



# CS1100N5A

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1A
$V_{DRM}/V_{RRM}$	900V
$I_{GT}$	30-100 $\mu$ A

## 用途

半交流开关  
相位控制

## APPLICATIONS

Half AC switching  
Phase control

## 产品特性

玻璃钝化芯片，高可靠性和一致性

## FEATURES

Glass-passivated mesa chip for high reliability and uniform

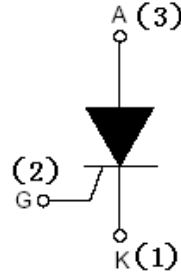
低通态电流和高浪涌电流能力

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

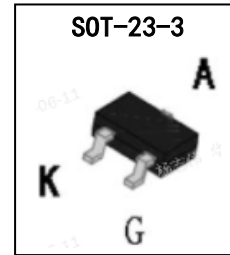
环保 RoHS 产品

RoHS products

## 封装 Package



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



## 订货信息 ORDER MESSAGES

有卤-编带	有卤-袋装	印 记 Marking	封 装 Package
Halogen-Reel	Halogen-Bag		
N/A	CS1100N5A--T-C	1100N5A	SOT-23-3
CS1100N5A -T-A	N/A	1100N5A	SOT-23-3

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	$V_{\text{DRM}}$		900	V
反向重复峰值电压 Repetitive peak reverse voltage	$V_{\text{RRM}}$		900	V
Non -Repetitive peak off-state voltage	$V_{\text{DSM}}$		950	V
Non -Repetitive peak reverse voltage	$V_{\text{RSM}}$		950	V
通态方均根电流 On-state RMS current	$I_{\text{T (RMS)}}$		1	A
非重复浪涌峰值通态电流 Non- repetitive surge peak on-state current	$I_{\text{TSM}}$	half sine cycle (t=20ms), $T_j=25^\circ\text{C}$	8	A
熔断 $I^2t$ $I^2t$ for fusing	$I^2t$	half sine wave, t=10ms	0.32	$\text{A}^2\text{s}$
通态电流临界上升率 Repetitive rate of rise of on-state current after riggering	$di/dt$	$I_{\text{TM}}=2.0\text{A}$ , $I_{\text{G}}=0.02\text{A}$ , $dI_{\text{G}}/dt=1.0\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	$I_{\text{GM}}$	$t_p=20\mu\text{s}$ , $T_j=110^\circ\text{C}$	0.3	A
平均门极功率 Average gate power	$P_{\text{G(AV)}}$	$t_p=20\mu\text{s}$ , $T_j=110^\circ\text{C}$	0.1	W
存储温度 Storage temperature	$T_{\text{stg}}$		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	$T_{\text{VJ}}$		-40~110	$^\circ\text{C}$



电特性 ELECTRICAL CHARACTERISTIC (T<sub>c</sub>=25°C)

