

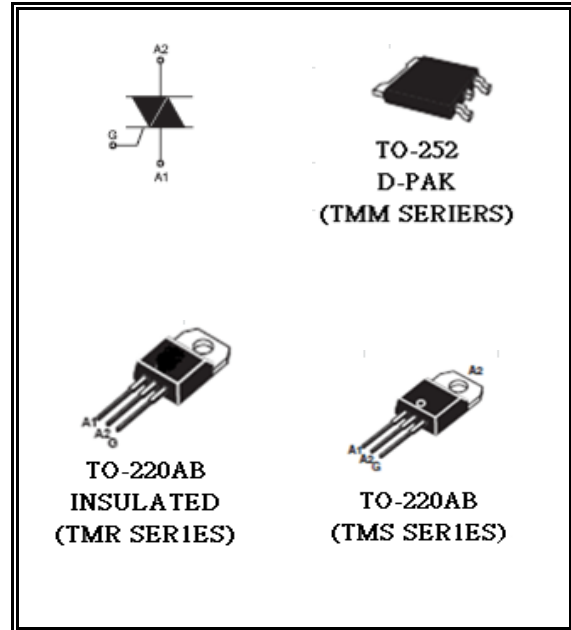


SENSITIVITY TRIAC 6 AMPERES SERIES

Features

- ◆ Voltage Capability up to 600 Volts
- ◆ I_{TSM} Surge Capability 60A
- ◆ Electrically -TMR Isolated Packages
- ◆ Hi-Reliability and Parameter Stability.
- ◆ Low Level Triggering and Characteristics.
- ◆ Apply for Phase Control in Light Dimmers 、 ON/OFF Function in Static Relays 、 Temperature Modulation controls or Motor Speed Controllers and Used Primarily for AC Switching 。
- ◆ Case Material : Molded Plastic 【UL Flammability Classification Rating 94V-0 】

PACKAGE OUTLINE



Absolute Maximum Ratings 【TA=25°C】

Parameter	Symbol	TMR2006	TMR4006	TMR6006	Unit
Peak Repetitive Off-State Voltage	V_{Drm}	200	400	600	V
On-State RMS Current	$I_T (RMS)$	6.0			A
Peak Non-Repetitive Surge Current (one full cycle 60Hz $T_J=25^\circ C$)	I_{TSM}	60			A
Circuit Fusing Consideration ($t=8.3mS$)	I^2T	15			A ² S
Average Gate Power (pulse width $\leq 8.3mS$, $TC=125^\circ C$)	$P_{G(AV)}$	0.4			Watt
Peak Gate Power Dissipation $I_{GT} \leq I_{GTM}$	P_{GM}	18			Watt
Operating Junction Temperature Range	T_J	- 40 to + 125			°C
Storage Temperature Range	T_S	- 40 to + 150			°C

Parameter		Symbol	Min	Typ.	Max	Units
Thermal Resistance	junction to ambient	TMM	-	58	-	°C /W
		TMR	-	60	-	
		TMS	-	56	-	
	junction to case	TMM	-	1.8	-	°C /W
		TMR	-	2.5	-	
		TMS	-	1.5	-	
Maximum Lead Temperature for Soldering (1/8" from case for 10seconds)		T_L	-	-	260	°C



