LITEON LITE-ON SEMICONDUCTORS

SD1A210GW

SIDAC High Voltage Silicon Bidirectional Thyristors

SIDAC
1 AMPERE RMS
220 VOLTS

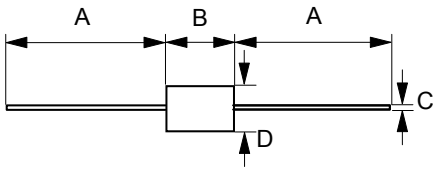
FEATURES

- •VBO range is from 201 to 219 Vdc
- •VDRM & VRRM with stand +/- 180V.
- •IH+/- is under 65mA.
- •Compact package for spacing saving.

Application

- • Gas Igniters
- • HID Igniters
- • Pulse generating

DO-15



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

MAXIMUM RATINGS (Tj=25 ℃, unless otherwise specified)

Parameter	Test Condition	Symbol	Value	Unit
Peak repetitive off-state voltage	TJ= -40 to 125℃, Sine Wave, 50 to 60 Hz	V_{DRM}	±180	V
On-state RMS current	TL= 80 ℃, All Conduction Angles	$I_{t(RMS)}$	1	A
Peak Non-Repetitive Surge Current	60 Hz One Cycle Sin wave (Tj=125 ℃)	I_{TSM}	16	A
Operating junction temperature range		Tj	-40 ~ +125	°C
Repetitive Peak On-state Current	Ta=25 ℃, f=1KHz pulse width to 10μS, sine wave f=60 Hz	I_{TRM}	17 50	A
Storage temperature range		Tstg	-40 ~ +150	°C

Rev. 2, Apr-2011, KDXD02

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.

THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal resistance – Junction to case	Rthjc	15	°C/W
Maximum lead Solder Temperature (Lead Length≧ 1/16 ” from Case, 10s Max)	T_L	260	°C

ELECTRICAL CHARACTERISTICS (Tj=25°C, unless otherwise specified)

Parameter	Test condition	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Peak repetitive forward or Reverse Blocking Current (50 to 60 Hz)		I_{DRM}	---	---	10	uA
ON CHARACTERISTICS						
Peak On-State Voltage	I_T =1A	V_{TM}	---	2.3	3	V
Break Over Voltage	dv/dt = 4 V/ms	V_{BO}	201	210	219	V
Break Over Current		I_{BO}	---	---	0.5	mA
Holding Current		I_H	25	---	65	mA
Switching Resistance		Rs	0.1	---	---	kΩ
DYNAMIC CHARACTERISTICS						
Critical rate of rise of on-state current		di/dt	---	80	---	A/μs

ORDERING INFORMATION

SD **1A** **210** **GW**

SIDAC Current: 1A=1A Voltage: 210=210V Package: DO-15

MARKING INFORMATION

LT YXWW

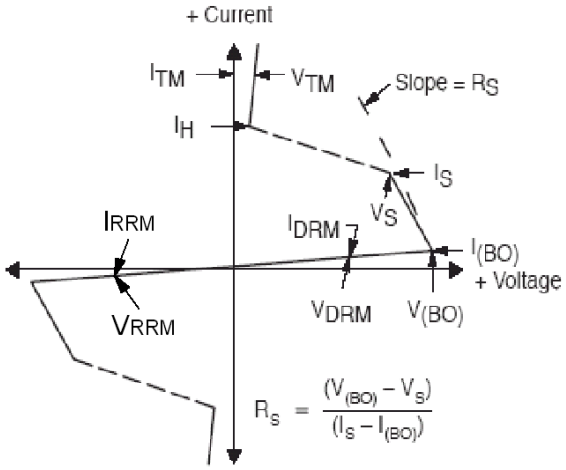
SD1A210GW

NOTE:Y= Year, WW= Week

RATING AND CHARACTERISTIC CURVES
SD1A210GW

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



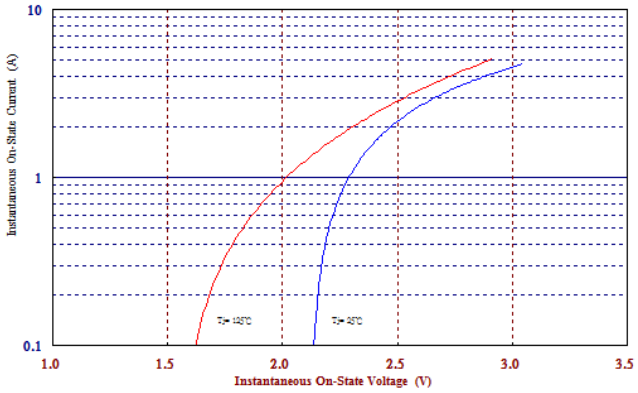


FIG. 1 - Typical On-State Voltage

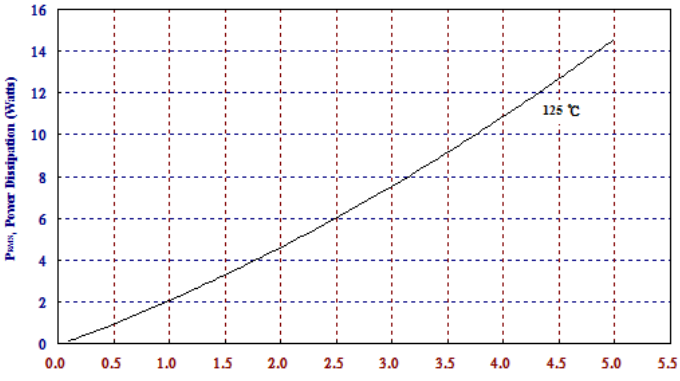


FIG. 2 - Typical Power Dissipation

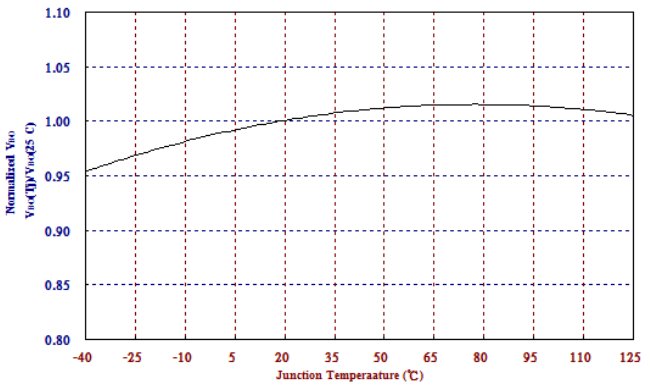


FIG. 3 - Typical Breakover Voltage

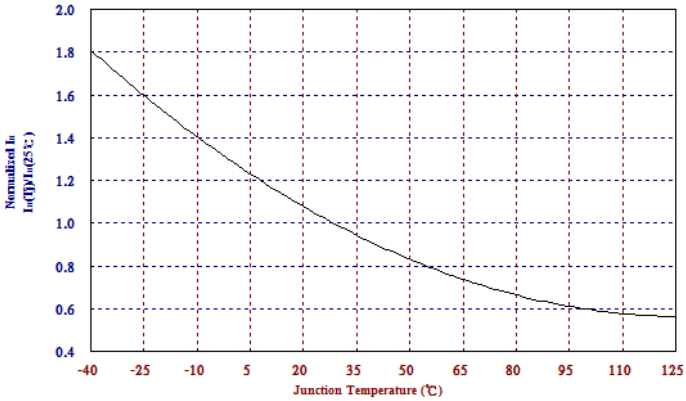


FIG. 4 - Typical Holding Current

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