



MCR100-8

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1A
V_{DRM}/V_{RRM}	800V
I_{GT}	10-100 μ A

用途

- 半交流开关
- 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
- 环保 RoHS 产品
- 芯片面积 1.36mm*1.36mm（锯片后最小面积 1.30mm*1.30mm）

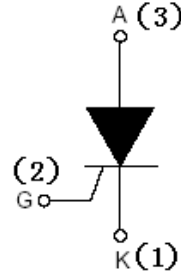
APPLICATIONS

- Half AC switching
- Phase control

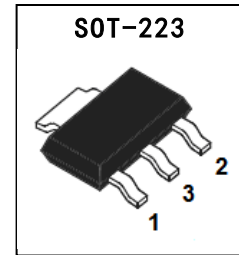
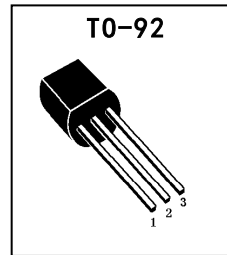
FEATURES

- Glass-passivated mesa chip for high reliability and uniform
- Low on-state voltage and High I_{TSM}
- RoHS products

封装 Package



序号 Pin	引线名称 Description
1	阴极 K
2	门极 G
3	阳极 A



订货信息 ORDER MESSAGES

有卤-编带	无卤-编带	有卤-袋装	印 记	封 装
Halogen-Reel	Halogen-Free-Reel	Halogen-Bag	Marking	Package
N/A	N/A	MCR100-8--T-C	MCR100-8	T0-92
MCR100-8-T-A	N/A	N/A	MCR100-8	T0-92
MCR100-8--NC-A	N/A	N/A	MCR100-8	SOT-223



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
断态重复峰值电压 Repetitive peak off-state voltage	V_{DRM}		800	V
反向重复峰值电压 Repetitive peak reverse voltage	V_{RRM}		800	V
Non -Repetitive peak off-state voltage	V_{DSM}		950	V
Non -Repetitive peak reverse voltage	V_{RSM}		950	V
通态平均电流 Average on-state current	$I_T(AV)$		0.6	A
通态方均根电流 On-state RMS current	$I_T(RMS)$		1.0	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I_{TSM}	half sine cycle ($t=20\text{ms}$), $T_j=25^\circ\text{C}$	12	A
熔断 I^2t I^2t for fusing	I^2t	half sine wave, $t=10\text{ms}$	0.72	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after riggering	dI/dt	$I_{TM}=2.0\text{A}$, $I_G=0.02\text{A}$, $dI_G/dt=1.0\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	I_{GM}	$t_p=20\mu\text{s}$, $T_j=110^\circ\text{C}$	1	A
平均门极功率 Average gate power	$P_{G(AV)}$	$t_p=20\mu\text{s}$, $T_j=110^\circ\text{C}$	0.1	W
存储温度 Storage temperature	T_{stg}		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	T_{VJ}		-40~125	$^\circ\text{C}$



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
断态峰值重复电流 Peak Repetitive Blocking Current	I _{DRM}	V _{DM} =V _{DRM} , T _J =125°C, R _{GK} =1KΩ	-	-	0.1	mA
反向峰值重复电流 Peak Repetitive Reverse Current	I _{RRM}	V _{RM} =V _{RRM} , T _J =125°C, R _{GK} =1KΩ	-	-	0.1	mA
峰值通态电压 Peak on-state voltage	V _{TM}	I _{TM} =1A	-	-	1.7	V
门极触发电流 Gate trigger current	I _{GT}	V _{AK} =12V, R _L =33Ω	10	-	100	μA
门极触发电压 Gate trigger voltage	V _{GT}	V _{AK} =12V, R _L =33Ω	-	0.6	0.8	V
维持电流 Holding current	I _H	V _{AK} =12V, I _T =0.1A	-	-	5	mA
擎住电流 Latch current	I _L	V _{AK} =12V, I _T =0.1A	-	-	5	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V _{DM} =2/3V _{DRM} , T _J =110°C, R _{GK} =1KΩ	50	100		V/μs

