



YIHUA

PART NAME: X0405MF

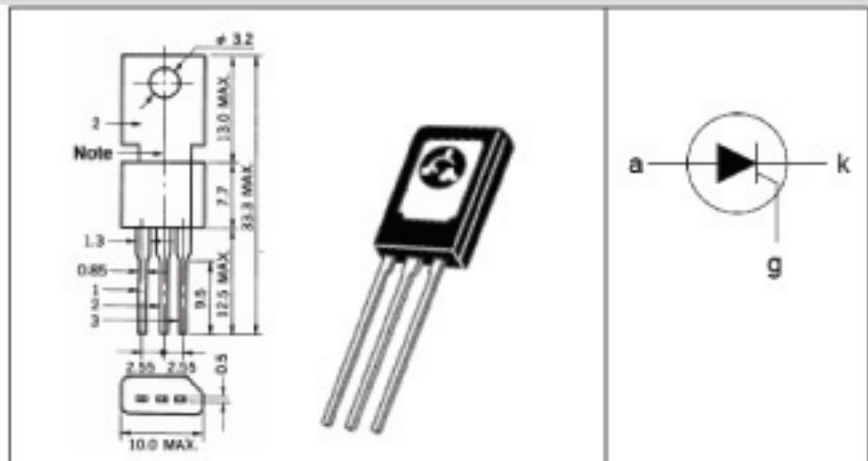
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Establishment: Carolyn

绍兴怡华电子科技有限公司

■ MAIN FEATURE

- 玻璃钝化工艺;
- 单向触发导通;
- 通态压降低;
- 双向阻断电压高;
- 环保塑料封装。



■ Use

- 用于各种开关控制器、马达控制器、光、温控制器、摩托车点火器等电路中。

■ Electricity Characteristic

参数名称	符号	规范值	单位	测试条件
重复峰值阻断电压	V_{DRM}, V_{RRM}	>600	V	
RMS 通态电流	I_T (RMS)	4	A	$T_I=60^{\circ}\text{C}$
平均通态电流	I_T (AV)	2.5	A	$T_I=60^{\circ}\text{C}$
浪涌电流	I_{TSM}	30	A	$t_p=10\text{ms}, T_j=25^{\circ}\text{C}$
通态电流上升率	dI/dt	50	A/ μS	$F=60\text{HZ}$
门极峰值电流	I_{GM}	1.2	A	$t_p=20\mu\text{S}$
平均门极耗散功率	P_G (AV)	0.2	W	
贮存温度	T_{stg}	-40~+150	$^{\circ}\text{C}$	
结温	T_j	-40~+125	$^{\circ}\text{C}$	

■ Electricity characteristic

参数名称	符号	规范值	单位	测试条件
触发电流	I_{GT}	10-200	μA	$V_D=12V, R_L=140\Omega$
触发电压	V_{GT}	≤ 0.8	V	$V_D=12V, R_L=140\Omega$
维持电流	I_H	≤ 5	mA	$I_T=50mA, R_{GK}=1K\Omega$
电压上升率	dv/dt	≥ 15	V/ μS	$V_D=67\%V_{DRM}, R_{GK}=1K\Omega$
通态压降	V_{TM}	≤ 1.7	V	$I_{TM}=8A, \tau_p=380\mu S$
断态漏电流	I_{DRM}, I_{RRM}	≤ 5	μA	$V_D=V_{DRM}, V_R=V_{RRM}, R_{GK}=1K\Omega, T_j=25^\circ C$
热阻	$R_{th}(j-l)$	15	$^\circ C/W$	
	$R_{th}(j-a)$	100		

■ Heat Characteristic

Emblem	parameter	numerical value	unit
T_J	Task scope	-40~+150 $^\circ C$	$^\circ C$
T_S	Temperature save up scope	-65~+150 $^\circ C$	$^\circ C$
$R_{\theta JA}$	Heat resistance	90	$^\circ C/W$

■ Characteristic curve

Fig. 1: Maximum average power dissipation versus average on-state current.

