



TAYCHIPST GLASS PASSIVATED JUNCTION RECTIFIER

GP30A THRU GP30M

50V-1000V 3.0A

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
- ◆ 1.5 Ampere operation at $T_A=55^{\circ}\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1\mu\text{A}$
- ◆ 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-204AC molded plastic over glass body

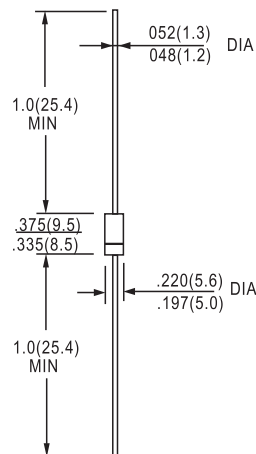
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.015 ounce, 0.4 gram

DO-27



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	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at TA=55°C	IAV)	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	125.0							Amps
Maximum instantaneous forward voltage at 3.0A	VF	1.2	1.1						Volts
Maximum reverse current TA=25°C at rated DC blocking voltage TA=150°C	IR	5.0 100.0							µA
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at TA=55°C	IR(AV)	100.0							µA
Maximum reverse recovery time (NOTE 1)	trr	3.0							µs
Typical junction capacitance (NOTE 2)	CJ	40.0							pF
Typical thermal resistance (NOTE 3)	RθJA RθJL	20.0 10.0							°C/W
Operating junction and storage temperature range	TJ, TSTG	-65 to +175							°C

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) 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

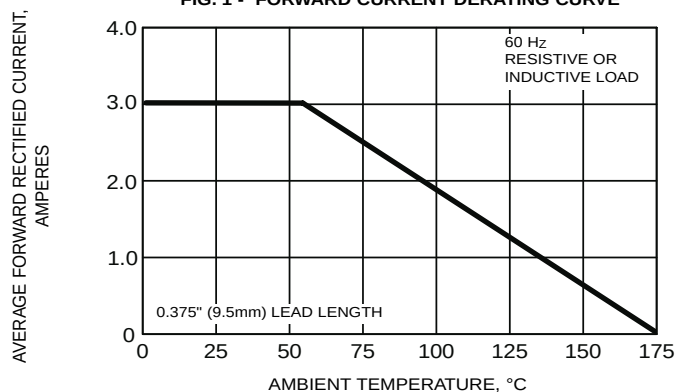


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

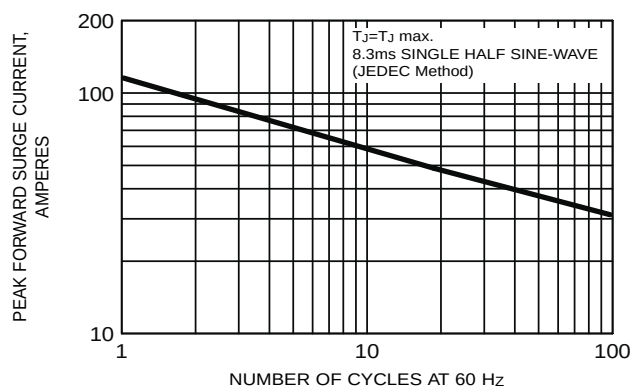


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

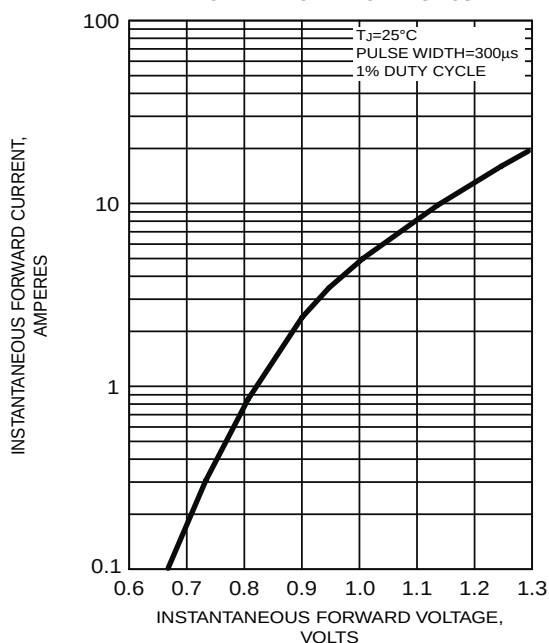


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

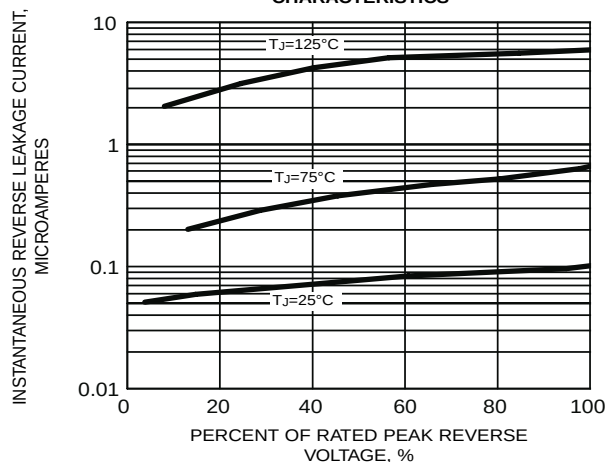


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

