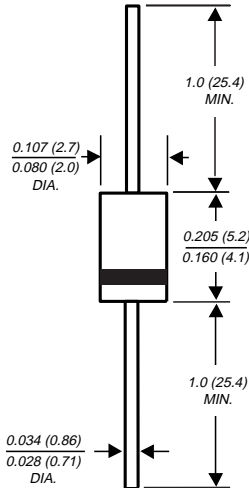


UG1A THRU UG1D

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 200 Volts Forward Current - 1.0 Ampere

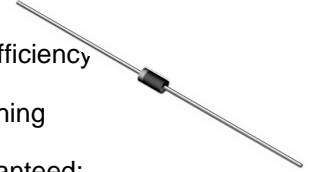
DO-204AL



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 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-204AL, molded plastic body over passivated chip

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.012 ounce, 0.34 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	UG1A	UG1B	UG1C	UG1D	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)	1.0				Amp
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) at T _L =75°C	I _{FSM}	40.0				Amps
Maximum instantaneous forward voltage at 1.0A	V _F	0.95				Volts
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0 200.0				μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	15.0				ns
Maximum reverse recovery time (NOTE 2)	t _{rr}	25.0 35.0				ns
Maximum recovered stored charge (NOTE 2)	Q _{rr}	8.0 12.0				nC
Typical junction capacitance (NOTE 3)	C _J	7.0				pF
Typical thermal resistance (NOTE 4)	R _{θJA} R _{θJL}	60.0 20.0				°C/W
Operating 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: I_F=1.0A 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 and from junction to lead at 0.375" (9.5mm) lead length

RATINGS AND CHARACTERISTIC CURVES UG1A THRU UG1D

FIG. 1 - FORWARD CURRENT DERATING CURVES

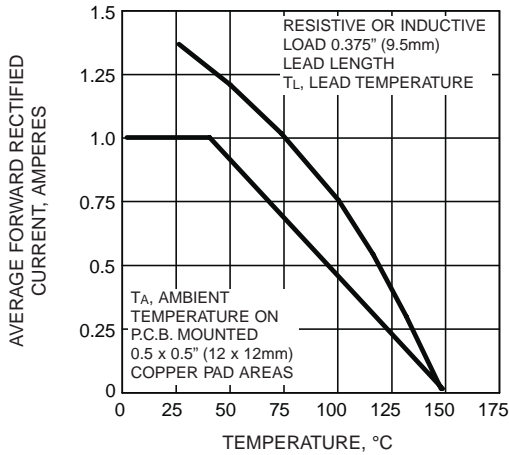


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

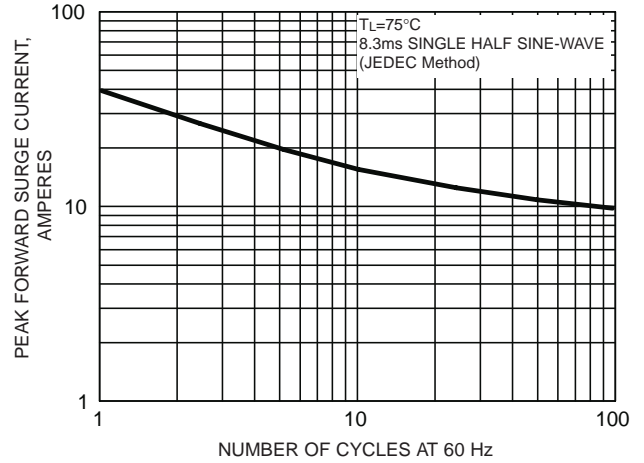


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

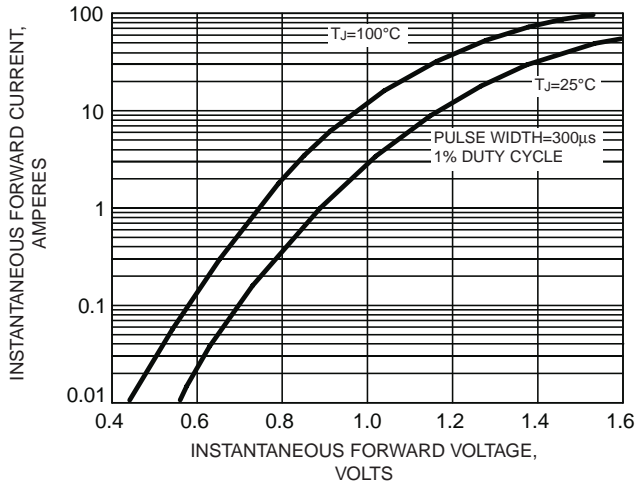


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

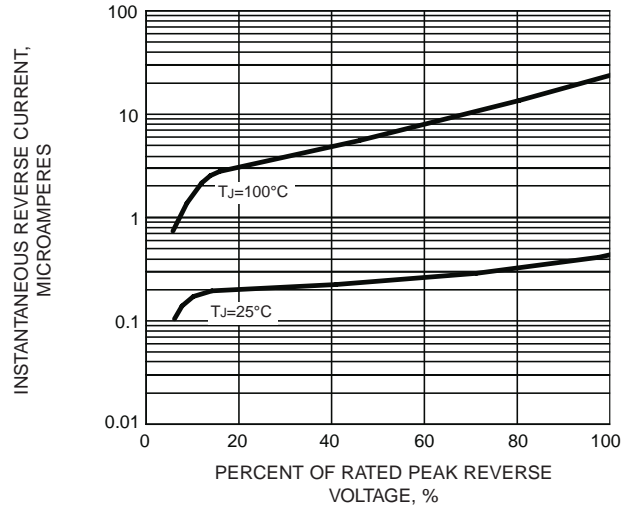


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

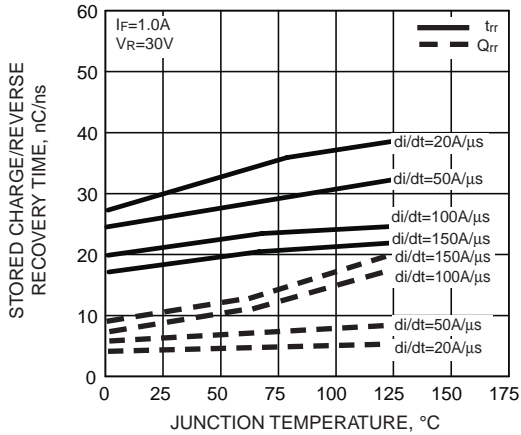


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

