

<b>TYN616T</b>		
	单向可控硅 THYRISTOR	版本号 201603-A

## 产品概述 GENERAL DESCRIPTION

TYN616T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。

TYN616T 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
$I_{T(RMS)}$	16	A
$V_{DRM}/V_{RRM}$	600/800	V
$I_{GT}$	15	mA

## 产品特性

- dv/dt高
- 通态压降低
- Rohs环保产品

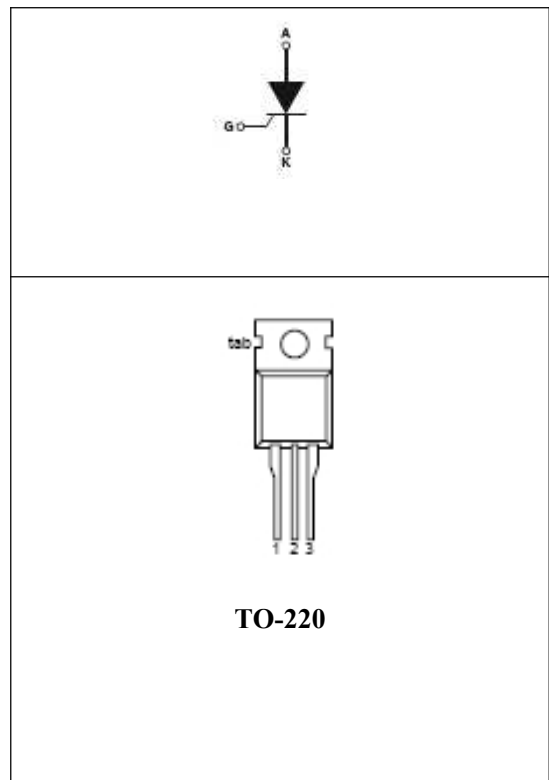
## FEATURES

- 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<sub>j</sub>=25°C) ABSOLUTE RATINGS

(T<sub>j</sub>=25°C, 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> =90°C 16	A
I <sub>TSM</sub>	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms 160	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 60	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°C 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°C 4	A
P <sub>G(AV)</sub>	平均门极耗散功率 Average gate power dissipation	T <sub>j</sub> =125°C 1	W
T <sub>stg</sub>	贮存结温范围 Storage junction temperature range	-40~+150	°C
T <sub>j</sub>	工作结温范围 Operating junction temperature range	-40~+125	°C

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

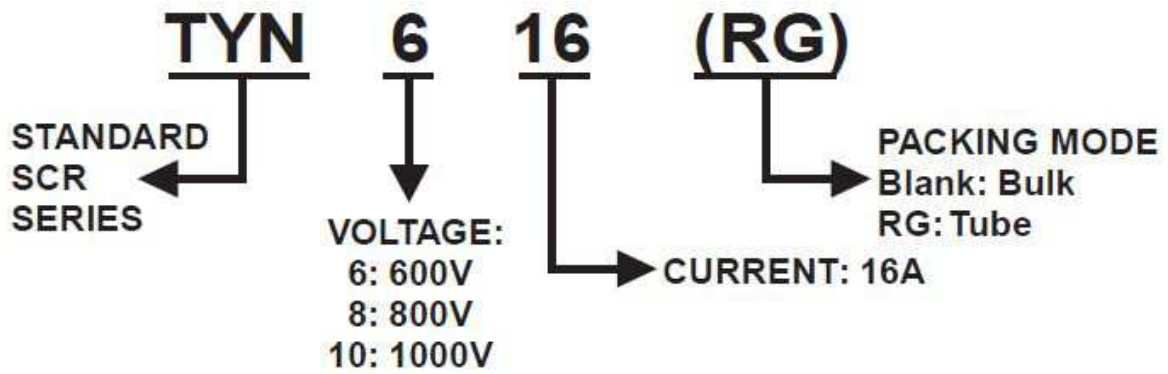
(T<sub>j</sub>=25°C, unless otherwise specified)

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>	-	-	15	mA	V <sub>D</sub> =12V, I <sub>T</sub> =0.1A
触发电压 Gate trigger voltage	V <sub>GT</sub>	-	-	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
电压上升率 Rise of off- state voltage	dv/dt	50	-	-	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> =24A
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>	-	-	2	mA	V <sub>RRM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125°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)	1.3	°C/W
Rth(j-a)	Junction to ambient	60	°C/W

## ORDERING INFORMATION



## 特征曲线 ELECTRICAL CHARACTERISTICS (CURVES)

图1 最大耗散功率与平均通态电流关系 Fig.1.Maximum Power Dissipation Versus Average On-state Current

