

# T0435NT

## 主要参数 MAIN CHARACTERISTICS

$I_T(RMS)$	4A
$V_{DRM}$	800V
$I_{GT}$	25mA

## 用途

- 交流开关
- 相位控制

## APPLICATIONS

- AC switching
- Phase control

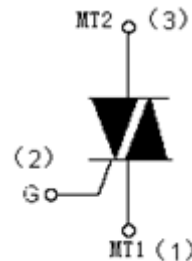
## 产品特性

- 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

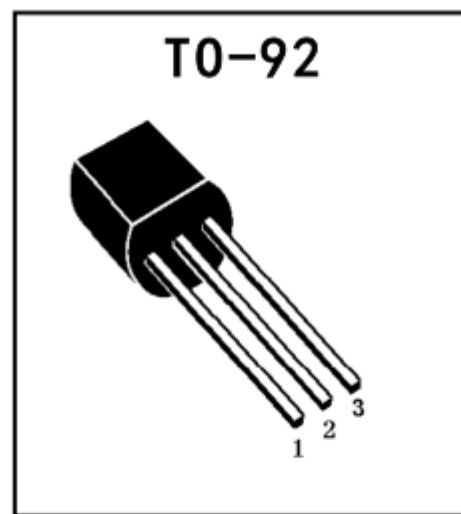
## FEATURES

- 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	门极 G
3	主电极 2 MT2



## 订货信息 ORDER MESSAGES

有卤-编带	无卤-编带	有卤-袋装	无卤-袋装	印 记	封 装
Halogen-Reel	Halogen-Free-Reel	Halogen-Bag	Haloge-Free-Bag	Marking	Package
T0435NT -T-A	N/A	N/A	N/A	T0435NT	TO-92
N/A	T0435NT -T-AR	N/A	N/A	T0435NT	TO-92
N/A	N/A	T0435NT--T-C	N/A	T0435NT	TO-92
N/A	N/A	N/A	T0435NT--T-CR	T0435NT	TO-92

## 概述 GENERAL DESCRIPTION

T0435NT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-92。

T0435NT 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-92.

绝对最大额定值 ABSOLUTE RATINGS (T<sub>c</sub>=25°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 <sub>DRM</sub>		±800	V
通态方均根电流 On-state RMS current	I <sub>T(RMS)</sub>	full sine wave	4	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I <sub>TSM</sub>	full sine wave ,t=20ms	25	A
		full sine wave ,t=16.7ms	27	A
	I <sup>2</sup> t	t=10ms	3.1	A <sup>2</sup> s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	I <sub>TM</sub> =6A, I <sub>G</sub> =0.2A, di <sub>G</sub> /dt=0.2A/μs	100	A/μs
峰值门极电流 Peak gate current	I <sub>GM</sub>		2	A
峰值门极电压 Peak gate voltage	V <sub>GM</sub>		5	V
峰值门极功率 Peak gate power	P <sub>GM</sub>		5	W
平均门极功率 Average gate power	P <sub>G(AV)</sub>	over any 20ms period	0.5	W
存储温度 Storage temperature	T <sub>stg</sub>		-40~150	°C
操作结温 Operation junction temperature	T <sub>VJ</sub>		125	°C



电特性 ELECTRICAL CHARACTERISTIC (T<sub>C</sub>=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 <sub>DRM</sub>	V <sub>DM</sub> =800V, T <sub>j</sub> =125°C, gate open	-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =5A	-	1.4	1.7	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, MT1(-),MT2(+),G(+)	2	-	25	mA
		R <sub>L</sub> =100 Ω, MT1(-),MT2(+),G(-)	2	-	25	mA
		Ω, MT1(+),MT2(-),G(-)	2	-	25	mA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, MT1(-),MT2(+),G(+)	-	0.7	1.5	V
		R <sub>L</sub> =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 <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	30	mA
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, MT1(-),MT2(+),G(+)	-	-	30	mA
		I <sub>GT</sub> =0.1A, MT1(-),MT2(+),G(-)	-	-	45	mA
		MT1(+),MT2(-),G(-)	-	-	30	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V <sub>DM</sub> =67% V <sub>DRM</sub> , T <sub>j</sub> =125°C, gate open	1000	-	-	V/ μ s
门极开通时间 Gate controlled turn-on time	t <sub>gt</sub>	I <sub>TM</sub> =6A, V <sub>DM</sub> =V <sub>DRM(MAX)</sub> , I <sub>G</sub> =0.1A, di <sub>G</sub> /dt=5A/ μ S	-	2	-	us

