

UG4A THRU UG4D

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage – 50 to 200 V

Forward Current – 4 A

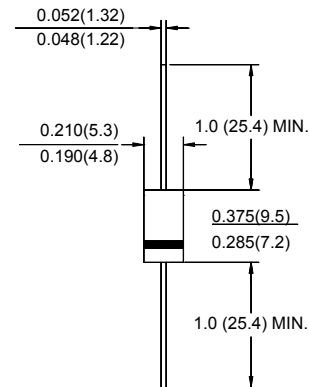
Features

- 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.

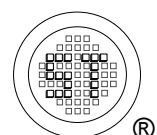
Parameter	Symbols	UG4A	UG4B	UG4C	UG4D	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	V
Maximum Average Forward Rectified Current 0.375"(9.5 mm) Lead Length at $T_L = 75^\circ\text{C}$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

¹⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

²⁾ t_{rr} and Q_{rr} measured at tester: $I_F = 4\text{ A}$, $V_R = 30\text{ V}$, $di/dt = 50\text{ A}/\mu\text{s}$, $I_{rr} = 10\% I_{RM}$ 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

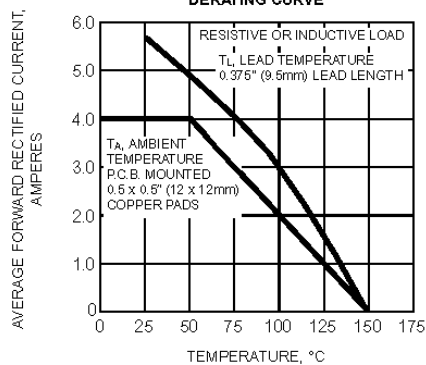


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

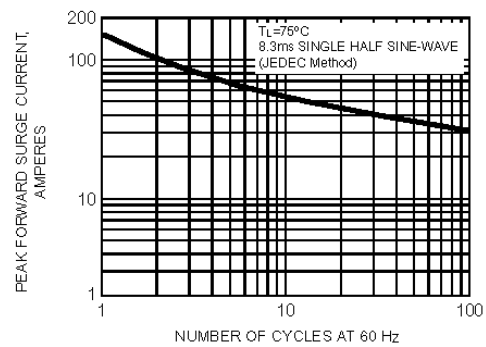


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

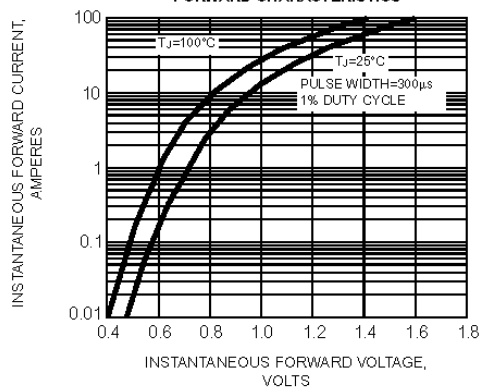


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

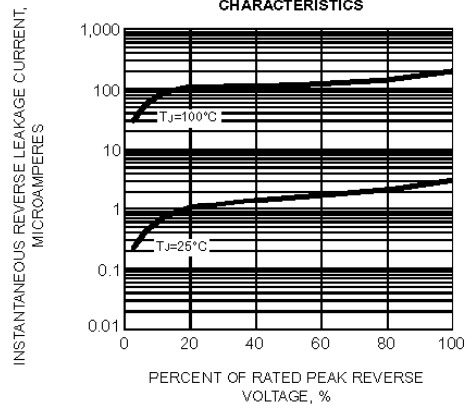


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

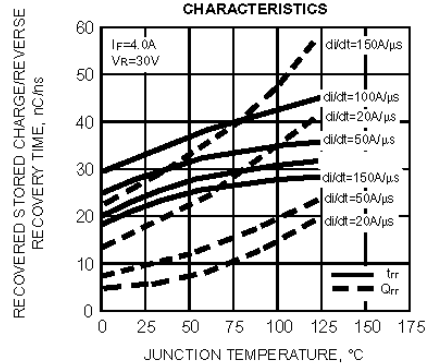


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

