

T8xx		
	双向可控硅 TRIAC	版本号 201603-A

产品概述 GENERAL DESCRIPTION

T8xx 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。

T8xx 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
$I_{T(RMS)}$	8	A
V_{DRM}/V_{RRM}	600&800	V
$I_{GT(III)}$	≤35	mA

产品特性

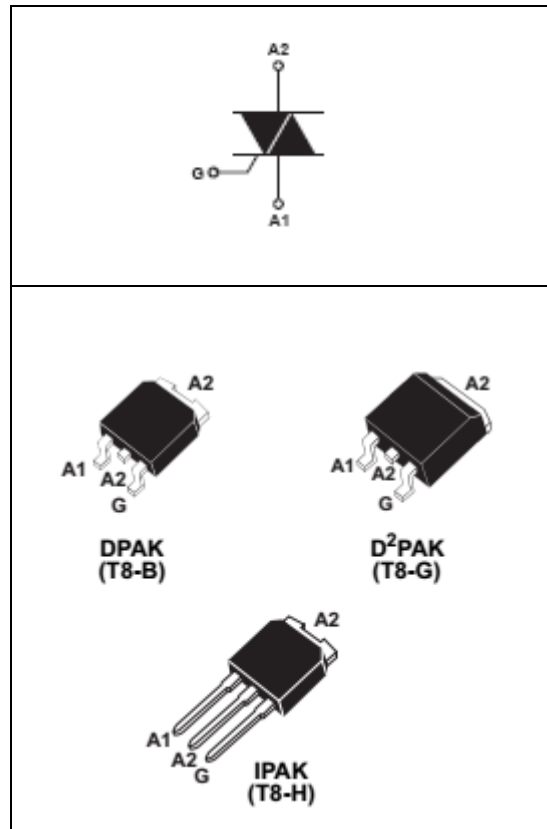
FEATURES

- | | |
|---|---|
| <ul style="list-style-type: none"> ● dv/dt高 ● 通态压降低 ● Rohs环保产品 | <ul style="list-style-type: none"> ● 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, $T_j=25^\circ\text{C}$) ABSOLUTE RATINGS

($T_j=25^\circ\text{C}$, 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)	$T_C=110^\circ\text{C}$	8	A
I_{TSM}	通态峰值浪涌电流 Non repetitive surge peak on-state current	$F=50\text{Hz}, t=20\text{ms}$	60	A
I^2t	I^2t 耗散值 I^2t value for fusing	$T_p=10\text{ms}$	36	A^2s
di/dt	通态电流上升值 Critical rate of rise of on-state current	$F=120\text{Hz}, T_j=125^\circ\text{C}$	50	$\text{A}/\mu\text{s}$
I_{GM}	门极峰值电流 Peak gate current	$T_p=20\mu\text{s}, T_j=125^\circ\text{C}$	4	A
$P_{G(AV)}$	平均门极耗散功率 Average gate power dissipation	$T_j=125^\circ\text{C}$	1	W
Tstg	贮存结温范围 Storage junction temperature range		-40--+150	$^\circ\text{C}$
T_j	工作结温范围 Operating junction temperature range		-40--+150	$^\circ\text{C}$

电参数(除非另有规定, $T_j=25^\circ\text{C}$) ELECTRICAL CHARACTERISTICS

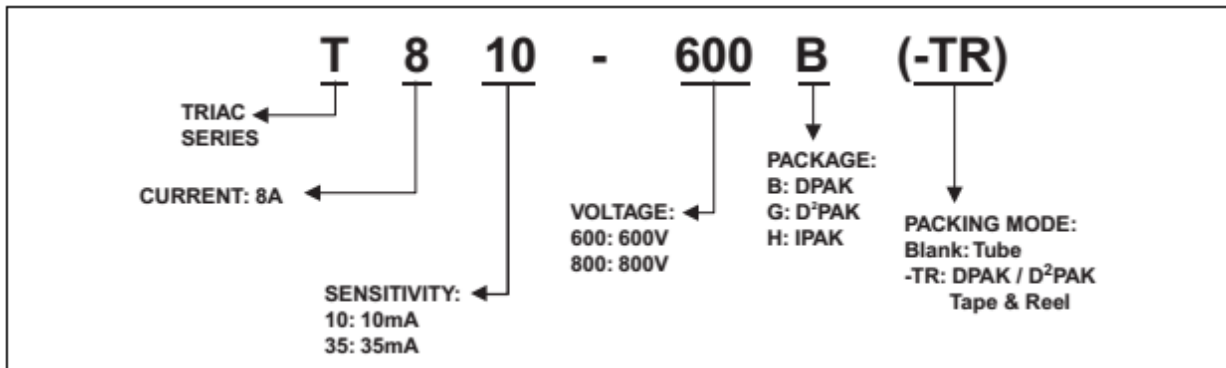
($T_j=25^\circ\text{C}$, unless otherwise specified)