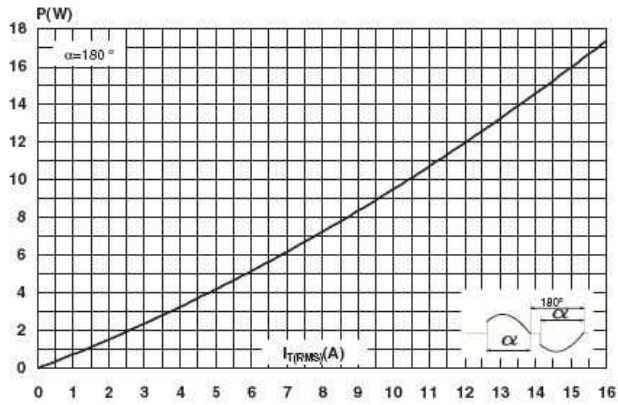


图2 RMS通态电流与Tc温度关系 Fig.2. RMS On-state Current Versus TL

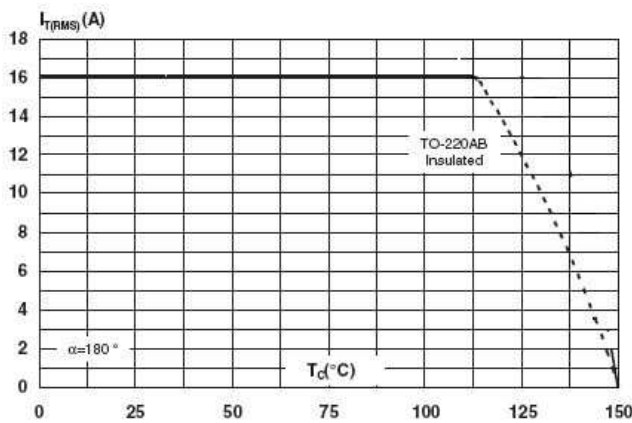


图3 通态特性 Fig.3.On-State Characteristics

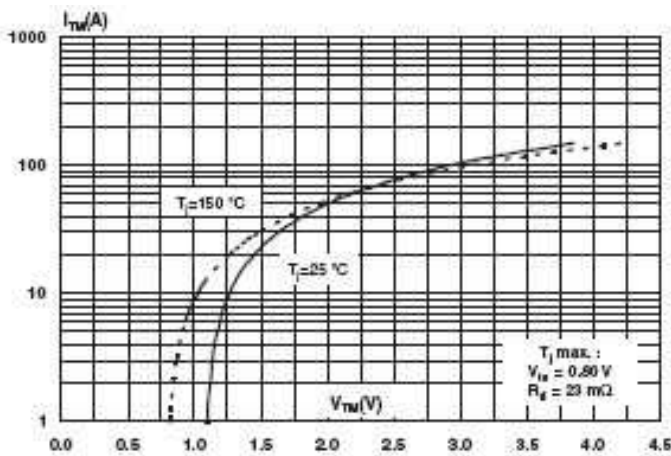


图4 通态浪涌峰值电流与周期数关系 Fig.4.Surge Peak On-state Current Versus Number Cycles

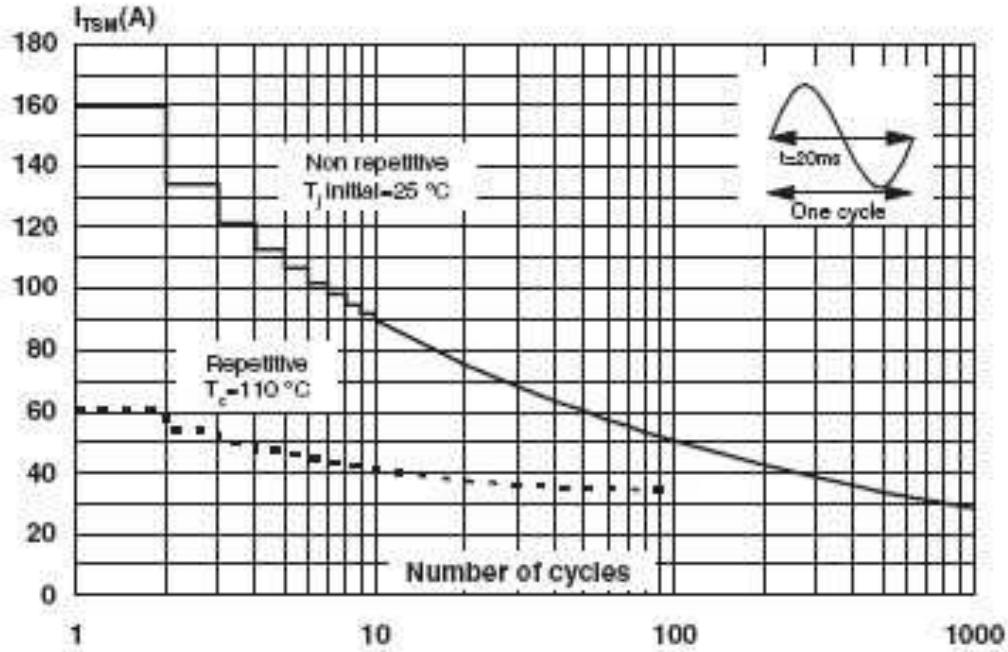
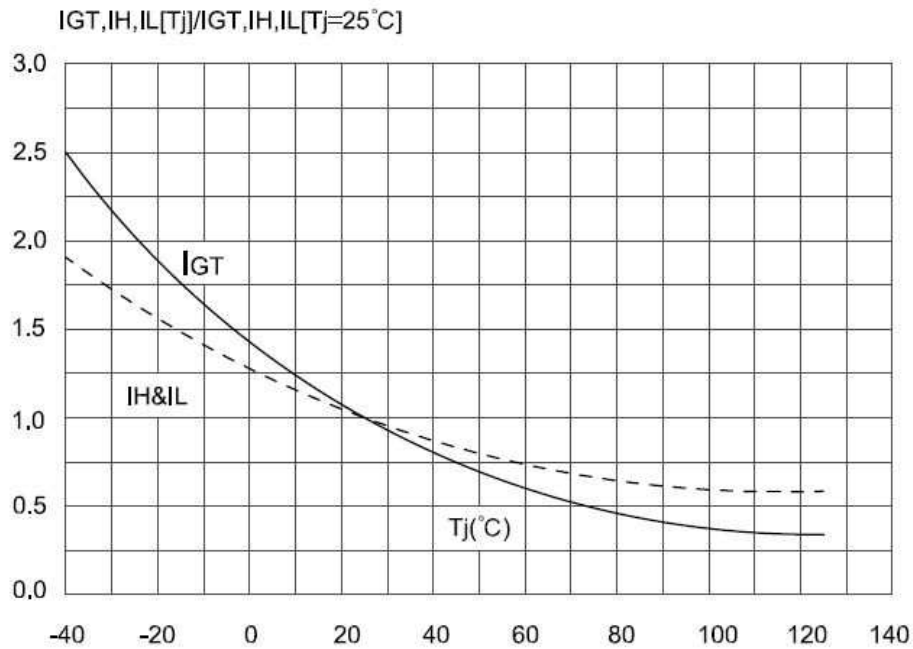


