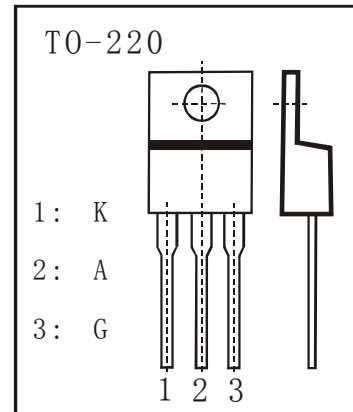


单向可控硅—TSE625

TSE625 主要应用于摩托车电压调节器电路中；还可广泛应用于各种万能开关器、彩灯控制器、漏电保护器、灯具继电器激励器、逻辑集成电路驱动、大功率可控硅门极驱动等线路控制。



1、特点

- 通态压降低
- 断态重复峰值电压高
- 触发灵敏度高
- 可靠性好
- 封装形式：T0-220

2、电特性

极限参数 (Ta=25℃)

参数名称	符号	额定值	单位
断态重复峰值电压	V_{DRM}	600	V
反向重复峰值电压	V_{RRM}	600	V
通态平均电流	$I_{T(AV)}$	16	A
通态峰值电流	$I_{T(RMS)}$	25	A
通态不重复浪涌电流	I_{TSM}	300	A
结温	T_j	125	℃
贮存温度	T_{atg}	-40 ~ 125	℃

电参数 (Ta=25℃)

参数名称	符号	单位	规范值			测试条件
			最小值	典型值	最大值	
断态重复峰值电压	V_{DRM}	V	600	650		$I_D=0.1mA$
反向重复峰值电压	V_{RRM}	V	600	650		$I_R=0.1mA$
断态重复峰值电流	I_{DRM}	μA			10	$V_{DRM}=600V$
通态峰值电压	V_{TM}	V		1.4	1.7	$I_T=50A$
维持电流	I_H	mA			50	$I_T=500mA, I_G=0$

关闭电流	I_L	mA			90	$I_G=1.2I_{GT}$
控制极触发电流※	I_{GT}	mA	4		40	$V_D=12V, R_L=33\Omega$
控制极触发电压	V_{GT}	V			1.5	$V_D=12V, R_L=33\Omega$
控制极最大电流	I_{GM}	A			4	
控制极最高电压	V_{GM}	V			5	
控制极最高反向电压	V_{RGM}	V			5	
电压上升速率	V_D/dt	V/ μs	200	300		$V_{DM}=67\%V_{DRM(MAX)}, R_{GK}=220\Omega, I_G=0$
电流上升速率	I_T/dt	A/ μs			50	$I_C=0.1A, dI_G/dt=0.1A/\mu s$
控制极不触发电压	V_{GD}	V	0.2			400V, $R_{GR}=1K\Omega, T_j=125^\circ C$

※：该参数与环境温度有关

2、电特性参数曲线

Figure 1: Maximum average power dissipation versus average on-state current

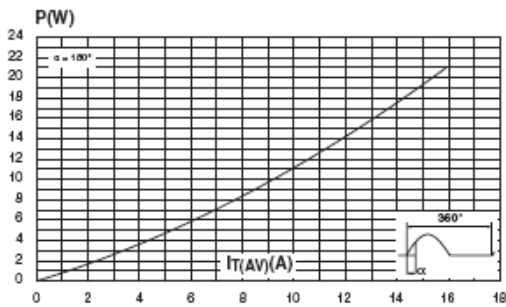


Figure 2: Average and D.C. on-state current versus case temperature

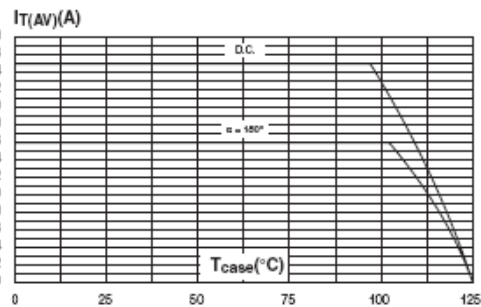


Figure 3: Average and D.C. on-state current versus ambient temperature (copper surface under tab: S=1cm²) (D²PAK)

