

# Z0105NT

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1.0A
$V_{DRM}$	800V
$I_{GT}$	5mA

## 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

低通态电流和高浪涌电流能力

## APPLICATIONS

AC switching

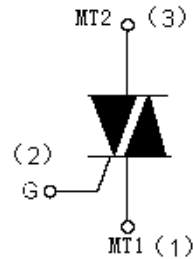
Phase control

## FEATURES

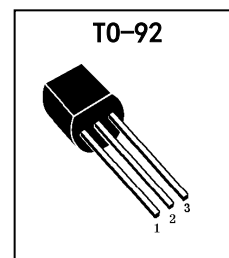
Glass-passivated mesa chip for reliability and uniform

Low on-state voltage and High  $I_{TSM}$

## 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

订货型号 Order codes				印 记 Marking	封 装 Package
有卤-编带弹 带盒装	无卤-编带弹带 盒装	有卤-袋装	无卤-袋装		
Halogen-Tape	Halogen-Free-Tape	Halogen-Bag	Halogen-Free-Bag		
Z0105NT-T-E	Z0105NT-T-ER	Z0105NT-T-C	Z0105NT-T-CR	Z0105NT	T0-92

Z0105NT 是玻璃钝化芯片结构的四象限双向晶闸管，具有较高的使用可靠性。器件封装形式有 T0-92。

Z0105NT are Glass passivated four quadrant triacs. Available packages are T0-92.



## 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
结到环境的热阻 Thermal resistance junction to ambient	Rth(j-a)	full cycle (T0-92)	-	150	-	K/W

## 绝对最大额定值 ABSOLUTE RATINGS (TC=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	$V_{DRM}$		±800	V
通态方均根电流 On-state RMS current	$I_{T(RMS)}$	full sine wave	1.0	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=20ms	8	A
	$I_{TSM}$	full sine wave, t=16.7ms	10	A
$I^2t$ for using	$I^2t$	t=8.3ms	0.42	A <sup>2</sup> s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	$dI/dt$	MT1(-), MT2(+), G(+);	50	A/ $\mu$ s
		MT1(-), MT2(+), G(-);	50	
		MT1(+), MT2(-), G(-)	50	
		MT1(+), MT2(-), G(+)	20	
峰值门极电流 Peak gate current	$I_{GM}$		1	A
峰值门极功率 Peak gate power	$P_{GM}$		2.0	W
峰值门极电压 Peak gate voltage	$V_{GM}$		6.0	V
平均门极功率 Average gate power	$P_{G(AV)}$		0.1	W
存储温度 Storage temperature	$T_{stg}$		-40~150	°C
操作结温 Operation junction temperature	$T_{VJ}$		-40~125	°C





