

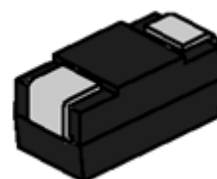


DESCRIPTION:

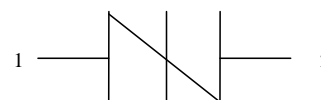
The sidac is a silicon bilateral voltage triggered switch with greater power-handling capabilities than standard diacs. Upon application of a voltage exceeding the sidac breakover voltage point, the sidac switches on through a negative resistance region to a low on-state voltage. Conduction continues 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 ignitors HID lighting ignitors



SMA/SMB



Symbol

FEATURES:

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

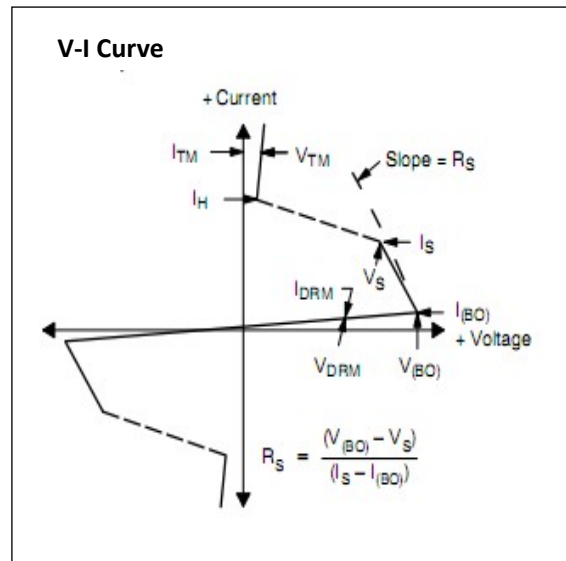
ABSOLUTE MAXIMUM RATINGS

($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{STG}	-40 to +125	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
On-state RMS current	I_T	1.0	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/ μs

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

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

Part Number	$I_{\text{DRM@}V_{\text{DRM}}}$		V_{BO}		I_{BO}	$V_{\text{T@}I_{\text{T}}=1\text{A}}$	I_{H}	R_{S}	Marking
	μA	V	V		μA	V	mA	k Ω	
	max	min	min	max	max	max	min	min	
K0900SA	1	70	80	97	50	2	10	0.1	K09S
K1050SA	1	90	95	113	50	2	10	0.1	K10S
K1200SA	1	100	110	125	50	2	10	0.1	K12S
K1300SA	1	110	120	138	50	2	10	0.1	K13S
K1400SA	1	120	130	146	50	2	10	0.1	K14S
K1500SA	1	130	140	170	50	2	10	0.1	K15S
K1800SA	1	160	170	195	50	2	10	0.1	K18S
K2000SA	1	180	190	215	50	2	10	0.1	K20S
K2200SA	1	190	205	230	50	2	10	0.1	K22S
K2400SA	1	200	220	250	50	2	10	0.1	K24S
K2600SA	1	220	240	270	50	2	10	0.1	K26S
K0900SB	1	70	80	97	50	2	10	0.1	K09S
K1050SB	1	90	95	113	50	2	10	0.1	K10S

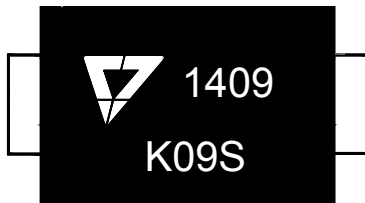
ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$, continued)

Part Number	$I_{\text{DRM}}@V_{\text{DRM}}$		V_{BO}		I_{BO}	$V_{\text{T}}@I_{\text{T}}=1\text{A}$	I_{H}	R_{S}	Marking
	μA	V	V		μA	V	mA	k Ω	
	max	min	min	max	max	max	min	min	
K1200SB	1	100	110	125	50	2	10	0.1	K12S
K1300SB	1	110	120	138	50	2	10	0.1	K13S
K1400SB	1	120	130	146	50	2	10	0.1	K14S
K1500SB	1	130	140	170	50	2	10	0.1	K15S
K1800SB	1	160	170	195	50	2	10	0.1	K18S
K2000SB	1	180	190	215	50	2	10	0.1	K20S
K2200SB	1	190	205	230	50	2	10	0.1	K22S
K2400SB	1	200	220	250	50	2	10	0.1	K24S
K2600SB	1	220	240	270	50	2	10	0.1	K26S