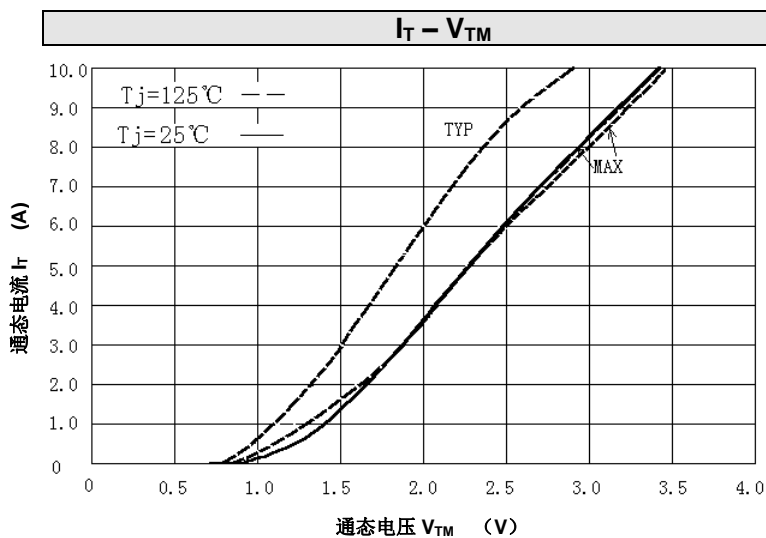
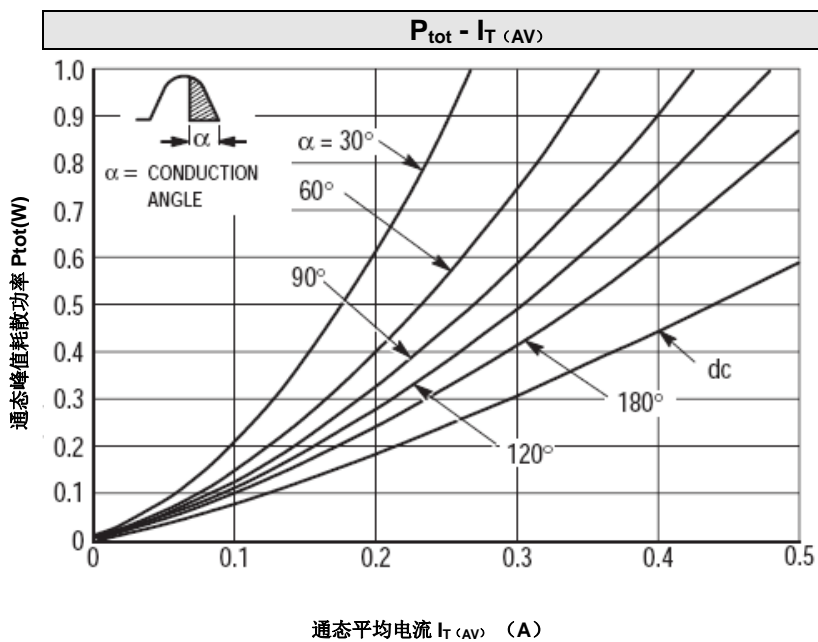
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
断态峰值重复电流 Peak Repetitive Blocking Current	I <sub>DRM</sub>	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>j</sub> =25°C, R <sub>GK</sub> =1KΩ	-	-	5	uA
反向峰值重复电流 Peak Repetitive Reverse Current	I <sub>RRM</sub>	V <sub>R</sub> =V <sub>RRM</sub> , T <sub>j</sub> =25°C, R <sub>GK</sub> =1KΩ	-	-	5	uA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =2A, t <sub>p</sub> =380us, T <sub>j</sub> =25°C	-	-	1.7	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>AK</sub> =12V, R <sub>L</sub> =33Ω	-	-	100	μA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>AK</sub> =12V, R <sub>L</sub> =33Ω	-	0.6	0.8	V
	V <sub>GD</sub>	V <sub>D</sub> =V <sub>DRM</sub> , T <sub>j</sub> =110°C	0.2			V
维持电流 Holding current	I <sub>H</sub>	V <sub>AK</sub> =12V, I <sub>T</sub> =0.1A	-	-	3	mA
擎住电流 Latch current	I <sub>L</sub>	V <sub>AK</sub> =12V, I <sub>T</sub> =0.1A	-	-	5	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V <sub>DM</sub> =2/3V <sub>DRM</sub> , T <sub>j</sub> =110°C, R <sub>GK</sub> =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
结到环境的热阻 Thermal resistance junction to Ambient	R <sub>th(j-A)</sub>	full cycle (SOT-23-3)	-	-	100	°C/W



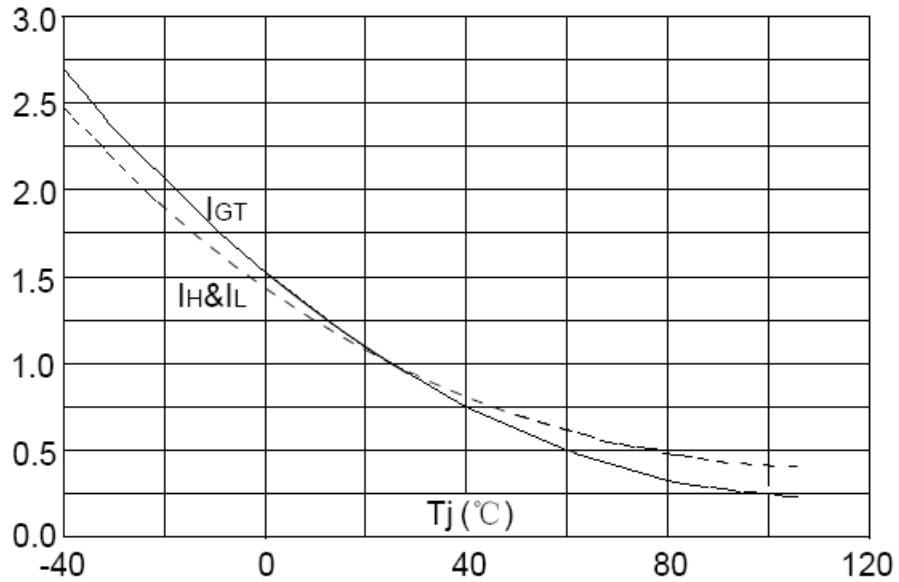
特征曲线 ELECTRICAL CHARACTERISTICS (curves)



