

Sidac

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.

Features

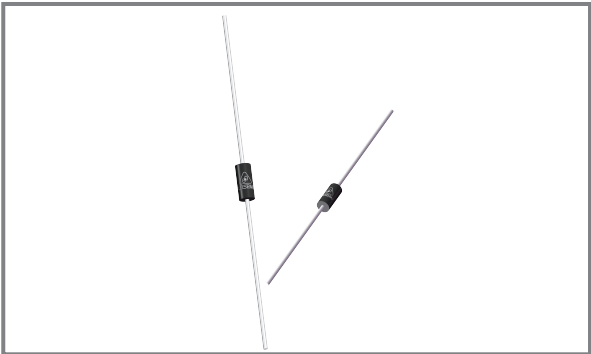
- ◆ Excellent capability of absorbing transient surge
- ◆ Quick response to surge voltage (ns Level)
- ◆ Glass passivated junctions
- ◆ High voltage lcmp ignitors

Applications

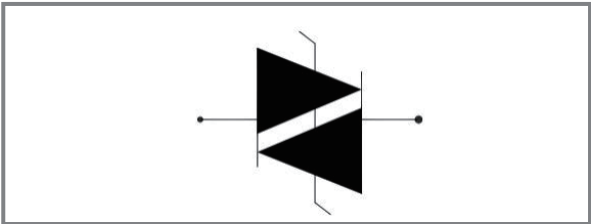
- ◆ High-voltage lamp ignitors
- ◆ Natural gas ignitors
- ◆ Gas oil ignitors
- ◆ High-voltage power supplies
- ◆ Xenon ignitors
- ◆ Over voltage protector
- ◆ Pulse generators
- ◆ Fluorescent lighting ignitors HID lighting ignitors



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Functional Diagram



Maximum Characteristics (TA=25°C RH=45%-75% ,unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum surge on-state current non-repetitive one cycle peak value(50Hz)	ITSM	16.7	A
Critical rate-of-rise of on-state current	diT/dt	80	A
On-state RMS Current	IT	1	A
Storage temperature range	TSTG	- 40 to +125	°C
Operating junction temperature range	TJ	- 40 to +125	°C

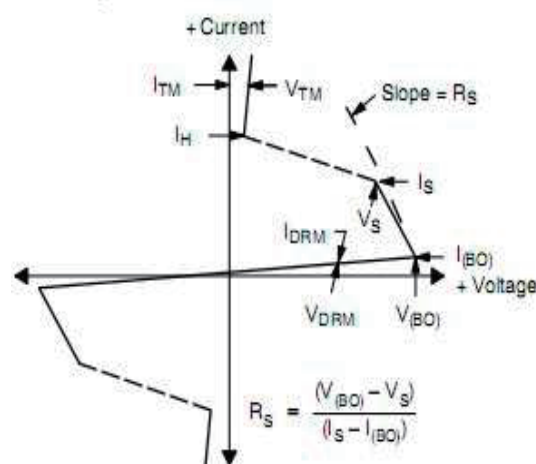
Electrical Characteristics (@=25°C unless otherwise Specified)

Part Number	V _{DRM} @ I _{DRM}		V _{BO}		I _{BO}	V _T @ I _T =1A	R _s	I _H	Body Marking
	V	μA	V		μA	V	KΩ	mA	
	Min	Max	Min	Max	Max	Max	Min	Min	
K0900G	70	1	80	97	50	2	0.1	10	DB090
K1050G	90	1	95	113	50	2	0.1	10	DB105
K1200G	100	1	110	125	50	2	0.1	10	DB120
K1300G	110	1	120	138	50	2	0.1	10	DB130
K1400G	120	1	130	146	50	2	0.1	10	DB140
K1500G	130	1	140	170	50	2	0.1	10	DB150BW
K1800G	160	1	170	195	50	2	0.1	10	DB180
K2000G	180	1	190	215	50	2	0.1	10	DB200BW
K2200G	190	1	205	230	50	2	0.1	10	DB220BW
K2400G	200	1	220	250	50	2	0.1	10	DB240BW
K2600G	220	1	240	270	50	2	0.1	10	DB260BW

Electrical Characteristics (@=25°C unless otherwise Specified)

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

V-I Curve



Electrical Characteristics (@=25°C unless otherwise Specified)

