



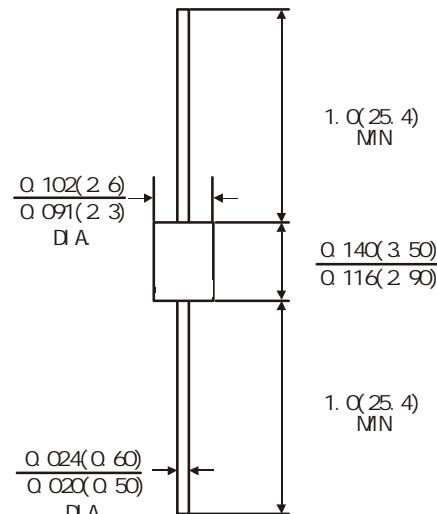
PSI KxxxS SERIES FOR SIDAC

(75 V to 400 V)

General Description

The sidac is a silicon bilateral voltage triggered switch with greater power-handling capabilities than standard diacs. Upon application of a voltage exceeding the sidac breakdown voltage point, the sidac switches on through a negative resistance region to a low on-state voltage. Conduction continues until the current is interrupted or drops below the minimum holding current of the device.

R-1

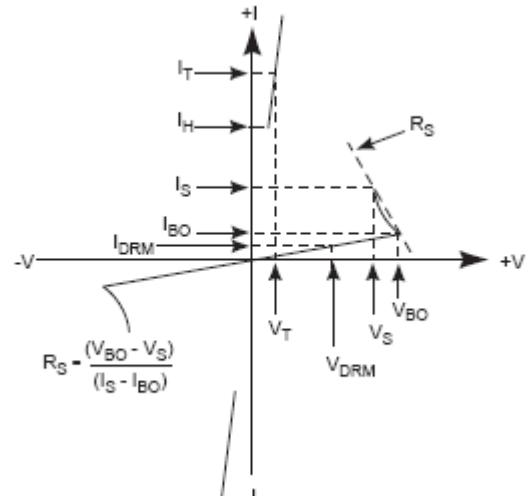


FEATURES

- AC circuit oriented
- Glass-passivated junctions
- High surge current capability

Applications

- High-voltage lamp ignitors
- Natural gas ignitors
- Gas oil ignitors
- High-voltage power supplies
- Xenon ignitors
- Overvoltage protector
- Pulse generators
- Fluorescent lighting ignitors
- HID lighting ignitors



MECHANICAL DATA

- Case : R-1 molded plastic
- Polarity : Color band denotes cathode
- Weight : 0.012 ounces, 0.34 grams
- Mounting position : Any

DRM Off	State Leakage Current
VDRM Off	State Repetitive Blocking Voltage
VBO	Breakover Voltage
IBO	Breakover Current
IH	Holding Current
VTM	On State Voltage
ITM	Peak on State Current



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MAXIMUM RATING(T_j<125°C;unless otherwise noted;Electricals apply in both directions)

Characteristics	Symbol	Value	Unit
On-State RMS Current T _j <125°C; All conduction Angles	I _{T(RMS)}	0.9	A
Non-repetitive Surge Current 峰值正旋周期浪涌电流 (60HZ One Cycle Sine Wave;Peak Value;T _j <125°C)	I _{TSM}	4	A
Operating Junction Temperature Range	T _J	- 40 to +125	° C
Storage Temperature Range	T _{Stg}	- 40 to +150	° C
Critical Rate of Rise of On-state Current	d _{IT} /d _t	50	A/μ s

ELECTRICAL CHARACTERISTICS(T_j<125°C;unless otherwise noted;Electricals apply in both directions)

Symbol	VDRM	IDRM	VBO		IBO	VTM	IH		RS
Parameter	Blocking Voltage	Repetitive Peak Off-State Current @ VDRM	Breakover Voltage	Breakover Current	On-state Voltage @IT=1A	Holding Current	Switch -ing Resistance		
Unit	Volt	uA	Volt		uA	Volt	mA		KΩ
Limit	Max	Max	Min	Max	Max	Max	Max	Min	Min
K105S	75	5	95	113	35	1.5	50	12	0.1
K110S	85	5	104	118	35	1.5	50	12	0.1
K120S	90	5	110	125	35	1.5	50	12	0.1
K130S	95	5	120	138	35	1.5	50	12	0.1
K140S	105	5	130	146	35	1.5	50	12	0.1
K150S	115	5	140	170	35	1.5	50	12	0.1
K195S	130	5	165	190	35	1.5	50	12	0.1
K200S	150	5	190	215	35	1.5	50	12	0.1
K220S	165	5	205	230	35	1.5	50	12	0.1
K240S	175	5	220	250	35	1.5	50	12	0.1
K250S	190	5	240	280	35	1.5	50	12	0.1
K300S	215	5	270	330	35	1.5	50	12	0.1
K330S	270	10	309	355	50	3	50	12	0.1
K340S	270	10	320	360	50	3	50	12	0.1
K360S	270	10	340	380	50	3	50	12	0.1
K380S	270	10	360	400	50	3	50	12	0.1
K460S	400	10	420	520	50	3	50	12	0.1

Rs=(Vbo-Vs)/(Is- Ibo);50/60HZ sine wave. Measured under condition to reduce heating.



