



T0405HC(HM HU)

主要参数 MAIN CHARACTERISTICS

$I_T(\text{RMS})$	4A
V_{DRM}	950V
I_{GT}	5mA

用途

- 交流开关
- 相位控制

APPLICATIONS

- AC switching
- Phase control

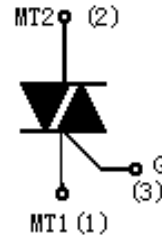
产品特性

- 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

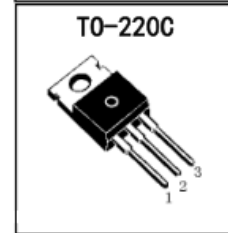
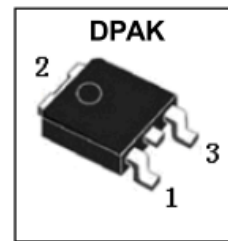
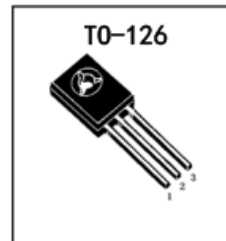
FEATURES

- 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

有卤-条管	无卤-条管	有卤-袋装	无卤-袋装	印 记	封 装
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag	Marking	Package
T0405HM -M-B	T0405HM -M-BR	T0405HM -M-C	T0405HM -M-CR	T0405HM	TO-126
T0405HC -C-B	T0405HC -C-BR	T0405HC -C-C	T0405HC -C-CR	T0405HC	TO-220C
有卤-编带	无卤-编带	N/A	N/A	印 记	封 装
Halogen-Reel	Halogen-Free-Reel	Halogen-Bag	Halogen-Free-Bag	Marking	Package
T0405HU -C-B	T0405HU -C-BR	T0405HU -C-C	T0405HU -C-CR	T0405HU	DPAK

概述 GENERAL DESCRIPTION

T0405HC (HU HM)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-220C TO-126 DPAK。

T0405HC(HU HM)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 is TO-220C TO-126 DPAK. .

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}		± 950	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave	4	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I_{TSM}	full sine wave, $t=20\text{ms}$	35	A
		full sine wave, $t=16.7\text{ms}$	38	A
	I^2t	$t=10\text{ms}$	6.1	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	$I_{\text{TM}}=6\text{A}$, $I_{\text{G}}=0.2\text{A}$, $di_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	I_{GM}		2	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°C)