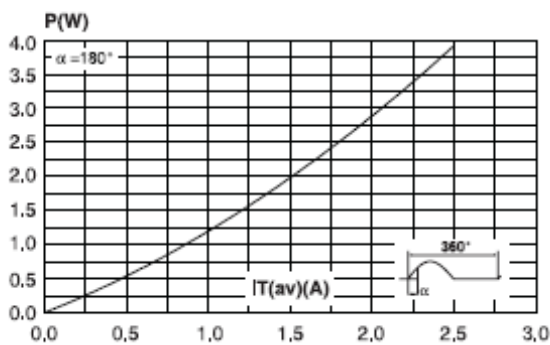


Fig.2: Relative variation of thermal impedance junction to ambient versus pulse duration

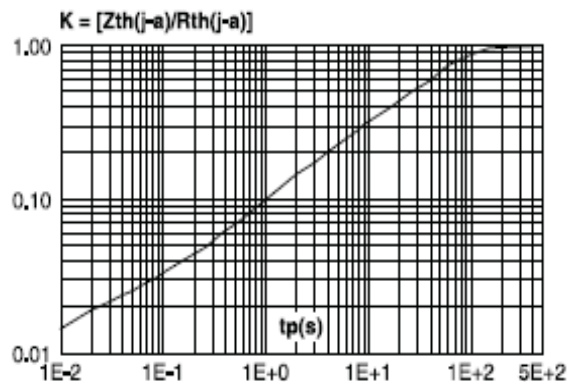


Fig.3.Average and D.C.on-state current versus ambient temperature

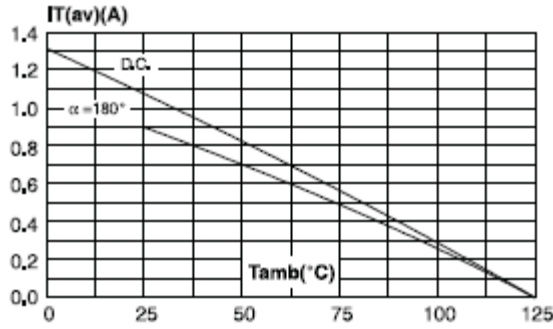


Fig. 4: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values).

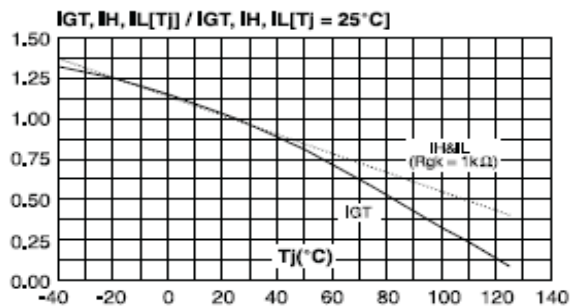


Fig. 6: Relative variation of dV/dt immunity versus gate-cathode resistance (typical values).

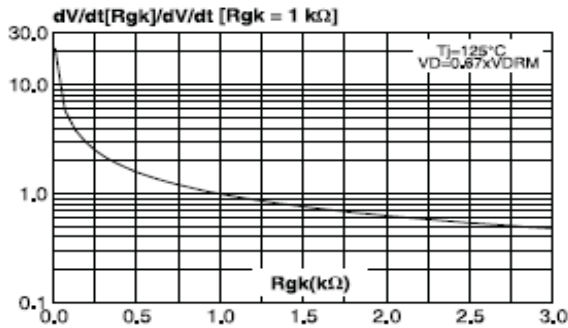


Fig. 8: Surge peak on-state current versus number of cycles.

