D.G.M.E.	BTA/BTB20CW/BW	版本号：V1.0
	双向可控硅(三项限) Triacs（3quadrants）	

产品概述 General Description

BTA/BTB20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/BTB20 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.

产品特点 MAIN FEATURES

- ●表面玻璃钝化，可靠性高 ●Glass-Passivated Surface For Reliability
- ● dv/dt高 ●highly dv/dt
- ●通态压降低 ●Low on-state voltage
- ●Rohs环保产品 ●Rohs Products

应用领域 Applications

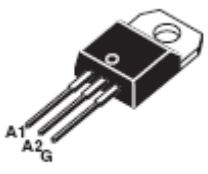
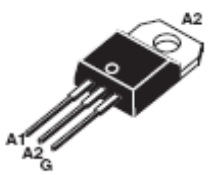
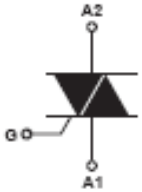
主要应用于调温控制, 调光控制, 调速控制…等。

domestic lighting ,heating and motor speed controllers.

主要参数 MAIN CHARACTERISTICS

参数 Parameter	数值 Value	单位 Unit
$I_{T\ (RMS)}$	20	A
V_{DRM}/V_{RRM}	600	V
I_{GT}	50	mA

封装Package：TO-220

 TO-220AB Insulated	 TO-220AB	

极限值(除非另有规定，T_a=25℃) ABSOLUTE RATINGS

(Tj=25℃,unless otherwise specified)

参数 Parameter		符号 symbol	数值 Value	单位 Unit
RMS 通态电流 on-state RMS current	TO-220ABI$_{ns.}$ T_C=85℃	$I_{T(RMS)}$	20	A
	TO-220AB T_C=100℃			
通态峰值浪涌电流 Non repetitive surge peak on-state current	t=20ms	I_{TSM}	210	A
I^2t 耗散值 I^2t for fusing	T_P=10ms	I^2t	200	A^2s
电流上升率 Repetitive rate of rise of on-state current after triggering	F=120H_Z,Tj=125℃	di/dt	50	A/μs
门极峰值电流 Peak gate current		I_{GM}	4	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	℃
工作结温范围 Operation junction temperature		Tj	-40-+125	℃

电参数(除非另有规定，T_a=25℃) ABSOLUTE RATINGS

(Tj=25℃,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=12V, I_T=0.01A	Ⅰ-Ⅱ-Ⅲ	MAX	35	50	mA
触发电压 Gate trigger voltage	V_{GT}	V_D=12V, I_T=0.01A	Ⅰ-Ⅱ-Ⅲ		1.5		V
维持电流 Holding current	I_H	I_T=500mA			40	50	mA
电压上升率 Rise of off- state voltage	dv/dt	V_D=67%V_{DRM}		MIN	400	1000	V/μS
通态压降 Peak on-state voltage	V_{TM}	I_T=28A		MAX	1.55		V
断态漏电流 For Peak Repetitive ward Blocking Current	I_{DRM}	V_D=V_{DRM}, Tj=125℃		MAX	1.0		mA

热特性 THERMAL RESISTANCES

参数 Parameter	符号 symbol	数值 Value		单位 Unit
Junction to case(AC)	Rth(j-lead)	To-220ABIns.	1.1	℃/W
		TO-220AB	2.0	
Junction to ambient	Rth(j-a)	60		℃/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

