



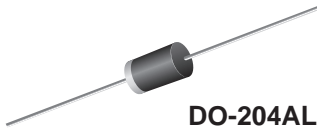
# JAN and JANTX 1N5614 thru 1N5622

Patented\*

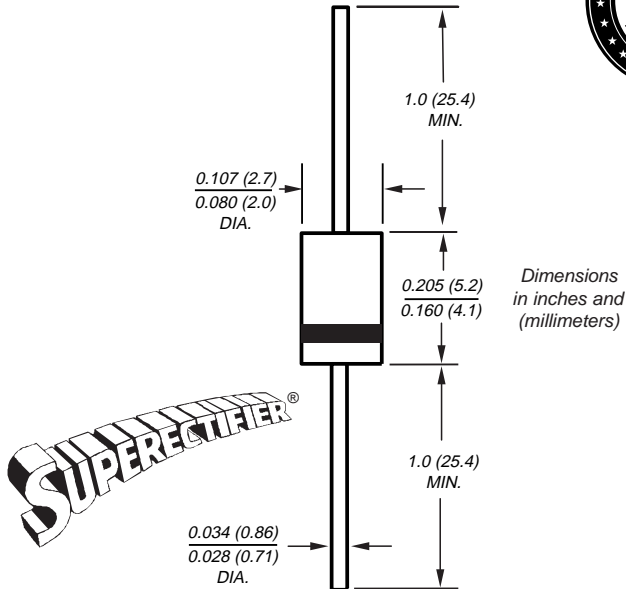
Vishay Semiconductors  
formerly GENERAL SEMICONDUCTOR®

## Glass Passivated Rectifiers

Reverse Voltage 200 to 1000V  
Forward Current 1.0A



DO-204AL (EG1)



### Features

- Qualified to MIL-PRF-19500/427
- Class 1 high temperature metallurgically bonded construction brazed > 600°C
- 1.0 ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway
- Typical  $I_R$  less than  $0.1\mu\text{A}$
- Cavity-free, glass passivated junction. In epoxy over hermetic glass
- High temperature soldering guaranteed:  $350^\circ\text{C}/10$  seconds, 0.375 (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

**Case:** DO-204AL, molded epoxy over glass body (EG1)

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

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any **Weight:** 0.015oz., 0.4g

**Flammability:** Epoxy is rated UL 94V-0.

\* 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	Prefix J = JAN Quality Level; Prefix JX = JANTX Quality Level					Unit
		J,JX 1N5614	J,JX 1N5616	J,JX 1N5618	J,JX 1N5620	J,JX 1N5622	
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 10 surges of 8.3ms each at 1 min. intervals super-imposed on $I_o = 750\text{mA}$ DC; $V_R =$ rated $V_{RRM}$ $T_A = 100^\circ\text{C}$ (per MIL-STD-750 m 4066)	$I_{FSM}$	25					A
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JL}$ $R_{\theta JA}$	38 45					$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175					$^\circ\text{C}$
Barometric Pressure	Hg	8			33		mm

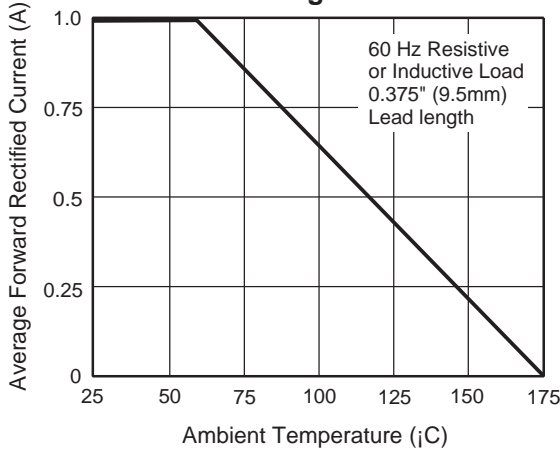
### Electrical Characteristics Ratings at $25^\circ\text{C}$ ambient temperature unless otherwise specified.

Minimum reverse breakdown voltage at $50\mu\text{A}$	$V_{BR}$	220	440	660	880	1100	V
Maximum instantaneous forward voltage $T_p = 300\mu\text{s}$ at 1.0A at 3.0A	$V_F$	1.1 1.3					V
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	$I_R$	0.5 25					$\mu\text{A}$
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					$\mu\text{s}$
Maximum junction capacitance at 4V, 1MHz	$C_J$	15					pF

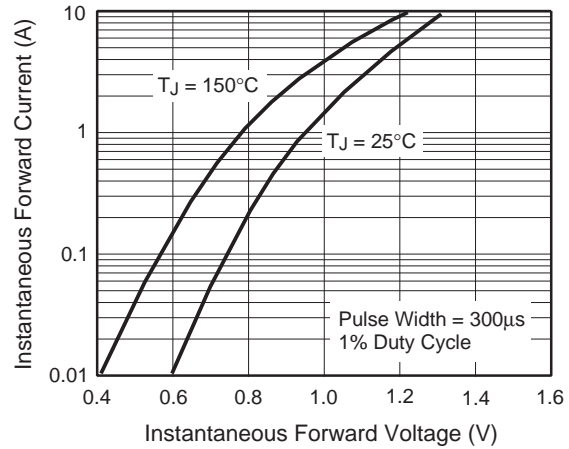
Notes: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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

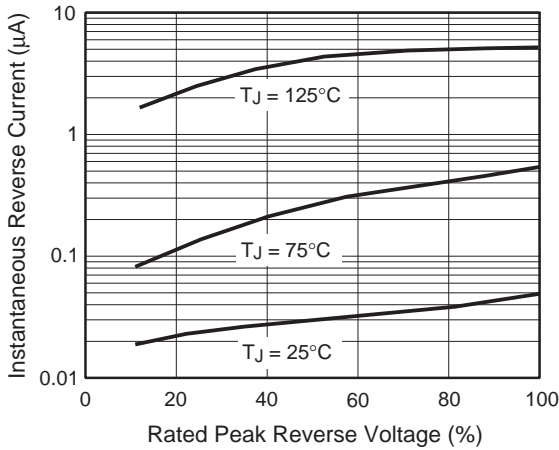
**Fig. 1 – Forward Current Derating Curve**



**Fig. 2 – Typical Instantaneous Forward Characteristics**



**Fig. 3 – Typical Reverse Characteristics**



**Fig. 4 – Typical Junction Capacitance**