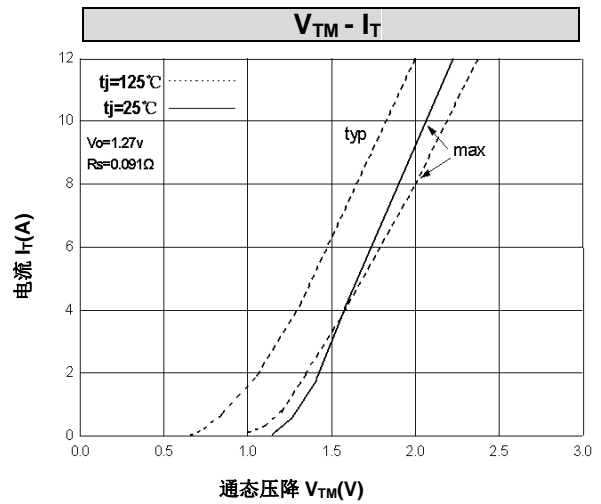
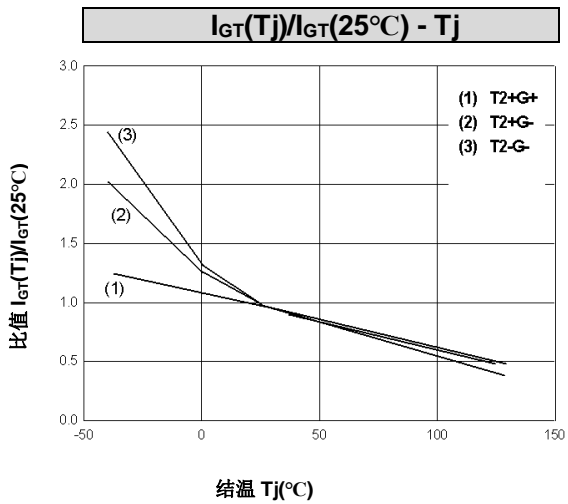
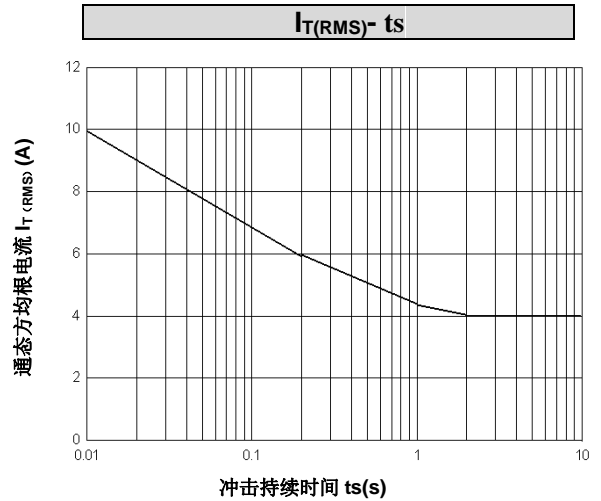
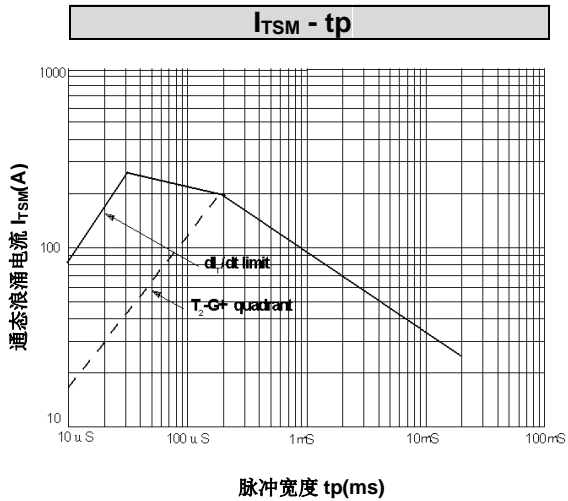
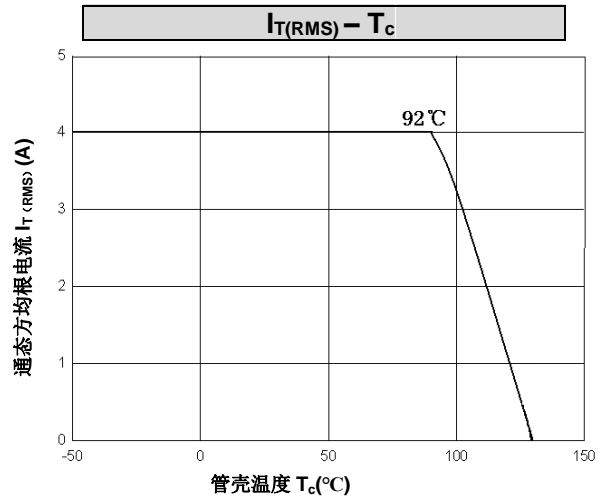
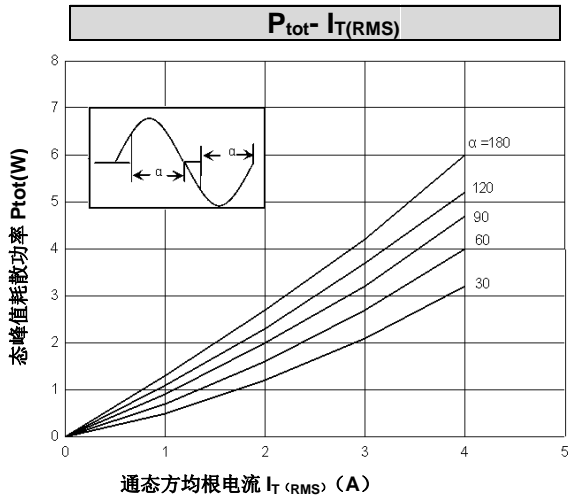
## 热特性 THERMAL CHARACTERISTIC

