

**SIDAC HIGH VOLTAGE
SILLICON UNIDIRECTIONAL THYSISTORS**

**1 AMPERE
180 VOLTS**

FEATURES

- V_{BO} range is from 170 to 190 Vdc
- V_{DRM} with stand 150V
- I_H is under 60 mA
- Compact package for spacing saving.

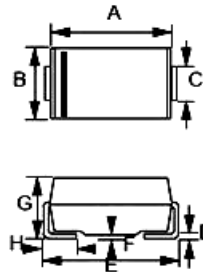
Application

- Gas Igniters

MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals: Lead Free Plating
- Component in accordance to RoHs 2011/65/EU
- UL Recognition File # E219635

SMA



SMA		
DIM.	MIN.	MAX.
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	1.96	2.40
H	0.76	1.52

All Dimensions in millimeter

Marking



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATING

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Peak repetitive off-state voltage	$T_J = -40$ to 125°C , sine wave, 50 to 60 Hz	V_{DRM}	150	V
On-state RMS current	$T_L = 80^\circ\text{C}$, all conduction angles	$I_{T(RMS)}$	1	A
Pulse on-state current	$T_a = 25^\circ\text{C}$, pulse width to = 10us, sine wave, repetitive peak value	f=5Hz	280	A
		f=60Hz	120	
Maximum lead solder temperature (Lead length $\geq 1/16$ " from case, 10s max)		T_L	260	$^\circ\text{C}$
Operating junction temperature range		T_J	-40 ~ +125	$^\circ\text{C}$
Storage temperature range		T_{STG}	-40 ~ +150	$^\circ\text{C}$

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance junction to case	R_{thJC}	15	$^\circ\text{C/W}$

OFF CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Peak repetitive forward or reverse blocking current (50 to 60 Hz) $V_{DRM}=150\text{V}$	I_{DRM}	10	μA

ON CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Peak on-state voltage	$I_T = 1 \text{ A}$	V_{TM}	--	1.1	1.5	V
Break over voltage	$I_{BO} = 5 \mu\text{A}$	V_{BO}	170	180	190	V
Break over current		I_{BO}	--	--	200	μA
Holding current		I_H	--	--	60	mA
Switching resistance		R_s	0.1	--	--	$k\Omega$

ON CHARACTERISTICS

PARAMETER	SYMBOL	MIN	TYP.	MAX	UNIT
Critical rate of rise of on-state current	di/dt	--	80	--	A/ μS

Note :

Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage may occur and reliability may be affected.

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RATING AND CHARACTERISTIC CURVES SD1A180A

