



3TT16C

主要参数 MAIN CHARACTERISTICS

$I_T(RMS)$	16A
V_{DRM}	800V
I_{GT}	35mA

用途

- 交流开关
- 相位控制

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
- 环保 RoHS 产品

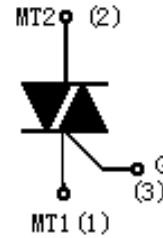
APPLICATIONS

- AC switching
- Phase control

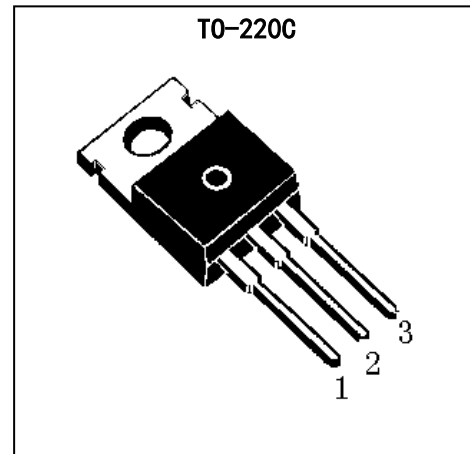
FEATURES

- 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-袋装	无卤-袋装		
Halogen-Tube	Halogen-Free-Tube	Halogen-Bag	Halogen-Free-Bag		
3TT16C-C-B	3TT16C-C-BR	3TT16C-C-C	3TT16C-C-CR	3TT16C	T0-220C

**概述 GENERAL DESCRIPTION**

3TT16C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。

3TT16C is 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.

绝对最大额定值 ABSOLUTE RATINGS (T_c=25℃)

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	VDRM		±800	V
通态方均根电流 On-state RMS current	IT(RMS)	full sine wave,	16	A
非重复浪涌峰值通态电流 Non- repetitive surge peak on-state current	ITSM	full sine wave ,t=20ms	150	A
		full sine wave ,t=16.7ms	161	A
	I _{2t}	t=10ms	112.5	A ² s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	dI/dt	ITM=20A, IG=0.2A, dI _G /dt=0.2A/μs	100	A/μs
峰值门极电流 Peak gate current	IGM		4	A
峰值门极电压 Peak gate voltage	VGM		5	V
峰值门极功率 Peak gate power	PGM		5	W
平均门极功率 Average gate power	PG(AV)	over any 20ms period	0.5	W
存储温度 Storage temperature	T _{stg}		-40~150	℃
操作结温 Operation junction temperature	TVJ		125	℃

电特性 ELECTRICAL CHARACTERISTIC (T_c=25°C)