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 <sub>th(j-c)</sub>	full cycle(TO-92)			7.9	°C/W





### 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

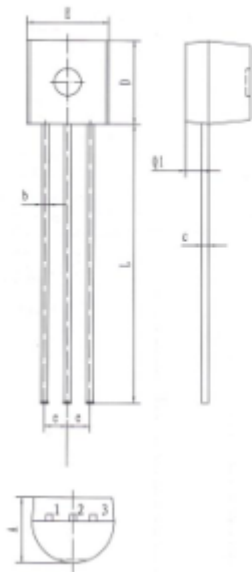




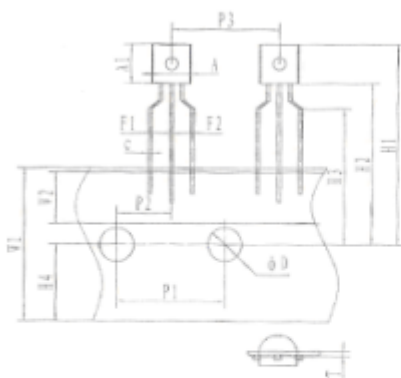
## 外形尺寸 PACKAGE MECHANICAL DATA

TO-92

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	3.30-3.90
b	0.35-0.55
c	0.31-0.51
D	4.30-4.90
E	4.30-4.90
e	1.17-1.37
L	12.50-15.50
Q1	0.85-1.00



符号 Symbol	尺寸 (mm) Size (mm)
A	4.50-4.70
A1	4.50-4.70
A2	3.50-3.70
c	TYP 0.45
F1/F2	2.20-2.80
W1	17.5-18.5
W2	5.50-6.50
H1	22.0-27.0
H2	18.0-20.0
H3	15.0-17.0
H4	8.50-9.50
P1	12.5-12.9
P2	6.00-6.70
P3	12.5-12.9
T	0.40-0.45
φD	3.80-4.20
ΔH	0.00-1.00



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