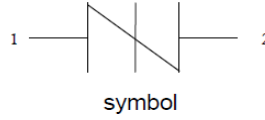
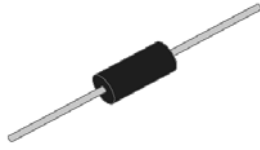


SIDAC



KxxxxG Series

DO-15

Leaded Plastic Package

Features

- 1) High-voltage lamp ignitors
- 2) Natural gas ignitors
- 3) Gas oil ignitors
- 4) High-voltage power supplies
- 5) Xenon ignitors
- 6) Overvoltage protector
- 7) Pulse generators
- 8) Fluorescent lighting ignitors HID lighting ignitors

General Description

The sidac is a silicon bilateral voltage triggered switch with greater power-handling capabilities than standard diacs. Upon application of a voltage exceeding the sidac breakover voltage point, the sidac switches on through a negative resistance region to a low on-state voltage. Conduction continues until the current is interrupted or drops below the minimum holding current of the device.

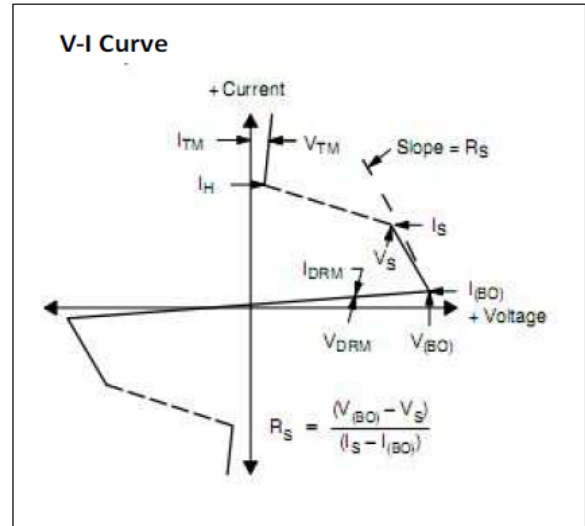
Absolute Maximum Ratings ($T_A=25^\circ\text{C}$, $R_{\theta J}=45\%-75\%$, unless otherwise specified)

DESCRIPTION	SYMBOL	UNIT	Unit
Storage temperature range	T_{STG}	40 to +125	$^\circ\text{C}$
Operating junction temperature range	T_J	40 to +125	$^\circ\text{C}$
On-state RMS current	I_T	1	A
Maximum surge on-state current non-repetitive one cycle peak value (50Hz)	I_{TSM}	16.7	A
Critical rate-of-rise of on-state current	di_T/dt	80	A/ μs

Electrical Parameter

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Symbol	Parameter
V _{DRM}	Peak off-state voltage
I _{DRM}	Off-state current
V _S	Switching voltage
I _S	Switching current
R _S	Switching resistance
V _T	On-state voltage
I _H	Holding current
V _{BO}	Breakover Voltage
I _{BO}	Breakover current



ELECTRICAL CHARACTERISTICS (T_A=25°C, continued)

Part Number	I _{DRM} @V _{DRM}		V _{BO}		I _{BO}	V _T @ I _T =1A	I _H	R _S	Marking
	μA	V	V		μA	V	mA	kΩ	
	max	min	min	max	max	max	min	min	
K0900G	1	70	80	97	50	2	10	0.1	DB090
K1050G	1	90	95	113	50	2	10	0.1	DB105
K1200G	1	100	110	125	50	2	10	0.1	DB120
K1300G	1	110	120	138	50	2	10	0.1	DB130
K1400G	1	120	130	146	50	2	10	0.1	DB140
K1500G	1	130	140	170	50	2	10	0.1	DB150
K1800G	1	160	170	195	50	2	10	0.1	DB180
K2000G	1	180	190	215	50	2	10	0.1	DB200BW
K2200G	1	190	205	230	50	2	10	0.1	DB220BW
K2400G	1	200	220	250	50	2	10	0.1	DB240BW
K2600G	1	220	240	270	50	2	10	0.1	DB260BW

ORDERING INFORMATION

K Series code K:Sidac	xxx Median voltage	0 0: Bi-direction 1: Uni-direction	G Package type:DO-15
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SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

