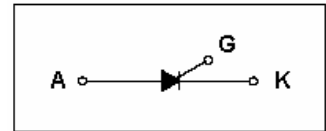


### Silicon Controlled Rectifier

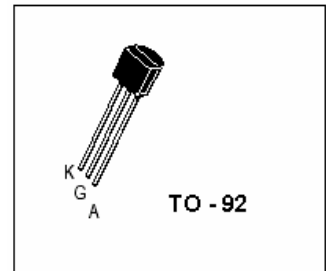
#### ■ Features

- \* Repetitive Peak Off-State Voltage : 600V
- \* R.M.S On-State Current( $I_{T(RMS)}=1.5A$ )
- \* Low On-State Voltage (1.2V(Typ.)@  $I_{TM}$ )



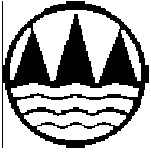
#### ■ General Description

Sensitive triggering SCR is suitable for the application where gate current limited such as small motor control, gate driver for large SCR, sensing and detecting circuits.



#### ■ Absolute Maximum Ratings ( $T_a=25^{\circ}C$ unless otherwise specified)

$T_{stg}$	Storage Temperature	-----	-40~125 $^{\circ}C$
$T_j$	Operating Junction Temperature	-----	-40~125 $^{\circ}C$
$V_{DRM}$	Repetitive Peak Off-State Voltage	-----	600V
$I_T$ (RMS)	R.M.S On-State Current (180 $^{\circ}$ Conduction Angles)	-----	1.5A
$I_{T(AV)}$	Average On-State Current (Half Sine Wave : $T_C = 45^{\circ}C$ )	-----	1.0A
$I_{TSM}$	Surge On-State Current (1/2 Cycle, 60Hz, Sine Wave, Non-repetitive)	-----	15A
$I^2t$	Circuit Fusing Considerations( $t = 8.3ms$ )	-----	0.9A $^2s$
$P_{GM}$	Forward Peak Gate Power Dissipation ( $T_a=25^{\circ}C$ )	-----	2W
$P_{G(AV)}$	Forward Average Gate Power Dissipation ( $T_a=25^{\circ}C$ , $t=8.3ms$ )	-----	0.1W
$I_{FGM}$	Forward Peak Gate Current	-----	1A
$V_{RGM}$	Reverse Peak Gate Voltage	-----	5V



**Electrical Characteristics** ( $T_a=25^\circ\text{C}$  unless otherwise specified)

Symbol	Items	Min.	Typ.	Max.	Unit	Conditions
$I_{DRM}$	Repetitive Peak Off-State Current			10 200	$\mu\text{A}$	$V_{AK}=V_{DRM}$ $T_a=25^\circ\text{C}$ $T_a=125^\circ\text{C}$
$V_{TM}$	Peak On-State Voltage (1)		1.2	1.7	V	$I_{TM}=3\text{A, PEAK}$
$I_{GT}$	Gate Trigger Current (2)			200 500	$\mu\text{A}$	$V_{AK}=6\text{V(DC)}$ , $R_L=100\text{ ohm}$ $T_a=25^\circ\text{C}$ $T_a=-40^\circ\text{C}$
$V_{GT}$	Gate Trigger Voltage (2)			0.8 1.2	V	$V_{AK}=7\text{V(DC)}$ , $R_L=100\text{ ohm}$ $T_a=25^\circ\text{C}$ $T_a=-40^\circ\text{C}$
$V_{GD}$	Non-Trigger Gate Voltage	0.2			V	$V_{AK}=12\text{V}$ , $R_L=100\text{ ohm}$ $T_a=125^\circ\text{C}$
$I_H$	Holding Current		2.0	5.0 10	mA	$I_T=100\text{mA}$ , Gate open, $T_a=25^\circ\text{C}$ $T_a=-40^\circ\text{C}$
$R_{th(j-c)}$	Thermal Resistance			50	$^\circ\text{C/W}$	Junction to Case
$R_{th(j-a)}$	Thermal Resistance			160	$^\circ\text{C/W}$	Junction to Ambient
dv/dt	Critical Rate of Rise Off-state Voltage	200			V/ $\mu\text{s}$	$V_D=V_{DRM}67\%$ exponential Waveform $R_{jk}=1\text{Kohm}$ $T_j=125^\circ\text{C}$

- Forward current applied for 1 ms maximum duration, duty cycle  $\leq 1\%$ .
- $R_{GK}$  current is not included in measurement.

