

产品概述 GENERAL DESCRIPTION

BT136 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。

BT136 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
$I_{T(RMS)}$	4	A
V_{DRM}/V_{RRM}	600&800	V
$I_{GT(III)}$	≤ 10	mA



产品特性

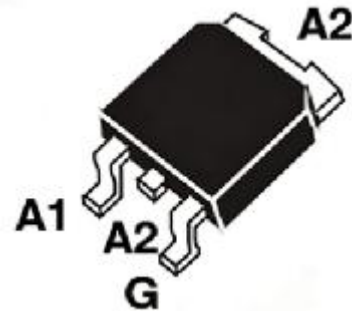
FEATURES

- 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°C) ABSOLUTE RATINGS

 (T_j=25°C, 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 ≤107°C	4 A
I _{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50Hz, t=20ms	25 A
I ² t	I ² t 耗散值 I ² t value for fusing	T _p =10ms	3.1 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°C	50 A/μs
I _{GM}	门极峰值电流 Peak gate current	T _p =20μs, T _j =125°C	2 A
P _{G(AV)}	平均门极耗散功率 Average gate power dissipation	T _j =125°C	0.5 W
T _{stg}	贮存结温范围 Storage junction temperature range		-40+150 °C
T _j	工作结温范围 Operating junction temperature range		-40+125 °C

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

 (T_j=25°C, unless otherwise specified)

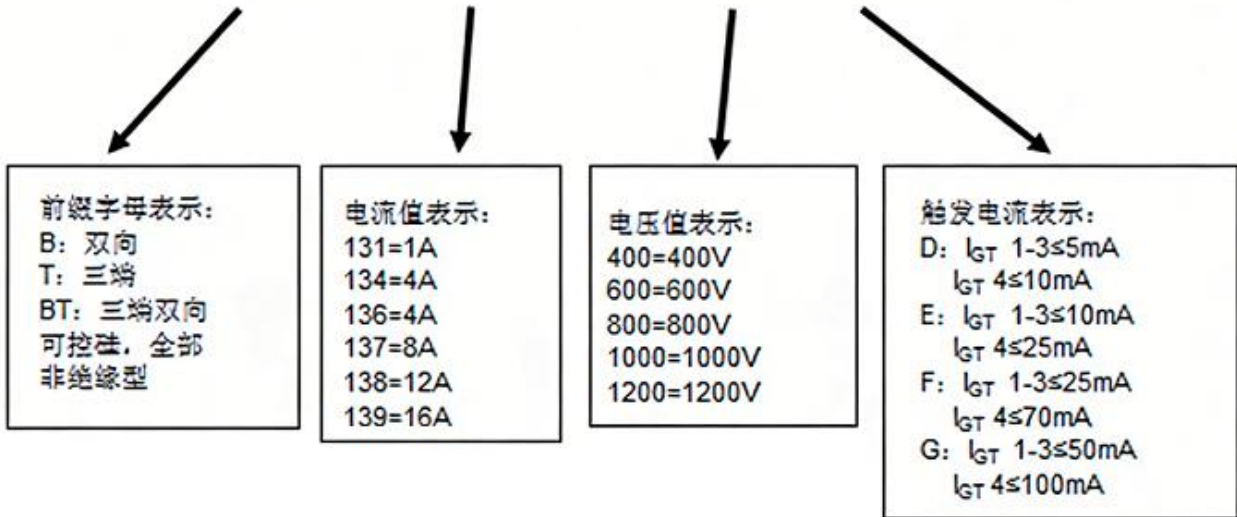
参数 Parameter	符号 Symbol	规范值	Value	单位 Unit	测试条件 Test Conditions	
		D	E			
触发电流 Gate trigger current	I _{GT}	I ~ III	5	10	mA	V _D =12V, I _T =0.1A
		IV	10	25		
触发电压 Gate trigger voltage	V _{GT}	I ~ IV	≤1.5		V	V _D =12V, I _T =0.1A
维持电流 Holding current	I _H		10	20	mA	V _D =12V, I _T =0.1A
擎住电流 Latching current	I _L	I、III	10	15	mA	V _D =12V, I _T =0.1A
		II、IV	15	20		
电压上升率 Rise of off- state voltage	dv/dt		5	50	V/μS	V _D =67% V _{DRM}
通态压降 Peak on-state voltage	V _{TM}		1.7		V	I _T =5.5A
断态漏电流 Peak repetitive forward blocking current	I _{DRM} I _{RRM}		5		μA	V _{RRM} =V _{DRM} , T _j = 25 °C
			0.8		mA	V _{RRM} =V _{DRM} , T _j =125 °C

