



CS210N4A

主要参数 MAIN CHARACTERISTICS

| | |
|--------------|------|
| $I_{T(RMS)}$ | 2.0A |
| V_{DRM} | 800V |
| I_{GT} | 10mA |

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

环保 RoHS 产品

APPLICATIONS

AC switching

Phase control

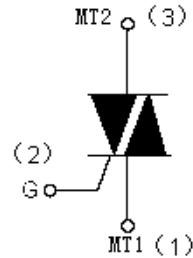
FEATURES

Glass-passivated mesa chip for reliability and uniform

Low on-state voltage and High I_{TSM}

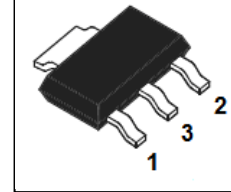
RoHS products

封装 Package



| 序号 Pin | 引线名称 Description |
|-----------|---------------------|
| 1 | 主电极 1 MT1 |
| 2 | 门极 G |
| 3 | 主电极 2 MT2 |

SOT-223



订货信息 ORDER MESSAGES

| 订货型号 Order codes | | 印 记 Marking | 封 装 Package |
|------------------|-------------------|----------------|----------------|
| 有卤-编带 | 无卤-编带 | | |
| Halogen-Reel | Halogen-Free-Reel | CS210N4A | SOT-223 |
| CS210N4A-NC-A | CS210N4A-NC-AR | | |

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} | | ± 800 | V |
| 通态方均根电流 On-state RMS current | $I_{\text{T(RMS)}}$ | full sine wave | 2.0 | A |
| 非重复浪涌峰值通态电流 Non - repetitive surge peak on-state current | I_{TSM} | full sine wave , $t=20\text{ms}$ | 20 | A |
| | I^2t | $t=10\text{ms}$ | 2.0 | A^2s |
| 通态电流临界上升率 Repetitive rate of rise of on-state current after triggering | di/dt | MT1(-),MT2(+),G(+); MT1(-),MT2(+),G(-); MT1(+),MT2(-),G(-); MT1(+),MT2(-),G(+); | 50 | $\text{A}/\mu\text{s}$ |
| 峰值门极功率 Peak gate power | P_{GM} | | 1 | W |
| 平均门极功率 Average gate power | $P_{\text{G(AV)}}$ | | 0.1 | W |
| 峰值门极电压 Peak gate voltage | V_{GM} | | 6 | V |
| 峰值门极电流 Peak gate current | I_{GM} | | 1 | A |
| 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 |
|--|------------------|--|-----------|-----------|-----------|------------|
| 峰值重复断态电流 Peak Repetitive Blocking Current | I _{DRM} | V _{DM} =V _{DRM} , T _j =125°C, gate open | - | - | 0.5 | mA |
| 峰值通态电压 Peak on-state voltage | V _{TM} | I _{TM} =2.8A | - | - | 1.6 | V |
| 门极触发电压 Gate trigger voltage | V _{GT} | V _{DM} =12V, R _L =100Ω | - | - | 1.5 | V |
| 门极触发电流 Gate trigger current | I _{GT} | MT1(-), MT2(+), G(+) | - | - | 10 | mA |
| | | MT1(-), MT2(+), G(-) | - | - | 10 | mA |
| | | MT1(+), MT2(-), G(-) | - | - | 10 | mA |
| | | MT1(+), MT2(-), G(+) | - | - | 20 | mA |
| 维持电流 Holding current | I _H | V _{DM} =12V, I _{GT} =0.1A | - | - | 20 | mA |
| 擎住电流 Latching current | I _L | V _{DM} =12V, I _{GT} =0.1A | - | - | 30 | 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 | 50 | - | - | V/μs |

