

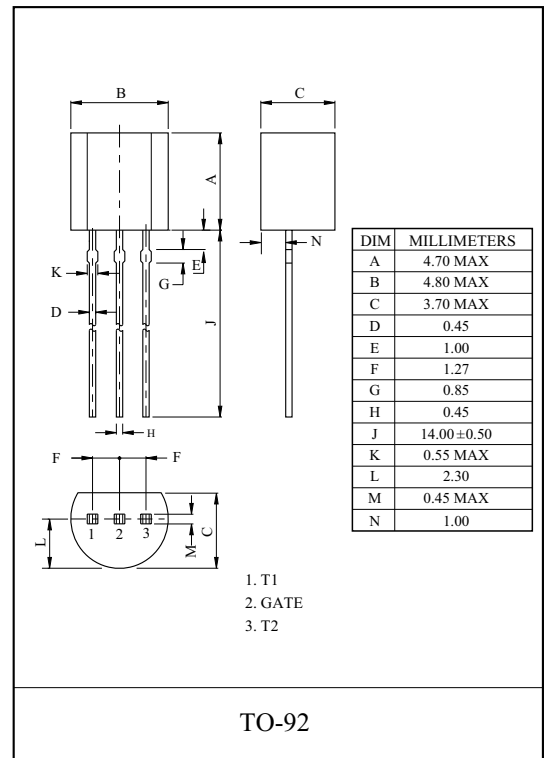
AC POWER CONTROL APPLICATION.

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 °C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Repetitive Peak Off-state Voltage	V_{DRM}	600	V
R.M.S On-state Current (Full Sine Waveform $T_c=50$ °C)	$I_{T(RMS)}$	1	A
Peak One Cycle Surge On-state Current (Non-Repetitive)	I_{TSM}	10 (60Hz 1 Cycle)	A
I ² t Limit Value (t=8.3mS)	I^2t	0.6	A ² S
Peak Gate Power Dissipation	P_{GM}	1	W
Average Gate Power Dissipation ($T_c=80$ °C, t = 8.3mS)	$P_{G(AV)}$	0.1	W
Peak Gate Voltage (t = 2.0μs, $T_c=80$ °C)	V_{GM}	5	V
Peak Gate Current (t = 2.0μs, $T_c=80$ °C)	I_{GM}	1	A
Junction Temperature	T_j	-40 125	

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ELECTRICAL CHARACTERISTICS (Ta=25 °C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT	
Repetitive Peak Off-state Current	I_{DRM}	$V_{DRM}=\text{Rated}$, Gate open	-	-	10	μA	
Gate Trigger Voltage	V_{GT}	$V_D=12\text{V}$, $R_L=100$	T ₂ (+), Gate(+)	-	-	2.0	V
			T ₂ (+), Gate(-)	-	-	2.0	
			T ₂ (-), Gate(-)	-	-	2.0	
			T ₂ (-), Gate(+)	-	-	2.5	
Gate Trigger Current	I_{GT}		T ₂ (+), Gate(+)	-	-	5.0	mA
			T ₂ (+), Gate(-)	-	-	5.0	
			T ₂ (-), Gate(-)	-	-	5.0	
			T ₂ (-), Gate(+)	-	-	7	
Peak On-State Voltage	V_{TM}	$I_{TM}=1\text{A}$	-	-	1.9	V	
Gate Non-Trigger Voltage	V_{GD}	$V_D=12\text{V}$, $R_L=100$, $T_J=110$	0.1	-	-	V	
Holding Current	I_H	$V_D=12\text{V}$, $I_{TM}=\pm 200\text{mA}$	-	-	10	mA	
Thermal Resistance	$R_{th(j-c)}$	Junction to Case, AC	-	-	75	/W	
	$R_{th(j-a)}$	Junction to Ambient, AC	-	-	150		

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