



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

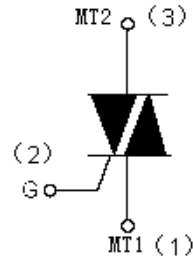
FEATURES

Glass-passivated mesa chip for reliability and uniform

Low on-state voltage and High I_{TSM}

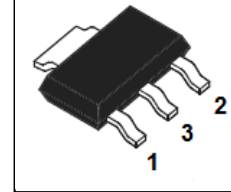
RoHS products

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

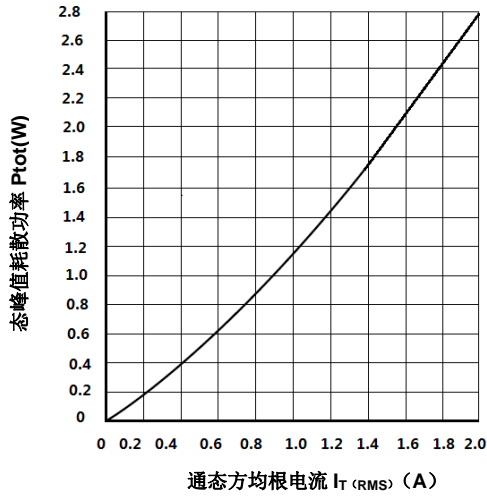
热特性 THERMAL CHARACTERISTIC

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

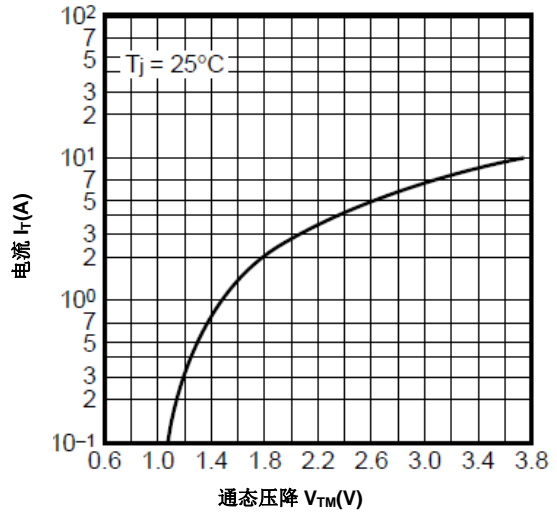
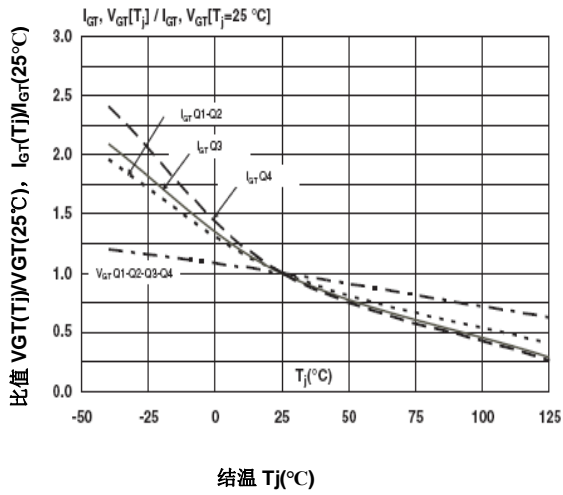
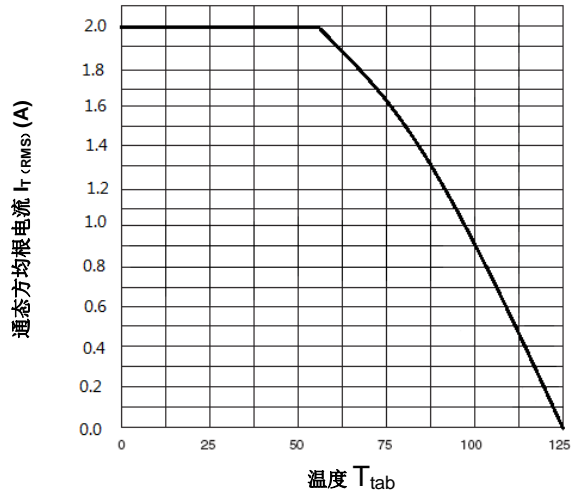


