T-01-15

AGP15 SERIES

MINIATURE GLASS PASSIVATED JUNCTION PLASTIC CONTROLLED AVALANCHE RECTIFIER

SUPERECTIFIER

GENERAL INSTRUMENT

VOLTAGE RANGE
200 to 800 Volts

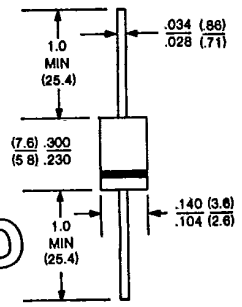
CURRENT
1.5 Amperes

FEATURES
- High temperature metallurgically bonded—no compression contacts as found in diode-constructed rectifiers
- Controlled Avalanche characteristic combined with the ability to dissipate reverse power
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Glass passivated junction DO-15 package.
- 1.5 ampere operation at T_A = 55° C with no thermal runaway
- Typical I_R less than 1 μA
- Exceeds environmental standards of MIL-STD-19500
- High Temperature soldering Guaranteed 350° C/10 seconds/.375" (9.5mm) lead length at 5 lbs., (2.3kg) tension

MECHANICAL DATA
Case: Molded plastic over glass
Terminals: Axial leads, solderable per MIL-STD-202, Method 208
Polarity: Color band denotes cathode
Mounting Position: Any
Weight: 0.0154 ounce, 0.4 gram

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

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	AGP15 -200	AGP15 -400	AGP15 -600	AGP15 -800	UNITS
Maximum Recurrent Peak Reverse Voltage	200	400	600	800	V
Maximum RMS Voltage	140	280	420	560	V
Maximum DC Blocking Voltage	200	400	600	800	V
Minimum Avalanche Breakdown Voltage at 100 μA	240	450	675	880	V
Maximum Avalanche Breakdown Voltage at 100 μA	500	750	1000	1200	V
Maximum Peak Power Dissipation in the Avalanche Region 20 μs Pulse		500			W
Maximum Average Forward Rectified Current .375", (9.5mm) lead lengths at T_A = 55°C		1.5			A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)		50			A
Maximum Instantaneous Forward Voltage at 1.5A		1.1			V
Maximum Reverse Current at Rated DC Blocking Voltage		5.0			μA
Maximum Full Load Reverse Current, Full Cycle Average, .375", (9.5mm) Lead Length at T_A = 55°C		100			μA
Typical Junction Capacitance (Note 1)		25			pF
Typical Reverse Recovery Time (Note 2)		2			μs
Storage and Operating Temperature Range, T_{STG}, T_J		-65 to +175			°C

NOTES:
1. Measured at 1MHz and applied reverse voltage of 4.0 volts.
2. Reverse Recovery Test Conditions: I_F = .5A, I_R = 1.0A, I_{rr} = .25A.

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RATING AND CHARACTERISTIC CURVES
AGP15 SERIES

FIG. 1 — FORWARD CURRENT DERATING CURVE

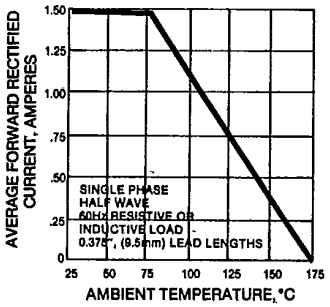

FIG. 2 — TYPICAL INSTANTEOUS FORWARD CHARACTERISTICS

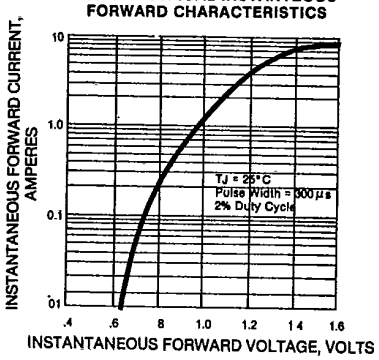

FIG. 3 — MAXIMUM NON-REPETITIVE SURGE CURRENT

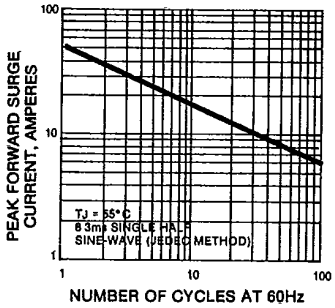

FIG. 4 — TYPICAL REVERSE CHARACTERISTICS

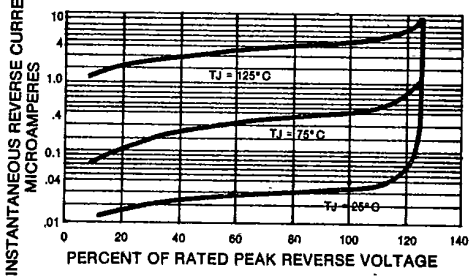

FIG. 5 — MAXIMUM NON-REPETITIVE REVERSE AVALANCHE POWER

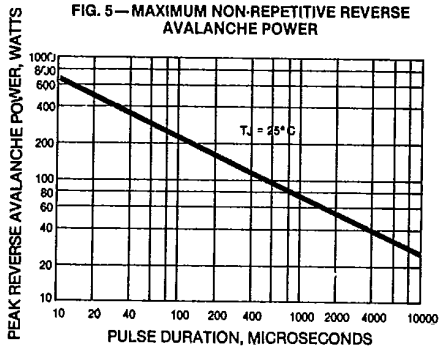

FIG. 6 — SUPERECTIFIER