Figure 1- Normalized V_s change
Vs. junction temperature

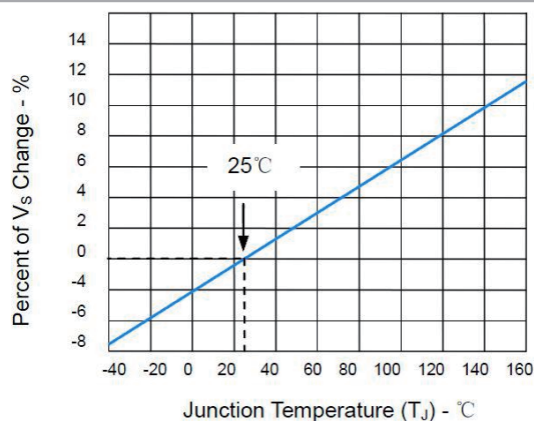
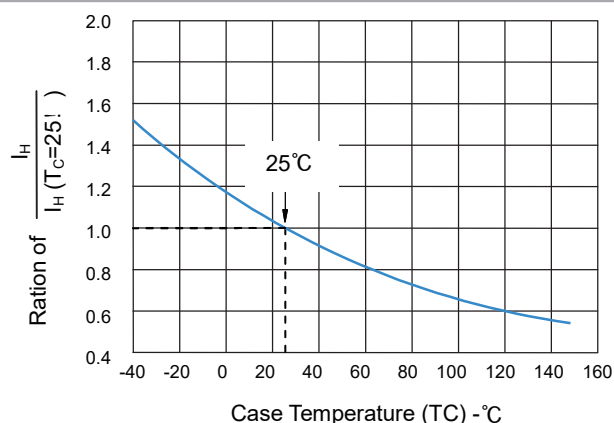
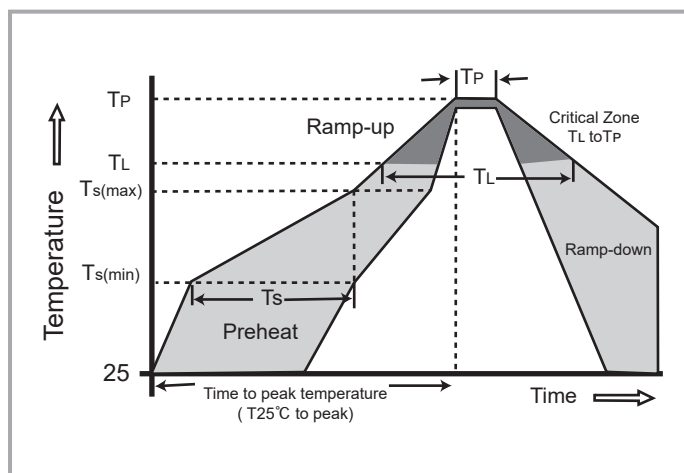


Figure 2- Normalized DC holding current
Vs. case temperature

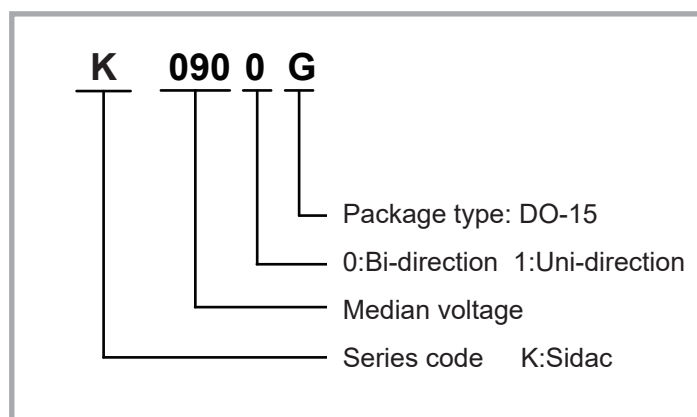


Soldering Parameters



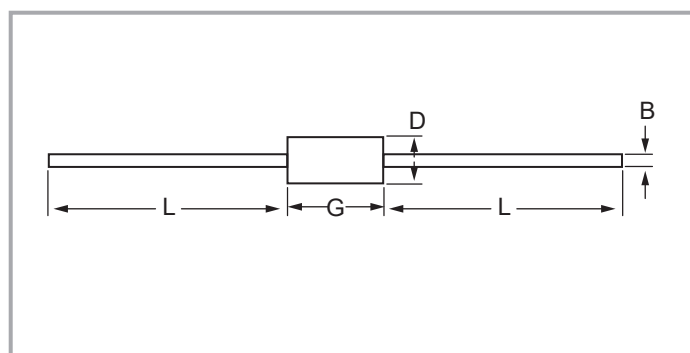
Reflow Condition		Lead-free assembly
Pre Heat	-Temperature Min (Ts(min))	150°C
	-Temperature Max (Ts(max))	200°C
	- Time (min to max) (Ts)	60 -180 Seconds
Average ramp up rate (Liquidus Temp TL) to peak		3°C/Second max
Ts(max) to TL - Ramp-up Rate		3°C/Second max
Reflow	- Temperature (TL) (Liquidus)	217°C
	- Time (min to max) (Ts)	60 -150 Seconds
Peak Temperature (TP)		260 +0/-5°C
Time within 5°C of actual peak Temperature (TP)		8-15 Seconds
Ramp-down Rate		6°C/Second Max
Time 25°C to peak Temperature (TP)		8 minutes Max
Do not exceed		260°C

Ordering Information



Dimensions DO-15

Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
B	0.028	0.034	0.700	0.864
D	0.120	0.140	3.048	3.556
G	0.235	0.270	5.969	6.858
L	1.000	--	25.40	--



Packing

Part Number	Component Package	Quantity	Packaging Option
KxxxxG	DO-15/DO-204AC	2,000	Box

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