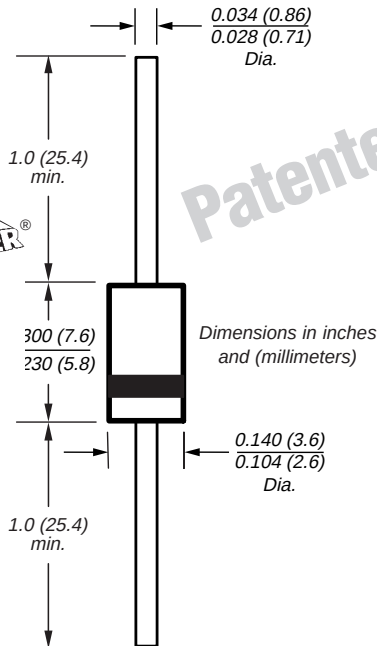

**DO-204AC
(DO-15)**


*Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 of 1976; brazed-lead assembly by Patent No. 3,930,306 of 1976 and glass composition by Patent No. 3,752,701 of 1973

Miniature Glass Passivated Junction Plastic Controlled Avalanche Rectifiers


Reverse Voltage
400 to 800V

Forward Current 1.5A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temp. metallurgically bonded constructed rectifiers
- Controlled Avalanche characteristic combined with the ability to dissipate reverse power
- Glass passivated cavity-free junction in DO-15 package
- 1.5 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic over glass

Terminals: Plated axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0154 oz., 0.4 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	AGP15-400	AGP15-600	AGP15-800	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	400	600	800	V
Maximum RMS voltage	V_{RMS}	280	420	560	V
Maximum DC blocking voltage	V_{DC}	400	600	800	V
Maximum Peak Power Dissipation in the Avalanche Region 20 μs Pulse	P_{RM}	500			W
Max. Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths at $T_A = 55^\circ\text{C}$	I_{AV}	1.5			A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50			A
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{R(AV)}$	100			μA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	25			$^\circ\text{C}/\text{W}$
Operating and storage temperature range	T_J, T_{STG}	-65 to +175			$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Minimum Avalanche Breakdown Voltage at $100\mu\text{A}$	V_{BR}	450	675	880	V
Maximum Avalanche Breakdown Voltage at $100\mu\text{A}$	V_{BR}	750	1000	1200	V
Maximum instantaneous forward voltage at 1.5A	V_F	1.1			V
Maximum reverse current at rated DC blocking voltage	I_R	5.0			μA
Typical reverse recovery time $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	2.0			μs
Typical junction capacitance at 4.0V, 1MHz	C_J	15			pF

Note: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C. Board mounted

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

Fig. 1 – Maximum Forward Current Derating Curve

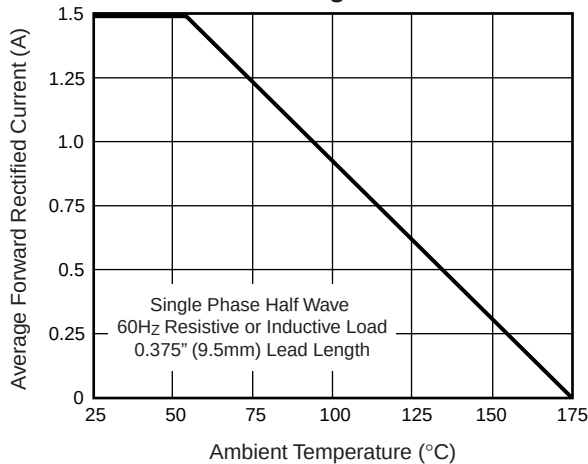


Fig. 2 – Typical Instantaneous Forward Characteristics

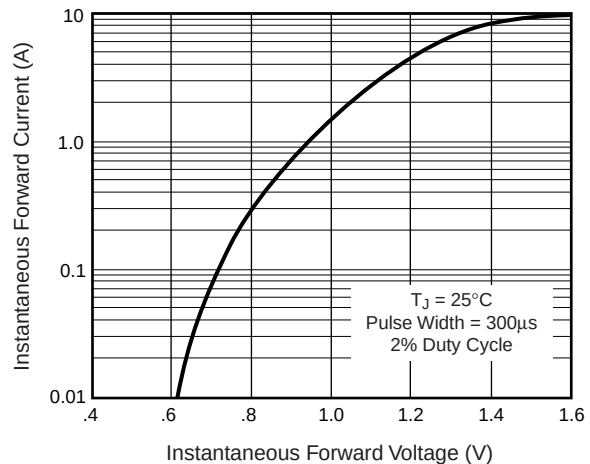


Fig. 3 – Maximum Non-Repetitive Peak Forward Surge Current

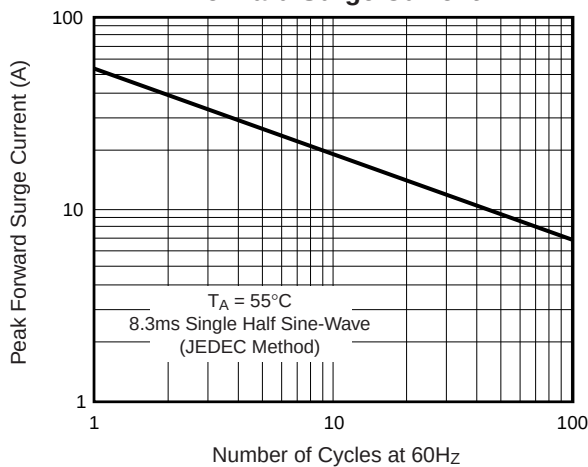


Fig. 4 – Typical Reverse Leakage Characteristics

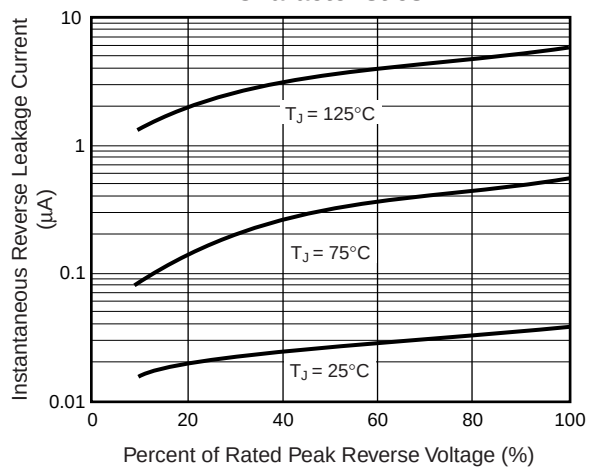


Fig. 5 – Maximum Non-Repetitive Reverse Avalanche Power Dissipation

