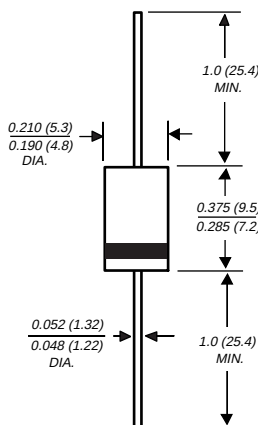


UG4A THRU UG4D

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 4.0 Amperes

DO-201AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- ◆ Ultrafast recovery time for high efficiency
- ◆ Soft recovery characteristics
- ◆ Excellent high temperature switching
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic body over passivated chip

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.045 ounce, 1.2 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG4A	UG4B	UG4C	UG4D	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	Volts
Maximum RMS voltage	V _{RMS}	35	70	105	140	Volts
Maximum DC blocking voltage	V _{DC}	50	100	150	200	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _L =75°C	I _(AV)	4.0				Amps
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L =75°C	I _{FSM}	150.0				Amps
Maximum instantaneous forward voltage at 4.0A	V _F	0.95				Volts
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =100°C	I _R	5.0 300.0				μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	20.0				ns
Maximum reverse recovery time (NOTE 2) T _J =25°C T _J =100°C	t _{rr}	30.0 50.0				ns
Maximum recovered stored charge (NOTE 2) T _J =25°C T _J =100°C	Q _{rr}	15.0 30.0				nC
Typical junction capacitance (NOTE 3)	C _J	20.0				pF
Typical thermal resistance (NOTE 4)	R _{θJA}	25.0				°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150				°C

NOTES:

(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}=0.25A

(2) t_{rr} and Q_{RR} measured at tester: I_F=4.0A, V_R=30V, di/dt=50A/μs, I_{rr}=10% I_{RM} for measurement of t_{rr}

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(4) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length

RATINGS AND CHARACTERISTIC CURVES UG4A THRU UG4D

FIG. 1 - FORWARD CURRENT DERATING CURVE

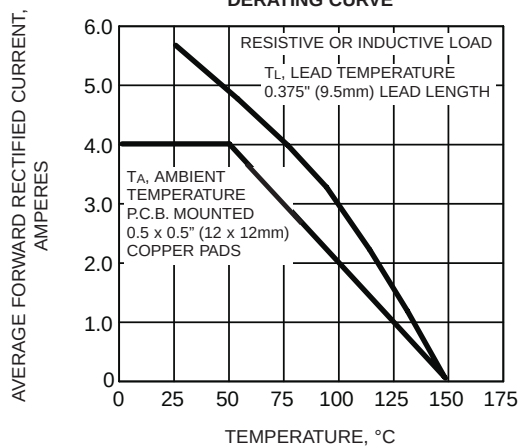


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

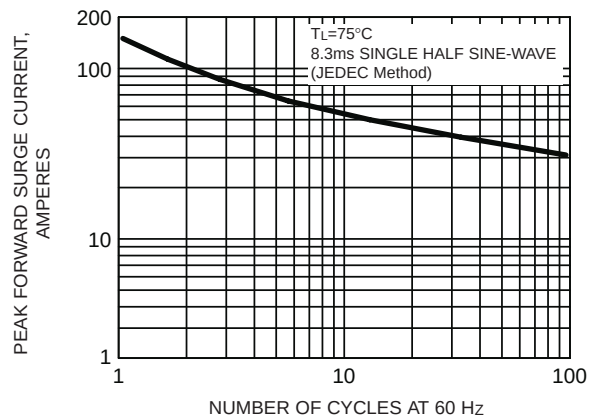


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

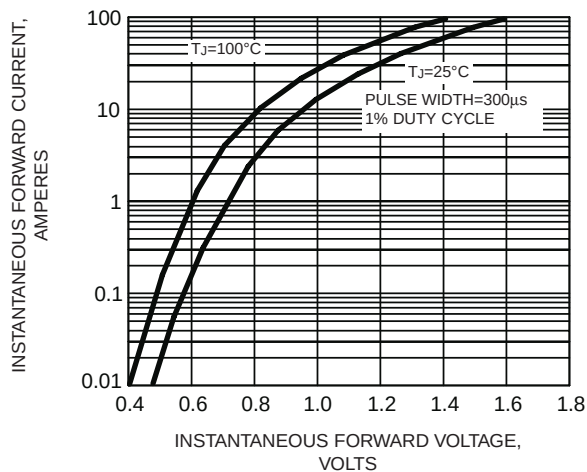


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

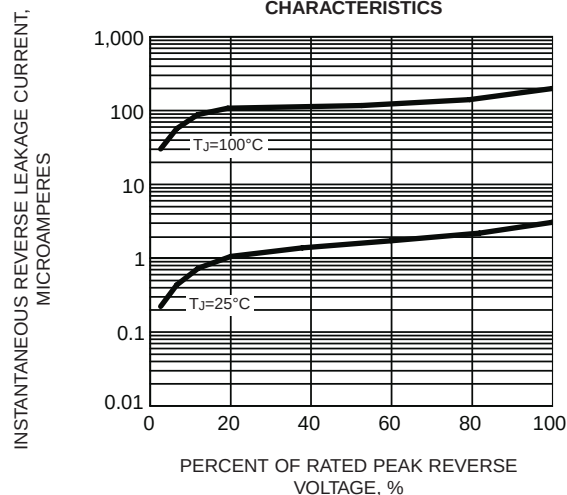


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

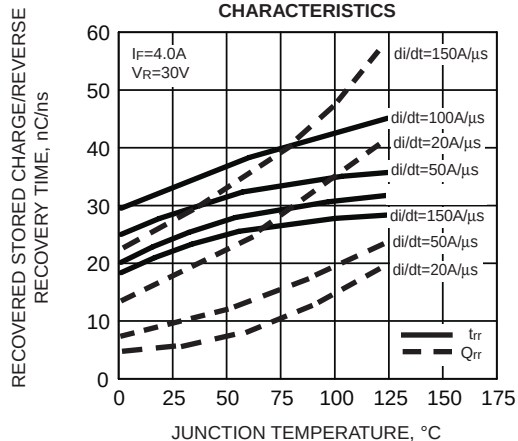


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