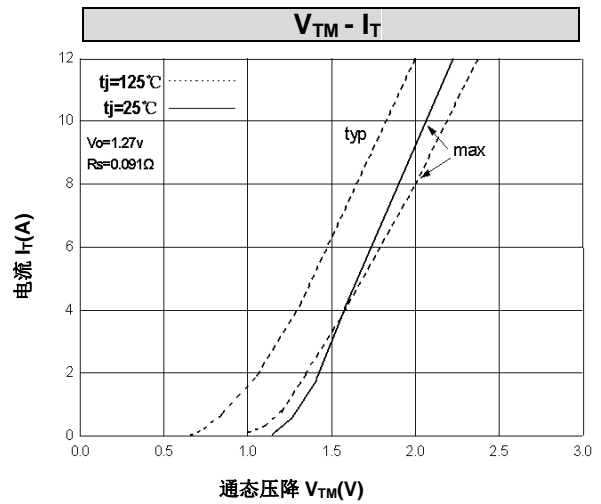
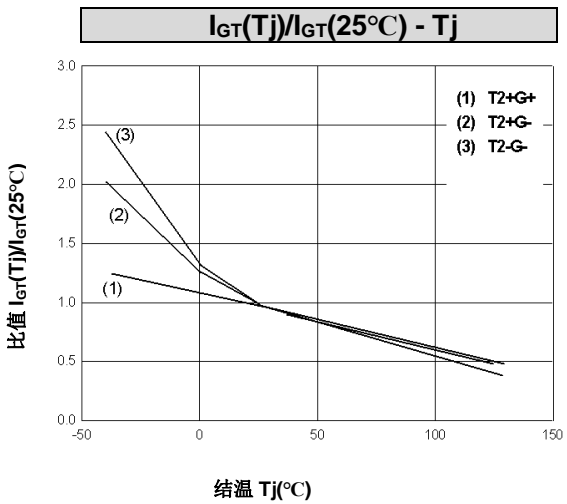
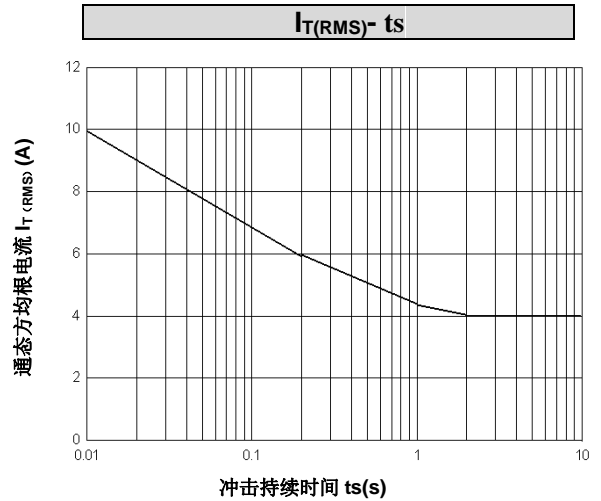
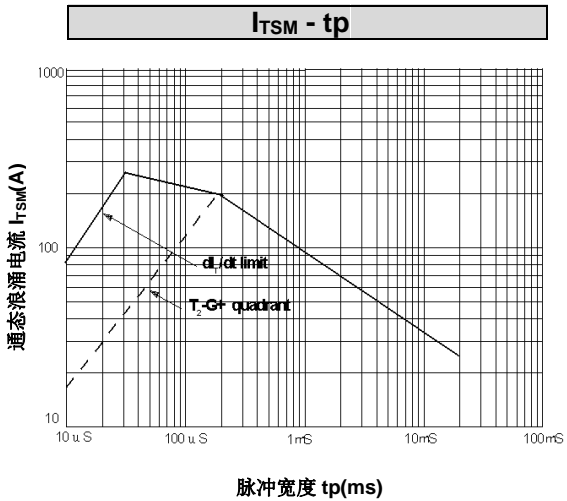
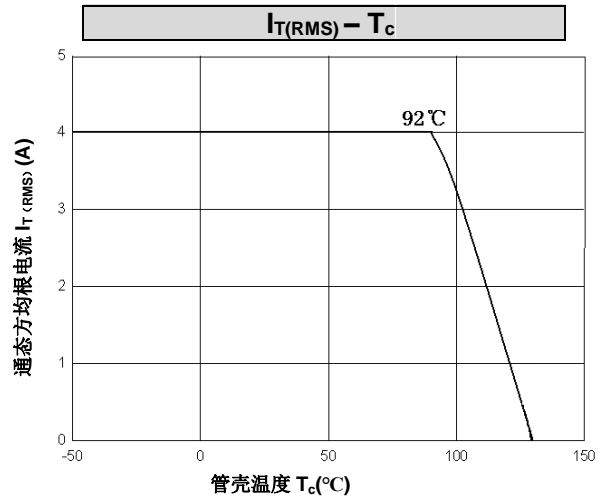
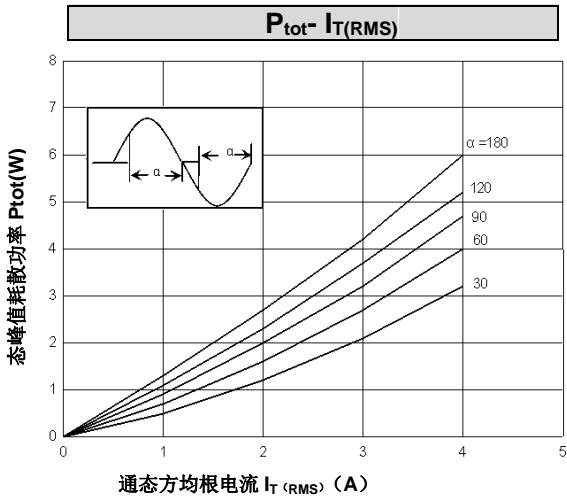
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I _{DRM}	V _{DM} =1000V, T _j =125°C, gate open	-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V _{TM}	I _{TM} =5A	-	1.3	1.5	V
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, MT1(-),MT2(+),G(+)	1	-	5	mA
		R _L =100 Ω, MT1(-),MT2(+),G(-)	1	-	5	mA
		Ω, MT1(+),MT2(-),G(-)	1	-	5	mA
门极触发电压 Gate trigger voltage	V _{GT}	V _{DM} =12V, MT1(-),MT2(+),G(+)	-	0.7	1.5	V
		R _L =100 Ω, MT1(-),MT2(+),G(-)	-	0.7	1.5	V
		Ω, MT1(+),MT2(-),G(-)	-	0.7	1.5	V
维持电流 Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A	-	-	15	mA
擎住电流 Latching current	I _L	V _{DM} =12V, MT1(-),MT2(+),G(+)	-	-	15	mA
		I _{GT} =0.1A, MT1(-),MT2(+),G(-)	-	-	30	mA
		Ω, MT1(+),MT2(-),G(-)	-	-	15	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V _{DM} =67% V _{DRM} , T _j =125°C, gate open	100	-	-	V/ μ s
门极开通时间 Gate controlled turn-on time	t _{gt}	I _{TM} =6A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/ μ S	-	2	-	Ms

