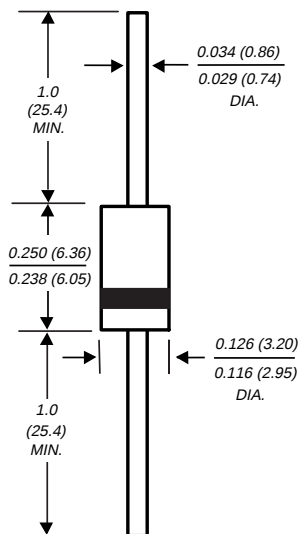


Ultrafast Plastic Rectifier

Reverse Voltage 50 to 200 V

Forward Current 2.0 A



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
- Excellent high temperature switching
- Soft recovery characteristics
- 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-204AC 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: 0.015 ounce, 0.4 gram

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	UG2A	UG2B	UG2C	UG2D	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 at 0.375" (9.5mm) lead length at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	2.0				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}	80				A
Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	45				°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150°C				°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	Value	Units
Maximum instantaneous forward voltage at 2.0A (NOTE 2)	V_F	0.95	V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	5.0 200	μA
Maximum reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	15	ns
Maximum reverse recovery time at $T_J = 25^\circ\text{C}$ $I_F=2.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, $I_{rr}=10\% I_{RM}$ $T_J = 100^\circ\text{C}$	t_{rr}	25 35	ns
Maximum recovered stored charge $T_J = 25^\circ\text{C}$ $I_F=2.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, $I_{rr}=10\% I_{RM}$ $T_J = 100^\circ\text{C}$	Q_{RR}	10 22	nC
Typical junction capacitance at 4V, 1MHz	C_J	15	pF

NOTES:

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

(2) Pulse test: 300 μs pulse width, 1% duty cycle

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES

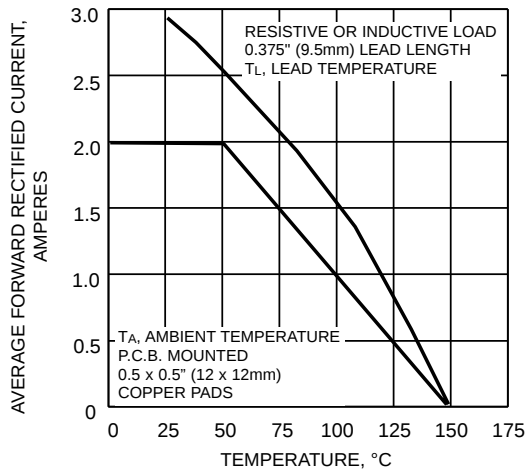


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

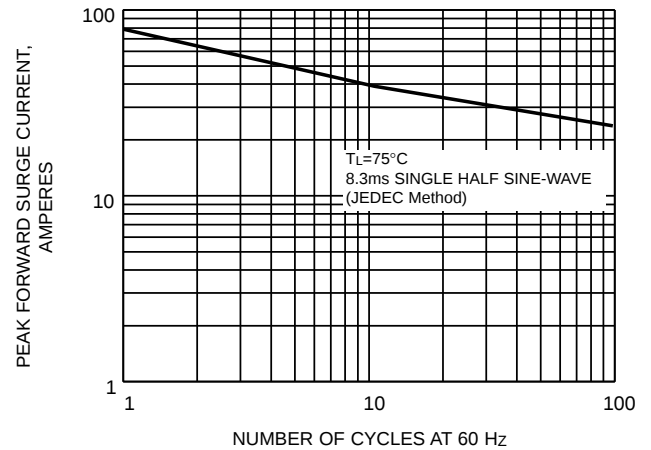


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

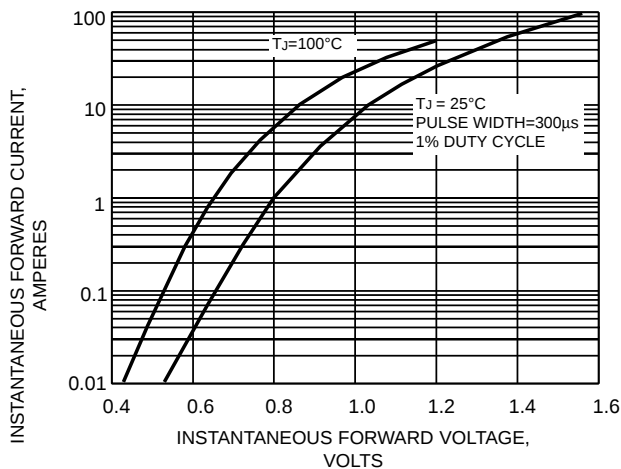


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

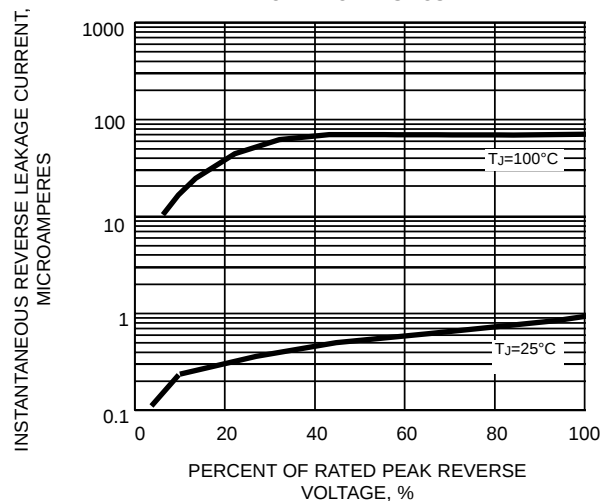


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

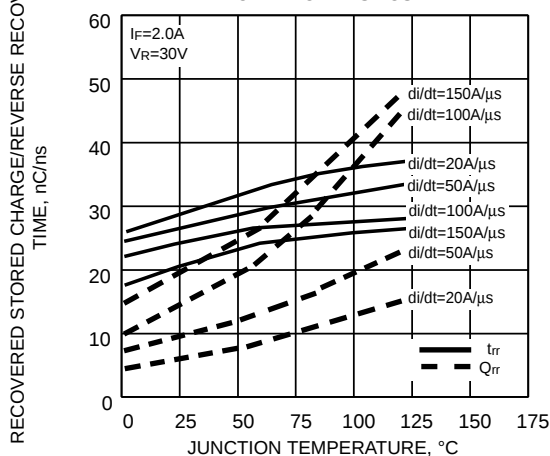


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

