

**SIDAC  
SILICON UNIDIRECTIONAL THYRISTORS**

**1 AMPERE  
180 VOLTS**

**FEATURES**

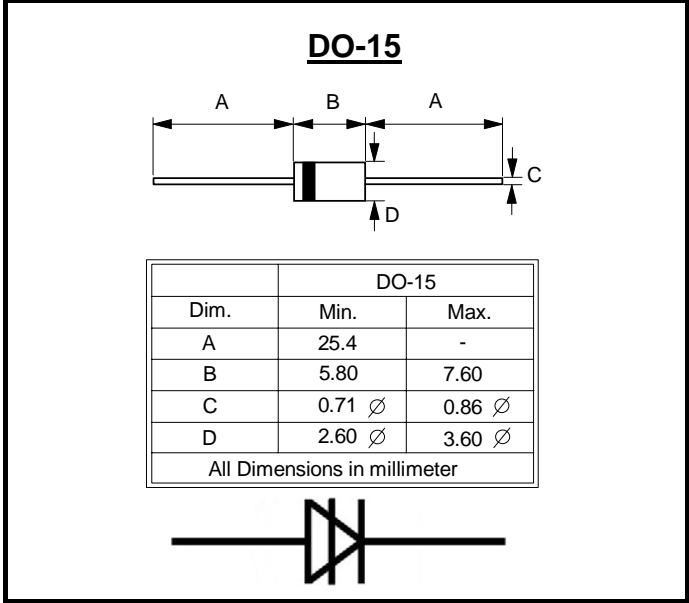
- $V_{BO}$  range is from 170 to 190 Vdc
- $V_{DRM}$  with stand 150V
- $I_H$  is under 60 mA
- Compact package for spacing saving.

**Application**

- Gas Igniters

**MECHANICAL DATA**

- Case: JEDEC DO-15 molded plastic
- Terminals: Lead Free Plating
- Component in accordance to RoHs 2011/65/EU
- UL Recognition File # E219635



**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 <sub>J</sub> = -40 to 125°C, sine wave, 50 to 60 Hz	$V_{DRM}$	150	V
On-state RMS current	T <sub>L</sub> = 80°C, all conduction angles	$I_{T(RMS)}$	1	A
Pulse on-state current	T <sub>a</sub> =25°C, pulse width to = 10us, sine wave, repetitive peak value	f=5Hz	330	A
		f=60Hz	190	
Maximum lead solder temperature (Lead length $\geq$ 1/16 " from case, 10s max)		T <sub>L</sub>	260	°C
Operating junction temperature range		T <sub>J</sub>	-40 ~ +125	°C
Storage temperature range		T <sub>STG</sub>	-40 ~ +150	°C

**THERMAL PERFORMANCE**

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance junction to case	R <sub>thJC</sub>	15	°C/W

**OFF CHARACTERISTICS**

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

**ON CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP.	MAX	UNIT
Peak on-state voltage	I <sub>T</sub> = 1 A	$V_{TM}$	--	1.1	1.5	V
Breakover voltage	I <sub>BO</sub> = 5 uA	$V_{BO}$	170	180	190	V
Breakover current		$I_{BO}$	--	--	200	uA
Holding current		$I_H$	--	--	60	mA
Switching resistance		R <sub>s</sub>	0.1	--	--	k $\Omega$

