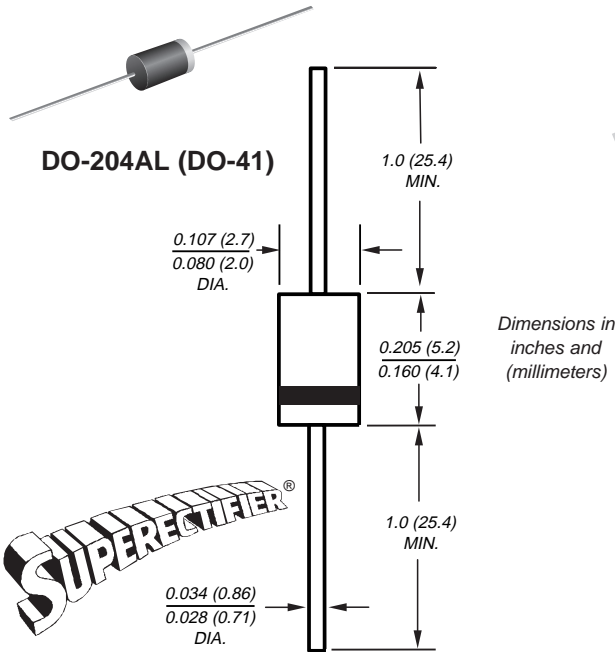


Glass Passivated Junction Rectifiers

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°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 $\frac{0.026 (0.66)}{0.023 (0.58)}$ 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°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												μA	
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°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		μA			
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								μs					
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_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

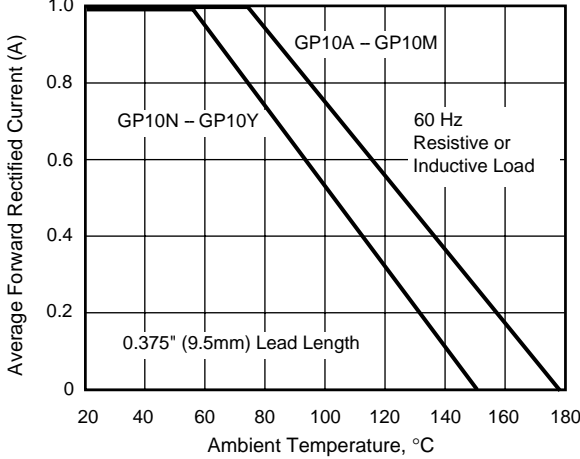


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

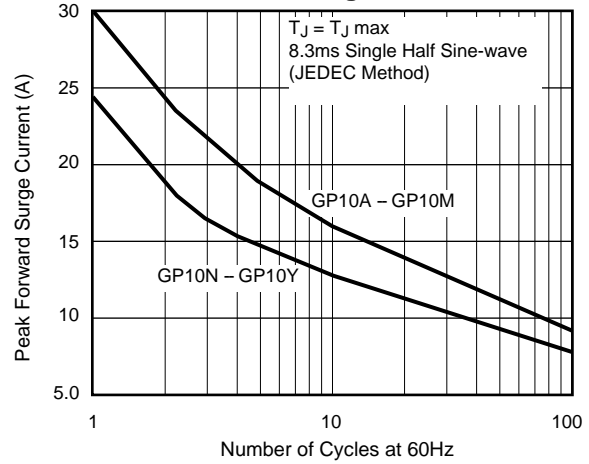


Fig. 3 – Typical Instantaneous Forward Characteristics

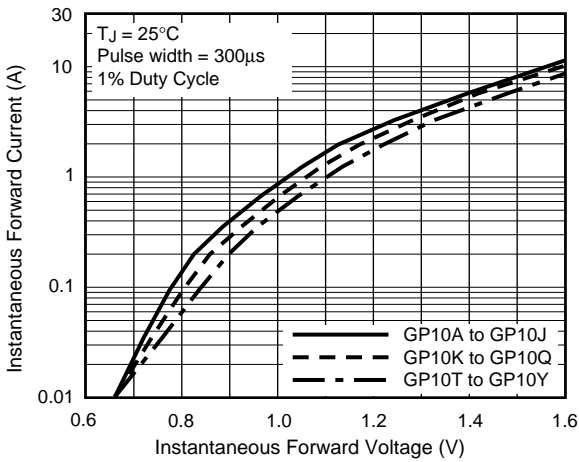


Fig. 4 – Typical Reverse Characteristics

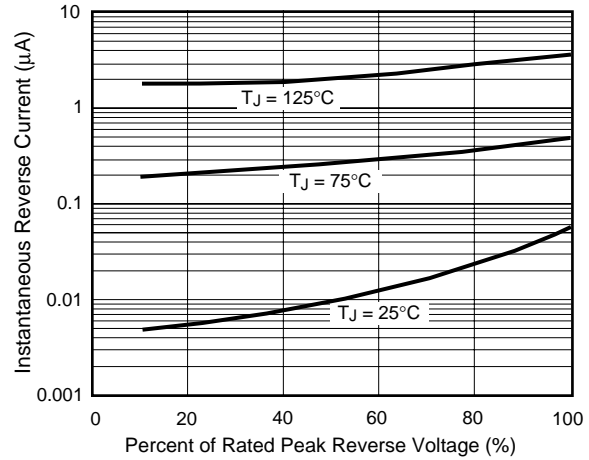


Fig. 5 – Maximum Repetitive Peak Reverse Voltage, V_{RRM}

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

