

# 3A, 50V - 1000V Glass Passivated Rectifiers

### **FEATURES**

- Glass passivated chip junction
- High current capability, Low VF
- High reliability
- High surge current capability
- Low power loss, high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition



**DO-201AD** 





### **MECHANICAL DATA**

**Case:** DO-201AD Molding compound, UL flammability classification rating 94V-0

Part No. with suffix "H" means AEC-Q101 qualified

Packing code with suffix "G" means green compound (halogen-free)

Terminal: Pure tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test **Weight:** 1.2 g (approximately)

|   |                               | 1N           | 1N      | 1N    | 1N    | 1N    | 1N    | 1N    | UNIT |
|---|-------------------------------|--------------|---------|-------|-------|-------|-------|-------|------|
| PARAMETER   | SYMBOL                        | 5400G        | 5401G   | 5402G | 5404G | 5406G | 5407G | 5408G |      |
| Maximum repetitive peak reverse voltage   | $V_{RRM}$                     | 50           | 100     | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum RMS voltage   | $V_{RMS}$                     | 35           | 70      | 140   | 280   | 420   | 560   | 700   | V    |
| Maximum DC blocking voltage   | V <sub>DC</sub>               | 50           | 100     | 200   | 400   | 600   | 800   | 1000  | V    |
| Maximum average forward rectified current   | I <sub>F(AV)</sub>            |              |         | 3     |       |       |       | Α     |      |
| Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>              | 125          |         |       |       |       | А     |       |      |
| Maximum instantaneous forward voltage (Note 1) @ 3 A                                | V <sub>F</sub>                | 1            | 1.1 1.0 |       |       |       | V     |       |      |
| Maximum reverse current @ rated VR T <sub>J</sub> =25 °C T <sub>J</sub> =125 °C     | I <sub>R</sub>                | 5<br>100     |         |       |       |       | μΑ    |       |      |
| Typical junction capacitance (Note 2)   | CJ                            | 25           |         |       |       |       | pF    |       |      |
| Typical thermal resistance  | $R_{	heta JC} \ R_{	heta JA}$ | 15<br>45     |         |       |       | °C/W  |       |       |      |
| Operating junction temperature range  | T <sub>J</sub>                | - 55 to +150 |         |       |       | °C    |       |       |      |
| Storage temperature range   | T <sub>STG</sub>              | - 55 to +150 |         |       |       | °C    |       |       |      |

Note1: Pulse Test with PW=300µs, 1% Duty Cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.



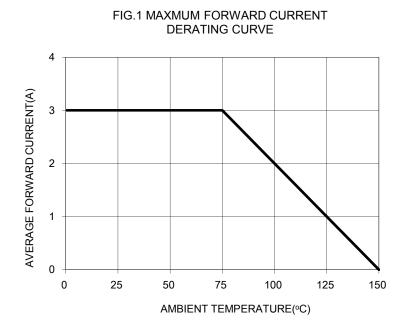
| ORDERING INFORMATION |          |              |              |          |                        |  |
|----------------------|----------|--------------|--------------|----------|------------------------|--|
| PART NO.             | PART NO. | PACKING CODE | PACKING CODE | PACKAGE  | PACKING                |  |
|                      | SUFFIX   |              | SUFFIX       |          |                        |  |
| 1N540xG<br>(Note 1)  | Н        | A0           | G            | DO-201AD | 500 / Ammo box         |  |
|                      |          | R0           |              | DO-201AD | 1,250 / 13" Paper reel |  |
|                      |          | B0           |              | DO-201AD | 500 / Bulk packing     |  |
|                      |          | X0           |              | DO-201AD | Forming                |  |