热特性 THERMAL CHARACTERISTIC

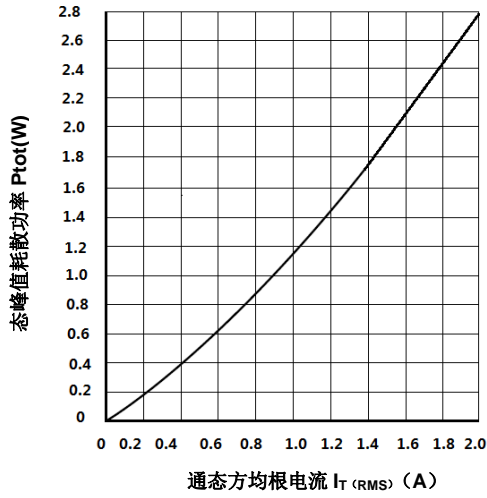
| 项 目 Parameter | 符 号 Symbol | 条 件 Condition | 最小 Min | 典型 Typ | 最大 Max | 单位 Unit |
|--|----------------------|-------------------------|-----------|-----------|-----------|------------|
| 结到基座的热阻 Thermal resistance junction to tab | R _{th(j-t)} | full cycle (SOT-223) | - | - | 25 | °C/W |



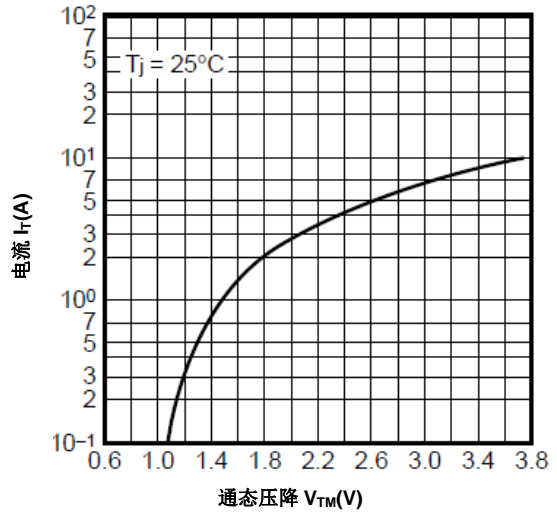
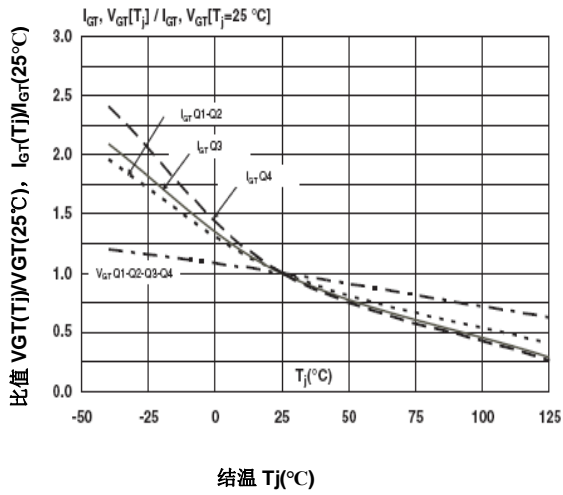
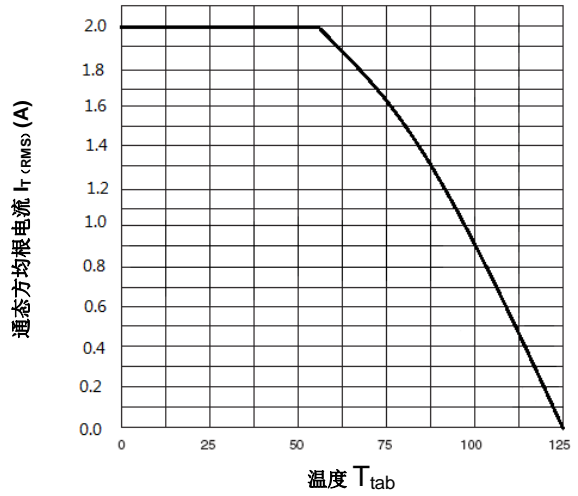


