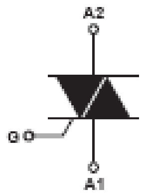
产品概述 GENERAL DESCRIPTION

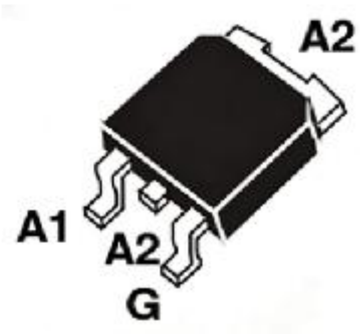
BT134 双向可控硅采用穿通隔离台面结构，复合玻璃钝化PN结表面保护工艺技术，dv/dt高，可靠性高，适用于控温、调光、马达控制。

BT134 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	● Highly dv/dt
● 通态压降低	● Low on-state voltage
● Rohs环保产品	● Rohs Products

应用领域 APPLICATIONS

主要应用于调光、控温、马达控制。

domestic lighting ,heating and motor speed controllers.

极限值(除非另有规定，Tj=25℃) ABSOLUTE RATINGS

(Tj=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≤107℃	4	A
I_{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state current	F=50H_Z ,t=20ms	25	A
I^2t	I^2t 耗散值 I^2t value for fusing	T_P=10ms	3.1	A^2s
di/dt	通态电流上升值 Critical rate of rise of on-state current	F=120H_Z,Tj=125℃	50	A/µs
I_{GM}	门极峰值电流 Peak gate current	TP=20µs,Tj=125℃	2	A
$P_{G(AV)}$	平均门极耗散功率 Average gate power dissipation	Tj=125℃	0.5	W
Tstg	贮存结温范围 Storage junction temperature range		-40-+150	℃
Tj	工作结温范围 Operating junction temperature range		-40-+125	℃

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

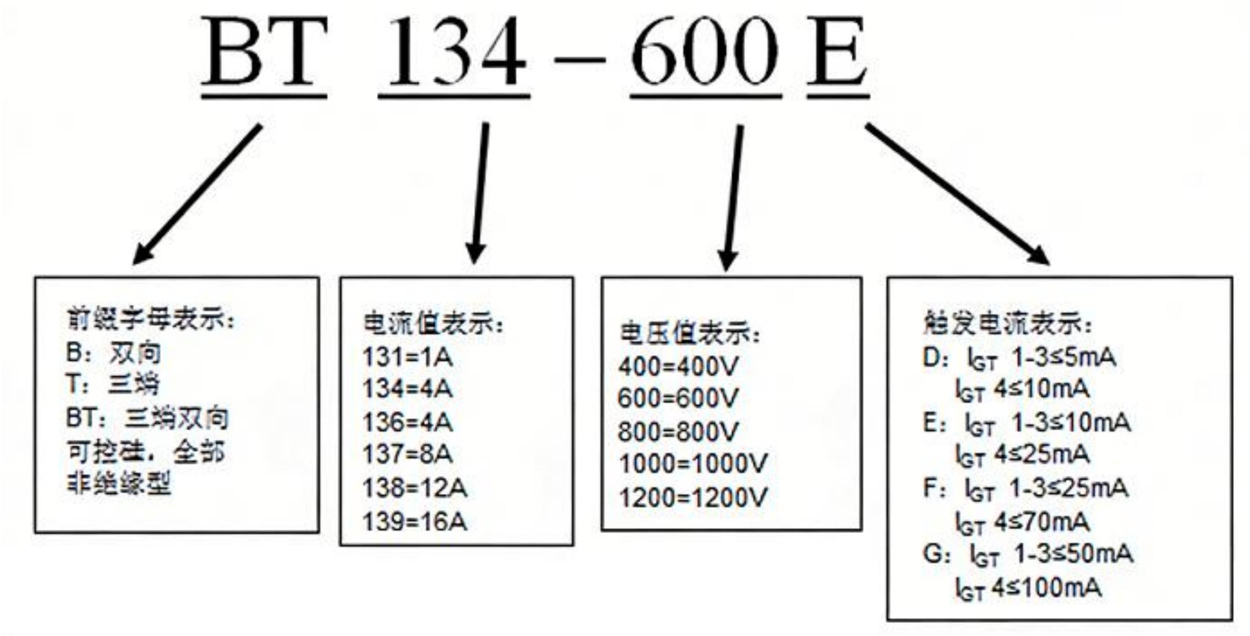
(Tj=25℃,unless otherwise specified)

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}		5		µA	V_{RRM}=V_{DRM},Tj = 25℃
	I_{RRM}		0.8		mA	V_{RRM}=V_{DRM},Tj =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)	3	℃/W
Rth(j-a)	Junction to ambient	75	℃/W