SENSITIVITY TRAIC 6 AMPERES SERIES

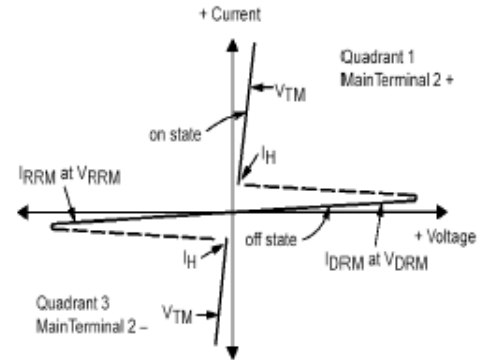
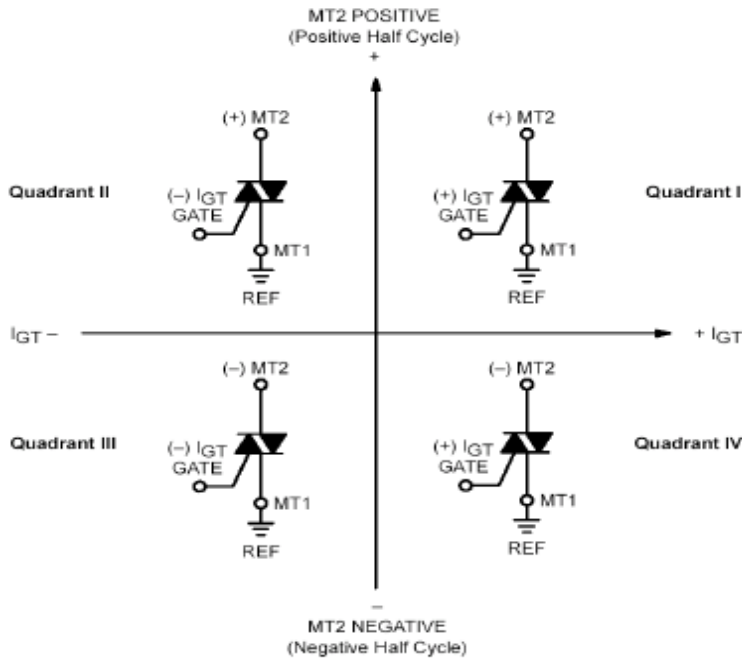
Electrical Characteristics

On Characteristics							
Parameter	Teat Conditions	Symbol	A	E	F	Units	
Peak Forward On-State Voltage	$I_{TM}=\pm 4A @ T_P \leq 2mS, Duty Cycle \leq 2\%$	V_{TM}	1.6			V	
Gate Trigger Current MT(+) G(+) MT(+) G(-) MT(-) G(-) MT(-) G(+)	$V_D=12V,$ $RL=100\Omega$	I_{GT1}	5	5	10	mA	
		I_{GT2}	5	5	10		
		I_{GT3}	5	5	10		
		I_{GT4}	5	10	20		
Critical rate-of-rise of off-state voltage at rated V_{DRM} gate open	$V_D=67\%V_{DRM}$ gate open , $T_C=100^\circ C$	dv/dt (2)	200V	40	40	45	Volts / uS
			400V	30	30	40	
			600V	20	20	30	
commutation voltage at rated V_{DRM} and $I_{T(RMS)}$ commutating $di/dt=0.54$ rated $I_{T(RMS)}$ / ms; gate unenergized	$(di/dt)_c = 13.3A/ms$	$(dv/dt)_c$ (2)	1.0	2.0	2.0	Volts / uS	
Gate Trigger Voltage	$V_D=12V,$ $RL=100\Omega$	V_{GT}	2.0			V	
Peak Gate Trigger Current	$V_D=12V,$ $RL=100\Omega$	I_{GTM}	1.6			A	
Holding Current	$I_T=100mA$	I_H	10	10	20	mA	
Gate Control Turn-On Time	$IGT=50mA$ With 0.1uS Rise Time	t_{gt}	3.0	3.0	3.2	uS	
Maximum Rate-Of-Change Of On -State Current	$IGT=50mA$ With 0.1uS Rise Time	di/dt	70.0			A/S	

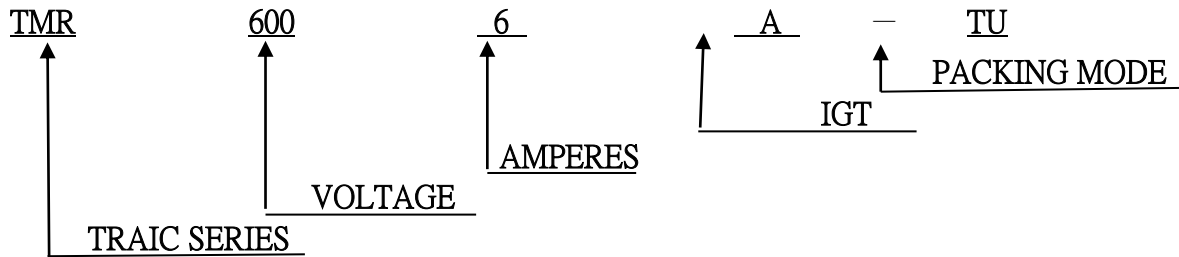
Off Characteristics						
Parameter	Symbol	Min	Typ.	Max	Units	
Peak Repetitive Forward or Reverse Blocking Current	$T_j=25^\circ C$	I_{DRM}	-	20	uA	
	$T_j=110^\circ C$		-	0.5	mA	



