

**Sidac High Voltage  
Silicon Bidirectional Thyristors**

**SIDACS  
0.6 AMPERES RMS  
105 VOLTS**

**FEATURES**

- High pulse current capability,typ=120A/us
- Glass passivation insures reliable operation
- Compact package, DO-219 Package
- Max. Dynamic Holding Current -100mA
- RoHS compliant

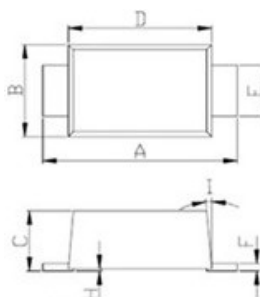
**APPLICATION**

- High Pressure Sodium Vapor Lighting
- Strobes and Flashers
- Ignitors
- High Voltage Regulators
- Pulse Generators
- Used to Trigger Gates of SCR's and Triacs

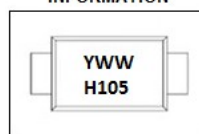
**MECHANICAL DATA**

- Case: JEDEC DO-219 molded plastic
- Component in accordance to RoHs 2011/65/EU

**DO-219**



MARKING  
INFORMATION



NOTE: Y=Year  
W= Week

DO-219			
DIM.	MIN.	TYP	MAX.
A	3.50	3.80	3.90
B	1.70	1.90	2.00
C	0.81	1.18	1.20
D	2.70	2.80	2.90
E	0.80	1.00	1.35
F	0.05	0.15	0.30
G	0.35	0.60	0.85
H	0.03	0.07	0.10
I	0°	5°	8°
All dimension in millimeter.			

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Off-State Voltage (T <sub>j</sub> =-40 to 125°C,Sine Wave,50 to 60Hz )	V <sub>DRM</sub> V <sub>RRM</sub>	±90	V
On-State RMS Current(T <sub>L</sub> =80°C,Lead Lengh=3/8" ,All Conduction Angles)	I <sub>T(RMS)</sub>	±0.6	A
Peak Non-Repetitive Surge Current ,60Hz One Cycle Wave(T <sub>j</sub> =125°C)	I <sub>TSM</sub>	±4.0	A
Operating Junction Temperature Range	T <sub>j</sub>	-40 to +125	°C
Storage Temperature Range	T <sub>STG</sub>	-40 to +150	°C

REV.0, DEC.-2017, KSXF01

**NOTES :**

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.

## RATING AND CHARACTERISTIC CURVES H105E



### THERMAL CHARACTERISTICS

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Maximum Lead Solder Temperature	$T_L$	260	°C

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

OFF CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
Peak Repetitive Forward or Reverse Blocking Current	$I_{DRM}$	---	---	5	uA

ON CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
Peak On-State Voltage (ITM=1A Peak @Tp ≤300 us, Duty Cycle ≤ 2%)	$V_{TM}$	---	1.3	1.5	V
Breakover Voltage IBO = 35uA	$V_{BO}$	95	---	110	V
Dynamic Holding Current (Sine Wave, 50 to 60 Hz, RL=100 Ohm)	$I_H$	---	---	100	mA
Switching Resistance (Sine Wave, 50 to 60 Hz)	$R_S$	0.1	---	---	kΩ

DYNAMIC CHARACTERISTIC	SYMBOL	MIN	TYP	MAX	UNIT
Critical Rate of Rise of On-State Current, Critical Damped Waveform Circuit (IPK = 130 A, Pulse Width = 10 us)	di/dt	---	120	---	A/us

## RATING AND CHARACTERISTIC CURVES H105E

**LITEON**

Voltage Current Characteristic of SIDAC  
(Bidirectional Device)

Symbol	Parameter
$I_{DRM}$	Off State Leakage Current
$V_{DRM}$	Off State Repetitive Blocking Voltage
$V_{BO}$	Breakover Voltage
$I_{BO}$	Breakover Current
$I_H$	Holding Current
$V_{TM}$	On State Voltage
$I_{TM}$	Peak on State Current

