K0900S Series Sidac

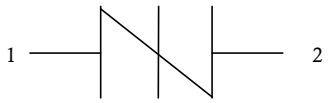
Rev.1.0

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 ignitorsHID lighting ignitors



Symbol

FEATURES:

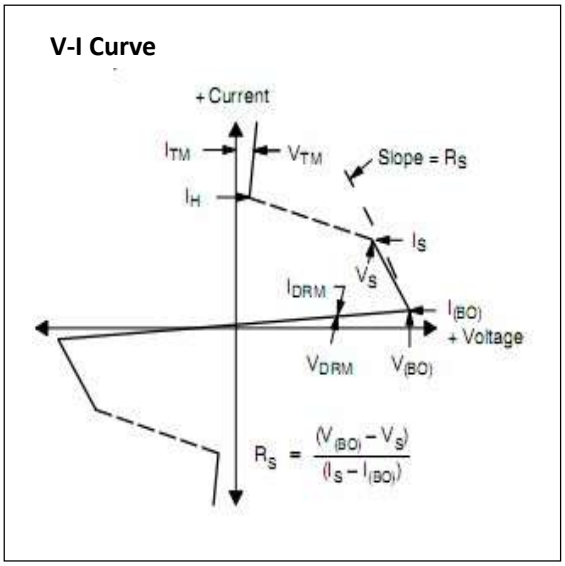
- ✧ Excellent capability of absorbing transient surge
- ✧ Quick response to surge voltage (ns Level)
- ✧ Glass-passivated junctions
- ✧ High voltage lcmp ignitors

ABSOLUTE MAXIMUM RATINGS (T_A=25ºC, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-40 to +125	℃
Operating junction temperature range	T_j	-40 to +125	℃
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

ELECTRICAL CHARACTERISTICS (T_A=25℃)

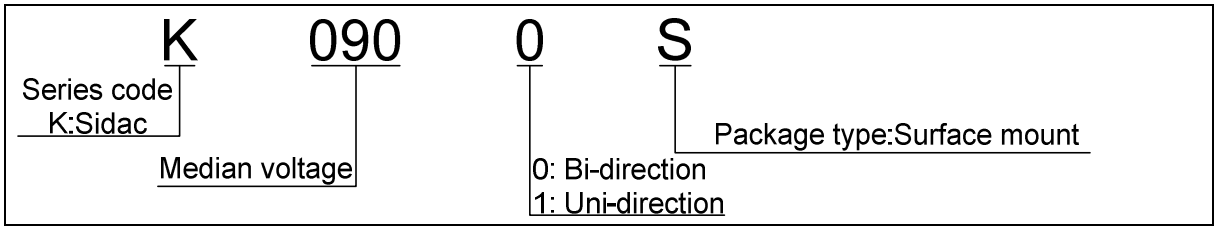
Symbol	Parameter
V_{DRM}	Peak off-state voltage
I_{DRM}	Off-state current
V_S	Switching voltage
I_S	Switching current
R_S	Switching resistance
V_T	On-state voltage
I_H	Holding current
V_{BO}	Breakover Voltage
I_{BO}	Breakover current



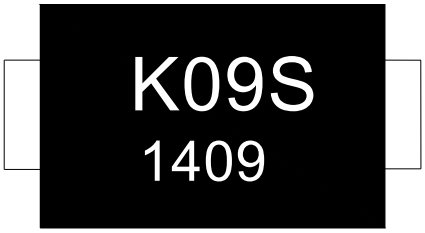
ELECTRICAL CHARACTERISTICS (T_A=25℃, continued)

Part Number	I_{DRM}@V_{DRM}		V_{BO}		I_{BO}	V_T@ I_T=1A	I_H	R_S	Marking
	μA	V	V		uA	V	mA	kΩ	
	max	min	min	max	max	max	min	min	
K0900S	1	70	80	97	50	2	10	0.1	K09S
K1050S	1	90	95	113	50	2	10	0.1	K10S
K1200S	1	100	110	125	50	2	10	0.1	K12S
K1300S	1	110	120	138	50	2	10	0.1	K13S
K1400S	1	120	130	146	50	2	10	0.1	K14S
K1500S	1	130	140	170	50	2	10	0.1	K15S
K1800S	1	160	170	195	50	2	10	0.1	K18S
K2000S	1	180	190	215	50	2	10	0.1	K20S
K2200S	1	190	205	230	50	2	10	0.1	K22S
K2400S	1	200	220	250	50	2	10	0.1	K24S
K2600S	1	220	240	270	50	2	10	0.1	K26S

