

<b>Z0409</b>		
	双向可控硅 TRIAC	版本号 201603-A

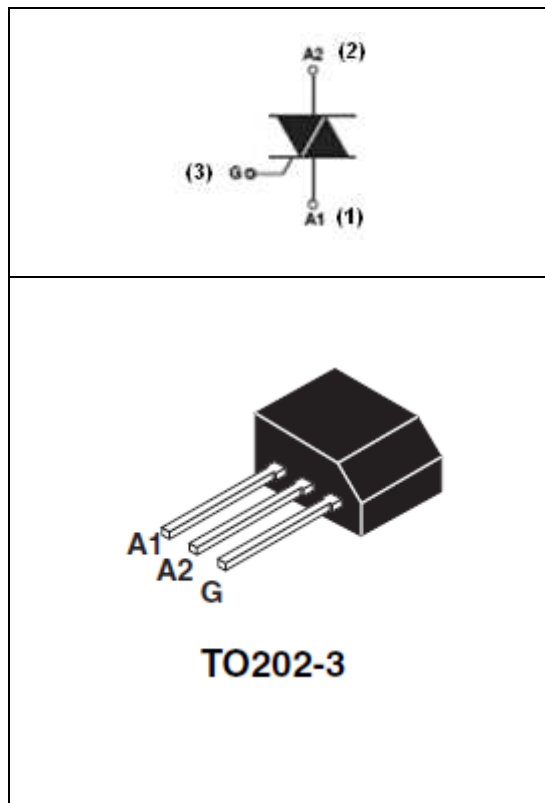
**产品概述 GENERAL DESCRIPTION**

Z0409 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。

Z0409 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
$I_{T(RMS)}$	4	A
$V_{DRM}/V_{RRM}$	600&800	V
$I_{GT(IV)}$	$\leq 10$	mA



**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, T<sub>j</sub>=25℃) ABSOLUTE RATINGS**

 (T<sub>j</sub>=25℃, unless otherwise specified)

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
I <sub>T(RMS)</sub>	RMS 通态电流 RMS on-state current (full sine wave)	T <sub>C</sub> ≤107℃	4 A
I <sub>TSM</sub>	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms	25 A
I <sup>2</sup> t	I <sup>2</sup> t 耗散值 I <sup>2</sup> t value for fusing	T <sub>p</sub> =10ms	3.1 A <sup>2</sup> s
di/dt	通态电流上升值 Critical rate of rise of on-state current	F=120Hz, T <sub>j</sub> =125℃	50 A/μs
I <sub>GM</sub>	门极峰值电流 Peak gate current	T <sub>p</sub> =20μs, T <sub>j</sub> =125℃	2 A
P <sub>G(AV)</sub>	平均门极耗散功率 Average gate power dissipation	T <sub>j</sub> =125℃	0.5 W
T <sub>stg</sub>	贮存结温范围 Storage junction temperature range		-40~+150 ℃
T <sub>j</sub>	工作结温范围 Operating junction temperature range		-40~+125 ℃

**电参数(除非另有规定, T<sub>j</sub>=25℃) ELECTRICAL CHARACTERISTICS**

 (T<sub>j</sub>=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 <sub>GT</sub>	I ~ IV	≤10	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
触发电压 Gate trigger voltage	V <sub>GT</sub>	I ~ IV	≤1.5	V	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
维持电流 Holding current	I <sub>H</sub>		≤10	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
擎住电流 Latching current	I <sub>L</sub>	I、III	≤10	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
		II、IV	≤15		
电压上升率 Rise of off- state voltage	dv/dt		≥5	V/μS	V <sub>D</sub> =67% V <sub>DRM</sub>
通态压降 Peak on-state voltage	V <sub>TM</sub>		≤1.7	V	I <sub>T</sub> =5.5A
断态漏电流 Peak repetitive forward blocking current	I <sub>DRM</sub> I <sub>RRM</sub>		≤5	μA	V <sub>RRM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =25℃
			≤0.8	mA	V <sub>RRM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125℃

**热特性 THERMAL RESISTANCES**

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
R <sub>th(j-c)</sub>	Junction to case(AC)	15	℃/W
R <sub>th(j-a)</sub>	Junction to ambient	100	℃/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