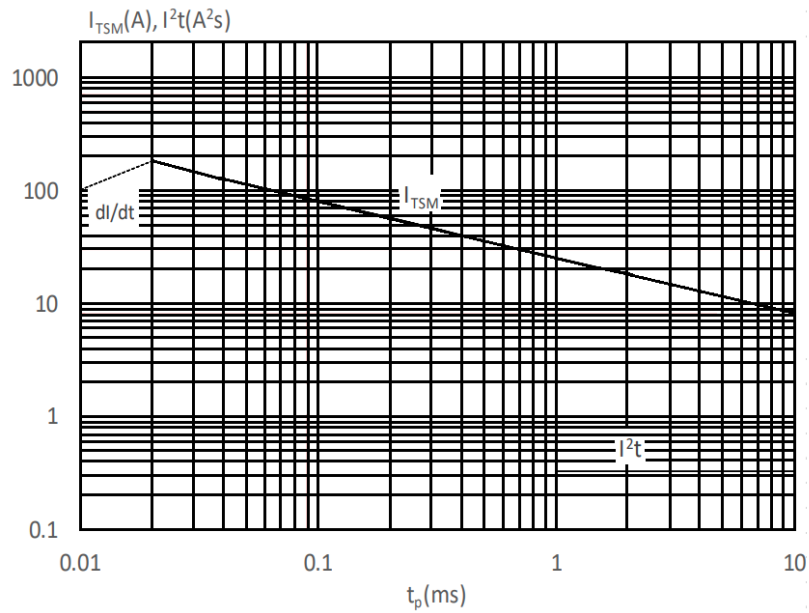


**IGT,IH,IL(Tj) /IGT,IH,IL(Tj=25°C)**

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

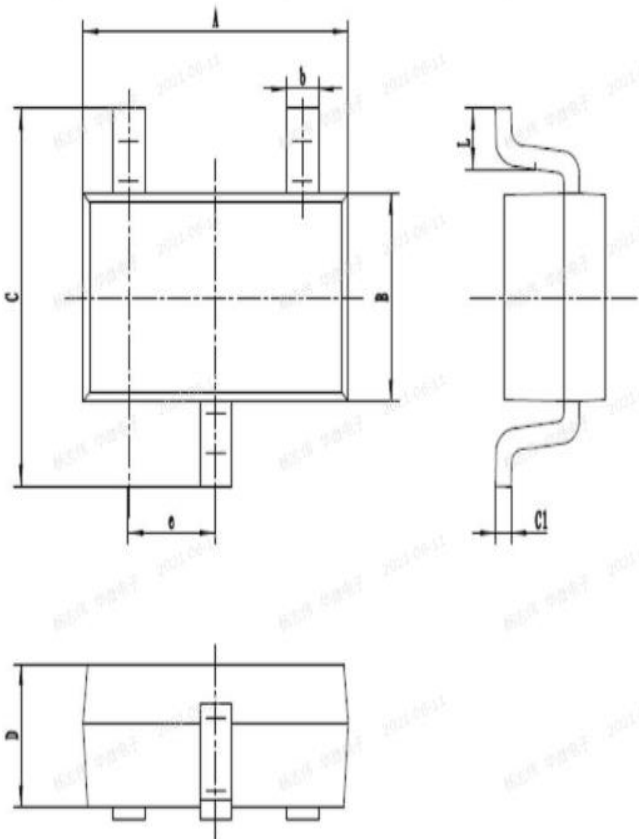


Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp



外形尺寸 PACKAGE MECHANICAL DATA  
SOT-23-3

单位 Unit: mm



SYMBOL	MM	
	MIN	MAX
A	2.82	3.02
B	1.50	1.70
C	2.65	2.95
D	1.00	1.20
L	0.30	0.60
b	0.29	0.51
e	0.95(BSC)	
C1	0.1	0.2



### 注意事项

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