



T0850HJ/T0850HF1/T0850HRM

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	8A
V_{DRM}	1000V
I_{GT}	50mA

用途

- 交流开关
- 相位控制

APPLICATIONS

- AC switching
- Phase control

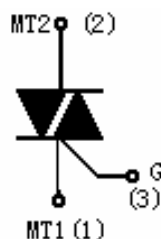
产品特性

- 玻璃钝化芯片，高可靠性和一致性
- 三象限可控硅，触发电流的一致性好
- 环保 RoHS 产品

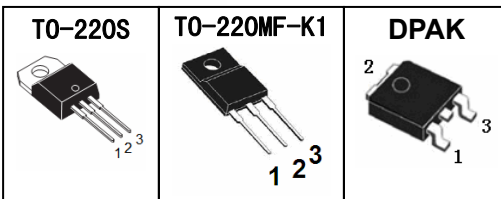
FEATURES

- Glass-passivated mesa chip for reliability and uniform
- Uniform gate trigger currents in three quadrants
- RoHS products

封装 Package



序号 Pin	引线名称 Description
1	主电极 1 MT1
2	主电极 2 MT2
3	门极 G



订货信息 ORDER MESSAGES

订 货 型 号 Order codes				印 记 Marking	封 装 Package
有卤-条管	无卤-条管	有卤-编带	无卤-编带		
Halogen-Tube	halogen-Free-Tube	Halogen-Reel	Halogen-Free-Reel		
T0850HJ-CB-B	T0850HJ-CB-BR	N/A	N/A	T0850HJ	TO-220S
T0850HF1-F1-B	T0850HF1-F1-BR	N/A	N/A	T0850HF1	TO-220MF-K1
T0850HRM-RM-B	T0850HRM-RM-BR	N/A	N/A	T0850HRM	DPAKM



**概述 GENERAL DESCRIPTION**

T0850HJ/T0850HF1/T0850HU是玻璃钝化芯片结构的三象限双向晶闸管，产品在第四象限不可触发，具有较高的使用可靠性。可适用于容易出现较高 dV/dt 或 dI/dt 的交流全波控制线路中，特别推荐应用与电感性负载控制（如电机控制线路）。器件封装形式有TO-220S（引线 with 散热片绝缘）、DPAK、TO-220MF-K1。

T0850HJ/T0850HF1/T0850HU are Glass passivated three quadrant triacs, designed for high performance full-wave ac control applications where high static and dynamic dV/dt and high dI/dt can occur. They are specially recommended for use on inductive loads such as motor control circuits. Available packages are TO-220S (internally isolated)、DPAK、TO-220MF-K1.

绝对最大额定值 ABSOLUTE RATINGS ($T_c=25^{\circ}\text{C}$)

项 目 Parameter	符 号 Symbol	试 验 条 件 Condition	数 值 Value	单 位 Unit
重复峰值断态电压 Repetitive peak off-state voltage	V_{DRM}		± 1000	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave	8	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I_{TSM}	full sine wave , $t=20\text{ms}$	80	A
		full sine wave , $t=16.7\text{ms}$	84	A
		I^2t $t=10\text{ms}$	32	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	dI/dt	$I_{\text{TM}}=12\text{A}$, $I_{\text{G}}=0.2\text{A}$, $dI_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	100	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	I_{GM}		4	A
峰值门极电压 Peak gate voltage	V_{GM}		5	V
峰值门极功率 Peak gate power	P_{GM}		5	W
平均门极功率 Average gate power	$P_{\text{G(AV)}}$	over any 20ms period	0.5	W
存储温度 Storage temperature	T_{stg}		-40~150	$^{\circ}\text{C}$
操作结温 Operation junction temperature	T_{VJ}		125	$^{\circ}\text{C}$



电特性 ELECTRICAL CHARACTERISTIC ($T_c=25^{\circ}\text{C}$)