热特性 THERMAL RESISTANCES

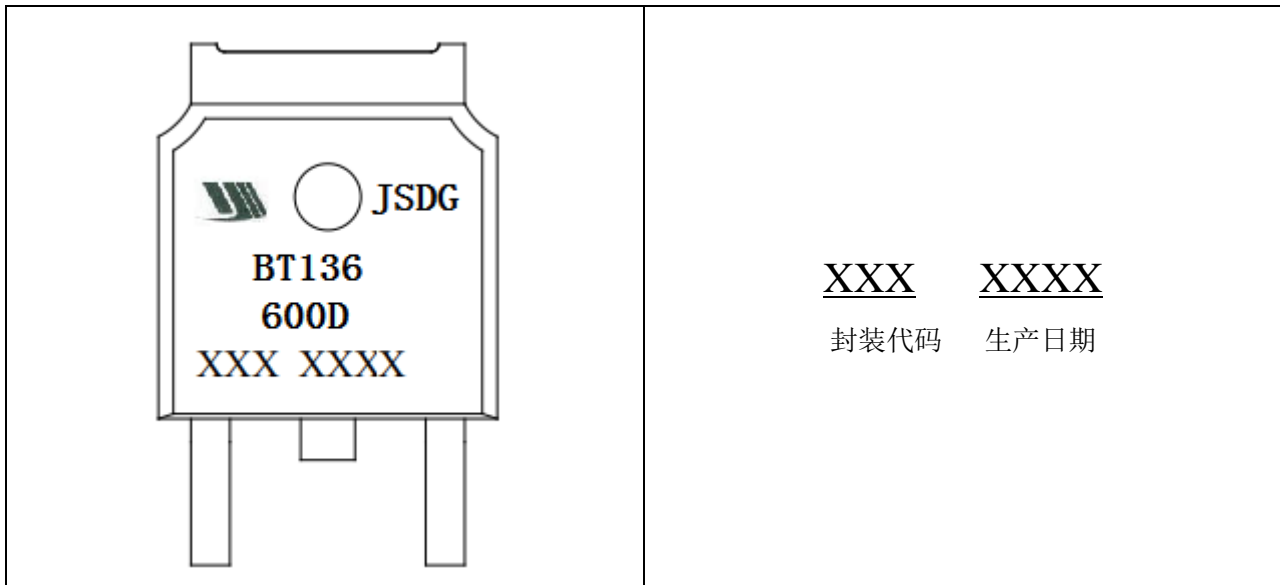
符号 Symbol	参数 Parameter	数值 Value	单位 Unit
Rth(j-c)	Junction to case(AC)	3	°C/W
Rth(j-a)	Junction to ambient	75	°C/W