ORDERING INFORMATION

K Series code K:Sidac	xxx Median voltage	0 0: Bi-direction 1: Uni-direction	SA(B) Package type: surface mount SMA/SMB
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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) (t_s)	60-180 secs.
Average ramp up rate (Liquidus 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) (Liquidus)	+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)		30 secs. Max
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

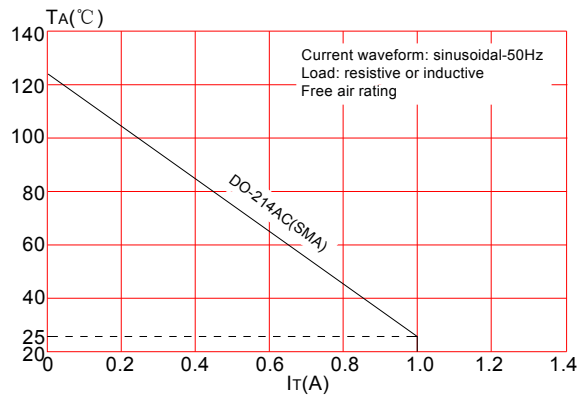


FIG.2: Reflow condition

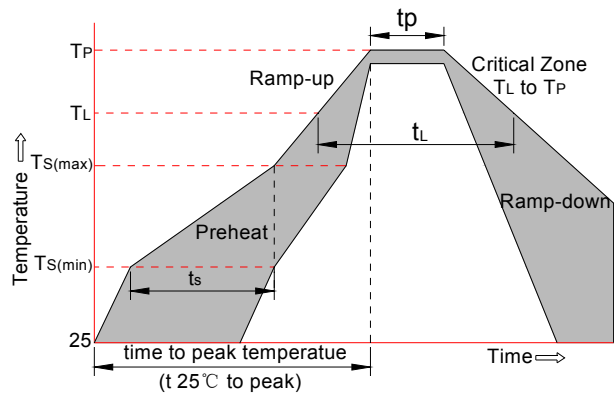


FIG.3: Normalized Vs change vs. junction temperature

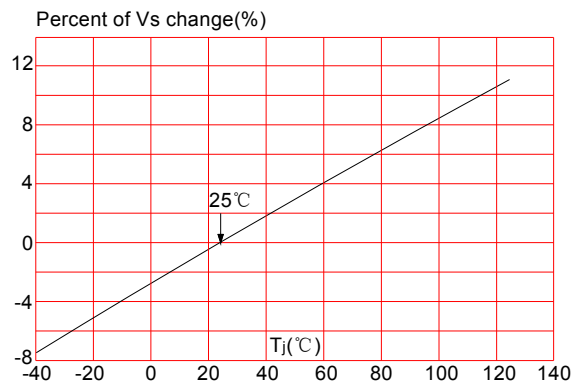
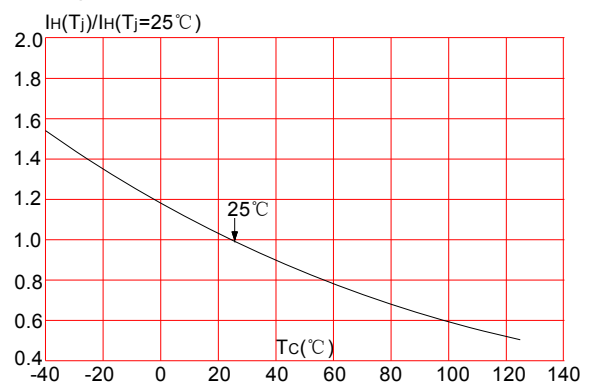
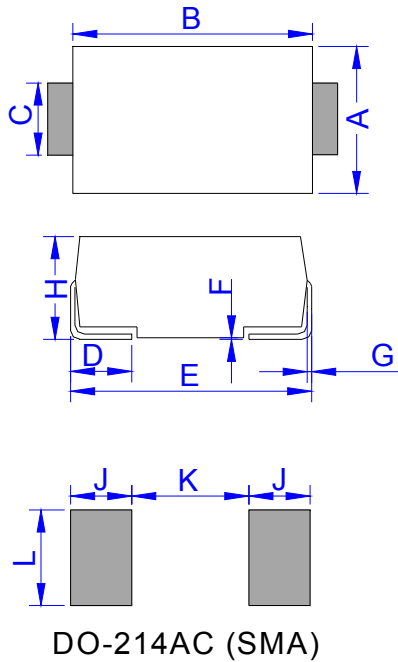