项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I_{DRM}	$V_{\text{DM}}=V_{\text{DRM}}$, $T_j=125^{\circ}\text{C}$, gate open	-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V_{TM}	$I_{\text{TM}}=11.3\text{A}$	-	1.3	1.7	V
门极触发电流 Gate trigger current	I_{GT}	$V_{\text{DM}}=12\text{V}$, $R_L=100\ \Omega$, MT1(-),MT2(+),G(+)	2	-	50	mA
		MT1(-),MT2(+),G(-)	2	-	50	mA
		MT1(+),MT2(-),G(-)	2	-	50	mA
门极触发电压 Gate trigger voltage	V_{GT}	$V_{\text{DM}}=12\text{V}$, $R_L=100\ \Omega$, MT1(-),MT2(+),G(+)	-	0.7	1.5	V
		MT1(-),MT2(+),G(-)	-	0.7	1.5	V
		MT1(+),MT2(-),G(-)	-	0.7	1.5	V
维持电流 Holding current	I_{H}	$V_{\text{DM}}=12\text{V}$, $I_{\text{GT}}=0.1\text{A}$	-	-	50	mA
擎住电流 Latching current	I_{L}	$V_{\text{DM}}=12\text{V}$, $I_{\text{GT}}=0.1\text{A}$, MT1(-),MT2(+),G(+)	-	-	50	mA
		MT1(-),MT2(+),G(-)	-	-	75	mA
		MT1(+),MT2(-),G(-)	-	-	50	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	$V_{\text{DM}}=67\% V_{\text{DRM(MAX)}}$, $T_j=125^{\circ}\text{C}$, gate open	1000	-	-	V/ μs
门极开通时间 Gate controlled turn-on time	t_{gt}	$I_{\text{TM}}=12\text{A}$, $V_{\text{DM}}=V_{\text{DRM(MAX)}}$, $I_{\text{G}}=0.1\text{A}$, $dI_{\text{G}}/dt=5\text{A}/\mu\text{S}$	-	2	-	μs

热特性 THERMAL CHARACTERISTIC

项 目 Parameter	符 号 Symbol	条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到管壳的热阻 Thermal resistance junction to case	$R_{\text{th(j-c)}}$	full cycle(DPAK)			2.0	$^{\circ}\text{C}/\text{W}$
		full cycle(TO-220S)			2.8	$^{\circ}\text{C}/\text{W}$
		full cycle(TO-220MF-K1)			4.1	$^{\circ}\text{C}/\text{W}$

