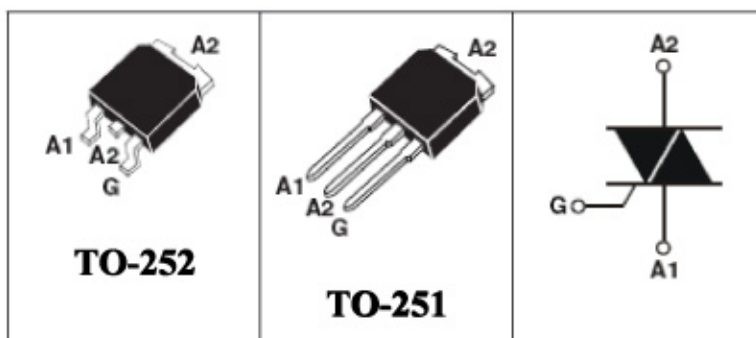




绍兴怡华电子科技有限公司

■ 主要特点:

符号	数值	单位
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600&800	V
$I_{GT(Q1)}$	5 to 35	mA



■ 用途:

T405 双向可控硅系列适用于一般交流开关电路,如:固态继电器,感应马达启动控制,调温控制,调光控制,调速控制...等.

■ 极限值:

符号	参数		数值	单位
$I_{T(RMS)}$	RMS 通态电流	$T_C=107^{\circ}C$	4	A
I_{TSM}	通态峰值浪涌电流	$F=50Hz, t=20ms$	30	A
I^2t	I^2t 耗散值	$T_P=10ms$	5.1	A^2s
di/dt	通态电流上升值	$I_{TM}=6A; I_G=0.2A$ $dI_G/dt=0.2 A/\mu s$	50	$A/\mu s$
I_{GM}	门极峰值电流	$TP=20\mu s, T_j=125^{\circ}C$	4	A
$P_{G(AV)}$	平均门极耗散功率	$T_j=125^{\circ}C$	1	W

■ 极限值:

Tstg	贮存结温范围	-40-+150	°C
Tj	工作结温范围	-40-+125	°C

■ 电特性:($T_C=25^{\circ}\text{C}$)

参数名称	符号	MIN	TYP	MAX	单位	测试条件	
触发电流	I_{GT}		5	10	mA	$V_D=12V,$ $R_L=30\Omega$	T2+G+
			5	10	mA		T2+G-
			5	15	mA		T2-G-
			15	35	mA		T2-G+
触发电压	V_{GT}			1.3	V	$V_D=12V, R_L=30\Omega$	
维持电流	I_H			15	mA	$V_D=12V, I_{GT}=0.1A$	
电压上升率	dv/dt		50		V/μS	$V_D=67\%V_{DRM}$	
通态压降	V_{TM}	≤ 1.6			V	$I_T=5A$	
断态漏电流	I_{DRM}	≤ 0.5			mA	$V_D=V_{DRM}, T_j=125^{\circ}\text{C}$	

■ 热阻:

符号	测试条件	MIN	TYP	MAX	单位
Rth(j-c)	结到散热片(全周期)		2.6	3.0	°C/W
Rth(j-a)	结到环境		100		°C/W

■ 特性曲线:

Figure 1: Maximum power dissipation versus RMS on-state current (full cycle)

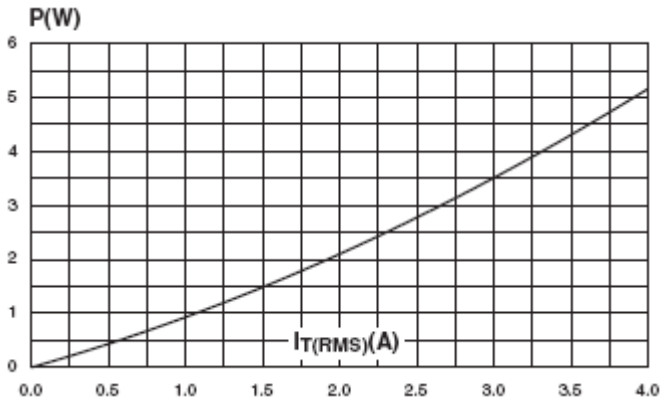


Figure 2: RMS on-state current versus case temperature (full cycle)

