

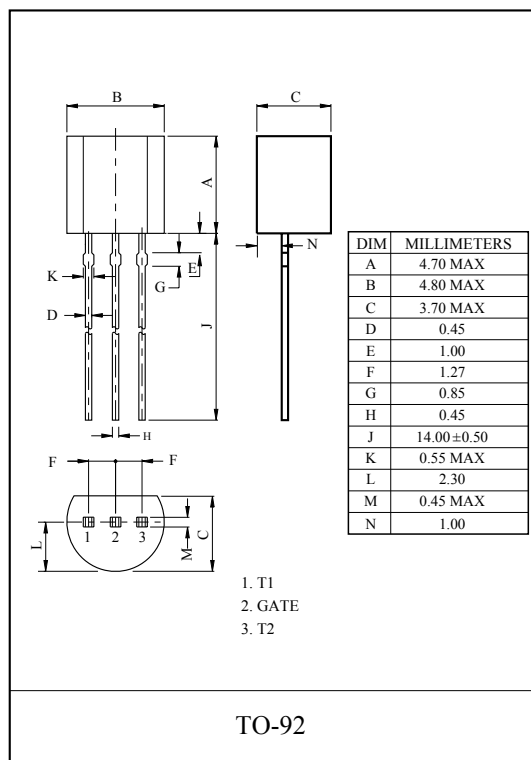
AC POWER CONTROL APPLICATION.

FEATURES

- Repetitive Peak Off-state Voltage : $V_{DRM}=600V$.
- R.M.S on-State Current : $I_{T(RMS)}=1A$.
- High Commutation (dv/dt)

APPLICATIONS

- Switching Mode Power Supply
- Speed Control of Small Motors
- Solid State Relay
- Light Dimmer
- Washing Machine
- Temperature Control of Heater



MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Non-Repetitive Peak Off-state Voltage	V_{DSM}	700	V
Repetitive Peak Off-state Voltage	V_{DRM}	600	V
R.M.S On-state Current (Full Sine Waveform Tc=56℃)	$I_{T(RMS)}$	1	A
Peak One Cycle Surge On-state Current (Non-Repetitive)	I_{TSM}	9 (50Hz 1 Cycle) 10 (60Hz 1 Cycle)	A
I ² t Limit Value (1mS ≤ t ≤ 10mS)	I ² t	0.4	A ² S
Peak Gate Power Dissipation	P_{GM}	1	W
Average Gate Power Dissipation	$P_{G(AV)}$	0.1	W
Peak Gate Voltage	V_{GM}	6	V
Peak Gate Current	I_{GM}	0.5	A
Junction Temperature	T_j	-40 ~ 125	℃

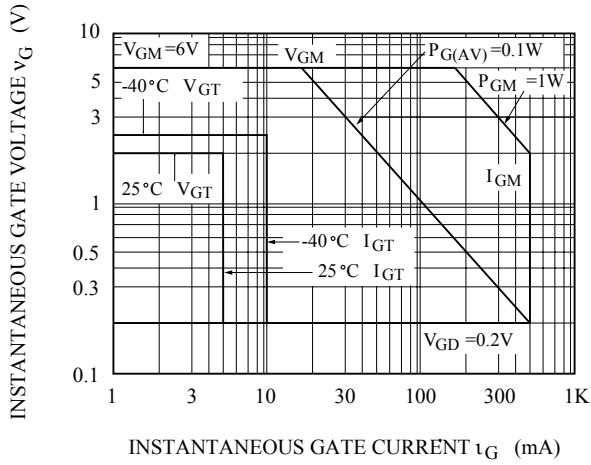
T1A6C

ELECTRICAL CHARACTERISTICS (Ta=25℃)

