

**GLASSPASSIVATED JUNCTION PLASTIC RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

**FEATURES**

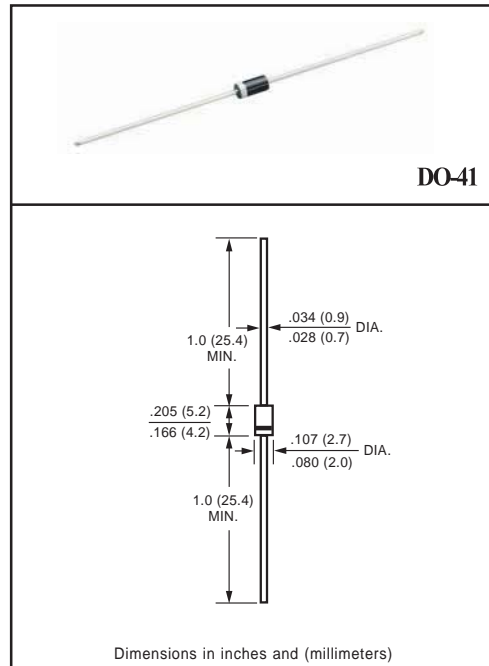
- \* High reliability
- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* Glass passivated junction
- \* P/N suffix V means AEC-Q101 qualified
- \* P/N suffix V means Halogen-free

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram

**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 (At TA = 25°C unless otherwise noted)**

RATINGS	SYMBOL	1N4001G	1N4002G	1N4003G	1N4004G	1N4005G	1N4006G	1N4007G	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 75°C	I <sub>O</sub>	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30							Amps
Typical Current Squared Time	I <sup>2</sup> T	3.74							A <sup>2</sup> S
Typical Junction Capacitance (Note)	C <sub>J</sub>	15							pF
Typical Thermal Resistance	R <sub>θJA</sub>	50							°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175							°C

**ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	1N4001G	1N4002G	1N4003G	1N4004G	1N4005G	1N4006G	1N4007G	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	0.2							uAmps
	@ TA = 150°C	400							

