° C ambient temperature unless otherwise specified.

Parameter	Symbols	UG4A	UG4B	UG4C	UG4D	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	V
Maximum Average Forward Rectified Current 0.375"(9.5 mm) Lead Length at T_L = 75 °C	$I_{(AV)}$	4				A
Peak Forward Surge Current, 8.3 ms Single Half-sine-wave Superimposed on rated load (JEDEC method) at T_L = 75 °C	I_{FSM}	150				A
Maximum Forward Voltage at 4 A	V_F	0.95				V
Maximum Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A = 100 °C	I_R	5 300				μA
Maximum Reverse Recovery Time [1]	t_{rr}	20				ns
Maximum Reverse Recovery Time [2] T_J = 25 °C T_J = 100 °C	t_{rr}	30 50				ns
Maximum Recovered stored charge Time [2] T_J = 25 °C T_J = 100 °C	Q_{rr}	15 30				nC
Typical Junction Capacitance [3]	C_J	20				pF
Typical Thermal Resistance [4]	$R_{\theta JA}$	25				°C/W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to +150				°C

[1] Reverse recovery test conditions: I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A.
[2] t_{rr} and Q_{rr} measured at tester: I_F = 4 A, V_R = 30 V, di/dt = 50 A/μs, I_{rr} = 10% I_{RM} for measurement of t_{rr}.
[3] Measured at 1 MHz and applied reverse voltage of 4 V.
[4] Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length.

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FIG. 1 - FORWARD CURRENT DERATING CURVE

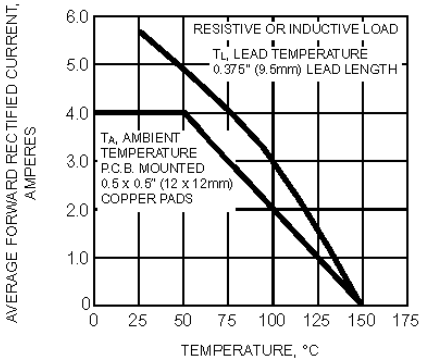

FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

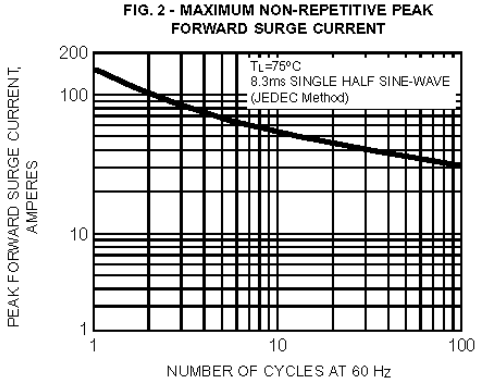

FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

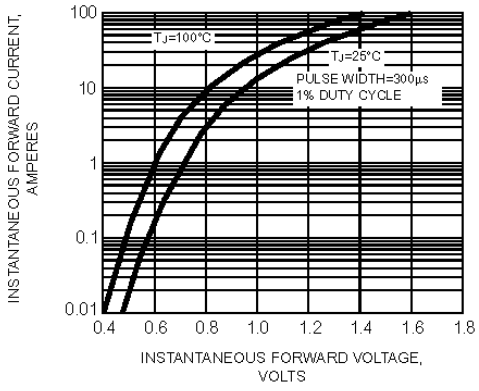

FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

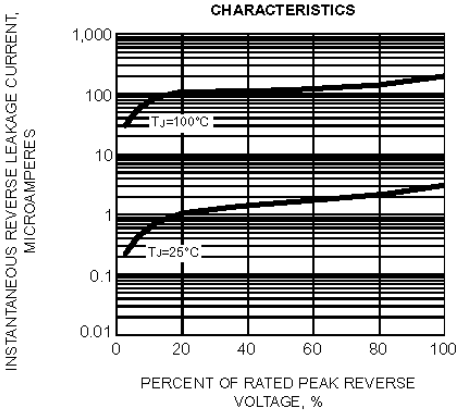

FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

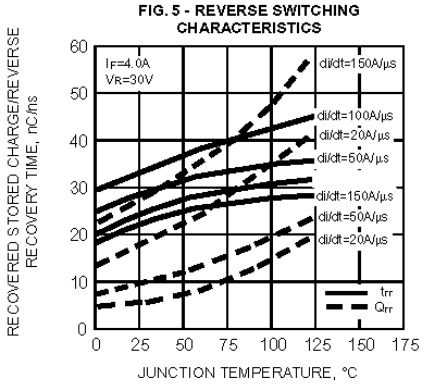

FIG. 6 - TYPICAL JUNCTION CAPACITANCE