

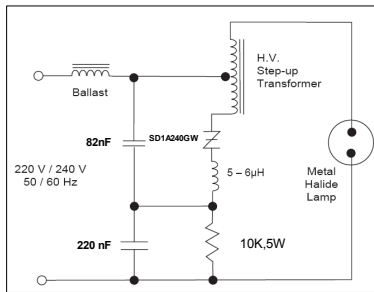
**Sidac High Voltage  
Silicon Bidirectional Thyristors**

**SIDACS  
1 AMPERE RMS  
240 VOLTS**

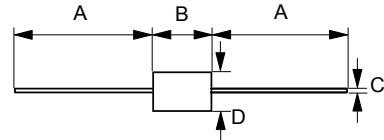
**FEATURES**

- VBO range is from 210 to 240 Vdc
- VDRM & VRRM with stand +/- 180V.
- IH+/- is under 65mA.
- Compact package for spacing saving.
- UL Recognition File # E219635

**TYP. APPLICATION CIRCUIT**



**DO-15**



DO-15		
Dim.	Min.	Max.
A	25.4	-
B	5.80	7.6
C	0.71 $\varnothing$	0.86 $\varnothing$
D	2.60 $\varnothing$	3.60 $\varnothing$
All Dimensions in millimeter		



**MAXIMUM RATINGS** (Tj= 25°C unless otherwise noticed)

Rating	Symbol	Value	Unit
Peak Repetitive Off- State Voltage (Tj= -40 to 125°C , Sine Wave, 50 to 60 Hz)	VDRM	± 180	Volts
On-State RMS Current (Tl = 80°C , Lead Length=3/8" , All Conduction Angles)	IT(RMS)	± 1	Amp
Peak Non-Repetitive Surge Current 60 Hz One Cycle Sine Wave (Tj = 125°C )	ITSM	± 20	Amps
Operating Junction Temperature Range	TJ	-40 to +125	°C
Repetitive Peak On-state Current Ta=25, pulse width to=10us, sine wave, repetitive peak value	f= 1K Hz f= 60 Hz ITRM	17 50	Amp.
Storage Temperature Range	Tstg	-40 to +150	°C

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.

REV. 5, Jan-2011, KDXD01

**THERMAL CHARACTERISTICS**

Characteristic	Symbol	Value	Unit
Thermal Resistance - Junction to Lead, Lead Length = 3/8 "	RthJL	18	°C/W
Maximum Lead Solder Temperature (Lead Length ≥ 1/16 " from Case, 10s Max)	TL	260	°C

**ELECTRICAL CHARACTERISTICS (T<sub>j</sub>=25°C unless otherwise noted)**

Characteristics	Symbol	Min	Typ	Max	Unit
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**OFF CHARACTERISTICS**

Peak Reptitive Forward or Reverse Blocking Current (50 to 60 Hz Sine Wave)	IDRM	----	----	5	uA
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**ON CHARACTERISTICS**

Peak On-State Voltage (I <sub>TM</sub> =1A Peak @T <sub>p</sub> ≤300 us, Duty Cycle ≤ 2%)	V <sub>TM</sub>	----		3	Volts
Breakover Voltage I <sub>BO</sub> = 0.5 mA	V <sub>BO</sub>	216	---	234	Volts
Breakover Current	I <sub>BO</sub>	---	---	0.5	mA
Dynamic Holding Current (Sine Wave, 50 to 60 Hz, R <sub>L</sub> =100 Ohm)	I <sub>H</sub>	----	25	65	mA
Switching Resistance (Sine Wave, 50 to 60 Hz)	R <sub>s</sub>	0.1	----	----	kΩ

**DYNAMIC CHARACTERISTICS**

Critical Rate of Rise of On-State Current	di/dt	----	80	----	A/us
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**ORDERING INFORMATION**

<b>SD</b> ↓	<b>1A</b> ↓	<b>240</b> ↓	<b>GW</b> ↓
SIDAC Current:	Voltage:	Package:	
1A=1A	120=120V	DO-15	
	220=220V		
	240=240V		

**MARKING INFORMATION**

<b>LT YXWW</b> <b>SD1AXXXGW</b>
NOTE: XXX = Voltage, Y =Year, Z = Week

**Voltage Current Characteristic of SIDAC**

Symbol	Parameter
IDRM	Off State Forward Leakage Current
VDRM	Off State Repetitive Forward Blocking Voltage
IRRM	Off State Reverse Leakage Current
VRRM	Off State Repetitive Reverse Blocking Voltage
VBO	Breakover Voltage
IBO	Breakover Current
IH	Holding Current
VTM	On State Voltage
ITM	Peak On State Current

