

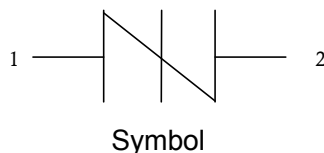


### DESCRIPTION:

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



### FEATURES:

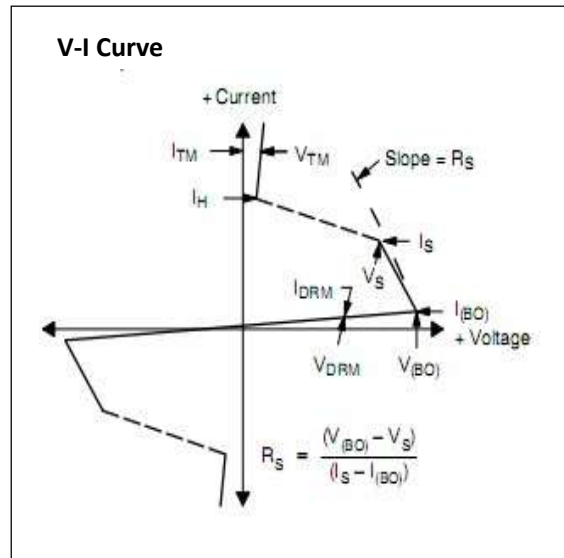
- ✧ Excellent capability of absorbing transient surge
- ✧ Quick response to surge voltage (ns Level)
- ✧ Glass-passivated junctions
- ✧ High voltage lcmp ignitors

### 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	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

**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ )

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



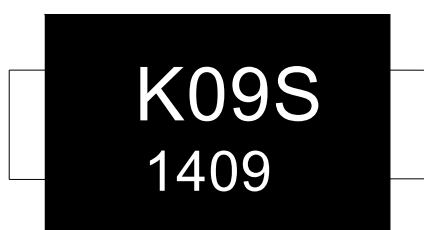
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ , continued)

Part Number	$I_{\text{DRM}}@V_{\text{DRM}}$		$V_{\text{BO}}$		$I_{\text{BO}}$	$V_T@ I_T=1\text{A}$	$I_H$	$R_S$	Marking
	$\mu\text{A}$	V	V		$\mu\text{A}$	V	mA	$\text{k}\Omega$	
	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

K	090	0	S
Series code K:Sidac	Median voltage	0: Bi-direction 1: Uni-direction	Package type:Surface mount

## MARKING

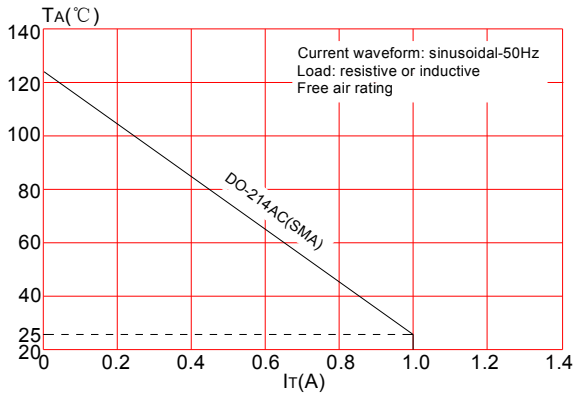


K09S:Device Marking Code  
1409: In ninth week, 2014

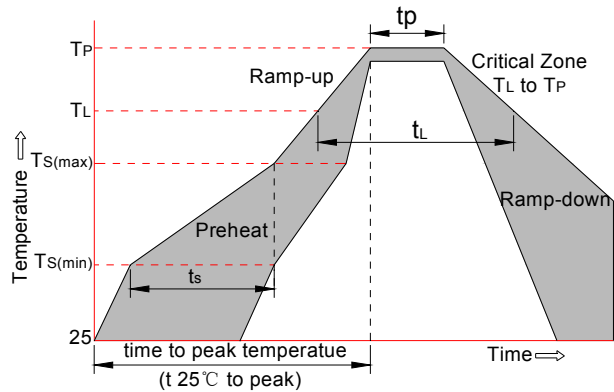
## SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.2)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ ) (Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		8-15 secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

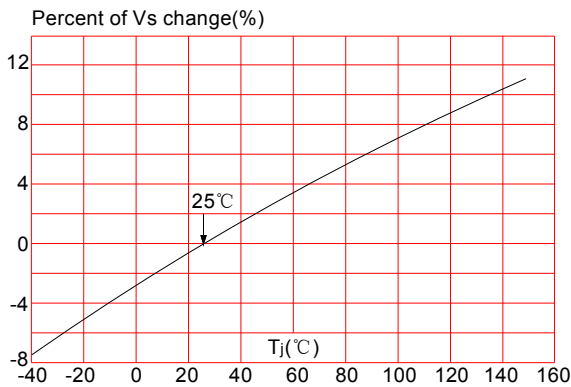
**FIG.1:** Maximum allowable ambient temperature versus on-state current



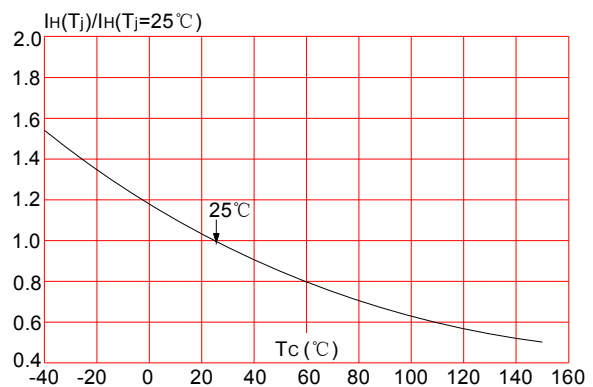
**FIG.2:** Reflow condition



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



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



**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

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