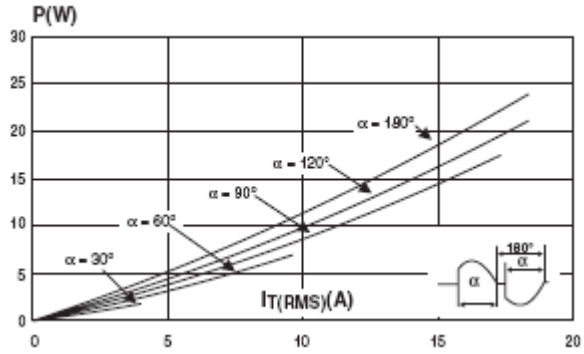


图2 平均通态电流与Tc温度关系
Fig.2. On-state Current Versus TL

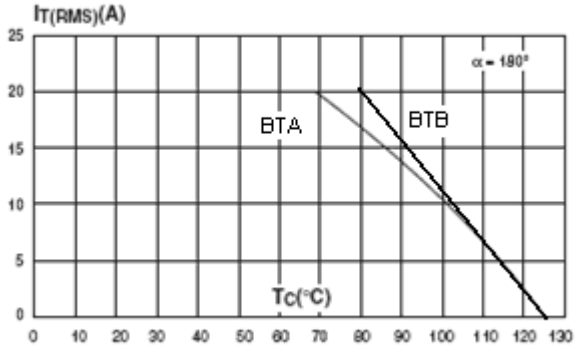


图3 通态特性
Fig.3.On-State Characteristics

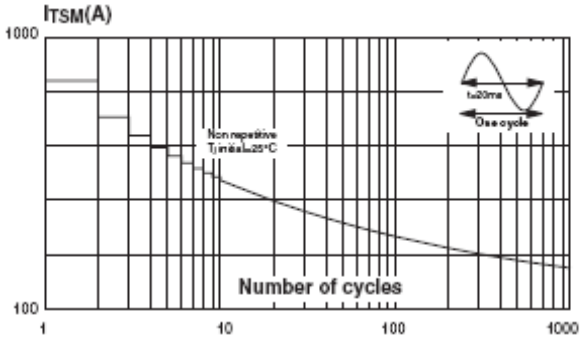


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles

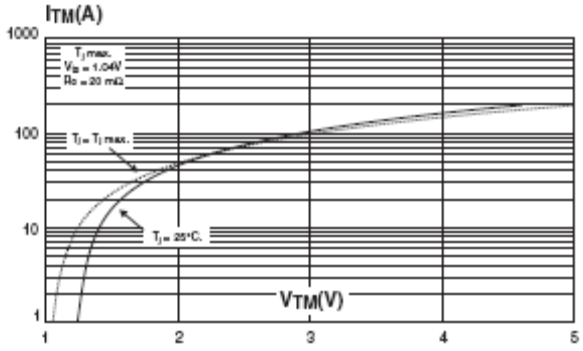
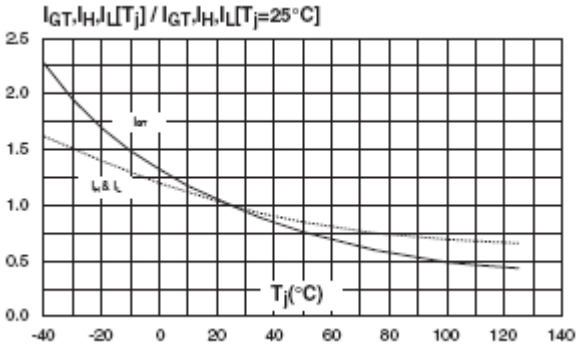
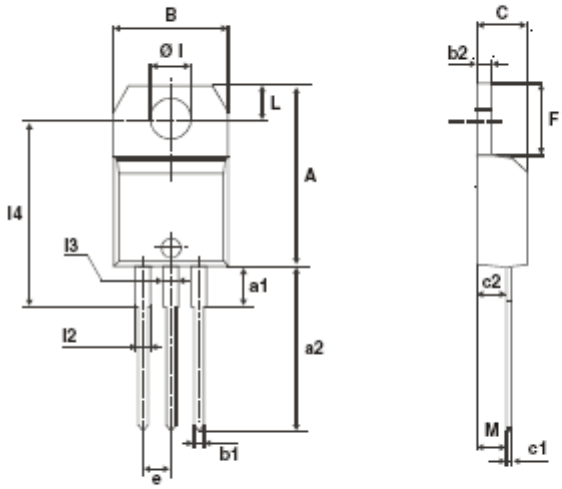


图5 I_{GT}、I_H、I_L相对值（相对于25℃）与结温关系
Fig.5.Relative Variation Of Gate Trigger Current Holding Current And Latching Current Versus Junction Temperature (Typical Value)



TO-220AB外形图 Package Mechanical Data



REF.	DIMENSIONS					
	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	0.4		0.70	0.019		0.027
c2	2.40		2.72	0.094		0.107
e	2.40		2.70	0.094		0.106
F	6.20		6.60	0.244		0.259
ØI	3.75		3.85	0.147		0.151
l4	15.80	16.40	16.80	0.622	0.646	0.661
L	2.65		2.95	0.104		0.116
l2	1.14		1.70	0.044		0.066
l3	1.14		1.70	0.044		0.066
M		2.60			0.102	