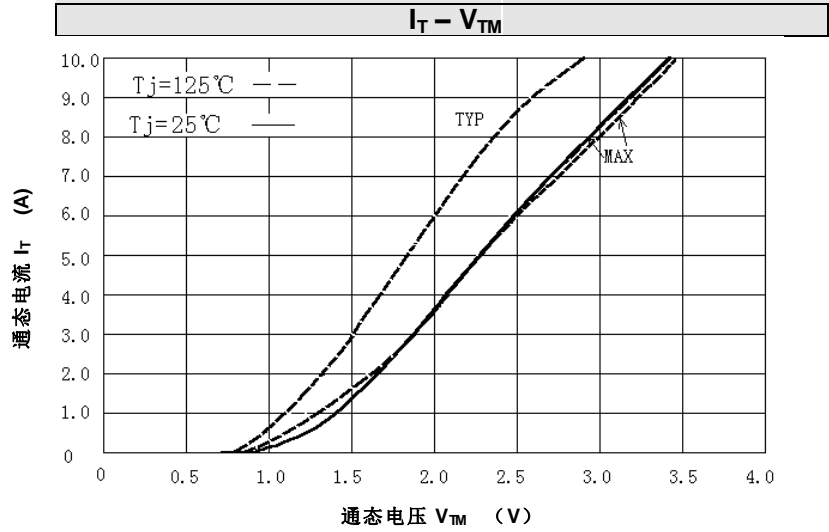
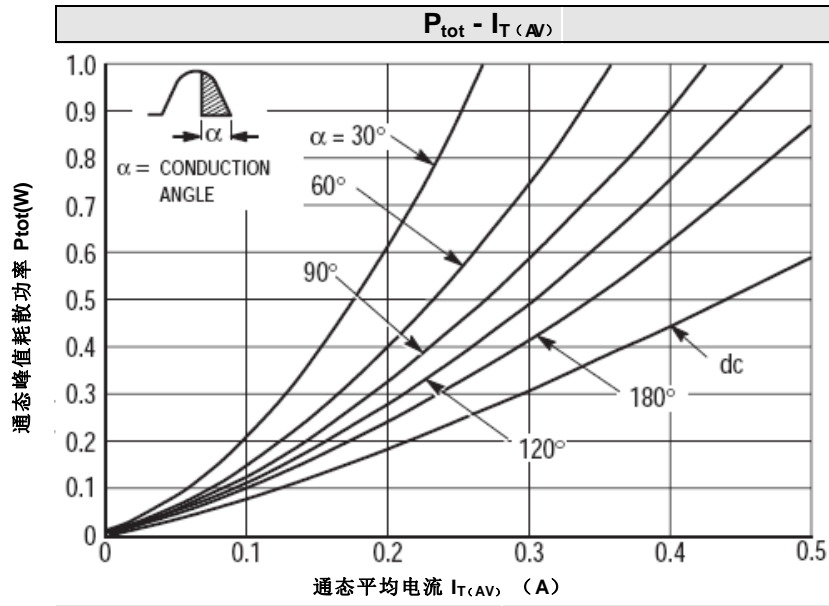
热特性 THERMAL CHARACTERISTIC

项 目 Parameter	符 号 Symbol	条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到引线的热阻 Thermal resistance junction to lead	R _{th(j-l)}	half cycle (TO-92)	-	-	75	°C/W
结到引线的热阻 Thermal resistance junction to solder point	R _{th(j-sp)}	half cycle (SOT-223)	-	-	15	°C/W
结到环境的热阻 Thermal resistance junction to ambient	R _{th(j-a)}	half cycle (TO-92)	-	-	200	°C/W





