

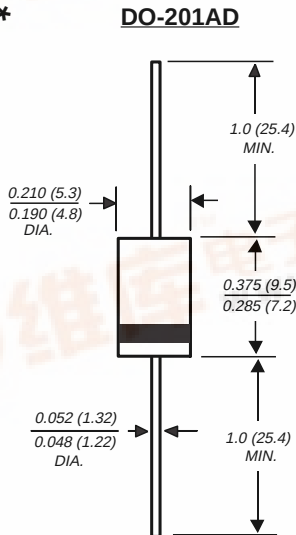
GP30A THRU GP30M

GLASS PASSIVATED JUNCTION PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current - 3.0 Amperes

PATENTED*



Dimensions in inches and (millimeters)

* Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- 3.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds $0.375"$ (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.04 ounce, 1.12 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	GP 30A	GP 30B	GP 30D	GP 30G	GP 30J	GP 30K	GP 30M	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A =55°C	I _(AV)	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125.0							Amps
Maximum instantaneous forward voltage at 3.0A	V _F	1.2	1.1						Volts
Maximum reverse current T _A =25°C at rated DC blocking voltage T _A =150°C	I _R	5.0 100.0							μA
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at T _A =55°C	I _{R(AV)}	100.0							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	3.0							μs
Typical junction capacitance (NOTE 2)	C _J	40.0							pF
Typical thermal resistance (NOTE 3)	R _{θJA} R _{θJL}	20.0 10.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175							°C

NOTES:

- Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- Thermal resistance from junction to ambient and from junction to lead at $0.375"$ (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES GP30A THRU GP30M

FIG. 1 - FORWARD CURRENT DERATING CURVE

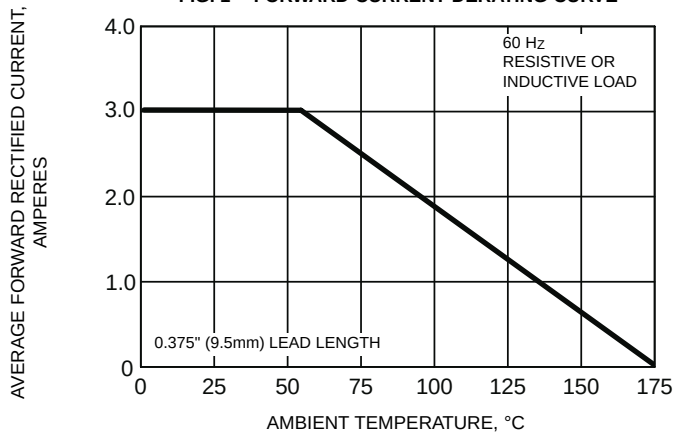


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

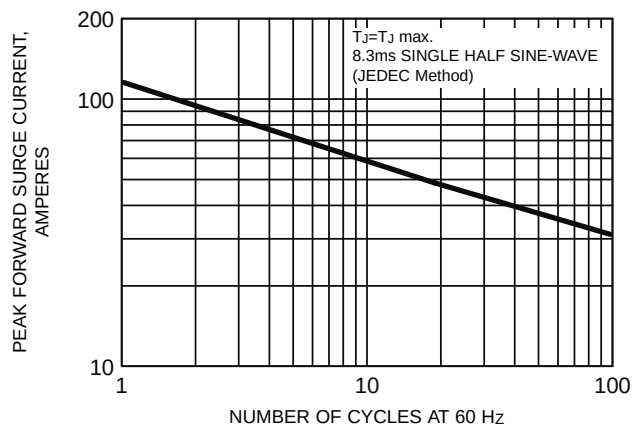


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

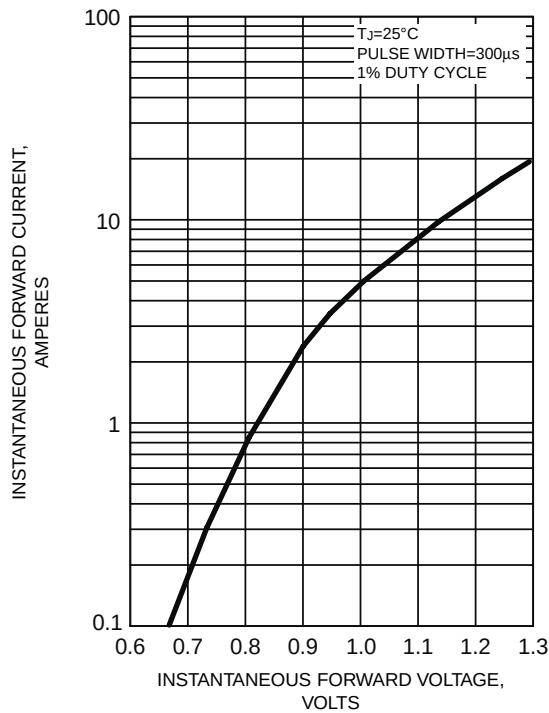


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

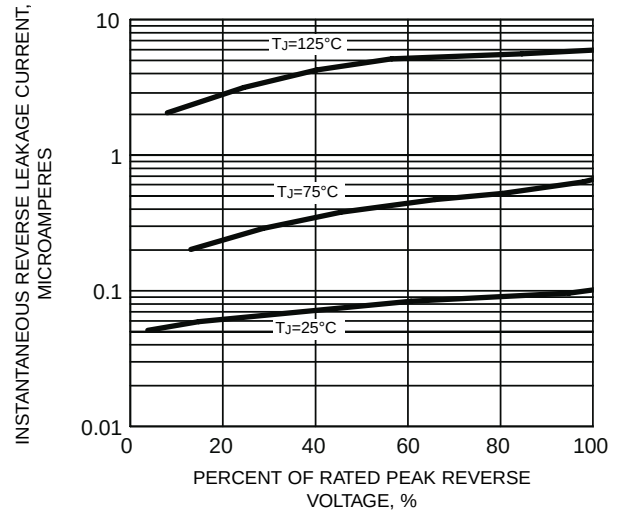


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