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

$P_{tot} - I_T(RMS)$



$I_T(RMS) - T_{tab}$

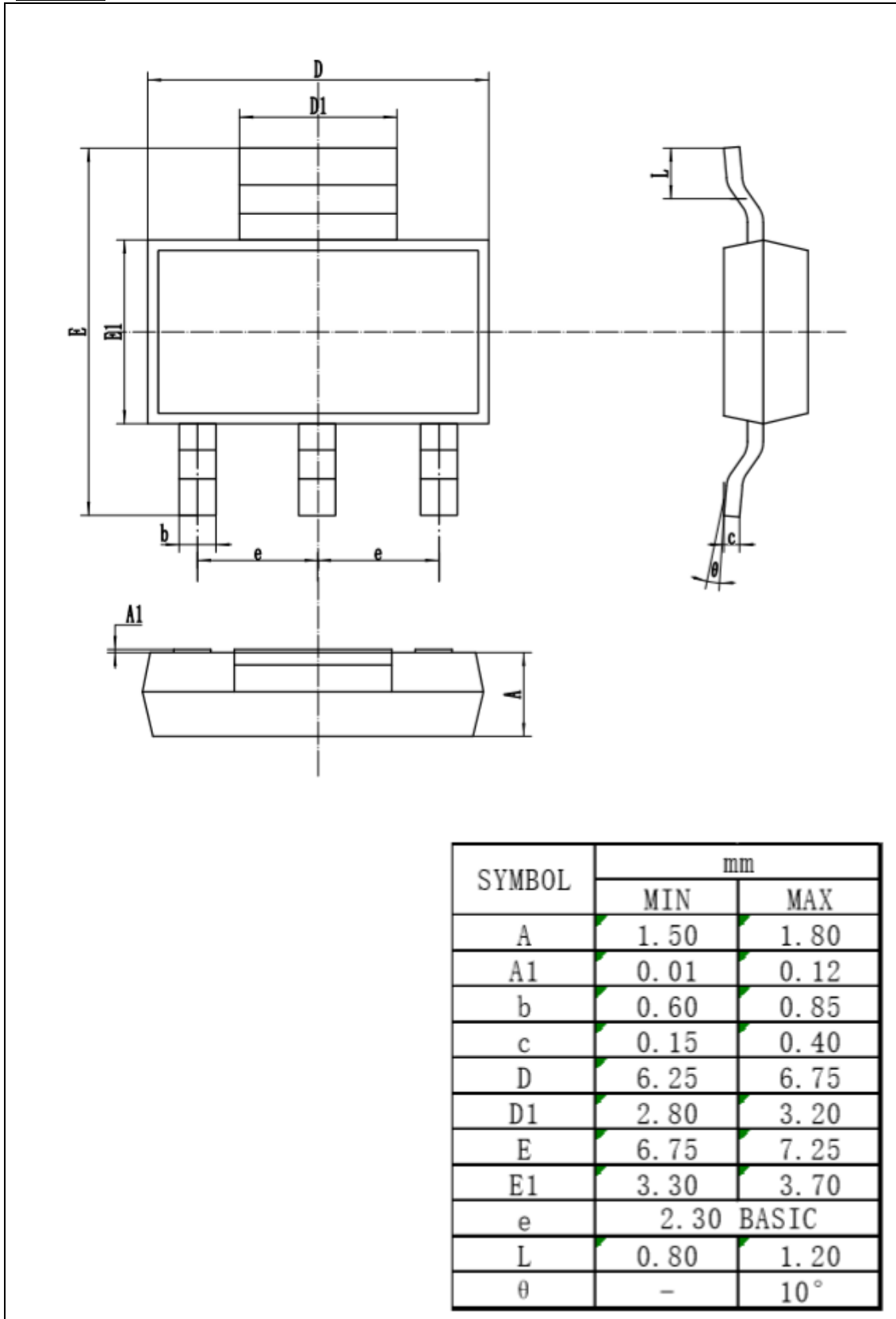




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

单位 Unit : mm





注意事项

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

1. Jilin Sino-microelectronics co., Ltd sales its product either through direct sales or sales agent , thus, for customers, when ordering , please check with our company.
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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