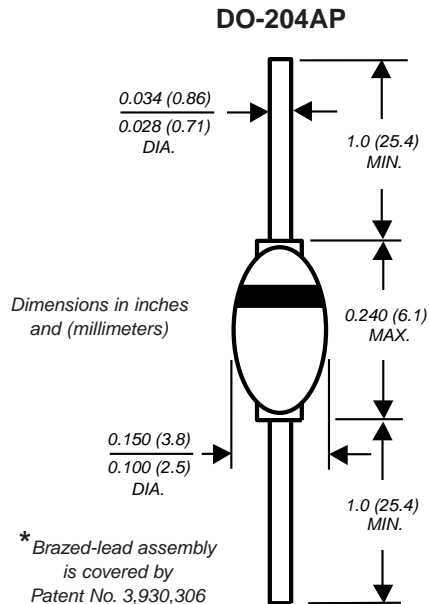


Glass Passivated Medium-Switching Junction Rectifiers

Reverse Voltage
200 to 1000V
Forward Current 1.0A



Patented*

Features

- High temperature metallurgically bonded construction
- 1.0 ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- Hermetically sealed package
- Capable of meeting environmental standards of MIL-S-19500
- 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-204AP solid glass body

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

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.02 oz., 0.56 g

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	1N5614	1N5616	1N5618	1N5620	1N5622	Unit
* Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	700	V
* Maximum DC blocking voltage	V_{DC}	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{F(AV)}$	1.0					A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50					A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	55					$^\circ\text{C}/\text{W}$
* Operating junction temperature range	T_J	-65 to +175					$^\circ\text{C}$
* Storage temperature range	T_{STG}	-65 to +200					$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	1N5614	1N5616	1N5618	1N5620	1N5622	Unit
* Minimum reverse breakdown voltage at $50\mu\text{A}$	V_{BR}	220	440	660	880	1100	V
* Maximum instantaneous forward voltage at 1.0A	V_F	1.2					V
* Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$ $T_A = 200^\circ\text{C}$	I_R	0.5 25 1500					μA
* Maximum reverse recovery time at $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$	t_{rr}	2.0					μs
Maximum junction capacitance at 12V, 1MHz	C_J	45	35	25	20	15	pF

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

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

Fig. 1 – Forward Current Derating Curve

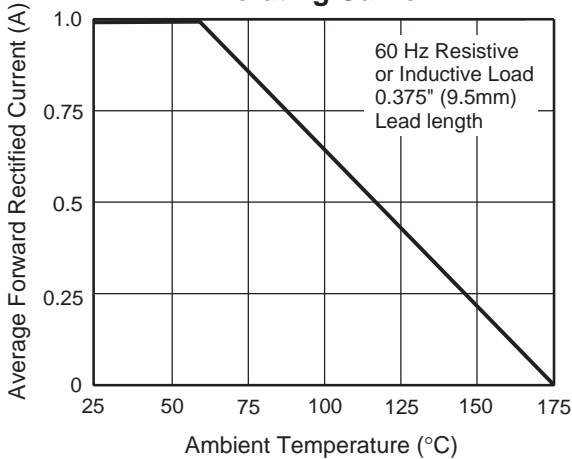


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

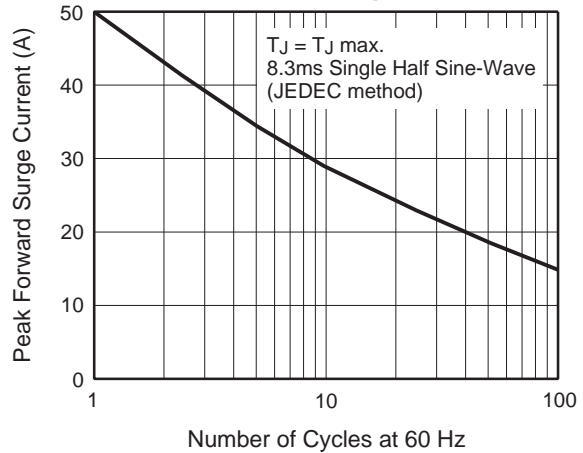


Fig. 3 – Typical Instantaneous Forward Characteristics

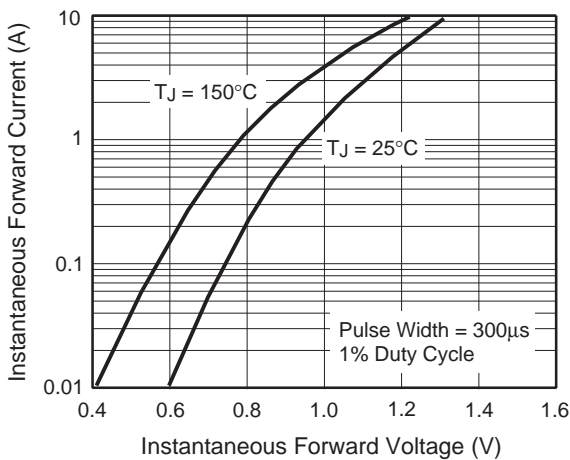


Fig. 4 – Typical Reverse Characteristics

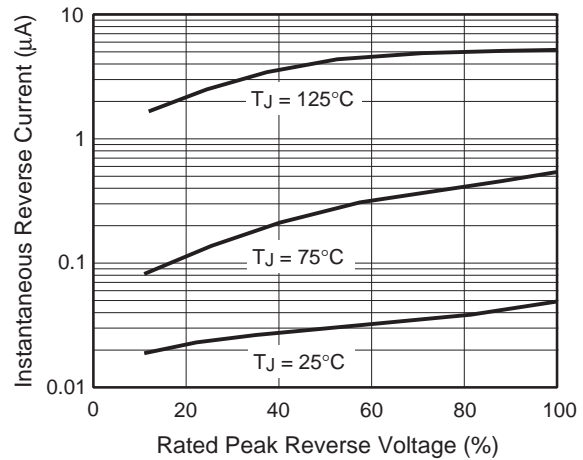


Fig. 5 – Typical Junction Capacitance