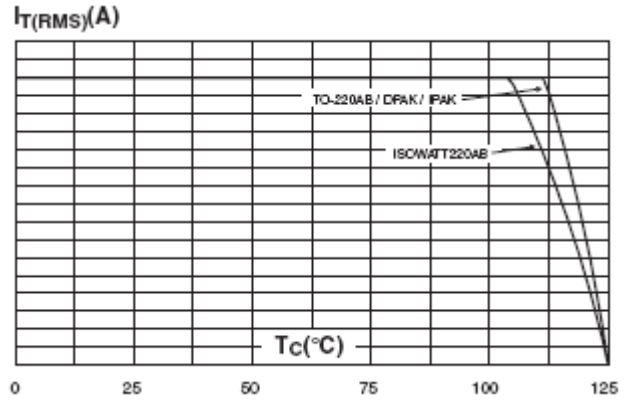


Figure 3: RMS on-state current versus ambient temperature (printed circuit board FR4, copper thickness: 35μm) (full cycle)

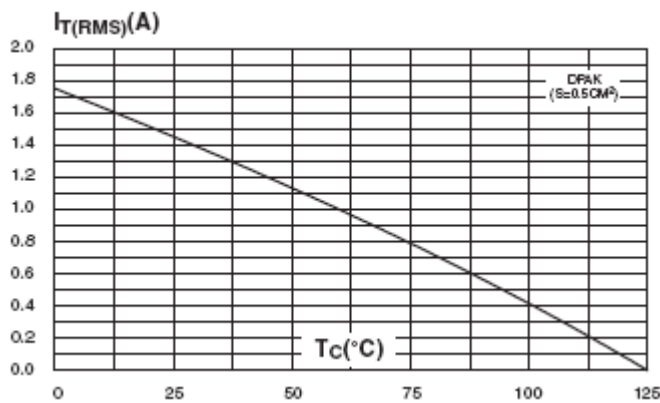


Figure 4: Relative variation of thermal impedance versus pulse duration

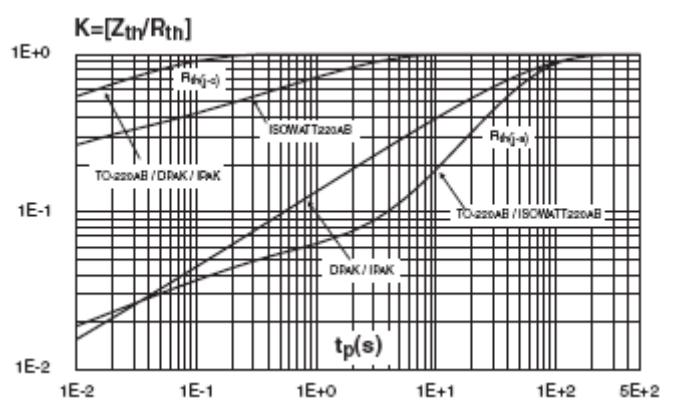


Figure 5: On-state characteristics (maximum values)

