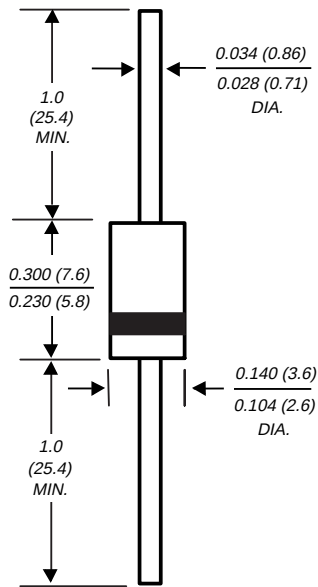


UG2A THRU UG2D

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 2.0 Amperes

DO-204AC



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 a free wheeling diode
- ◆ Ultrafast recovery for high efficiency times
- ◆ 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-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 AND ELECTRICAL 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	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 $T_L=75^\circ\text{C}$	$I_{(AV)}$	2.0				Amps
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}	80.0				Amps
Maximum instantaneous forward voltage at 2.0A	V_F	0.95				Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 200.0				μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	15.0				ns
Maximum reverse recovery time $T_J=25^\circ\text{C}$ (NOTE 2) $T_J=100^\circ\text{C}$	t_{rr}	25.0 35.0				ns
Maximum stored charge $T_J=25^\circ\text{C}$ (NOTE 2) $T_J=100^\circ\text{C}$	Q_{rr}	10.0 22.0				nC
Typical junction capacitance (NOTE 3)	C_J	15.0				pF
Typical thermal resistance (NOTE 4)	$R_{\theta JA}$	45.0				$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150				$^\circ\text{C}$

NOTES:

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

(2) t_{rr} and Q_{rr} at: $I_F=2.0\text{A}$, $V_R=30\text{V}$, $di/dt=50\text{A}/\mu\text{s}$, $I_{rr}=10\% I_{RM}$ for measurement of t_{rr}

(3) Measured at 1.0 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 UG2A THRU UG2D

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVES

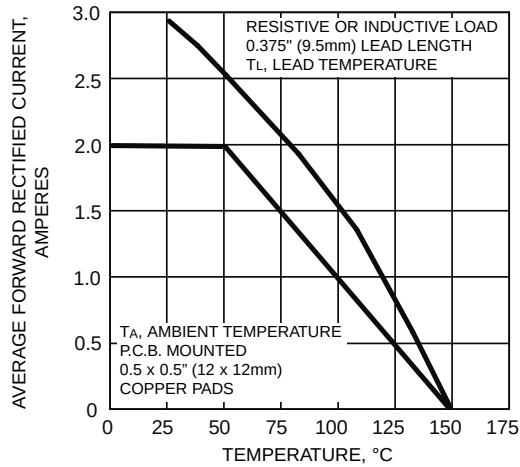


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

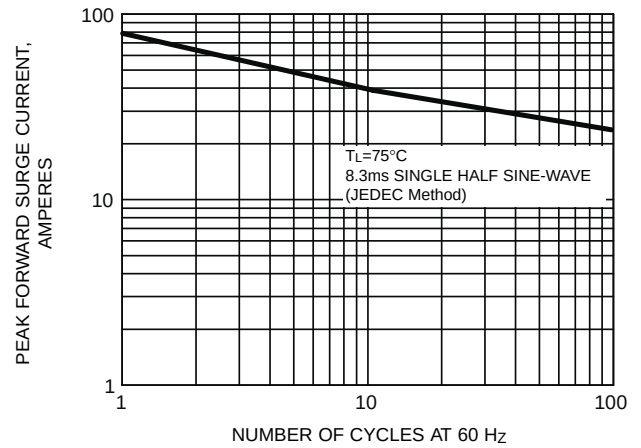


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

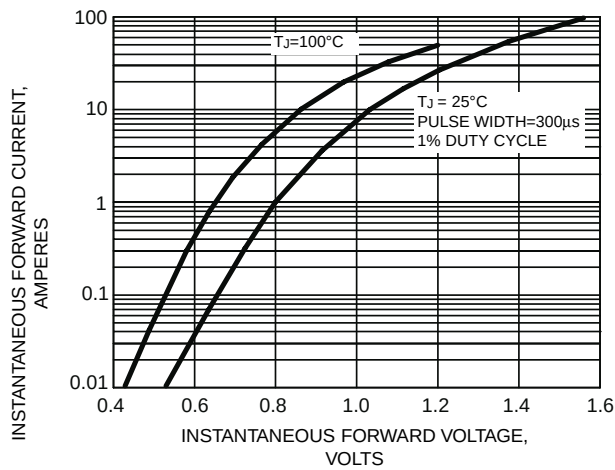


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

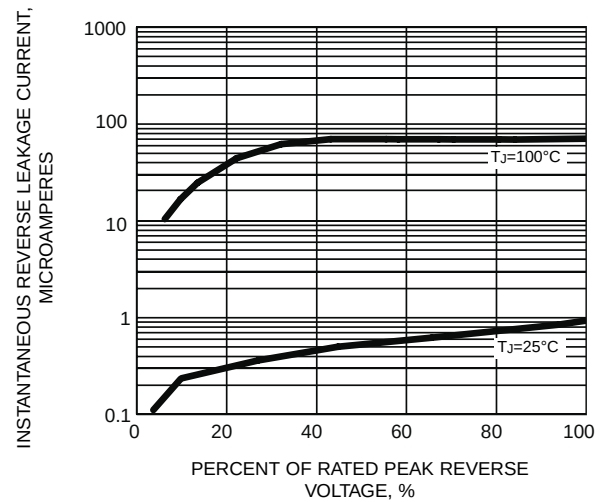


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

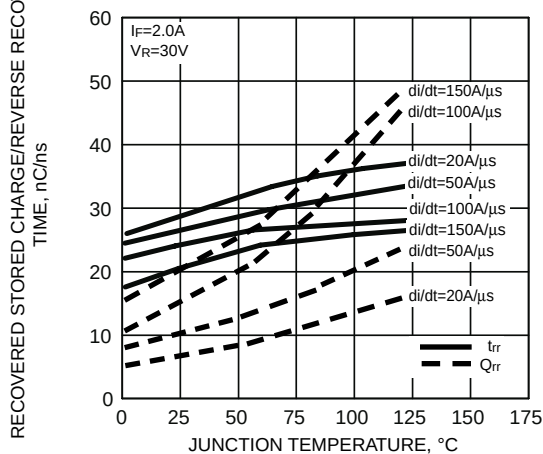


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