FIG.1-Maximum Lead Temperature

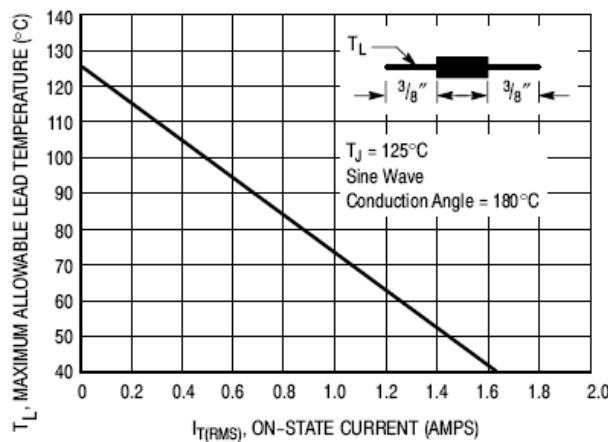


FIG.2-Maximum Ambient Temperature

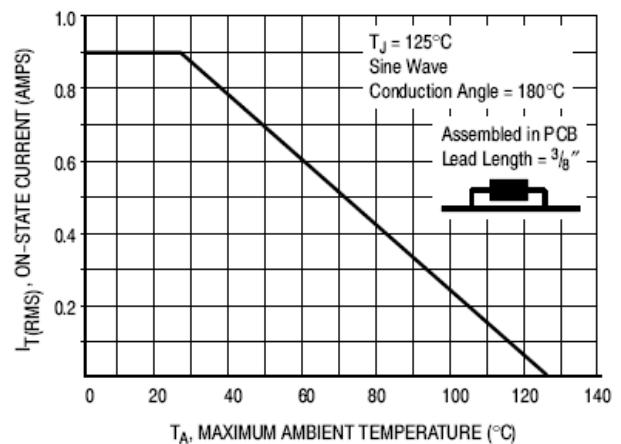


FIG.3-Typical On-State Voltage

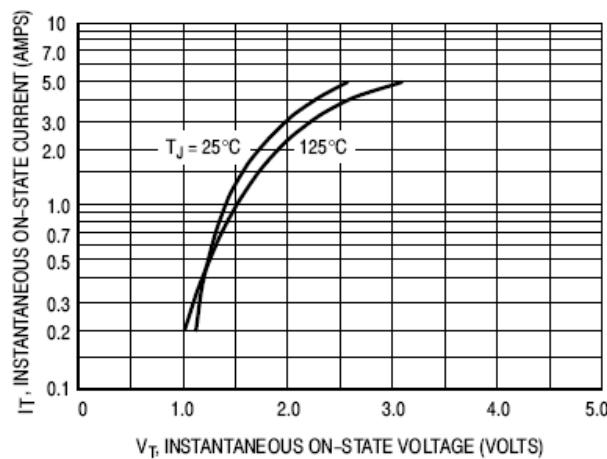
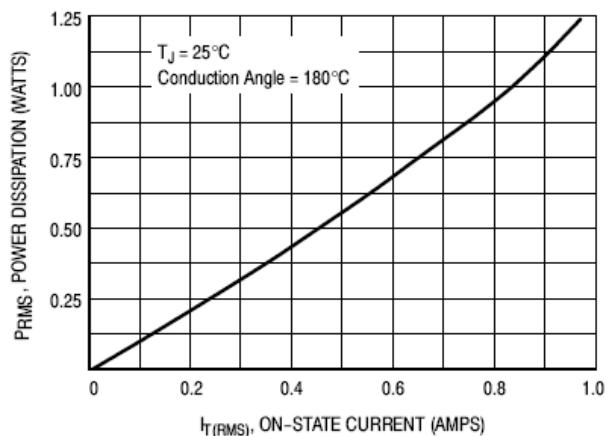


FIG.4-Typical Power Dissipation



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FIG.5-Comparison of Sidac versus SCR for Gas Ignitor Circuit