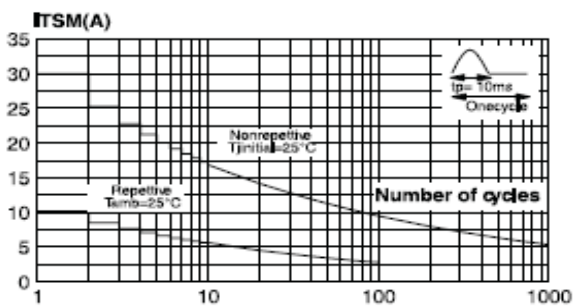


Fig. 5: Relative variation of holding current versus gate-cathode resistance (typical values).

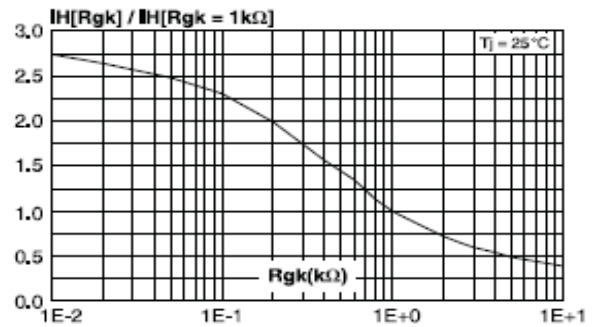


Fig. 7: Relative variation of dV/dt immunity versus gate-cathode capacitance (typical values).

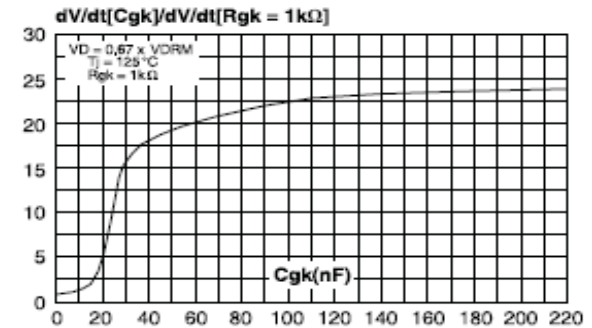
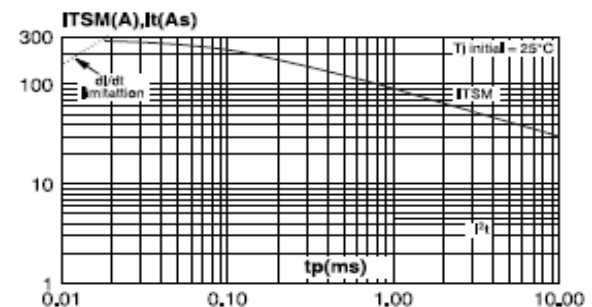
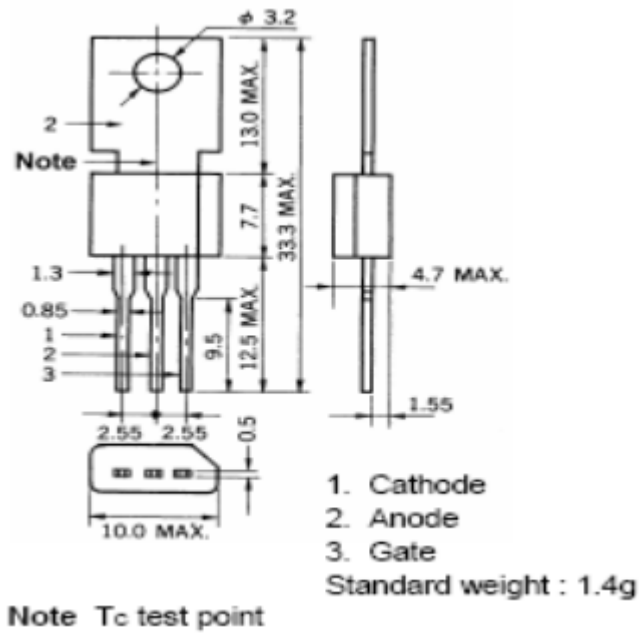


Fig. 9: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms, and corresponding value of I^2t .



■ TO-202 external dimensions



■ TO-126 外形尺寸