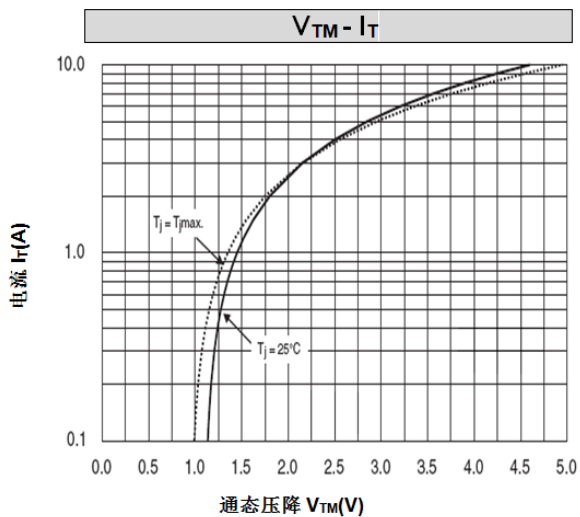
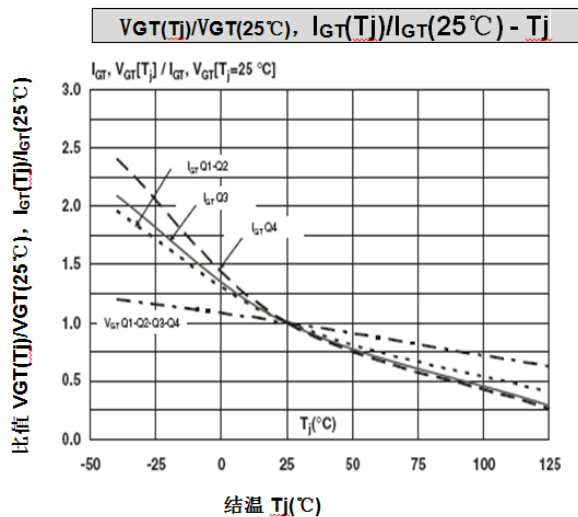
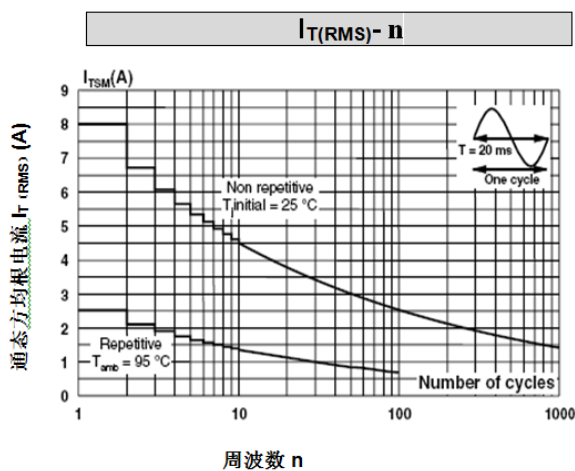
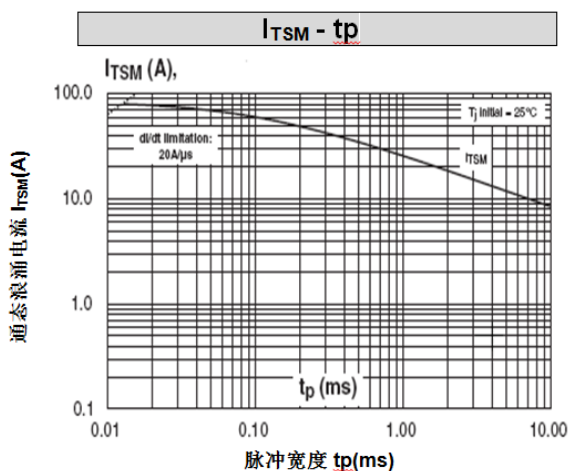
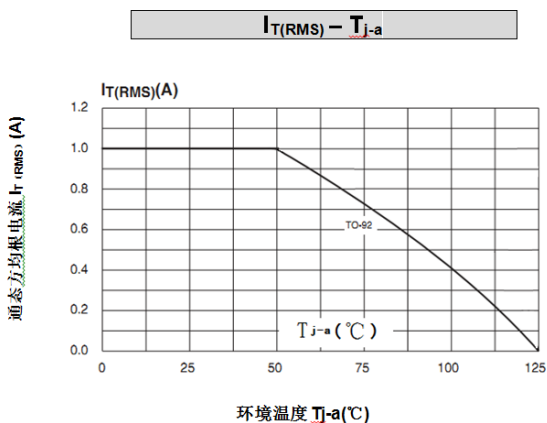
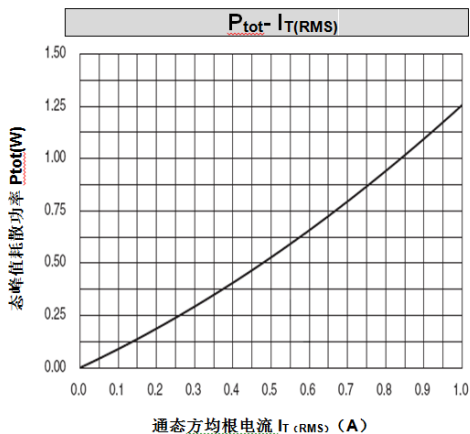
## 电特性 ELECTRICAL CHARACTERISTIC (TC=25°C)

