TAYCHIPST

Miniature Glass Passivated Junction
Plastic Controlled Avalanche Rectifiers

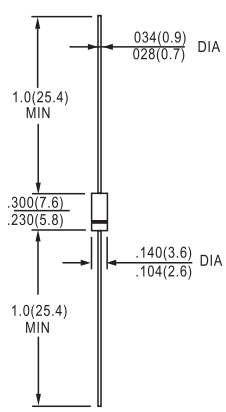
AGP15-400 THRU AGP15-800

400V-800V 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°C with no thermal runaway
- Typical I_R 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

DO-15



Dimensions in inches and (millimeters)

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 AND ELECTRICAL CHARACTERISTICS

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 Avalanch Region 20 μs Pulse	P_{RM}	500			W
Max. Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths at T_A = 55°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°C	$I_{R(AV)}$	100			μA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	25			°C/W
Operating and storage temperature range	T_J, T_{STG}	–65 to +175			°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Minimum Avalanche Breakdown Voltage at 100μA	V_{BR}	450	675	880	V
Maximum Avalanche Breakdown Voltage at 100μA	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=0.5A, I_R=1.0A, I_{rr}=0.25A	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 AGP15-400 THRU AGP15-800

Fig. 1 – Maximum Forward Current Derating Curve

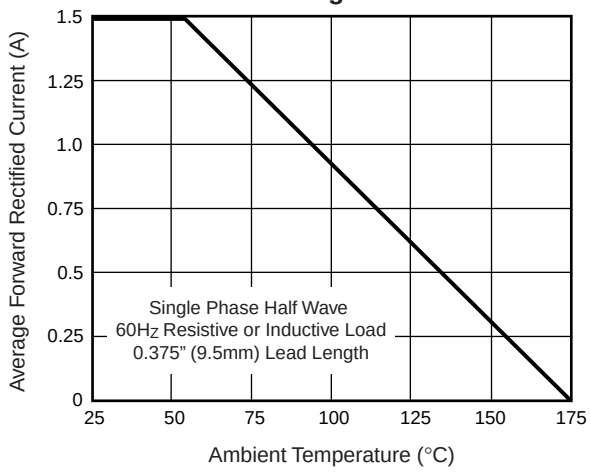


Fig. 2 – Typical Instantaneous Forward Characteristics

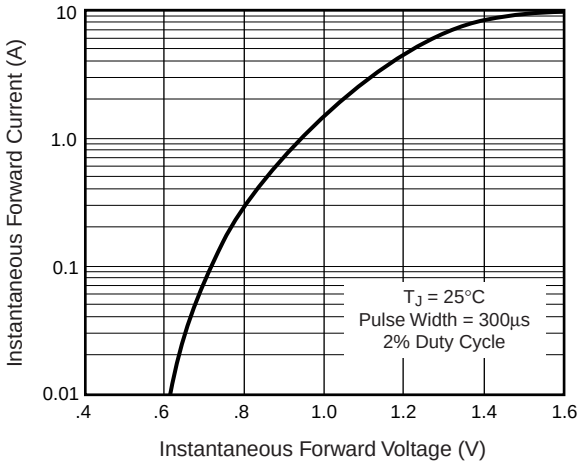


Fig. 3 – Maximum Non-Repetitive Peak Forward Surge Current

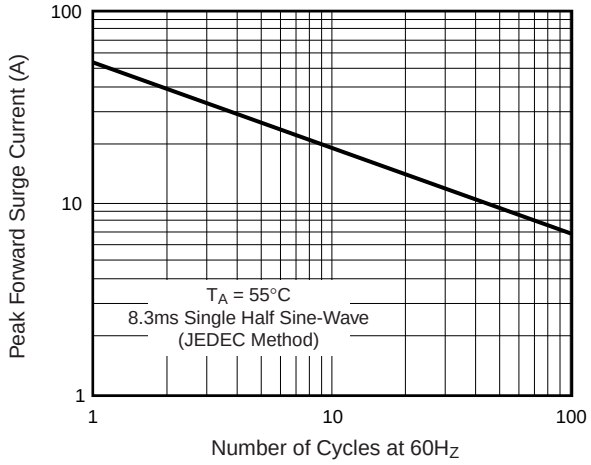


Fig. 4 – Typical Reverse Leakage Characteristics

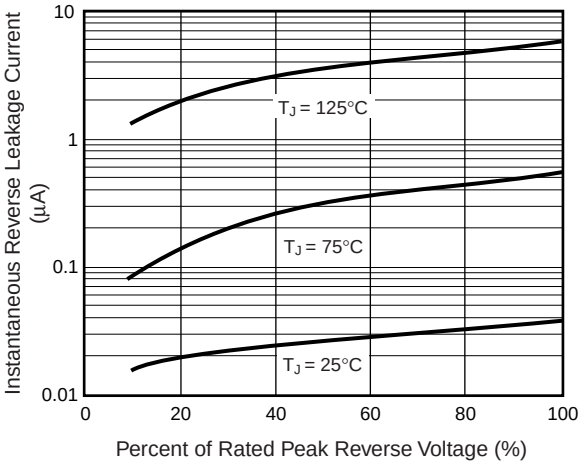


Fig. 5 – Maximum Non-Repetitive Reverse Avalanche Power Dissipation