参数 Parameter	符号 Symbol		规范值 Value		单位 Unit	测试条件 Test Conditions
			T810	T835		
触发电流 Gate trigger current	I_{GT}	I ~ III	10	35	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
触发电压 Gate trigger voltage	V_{GT}	I ~ III	≤ 1.5		V	$V_D=12\text{V}, I_T=0.1\text{A}$
维持电流 Holding current	I_H		15	35	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
擎住电流 Latching current	I_L		25	50	mA	$V_D=12\text{V}, I_T=0.1\text{A}$
电压上升率 Rise of off- state voltage	dv/dt		40	400	$\text{V}/\mu\text{S}$	$V_D=67\% V_{DRM}$
通态压降 Peak on-state voltage	V_{TM}		≤ 1.6		V	$I_T=10\text{A}$
断态漏电流 Peak repetitive forward blocking current	I_{DRM}		≤ 5		μA	$V_{RRM}=V_{DRM}, T_j=25^\circ\text{C}$
	I_{RRM}		≤ 1		mA	$V_{RRM}=V_{DRM}, T_j=125^\circ\text{C}$

热特性 THERMAL RESISTANCES

符号 Symbol	参数 Parameter	数值 Value	单位 Unit	
Rth(j-c)	Junction to case(AC)	IPAK	1.6	K/W
		DPAK	1.6	
		D ² PAK	1.6	
Rth(j-a)	Junction to ambient	IPAK	100	K/W
		DPAK	70	
		D ² PAK	45	

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
Fig.1.Maximum Power Dissipation Versus on-state current

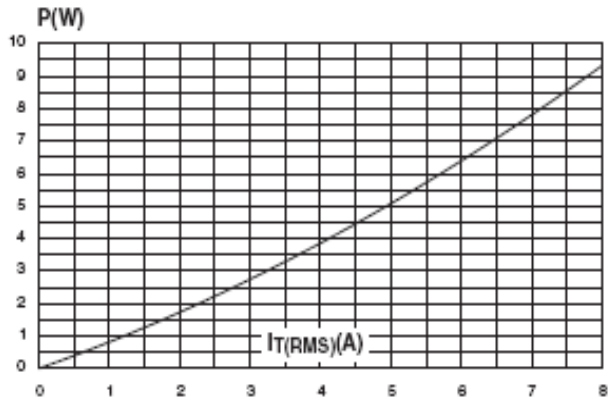


图3 通态特性
Fig.3.On-State Characteristics

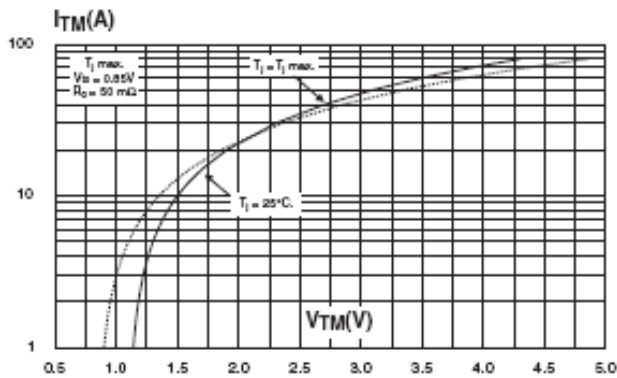


图5 I_{GT} 、 I_H 、 I_L 相对值（相对于25°C）与结温关系

Fig.5.Relative Variation Of Gate Trigger Current , Holding Current And Latching Current Versus Junction Temperature (Typical Value)