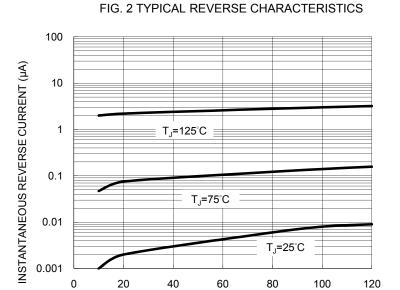
Note 1: "x" defines voltage from 50V (1N5400G) to 1000V (1N5408G)

| EXAMPLE            |          |                    |              |                        |                                      |  |  |
|--------------------|----------|--------------------|--------------|------------------------|--------------------------------------|--|--|
| PREFERRED PART NO. | PART NO. | PART NO.<br>SUFFIX | PACKING CODE | PACKING CODE<br>SUFFIX | DESCRIPTION                          |  |  |
| 1N5408GHA0G        | 1N5408G  | Н                  | A0           | G                      | AEC-Q101 qualified<br>Green compound |  |  |

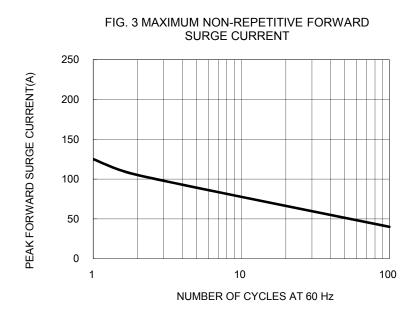
#### **RATINGS AND CHARACTERISTICS CURVES**

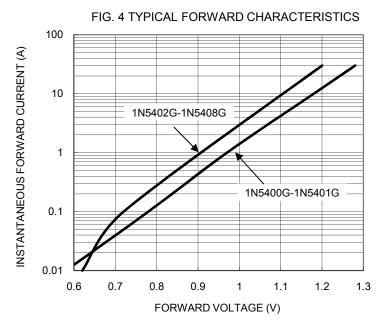
(T<sub>A</sub>=25°C unless otherwise noted)





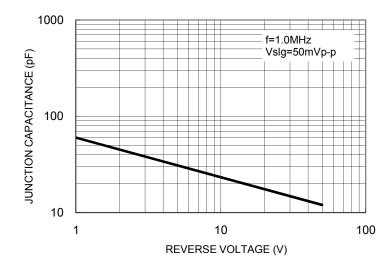
PERCENT OF RATED PEAK REVERSE VOLTAGE (%)



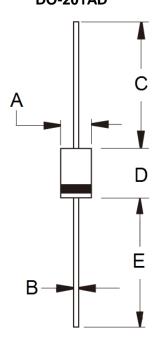




### FIG. 5 TYPICAL JUNCTION CAPACITANCE



# PACKAGE OUTLINE DIMENSIONS DO-201AD



| DIM.   | Unit  | (mm) | Unit (inch) |       |  |  |
|--------|-------|------|-------------|-------|--|--|
| Dilvi. | Min   | Max  | Min         | Max   |  |  |
| Α      | 5.00  | 5.60 | 0.197       | 0.220 |  |  |
| В      | 1.20  | 1.30 | 0.048       | 0.052 |  |  |
| С      | 25.40 | 1    | 1.000       | -     |  |  |
| D      | 8.50  | 9.50 | 0.335       | 0.375 |  |  |
| Е      | 25.40 | -    | 1.000       | -     |  |  |

# **MARKING DIAGRAM**



P/N = Specific Device Code G = Green Compound

YWW = Date Code F = Factory Code



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1N5400G 1N5401G 1N5402G 1N5404G 1N5406G 1N5407G 1N5408G 1N5408GHR0G 1N5401G R0
1N5408G R0 1N5404G R0 1N5407G R0 1N5406G R0 1N5400GHR0G 1N5400G R0G 1N5408GHR0
1N5407GHR0G 1N5406GHR0G 1N5404GHR0 1N5404GHR0G 1N5401GHR0G 1N5402GHR0G 1N5407G R0G
1N5408G R0G 1N5400G R0 1N5402G R0 1N5402G R0G 1N5404G R0G 1N5406G R0G 1N5401G R0G
1N5407GHA0G 1N5408GHA0G 1N5406G A0G 1N5406GHA0G 1N5401GHA0G 1N5404G A0G 1N5408G A0G
1N5407G A0G 1N5404GH 1N5406GH 1N5407GH 1N5408GH