

**SIDAC
SILICON UNIDIRECTIONAL THYRISTORS**

**1 AMPERE
120 VOLTS**

FEATURES

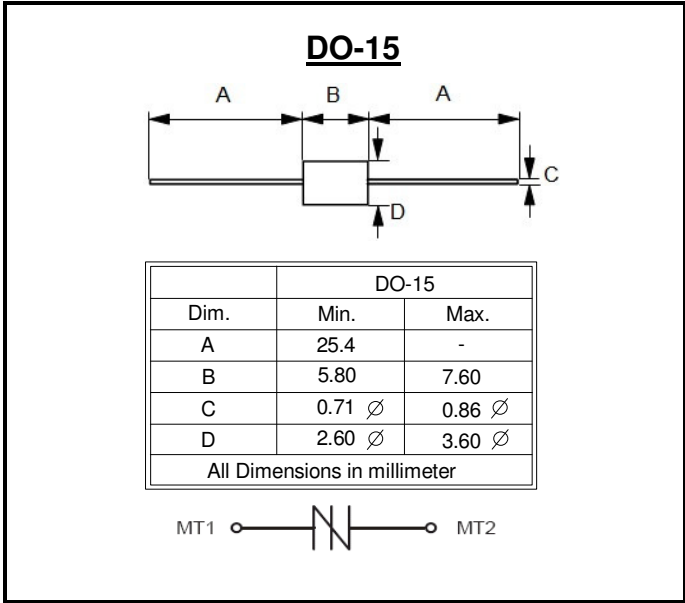
- V_{BO} range is from 105 to 120 Vdc
- V_{DRM} with stand 90V
- I_H is under 60 mA
- Compact package for spacing saving.

Application

- Gas Igniters
- HID Igniters
- Pulse generating

MECHANICAL DATA

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



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}	90	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 = 10 μs , sine wave, repetitive peak value	$f = 5\text{Hz}$	25	A
		$f = 60\text{Hz}$	80	
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	$^\circ\text{C}/\text{W}$

OFF CHARACTERISTICS

PARAMETER	SYMBOL	MAX	UNIT
Peak repetitive forward or reverse blocking current (50 to 60 Hz) $V_{DRM} = 90\text{V}$	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}	--	--	1.5	V
Breakover voltage	$I_{BO} = 5\text{uA}$	V_{BO}	105	--	120	V
Breakover current		I_{BO}	--	--	200	μA
Holding current		I_H	--	--	60	mA
Switching resistance		R_s	0.1	--	--	$\text{k}\Omega$

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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Fig.1- TYPICAL ON-STATE VOLTAGE