FIG.1: Maximum allowable ambient temperature versus on-state current

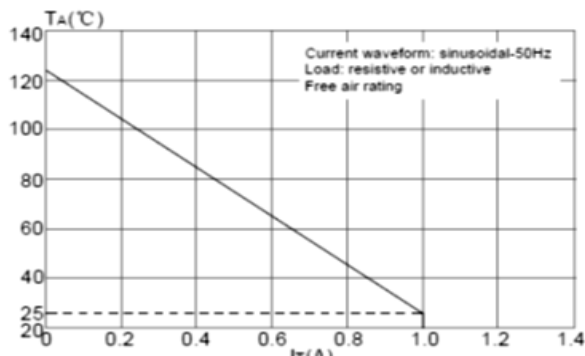


FIG.2: Reflow condition

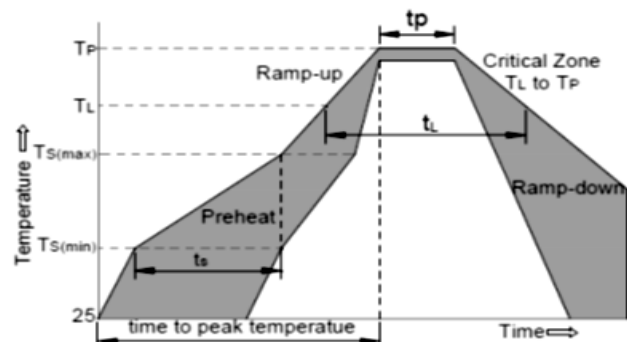


FIG.3: Normalized Vs change vs. junction temperature

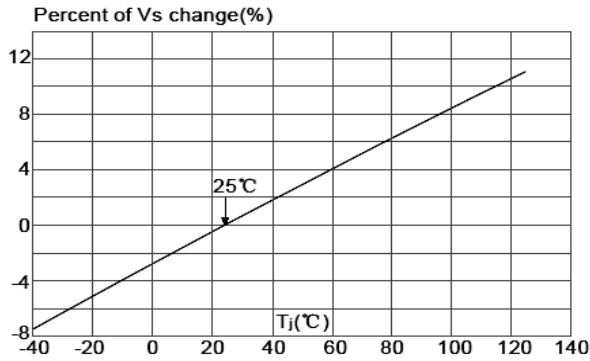
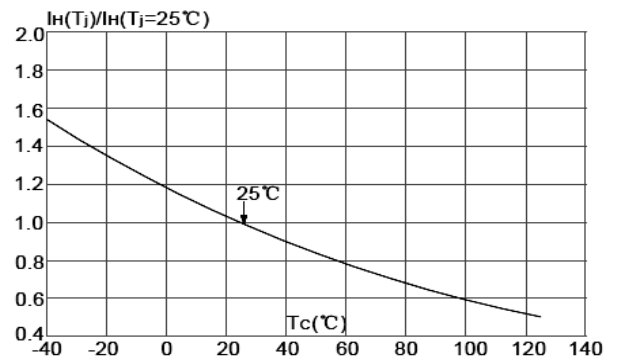
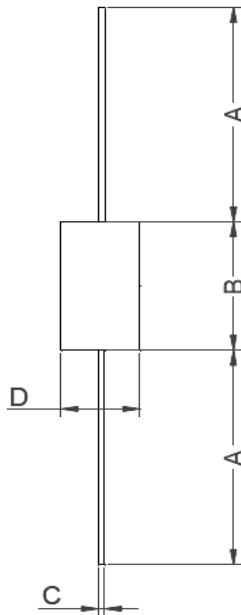


FIG.4: Normalized DC holding current vs. case temperature



PACKAGE MECHANICAL DATA



DO-15

Ref.	Dimensions			
	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	1.000	-	25.40	-
B	0.228	0.300	5.80	7.62
C	0.022	0.035	0.56	0.89
D	0.102	0.142	2.60	3.60

Part Number	UNIT WEIGHT (g/PCS) typ.	Case Type	Quantity	Packing Option
KxxxxG	0.38	DO-15/DO-204AC	2000	Box



Continental Device India Pvt. Limited
An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

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 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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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. - U32109DL1964PTC004291