

BT131-8B

双向可控硅
TRIAC

版本号
201603-A

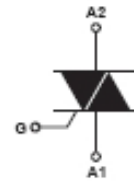
产品概述 GENERAL DESCRIPTION

BT131-8B 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。

BT131-8B 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.

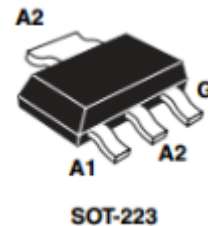
主要参数 MAIN CHARACTERISTICS

参数 Parameter	数值 Value	单位 Unit
$I_{T(RMS)}$	1	A
V_{DRM}/V_{RRM}	800	V
$I_{GT(III)}$	≤ 10	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 =90℃	1 A
I _{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms	12.5 A
I ² t	I ² t 耗散值 I ² t value for fusing	T _p =10ms	0.78 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	T _p =20μs, T _j =125℃	2 A
P _{G(AV)}	平均门极耗散功率 Average gate power dissipation	T _j =125℃	0.5 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	≤10	mA	V _D =12V, I _T =0.1A
触发电压 Gate trigger voltage	V _{GT}	I ~ III	≤1.5	V	V _D =12V, I _T =0.1A
维持电流 Holding current	I _H		≤7	mA	V _D =12V, I _T =0.1A
擎住电流 Latching current	I _L	I、III	≤7	mA	V _D =12V, I _T =0.1A
		II	≤15		
电压上升率 Rise of off- state voltage	dv/dt		≥1000	V/μS	V _D =67% V _{DRM}
通态压降 Peak on-state voltage	V _{TM}		≤1.5	V	I _T =2.0A
断态漏电流 Peak repetitive forward blocking current	I _{DRM}		≤5	μA	V _R =V _{DRM} , T _j =25℃
	I _{RRM}		≤0.5	mA	V _R =V _{DRM} , T _j =125℃

热特性 THERMAL RESISTANCES

符号 Symbol	参数 Parameter	数值 Value	单位 Unit
R _{th(j-c)}	Junction to case(AC)	25	℃/W
R _{th(j-a)}	Junction to ambient	60	℃/W

