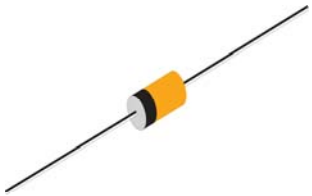
SCHOTTKY BARRIER RECTIFIERS

1N5817 - 1N5818
1N5819



DO-41

DO-41 Axial Leaded
Plastic Package
RoHS compliant

APPLICATION:

Suited for use as Rectifiers in Low Voltage, High Frequency Inverters, Free Wheeling Diodes and Polarity Protection Diodes

ABSOLUTE MAXIMUM RATINGS (Ta = 25 ℃ Unless otherwise specified) [1]

PARAMETER	SYMBOL	VALUE			UNIT
		1N5817	1N5818	1N5819	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blockng Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
Non-Repetitive Peak Reverse Voltage	V_{RSM}	24	36	48	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Forward Current note 1 (VR(equiv) <0.2V VR(dc), TL=90ºC Rth(j-a)=80ºC/W, P.C Board Mounting note 2, Ta=55ºC	I_O	1.0			A
Ambient Temperature (Rated V_R(dc), $P_{F(AV)}$=0, $R_{th\ (j-a)}$ =80ºC/W)	T_a	85	80	75	°C
Non-Repetitive Peak Surge Current (surge applied at rated load conditions, half - wave, single phase 60Hz , T_L=70ºC)	I_{FSM}	25 (for one cycle)			A
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +125			°C
Peak Operating Junction Temperature (forward current applied)	$T_{j\ (pk)}$	150			°C

THERMAL CHARACTERISTICS [1]

Thermal Resistance from Junction to Ambient in free air	$R_{th\ (j-a)}$	80	°C/W

Note:

1. Lead temperature reference is cathode lead 1/32" from case
2. Pulse test: Pulse width=300ms, Duty cycle=2%

ELECTRICAL CHARACTERISTICS at (Ta = 25 ℃ Unless otherwise specified)

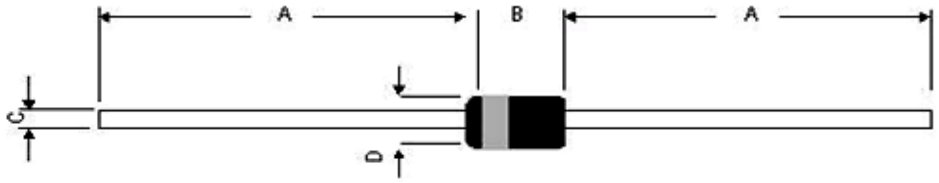
PARAMETER	SYMBOL	TEST CONDITION	VALUE			UNIT
			1N5817	1N5818	1N5819	
Maximum Instantaneous Forward Voltage Drop	V_F [2]	I_F=0.1A	0.32	0.330	0.34	V
		I_F=1.0A	0.45	0.550	0.60	V
		I_F=3.0A	0.75	0.875	0.90	V
Maximum Instantaneous Reverse Current	I_R [2]	@ rated V_R T_L=25ºC	1			mA
		T_L=100ºC	10			mA

Note:

1. Lead temperature reference is cathode lead 1/32" from case
2. Pulse test: Pulse width=300ms, Duty cycle=2%

PACKAGE DETAIL

DO-41 Axial Lead Plastic Package

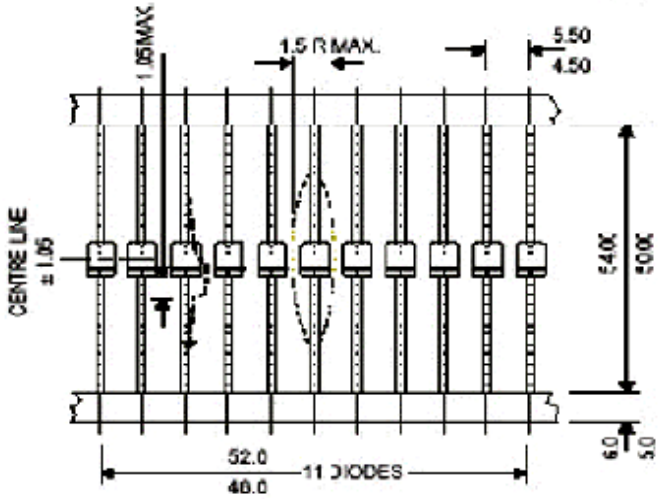


DIM	MIN	MAX
A	27.90	--
B	4.05	5.20
C	0.75	0.87
D	2.30	2.70

All Dimensions are in mm

Cathode is marked by a Band

DO-41, 52mm Taping Specification



52 mm Taping Specification

1. T & A indicates Axiel Tape and Ammo Packing (52 mm Tape Spacing)
2. 300 mm (min) leader tape on every tape.
3. No. of empty places allowed 0.25% without consecutive empty places
4. End of leeds shell preferably not protrude beyond the tapes.
5. Components shall be help sufficiently in the tape or tapes so that they can not come free in normal handling.

All Dimensions are in mm

Packing in Ammo Pack: 5000 pcs./Ammo Pack

Recommended Product Storage Environment for Discrete Semiconductor Devices

This storage environment assumes that the Diodes and transistors are packed properly inside the original packing supplied by CDIL.

- Temperature 5 °C to 30 °C
- Humidity between 40 to 70 %RH
- Air should be clean.
- Avoid harmful gas or dust.
- Avoid outdoor exposure or storage in areas subject to rain or water spraying .
- Avoid storage in areas subject to corrosive gas or dust. Product shall not be stored in areas exposed to direct sunlight.
- Avoid rapid change of temperature.
- Avoid condensation.
- Mechanical stress such as vibration and impact shall be avoided.
- The product shall not be placed directly on the floor.
- The product shall be stored on a plane area. They should not be turned upside down. They should not be placed against the wall.

Shelf Life of CDIL Products

The shelf life of products is the period from product manufacture to shipment to customers. The product can be unconditionally shipped within this period. The period is defined as 2 years.
If products are stored longer than the shelf life of 2 years the products shall be subjected to quality check as per CDIL quality procedure.
The products are further warranted for another one year after the date of shipment subject to the above conditions in CDIL original packing.

Floor Life of CDIL Products and MSL Level

When the products are opened from the original packing, the floor life will start.
For this, the following JEDEC table may be referred:

JEDEC MSL Level		
Level	**Time**	**Condition**
1	Unlimited	≤30 °C / 85% RH
2	1 Year	≤30 °C / 60% RH
2a	4 Weeks	≤30 °C / 60% RH
3	168 Hours	≤30 °C / 60% RH
4	72 Hours	≤30 °C / 60% RH
5	48 Hours	≤30 °C / 60% RH
5a	24 Hours	≤30 °C / 60% RH
6	Time on Label(TOL)	≤30 °C / 60% RH

Customer Notes

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).
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