项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit	
门极触发电流 Gate trigger current	$I_{GT}$	$V_{DM}=6V,$ $R_L=6\Omega$	MT1 (-), MT2 (+), G (+)	-	-	5	mA
			MT1 (-), MT2 (+), G (-)	-	-	5	mA
			MT1 (+), MT2 (-), G (-)	-	-	5	mA
			MT1 (+), MT2 (-), G (+)	-	-	10	mA
维持电流 Holding current	$I_H$	$V_{DM}=12V, I_{GT}=0.1A$	-	-	10	mA	
擎住电流 Latching current	$I_L$	$V_{DM}=12V, I_{GT}=0.1A,$ MT2 (+), G (+)	-	-	15	mA	
			$V_{DM}=12V, I_{GT}=0.1A,$ MT2 (+), G (-)	-	-	25	mA
			$V_{DM}=12V, I_{GT}=0.1A,$ MT2 (-), G (-)	-	-	15	mA
			$V_{DM}=12V, I_{GT}=0.1A,$ MT2 (-), G (+)	-	-	25	mA
断态临界电压上升率 Rise of off-state voltage	$dV/dt$	$V_{DM}=402V,$ $T_j=110^\circ C, \text{ gate open}$	50	-	-	V/ $\mu s$	
门极触发电压 Gate trigger voltage	$V_{GT}$	$V_{DM}=6V, R_L=6\Omega$	-	-	1.3	V	
峰值通态电压 Peak on-state voltage	$V_{TM}$	$I_{TM}=1.5A$	-	1.3	1.6	V	
峰值重复断态电流 Off-state leakage Current	ID	$V_D=600V, T_j=125^\circ C$	-	-	500	$\mu A$	





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

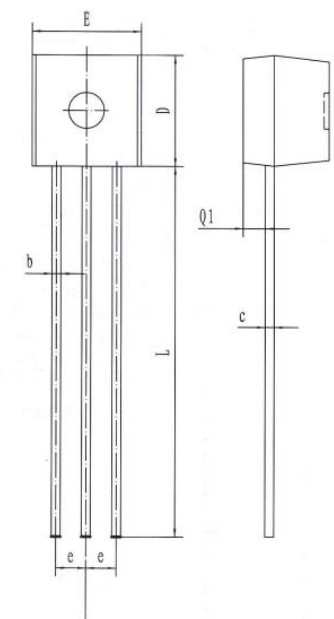




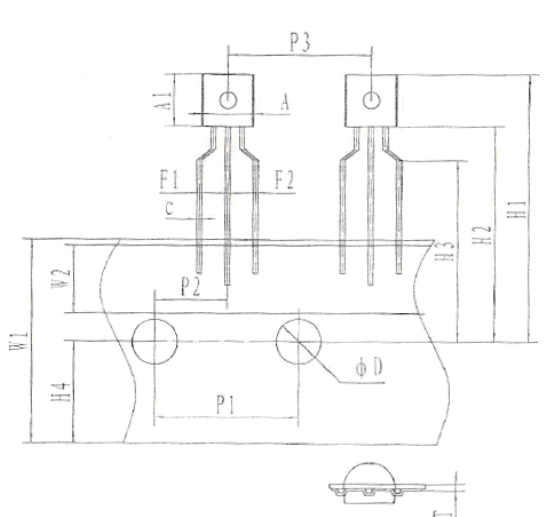
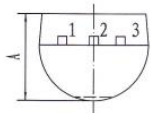
外形尺寸 PACKAGE MECHANICAL DATA

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
φ D	3.80-4.20
ΔH	0.00-1.00



### 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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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
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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