# imall

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# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





1N4001G THRU 1N4007G

#### Technical Data Data Sheet N0544, Rev. A



# 1N4001G THRU 1N4007G 1.0A GLASS PASSIVATED RECTIFIER



### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

# **Circuit Diagram**



# **Mechanical Data**

- Case: molded plastic
- Terminals: Plated leads, solderable per MIL-STD-202, Method 208
- Polarity: Cathode band
- Mounting Position: Any
- Weight:0.34 grams(approx)

# **Maximum Ratings and Electrical Characteristics** @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	Symbol	1N 4001G	1N 4002G	1N 4003G	1N 4004G	1N 4005G	1N 4006G	1N 4007G	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	VRMS	35	70	140	280	420	560	700	V
Average forward rectified output current @T <sub>A</sub> = 75°C	lo				1.0				А
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30			A				
Forward Voltage @I <sub>F</sub> =1.0A	Vfm				1.0				V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C	IRM				5.0 50				μA
Typical Junction Capacitance (Note 2)	CJ				8				pF
Typical Thermal Resistance Junction to Ambient (Note 1)	Reja	100			°C/W				
Operating Junction Temperature Range	TJ			-(	65 to +1	75			°C
Storage Temperature Range	Tstg			-(	65 to +1	75			°C

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

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#### **Technical Data** Data Sheet N0544, Rev. A

1.0

0.8

0.6

0.4

0.2

0

40

60

80

100

120

140

(<sub>AV)</sub>, AVERAGE FORWARD RECTIFIED CURRENT (A)

I<sub>FSM</sub>, PEAK FORWARD SURGE CURRENT (A)

RoHS Pb **Ratings and Characteristics Curves** 10 IF, INSTANTANEOUS FORWARD CURRENT (A) 1.0 0.1

 $T_j = 25^{\circ}C$ ULSE WIDTH = 300µs 2% DUTY CYCLE

1.2

1.4

1.6

1MH:

100

T<sub>A</sub>, AMBIENT TEMPERATURE (°C) V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 1 Forward Current Derating Curve Fig. 2 Typical Forward Characteristics 50 100

160

180

#### $T_1 = 25^{\circ}C$ 40 Cj, CAPACITANCE (pF) 30 10 20 10 ns Single half sine JEDEC Method 0 1.0 1.0 10 1.0 10 100 V<sub>R</sub>, REVERSE VOLTAGE (V) NUMBER OF CYCLES AT 60 Hz

0.01 0.6

0.8

1.0

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

Fig. 4 Typical Junction Capacitance

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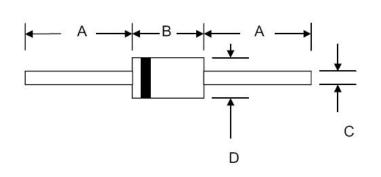


#### **Technical Data** Data Sheet N0544, Rev. A





## **Mechanical Dimensions DO-41**



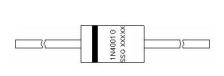
SYMBOL	Millin	neters	Inches			
	Min. Max.		Min.	Max.		
A	25.4	-	1.000	-		
В	4.06	5.21	0.160	0.205		
С	0.71	0.864	0.028	0.034		
D	2.00	2.72	0.079	0.107		

# **Ordering Information**

Device	Package	Shipping
1N4001G-1N4007G	DO-41 (Pb-Free)	5000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

# **Marking Diagram**



Where XXXXX is YYWWL

```
1N4001G = Type Number
SSG
```

```
= SSG
```

ΥY

L

ww

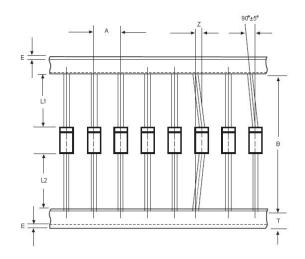
= Year = Week

= Lot Number

Cautions: Molding resin

Epoxy resin UL:94V-0

# **Carrier Tape Specification DO-41**



SYMBOL	Millimeters			
	Min.	Max.		
А	4.50	5.50		
В	50.9	53.9		
Z	-	1.20		
Т	5.60	6.40		
E	-	0.80		
IL1-L2I	-	1.0		



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