

 <b>D. G. M. E.</b>	BTA/BTB41C/B	版本号: V1.0
	双向可控硅 (四项限) Triacs (4quadrants)	

## 产品概述      General Description

BTA/BTB41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, 四象限触发, 可靠性高, 适合应用于调光、控温、马达控制。

**BTA/BTB41** Triacs is fabricated using two-side diffusion processes, the junction termination areas are passivated with glass. Thanks to highly reliability, the Triacs series is suitable for domestic lighting, heating and motor speed controllers.

## 产品特点      MAIN FEATURES

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>● 表面玻璃钝化, 可靠性高</li> <li>● 绝缘电压2500V UL文号E258362</li> <li>● 通态压降低</li> <li>● Rohs环保产品</li> </ul> | <ul style="list-style-type: none"> <li>● Glass-Passivated Surface For Reliability</li> <li>● Viso: 2500V UL FILE NO.: E258362</li> <li>● Low on-state voltage</li> <li>● Rohs Products</li> </ul> |
|--|---|

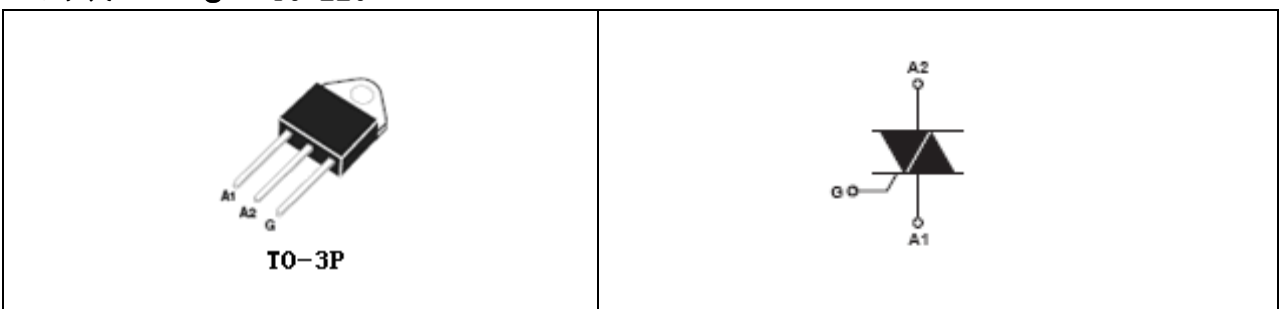
## 应用领域      Applications

主要应用于调温控制, 调光控制, 调速控制...等。  
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)	40	A
$V_{DRM}/V_{RRM}$	600	V
$I_{GT}$	50	mA

### 封装 Package: T0-220



## 极限值(除非另有规定, $T_a=25^{\circ}\text{C}$ ) ABSOLUTE RATINGS

( $T_j=25^{\circ}\text{C}$ , unless otherwise specified)

参数 Parameter	符号 symbol	数值 Value	单位 Unit
RMS 通态电流 on-state RMS current	$I_{T(RMS)}$	40	A
通态峰值浪涌电流 Non repetitive surge peak on-state current	$I_{TSM}$	400	A
$I^2t$ 耗散值 $I^2t$ for fusing	$I^2t$	800	$\text{A}^2\text{s}$
电流上升率 Repetitive rate of rise of on-state current after triggering	di/dt	50	$\text{A}/\mu\text{s}$
门极峰值电流 Peak gate current	$I_{GM}$	8	A
平均门极耗散功率 Average gate power	$P_{G(AV)}$	1.0	W
贮存结温范围 Storage temperature	$T_{stg}$	-40+150	$^{\circ}\text{C}$
工作结温范围 Operation junction temperature	$T_j$	-40+125	$^{\circ}\text{C}$

## 电参数(除非另有规定, $T_a=25^{\circ}\text{C}$ ) ABSOLUTE RATINGS

( $T_j=25^{\circ}\text{C}$ , unless otherwise specified)

参数名称 Parameter	符号 Symbol	测试条件 Test Conditions	规范值 Value		单位 Unit	
			C	B		
触发电流 Gate trigger current	$I_{GT}$	$V_D=12\text{V}$ , $I_T=0.01\text{A}$	I - II - III	35	50	mA
			IV	50	100	
触发电压 Gate trigger voltage	$V_{GT}$	$V_D=12\text{V}$ , $I_T=0.01\text{A}$	I - II - III	1.5		V
			IV			
维持电流 Holding current	$I_H$	$I_T=500\text{mA}$		40	50	mA
电压上升率 Rise of off- state voltage	dv/dt	$V_D=67\%V_{DRM}$	MIN	200	400	$\text{V}/\mu\text{s}$
通态压降 Peak on-state voltage	$V_{TM}$	$I_T=60\text{A}$ , $T_P=380\mu\text{s}$	MAX	1.55		V
断态漏电流 For Peak Repetitive ward Blocking Current	$I_{DRM}$	$V_D=V_{DRM}$ , $T_j=125^{\circ}\text{C}$	MAX	5.0		mA