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 _{th(j-c)}	full cycle(TO-126/DPAK/220C)			3.0	°C/W



特征曲线 ELECTRICAL CHARACTERISTICS (curves)

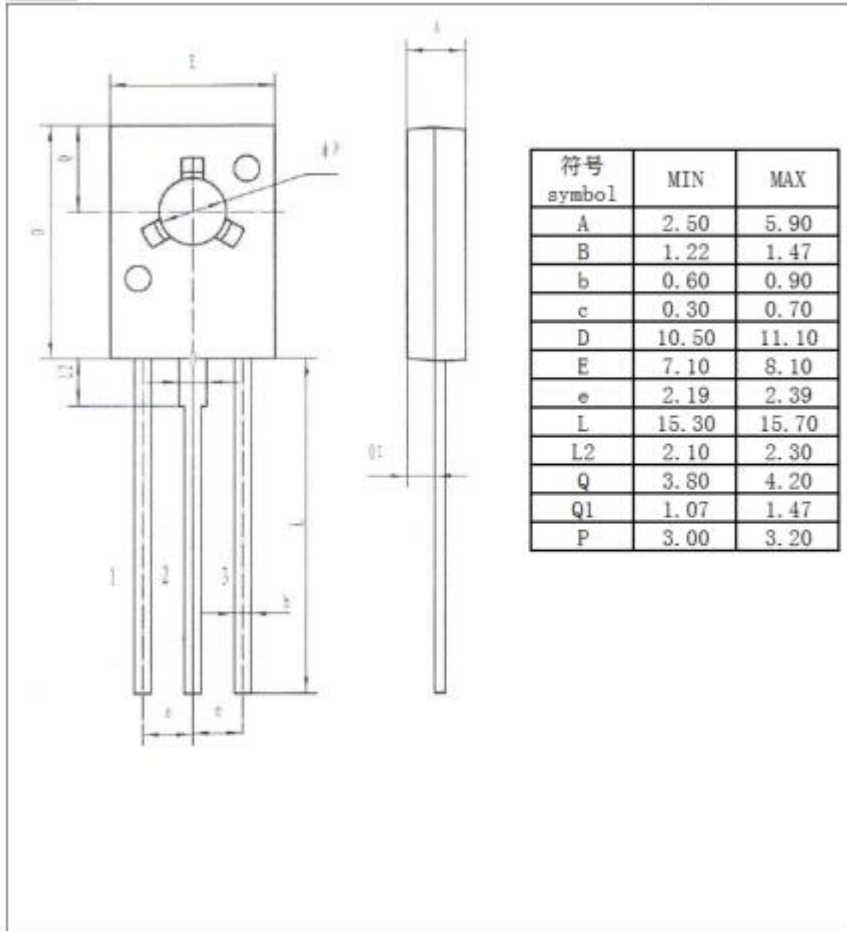




外形尺寸 PACKAGE MECHANICAL DATA

TO-126