SENSITIVITY TRAIC 6 AMPERES SERIES



TYPE NUMBER CODING SYSTEM :



OTHER INFORMATION:

Parts Number	Marking	Weight	Base Quantity	Packing Mode	
TMR4006A-TU	TMR4006A	2.5	50	TUBE	TU
TMR6006A-TU	TMR6006A	2.5	50	TUBE	TU
TMR8006A-TU	TMR8006A	2.5	50	TUBE	TU
TMS4006A-TU	TMS4006A	2.5	50	TUBE	TU
TMS6006A-TU	TMS6006A	2.5	50	TUBE	TU
TMS8006A-TU	TMS8006A	2.5	50	TUBE	TU
TMM4006A-TR	TMM4006A	1.6	1000	TAPING REEL	TR
TMM6006A-TR	TMM6006A	1.6	1000	TAPING REEL	TR
TMM8006A-TR	TMM8006A	1.6	1000	TAPING REEL	TR



SENSITIVITY TRAIC 6 AMPERES SERIES

ELECTRONICS CHARACTERISTICS CURVE

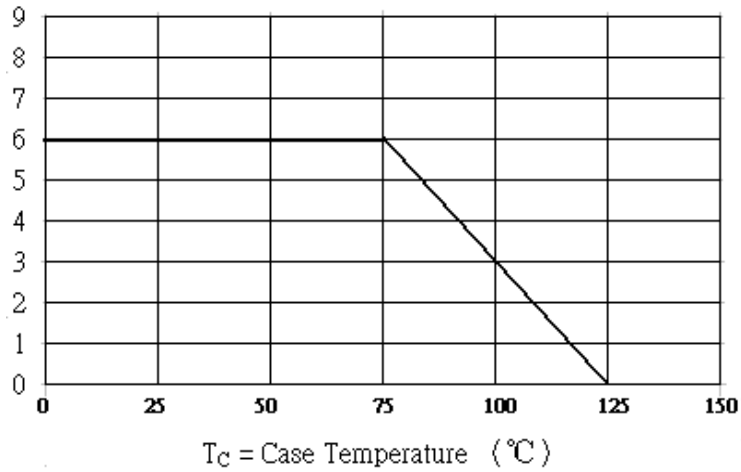


Fig. 1 RMS on-state current versus case temperature (full cycle)

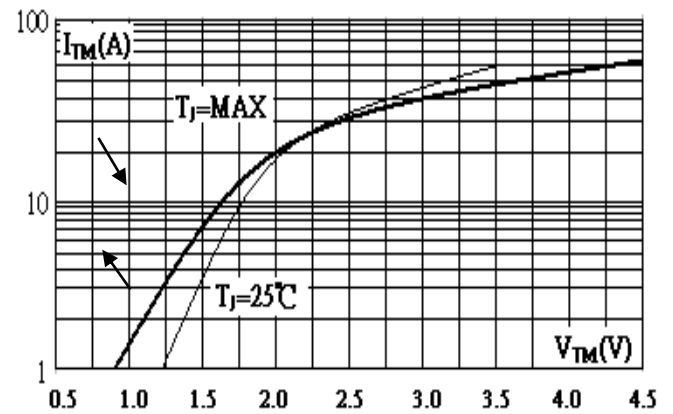


Fig. 2 On-state characteristics (maximum values)