ORDERING INFORMATION

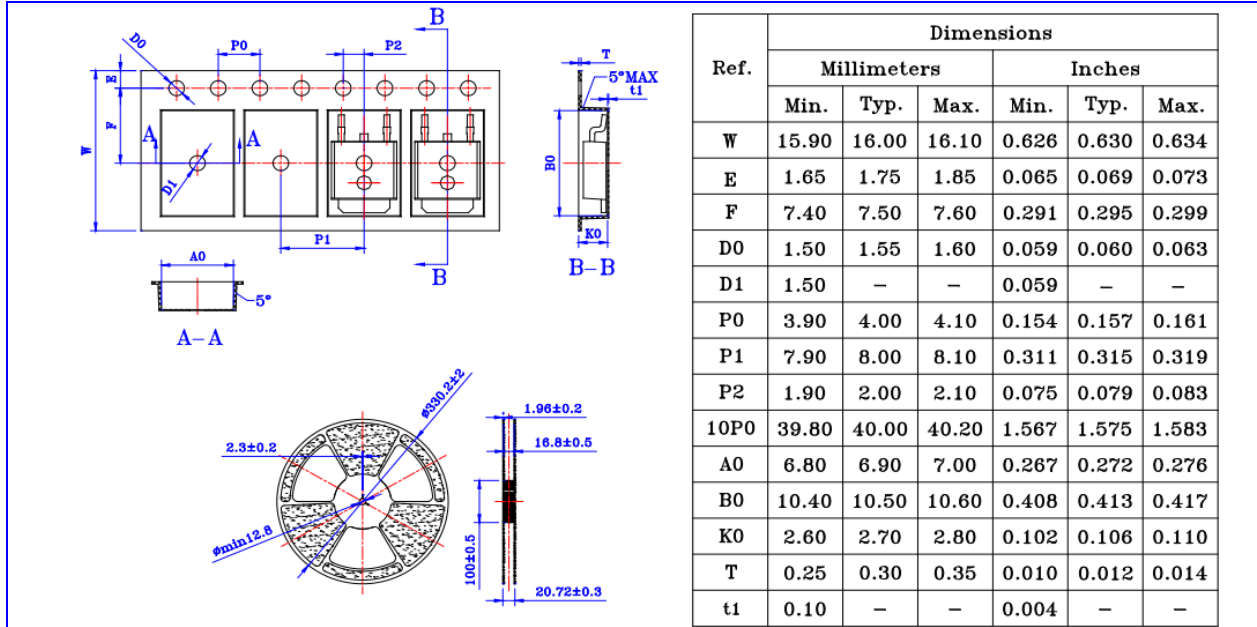
BT 136 - 600 E



印章说明MARKING



配送方式 DELIVERY MODE



PACKAGE	OUTLINE	REEL(PCS)	PER CARTON (PCS)	TAPE&REEL
TO-252	TAPING	2500	25000	13inch

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

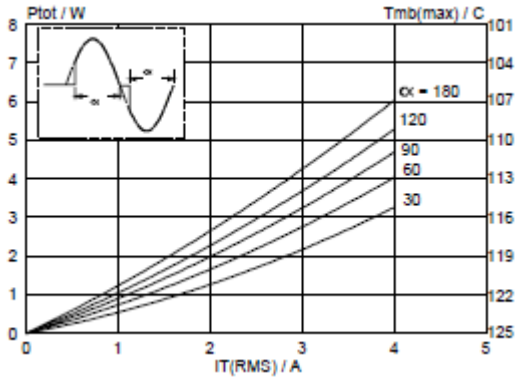


图2 RMS通态电流与Tc温度关系
Fig.2. RMS On-state Current Versus TL

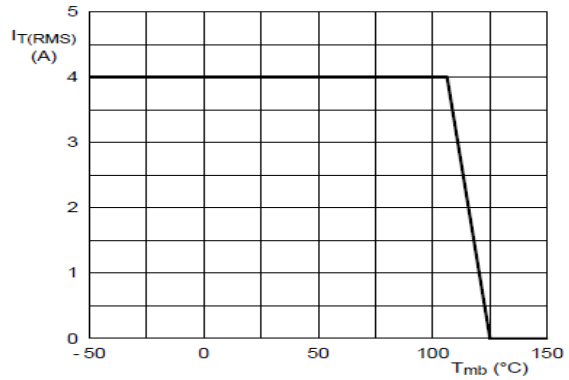


图3 通态特性
Fig.3.On-State Characteristics

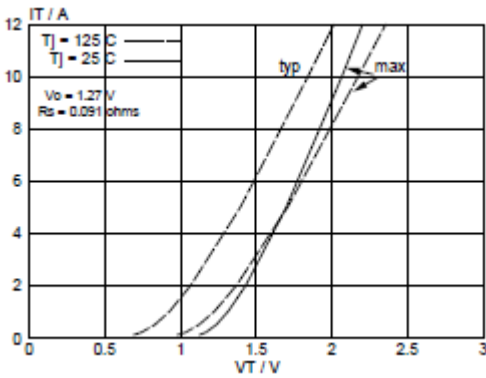


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles

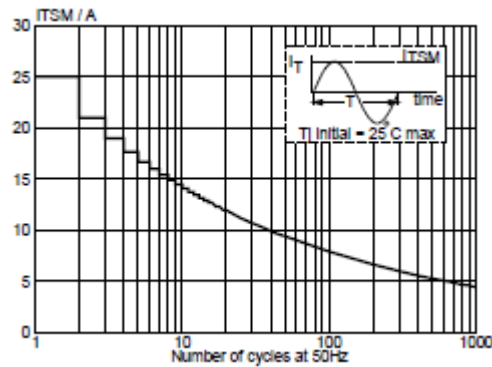
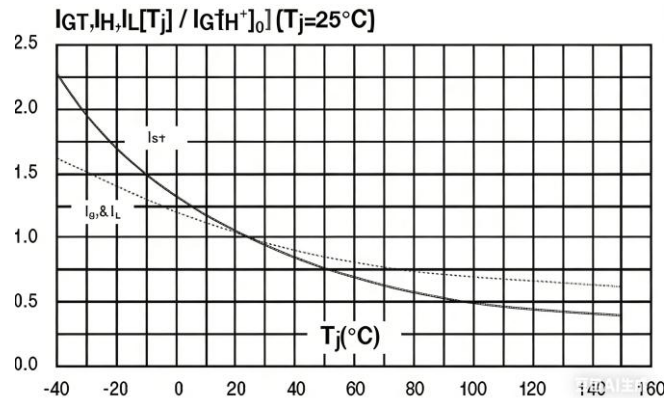
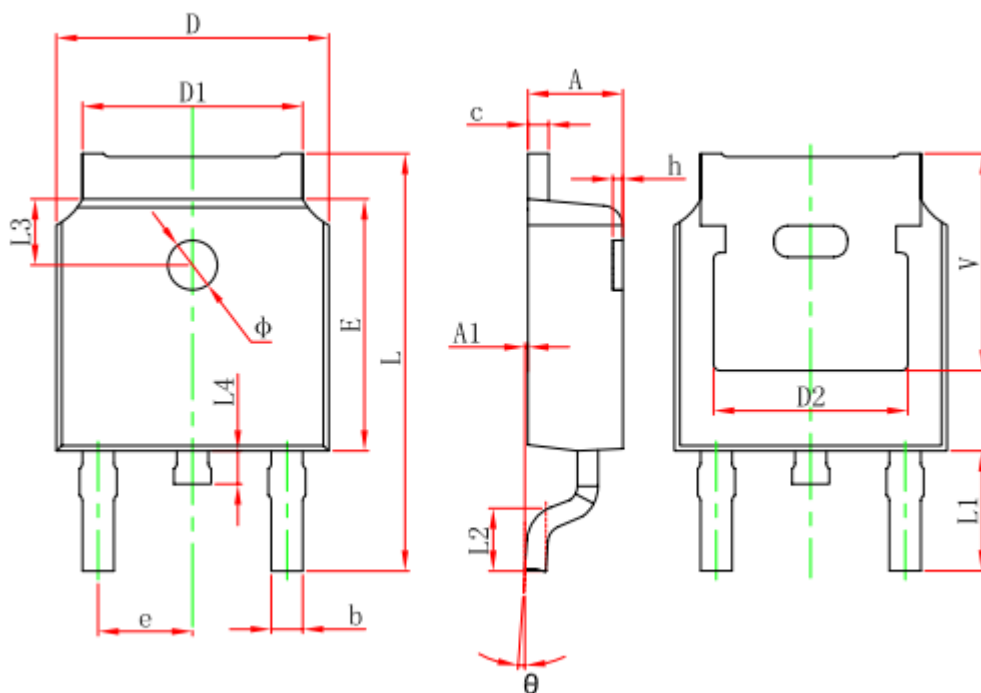


图5 IGT、IH、IL相对值（相对于25°C）与结温关系
Fig.5.Relative Variation Of Gate Trigger Current, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



封装尺寸 PACKAGE MECHANICAL DATA

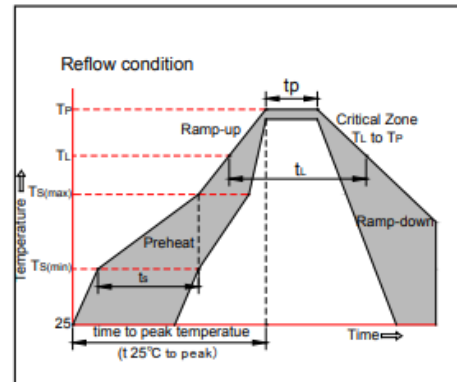
TO-252



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.830 REF.		0.190 REF.	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF.		0.114 REF.	
L2	1.400	1.700	0.055	0.067
L3	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 REF.		0.211 REF.	

焊接参数 SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L) (Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C



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