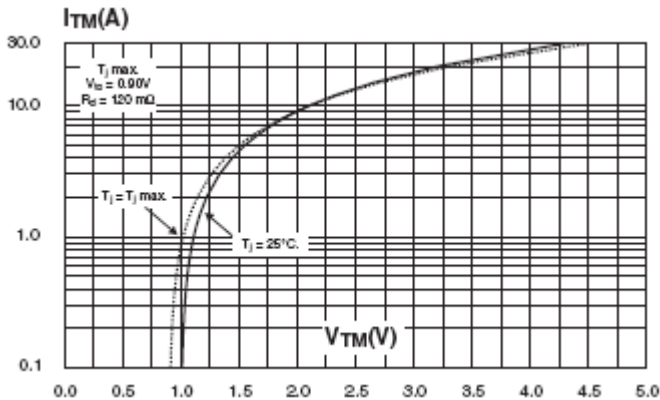
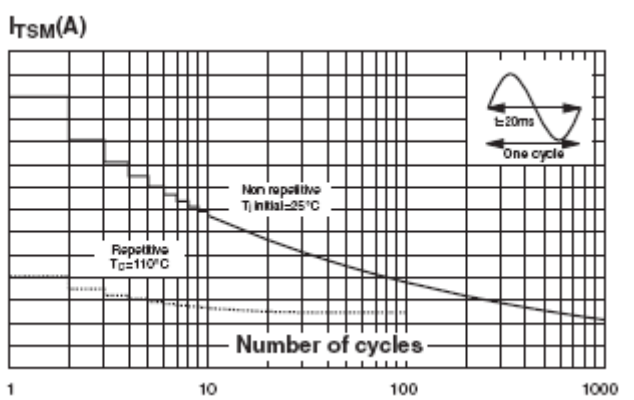


Figure 6: Surge peak on-state current versus number of cycles



■ 特性曲线:

Figure 7: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms and corresponding value of I_{zt}

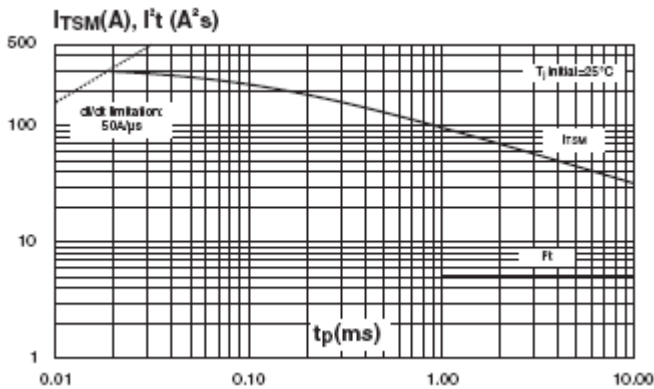


Figure 9: Relative variation of critical rate of decrease of main current versus $(dV/dt)_c$ (typical values)

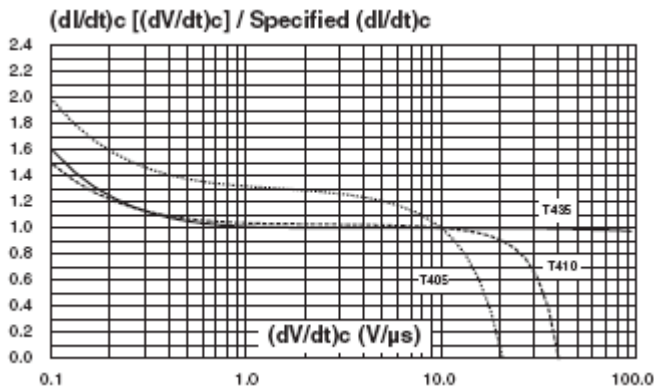


Figure 11: DPAK thermal resistance junction to ambient versus copper surface under tab (printed circuit board FR4, copper thickness: 35 μm)

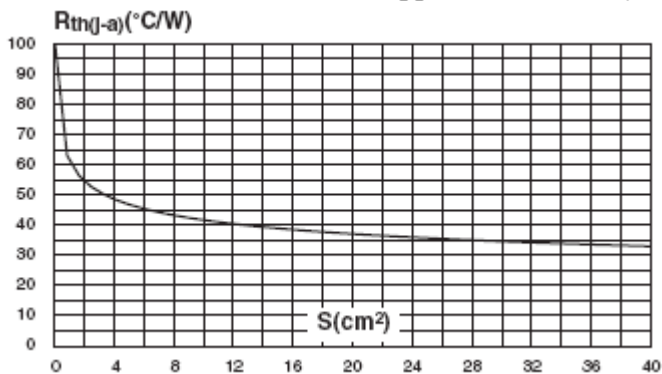


Figure 8: Relative variation of gate trigger current, holding current and latching current versus junction temperature (typical values)