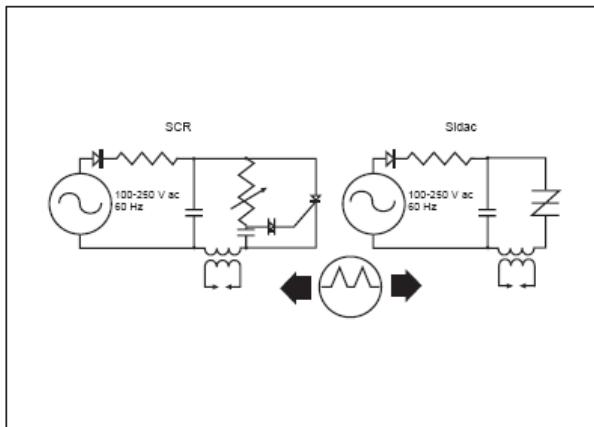


FIG.6-Dynamic Holding Current Test Circuit for Sidacs

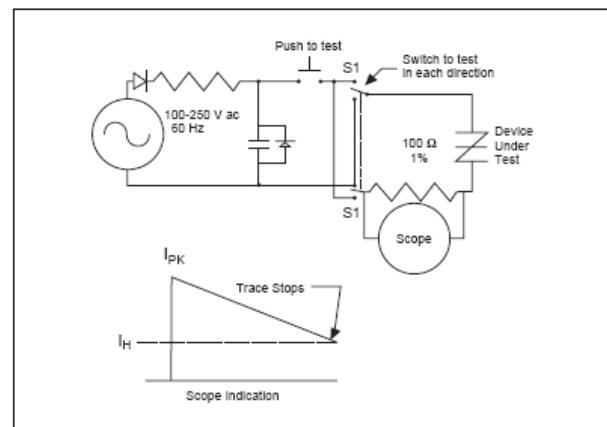


FIG.7-Xenon Lamp Flashing Circuit

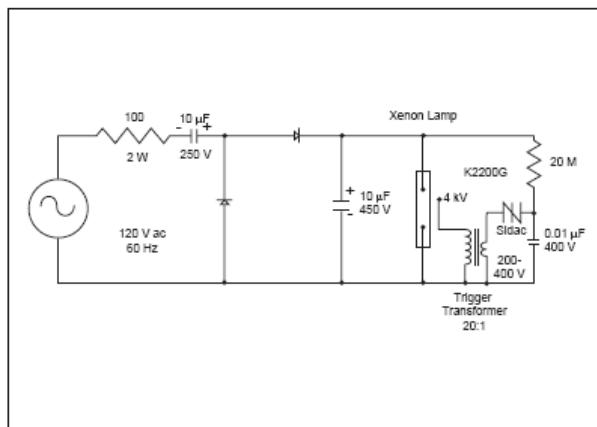


FIG.8-Typical High Pressure Sodium Lamp Firing Circuit

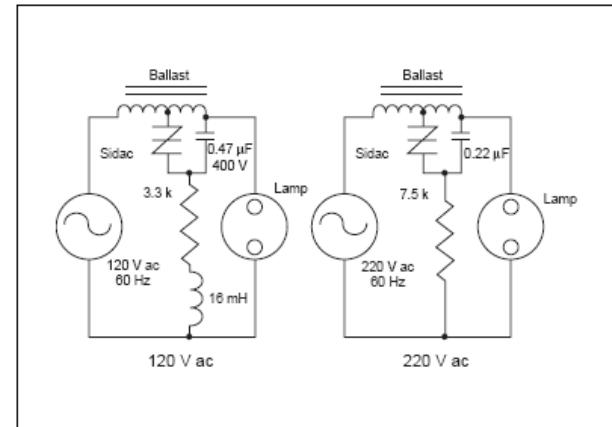


FIG.9-Circuit (Low Voltage Input) for Gas Ignition

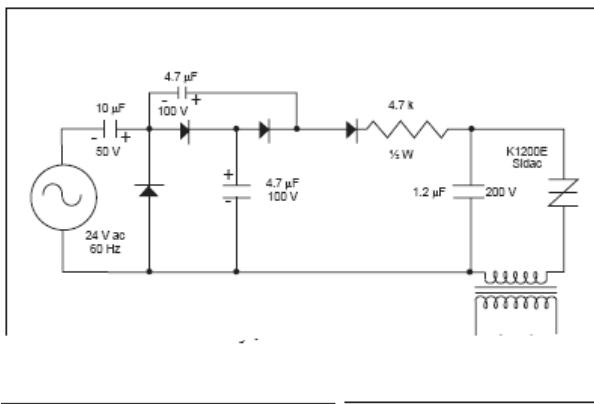


FIG.10-Basic Sidac Circuit