25°C

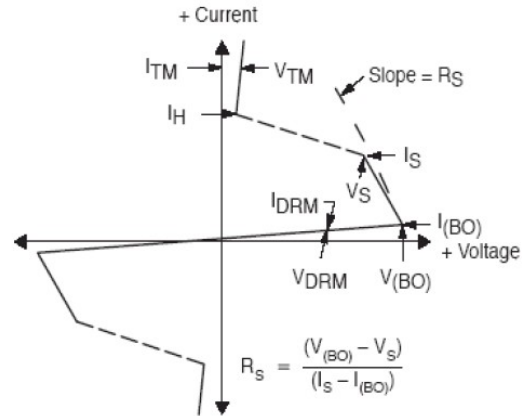


FIG.1- Typical On-State Voltage

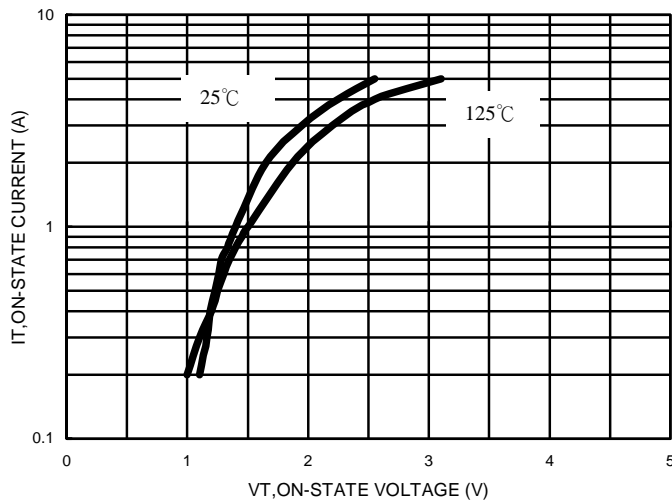


FIG.2- Typical Power Dissipation

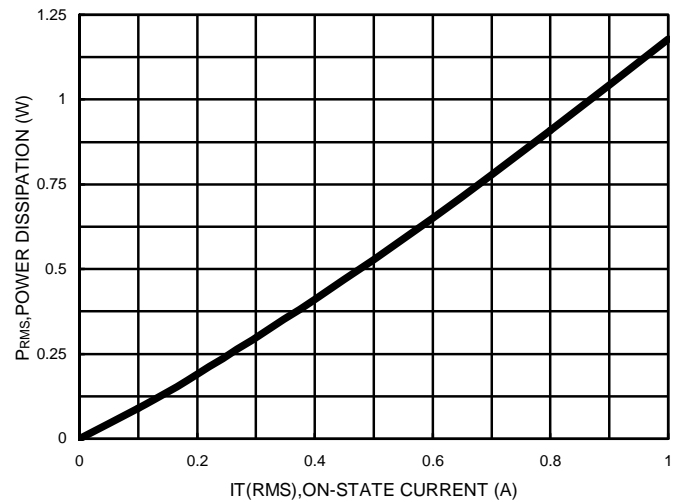


FIG.3- Typical Breakover Voltage

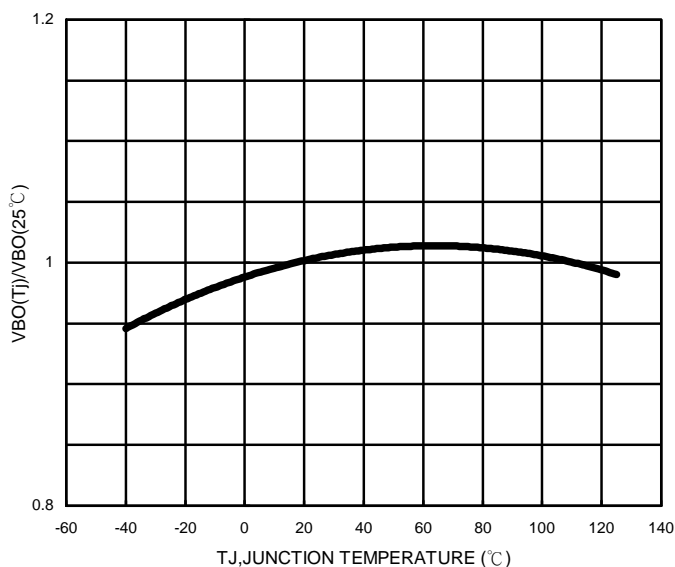
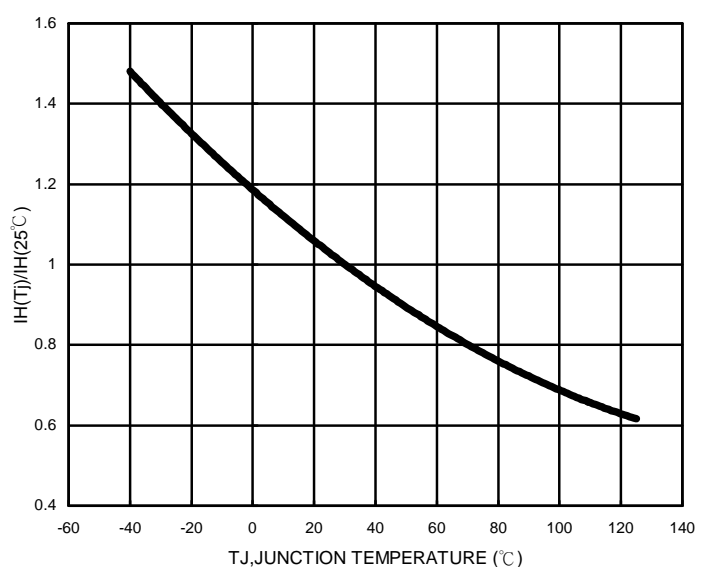


FIG.4- Typical Holding Current



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