

<b>2P4M</b>		
	单向可控硅 THYRISTOR	版本号 201603-A

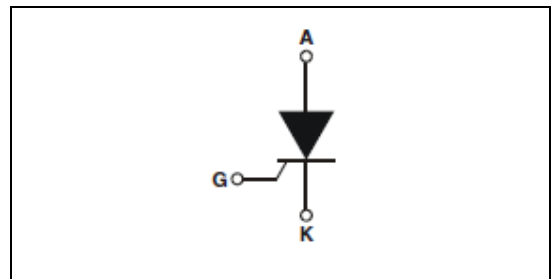
## 产品概述 GENERAL DESCRIPTION

2P4M 单向可控硅采用穿通隔离台面结构，复合玻璃钝化PN结表面保护工艺技术，dv/dt高，可靠性高，适用于控温、调光、马达控制。

2P4M Thyristor is fabricated using separation diffusion processes ,the junction termination areas are passivated with glass. Thanks to highly dv/dt and reliability,the Triacs series is suitable for domestic lighting ,heating and motor speed controllers.

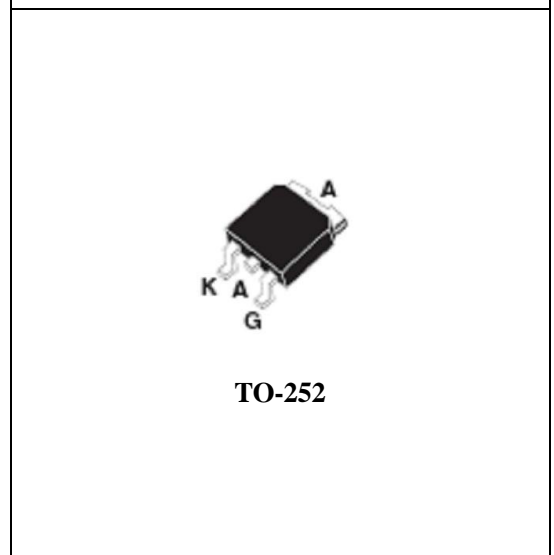
## 主要参数 MAIN CHARACTERISTICS

参数 Parameter	数值 Value	单位 Unit
$I_{T(RMS)}$	4	A
$V_{DRM}/V_{RRM}$	400	V
$I_{GT}$	200	$\mu A$



## 产品特性 FEATURES

- dv/dt高
- 通态压降低
- Rohs环保产品
- Highly dv/dt
- Low on-state voltage
- Rohs Products



## 应用领域 APPLICATIONS

主要应用于调光、控温、马达控制。

domestic lighting ,heating and motor speed controllers.

**极限值(除非另有规定, Tj=25℃) ABSOLUTE RATINGS**

(Tj=25℃, unless otherwise specified)

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
$I_{T(RMS)}$	RMS 通态电流 RMS on-state current (full sine wave)	$T_{lead} \leq 51^\circ C$	A
$I_{TSM}$	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms	A
$I^2t$	$I^2t$ 耗散值 $I^2t$ value for fusing	$T_p=10ms$	A <sup>2</sup> s
di/dt	通态电流上升值 Critical rate of rise of on-state current	F=120Hz, Tj=125℃	A/μs
$I_{GM}$	门极峰值电流 Peak gate current	TP=20μs, Tj=125℃	A
$P_{G(AV)}$	平均门极耗散功率 Average gate power dissipation	Tj=125℃	W
Tstg	贮存结温范围 Storage junction temperature range		-40+150 ℃
Tj	工作结温范围 Operating junction temperature range		-40+125 ℃

**电参数(除非另有规定, Tj=25℃) ELECTRICAL CHARACTERISTICS**

(Tj=25℃, unless otherwise specified)