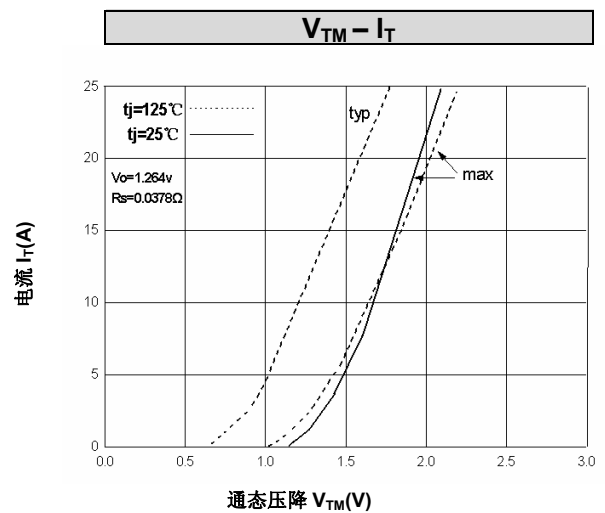
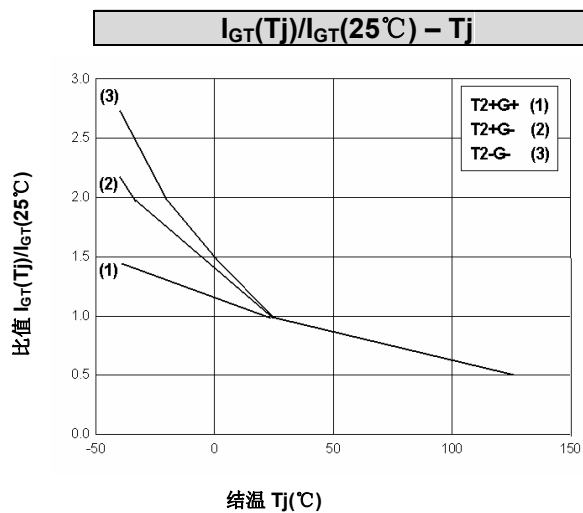
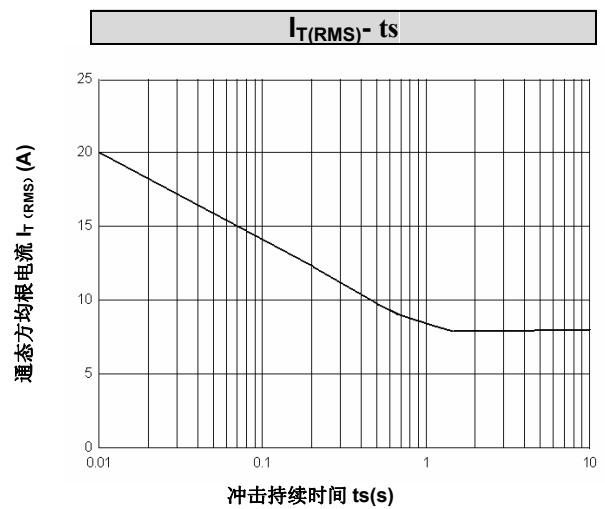
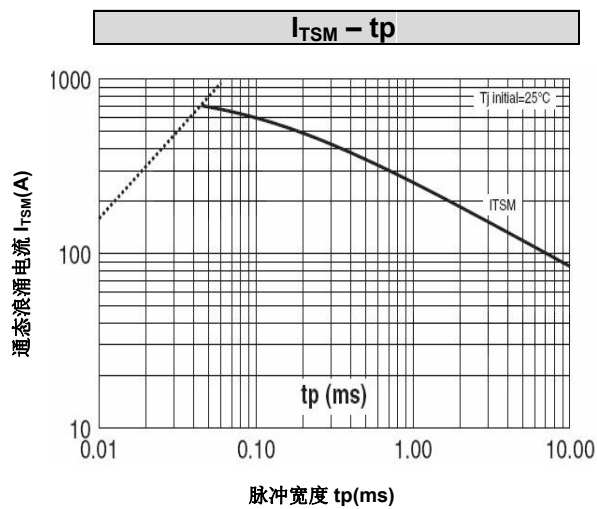
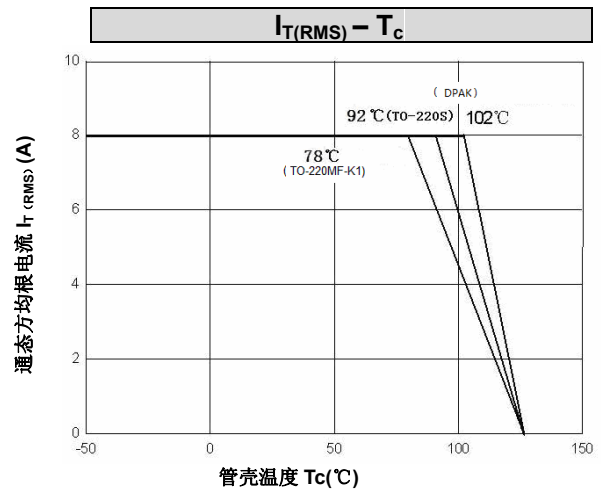
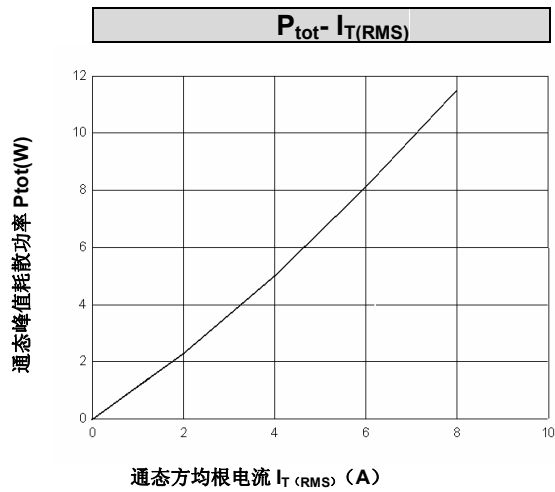
电绝缘特性 ELECTRICAL ISOLATION

项 目 Parameter	符 号 Symbol	条 件 Condition	数 值 Value	单位 Unit
绝缘电压 Isolation voltage	V_{ISOL}	1 minute, leads to mounting tab TO-220S/DPAK	2000	V
		1 minute, leads to mounting tab TO-220MF-K1	2000	V





