RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

# 1N5400G THRU 1N5408G

## *GLASS PASSIVATED RECTIFIER*

***VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Amperes***

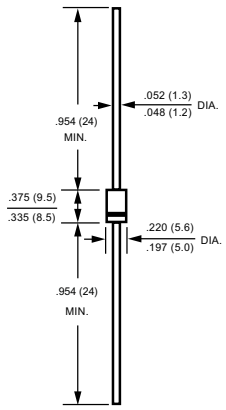
### FEATURES

* Low cost
* Low leakage
* Low forward voltage drop
* High current capability
* P/N suffix V means AEC-Q101 qualified, e.g:1N5400GV
* P/N suffix V means Halogen-free

### MECHANICAL DATA

* Case: Molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight:1.2 grams

**DO-201AD**




Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

MAXIMUM RATINGS (@ $T_A$=25 °C unless otherwise noted)

| RATINGS | SYMBOL | 1N5400G | 1N5401G | 1N5402G | 1N5404G | 1N5406G | 1N5407G | 1N5408G | UNITS |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at $T_L$ = 105 °C | $I_O$ | 3.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 200 | | | | | | | Amps |
| Typical Current Squared Time | $I^2T$ | 166 | | | | | | | $A^2S$ |
| Typical ThermalResistance(Note2) | $R_{\theta JA}$ | 20 | | | | | | | °C/W |
| | $R_{\theta JL}$ | 5.0 | | | | | | | |
| TypicalJunctionCapacitance(Note1) | $C_J$ | 30 | | | | | | | pF |
| Operating and Storage Temperature Range | $T_J$, $T_{STG}$ | -55 to + 150 | | | | | | | °C |

ELECTRICAL CHARACTERISTICS (@$T_A$=25 °C unless otherwise noted)

| CHARACTERISTICS | | SYMBOL | 1N5400G | 1N5401G | 1N5402G | 1N5404G | 1N5406G | 1N5407G | 1N5408G | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage at 3.0A DC | | $V_F$ | .98 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @$T_A$ = 25°C | $I_R$ | 0.5 | | | | | | | uAmps |
| | @$T_A$ =150 °C | | 2 | | | | | | | mAmps |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. Typical Thermal Resistance : At 9.5mm lead lengths,PCB mounted.