**Performance Curves**

FIGURE 1 – Gate Characteristics

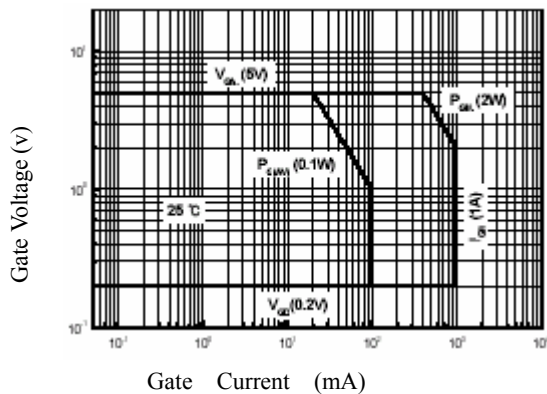
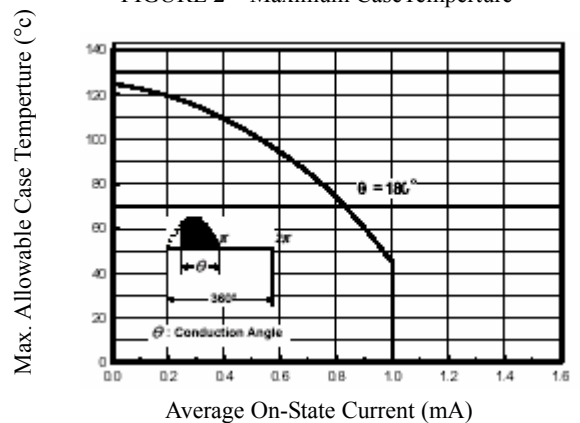


FIGURE 2 – Maximum Case Temperature



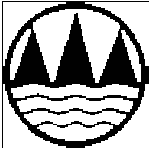


FIGURE 3-Typical Forward Voltage(V)

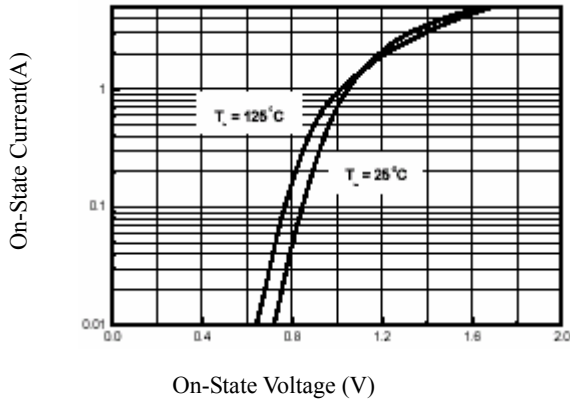


FIGURE 4-Thermal Response

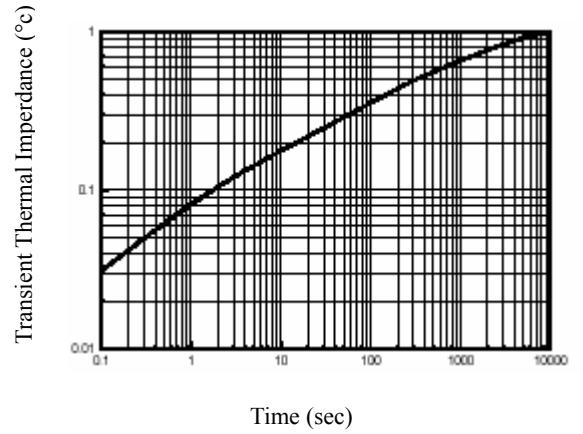


FIGURE 5-Typical Gate Trigger Voltage VS Junction Temperature

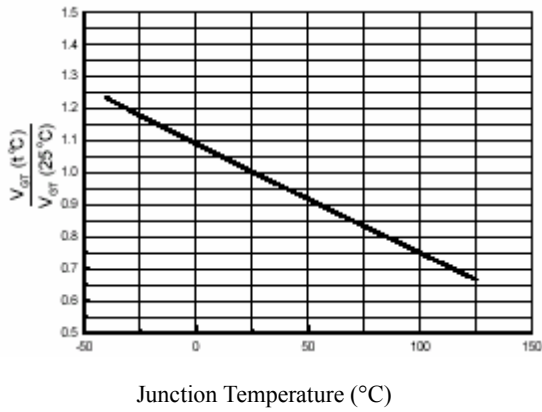


FIGURE 6-Typical Gate Trigger Current VS Junction Temperature

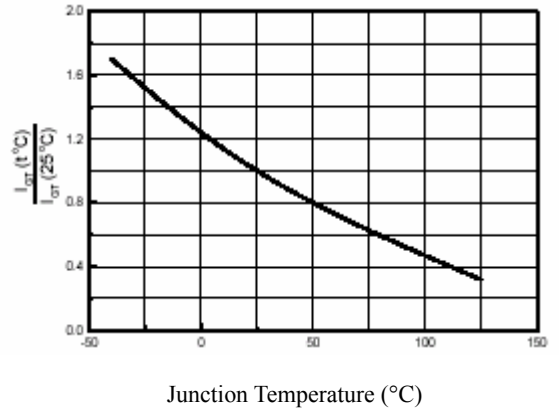


FIGURE 7-Typical Holding Current

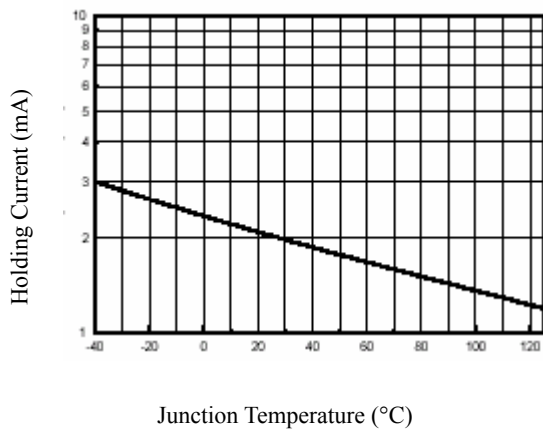


FIGURE 8-Power Dissipation