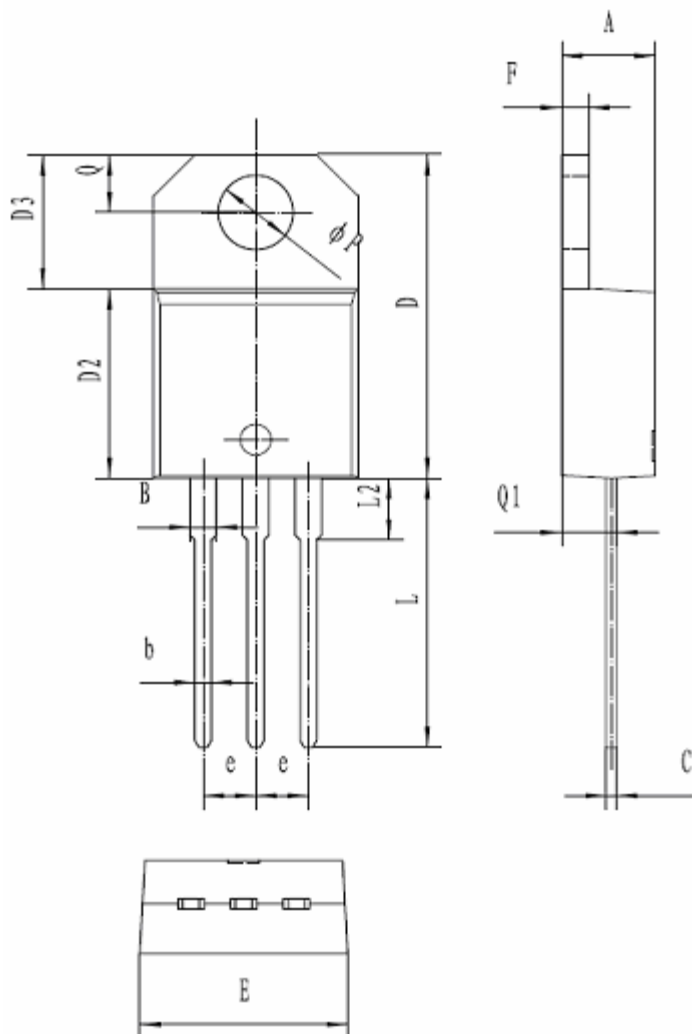
征曲线 ELECTRICAL CHARACTERISTICS (curves)



外形尺寸 PACKAGE MECHANICAL DATA

TO-220S

单位 Unit : mm

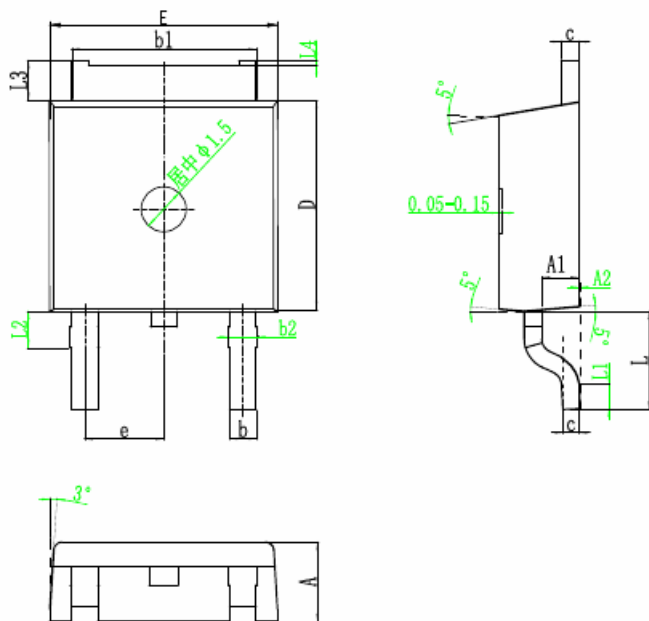


符号 symbol	MIN	MAX
A	4.40	4.60
B	1.14	1.70
b	0.61	0.88
C	0.47	0.70
D	15.20	15.90
D2	8.60	9.70
D3	6.20	6.60
E	10.00	10.40
e	2.40	2.70
F	1.23	1.32
L	13.00	14.00
L2	typ. 3.75	
Q	2.65	2.95
Q1	2.89	3.42
P	3.72	3.85