ORDERING INFORMATION



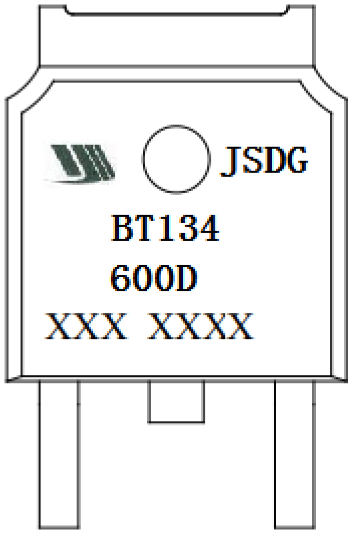
前缀字母表示：
B：双向
T：三端
BT：三端双向可控硅，全部非绝缘型

电流值表示：
131=1A
134=4A
136=4A
137=8A
138=12A
139=16A

电压值表示：
400=400V
600=600V
800=800V
1000=1000V
1200=1200V

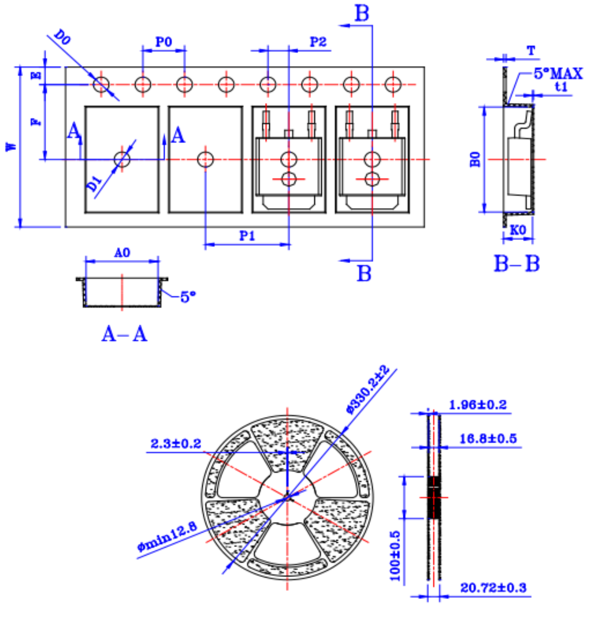
触发电流表示：
D：I_{GT} 1-3≤5mA
I_{GT} 4≤10mA
E：I_{GT} 1-3≤10mA
I_{GT} 4≤25mA
F：I_{GT} 1-3≤25mA
I_{GT} 4≤70mA
G：I_{GT} 1-3≤50mA
I_{GT} 4≤100mA

印章说明MARKING



XXX	XXXX
封装代码	生产日期

配送方式 DELIVERY MODE



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
W	15.90	16.00	16.10	0.626	0.630	0.634
E	1.65	1.75	1.85	0.065	0.069	0.073
F	7.40	7.50	7.60	0.291	0.295	0.299
D0	1.50	1.55	1.60	0.059	0.060	0.063
D1	1.50	–	–	0.059	–	–
P0	3.90	4.00	4.10	0.154	0.157	0.161
P1	7.90	8.00	8.10	0.311	0.315	0.319
P2	1.90	2.00	2.10	0.075	0.079	0.083
10P0	39.80	40.00	40.20	1.567	1.575	1.583
A0	6.80	6.90	7.00	0.267	0.272	0.276
B0	10.40	10.50	10.60	0.408	0.413	0.417
K0	2.60	2.70	2.80	0.102	0.106	0.110
T	0.25	0.30	0.35	0.010	0.012	0.014
t1	0.10	–	–	0.004	–	–

