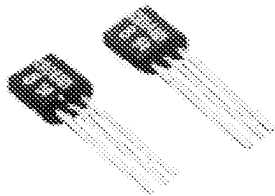


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LOW POWER USE
GLASS PASSIVATION TYPE

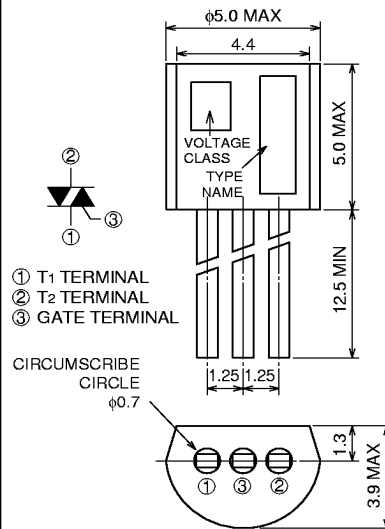
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- $I_T (AV)$ 0.4A
- V_{DRM} 400V/600V
- I_{GT} 100 μ A

OUTLINE DRAWING

Dimensions
in mm



JEDEC : TO-92

APPLICATION

Ignitor, solid state relay, strobe flasher, circuit breaker, other general purpose control applications

MAXIMUM RATINGS

Symbol	Parameter	Voltage class		Unit
		8	12	
V_{RRM}	Repetitive peak reverse voltage	400	600	V
V_{RSM}	Non-repetitive peak reverse voltage	500	720	V
$V_R (DC)$	DC reverse voltage	320	480	V
V_{DRM}	Repetitive peak off-state voltage *1	400	600	V
$V_D (DC)$	DC off-state voltage *1	320	480	V

Symbol	Parameter	Conditions	Ratings	Unit
$I_T (RMS)$	RMS on-state current		0.63	A
$I_T (AV)$	Average on-state current	Commercial frequency, sine half wave, 180° conduction, $T_a=54^\circ C$	0.4	A
I_{TSM}	Surge on-state current	60Hz sine half wave 1 full cycle, peak value, non-repetitive	10	A
I_{T1}	I_{T1} for fusing	Value corresponding to 1 cycle of half wave 60Hz, surge on-state current	0.4	A ² s
P_{GM}	Peak gate power dissipation		0.5	W
$P_G (AV)$	Average gate power dissipation		0.1	W
V_{FGM}	Peak gate forward voltage		6	V
V_{RGM}	Peak gate reverse voltage		6	V
I_{FGM}	Peak gate forward current		0.3	A
T_j	Junction temperature		-40 ~ +125	°C
T_{stg}	Storage temperature		-40 ~ +125	°C
—	Weight	Typical value	0.23	g

*1. With Gate-to-cathode resistance $R_{GK}=1k\Omega$

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ELECTRICAL CHARACTERISTICS

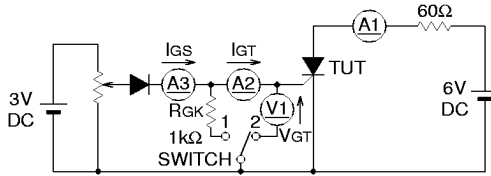
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
IRRM	Repetitive peak reverse current	$T_j=125^\circ\text{C}$, V_{RRM} applied	—	—	0.5	mA
IDRM	Repetitive peak off-state current	$T_j=125^\circ\text{C}$, V_{DRM} applied, $R_{GK}=1\text{k}\Omega$	—	—	0.5	mA
V_{TM}	On-state voltage	$T_a=25^\circ\text{C}$, $I_{TM}=1.2\text{A}$, instantaneous value	—	—	1.2	V
V_{GT}	Gate trigger voltage	$T_a=25^\circ\text{C}$, $V_D=6\text{V}$, $I_T=0.1\text{A}$ *3	—	—	0.8	V
V_{GD}	Gate non-trigger voltage	$T_j=125^\circ\text{C}$, $V_D=1/2V_{DRM}$, $R_{GK}=1\text{k}\Omega$	0.2	—	—	V
I_{GT}	Gate trigger current	$T_j=25^\circ\text{C}$, $V_D=6\text{V}$, $I_T=0.1\text{A}$ *3	1	—	100*2	μA
IH	Holding current	$T_j=25^\circ\text{C}$, $V_D=12\text{V}$, $R_{GK}=1\text{k}\Omega$	—	1.5	3	mA
$R_{th(j-a)}$	Thermal resistance	Junction to ambient	—	—	150	$^\circ\text{C/W}$

*2. If special values of I_{GT} are required, choose at least two items from those listed in the table below. (Example: AB, BC)