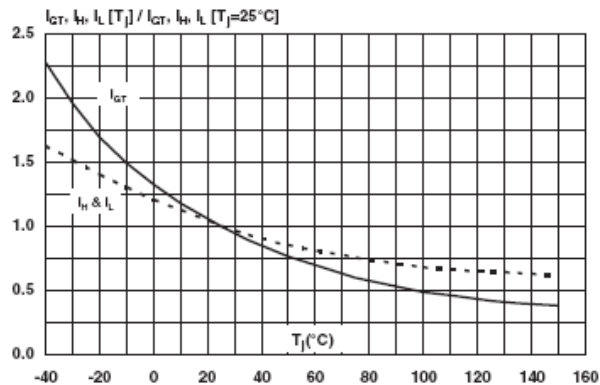


图2 RMS通态电流与Tc温度关系
Fig.2. RMS On-state Current Versus TL

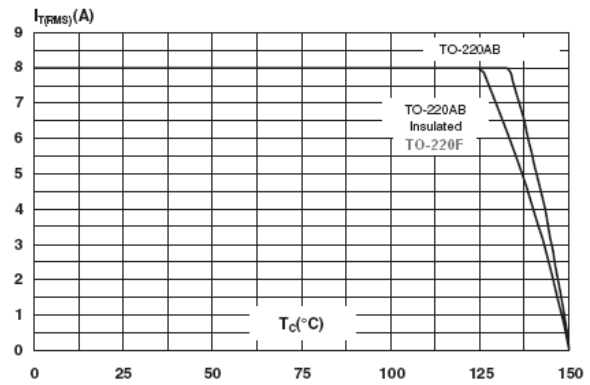
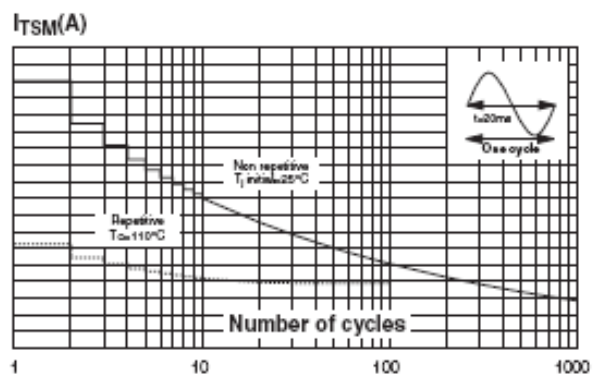
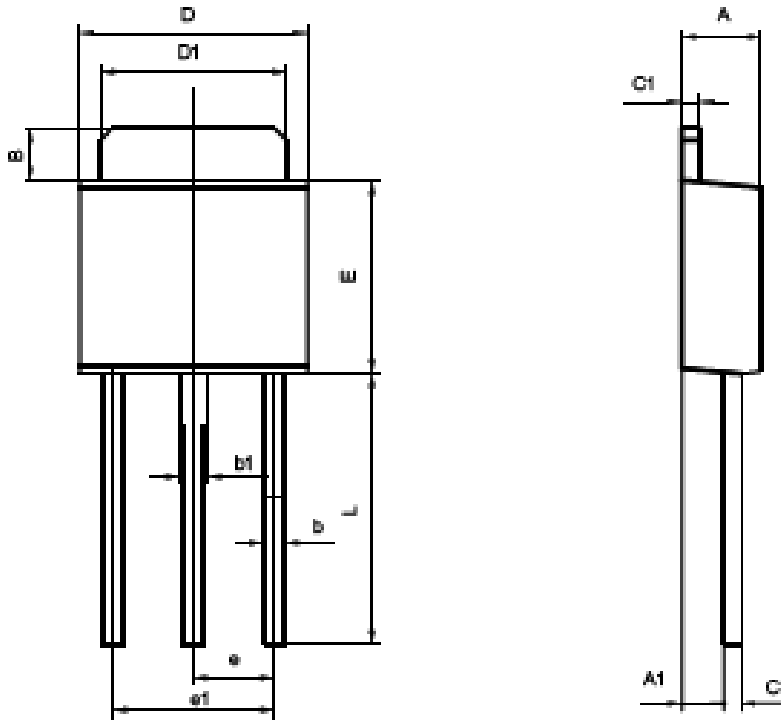