FIG.4: Normalized DC holding current vs. case temperature



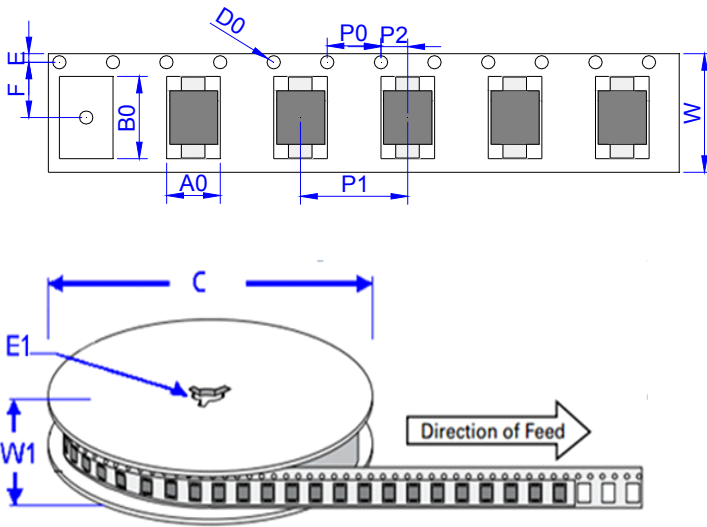
PACKAGE MECHANICAL DATA

1) DO-214AC (SMA)



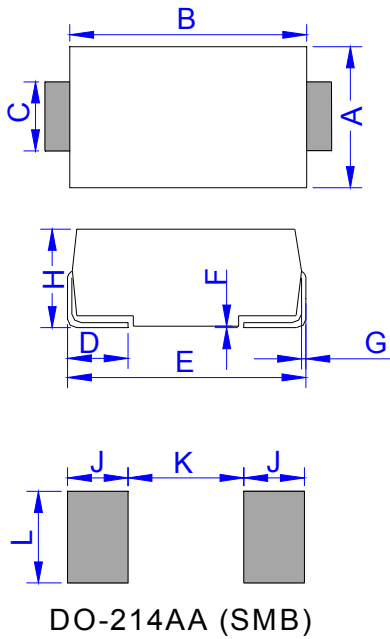
Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

TAPE AND REEL SPECIFICATION-SMA



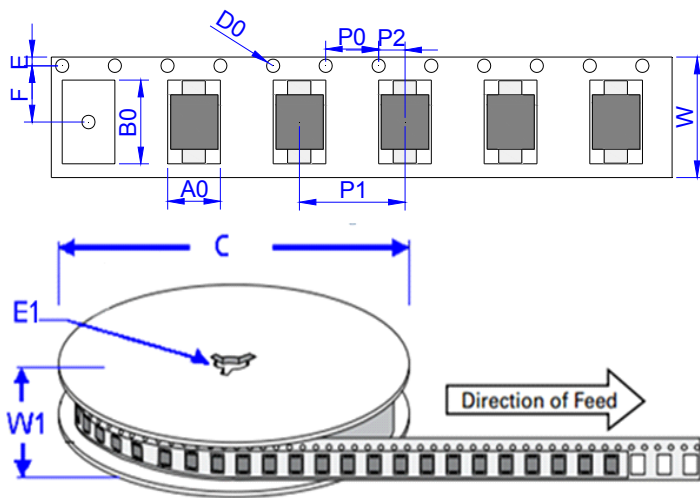
Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524 ± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	4.00 ± 0.2	0.157 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0 ± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

2) DO-214AA (SMB)



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMB




Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69± 0.3	0.224 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

TAPE AND REEL SPECIFICATION

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
KxxxxSA	0.07	7,500	120,000	13 inch reel pack
KxxxxSB	0.098	3,000	48,000	13 inch reel pack

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