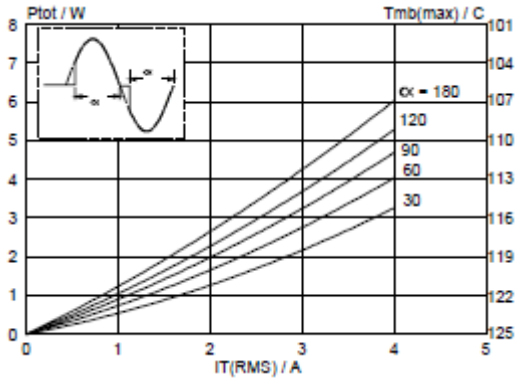


图2 RMS通态电流与Tc温度关系  
Fig.2. RMS On-state Current Versus TL

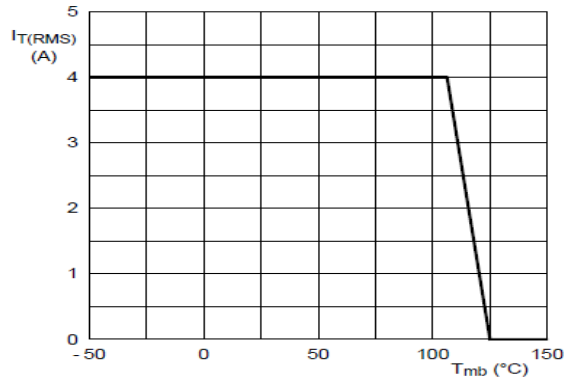


图3 通态特性  
Fig.3.On-State Characteristics

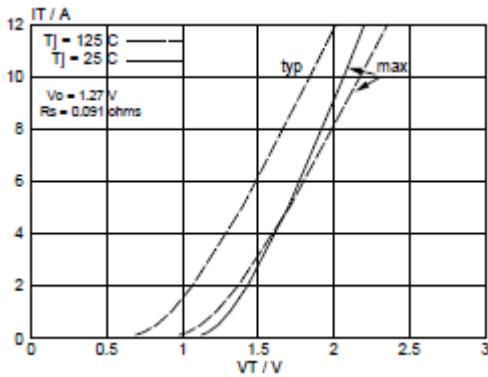


图4 通态浪涌峰值电流与周期数关系  
Fig.4.Surge Peak On-state Current Versus Number Cycles

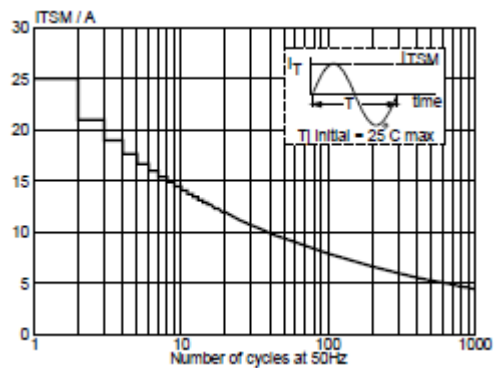
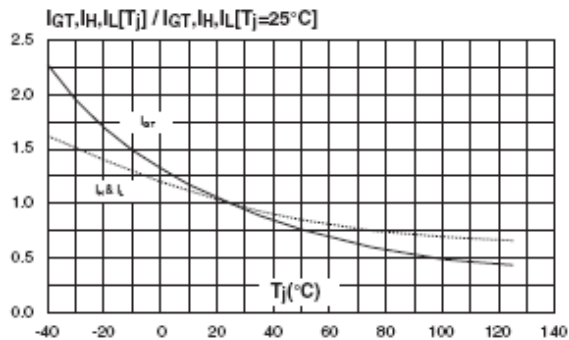
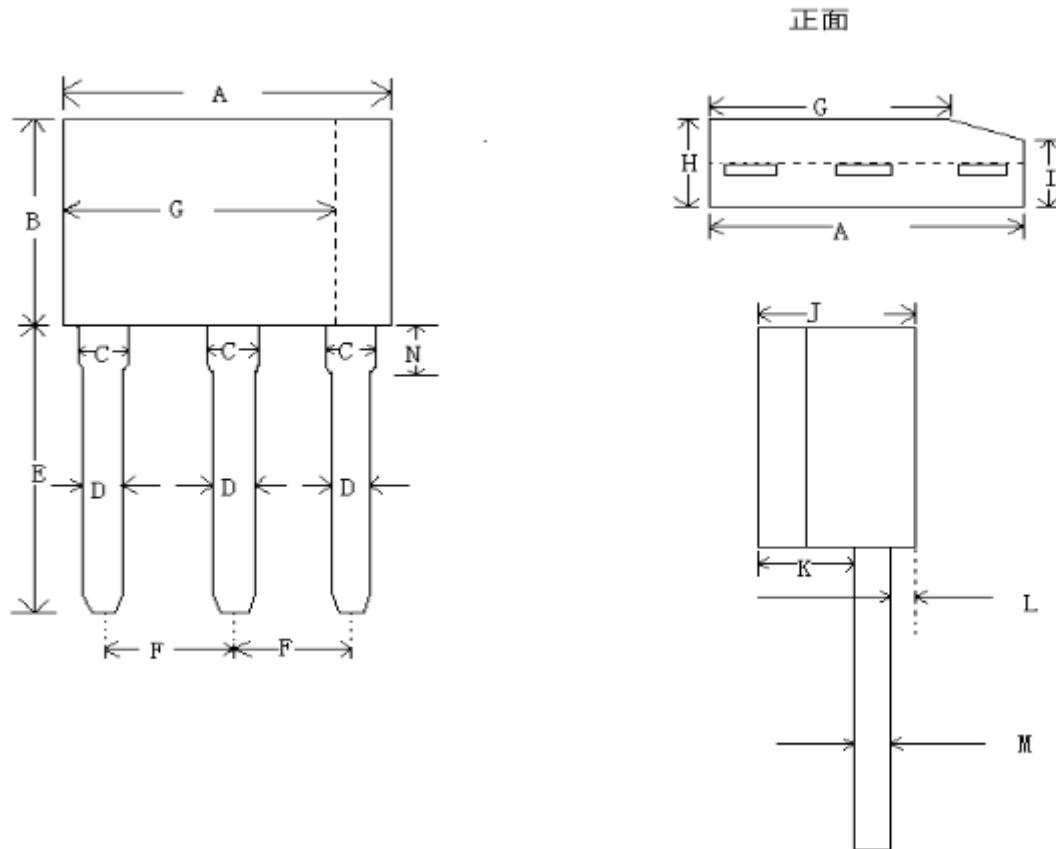


图5 IGT、IH、IL相对值（相对于25°C）与结温关系  
Fig.5.Relative Variation Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



封装尺寸 PACKAGE MECHANICAL DATA

TO-202-3



代码	最小值	最大值	代码	最小值	最大值
A	9.10	10.10	B	6.70	7.70
C	1.17	1.47	D	0.57	0.87
E	9.90	11.90	F	2.39	2.69
G	7.00	8.00	H	4.06	5.06
I	2.10	3.10	J	4.06	5.06
K	2.10	2.60	L	1.40	1.90
M	0.35	0.65	N	1.50	2.50

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