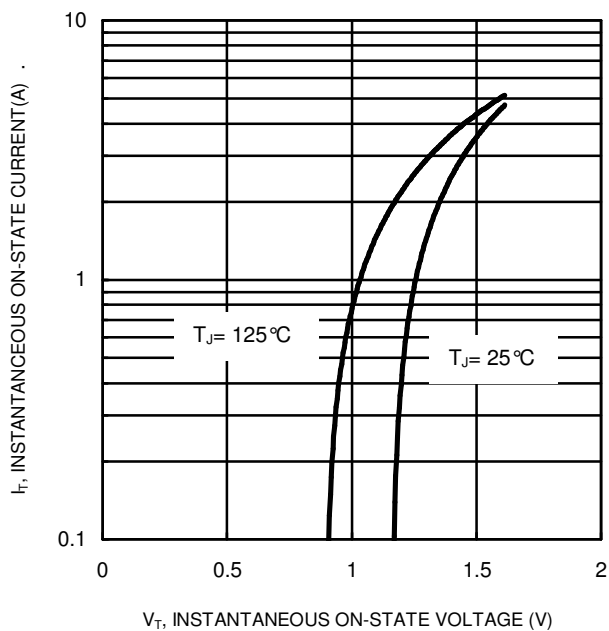


Fig.2- TYPICAL POWER DISSIPATION

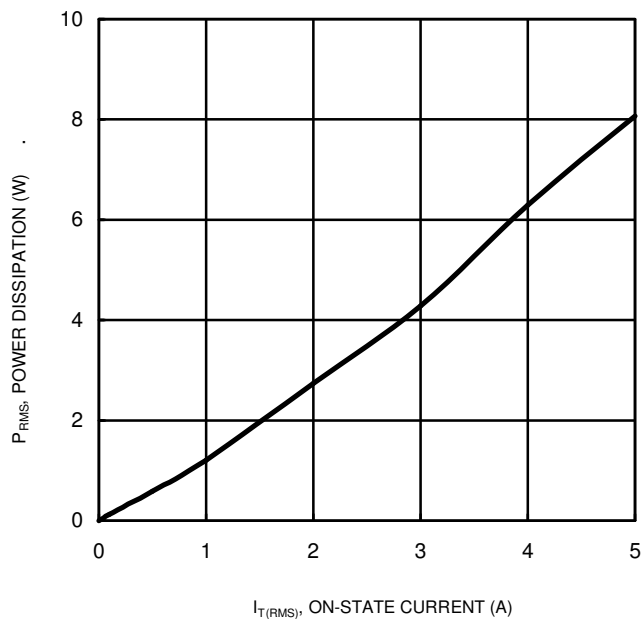


Fig.3- TYPICAL BREAKOVER VOLTAGE

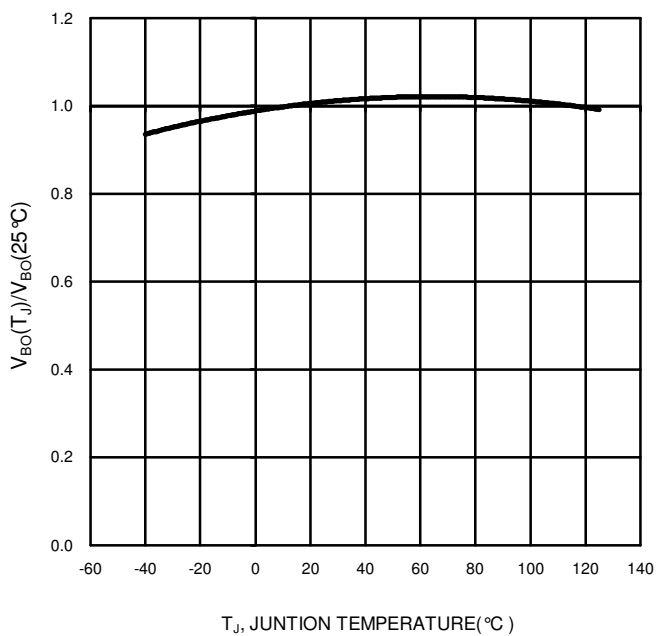
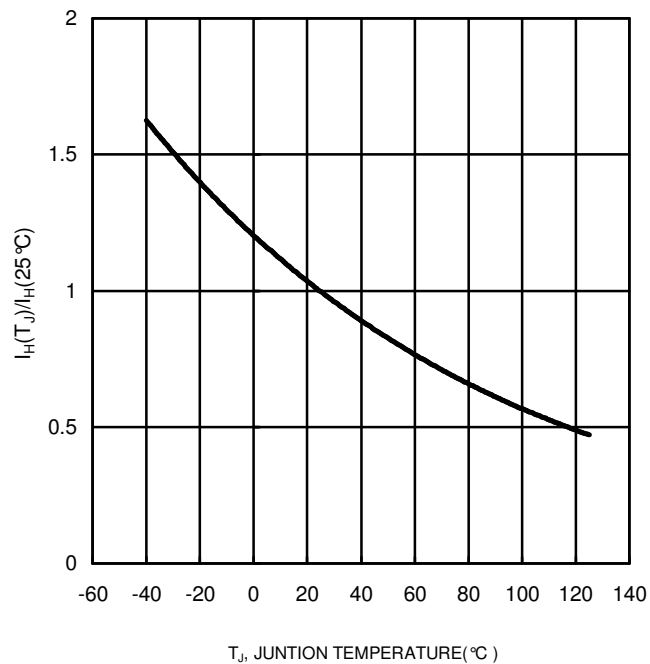


Fig.4- TYPICAL HOLDING CURRENT



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