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 on-state current

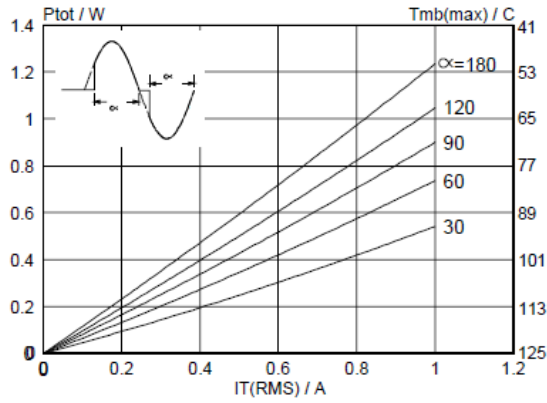


图2 RMS通态电流与Tc温度关系
Fig.2. RMS On-state Current Versus TL

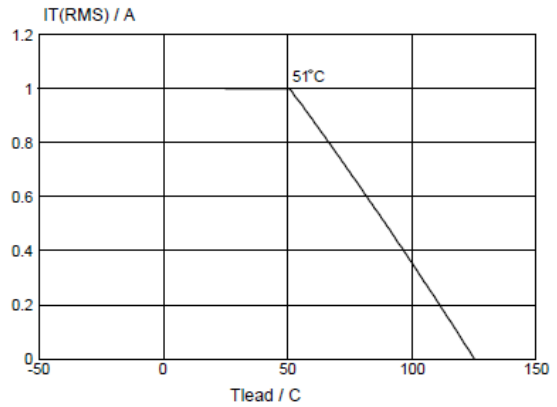


图3 通态特性
Fig.3.On-State Characteristics

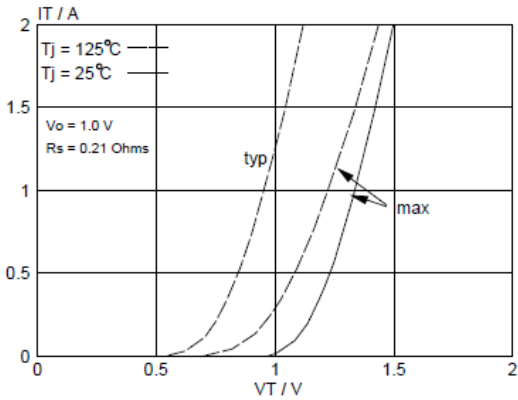


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles

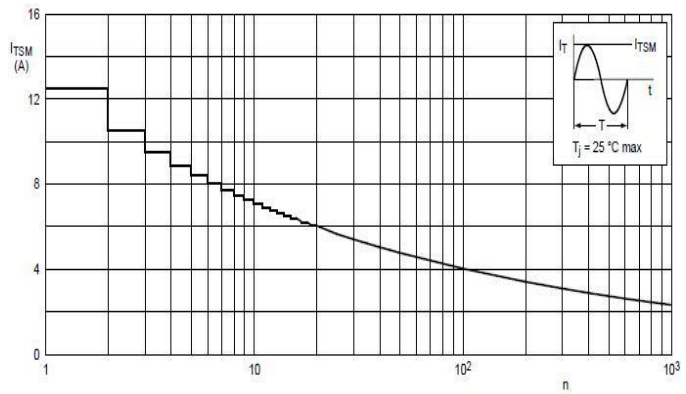
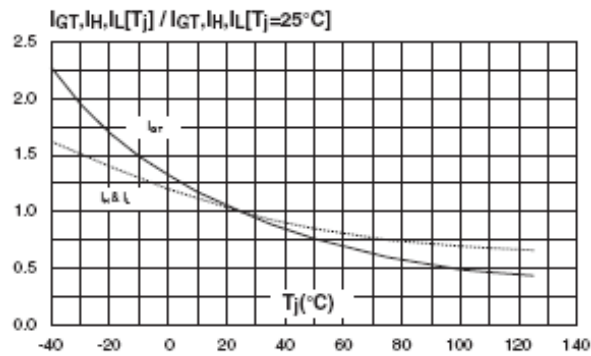
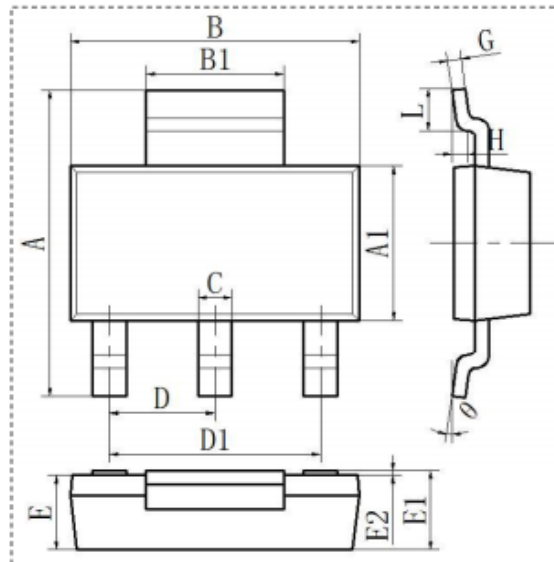


图5 I_{GT}、I_H、I_L相对值（相对于25°C）与结温关系
Fig.5.Relative Variation Of Gate Trigger Current , Holding Current And Latching Current Versus Junction Temperature (Typical Value)



封装尺寸 PACKAGE MECHANICAL DATA

SOT-223



符号	标准	下公差	上公差	下限值	上限值
A	6.95	-0.24	0.24	6.71	7.19
A1	3.5	-0.1	0.1	3.4	3.6
B	6.4	-0.1	0.1	6.2	6.4
B1	3.00	-0.1	0.1	2.9	3.1
C	0.74	-0.08	0.08	0.66	0.82
D	2.3	-0.05	0.05	2.25	2.35
D1	4.6	-0.1	0.1	4.5	4.7
E	1.6	-0.1	0.1	1.5	1.7
E1	1.66	-0.14	0.14	1.52	1.8
E2(测试后)	/	/	/	0	0.1
E2(成型后)	/	/	/	0.02	0.08
G	0.3	-0.05	0.05	0.25	0.35
H	0.25	-0.05	0.05	0.20	0.30
L	0.95	-0.15	0.15	0.8	1.1
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