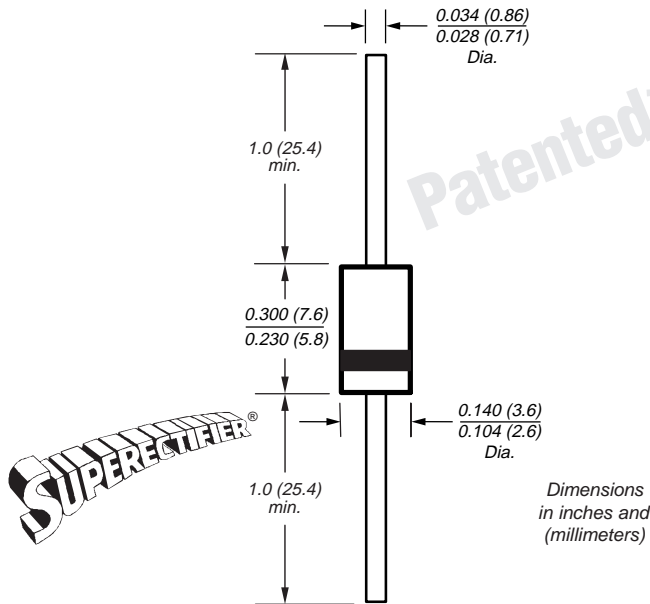


Glass Passivated Ultrafast Rectifier

DO-204AC (DO-15)

Reverse Voltage 800 to 1000V
Forward Current 1.0A



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

Features

- High temperature metallurgically bonded construction
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Cavity-free glass passivated junction
- Ultrafast recovery time for high efficiency
- Low forward voltage, high current capability
- Capable of meeting environmental standards of MIL-S-19500
- Low leakage current • High surge current capability
- Specified reverse surge capability
- High temperature soldering guaranteed: 350°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 oz., 0.4 g

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	BYV26DGP	BYV26EGP	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	800	1000	V
Maximum RMS voltage	V _{RMS}	560	700	V
Maximum DC blocking voltage	V _{DC}	800	1000	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 10ms single half sine-wave superimposed on rated load	I _{FSM}	30		A
Non repetitive peak reverse energy (Note 1)	E _{RSM}	10		mj
Typical thermal resistance (Note 2,3)	R _{θJA} R _{θJL}	70 16		°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +175		°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Minimum avalanche breakdown voltage at 100µA	V _{BR}	900	1100	V
Maximum instantaneous forward voltage at 1.0A	V _F	2.5	1.3	V
Maximum DC reverse current at rated DC blocking voltage	I _R	5.0	150	µA
Max. reverse recovery time at I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	t _{rr}	75		ns
Typical junction capacitance at 4.0V, 1MHz	C _J	15		pF

Notes: (1) Peak reverse energy measured at I_R = 400mA, T_J = T_J max. on inductive load, t = 20µs
(2) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads
(3) Thermal resistance from junction to lead at 0.375" (9.5mm) lead length with both leads attached to heatsink

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Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig. 1 – Maximum Forward Current Derating Curve

