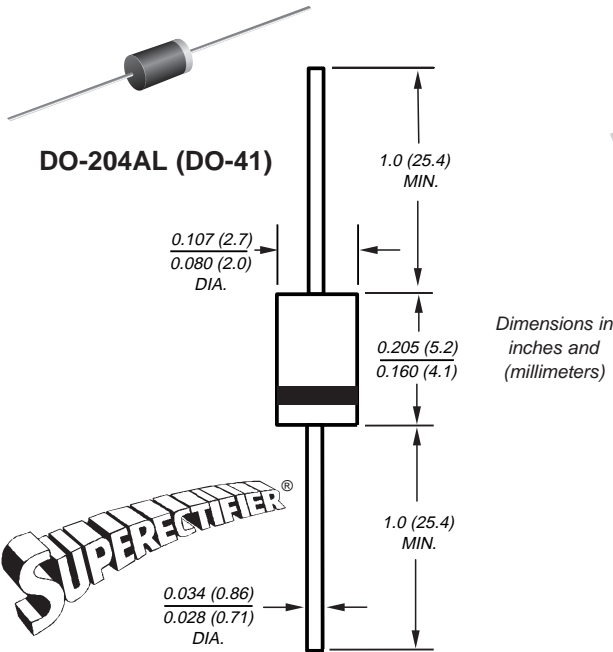


## Glass Passivated Junction Rectifiers

**Reverse Voltage**  
50 to 1600V  
**Forward Current** 1.0A



*Patented\**

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Cavity-free glass passivated 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 oz., 0.3 g

**NOTE:** Lead diameter is  $\frac{0.026}{0.023}$  ( $\frac{0.66}{0.58}$ ) for suffix "E" part numbers

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

### Maximum Ratings & Thermal Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameter	Symbol	A	B	D	G	J	K	M	N	Q	T	V	W	Y	Unit		
Maximum repetitive peak reverse voltage	$V_{RRM}$	50 to 1600V (See Fig. 5)													V		
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_{F(AV)}$	1.0													A		
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30										25					A
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													$\mu\text{A}$		
Typical thermal resistance (Note 1)	$R_{\theta JA}$	55													$^\circ\text{C}/\text{W}$		
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175										-65 to +150					$^\circ\text{C}$

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

Parameter	Symbol	A	B	D	G	J	K	M	N	Q	T	V	W	Y	Unit		
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.1			1.2			1.3								V	
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	5.0								50							$\mu\text{A}$
Typical reverse recovery time at $I_F = 0.5\text{A}, I_R = 1.0\text{A}, I_{rr} = 0.25\text{A}$	$t_{rr}$	3.0															$\mu\text{s}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	8.0			7.0			5.0									pF