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

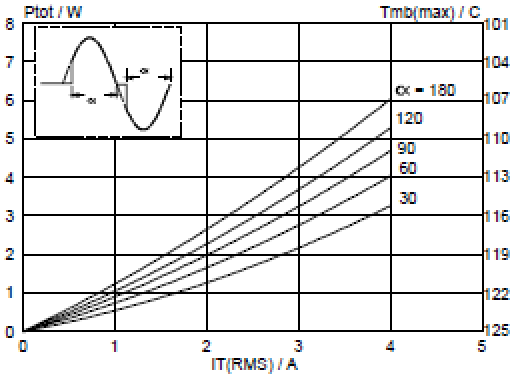


图2 RMS通态电流与Tc温度关系
Fig.2. RMS On-state Current Versus TL

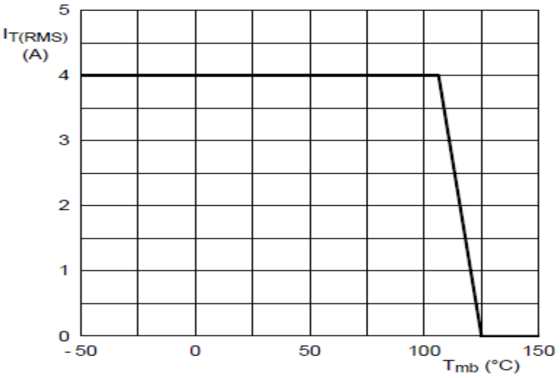


图3 通态特性
Fig.3.On-State Characteristics

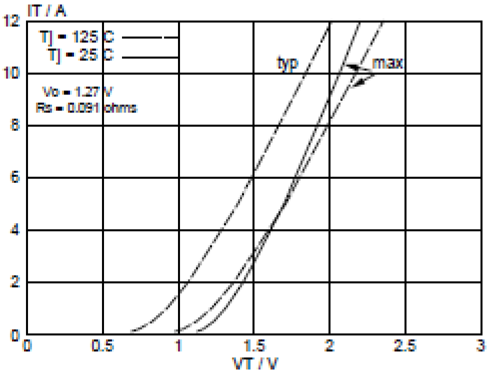


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles

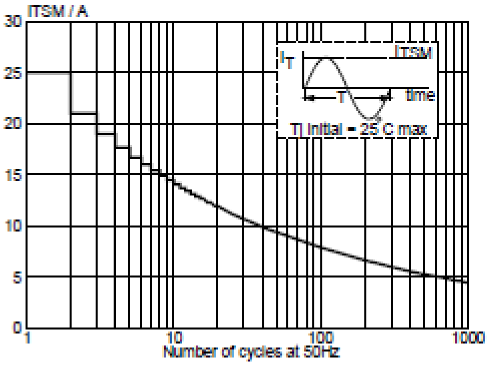
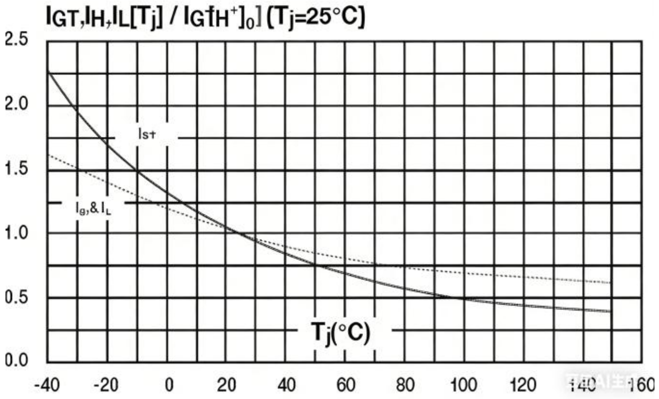
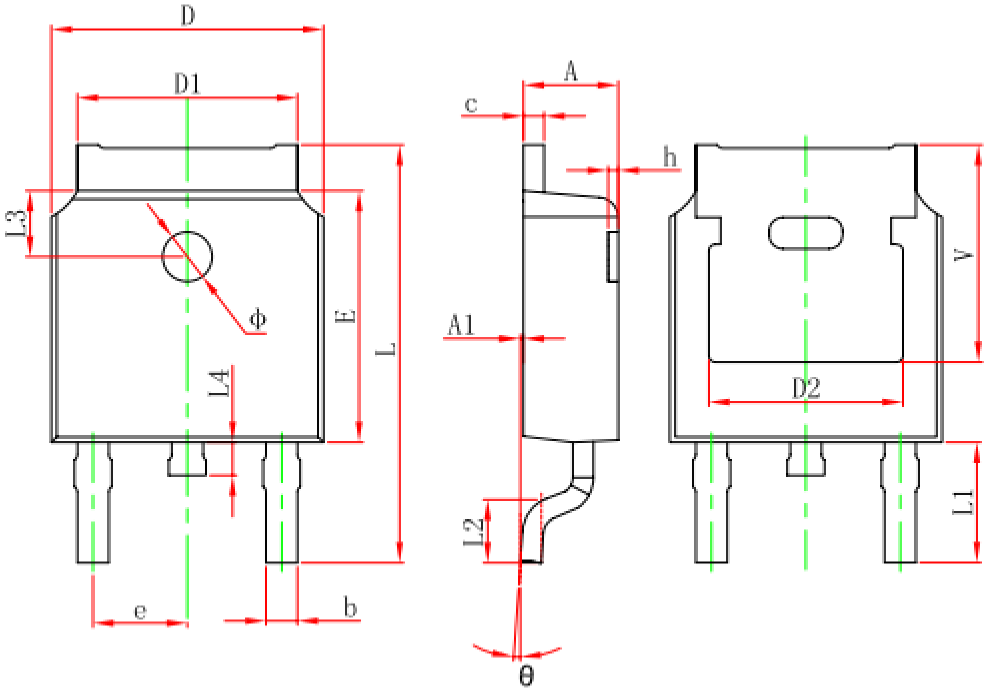


图5 IGT、IH、IL相对值（相对于25℃）与结温关系
Fig.5.Relative Variation Of Gate Trigger Current
, Holding Current And Latching Current Versus Junction Temperature (Typical Value)



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