

## BTA208X-1000C

双向可控硅  
TRIAC

版本号  
201603-A

### 产品概述 GENERAL DESCRIPTION

BTA208X-1000C 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。

BTA208X-1000C 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
$I_{T(RMS)}$	8	A
$V_{DRM}/V_{RRM}$	1000	V
$I_{GT(III)}$	$\leq 35$	mA
$V_{ISO}$	2000	V

### 产品特性

- dv/dt高
- 通态压降低
- Rohs环保产品

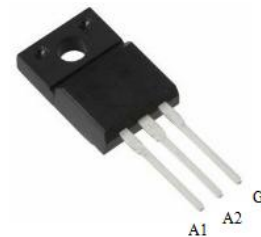
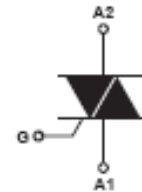
### FEATURES

- 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.



TO-220F

## 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> =110℃	8 A
I <sub>TSM</sub>	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms	80 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	36 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℃	4 A
P <sub>G(AV)</sub>	平均门极耗散功率 Average gate power dissipation	T <sub>j</sub> =125℃	1 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+150 ℃

## 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
		Min.	Typ.	Max.		
触发电流 Gate trigger current	I <sub>GT</sub>	I ~ III	10	-	35	mA V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
触发电压 Gate trigger voltage	V <sub>GT</sub>	I ~ III	≤1.5			V V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
维持电流 Holding current	I <sub>H</sub>		-	-	50	mA V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
擎住电流 Latching current	I <sub>L</sub>		-	-	60	mA V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
电压上升率 Rise of off- state voltage	dv/dt		500	-	-	V/μS V <sub>D</sub> =67% V <sub>DRM</sub>
通态压降 Peak on-state voltage	V <sub>TM</sub>		≤1.55			V I <sub>T</sub> =11A
断态漏电流 Peak repetitive forward blocking current	I <sub>DRM</sub>		≤5			μA V <sub>RRM</sub> =V <sub>DRM</sub> , T <sub>j</sub> = 25 °C
	I <sub>RRM</sub>		≤3.1			mA V <sub>RRM</sub> =V <sub>DRM</sub> , T <sub>j</sub> = 150 °C

## 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)	1.7	K/W
R <sub>th(j-a)</sub>	Junction to ambient	60	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