单位 Unit : mm

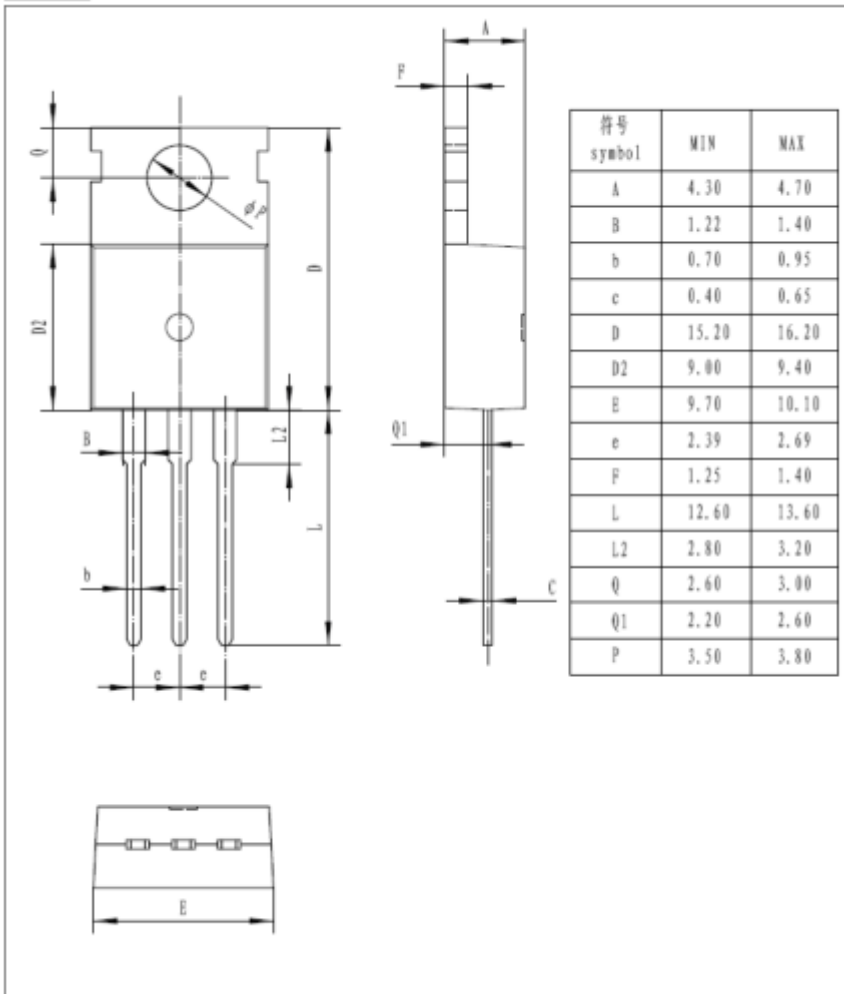




外形尺寸 PACKAGE MECHANICAL DATA

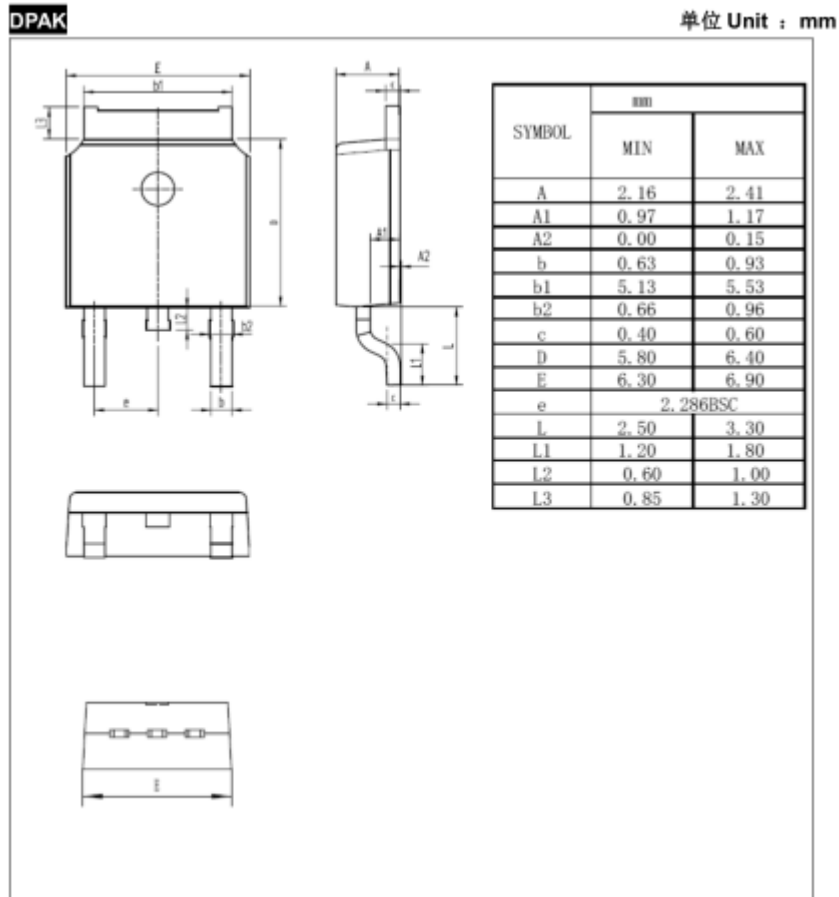
TO-220C

单位 Unit : mm





外形尺寸 PACKAGE MECHANICAL DATA





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