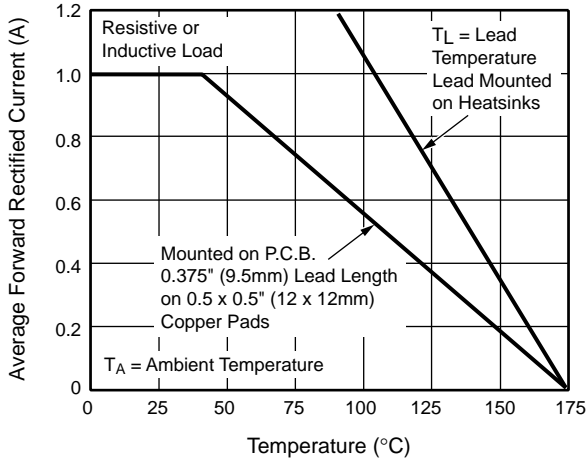


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

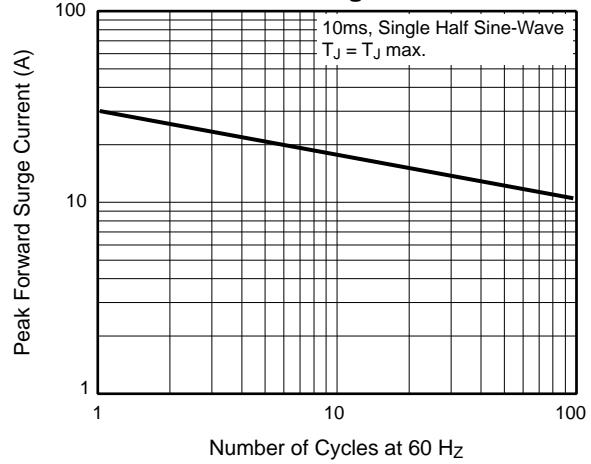


Fig. 3 – Typical Instantaneous Forward Voltage Characteristics

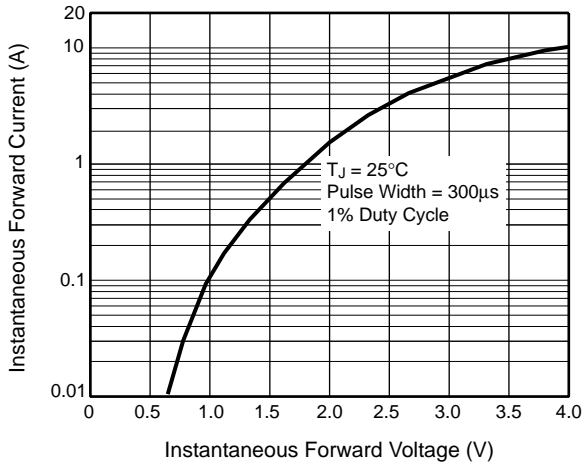


Fig. 4 – Typical Reverse Leakage Characteristics

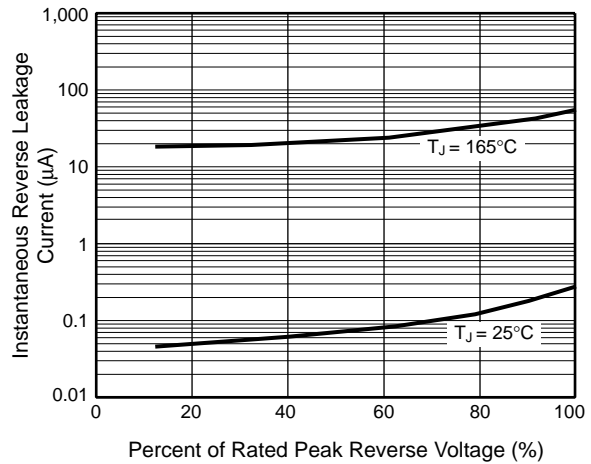


Fig. 5 – Typical Junction Capacitance

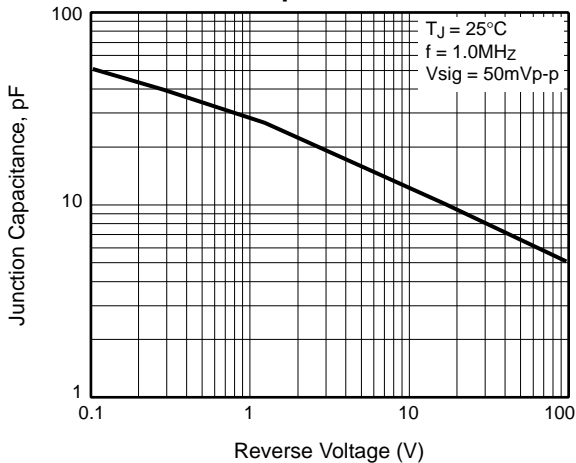


Fig. 6 – Typical Transient Thermal Impedance

