

TOSHIBA Thyristor Silicon Planar Type

S6992

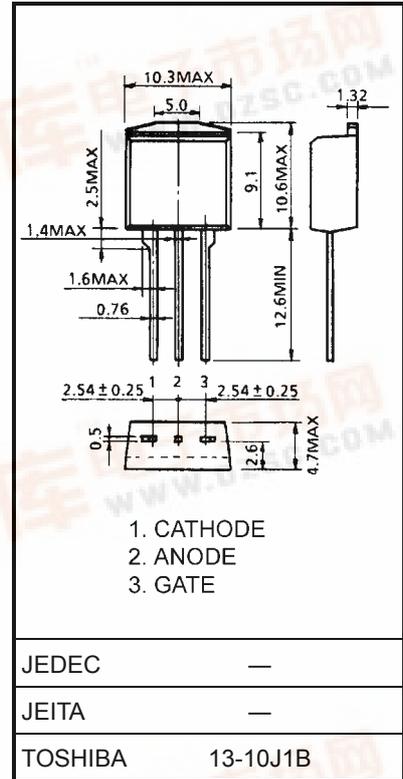
Condenser Discharge Control Applications

Unit: mm

- Critical rate of rise of ON-state current: $di/dt = 750 \text{ A}/\mu\text{s}$
- Repetitive surge ON-state current: $I_{TRM} = 500 \text{ A}$ ($t_w = 2 \mu\text{s}$)
- Repetitive peak OFF-state voltage: $V_{DRM} = 800 \text{ V}$
- Gate trigger current: $I_{GT} = 20 \text{ mA max.}$

Maximum Ratings

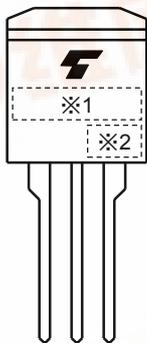
Characteristics	Symbol	Rating	Unit
Repetitive peak OFF-state voltage	V_{DRM}	800	V
Repetitive peak surge ON-state current (Note)	I_{TRM}	500	A
Critical rate of rise of ON-state current (Note)	di/dt	750	$\text{A}/\mu\text{s}$
Peak gate power dissipation	P_{GM}	5	W
Average gate power dissipation	$P_{G(AV)}$	0.5	W
Peak forward gate voltage	V_{FGM}	10	V
Peak reverse gate voltage	V_{RGM}	-5	V
Peak forward gate current	I_{GM}	2	A
Junction temperature	T_j	-40~125	$^{\circ}\text{C}$
Storage temperature range	T_{stg}	-40~150	$^{\circ}\text{C}$



Weight: 1.5 g (typ.)

Note: $V_D \leq 0.8 \times \text{rated}$, $T_c = 85^{\circ}\text{C}$, $i_{gp} \geq 40 \text{ mA}$, $t_{gw} \geq 10 \mu\text{s}$, $t_{gr} \leq 150 \text{ ns}$

Marking

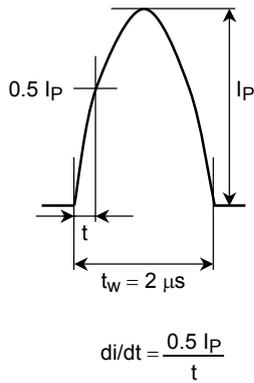


※1	TYPE NAME	S6992	MARK	S6992
※2	Lot Number <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 15px; height: 15px; margin-right: 5px;"></div> <div style="margin-right: 5px;">↑</div> <div style="margin-right: 5px;">Month (starting from alphabet A)</div> </div> <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 15px; height: 15px; margin-right: 5px;"></div> <div style="margin-right: 5px;">↑</div> <div style="margin-right: 5px;">Year (last decimal digit of the current year)</div> </div>		Example 8A: January 1998 8B: February 1998 8L: December 1998	

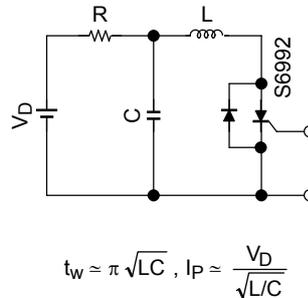
*: There is no reverse-blocking (reverse voltage) ability.