ORDERING INFORMATION



MARKING



K09S:Device Marking Code
1409: In ninth week, 2014

SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
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 (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L) (Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		8-15 secs.
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

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

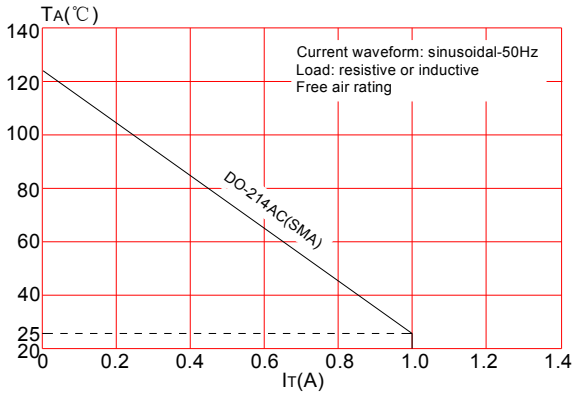


FIG.2: Reflow condition

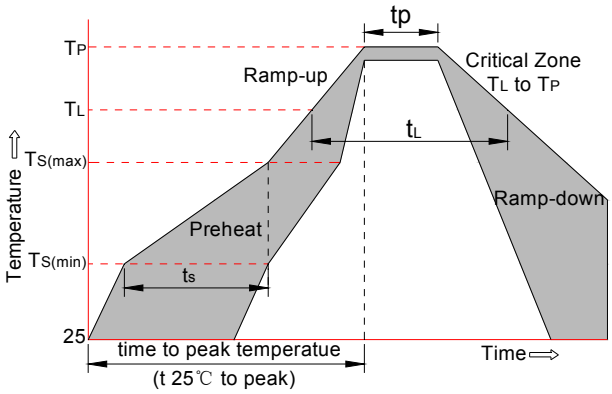


FIG.3: Normalized Vs change vs. junction temperature

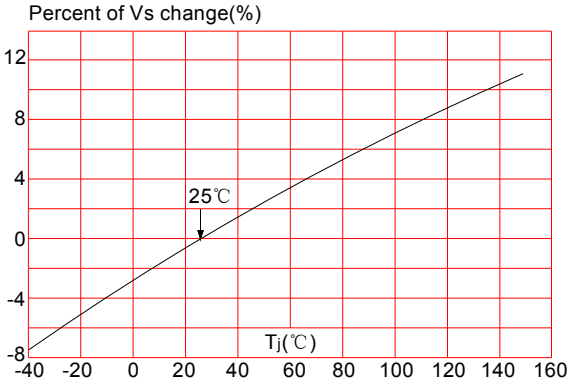
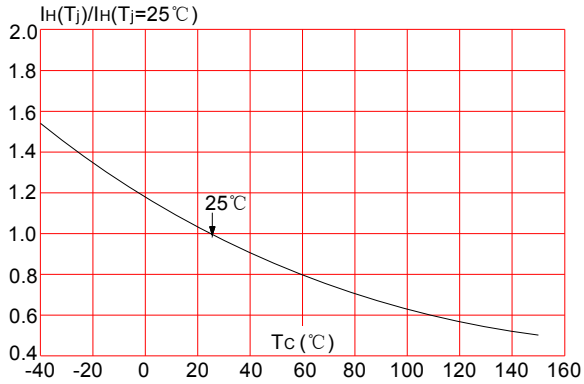


FIG.4: Normalized DC holding current vs. case temperature



TAPE AND REEL SPECIFICATION

PACKAGE	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
DO214AC/SMA	5,000	80,000	330
DO214AA/SMB	3,000	48,000	330