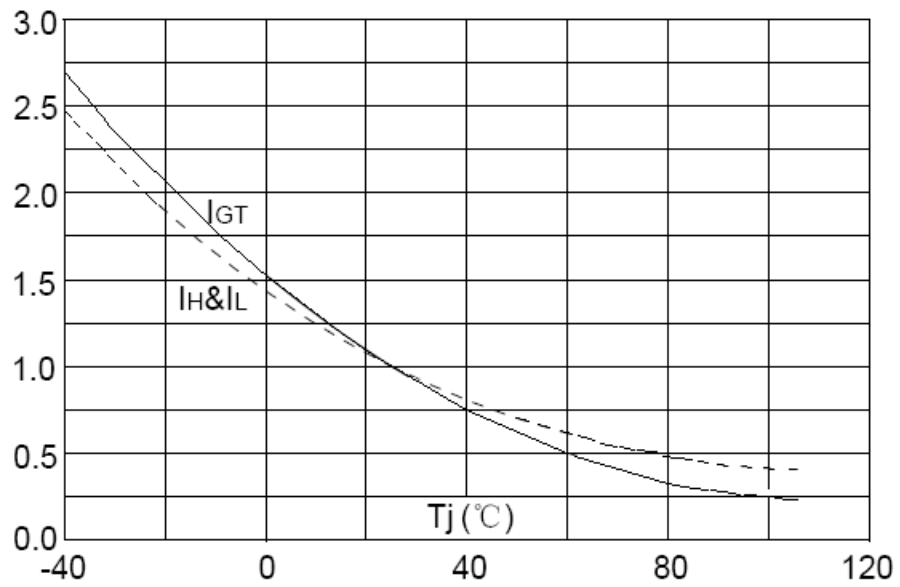
特征曲线 ELECTRICAL CHARACTERISTICS (curves)





IGT,IH,IL/IGT,IH,IL(Tj=25°C)

Relative variations of gate trigger current ,holding current and latching current versus junction temperature.

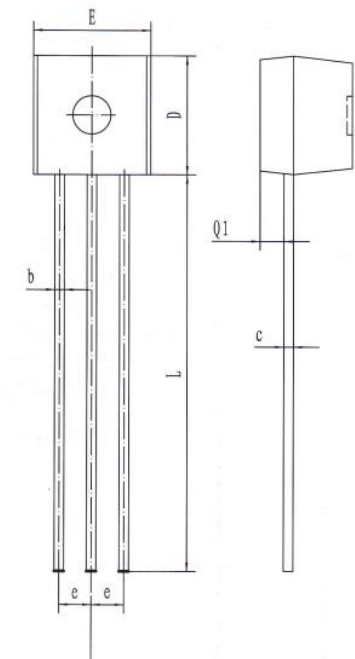




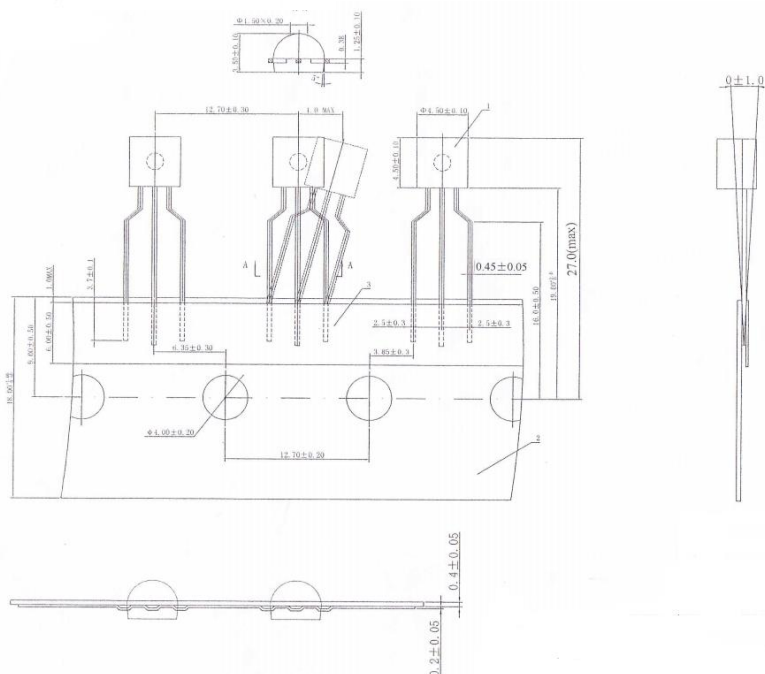
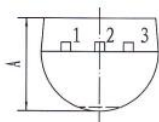
外形尺寸 PACKAGE MECHANICAL DATA