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

$P_{tot} - I_T(RMS)$



$I_T(RMS) - T_{tab}$

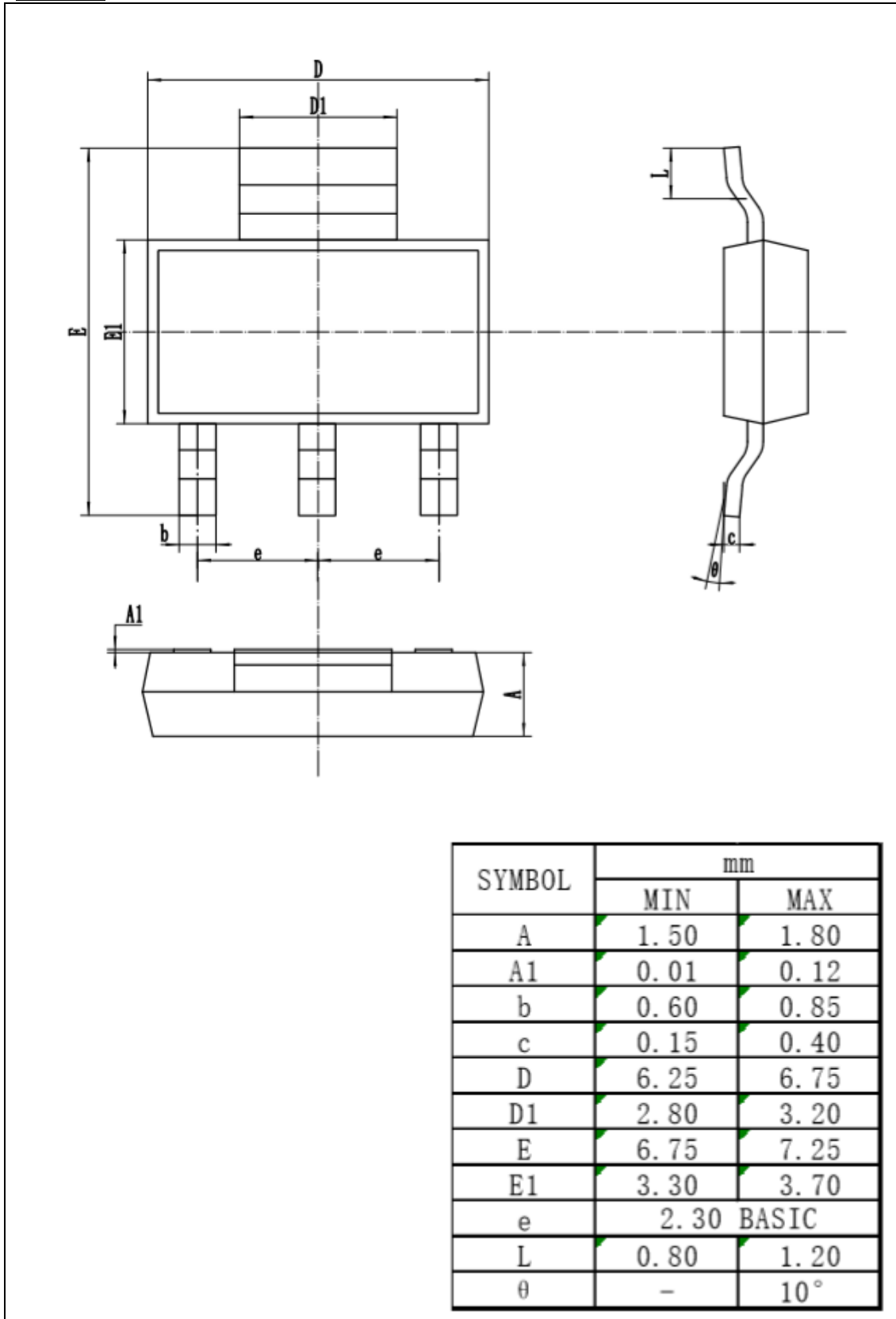




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

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.

联系方式

吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：www.hwdz.com.cn

CONTACT

JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: www.hwdz.com.cn