

BTA41		
	双向可控硅 TRIAC	版本号 201603-A

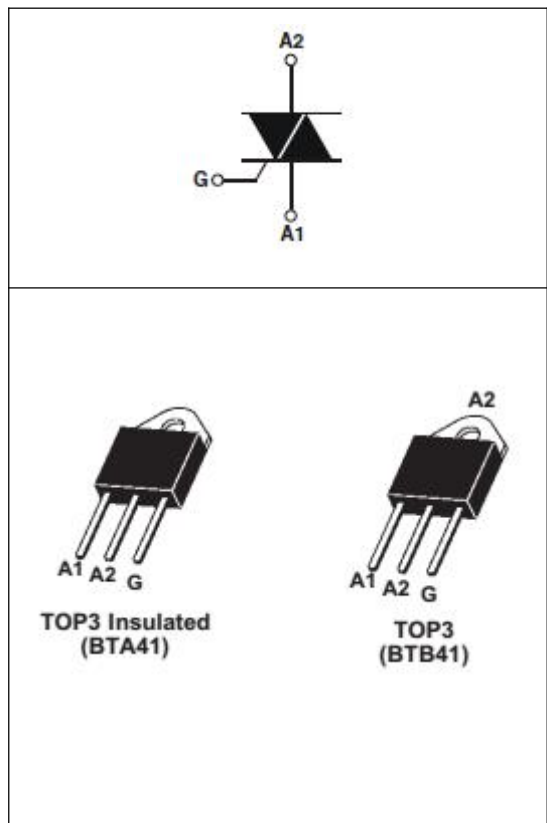
产品概述 GENERAL DESCRIPTION

BTA41 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。

BTA41 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	数值 Value	单位 Unit
$I_{T(RMS)}$	41	A
V_{DRM}/V_{RRM}	600&800	V
I_{GT}	≤ 50	mA



产品特性

FEATURES

- dv/dt高
- 通态压降低
- Rohs环保产品
- 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)	T _C =95℃ 41	A
I _{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms 400	A
I ² t	I ² t 耗散值 I ² t value for fusing	T _p =10ms 800	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	T _p =20μs, T _j =125℃ 8	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~+125	℃

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

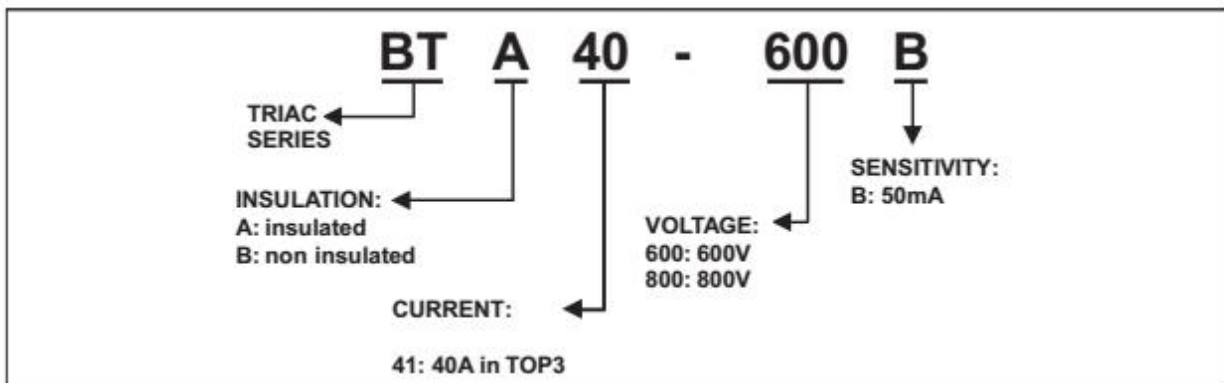
(T_j=25℃, unless otherwise specified)

参数 Parameter	符号 Symbol	规范值 Value	单位 Unit	测试条件 Test Conditions
触发电流 Gate trigger current	I _{GT}	I ~ III	≤50	V _D =12V, I _T =0.1A mA
		IV	≤100	
触发电压 Gate trigger voltage	V _{GT}	I ~ IV	≤1.3	V V _D =12V, I _T =0.1A
维持电流 Holding current	I _H	≤80	mA	V _D =12V, I _T =0.1A
擎住电流 Latching current	I _L	I、III、IV	≤70	V _D =12V, I _T =0.1A mA
		II	≤160	
电压上升率 Rise of off- state voltage	dv/dt	≥500	V/μS	V _D =67%V _{DRM}
通态压降 Peak on-state voltage	V _{TM}	≤1.55	V	I _T =60A
断态漏电流 Peak repetitive forward blocking current	I _{DRM}	≤10	μA	V _{RRM} =V _{DRM} , T _j =25℃
	I _{RRM}	≤5	mA	V _{RRM} =V _{DRM} , T _j =125℃