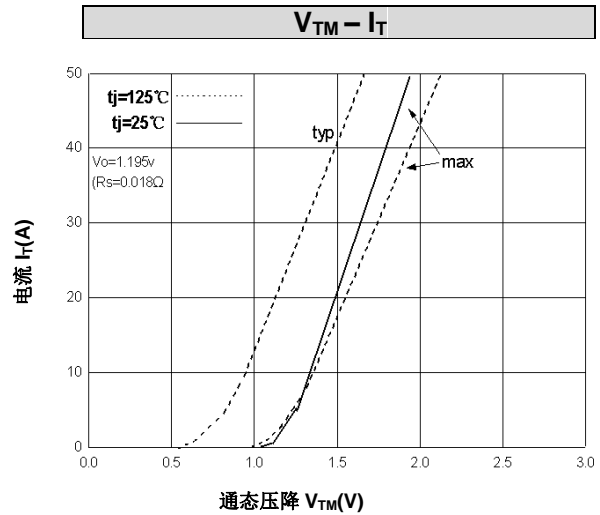
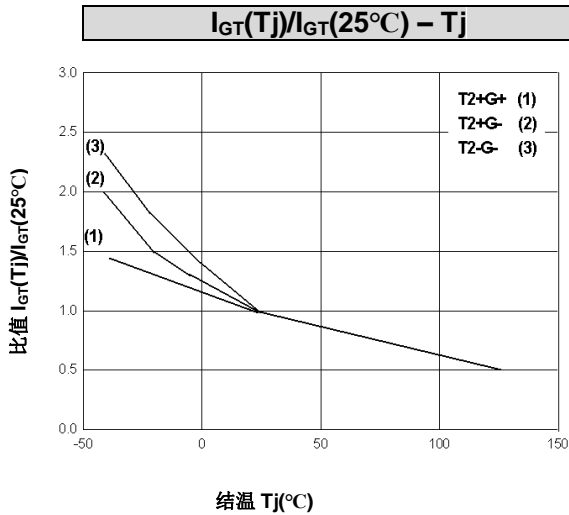
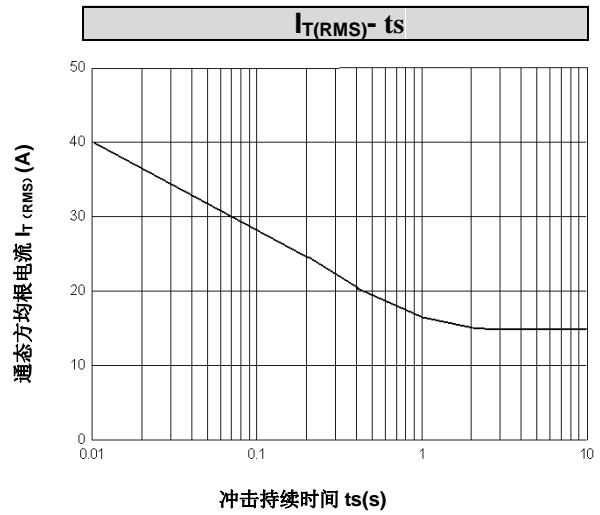
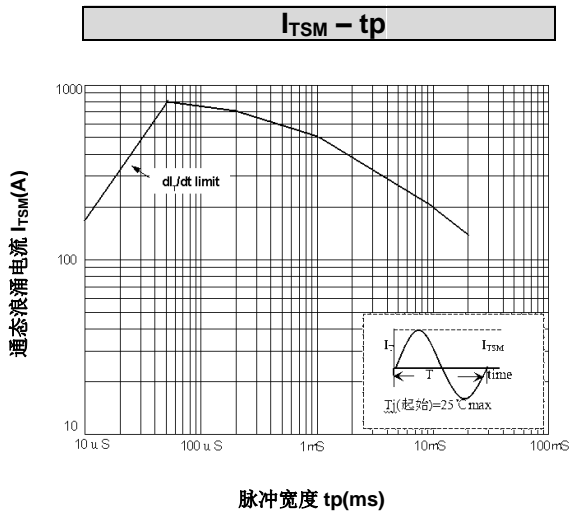
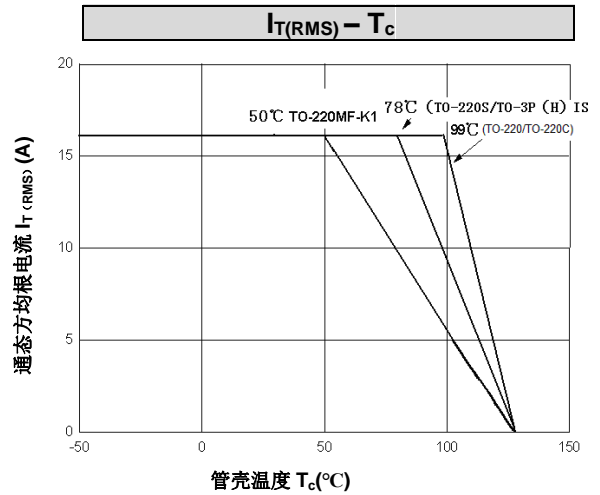
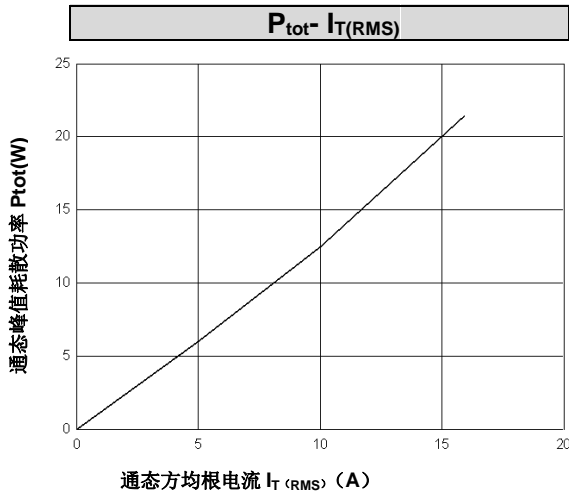
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition		最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I _{DRM}	V _{DM} =V _{DRM} , T _j =125°C, gate open		-	-	1.0	mA
峰值通态电压 Peak on-state voltage	V _{TM}	I _{TM} =20A		-	1.4	1.7	V
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100Ω	MT1(-),MT2(+),G(+)	-	-	35	mA
			MT1(-),MT2(+),G(-)	-	-	35	mA
			MT1(+),MT2(-),G(-)	-	-	35	mA
门极触发电压 Gate trigger voltage	V _{GT}	V _{DM} =12V, R _L =100Ω	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 _{DM} =12V, I _{GT} =0.1A		-	-	35	mA
擎住电流 Latching current	I _L	V _{DM} =12V, I _{GT} =0.1A	MT1(-),MT2(+),G(+)	-	-	50	mA
			MT1(-),MT2(+),G(-)	-	-	60	mA
			MT1(+),MT2(-),G(-)	-	-	50	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V _{DM} =67% V _{DRM(MAX)} , T _j =125°C, gate open		1000	-	-	V/μs
门极开通时间 Gate controlled turn-on time	tgt	I _{TM} =20A, V _{DM} =V _{DRM(MAX)} , I _G =0.1A, dI _G /dt=5A/μS		-	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 _{th(j-c)}	full cycle(TO-220C)			1.2	°C/W