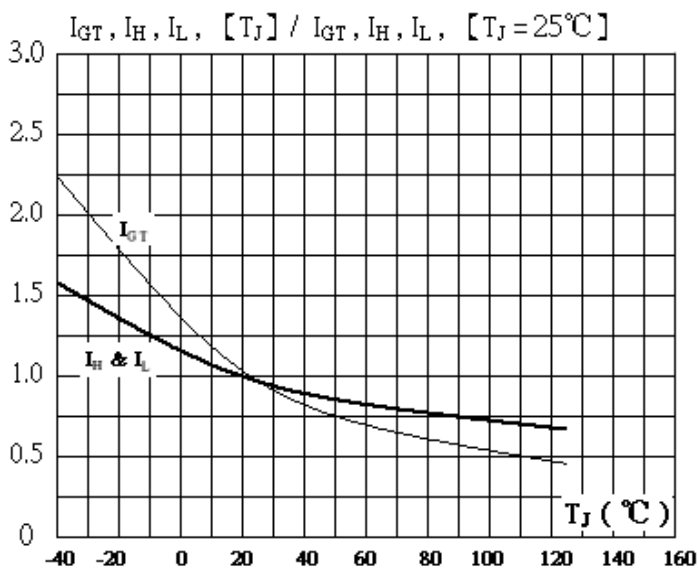


Fig. 3 Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

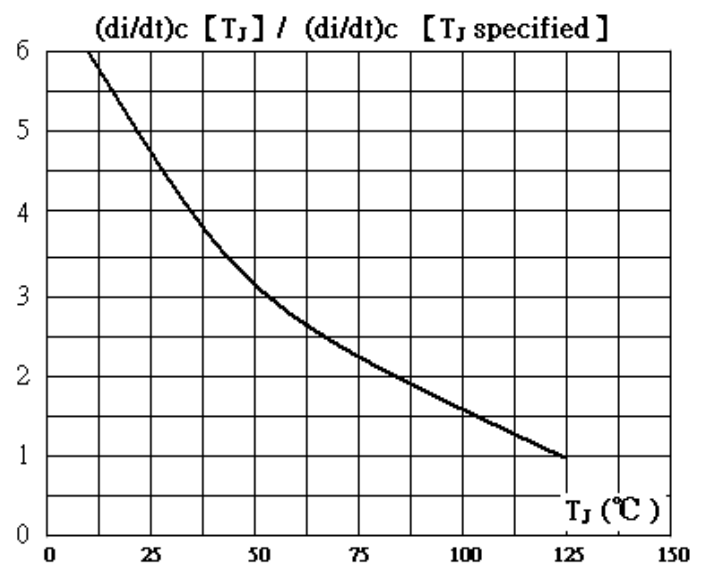


Fig. 4 Relative variation of critical rate of decrease of main current versus junction temperature (typical values).



SENSITIVITY TRAIC 6 AMPERES SERIES

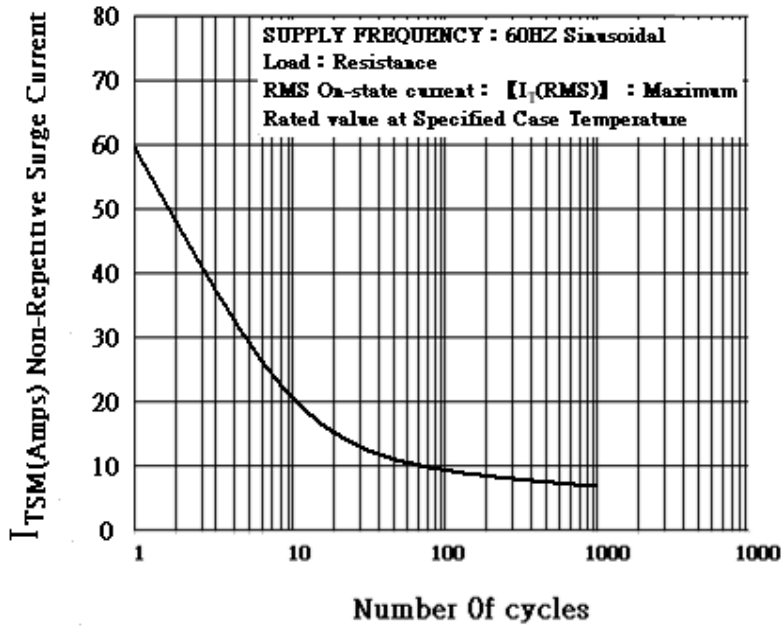


Fig. 5 Surge peak on-state current versus number of cycles.