## 热特性 THERMAL RESISTANCES

参数 Parameter	符号 symbol	数值 Value	单位 Unit
Junction to case(AC)	$R_{th(j-lead)}$	0.9	$^{\circ}\text{C}/\text{W}$
Junction to ambient	$R_{th(j-a)}$	50	$^{\circ}\text{C}/\text{W}$

典型特性曲线 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

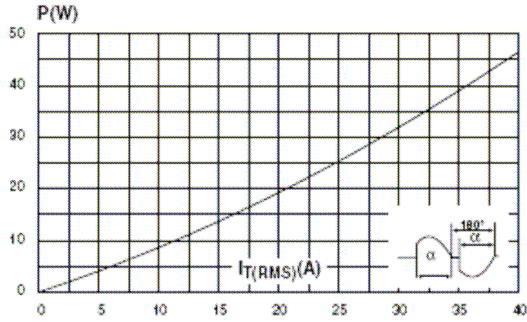


图2 平均通态电流与Tc温度关系  
Fig.2. On-state Current Versus TL

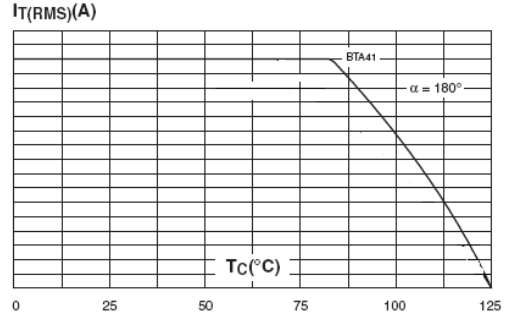


图3 通态特性  
Fig.3.On-State Characteristics

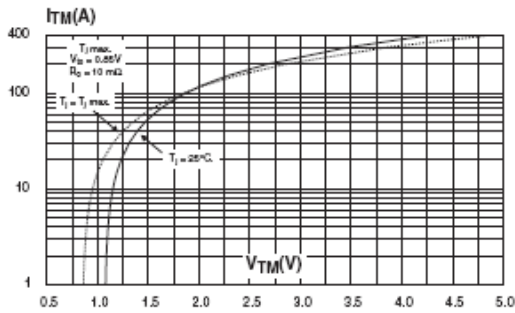


图4 通态浪涌峰值电流与周期数关系  
Fig.4.Surge Peak On-state Current Versus Number Cycles

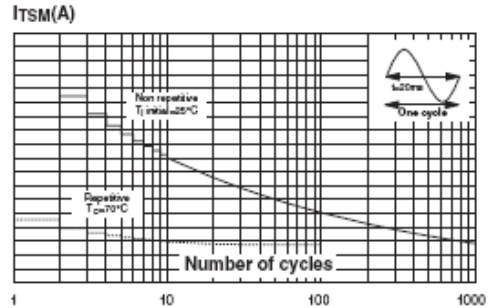
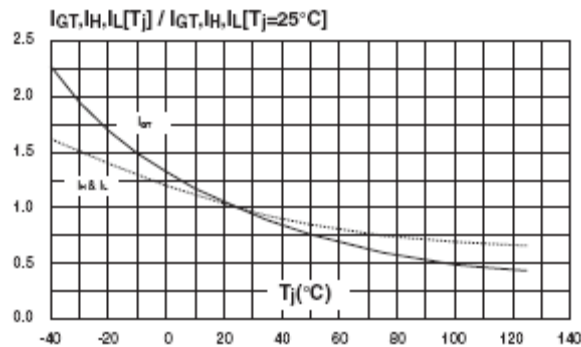
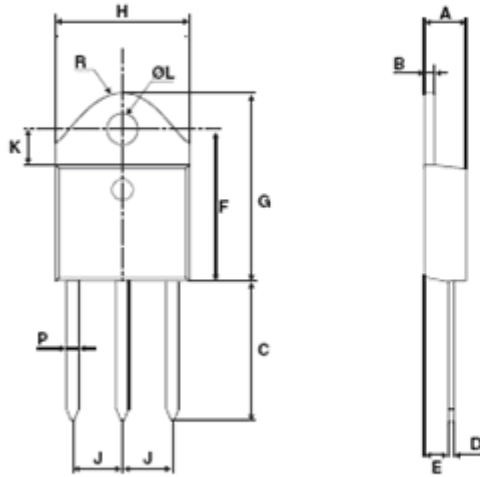


图5  $I_{GT}$ 、 $I_H$ 、 $I_L$ 相对值（相对于25°C）与结温关系  
Fig.5.Relative Variation Of Gate Trigger Current , Holding Current And Latching Current Versus Junction Temperature (Typical Value)



## TO-3P外形图 Package Mechanical Data



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.4		4.6	0.173		0.181
B	1.45		1.55	0.057		0.061
C	14.35		15.60	0.565		0.614
D	0.4		0.7	0.020		0.028
E	2.7		2.9	0.106		0.114
F	15.8		16.5	0.622		0.650
G	20.4		21.1	0.815		0.831
H	15.1		15.5	0.594		0.610
J	5.4		5.65	0.213		0.222
K	3.4		3.65	0.134		0.144
ØL	4.08		4.17	0.161		0.164
P	1.20		1.40	0.047		0.055
R		4.60			0.181	