热特性 THERMAL RESISTANCES

符号 Symbol	参数 Parameter	数值 Value	单位 Unit	
Rth(j-c)	Junction to case(AC)	TOP3 Insulated	0.9	°C/W
		TOP3	1.2	
Rth(j-a)	Junction to ambient	TOP3 Insulated	50	°C/W
		TOP3	50	

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

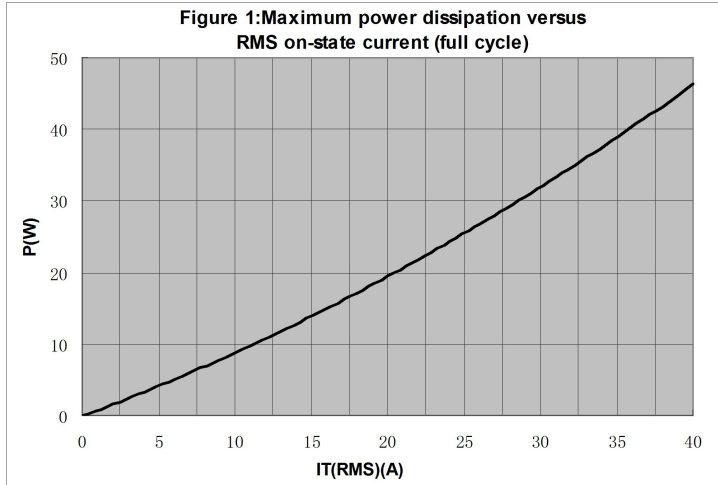


图2 RMS通态电流与Tc温度关系

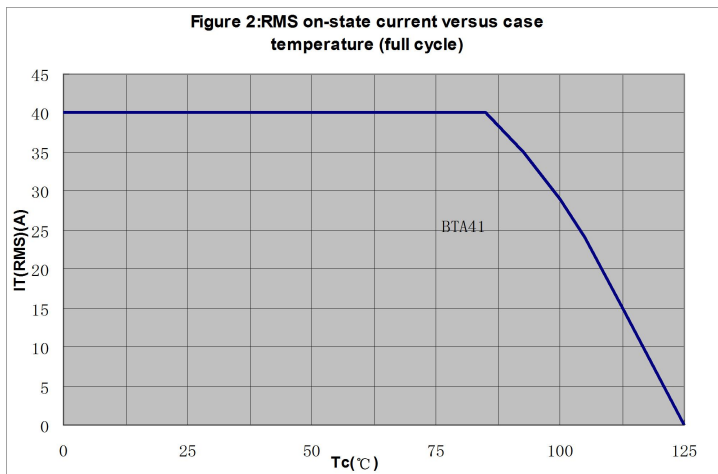


图3 通态特性

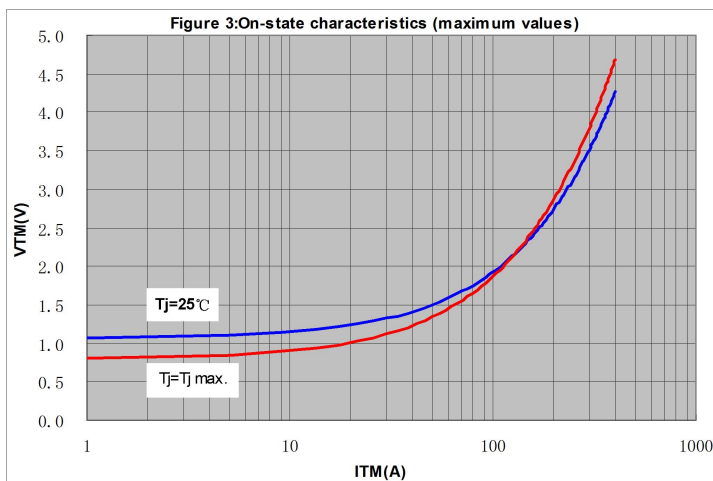


图4 通态浪涌峰值电流与周期数关系

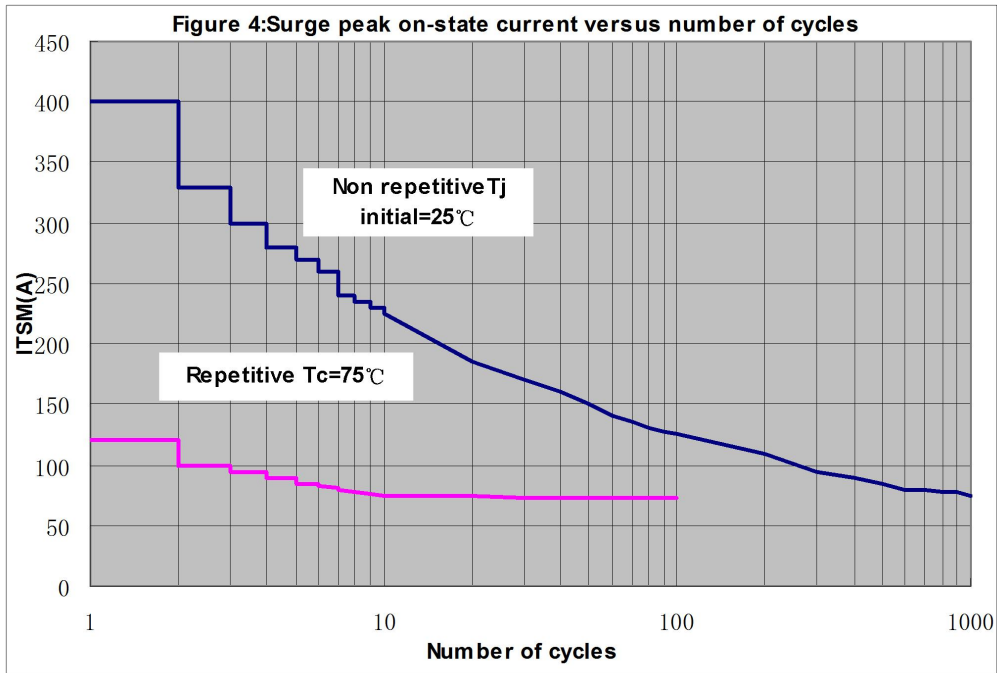