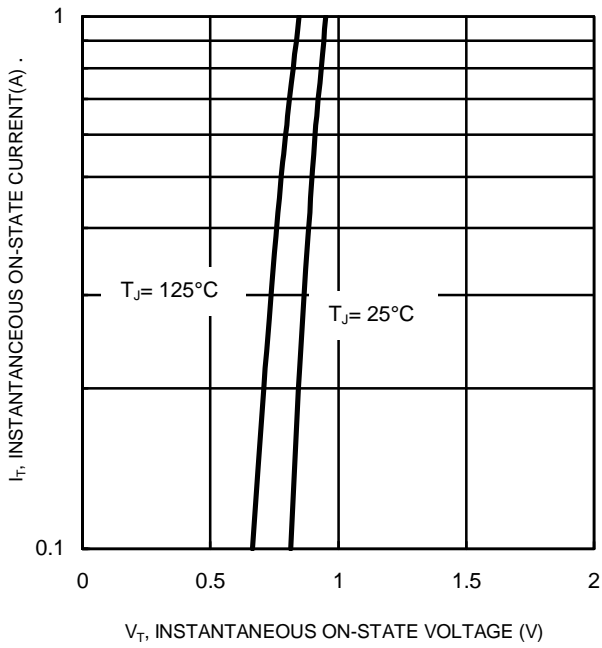
**ON CHARACTERISTICS**

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

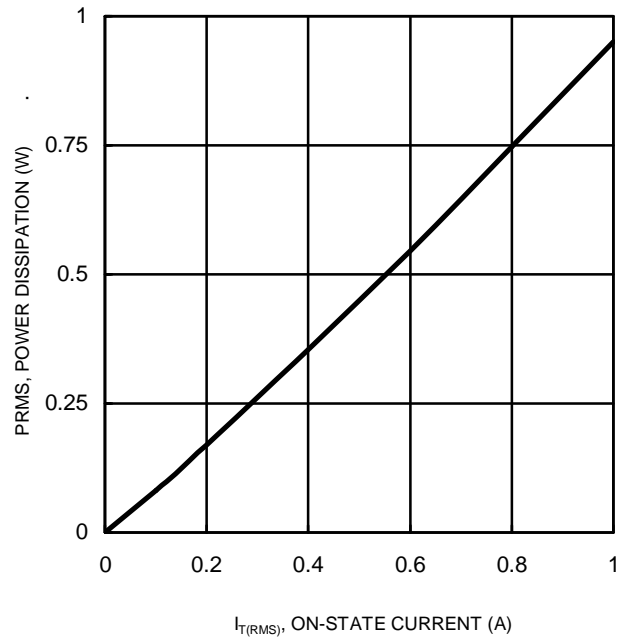
**Note :**  
Maximum ratings are those values beyond which device damage can occur. Maximum ratings applied to the device are individual stress limit values (not normal operating conditions) and are not valid simultaneously. If these limits are exceeded, device functional operation is not implied, damage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

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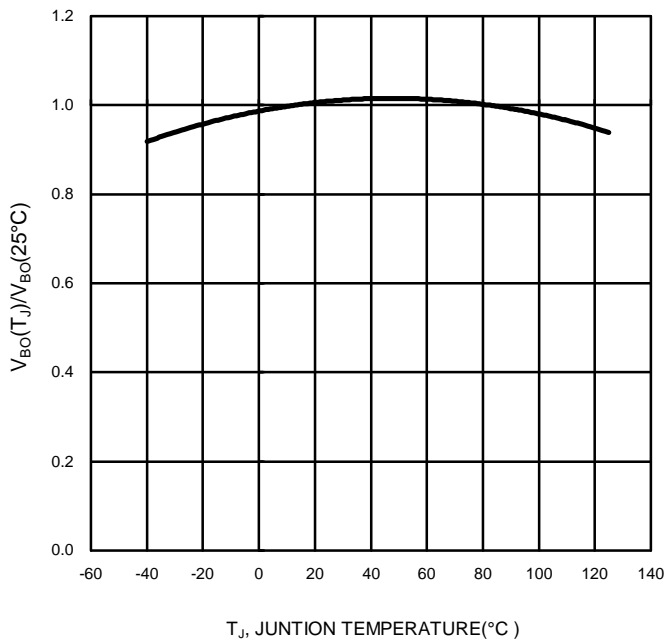
**Fig.1- TYPICAL ON-STATE VOLTAGE**



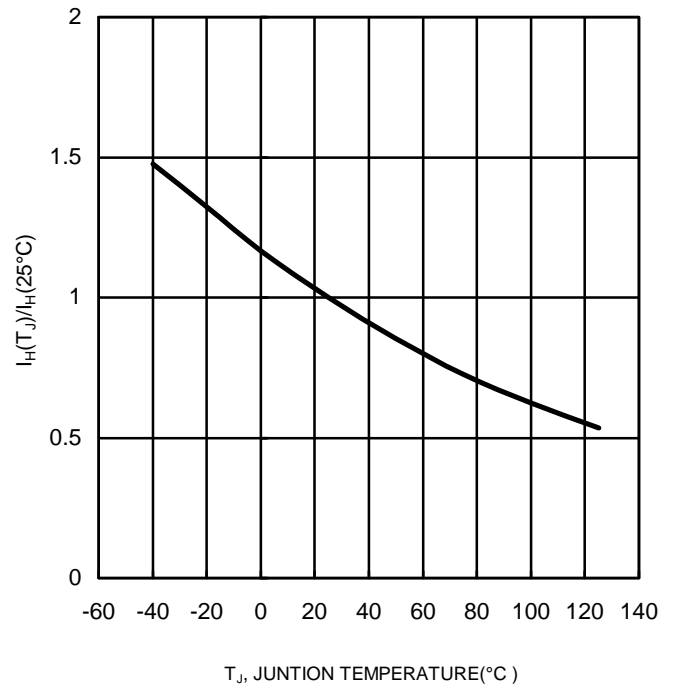
**Fig.2- TYPICAL POWER DISSIPATION**



**Fig.3- TYPICAL BREAKOVER VOLTAGE**



**Fig.4- TYPICAL HOLDING CURRENT**



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