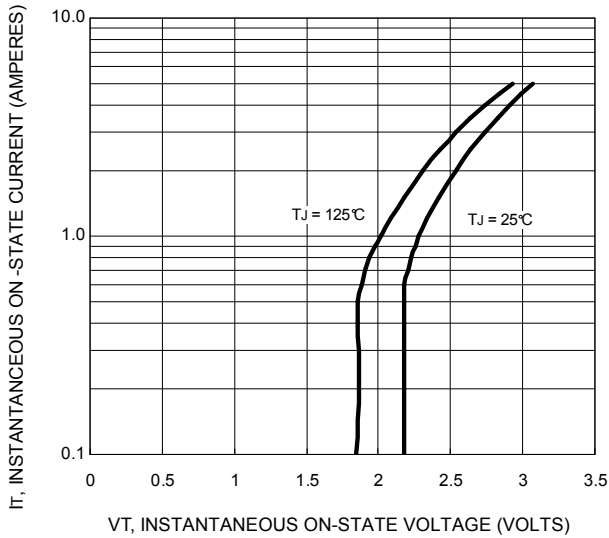
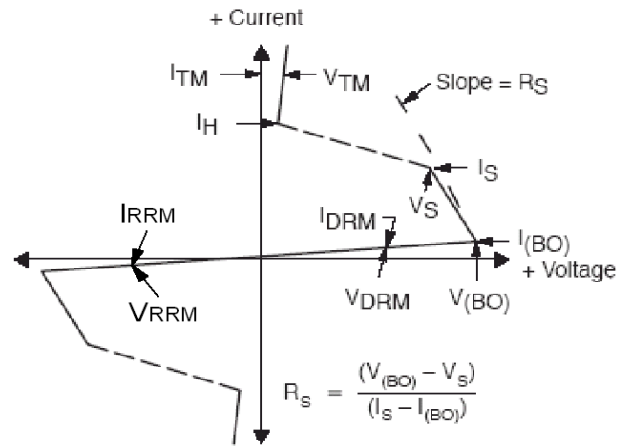


FIG. 1 - Typical On-State Voltage

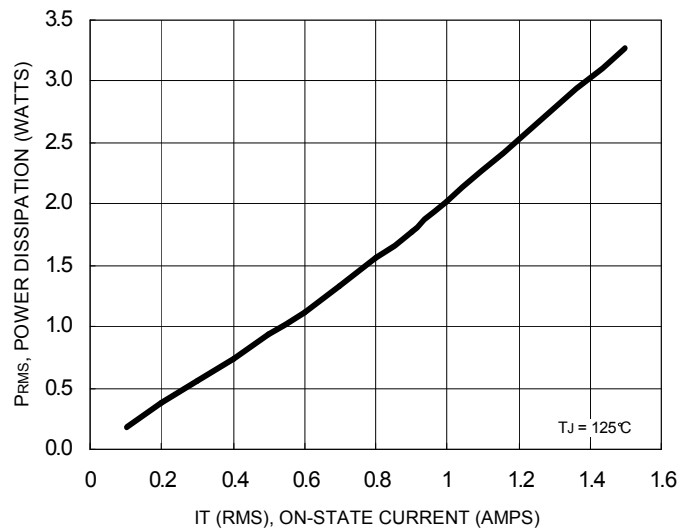


FIG. 2 - Typical Power Dissipation

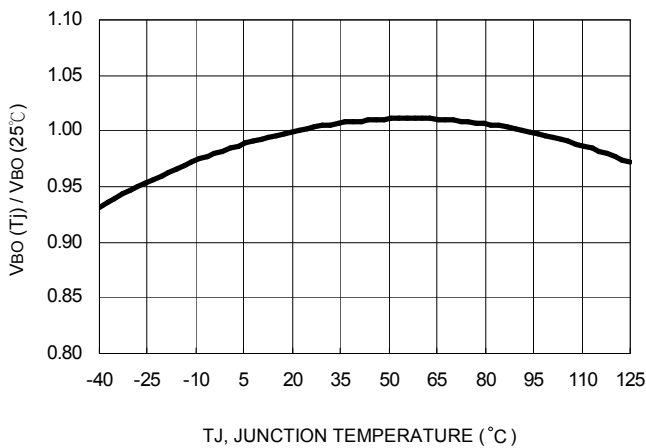


FIG. 3 - Typical Breakover Voltage

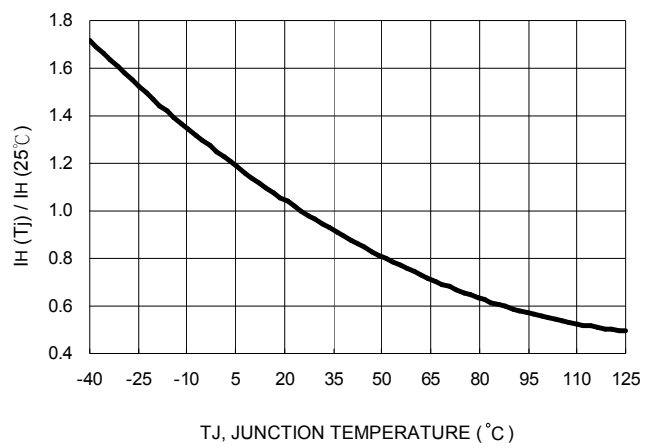


FIG. 4 - Typical Holding Current

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