

KXXXXSD1 Series

ROHS

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

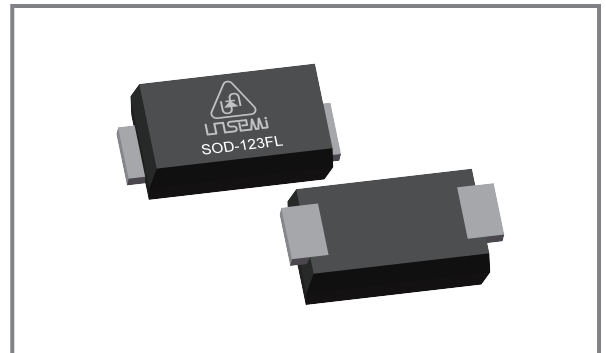
- ◆ Excellent capability of absorbing transient surge
- ◆ Quick response to surge voltage (ns Level)
- ◆ Glass passivated junctions
- ◆ High voltage lcmp ignitors

Applications

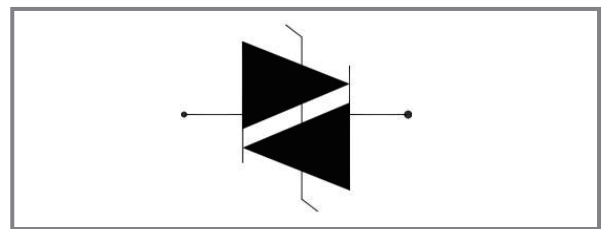
- ◆ High-voltage lamp ignitors
- ◆ Natural gas ignitors
- ◆ Gas oil ignitors
- ◆ High-voltage power supplies
- ◆ Xenon ignitors
- ◆ Over voltage protector
- ◆ Pulse generators
- ◆ Fluorescent lighting ignitors HID lighting ignitors



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Functional Diagram



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

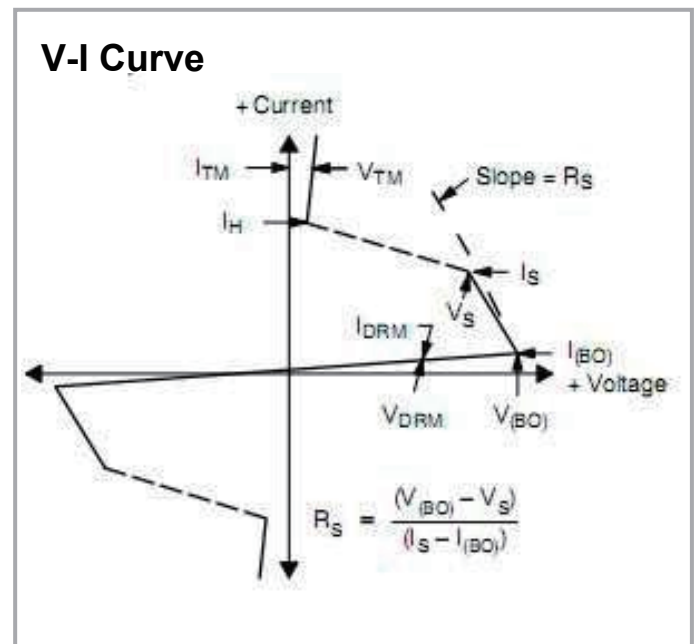
Parameter	Symbol	Value	Unit
Maximum surge on-state current non-repetitive one cycle peak value(50Hz)	ITSM	8	A
Critical rate-of-rise of on-state current	diT/dt	50	A
On-state RMS Current	IT	1	A
Storage temperature range	TSTG	- 40 to +125	°C
Operating junction temperature range	TJ	- 40 to +125	°C

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	
K0900SD1	70	1	80	97	50	2	0.1	10	K09S
K1050SD1	90	1	95	113	50	2	0.1	10	K10S
K1200SD1	100	1	110	125	50	2	0.1	10	K12S
K1300SD1	110	1	120	138	50	2	0.1	10	K13S
K1400SD1	120	1	130	146	50	2	0.1	10	K14S
K1500SD1	130	1	140	170	50	2	0.1	10	K15S
K1800SD1	160	1	170	195	50	2	0.1	10	K18S
K2000SD1	180	1	190	215	50	2	0.1	10	K20S
K2200SD1	190	1	205	230	50	2	0.1	10	K22S
K2400SD1	200	1	220	250	50	2	0.1	10	K24S
K2600SD1	220	1	240	270	50	2	0.1	10	K26S

