

## T1235

双向可控硅  
TRIAC

版本号  
201603-A

### 产品概述 GENERAL DESCRIPTION

T1235 双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。

T1235 Triacs 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
$I_{T(RMS)}$	12	A
$V_{DRM}/V_{RRM}$	600&800	V
$I_{GT(III)}$	$\leq 35$	mA

### 产品特性

- dv/dt高
- 通态压降低
- Rohs环保产品

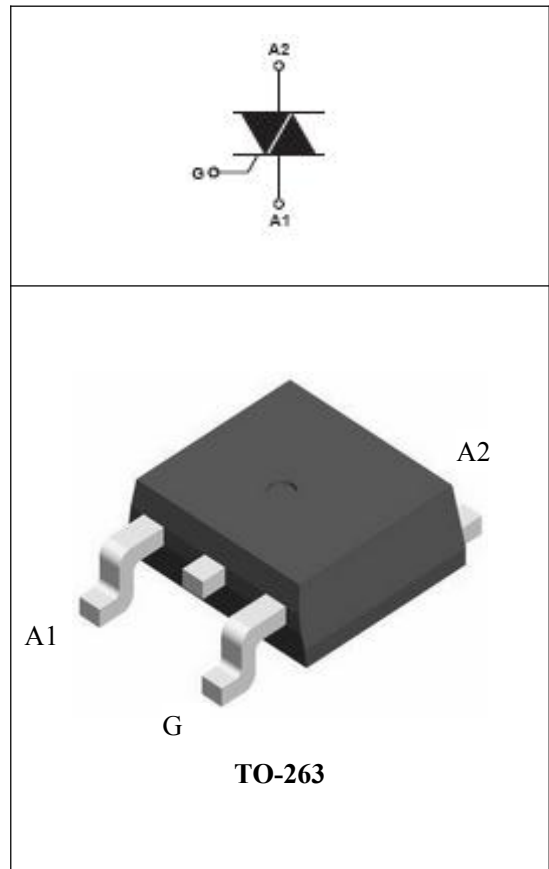
### FEATURES

- 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,  $T_j=25^\circ\text{C}$ ) ABSOLUTE RATINGS**

 ( $T_j=25^\circ\text{C}$ , 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)	$T_C=90^\circ\text{C}$ 12	A
$I_{TSM}$	通态峰值浪涌电流 Non repetitive surge peak on-state current	$F=50\text{Hz}, t=20\text{ms}$ 120	A
$I^2t$	$I^2t$ 耗散值 $I^2t$ value for fusing	$T_p=10\text{ms}$ 78	$\text{A}^2\text{s}$
$di/dt$	通态电流上升值 Critical rate of rise of on-state current	$F=120\text{Hz}, T_j=125^\circ\text{C}$ 50	$\text{A}/\mu\text{s}$
$I_{GM}$	门极峰值电流 Peak gate current	$T_p=20\mu\text{s}, T_j=125^\circ\text{C}$ 4	A
$P_{G(AV)}$	平均门极耗散功率 Average gate power dissipation	$T_j=125^\circ\text{C}$ 1	W
$T_{stg}$	贮存结温范围 Storage junction temperature range	-40+150	$^\circ\text{C}$
$T_j$	工作结温范围 Operating junction temperature range	-40+150	$^\circ\text{C}$

**电参数(除非另有规定,  $T_j=25^\circ\text{C}$ ) ELECTRICAL CHARACTERISTICS**

 ( $T_j=25^\circ\text{C}$ , 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	$I_{GT}$ I ~ III	$\leq 35$	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
触发电压 Gate trigger voltage	$V_{GT}$ I ~ III	$\leq 1.5$	V	$V_D=12\text{V}, I_T=0.1\text{A}$
维持电流 Holding current	$I_H$	$\leq 80$	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
擎住电流 Latching current	$I_L$	$\leq 100$	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
电压上升率 Rise of off- state voltage	$dv/dt$	500	$\text{V}/\mu\text{s}$	$V_D=67\%V_{DRM}$
通态压降 Peak on-state voltage	$V_{TM}$	$\leq 1.6$	V	$I_T=17\text{A}$
断态漏电流 Peak repetitive forward blocking current	$I_{DRM}$	$\leq 5$	$\mu\text{A}$	$V_{RRM}=V_{DRM}, T_j=25^\circ\text{C}$
	$I_{RRM}$	$\leq 3$	mA	$V_{RRM}=V_{DRM}, T_j=150^\circ\text{C}$

**热特性 THERMAL RESISTANCES**

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
$R_{th(j-c)}$	Junction to case(AC)	1.2	K/W
$R_{th(j-a)}$	Junction to ambient	45	K/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

