

BTA12		
	双向可控硅 TRIAC	版本号 201603-A

产品概述 GENERAL DESCRIPTION

BTA12 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。

BTA12 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	单位 Unit	BTA12
$I_{T(RMS)}$	A	12
V_{DRM}/V_{RRM}	V	600&800
$I_{GT(III)}$	mA	5/10/35/50

产品特性

- dv/dt高
- 通态压降低
- Rohs环保产品

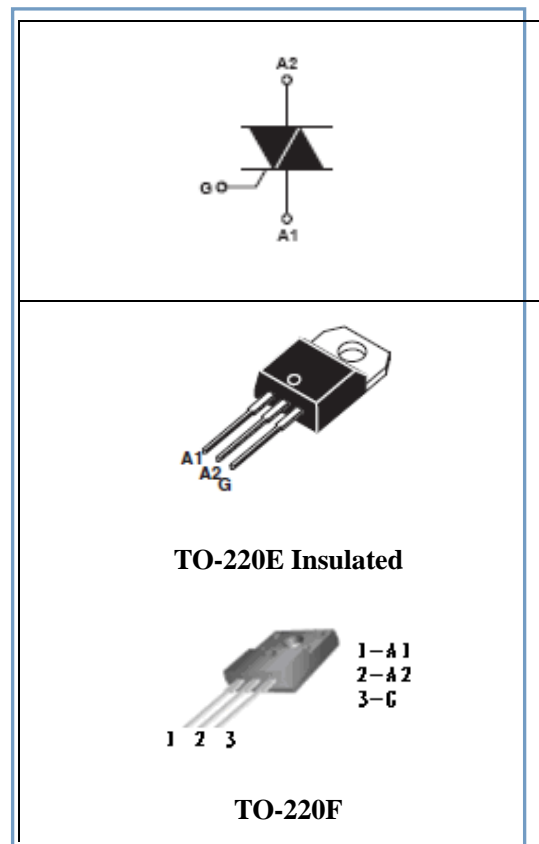
FEATURES

- 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℃) ABSOLUTE RATINGS

(T_j=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)	I ² PAK/D ² PAK/TO-220A T _C =105℃	12	A
		B TO-220AB INS T _C =90℃		
I _{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state	F=50Hz, t=20ms	120	A
I ² t	I ² t 耗散值 I ² t value for fusing	T _p =10ms	78	A ² s
di/dt	通态电流上升值 Critical rate of rise of on-state current	F=120Hz, T _j =125℃	50	A/μs
I _{GM}	门极峰值电流 Peak gate current	TP=20μs, T _j =125℃	4	A
P _{G(AV)}	平均门极耗散功率 Average gate power dissipation	T _j =125℃	1	W
T _{stg}	贮存结温范围 Storage junction temperature range		-40~+150	℃
T _j	工作结温范围 Operating junction temperature range		-40~+150	℃

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

(T_j=25℃, unless otherwise specified)

3 quadrants

参数 Parameter	符号 Symbol		规范值 Value				单位 Unit	测试条件 Test Conditions
			TW	SW	CW	BW		
触发电流 Gate trigger current	I _{GT}	I ~ III	5	10	35	50	mA	V _D =12V, I _T =0.1A
触发电压 Gate trigger voltage			V _{GT}	1.5				V
维持电流 Holding current	I _H		20	35	80	100	mA	V _D =12V, I _T =0.1A
擎住电流 Latching current	I _L		40	60	100	120	mA	V _D =12V, I _T =0.1A
电压上升率 Rise of off- state voltage	dv/dt		20	40	500	1000	V/μS	V _D =67% V _{DRM}
通态压降 Peak on-state voltage	V _{TM}		1.6				V	I _T =17A
断态漏电流 Peak repetitive forward blocking current	I _{DRM}		5				μA	V _{RRM} =V _{DRM} , T _j =25℃
	I _{RRM}		1				mA	V _{RRM} =V _{DRM} , T _j =125℃