**Note:** (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

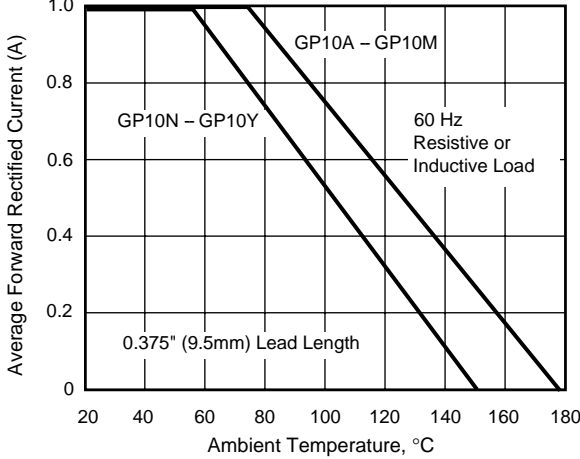
# GP10A thru GP10Y

Vishay Semiconductors  
formerly General Semiconductor

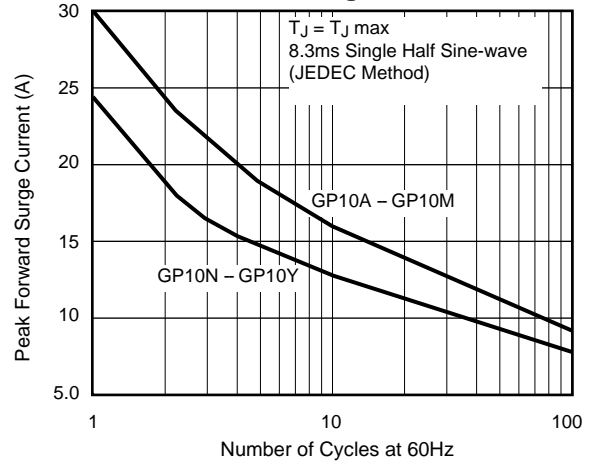


## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

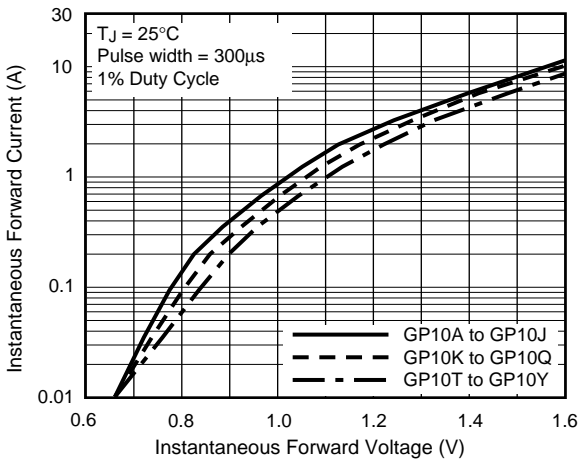
**Fig. 1 – Forward Current Derating Curve**



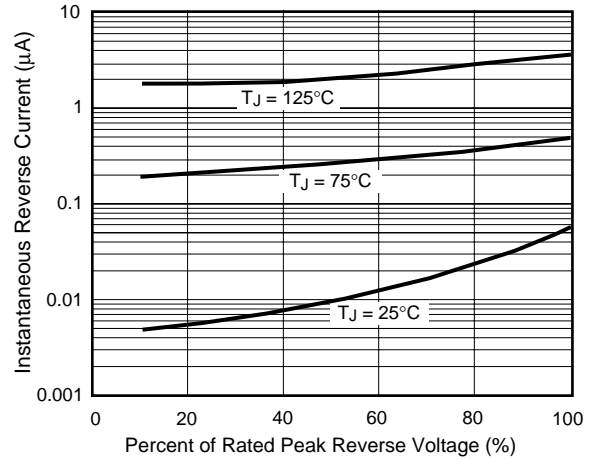
**Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics**



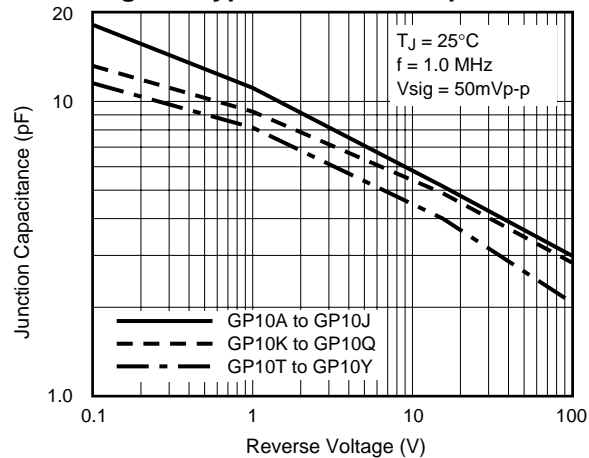
**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Maximum Repetitive Peak Reverse Voltage, V<sub>RRM</sub>**

GP10A.....	50V
GP10B.....	100V
GP10D.....	200V
GP10G.....	400V
GP10J.....	600V
GP10K.....	800V
GP10M.....	1000V
GP10N.....	1100V
GP10Q.....	1200V
GP10T.....	1300V
GP10V.....	1400V
GP10W.....	1500V
GP10Y.....	1600V

**Fig. 6 – Typical Junction Capacitance**



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