2020-04
REV:D

## RATING AND CHARACTERISTICS CURVES ( 1N5400G THRU 1N5408G)

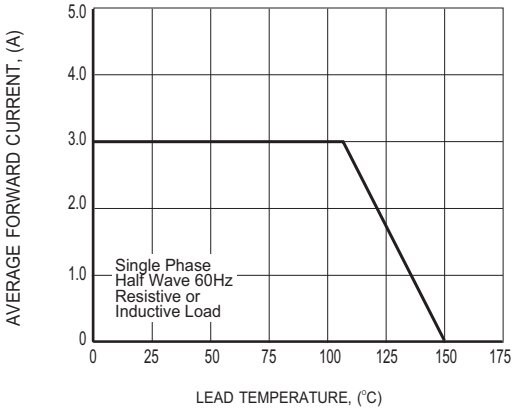



FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

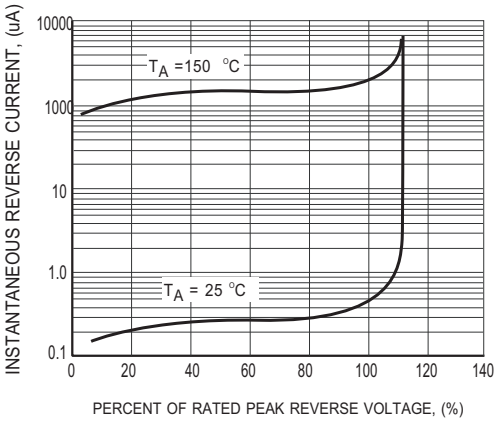



FIG.2 MAXIMUM REVERSE CHARACTERISTICS

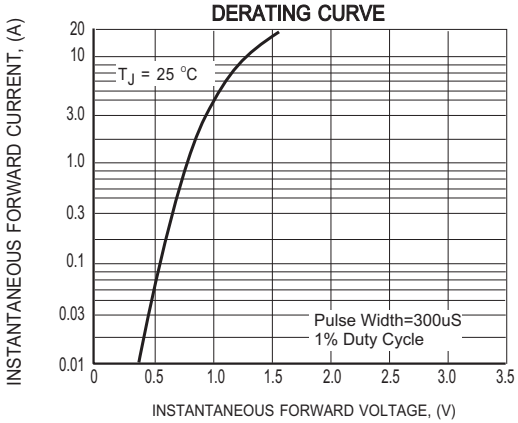



FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

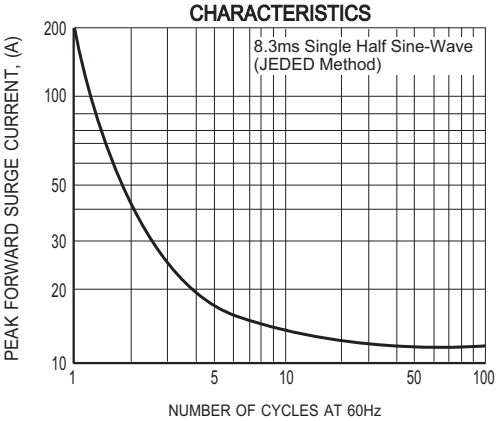



FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

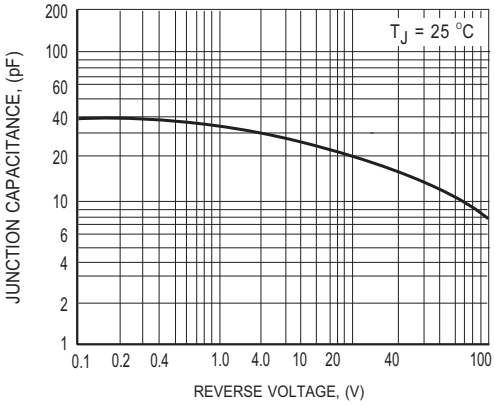
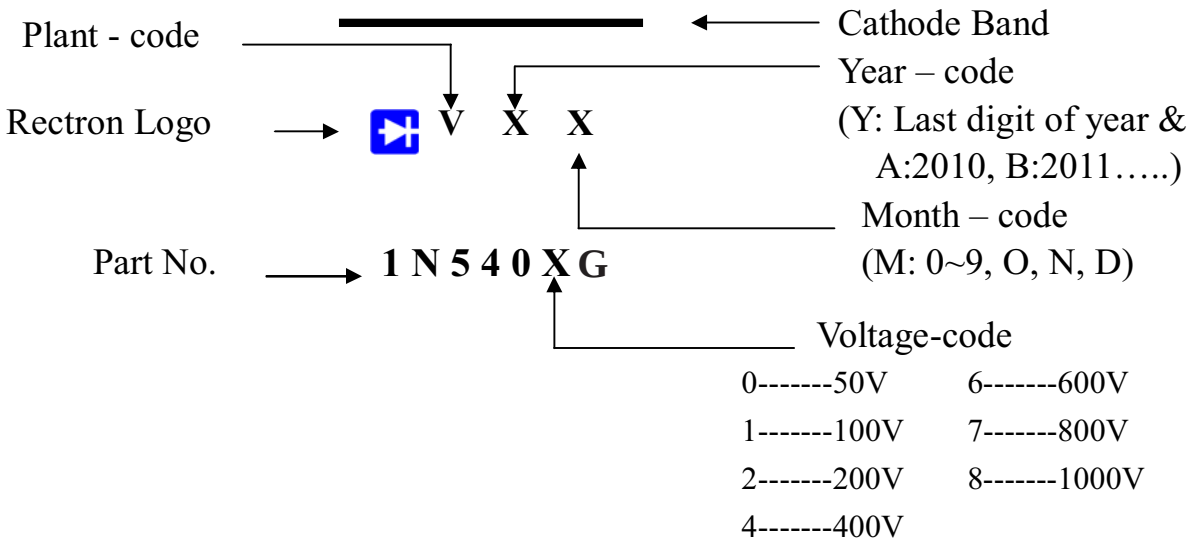



FIG.5 TYPICAL JUNCTION CAPACITANCE

## Marking Description



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

## BULK PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---|---|---|---|---|---|---|
| DO-201 | -B | 500 | 300*73*40 | 347*320*271 | 12,000 | 15.9 |

## REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---|---|---|---|---|---|---|---|---|---|
| DO-201 | -T | 1,200 | 1,200 | 5.0 | 52 | 330 | 355*350*335 | 4,800 | 9.10 |

## AMMO PACK

| PACKAGE | PACKING CODE | REEL ( EA ) | COMPONENT SPACE(mm) | TAPE SPACE (mm) | BOX SIZE (mm) | CARTON SIZE(mm) | CARTON ( EA ) | GROSS WEIGHT (Kg) |
|---|---|---|---|---|---|---|---|---|
| DO-201 | -F | 600 | 9.5 | 52 | 255*73*100 | 400*268*225 | 6,000 | 9.9 |

# DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.