Item	A	B	C
I_{GT} (μA)	1 ~ 30	20 ~ 50	40 ~ 100

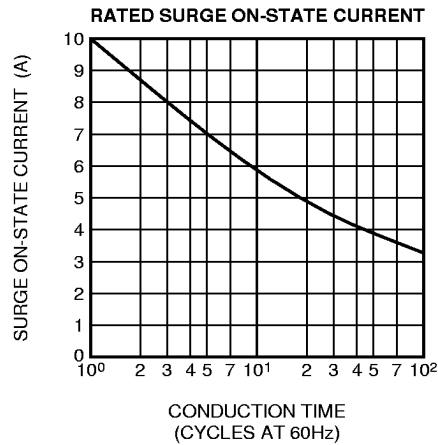
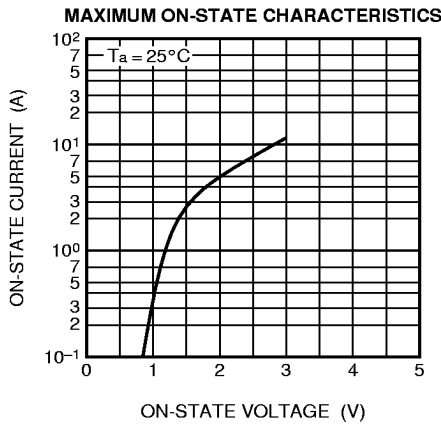
The above values do not include the current flowing through the $1\text{k}\Omega$ resistance between the gate and cathode.

*3. I_{GT} , V_{GT} measurement circuit.



SWITCH 1 : I_{GT} measurement
SWITCH 2 : V_{GT} measurement
(Inner resistance of voltage meter is about $1\text{k}\Omega$)

PERFORMANCE CURVES

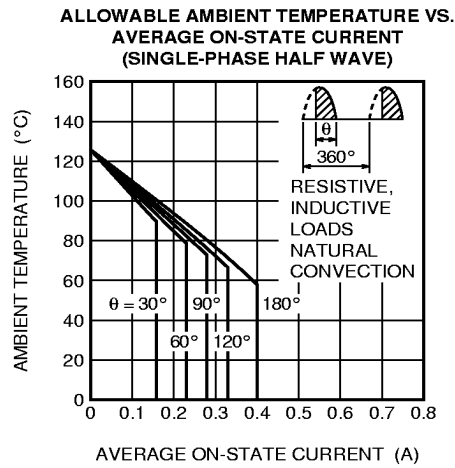
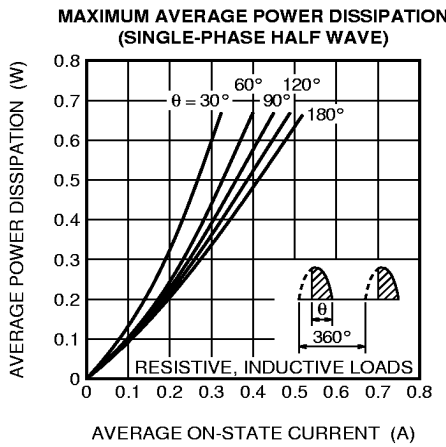
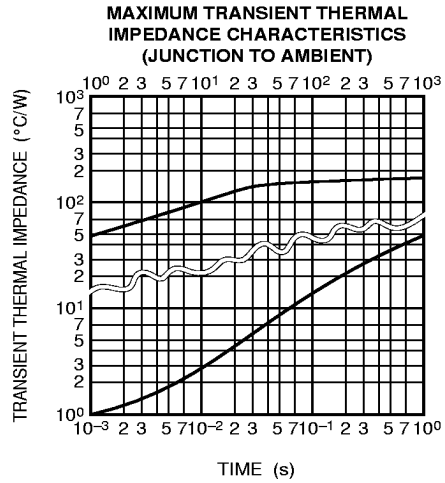
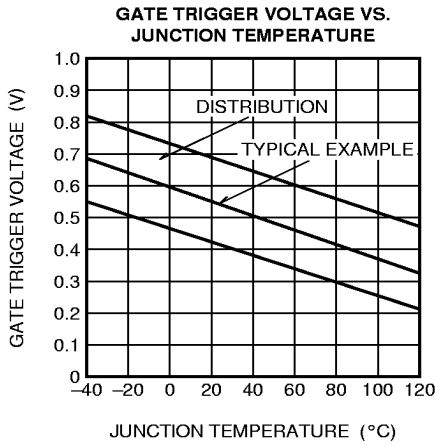
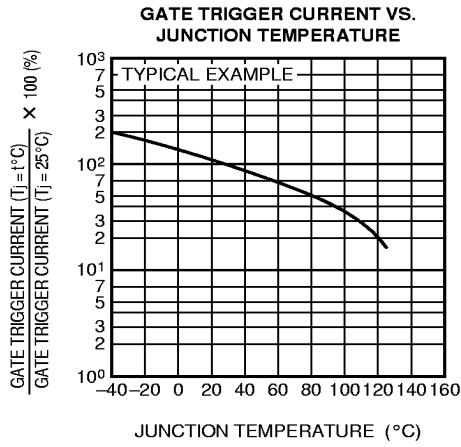
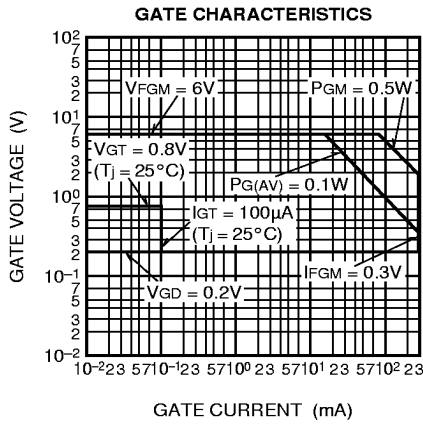


