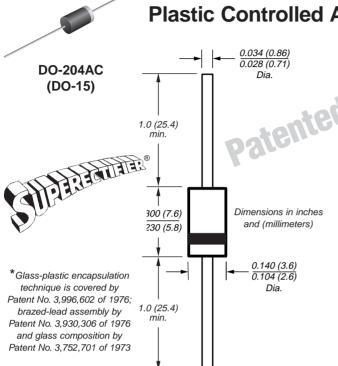


Vishay Semiconductors formerly General Semiconductor

# 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 TA=55°C with no thermal runaway
- Typical I<sub>R</sub> less than 0.1μA
- Capable of meeting environmental standards of MIL-S-19500
- High temperature soldering guaranteed: 350°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	VRRM	400	600	800	V
Maximum RMS voltage	VRMS	280	420	560	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	800	V
Maximum Peak Power Dissipation in the Avalanch Region 20 μs Pulse	PRM	500			W
Max. Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths at TA = 55°C	lav	1.5			А
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM		А		
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T <sub>A</sub> = 55°C	I <sub>R(AV)</sub>	100			μΑ
Typical thermal resistance (Note 1)	RθJA	25			°C/W
Operating and storage temperature range	TJ, TSTG		°C		

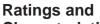
## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Minimum Avalanche Breakdown Voltage at 100μA	VBR	450	675	880	V
Maximum Avalanche Breakdown Voltage at 100μA	V <sub>BR</sub>	750	1000	1200	V
Maximum instantaneous forward voltage at 1.5A	VF	1.1			V
Maximum reverse current at rated DC blocking voltage	lR	5.0			μΑ
Typical reverse recovery time I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	t <sub>rr</sub>	2.0			μs
Typical junction capacitance at 4.0V, 1MHz	CJ	15			pF

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

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Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Maximum Forward Current **Derating Curve** 1.5 Average Forward Rectified Current (A) 1.25 1.0 0.75 0.5 Single Phase Half Wave 60Hz Resistive or Inductive Load 0.25 0.375" (9.5mm) Lead Length 0 50 100 125 150 25 175 Ambient Temperature (°C)

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

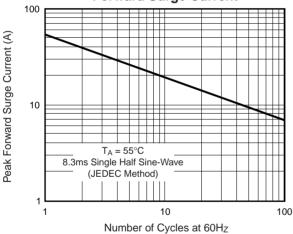


Fig. 5 - Maximum Non-Repetitive **Reverse Avalanche Power Dissipation** 

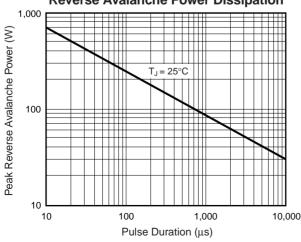


Fig. 2 – Typical Instantaneous Forward Characteristics

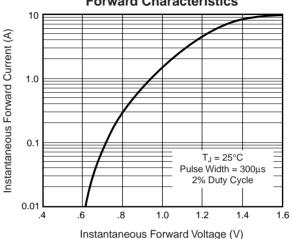
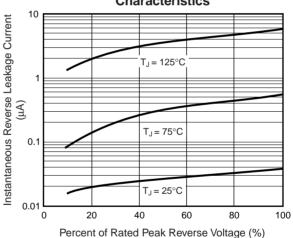


Fig. 4 - Typical Reverse Leakage Characteristics



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