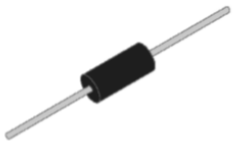
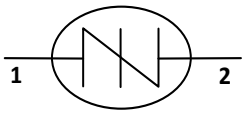
Kxxx0G1 SERIES

Features



DO-15



Bi-directional

Symbol

- DO-15 package
- Excellent capability of absorbing transient surge
- Quick response to surge voltage (ns Level)
- Bi-directional configurations
- AC Circuit Oriented
- Glass-passivated junctions
- For surface mounted applications to optimize board space
- RoHS compliant

Description

The SIDAC is a silicon bilateral voltage triggered switch. 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.

SIDACs feature glass-passivated junctions to ensure a rugged and dependable device capable of withstanding harsh environments.

Applications

High-voltage lamp ignitors
high voltage power supplies
natural gas igniters, Gas oil ignitors, Xenon flash ignitors
high-pressure Sodium lamps
Overvoltage protector
Fluorescent lighting ignitors HID lighting ignitors

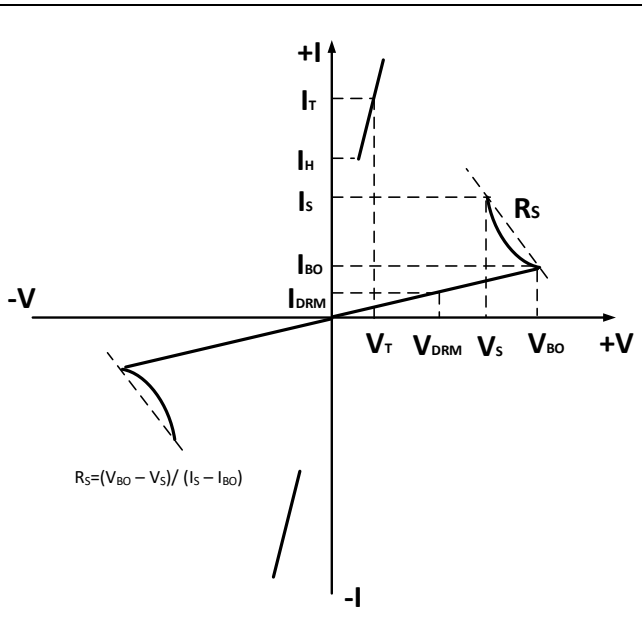
Absolute Maximum Ratings (T_A=25℃, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Critical Rate of Rise of On-state Current	di/dt			80	A/μs
Junction Temperature Range	T_J		-40	125	℃
Storage Temperature Range	T_{STG}		-40	150	℃
On-state RMS current	I_T	50/60Hz, TJ < 125°C		1.0	A
Maximum surge on-state current non-repetitive one cycle peak value	I_{TSM}	Single Cycle (50Hz)		16.7	A

Electronics Characteristics (T_A=25℃)

Part Number	Marking	I_{DRM}@V_{DRM}		V_{BO}		I_{BO}	V_T@ I_T=1A	I_H	R_S
		Max (μA)	Min (V)	Min (V)	Max (V)	Max (μA)	Max (V)	Min (mA)	Min (KΩ)
K0900G1	K090G1	1	70	80	97	50	2	10	0.1
K1050G1	K105G1	1	90	95	113	50	2	10	0.1
K1200G1	K120G1	1	100	110	125	50	2	10	0.1
K1300G1	K130G1	1	110	120	138	50	2	10	0.1
K1400G1	K140G1	1	120	130	146	50	2	10	0.1
K1500G1	K150G1	1	130	140	170	50	2	10	0.1
K1800G1	K180G1	1	160	170	195	50	2	10	0.1
K2000G1	K200G1	1	180	190	215	50	2	10	0.1
K2200G1	K220G1	1	190	205	230	50	2	10	0.1
K2400G1	K240G1	1	200	220	250	50	2	10	0.1
K2600G1	K260G1	1	220	240	270	50	2	10	0.1

I-V Curve Characteristics

Symbol	Parameter	V-I Characteristics
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	

Typical Characteristics

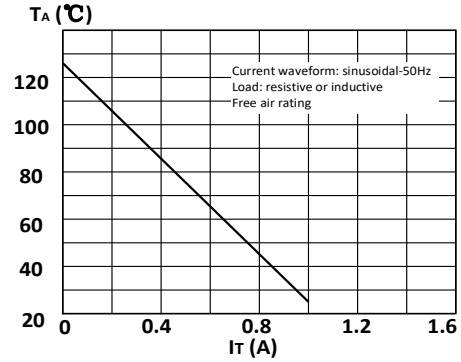


Fig. 1. Maximum allowable ambient temperature versus on-state current

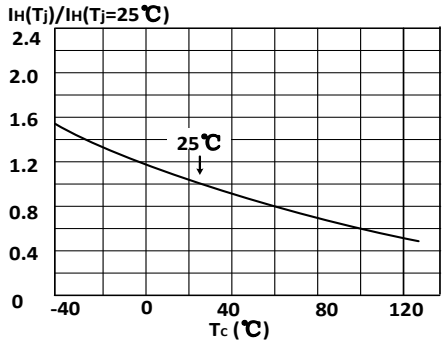


Fig. 2. Normalized DC holding current versus case temperature

Soldering Parameters

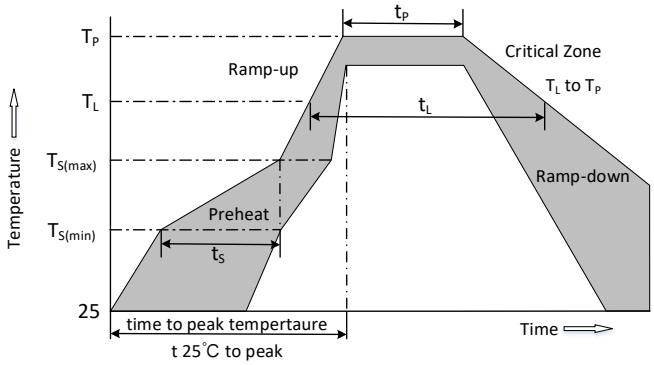


Fig.3. Reflow Condition

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