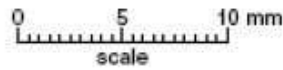
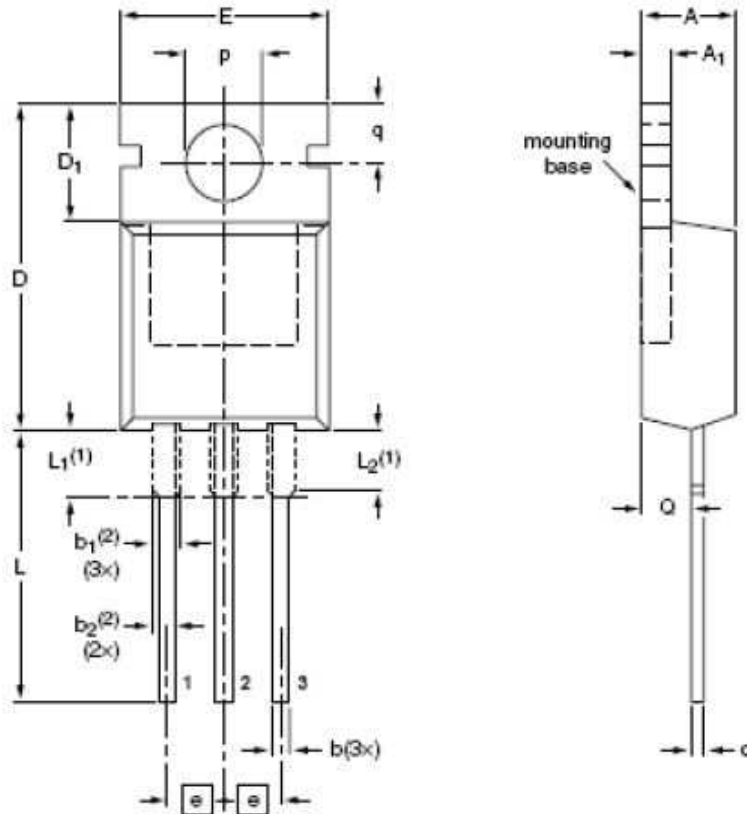
图5  $I_{GT}$ 、 $I_H$ 、 $I_L$ 相对值（相对于25°C）与结温关系

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



**封装尺寸 PACKAGE MECHANICAL DATA**

**TO-220**



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub>	b	b <sub>1</sub> <sup>(2)</sup>	b <sub>2</sub> <sup>(2)</sup>	c	D	D <sub>1</sub>	E	e	L	L <sub>1</sub> <sup>(1)</sup>	L <sub>2</sub> <sup>(1)</sup> max.	p	q	Q
mm	4.7	1.40	0.9	1.6	1.3	0.7	16.0	6.6	10.3		15.0	3.30		3.8	3.0	2.6
	4.1	1.25	0.6	1.0	1.0	0.4	15.2	5.9	9.7	2.54	12.8	2.79	3.0	3.5	2.7	2.2

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