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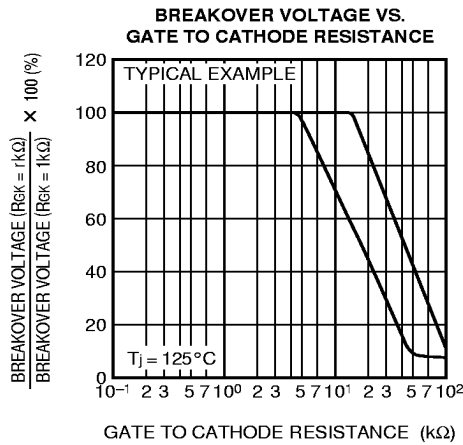
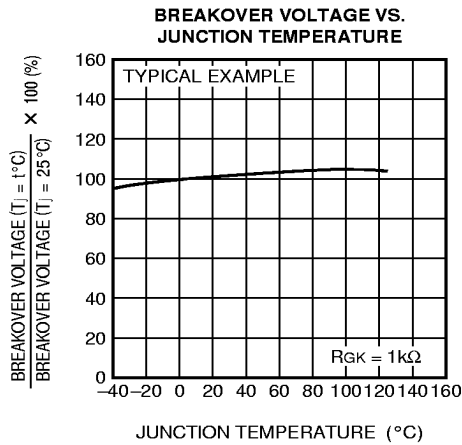
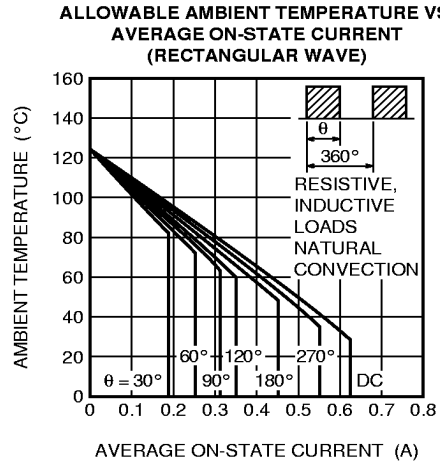
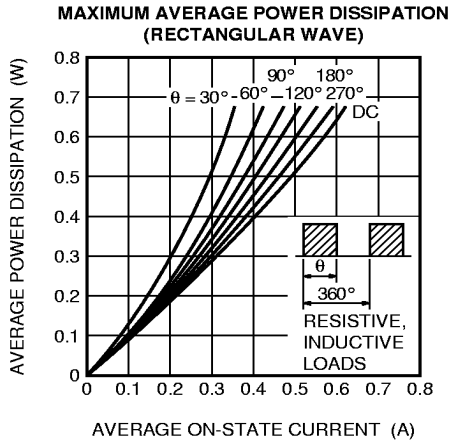
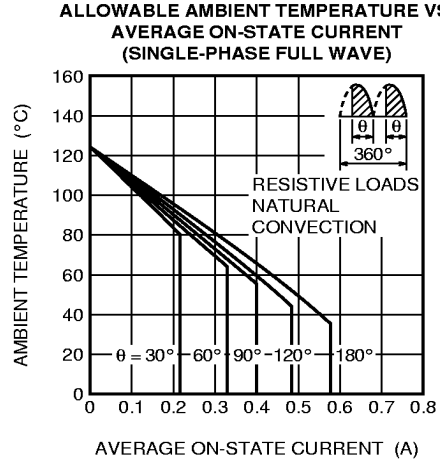
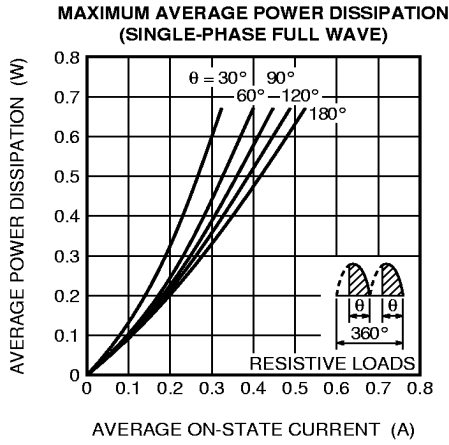