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts

## RATING AND CHARACTERISTIC CURVES ( 1N4001G THRU 1N4007G )

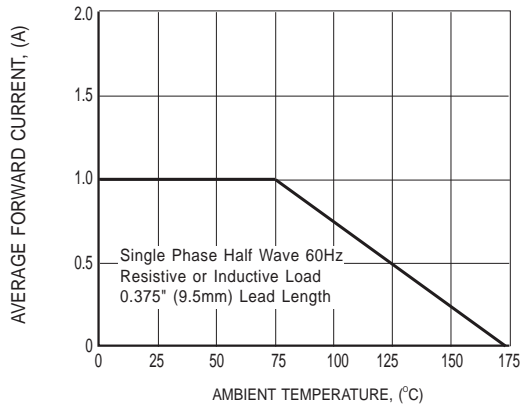


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

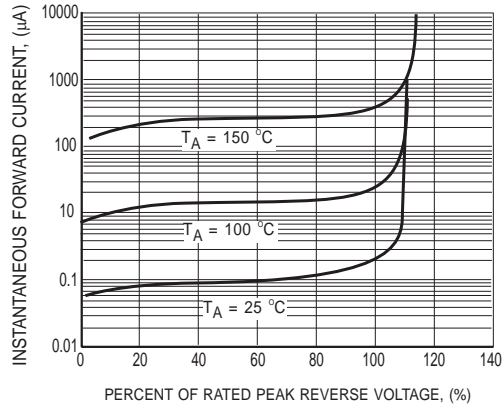


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

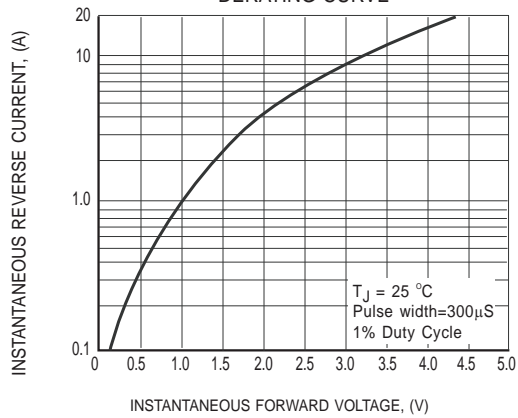


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

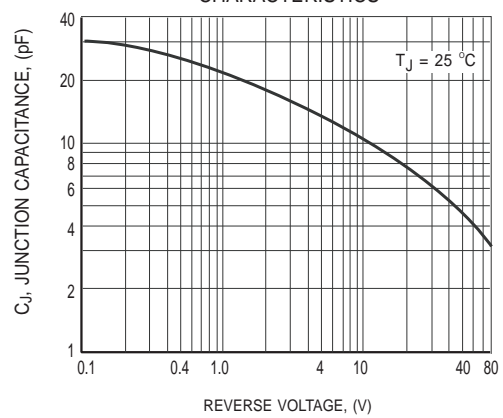


FIG.4 TYPICAL JUNCTION CAPACITANCE

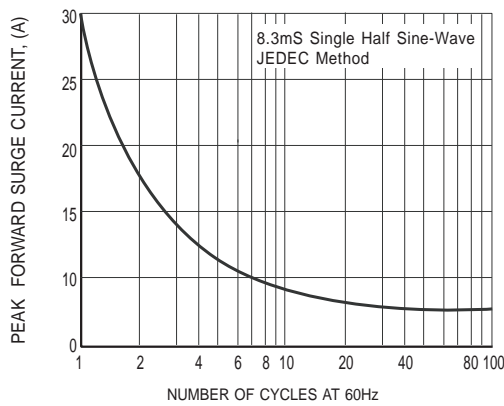


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

# AXIAL LEAD TAPING SPECIFICATIONS FOR RECTIFIERS

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below.

COMPONENT OUTLINE	COMPONENT PITCH A	INNER TAPE PITCH B		CUMULATIVE PITCH TOLERANCE
	$\pm 0.5\text{mm} (.020")$	$\pm 0.5\text{mm} (.020")$	$\pm 1.5\text{mm} (.059")$	
R-1	5.0mm	26.0mm		2.0mm/20pitch
A-405	5.0mm	26.0mm		2.0mm/20pitch
A-405	5.0mm		52.4mm	2.0mm/20pitch
DO-41	5.0mm	26.0mm		2.0mm/20pitch
DO-41	5.0mm		52.4mm	2.0mm/10pitch
DO-15	5.0mm		52.4mm	2.0mm/10pitch
R-3	5.0mm		52.4mm	2.0mm/10pitch
DO-201AD	10.0mm		52.4mm	2.0mm/10pitch
R-6	10.0mm		52.4mm	2.0mm/10pitch