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}



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

Figure 1- Normalized V_s change Vs. junction temperature

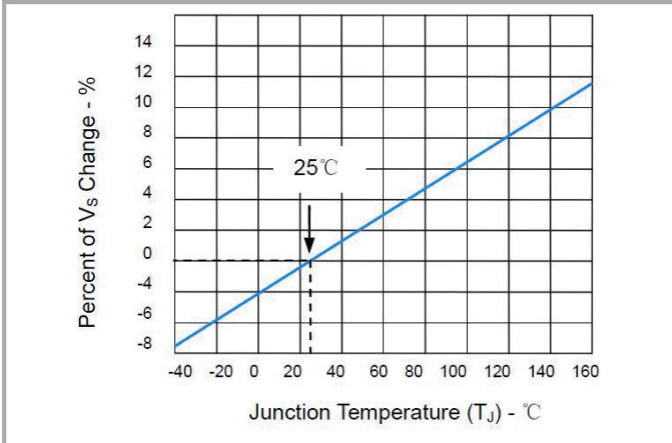
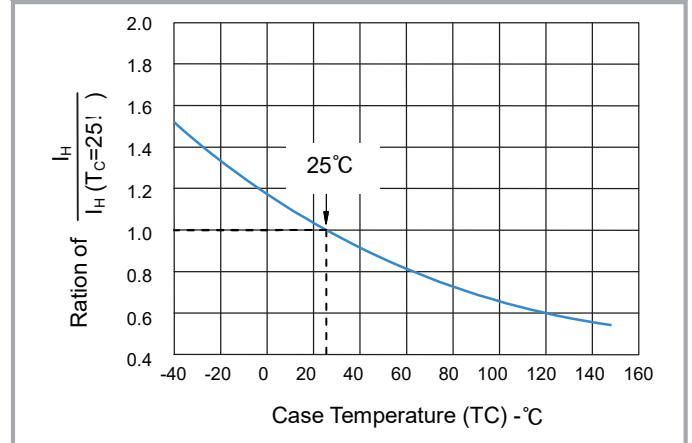
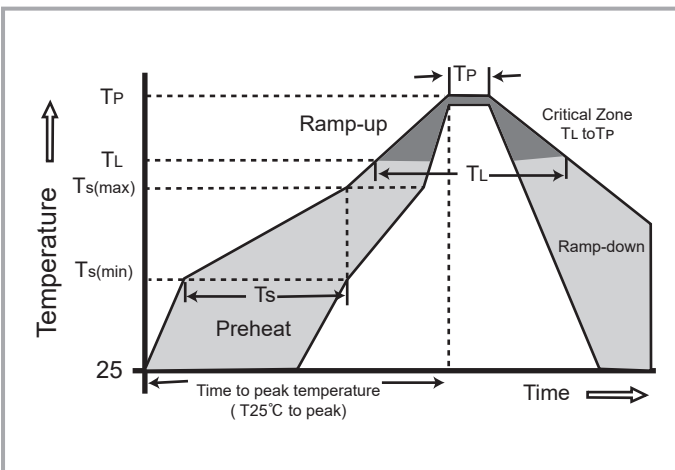