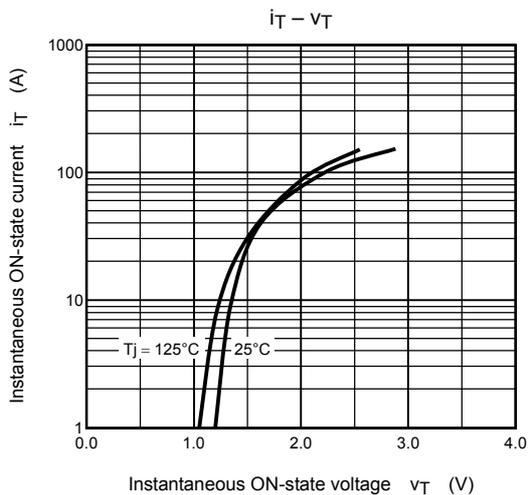
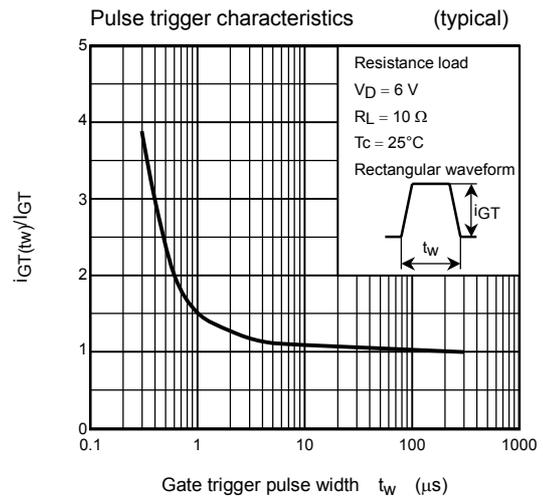
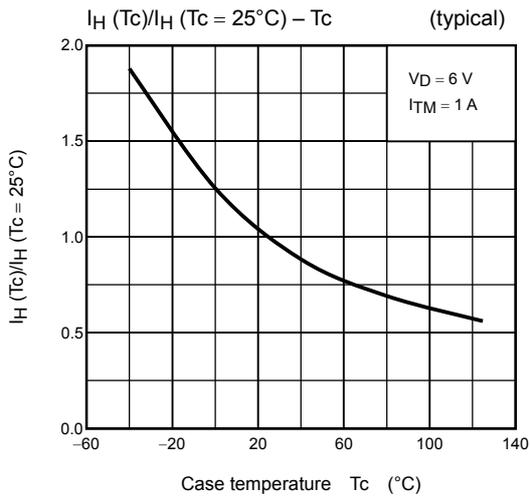
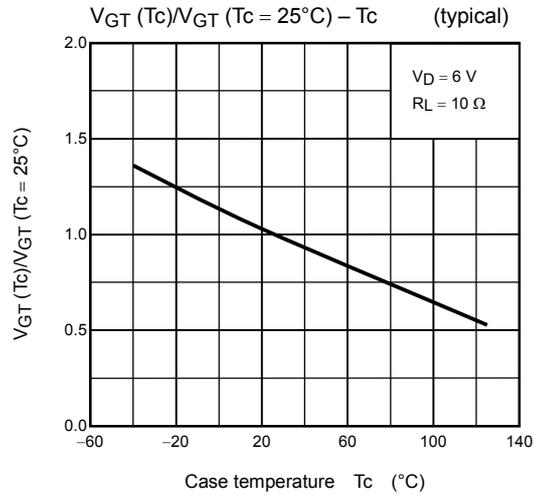
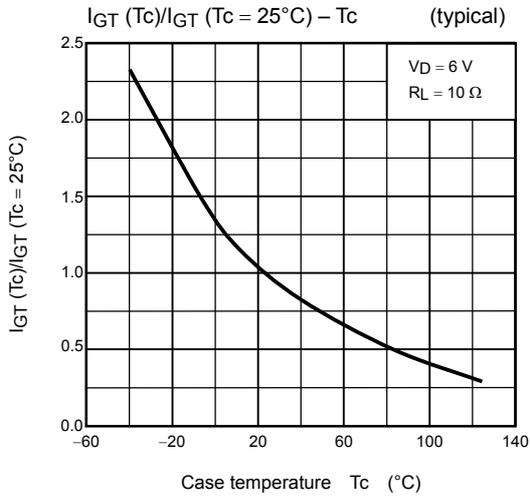
Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Repetitive peak OFF-state current	I_{DRM}	$V_{DRM} = \text{rated}$	—	—	10	μA
Peak ON-state voltage	V_{TM}	$I_{TM} = 25 \text{ A}$	—	—	1.5	V
Gate trigger voltage	V_{GT}	$V_D = 6 \text{ V}, R_L = 10 \Omega$	—	—	1.0	V
Gate trigger current	I_{GT}		—	—	20	mA
Gate non-trigger voltage	V_{GD}	$V_D = \text{rated}, T_c = 125^\circ\text{C}$	0.2	—	—	V
Critical rate of rise of OFF-state voltage	dv/dt	$V_{DRM} = \text{rated}, T_c = 125^\circ\text{C}$ Exponential rise	—	50	—	V/ μs
Holding current	I_H	$V_D = 6 \text{ V}, I_{TM} = 1 \text{ A}$	—	—	40	mA
Thermal resistance	$R_{th(j-a)}$	Junction to ambient	—	—	70	$^\circ\text{C/W}$



Test Circuit Examples





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000707EAA

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