参数 Parameter	符号 Symbol	规范值 Value	单位 Unit	测试条件 Test Conditions
触发电流 Gate trigger current	$I_{GT}$	200	μA	$V_D=6V, I_T=0.01A$
触发电压 Gate trigger voltage	$V_{GT}$	1.0	V	$V_D=7V, I_T=0.01A$
维持电流 Holding current	$I_H$	5	mA	$V_D=7V, I_T=0.01A$
擎住电流 Latching current	$I_L$	8	mA	$V_D=7V, I_T=0.01A$
电压上升率 Rise of off-state voltage	dv/dt	10	V/μS	$V_D=67\% V_{DRM}$
通态压降 Peak on-state voltage	$V_{TM}$	1.6	V	$I_T=5A$
断态漏电流 Peak repetitive forward blocking current	$I_{DRM}$	10	μA	$V_{RRM}=V_{DRM}, T_j=25^\circ C$
	$I_{RRM}$	2	mA	$V_{RRM}=V_{DRM}, T_j=125^\circ C$

**热特性 THERMAL RESISTANCES**

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
Rth(j-c)	Junction to case(AC)	1.6	℃/W
Rth(j-a)	Junction to ambient	70	℃/W

特征曲线 ELECTRICAL CHARACTERISTICS (CURVES)

图1 最大耗散功率与RMS通态电流关系  
Fig.1.Maximum Power Dissipation Versus on-state current

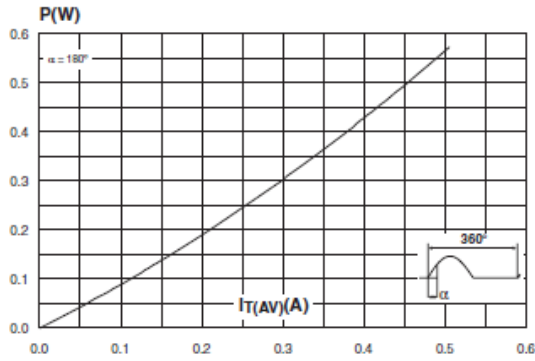


图3 通态特性  
Fig.3.On-State Characteristics

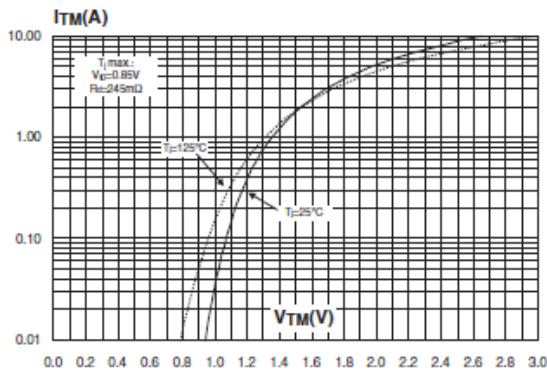


图5  $I_{GT}$ 、 $I_H$ 、 $I_L$ 相对值（相对于25°C）与结温关系

Fig.5.Relative Variation Of Gate Trigger Current , Holding Current And Latching Current Versus Junction Temperature (Typical Value)