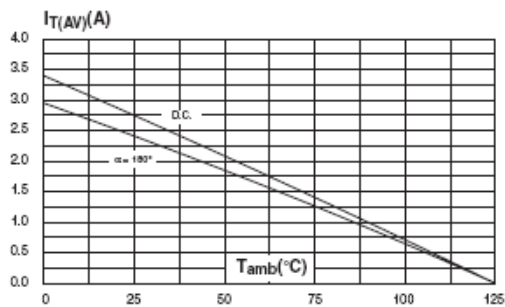


Figure 4: Relative variation of thermal impedance versus pulse duration

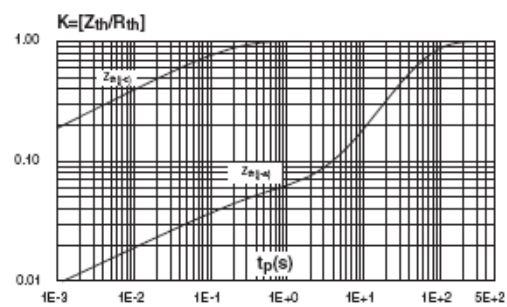


Figure 5: Relative variation of gate trigger current, holding current and latching current versus junction temperature

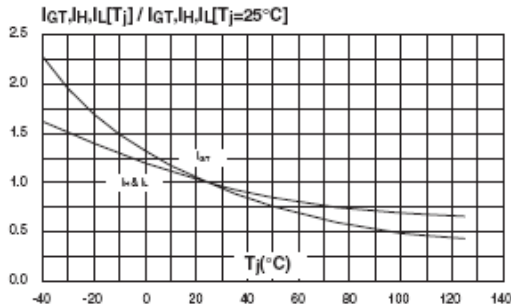


Figure 7: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 10$ ms, and corresponding values of I^2t

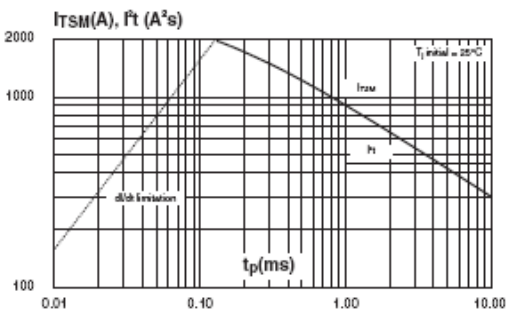


Figure 9: Thermal resistance junction to ambient versus copper surface under tab (epoxy printed circuit board FR4, copper thickness: 35 μ m) (D²PAK)

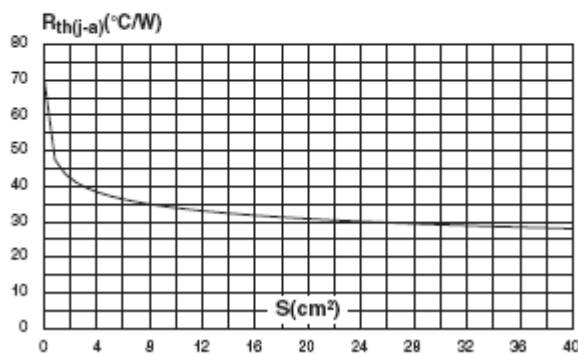


Figure 6: Surge peak on-state current versus number of cycles

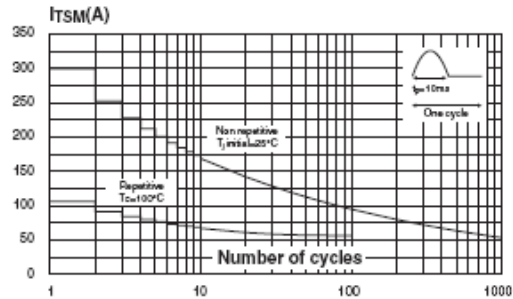


Figure 8: On-state characteristics (maximum values)