Figure 2- Normalized DC holding current Vs. case temperature

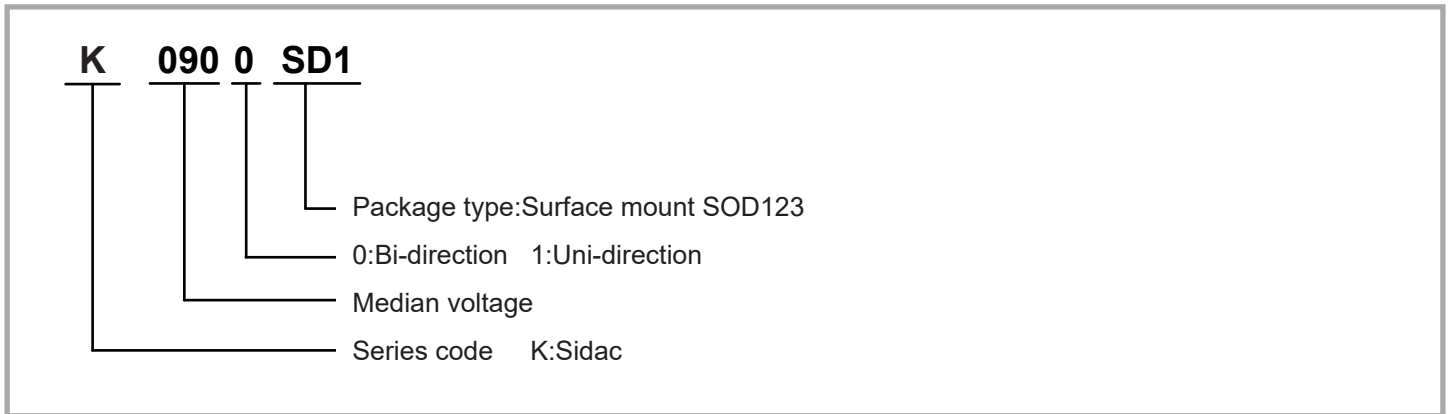


Soldering Parameters



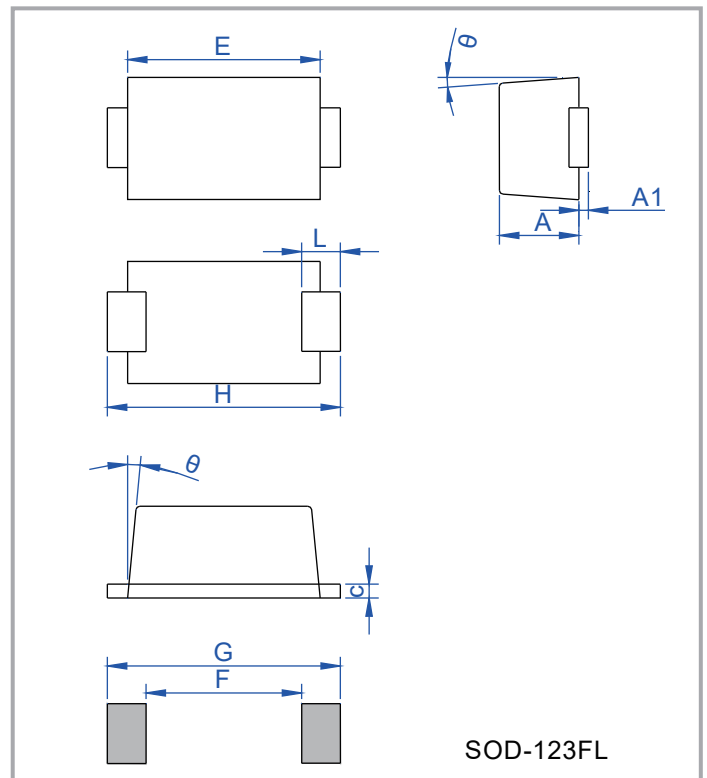
Reflow Condition		Lead-free assembly
Pre Heat	- Temperature Min (Ts(min))	150°C
	- Temperature Max (Ts(max))	200°C
	- Time (min to max) (Ts)	60 -180 Seconds
Average ramp up rate (Liquidus Temp TL) to peak		3°C/Second max
Ts(max) to TL - Ramp-up Rate		3°C/Second max
Reflow	- Temperature (TL) (Liquidus)	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



Package Mechanical Data

Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.035	0.047	0.90	1.20
B	0	0.004	0	0.10
C	0.028	0.043	0.70	1.10
D	0.004	0.008	0.10	0.20
E	0.059	0.071	1.50	1.80
F	0.098	0.114	2.50	2.90
G	0.093	--	2.36	--
H	0.165	--	4.19	--
J	0.134	0.150	3.40	3.80
K	0.022	0.037	0.55	0.95
L	0°	8°	0°	8°



Tape And Reel Specification

Part Number	Component Package	Reel (PCS)	Per carton(PCS)
KxxxxSD1	SOD-123FL	3,000	96,000

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