TO-92

单位 Unit : 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

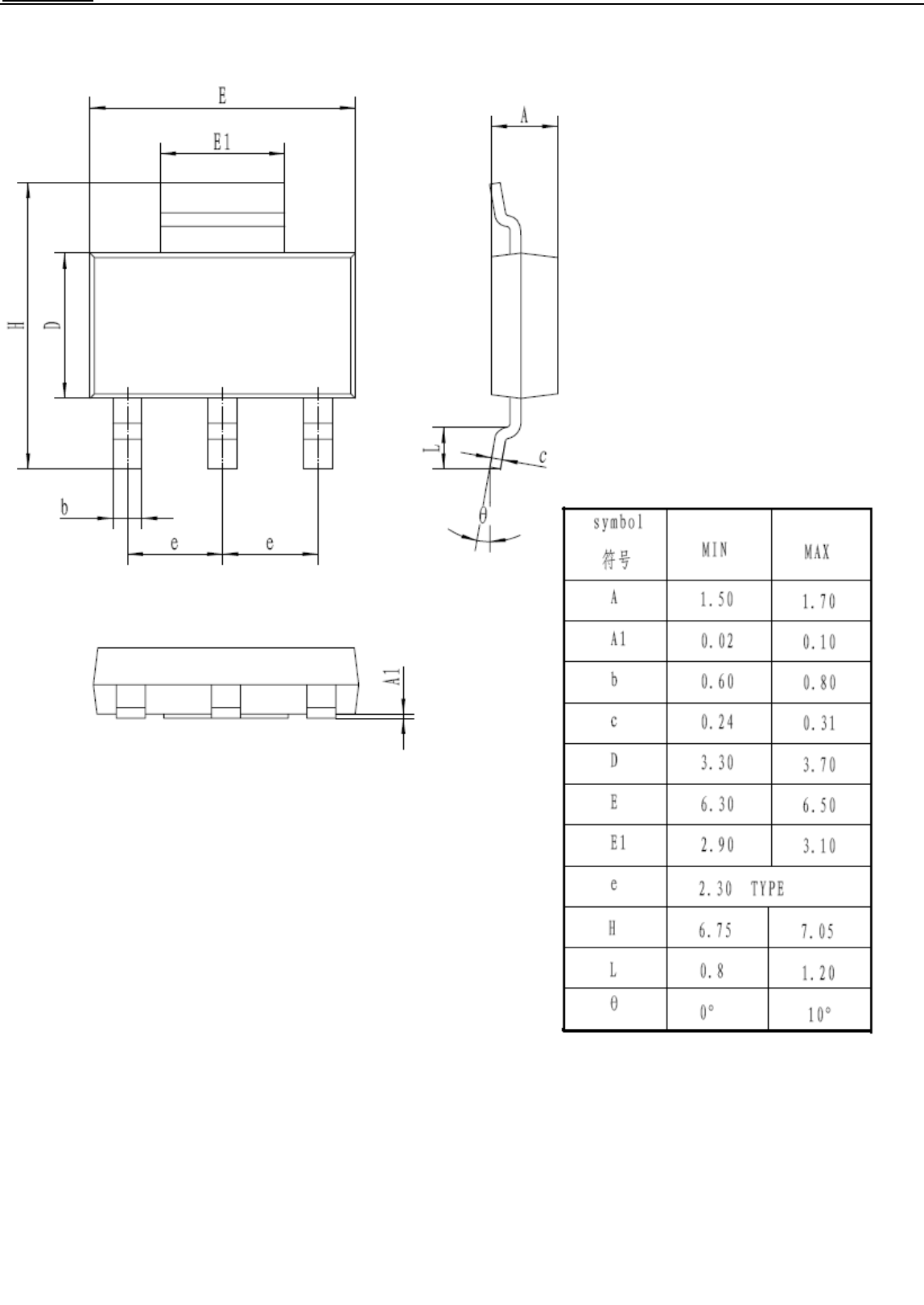




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

单位 Unit : mm



**注意事项**

1. 吉林华微电子股份有限公司的产品销售分为直销和销售代理，无论哪种方式，订货时请与公司核实。
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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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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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