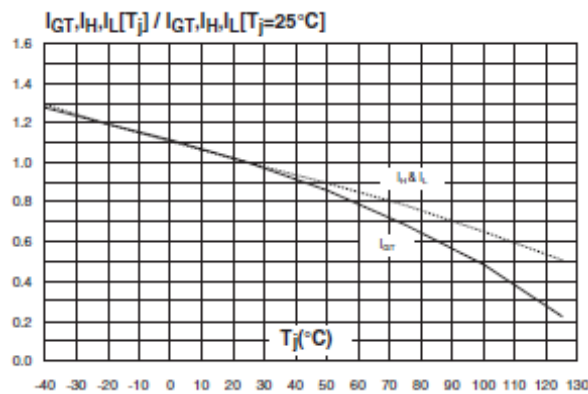


图2 平均通态电流与Tc温度关系  
Fig.2.  $I_{T(AV)}$  On-state Current Versus TL

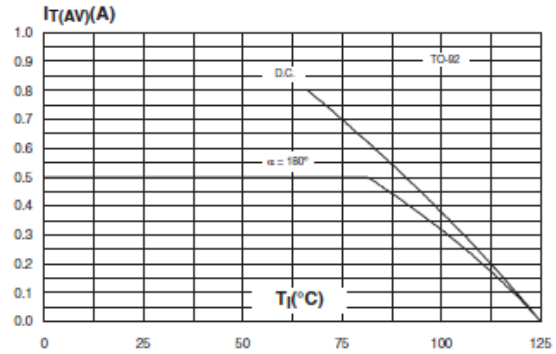
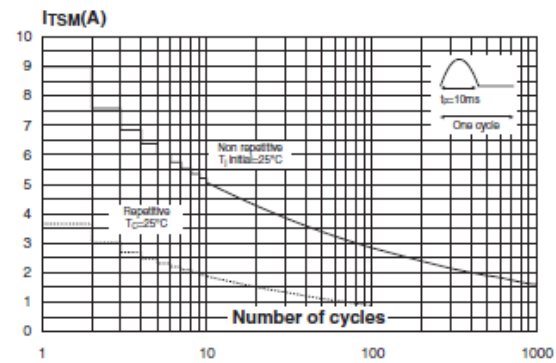
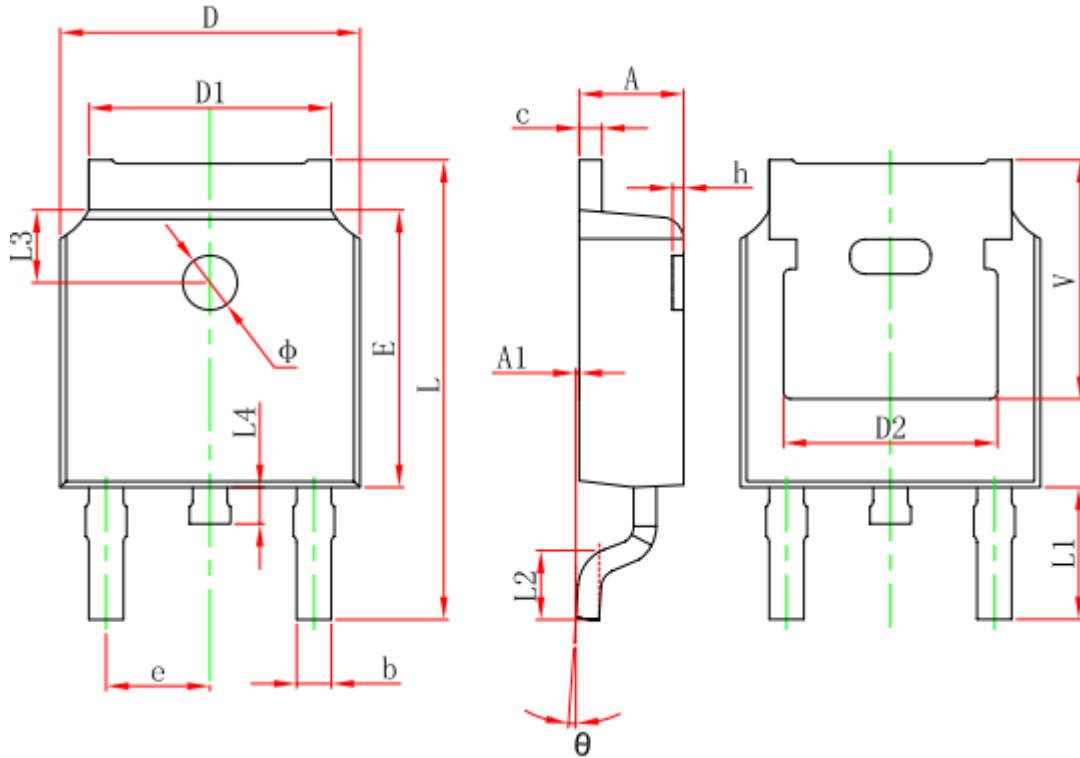


图4 通态浪涌峰值电流与周期数关系  
Fig.4.Surge Peak On-state Current Versus Number Cycles



封装尺寸 PACKAGE MECHANICAL DATA

TO-252



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 REF.		0.211 REF.	



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