RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

1N4001G THRU 1N4007G

GLASSPASSIVATED JUNCTIONPLASTICRECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

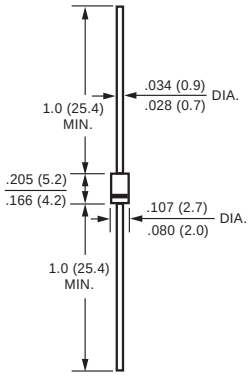
FEATURES

* 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

DO-41



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 (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	1N4001G	1N4002G	1N4003G	1N4004G	1N4005G	1N4006G	1N4007G	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_A = 75°C	I_O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Typical Current Squared Time	I^2T	3.74							A^2S
Typical Junction Capacitance (Note)	C_J	15							pF
Typical Thermal Resistance	$R\theta JA$	50							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to + 175							°C

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

CHARACTERISTICS		SYMBOL	1N4001G	1N4002G	1N4003G	1N4004G	1N4005G	1N4006G	1N4007G	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC		V_F	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	0.2							uAmps
	@T_A = 150°C		400							

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

2018-01
REV:B

RATING AND CHARACTERISTIC CURVES (1N4001G THRU 1N4007G)

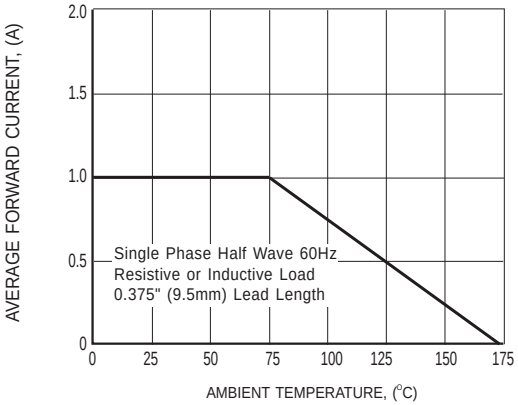


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

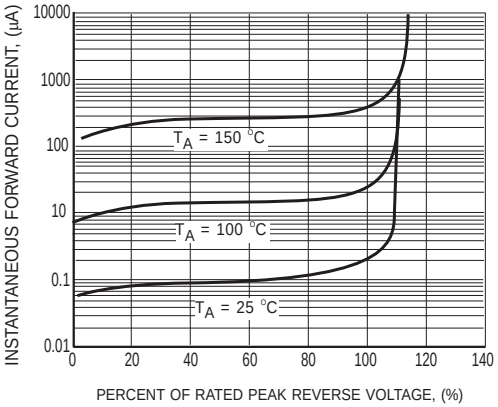


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

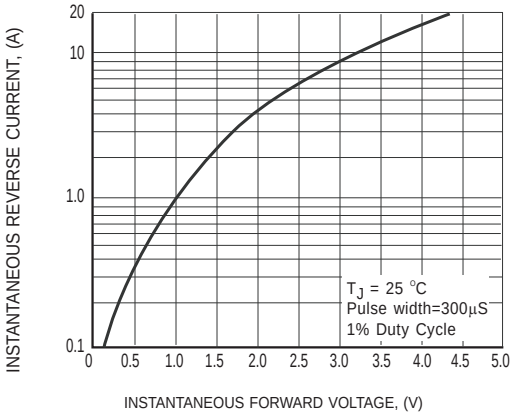


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

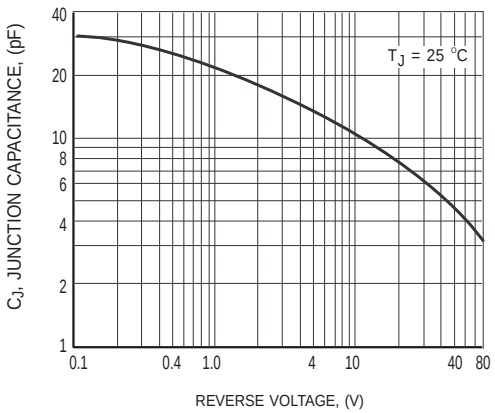


FIG.4 TYPICAL JUNCTION CAPACITANCE

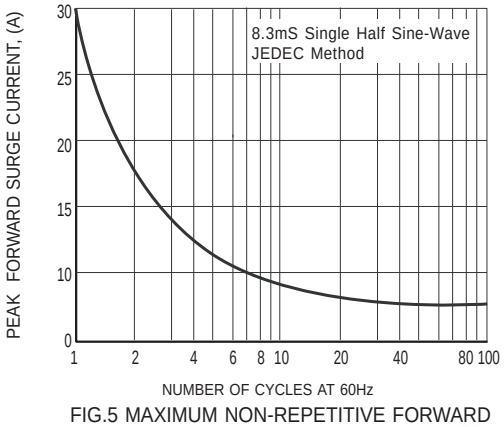


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

AXIAL LEAD TAPING SPECIFICATIONS FOR RECTIFIERS

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

COMPNENT OUTLINE	COMPONENT PITCH A	INNER TAPE PITCH B		CUMULATIVE PITCH TOLERANCE
	±0.5mm (.020")	±0.5mm (.020")	±1.5mm (.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

