

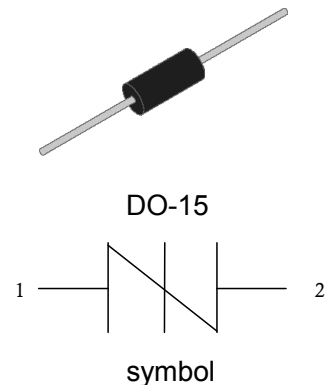


### DESCRIPTION:

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.

### APPLICATIONS:

- ✧ High-voltage lamp ignitors
- ✧ Natural gas ignitors
- ✧ Gas oil ignitors
- ✧ High-voltage power supplies
- ✧ Xenon ignitors
- ✧ Overvoltage protector
- ✧ Pulse generators
- ✧ Fluorescent lighting ignitors HID lighting ignitors



### FEATURES:

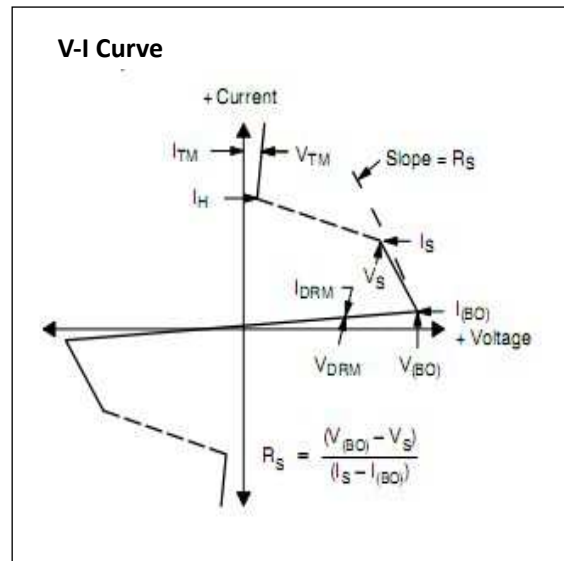
- ✧ Excellent capability of absorbing transient surge
- ✧ Quick response to surge voltage (ns Level)
- ✧ Glass-passivated junctions
- ✧ High voltage lcmp ignitors

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T <sub>STG</sub>	-40 to +125	°C
Operating junction temperature range	T <sub>J</sub>	-40 to +125	°C
On-state RMS current	I <sub>T</sub>	1.0	A
Maximum surge on-state current non-repetitive one cycle peak value (50Hz)	I <sub>TSM</sub>	16.7	A
Critical rate-of-rise of on-state current	di <sub>T</sub> /dt	80	A/μs

**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C)

Symbol	Parameter
V <sub>DRM</sub>	Peak off-state voltage
I <sub>DRM</sub>	Off-state current
V <sub>S</sub>	Switching voltage
I <sub>S</sub>	Switching current
R <sub>S</sub>	Switching resistance
V <sub>T</sub>	On-state voltage
I <sub>H</sub>	Holding current
V <sub>BO</sub>	Breakover Voltage
I <sub>BO</sub>	Breakover current



**ELECTRICAL CHARACTERISTICS** (T<sub>A</sub>=25°C, continued)

Part Number	I <sub>DRM</sub> @V <sub>DRM</sub>		V <sub>BO</sub>		I <sub>BO</sub>	V <sub>T</sub> @ I <sub>T</sub> =1A	I <sub>H</sub>	R <sub>S</sub>	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

<p><b>K</b></p> <p>Series code K:Sidac</p>	<p><b>XXX</b></p> <p>Median voltage</p>	<p><b>0</b></p> <p>0: Bi-direction 1: Uni-direction</p>	<p><b>G</b></p> <p>Package type:DO-15</p>
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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) ( $t_s$ )	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

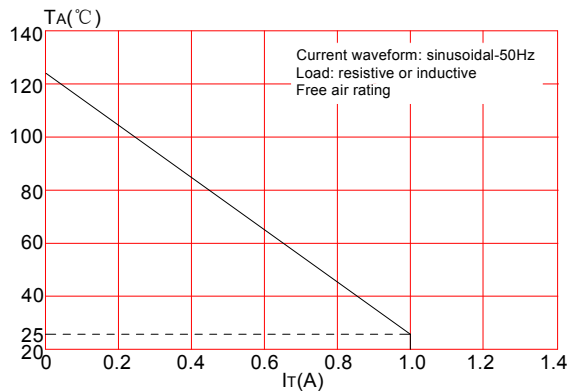
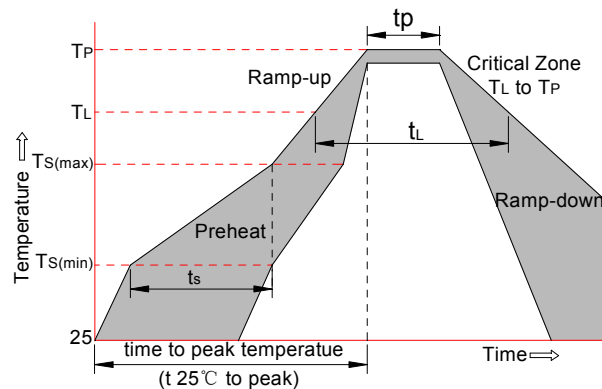
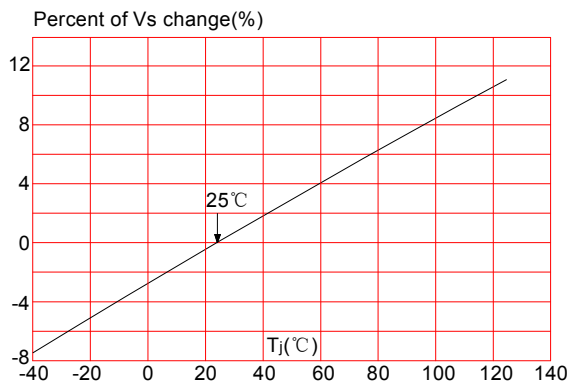


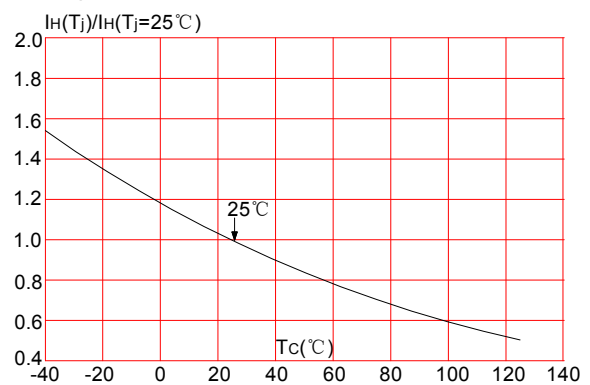
FIG.2: Reflow condition



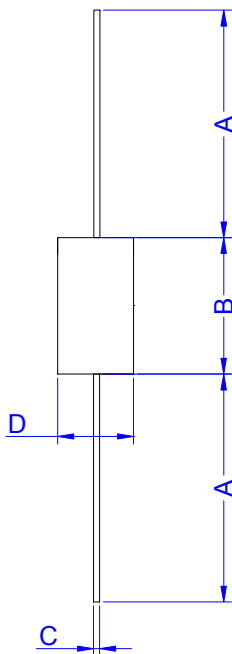
**FIG.3:** Normalized  $V_s$  change vs. junction temperature



**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

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