



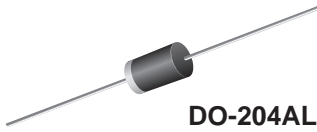
# JAN and JANTX 1N3611 thru 1N3614 and 1N3957

Patented\*

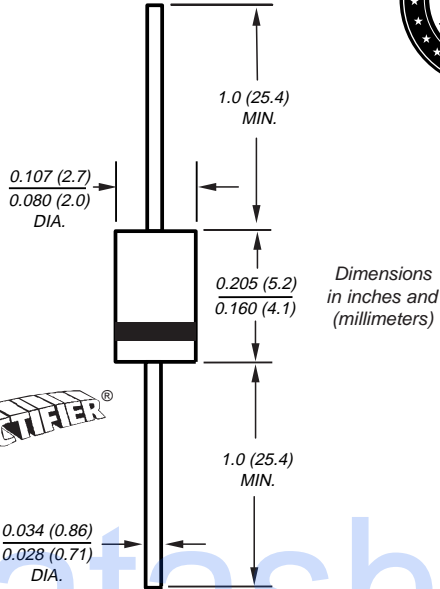
Vishay Semiconductors  
formerly GENERAL SEMICONDUCTOR®

## Glass Passivated Rectifiers

Reverse Voltage 200 to 1000V  
Forward Current 1.0A



DO-204AL (EG1)



### Features

- Qualified to MIL-PRF-19500/228
- Class 1 high temperature metallurgically bonded construction brazed > 600°C
- 1.0 ampere operation at T<sub>A</sub> = 55°C with no thermal runaway
- Typical I<sub>R</sub> less than 0.1µA
- Cavity-free, glass passivated junction. In epoxy over hermetic glass
- High temperature soldering guaranteed: 350°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°C ambient temperature unless otherwise specified.

Parameter	Symbol	Prefix J = JAN Quality Level; Prefix JX = JANTX Quality Level					Unit
		J,JX 1N3611	J,JX 1N3612	J,JX 1N3613	J,JX 1N3614	J,JX 1N3957	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at T <sub>A</sub> = 55°C	I <sub>F(AV)</sub>	1.0					A
Peak forward surge current 10 surges of 8.3ms each at 1 min. intervals super-imposed on I <sub>O</sub> = 750mA DC; V <sub>R</sub> = rated V <sub>RRM</sub> T <sub>A</sub> = 100°C (per MIL-STD-750 m 4066)	I <sub>FSM</sub>	30					A
Typical thermal resistance <sup>(1)</sup>	R <sub>θJL</sub> R <sub>θJA</sub>	38 45					°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175					°C
Barometric Pressure	Hg	8		54		87	mm

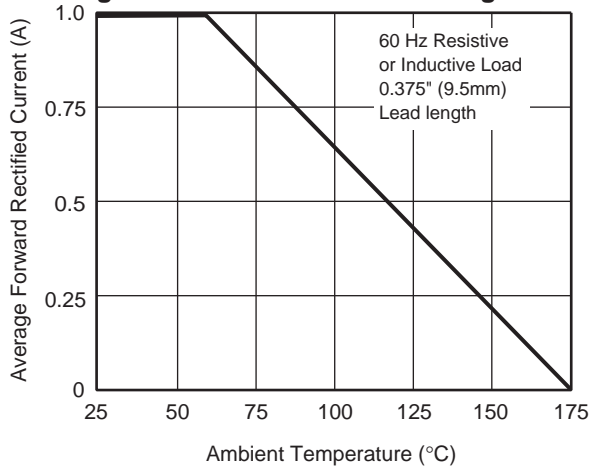
### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Minimum reverse breakdown voltage at 50µA	V <sub>BR</sub>	220	440	660	880	1100	V
Maximum instantaneous forward voltage T <sub>p</sub> = 300µs at 1.0A, T <sub>A</sub> = 25°C at 3.0A, T <sub>A</sub> = 25°C at 1.0A, T <sub>A</sub> = -65°C	V <sub>F</sub>	1.1 1.3 1.5					V
Maximum DC reverse current at rated DC blocking voltage T <sub>A</sub> = 25°C T <sub>A</sub> = 150°C	I <sub>R</sub>	1 300					µA
Typical reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	t <sub>rr</sub>	2.0					µs
Typical junction capacitance at 4V, 1MHz	C <sub>J</sub>	8.0					pF

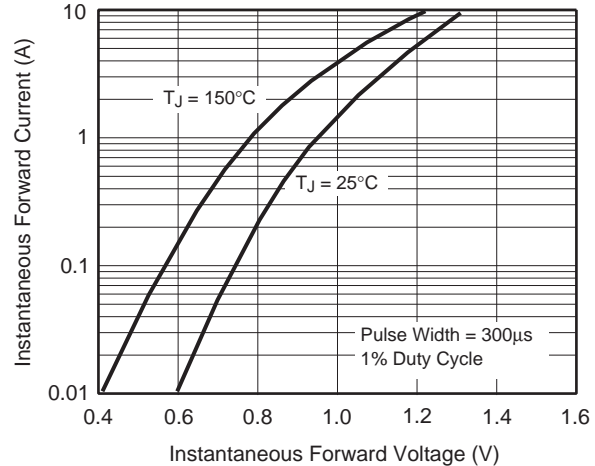
Notes: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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

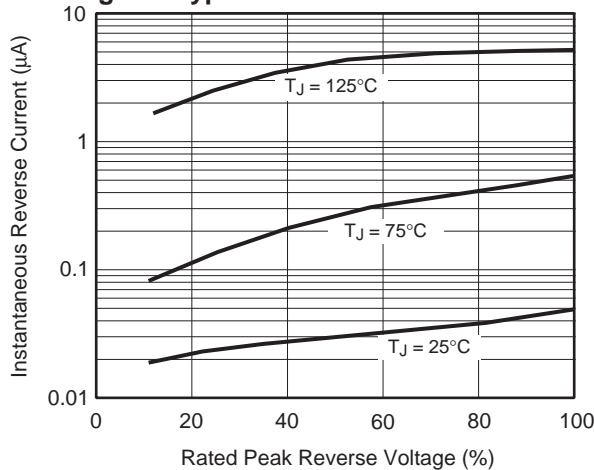
**Fig. 1 – Forward Current Derating Curve**



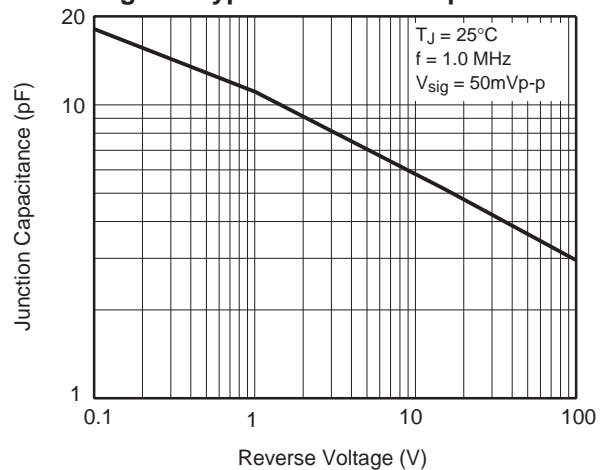
**Fig. 2 – Typical Instantaneous Forward Characteristics**



**Fig. 3 – Typical Reverse Characteristics**



**Fig. 4 – Typical Junction Capacitance**



**Fig. 5 – Typical Transient Thermal Impedance**