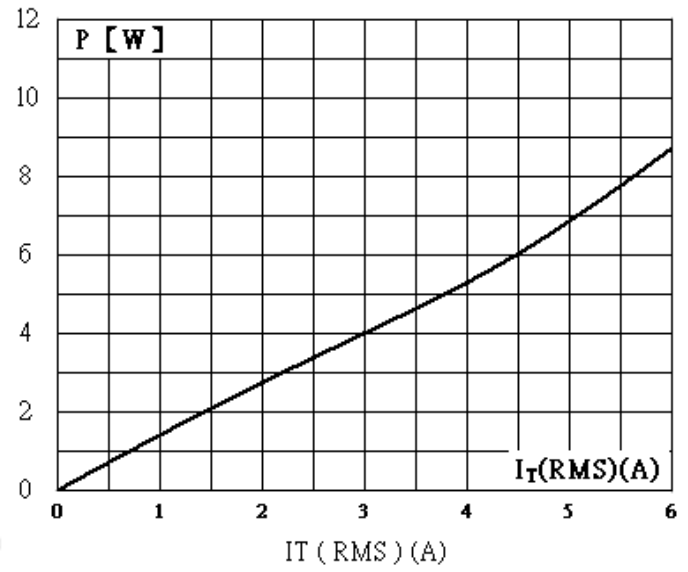


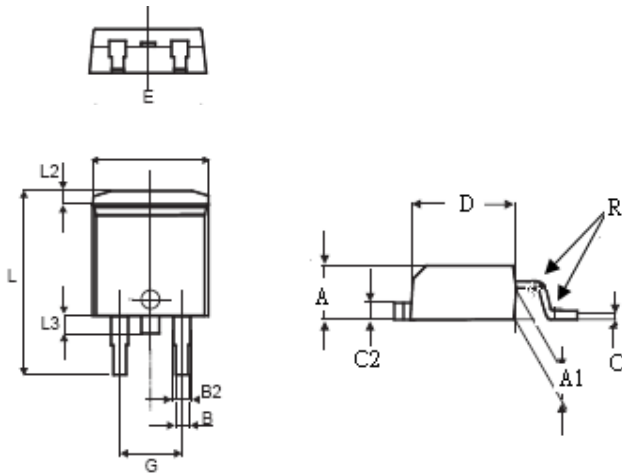
Fig. 6 Maximum power dissipation versus RMS on-state current (full cycle)



SENSITIVITY TRAIC 6 AMPERES SERIES

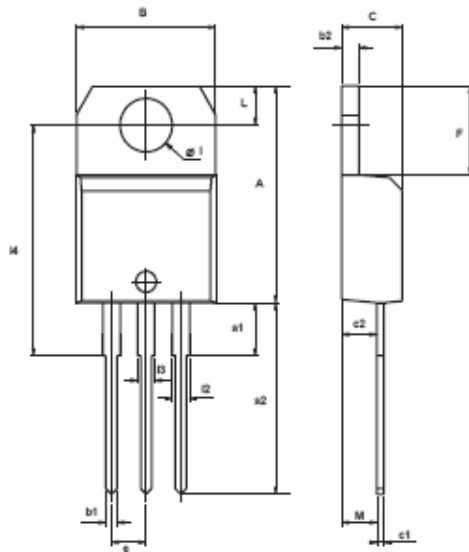
Outline Drawings

D-PAK



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
B	0.75		0.85	0.030		0.034
B2	0.75		0.85	0.030		0.034
C	0.45		0.55	0.018		0.022
C2	0.45		0.55	0.018		0.022
D	5.96		6.16	0.235		0.245
E	6.50		6.70	0.255		0.265
G	4.47		4.67	0.176		0.184
L	9.60		10.0	0.378		0.394
L2	0.47		0.87	0.180		0.035
L3	1.40		1.75	0.055		0.070
R			40°			

TO-220AB 【INSULATED】



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.20		15.90	0.598		0.625
a1		3.75			0.147	
a2	13.00		14.00	0.511		0.551
B	10.00		10.40	0.393		0.409
b1	0.61		0.88	0.024		0.034
b2	1.23		1.32	0.048		0.051
C	4.40		4.60	0.173		0.181
c1	0.49		0.70	0.019		0.027
c2	2.40		2.72	0.094		0.107
e	2.40		2.70	0.094		0.106
F	6.20		6.60	0.244		0.259
l	3.75		3.85	0.147		0.151
l4	15.80	16.40	16.80	0.622	0.646	0.661
L	2.65		2.95	0.104		0.116
l2	1.14		1.70	0.044		0.066
l3	1.14		1.70	0.044		0.066
M		2.60			0.102	