

 D. G. M. E.	BTA/BTB41CW/BW	版本号: V1.0
	双向可控硅(三项限) Triacs (3quadrants)	

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, 三象限触发, 抗干扰能力强, 可靠性高。

BTA/BTB41 Triacs is fabricated using two-side 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.

产品特点 MAIN FEATURES

- | | |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ● 表面玻璃钝化, 可靠性高 ● dv/dt高 ● 通态压降低 ● Rohs环保产品 | <ul style="list-style-type: none"> ● Glass-Passivated Surface For Reliability ● highly dv/dt ● Low on-state voltage ● Rohs Products |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

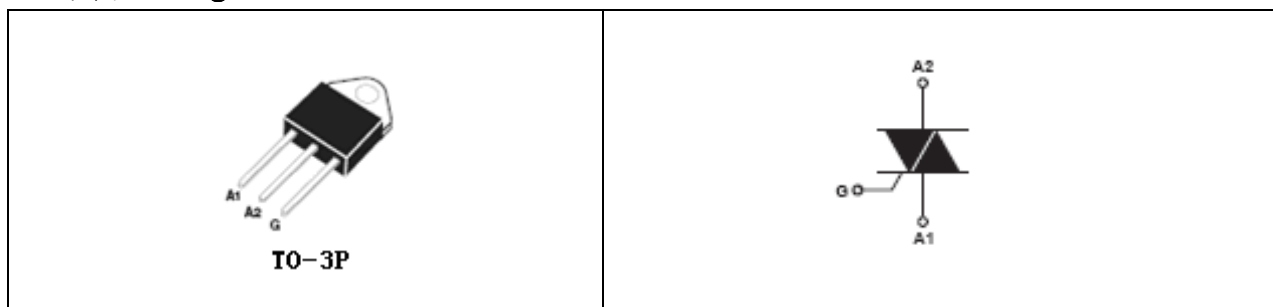
应用领域 Applications

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	A^2s
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	Tstg	-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		
			CW	BW			
触发电流 Gate trigger current	I_{GT}	$V_D=12\text{V}$, $I_T=0.01\text{A}$	I - II - III	MAX	35	50	mA
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
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	400	1000	$\text{V}/\mu\text{s}$
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

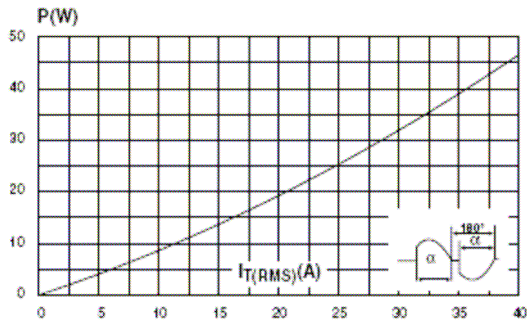


图2 平均通态电流与Tc温度关系
Fig.2. On-state Current Versus TL

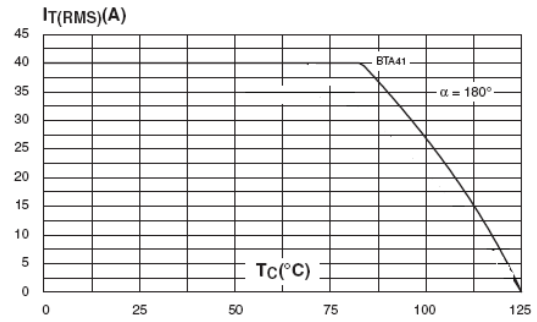


图3 通态特性
Fig.3.On-State Characteristics

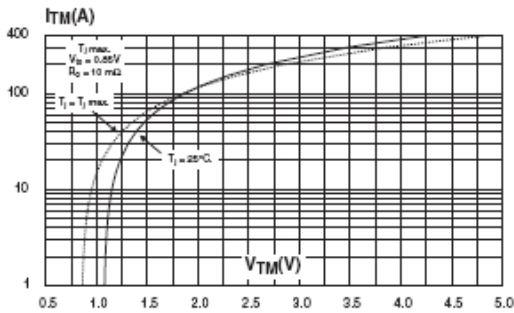


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles

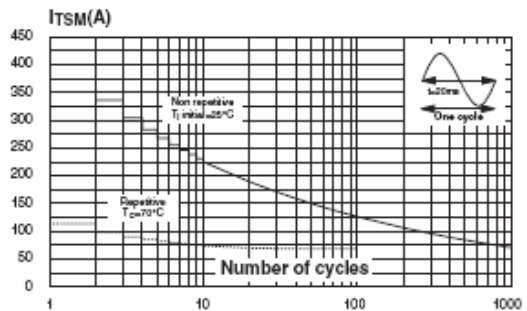
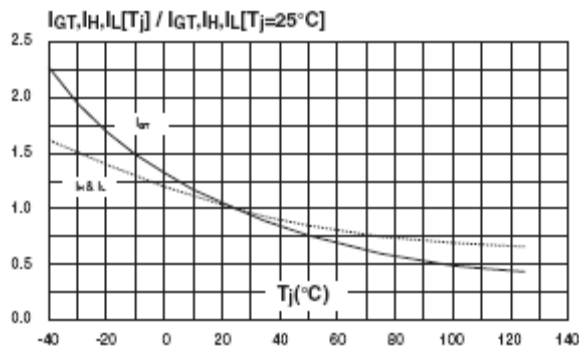
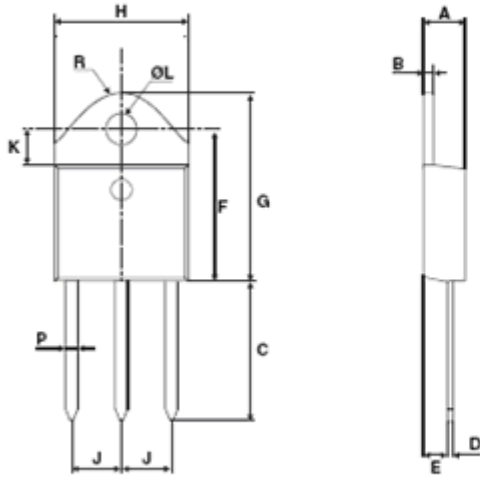


图5 I_{GT} 、 I_H 、 I_L 相对值（相对于25°C）与结温关系
Fig.5.Relative Variation Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



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	