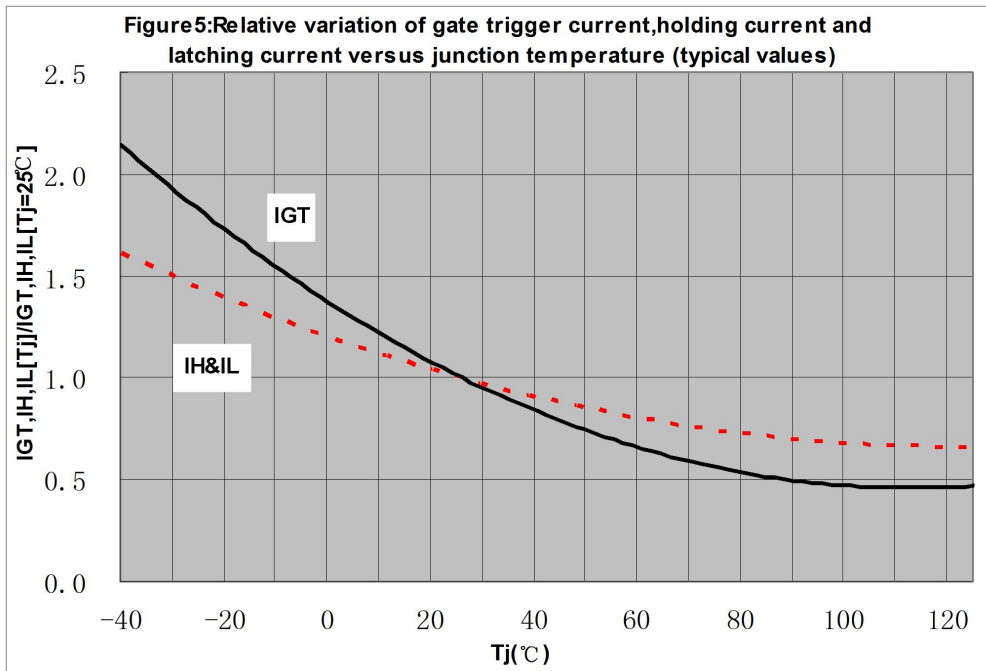


图5 IGT、IH、IL相对值（相对于25°C）与结温关系



封装尺寸 PACKAGE MECHANICAL DATA

TOP3 Insulated AND TOP3

Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	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	0.5	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	20.2	21.1	0.795	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 typ.		0.181 typ.	

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