

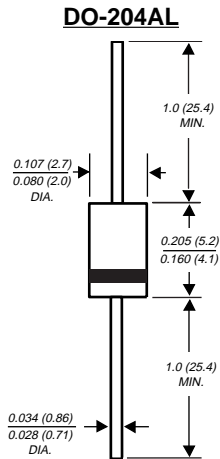
# GP10A THRU GP10Y

## GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - 50 to 1600 Volts

Forward Current - 1.0 Ampere

**PATENTED\***



NOTE: Lead diameter is 0.026 (0.66) for suffix "E" part numbers  
0.023 (0.58)

\* Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation is covered by

Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306

**SUPERRECTIFIER®**

### 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
- ◆ 1.0 Ampere operation at  $T_A=75^\circ\text{C}$  and  $55^\circ\text{C}$  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-204AL 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:** 0.012 ounce, 0.3 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

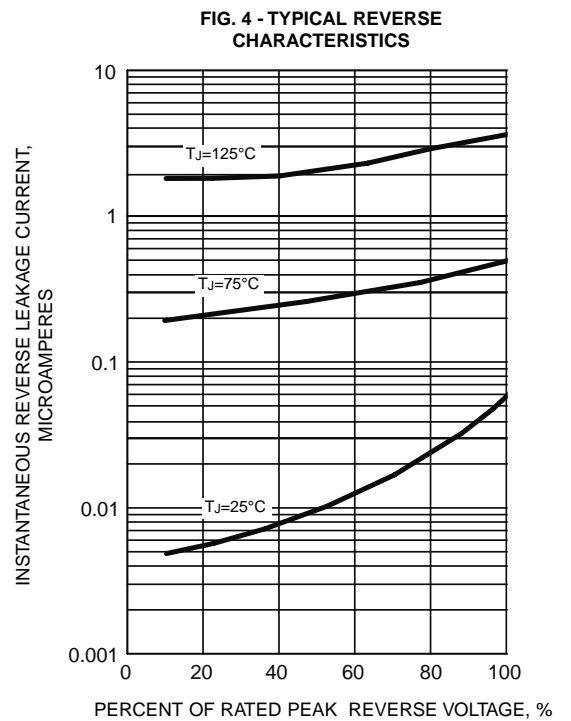
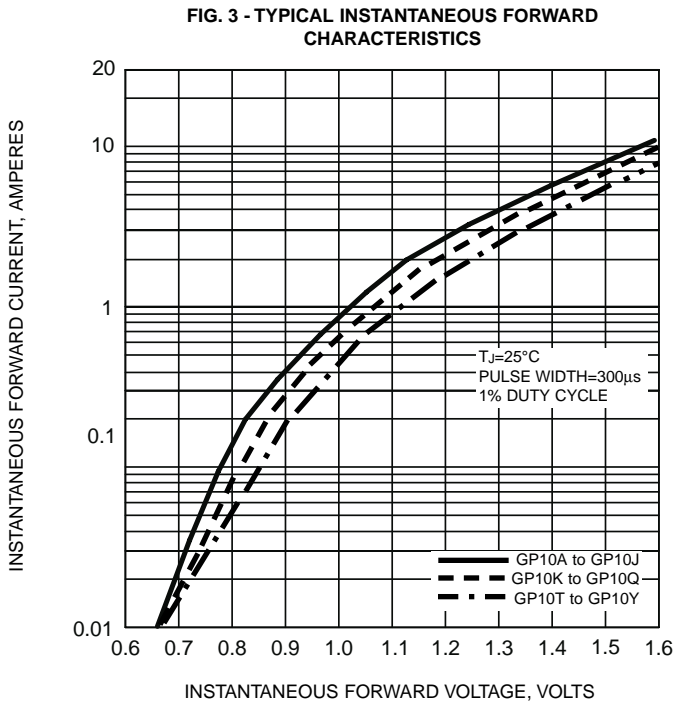
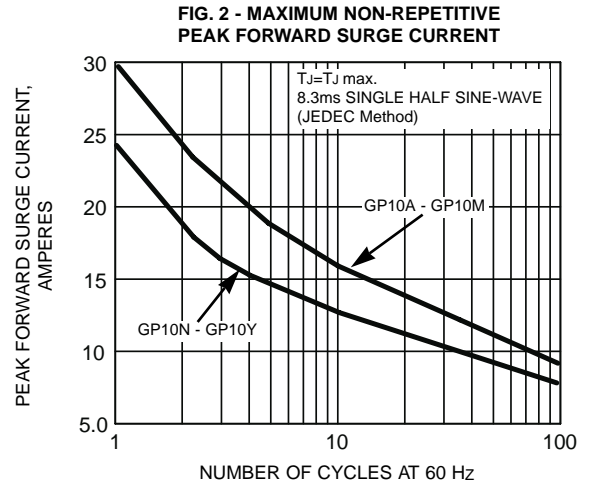
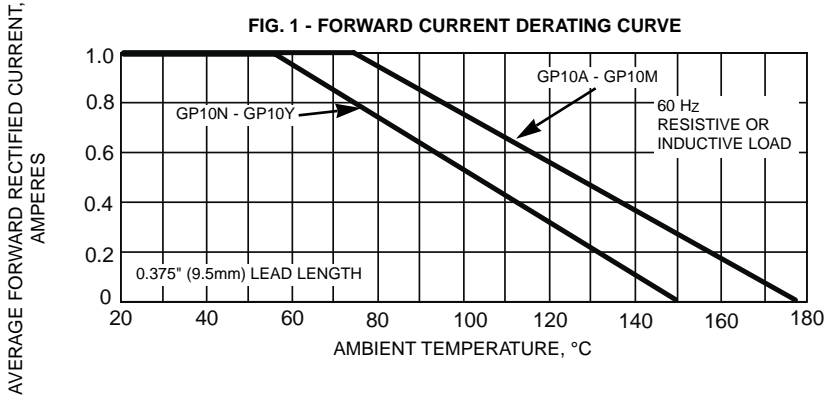
Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

	SYMBOLS	A	B	D	G	J	K	M	N	Q	T	V	W	Y	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50 to 1600 Volts (SEE FIG. 5)												Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG. 1)	$I_{(AV)}$	1.0												Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0						25.0						Amps	
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1			1.2			1.3						Volts	
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A=75^\circ\text{C}$	$I_{R(AV)}$	30.0												$\mu\text{A}$	
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$ 5.0						$T_A=125^\circ\text{C}$ 50.0						$\mu\text{A}$	
Typical reverse recovery time (NOTE 1)	$t_{rr}$	2.0												$\mu\text{s}$	
Typical junction capacitance (NOTE 2)	$C_J$	8.0			7.0			5.0						pF	
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	55.0												$^\circ\text{C}/\text{W}$	
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175						-65 to +150						$^\circ\text{C}$	

#### NOTES:

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

# RATINGS AND CHARACTERISTIC CURVES GP10A THRU GP10Y



**FIG. 5 - MAXIMUM REPETITIVE PEAK REVERSE VOLTAGE,  $V_{RRM}$**

GP10A	. . . . .	.50V
GP10B	. . . . .	.100V
GP10D	. . . . .	.200V
GP10G	. . . . .	.400V
GP10J	. . . . .	.600V
GP10K	. . . . .	.800V
GP10M	. . . . .	1.000V
GP10N	. . . . .	1.100V
GP10Q	. . . . .	1.200V
GP10T	. . . . .	1.300V
GP10V	. . . . .	1.400V
GP10W	. . . . .	1.500V
GP10Y	. . . . .	1.600V