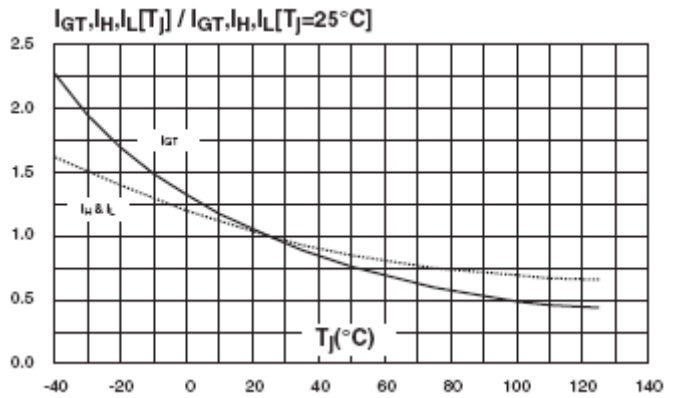
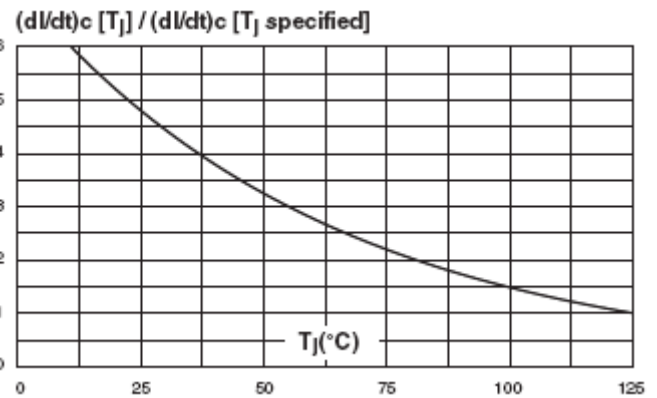
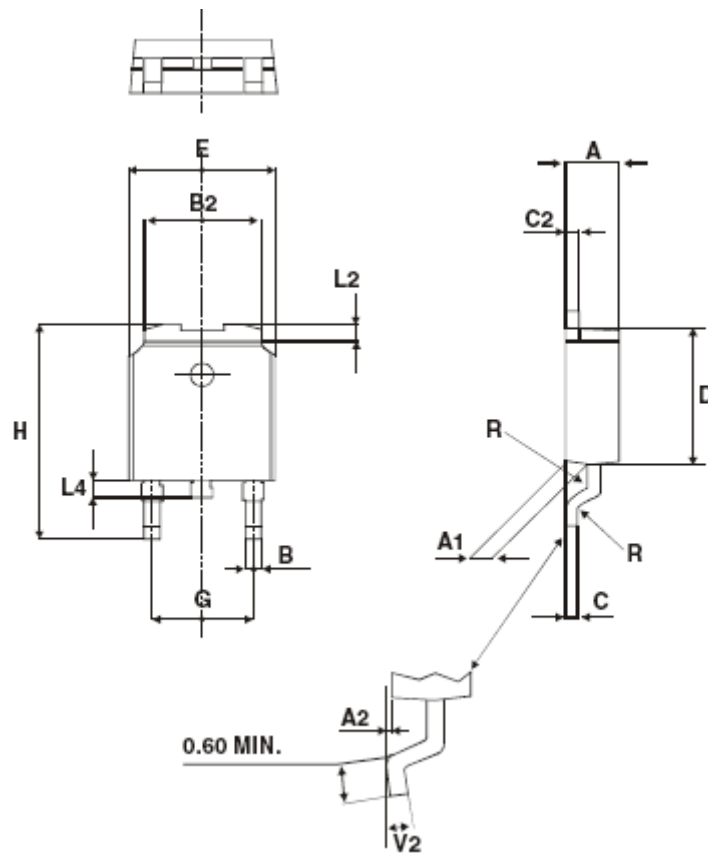


