TAYCHIPST

ULTRAFAST EFFICIENT PLASTIC RECTIFIER

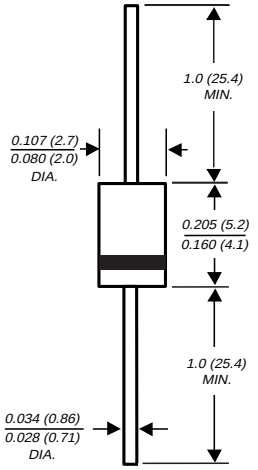
UG1A THRU UG1D

50V-200V 1.0A

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

DO-204AL



Dimensions in inches and (millimeters)

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 T_A= 25°C / T_A=100°C	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_J=25°C / T_J=100°C	t_{rr}	25.0 35.0				ns
Maximum recovered stored charge (NOTE 2) T_J=25°C / T_J=100°C	Q_{rr}	8.0 12.0				nC
Typical junction capacitance (NOTE 3)	C_J	7.0				pF
Typical thermal resistance (NOTE 4)	$R_{\Theta JA}$ $R_{\Theta JL}$	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 Qrr 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

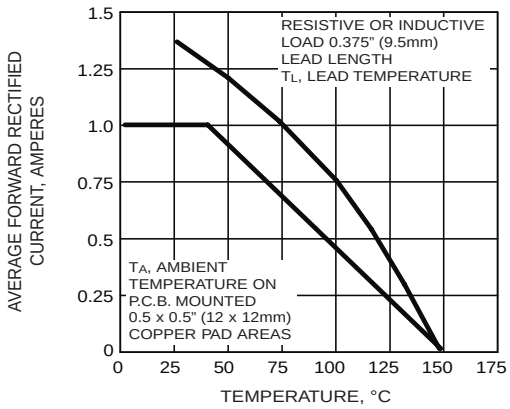


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

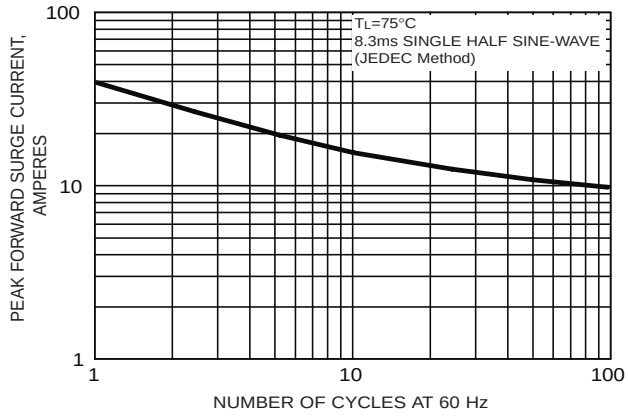


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

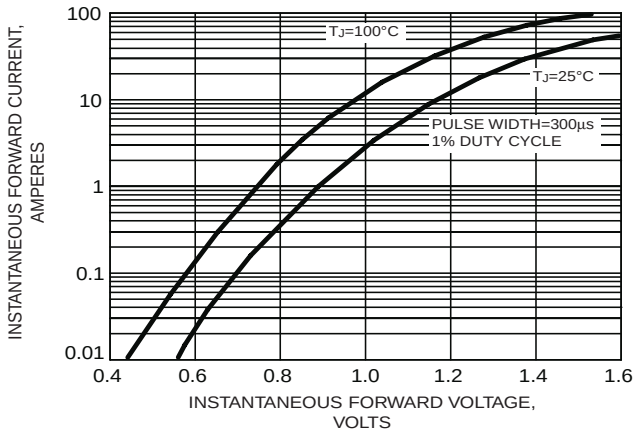


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

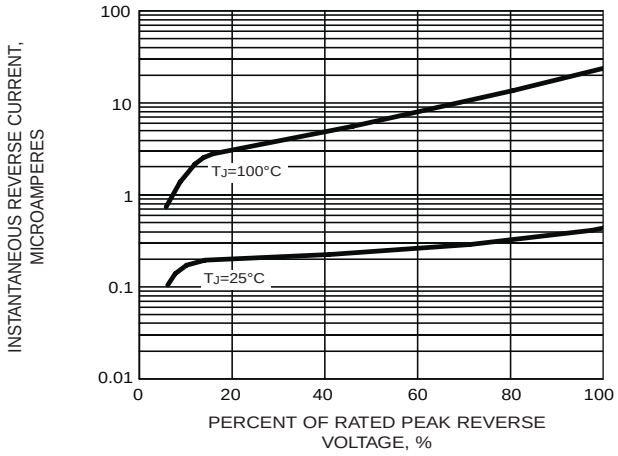


FIG. 5 - REVERSE SWITCHING CHARACTERISTICS

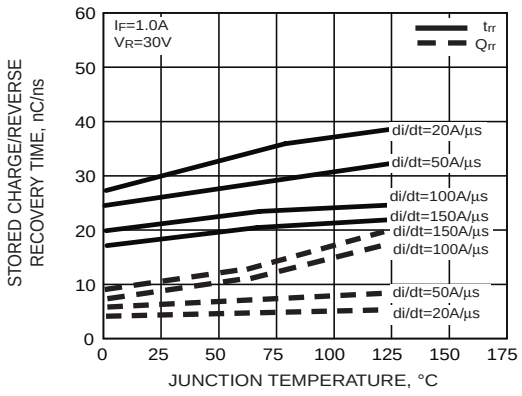


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