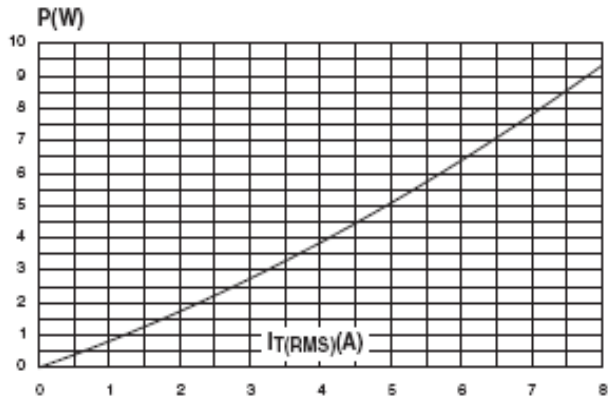


图2 RMS通态电流与Tc温度关系  
Fig.2. RMS On-state Current Versus TL

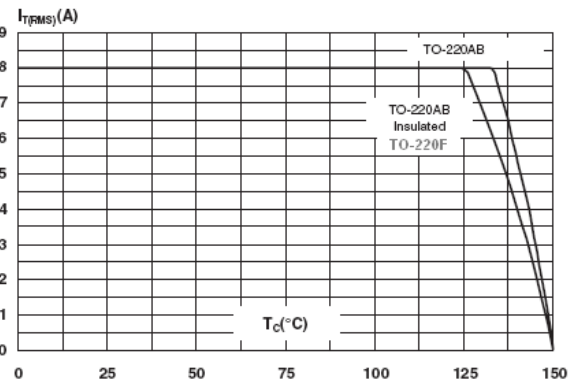


图3 通态特性  
Fig.3.On-State Characteristics

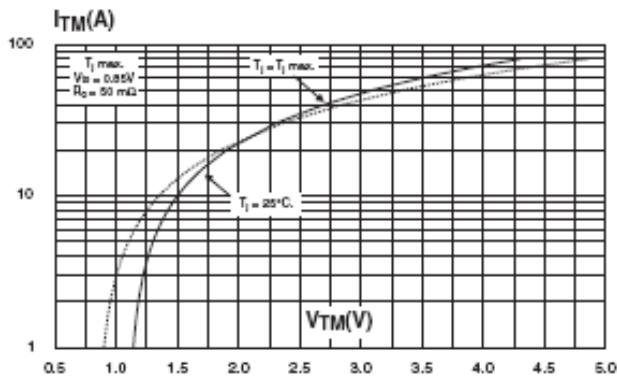


图4 通态浪涌峰值电流与周期数关系  
Fig.4.Surge Peak On-state Current Versus Number Cycles

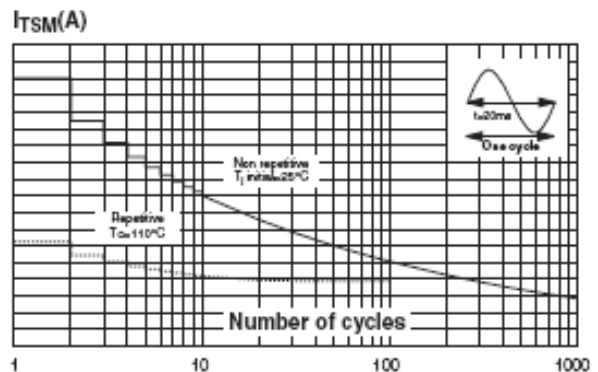
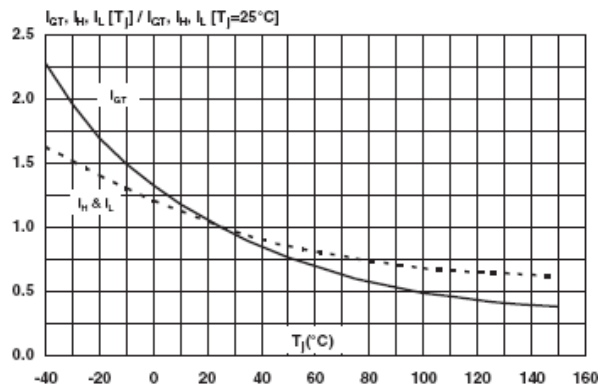
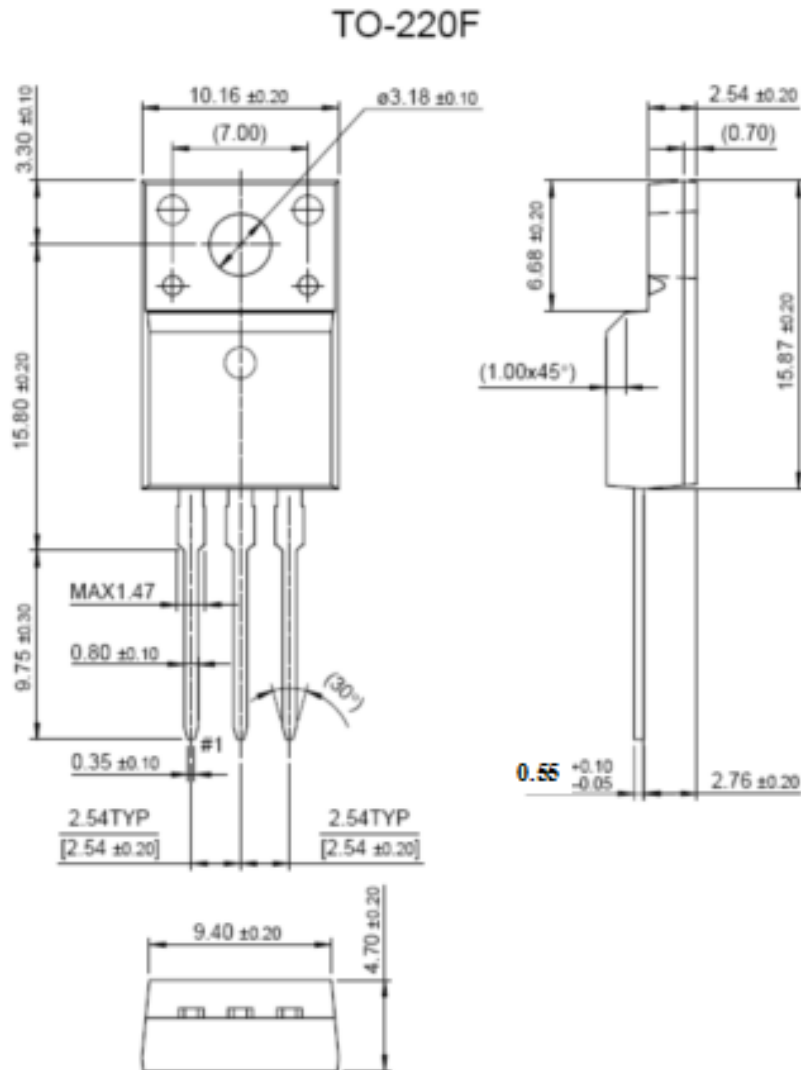


图5 IGT、IH、IL相对值（相对于25°C）与结温关系  
Fig.5.Relative Variation Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



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