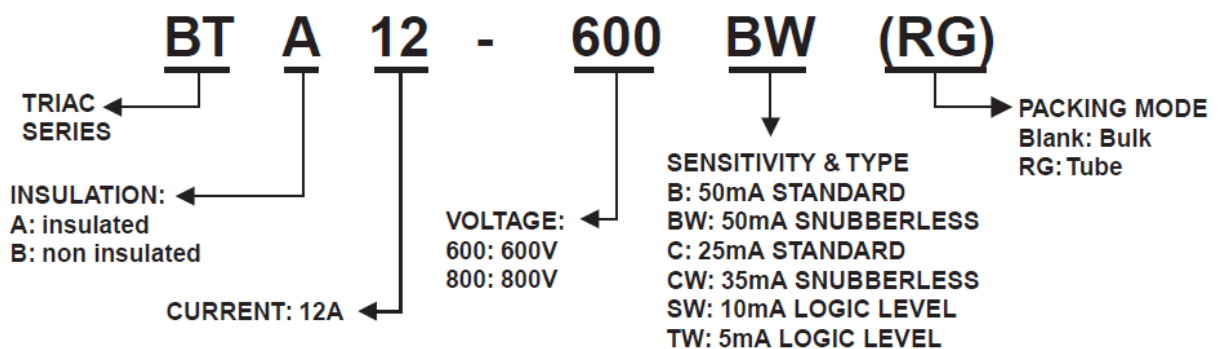
4 quadrants

参数 Parameter	符号 Symbol		规范值 Value		单位 Unit	测试条件 Test Conditions
			C	B		
触发电流 Gate trigger current	I _{GT}	I ~ III	25	50	mA	V _D =12V, I _T =0.1A
		IV	50	100		
触发电压 Gate trigger voltage	V _{GT}	I ~ III	1.5		V	V _D =12V, I _T =0.1A
		IV				
维持电流 Holding current	I _H		35	60	mA	V _D =12V, I _T =0.1A
擎住电流 Latching current	I _L	I-III-IV	45	70	mA	V _D =12V, I _T =0.1A
		II	80	100		
电压上升率 Rise of off- state voltage	dv/dt		200	400	V/μS	V _D =67% V _{DRM}
通态压降 Peak on-state voltage	V _{TM}		1.6		V	I _T =17A
断态漏电流 Peak repetitive forward blocking current	I _{DRM}		5		μA	V _{RRM} =V _{DRM} , T _j = 25 °C
	I _{RRM}		1		mA	V _{RRM} =V _{DRM} , T _j =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)	TO-220E	2.7	°C/W
		TO-220F	3.3	
Rth(j-a)	Junction to ambient	TO-220E	60	°C/W
		TO-220F		