图4 通态浪涌峰值电流与周期数关系
Fig.4.Surge Peak On-state Current Versus Number Cycles



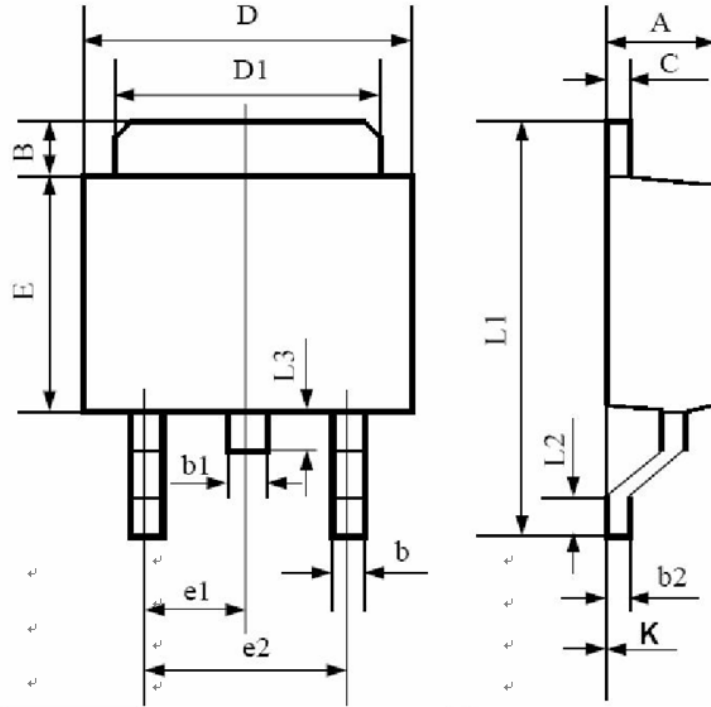
封装尺寸 PACKAGE MECHANICAL DATA

IPAK



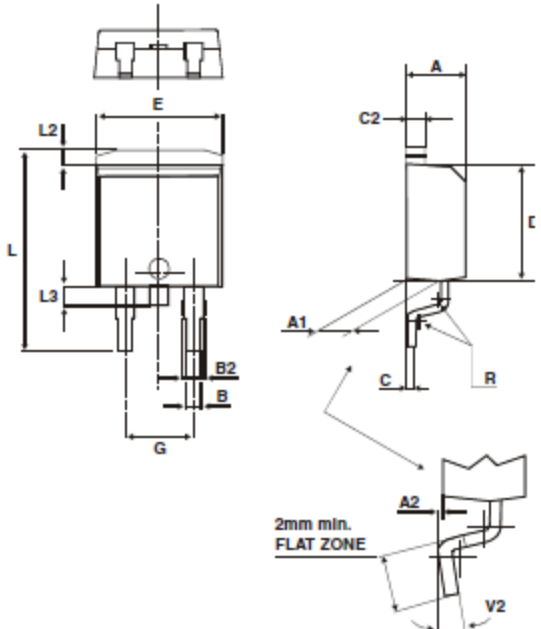
Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	1.100	1.300	0.043	0.051
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
e	0.400	0.500	0.016	0.020
e1	0.480	0.580	0.019	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.800	0.213	0.224
e	2.300TYP		0.091TYP	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311

DPAK



符号	公制尺寸		英制尺寸	
	最小	最大	最小	最大
A	2.20	2.40	0.087	0.094
B	1.35	1.65	0.053	0.065
b	0.50	0.70	0.02	0.028
b1	0.70	0.90	0.028	0.035
b2	0.46	0.56	0.018	0.022
C	0.46	0.56	0.018	0.022
D	6.35	6.65	0.25	0.262
D1	5.20	5.40	0.205	0.212
E	5.80	6.10	0.228	0.240
e1	2.25	2.35	0.089	0.093
e2	4.50	4.70	0.177	0.185
L1	9.80	10.30	0.386	0.406
L2	0.95	1.45	0.037	0.057
L3	0.8	1.10	0.031	0.043
K	-0.1	0.00	-0.004	0.000

D²PAK

	Dimensions						
	Ref.	Millimeters			Inches		
		Min.	Typ.	Max.	Min.	Typ.	Max.
	A	4.30		4.60	0.169		0.181
	A1	2.49		2.69	0.098		0.106
	A2	0.03		0.23	0.001		0.009
	B	0.70		0.93	0.027		0.037
	B2	1.25	1.40		0.048	0.055	
	C	0.45		0.60	0.017		0.024
	C2	1.21		1.36	0.047		0.054
	D	8.95		9.35	0.352		0.368
	E	10.00		10.28	0.393		0.405
	G	4.88		5.28	0.192		0.208
	L	15.00		15.85	0.590		0.624
	L2	1.27		1.40	0.050		0.055
	L3	1.40		1.75	0.055		0.069
	R	0.40			0.016		
	V2	0°		8°	0°		8°

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