

## Continental Device India Pvt. Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company





### HIGH SPEED SILICON SWITCHING DIODE

1N4148, 1N4448

**DO-35** 

Glass Axial Package



Polarity: Colour band denotes cathode end

General purpose, Industrial, Military and Space applications. Hermetically sealed glass with a stud on either side of the glass passivated chip provides excellent stability. Extremely low leakage and very high reliability.

# ABSOLUTE MAXIMUM RATINGS $(T_A = 25^{\circ}C)^{(1)}$

CHARACTERISTICS	SYMBOL	VALUE		UNIT
Maximum Repetitive Reverse Voltage	$V_{RRM}$	100		V
Continuous Reverse Voltage	$V_R$	75		V
Average Rectified Forward Current	I <sub>(AV)</sub>	200		mA
DC Forward Current	I <sub>F</sub>	300		mA
Recurrent Peak Forward Current	I <sub>P</sub>	400		mA
Non Bonetitive Book Forward Come Comment		Pulse Width = 1.0s	1.0	Α
Non-Repetitive Peak Forward Surge Current	I <sub>FSM</sub>	Pulse Width = 1.0µs	4.0	А
Power Dissipation	$P_{D}$	500		mW
Storage Temperature Range	T <sub>STG</sub>	-65 to +200		°C
Operating Junction Temperature Range	$T_J$	-65 to +175 °C		°C

Note 1: These ratings are limiting values above which the serviceability of the diode may be impaired.

#### **Thermal Characteristics**

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	300	°C/W

# ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C, unless otherwise specified) (2)

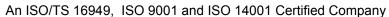
CHARACTERISTICS		SYMBOL	TEST CONDITION	MIN	MAX	UNIT
	1N4148		I <sub>F</sub> =10mA		1.0	V
Forward Voltage	1N4448	$V_{F}$	I <sub>F</sub> =5mA	0.62	0.72	V
			I <sub>F</sub> =100mA		1.0	V
Reverse Leakage		I <sub>R</sub>	V <sub>R</sub> =20V		25	nA
			$V_R = 20V; T_A = 150$ °C		50	μΑ
			V <sub>R</sub> =75V		5.0	μΑ
Reverse Breakdown Voltage		V <sub>BR</sub>	I <sub>R</sub> =100μA	100		V
			I <sub>R</sub> =5µA	75		V
IDiode Capacitance —	1N4148		V <sub>R</sub> =0; f = 1.0MHz		4	pF
	1N4448	C <sub>T</sub>			2	pF
Recverse Recovery Time		t <sub>rr</sub>	$I_F$ =10mA to $I_R$ =60mA,			
			R <sub>L</sub> =100Ω measured at		4	ns
			I <sub>R</sub> =1mA			

Note 2 : Non-recurrent square wave  $P_W = 8.3 ms$ 

1N4148\_4448 Rev 3\_06122017E



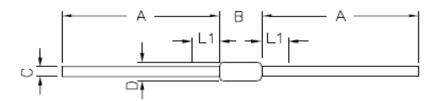
# Continental Device India Pvt. Limited







## **DO-35 PACKAGE OUTLINE AND DIMENSIONS**

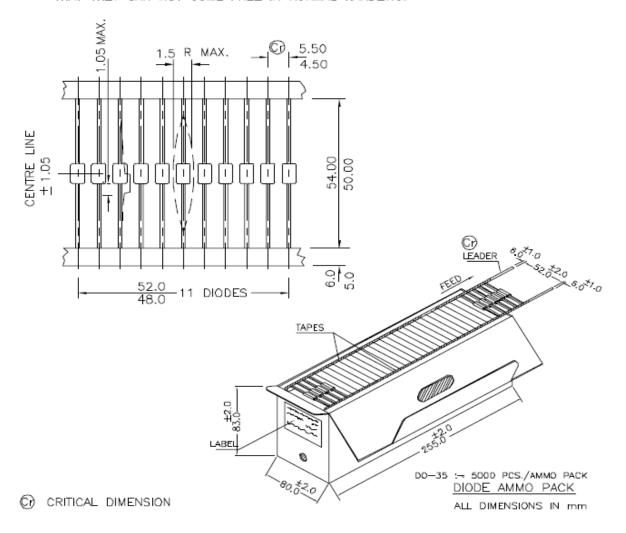


Dim	Min (mm)	Max (mm)
Α	27.5	-
В	-	3.9
С	-	0.5
D	-	1.9

Note: Cathode is marked by Black Band

# DO-35 TAPING SPECIFICATION

- 1) T & A INDICATES AXIAL TAPE & AMMO PACKING (52 mm TAPE SPACING)
- 300 mm (MIN) LEADER TAPE ON EVERY SPOOL.
- No. OF EMPTY PLACES ALLOWED 0.25% WITHOUT CONSECUTIVE EMPTY PLACES.
- 4) ENDS OF LEADS SHALL PREFERABLY NOT PROTRUDE BEYOND THE TAPES.
- COMPONENTS SHALL BE HELD SUFFICIENTLY IN THE TAPE OR TAPES SO THAT THEY CAN NOT COME FREE IN NORMAL HANDLING.



1N4148\_4448 Rev 3\_06122017E



## Continental Device India Pvt. Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company





#### **Component Disposal Instructions**

- 1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
- 2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

#### **Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of

**Continental Device India Pvt. Limited** 

C-120 Naraina Industrial Area, New Delhi 110 028, India. Telephone + 91-11-2579 6150, 4141 1112 Fax + 91-11-2579 5290, 4141 1119 email@cdil.com www.cdil.com

CIN No. - U32109DI 1964PTC004291