Figure 10: Relative variation of critical rate of decrease of main current versus junction temperature

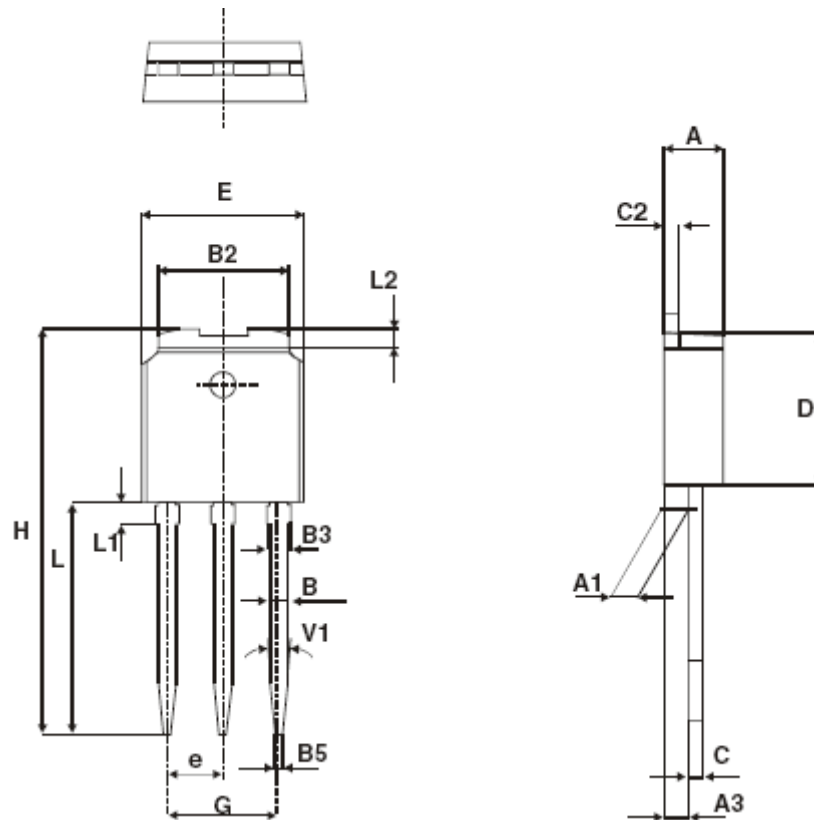


■ TO-252 外形尺寸



REF.	DIMENSIONS			
	Millimeters		Inches	
	Min.	Max	Min.	Max.
A	2.20	2.40	0.086	0.094
A1	0.90	1.10	0.035	0.043
A2	0.03	0.23	0.001	0.009
B	0.64	0.90	0.025	0.035
B2	5.20	5.40	0.204	0.212
C	0.45	0.60	0.017	0.023
C2	0.48	0.60	0.018	0.023
D	6.00	6.20	0.236	0.244
E	6.40	6.60	0.251	0.259
G	4.40	4.60	0.173	0.181
H	9.35	10.10	0.368	0.397
L2	0.80 typ.		0.031 typ.	
L4	0.60	1.00	0.023	0.039
V2	0°	8°	0°	8°

■ TO-251 外形尺寸



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.094
A1	0.90		1.10	0.035		0.043
A3	0.70		1.30	0.027		0.051
B	0.64		0.90	0.025		0.035
B2	5.20		5.40	0.204		0.212
B3			0.95			0.037
B5		0.30			0.035	
C	0.45		0.60	0.017		0.023
C2	0.48		0.60	0.019		0.023
D	6		6.20	0.236		0.244
E	6.40		6.60	0.252		0.260
e		2.28			0.090	
G	4.40		4.60	0.173		0.181
H		16.10			0.634	
L	9		9.40	0.354		0.370
L1	0.8		1.20	0.031		0.047
L2		0.80	1		0.031	0.039
V1		10°			10°	