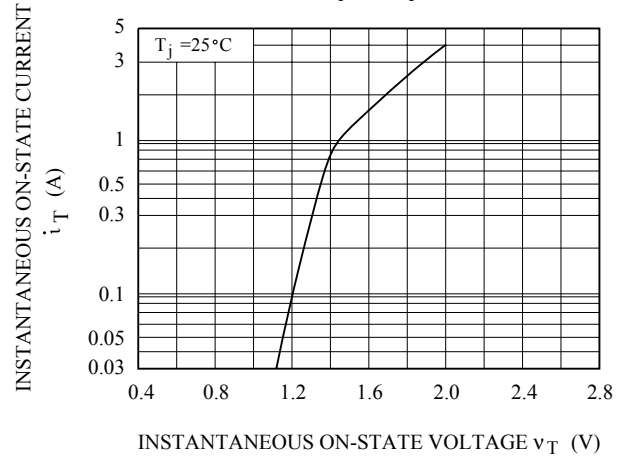
CHARACTERISTIC		SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Repetitive Peak Off-state Current		I _{DRM}	V _{DRM} =Rated		-	-	10	μA
Gate Trigger Voltage	I	V _{GT}	V _D =12V, R _L =20 Ω	T ₂ (+), Gate(+)	-	-	2.0	V
	II			T ₂ (+), Gate(-)	-	-	2.0	
	III			T ₂ (-), Gate(-)	-	-	2.0	
	IV			T ₂ (-), Gate(+)	-	-	2.0	
Gate Trigger Current	I	I _{GT}		T ₂ (+), Gate(+)	-	-	5.0	mA
	II			T ₂ (+), Gate(-)	-	-	5.0	
	III			T ₂ (-), Gate(-)	-	-	5.0	
	IV			T ₂ (-), Gate(+)	-	-	10	
Peak On-State Voltage		V _{TM}	I _{TM} =1.5A		-	-	1.6	V
Gate Non-Trigger Voltage		V _{GD}	V _D =Rated, Tc=125 °C		0.2	-	-	V
Holding Current		I _H	V _D =12V, I _{TM} =1A		-	-	10	mA
Critical Rate of Rise of Off-state Voltage at Commutation		(d _V /d _t) _C	T _J =125 °C, (di/dt) _C =-0.5A/mS, V _D =2/3V _{DRM}		2.0	-	-	V/μS
Thermal Resistance		R _{th(j-c)}	Junction to Case, AC		-	-	40	°C/W
		R _{th(j-a)}	Junction to Ambient, AC		-	-	180	

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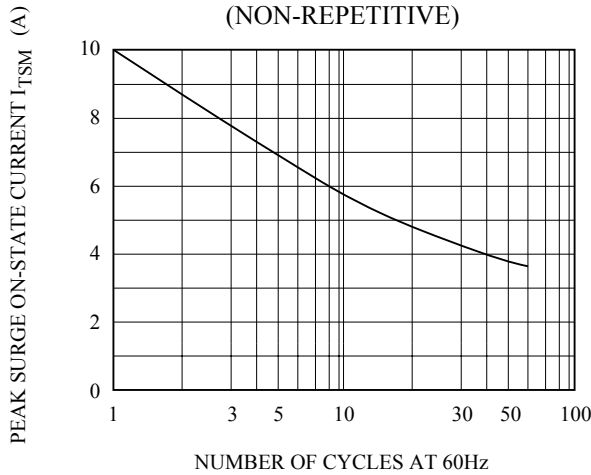
GATE TRIGGER CHARACTERISTIC



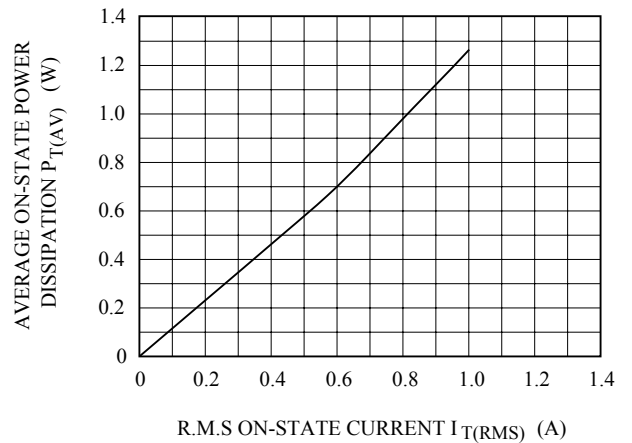
$i_T - v_T$



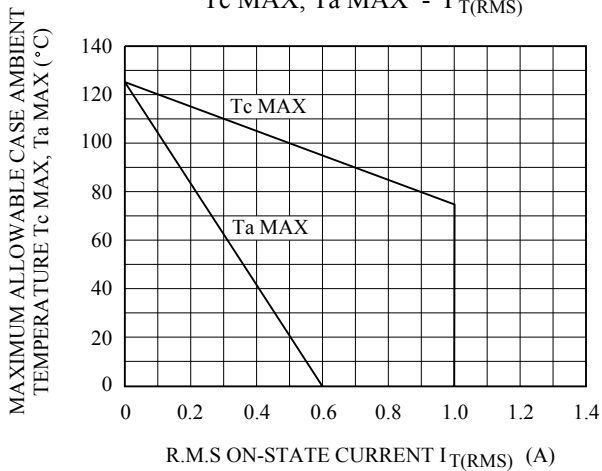
SURGE ON-STATE CURRENT (NON-REPETITIVE)



$P_{T(AV)} - I_{T(RMS)}$



$T_c \text{ MAX, } T_a \text{ MAX} - I_{T(RMS)}$



$r_{th(j-c)}, r_{th(j-a)} - t$