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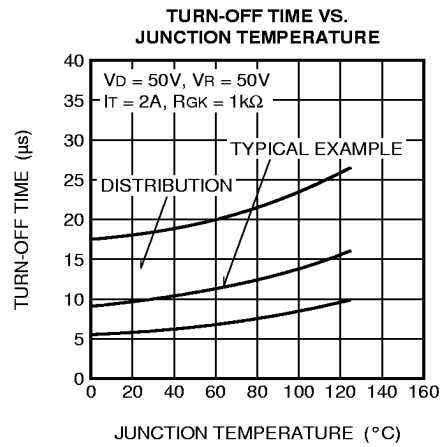
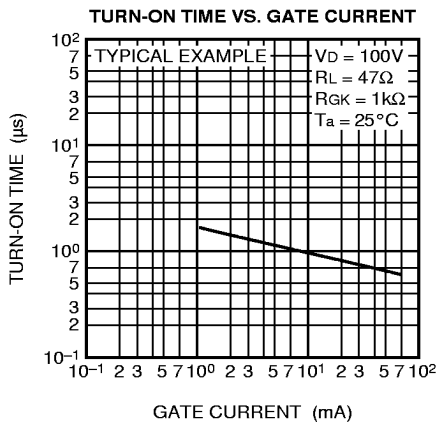
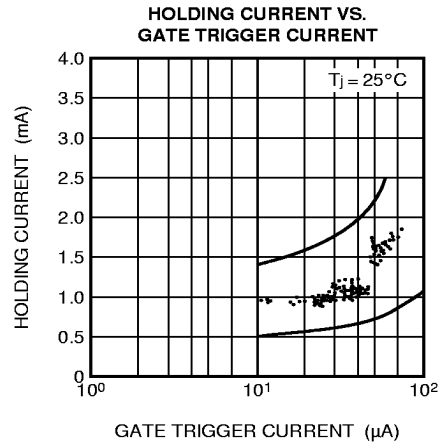
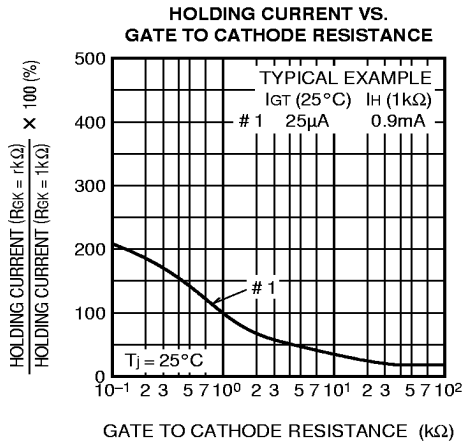
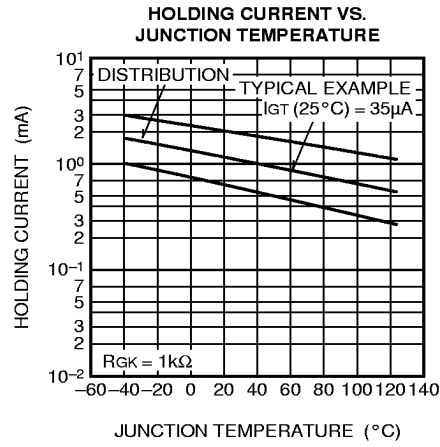
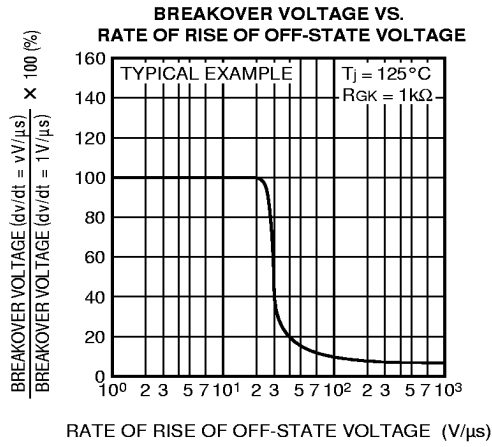
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