Fig.1- TYPICAL FORWARD VOLTAGE

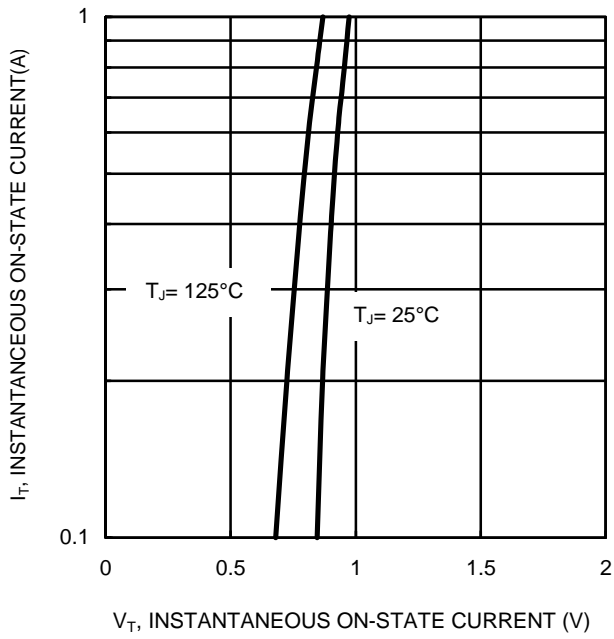


Fig.2- TYPICAL POWER DISSIPATION

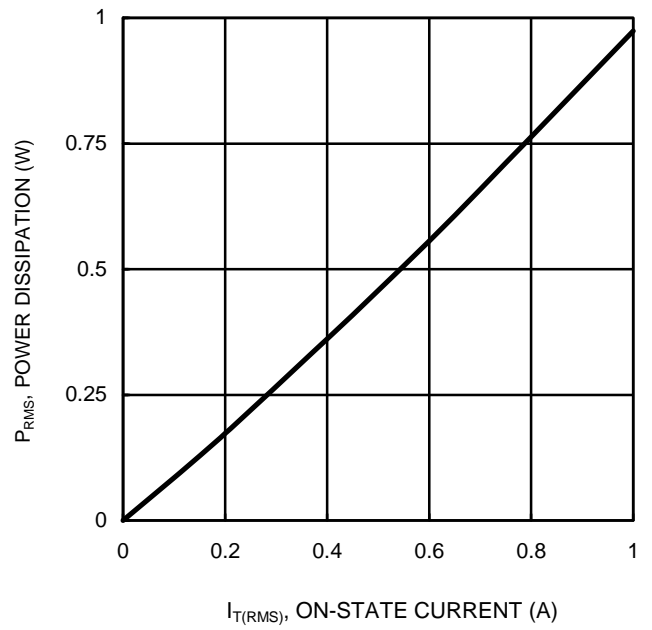


FIG.3- TYPICAL BREAKOVER VOLTAGE

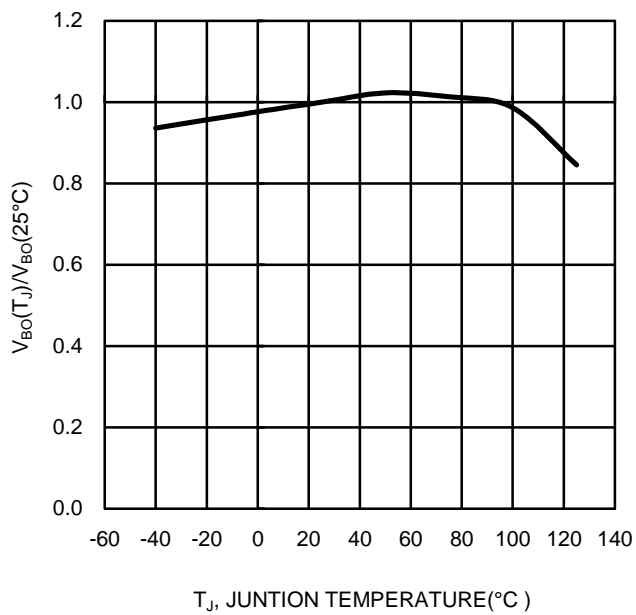
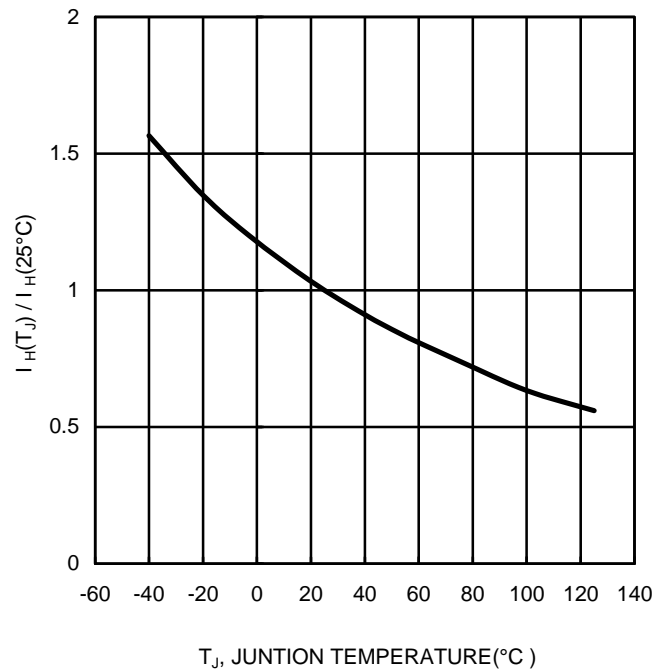


Fig.4- TYPICAL HOLDING CURRENT



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