DPAKM

单位 Unit : mm



SYMBOL	mm		
	MIN	NOM	MAX
A	2.20	2.30	2.40
A1	0.90	1.00	1.10
A2	0.00		0.10
b	0.71	0.81	0.91
b1	5.20	5.30	5.40
b2	0.85	0.95	1.05
c	0.47	0.508	0.55
D	6.00	6.15	6.30
E	6.45	6.60	6.75
e	2.186	2.286	2.386
L	2.50	2.70	2.90
L1	0.95	1.15	1.35
L2	1.90	2.00	2.10
L3	0.868	0.968	1.068
L4	0.05	0.1	0.15

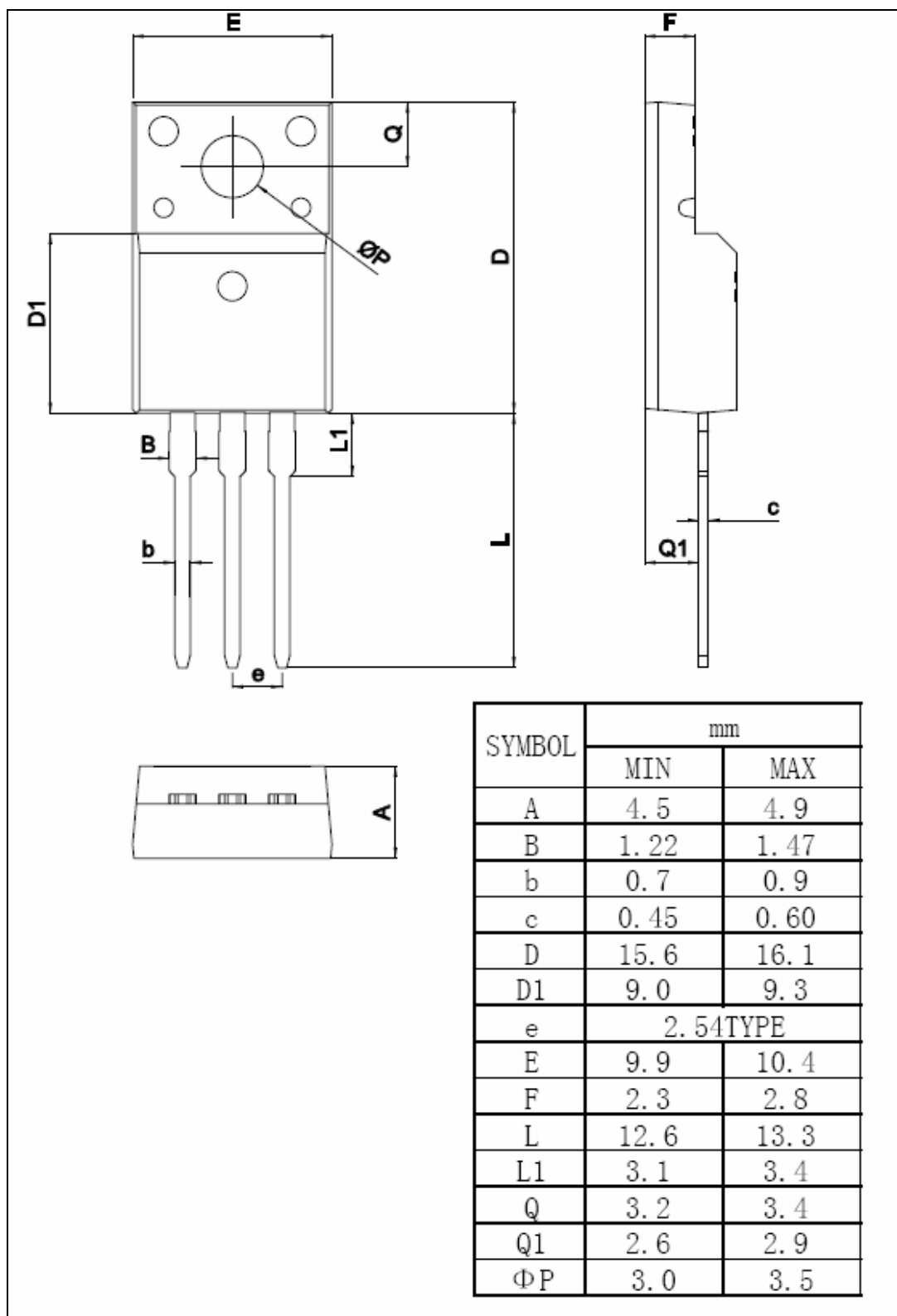




外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF-K1

单位 Unit : mm



**注意事项**

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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知

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