ORDERING INFORMATION



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

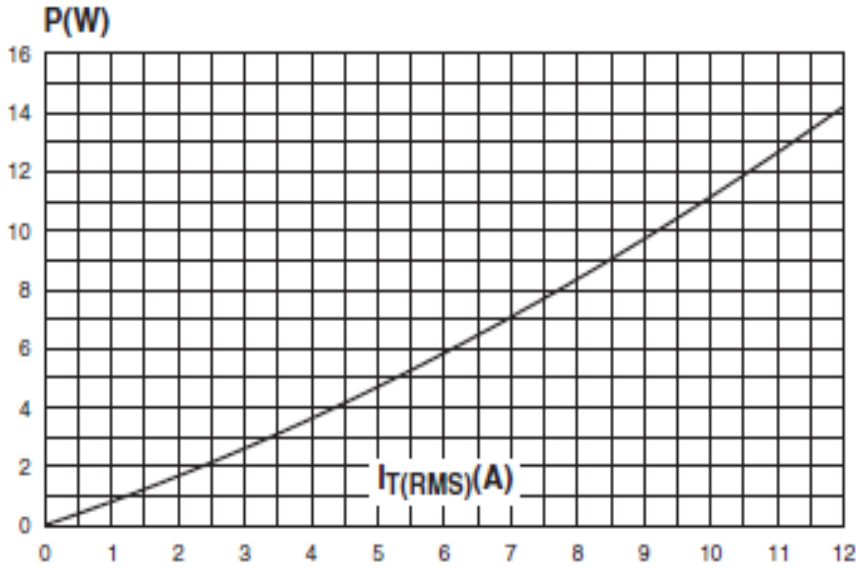


图2 RMS通态电流与Tc温度关系

Fig.2. RMS On-state Current Versus TL on-state current

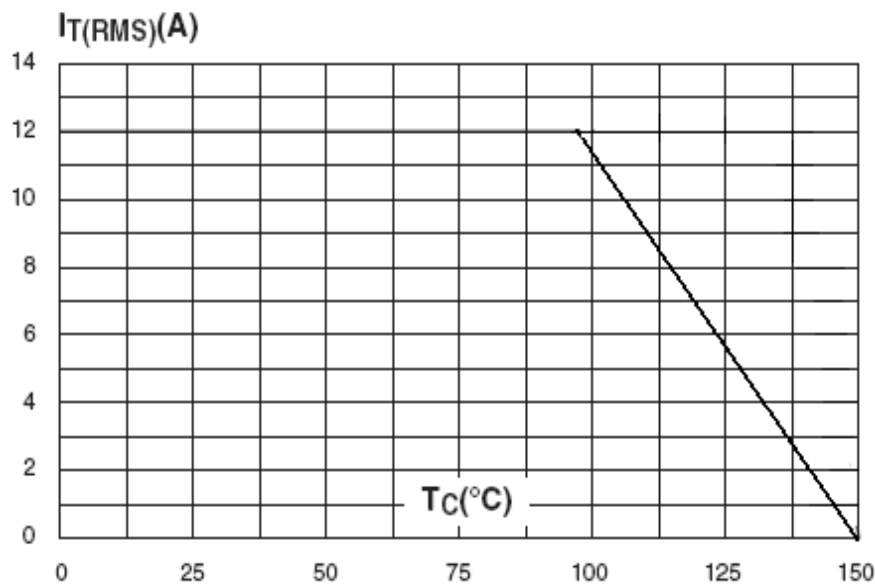


图3 通态特性

Fig.3.On-State Characteristics

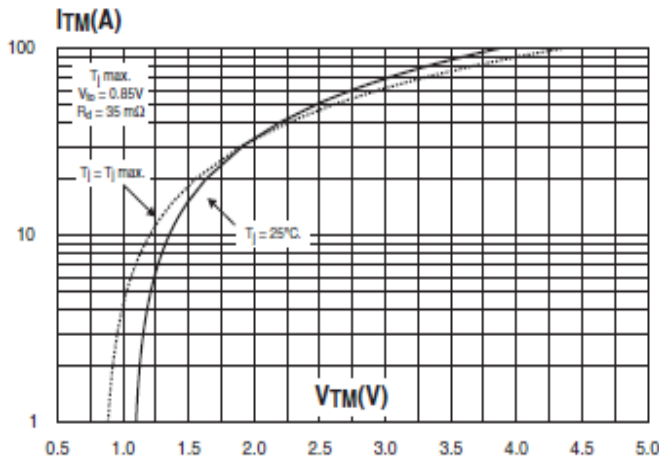


图4 通态浪涌峰值电流与周期数关系

Fig.4.Surge Peak On-state Current Versus Number Cycles

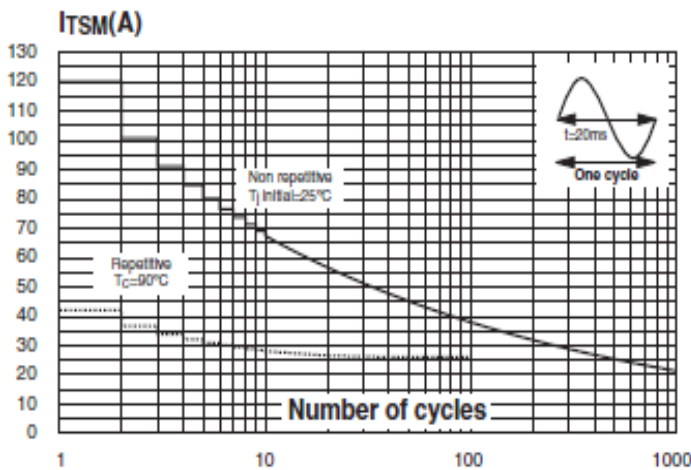
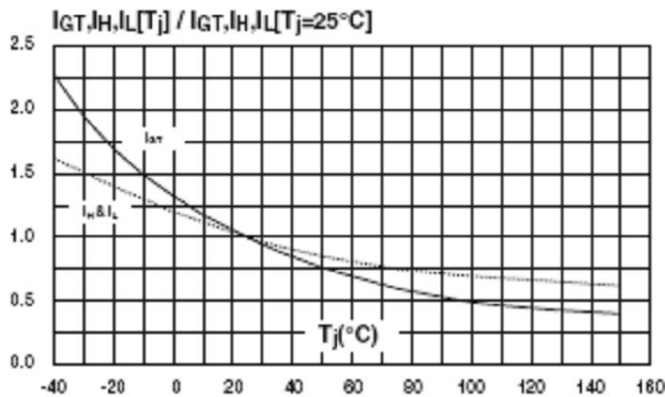


图5 I_{GT} 、 I_H 、 I_L 相对值（相对于 25°C ）与结温关系

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



TO-220E Insulated

	Dimensions						
	Ref.	Millimeters			Inches		
		Min.	Typ.	Max.	Min.	Typ.	Max.
	A	15.20		15.90	0.598		0.625
	a1		3.75			0.147	
	a2	13.00		14.00	0.511		0.551
	B	10.00		10.40	0.393		0.409
	b1	0.61		0.88	0.024		0.034
	b2	1.23		1.32	0.048		0.051
	C	4.40		4.60	0.173		0.181
	c1	0.40		0.70	0.015		0.027
	c2	2.40		2.72	0.094		0.107
	e	2.40		2.70	0.094		0.106
	F	6.20		6.70	0.244		0.264
	ØI	3.70		3.85	0.146		0.151
	I4	15.80	16.40	16.80	0.622	0.646	0.661
	L	2.65		2.95	0.104		0.116
	I2	1.14		1.70	0.044		0.066
	I3	1.14		1.70	0.044		0.066
	M		2.60			0.102	