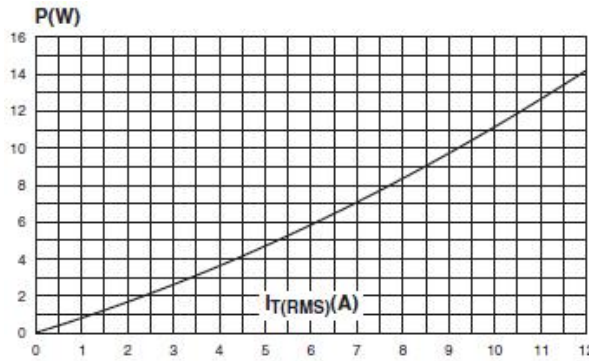


图2 RMS通态电流与Tc温度关系  
Fig.2. RMS On-state Current Versus TL

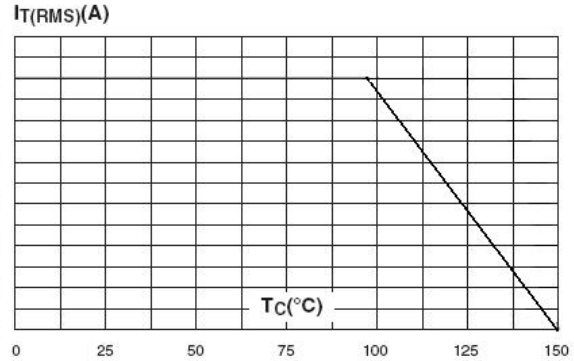


图3 通态特性  
Fig.3.On-State Characteristics

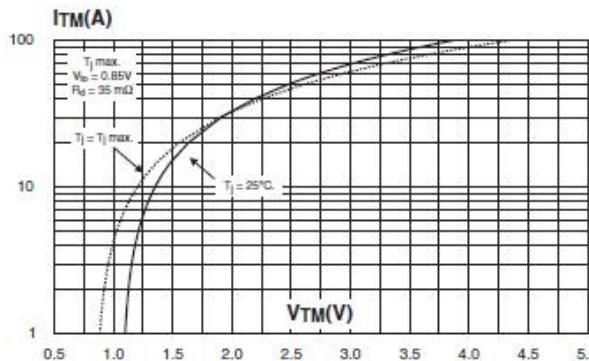


图4 通态浪涌峰值电流与周期数关系  
Fig.4.Surge Peak On-state Current Versus Number Cycles

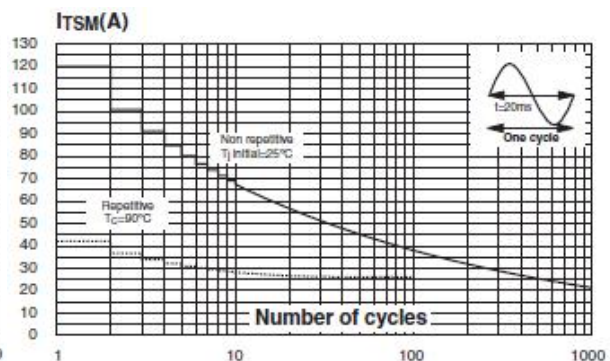
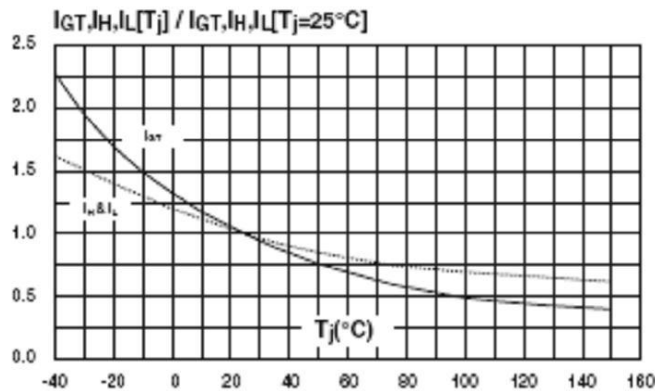
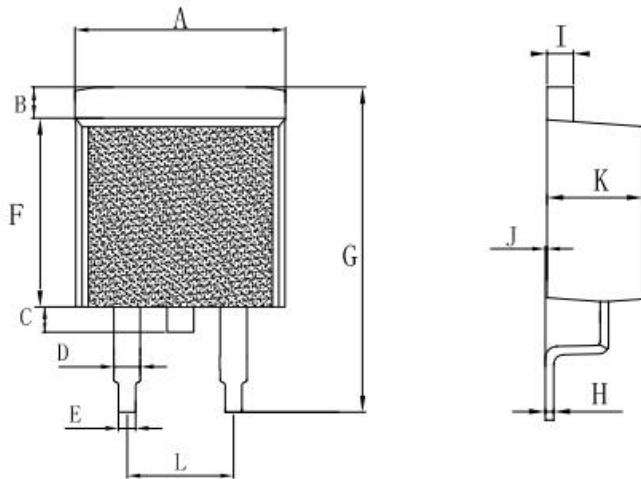


图5 IGT、IH、IL相对值（相对于25°C）与结温关系  
Fig.5.Relative Variation Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



封装尺寸 PACKAGE MECHANICAL DATA

T0-263



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	9.7	10.4	0.381	0.409
B	1.31	1.62	0.051	0.063
C	0.65	1.22	0.025	0.048
D	1.15	1.36	0.045	0.053
E	0.62	0.95	0.024	0.037
F	8.75	9.32	0.344	0.366
G	14.75	15.8	0.580	0.622
H	0.32	0.48	0.012	0.018
I	1.18	1.36	0.046	0.053
J	0	0.15	0	0.005
K	4.38	4.86	0.172	0.191
L	4.85	5.23	0.190	0.205

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