特征曲线 ELECTRICAL CHARACTERISTICS (curves)



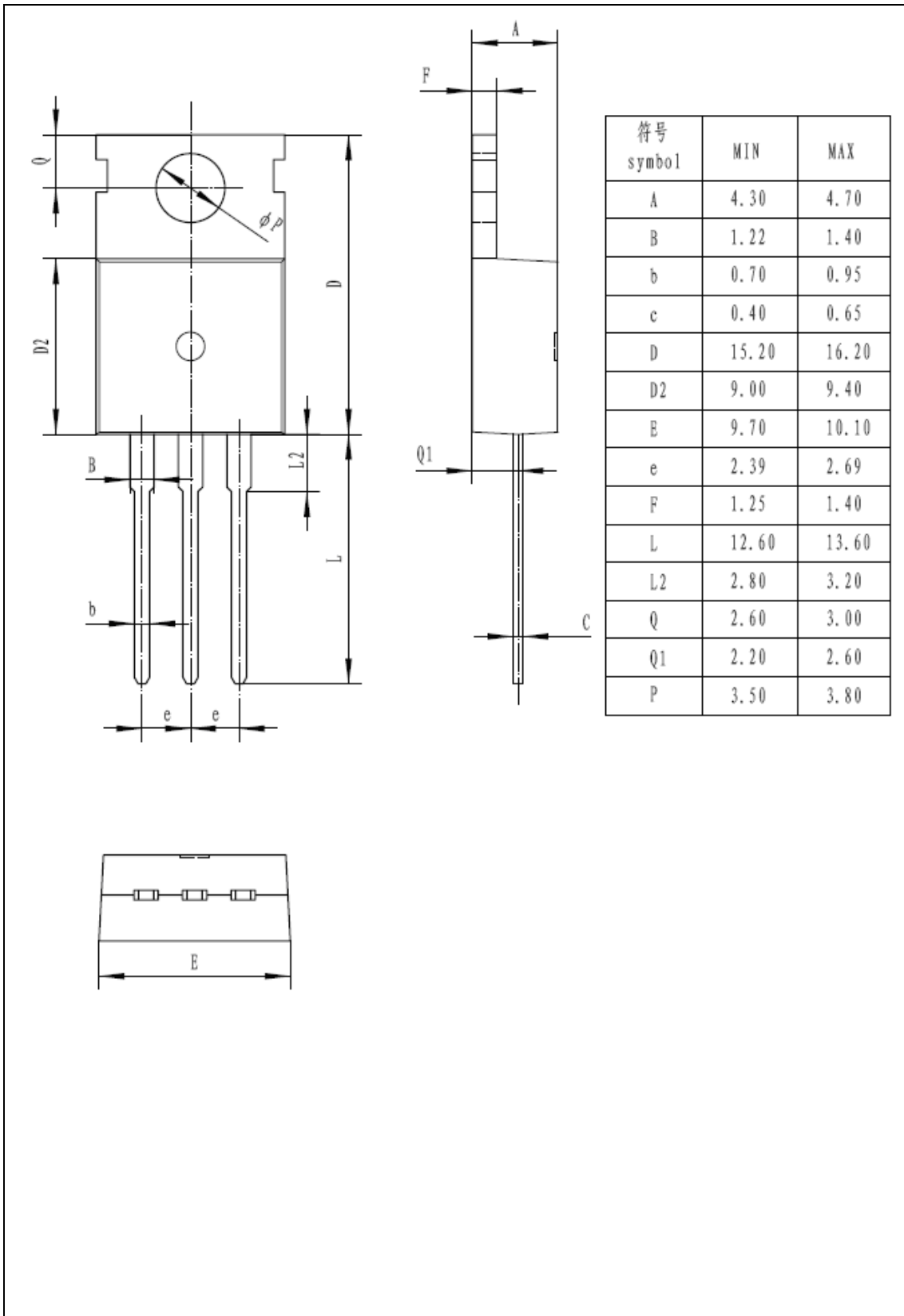


3TT16C

外形尺寸 PACKAGE MECHANICAL DATA

TO-220C

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。

NOTE

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this. specification sheet and is subject to change without prior notice.

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