Information furnished is believed to be accurate and reliable. However, Jiangsu Dongchen Electronics Technology CO.,LTD assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Jiangsu Dongchen Electronics Technology CO.,LTD. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. Jiangsu Dongchen Electronics Technology CO.,LTD products are not authorized for use as critical components in life support devices or systems without express written approval of Jiangsu Dongchen Electronics Technology CO.,LTD.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Triacs](#) category:

Click to view products by [Dongchen](#) manufacturer:

Other Similar products are found below :

[T2035H-6G](#) [BT137-600-0Q](#) [Z0409MF0AA2](#) [Z0109NA 2AL2](#) [ACST1635T-8FP](#) [BCR20RM-30LA#B00](#) [CMA60MT1600NHR](#) [NTE5611](#)
[NTE5612](#) [NTE5613](#) [NTE5621](#) [NTE5623](#) [NTE5629](#) [NTE5638-08](#) [NTE5688](#) [NTE5689](#) [NTE5690](#) [T1235T-8I](#) [BTA312-600CT.127](#) [T1210T-](#)
[8G-TR](#) [Z0109NN0,135](#) [T2535T-8I](#) [T2535T-8T](#) [TN4050-12WL](#) [MAC4DLM-1G](#) [BT137-600E,127](#) [BT137X-600D](#) [BT148W-600R,115](#)
[BT258-500R,127](#) [BTA08-800BW3G](#) [BTA140-800,127](#) [BTA30-600CW3G](#) [BTA30-600CW3G](#) [BTB08-800BW3G](#) [BTB16-600CW3G](#)
[BTB16-600CW3G](#) [Z0410MF0AA2](#) [Z0109MN,135](#) [T825T-6I](#) [T1635T-6I](#) [T1220T-6I](#) [NTE5638](#) [TYN612MRG](#) [TYN1225RG](#) [TPDV840RG](#)
[ACST1235-8FP](#) [ACS302-6T3-TR](#) [BT134-600D,127](#) [BT134-600G,127](#) [BT136X-600E,127](#)