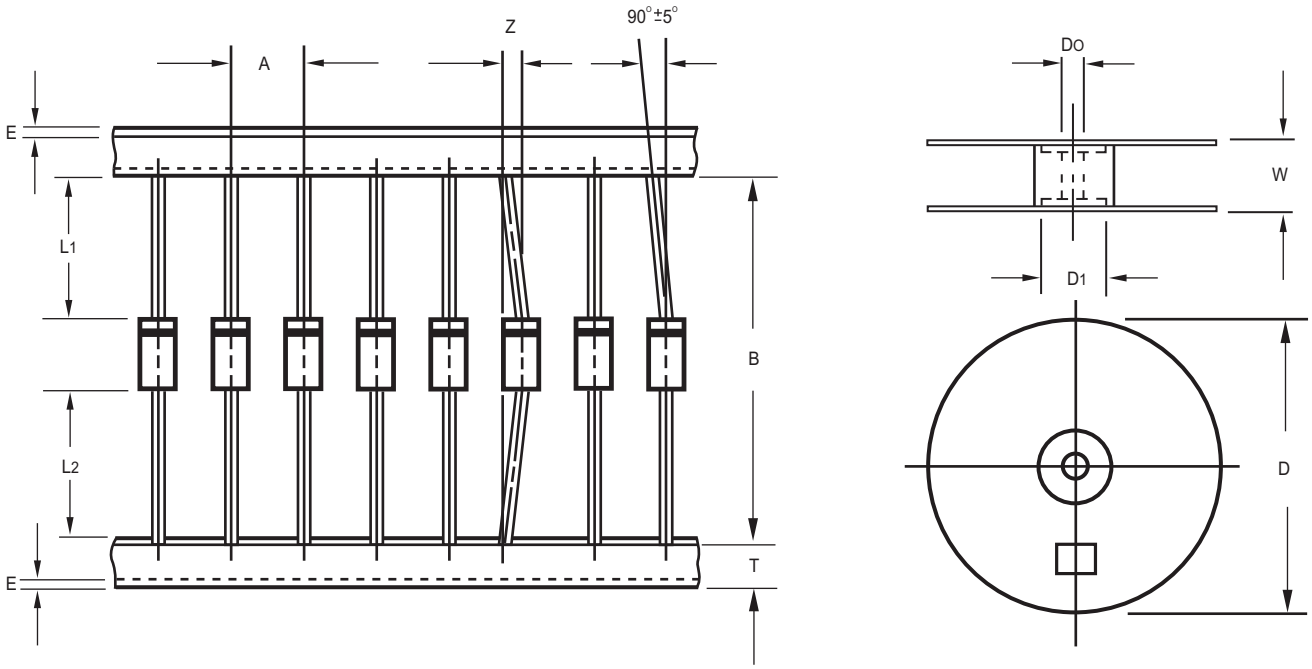


Fig.: Configuration of AXIAL LEAD TAPING

ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2 Max.	0.047 Max.
Tape width	T	6.0±0.4	0.236±0.016
Exposed adhesive	E	0.8 Max.	0.032 Max.
Body eccentricity	IL1-L2I	1.0 Max.	0.039 Max.
Reel outside diameter	D	330.0	13.0
Reel inner diameter	D1	85.7±0.3	3.374±0.012
Feed hole diameter	D0	30.5±0.4	1.201±0.016
Reel width	W	79.0±1.0	3.110±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±1.0mm (1.97" ± 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

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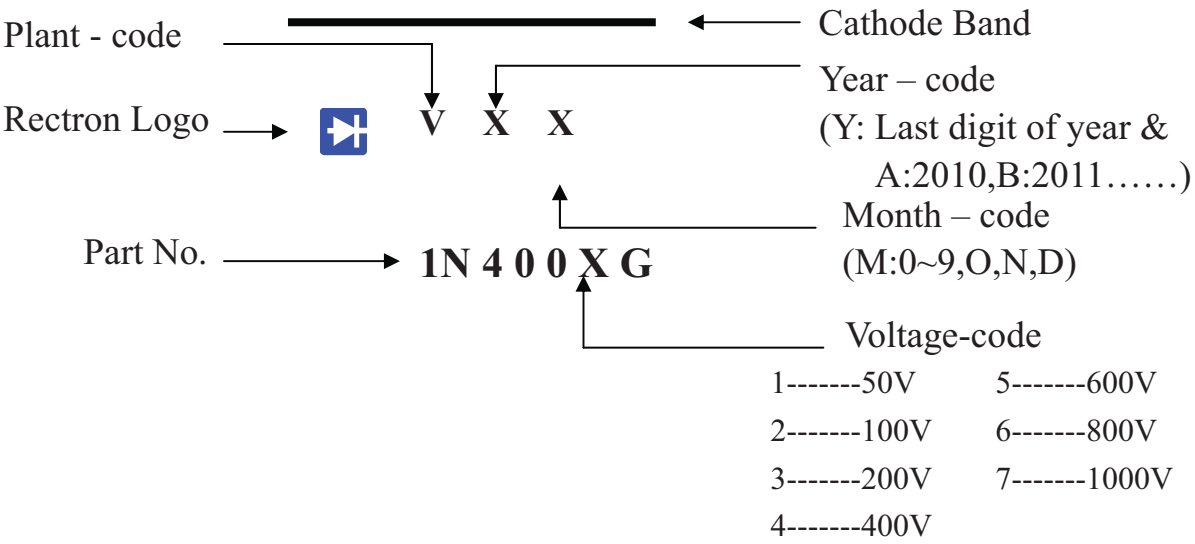
Attachment information about 1N400XG

1. Internal Circuit

2. Marking on the body



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Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9