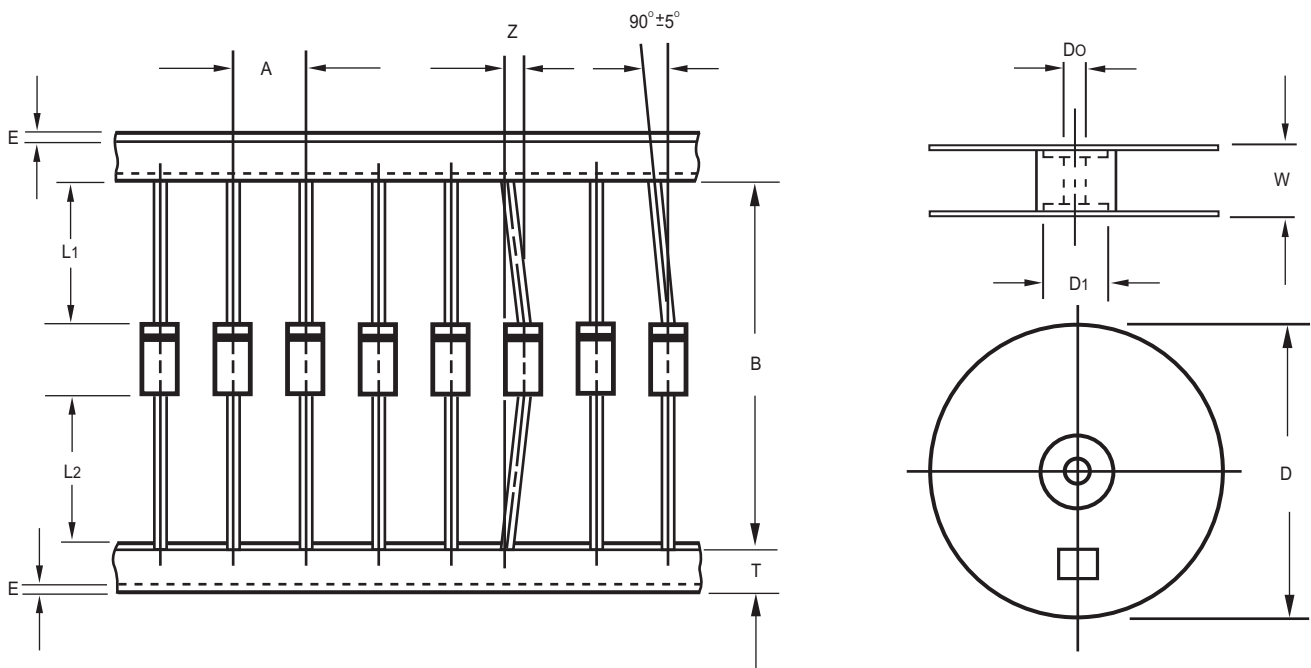


Fig.: Configuration of AXIAL LEAD TAPING

ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2 Max.	0.047 Max.
Tape width	T	$6.0 \pm 0.4$	$0.236 \pm 0.016$
Exposed adhesive	E	0.8 Max.	0.032 Max.
Body eccentricity	$ L1-L2 $	1.0 Max.	0.039 Max.
Reel outside diameter	D	330.0	13.0
Reel inner diameter	D1	$85.7 \pm 0.3$	$3.374 \pm 0.012$
Feed hole diameter	Do	$30.5 \pm 0.4$	$1.201 \pm 0.016$
Reel width	W	$79.0 \pm 1.0$	$3.110 \pm 0.039$

- Notes : 1. Each component lead shall be sandwiched between tapes for a minimum of 3.2mm (0.126").  
2. The reel width "W" for 26mm taping is  $50.0 \pm 1.0\text{mm} (1.97" \pm 0.040")$ .

## 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-41	-B	1,000	194*75*21	415*220*255	50,000	16.2

eg(TYPE):1N4007G-B

### 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-41	-T	5,000	5,000	5.0	52	330	355*350*335	20,000	10.49

eg(TYPE):1N4007G-T

### 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-41	-F	3,000	5.0	52	255*73*100	400*268*225	30,000	13.0
DO-41	-E	3,000	5.0	26	256*48*94	365*270*217	42,000	12.41

eg(TYPE):1N4007G-F,1N4007G-E

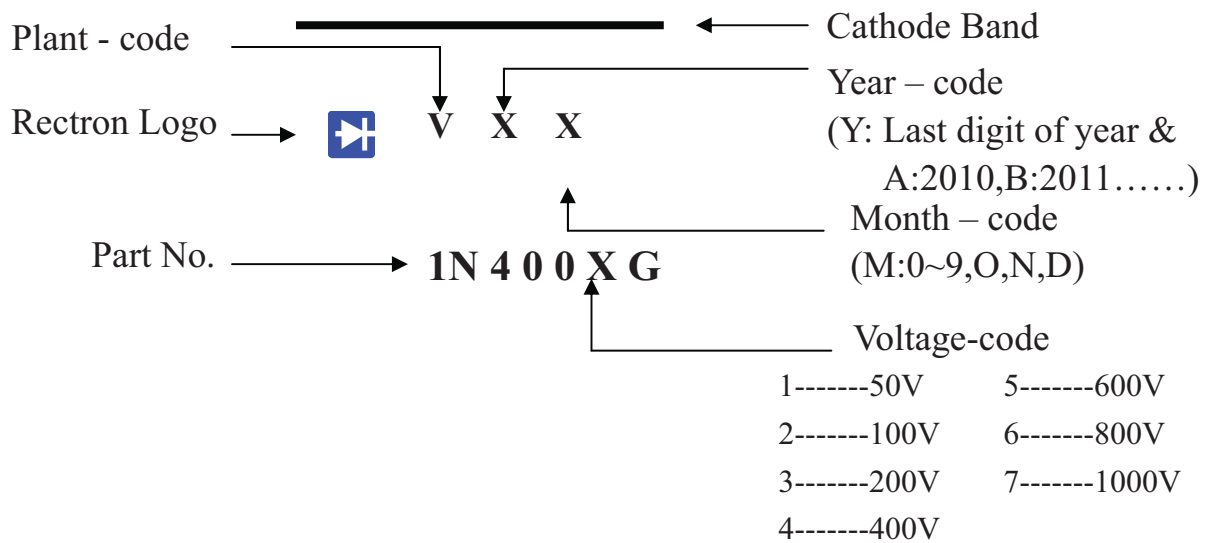


## Attachment information about 1N400XG

### 1. Internal Circuit



### 2. Marking on the body



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