



# CP1100T5A

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1.25A
$V_{DRM}/V_{RRM}$	1200V
$I_{GT}$	10-90 $\mu$ A

### 用途

- 半交流开关
- 相位控制

### 产品特性

- 平面芯片，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

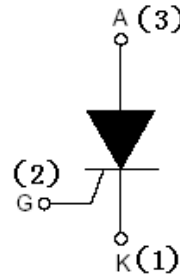
### APPLICATIONS

- Half AC switching
- Phase control

### FEATURES

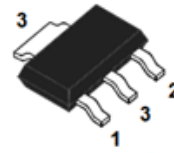
- Planar passivated chip for high reliability and uniform
- Low on-state voltage and High  $I_{TSM}$
- RoHS products

## 封装 Package

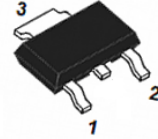


序号 Pin	引线名称 Description
1	阴极 K
2	门极 G
3	阳极 A

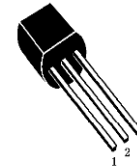
SOT-223



SOT-223-2L



TO-92



## 订货信息 ORDER MESSAGES

有卤-编带	无卤-编带	有卤-袋装	印记 Marking	封装 Package
Halogen-Reel	Halogen-Free-Reel	Halogen-Bag	CP1100T5A	SOT-223
CP1100T5A-NC-A	CP1100T5A-NC-AR	N/A	CP1100T5A	SOT-223
CP1100T5A-NL-A	CP1100T5A-NL-AR	N/A	CP1100T5A	SOT-223-2L
有卤-编带	无卤-编带	有卤-袋装	印记 Marking	封装 Package
Halogen-Tape	Halogen-Free-Tape	Halogen-Bag	CP1100T5A	TO-92
CP1100T5A-T-E	CP1100T5A-T-ER	CP1100T5A-T-C	CP1100T5A	TO-92

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（反向）重复峰值电压 Repetitive peak off-state (reverse) voltage	$V_{\text{DRM}}$ $/V_{\text{RRM}}$		1200	V
通态平均电流 Average on-state current	$I_{\text{T(AV)}}$		0.8	A
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$		1.25	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	$I_{\text{TSM}}$	50Hz, $t=20\text{ms}$	20	A
熔断 $I^2t$ $I^2t$ for fusing	$I^2t$	$t=10\text{ms}$	2.0	$\text{A}^2\text{s}$
通态电流临界上升率 Repetitive rate of rise of on-state current after riggering	$di/dt$	$I_{\text{TM}}=2.5\text{A}$ , $I_{\text{G}}=0.02\text{A}$ , $dI_{\text{G}}/dt=1.0\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	$I_{\text{GM}}$		1	A
平均门极功率 Average gate power	$P_{\text{G(AV)}}$	over any 20ms period	0.1	W
存储温度 Storage temperature	$T_{\text{stg}}$		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	$T_{\text{VJ}}$		-40~125	$^\circ\text{C}$

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>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	-	-	0.2	mA
反向峰值重复电流 Peak Repetitive Reverse Current	I <sub>RPM</sub>	V <sub>RM</sub> =V <sub>RPM</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	-	-	0.2	mA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =2.5A	-	—	1.45	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>AK</sub> =12V, R <sub>L</sub> =33Ω	10	-	90	μA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>AK</sub> =12V, R <sub>L</sub> =33Ω	-	-	0.8	V
维持电流 Holding current	I <sub>H</sub>	I <sub>T</sub> =0.1A	-	-	3	mA
擎住电流 Latch current	I <sub>L</sub>	I <sub>G</sub> =1mA	-	-	4	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V <sub>DM</sub> =70% V <sub>DRM(MAX)</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	50	-	-	V/μs

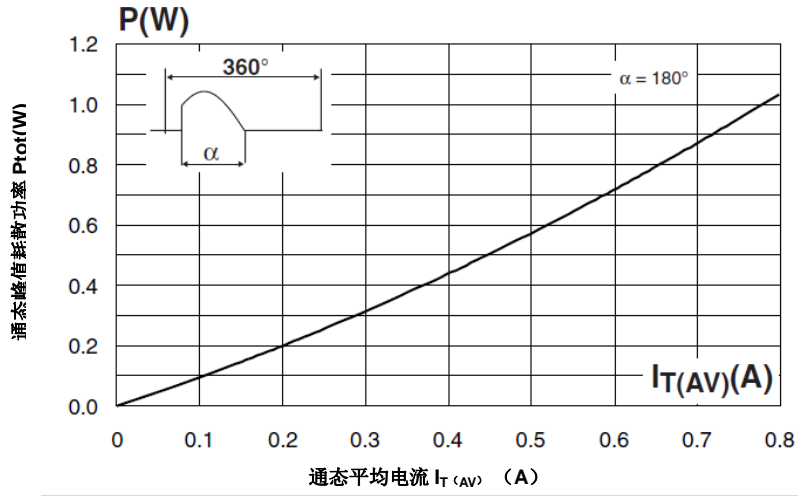
## 热特性 THERMAL CHARACTERISTIC

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 <sub>th(j-t)</sub>	SOT-223/SOT-223-2L	-	-	25	°C/W
结到引线的热阻 Thermal resistance junction to lead	R <sub>th(j-l)</sub>	TO-92	-	-	65	°C/W
结到环境的热阻 Thermal resistance junction to ambient	R <sub>th(j-a)</sub>	SOT-223/SOT-223-2L	-	-	60	°C/W
结到环境的热阻 Thermal resistance junction to ambient	R <sub>th(j-a)</sub>	TO-92	-	-	160	°C/W

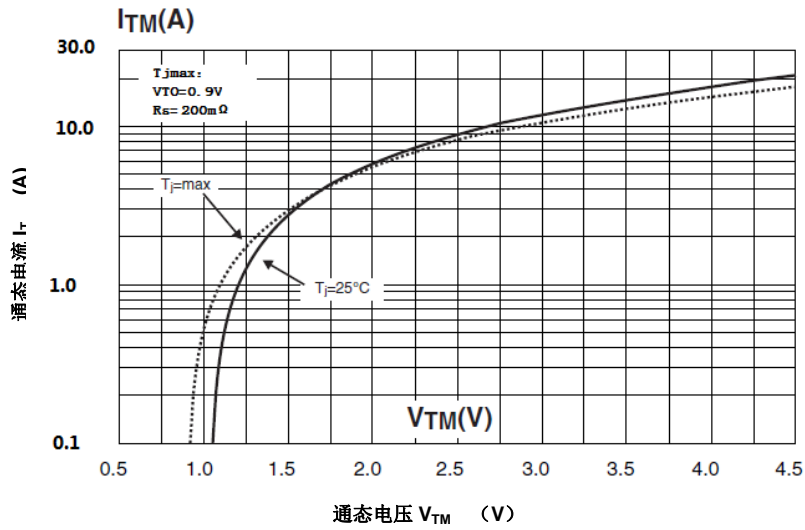


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

$P_{tot} - I_T (AV)$



$I_T - V_{TM}$

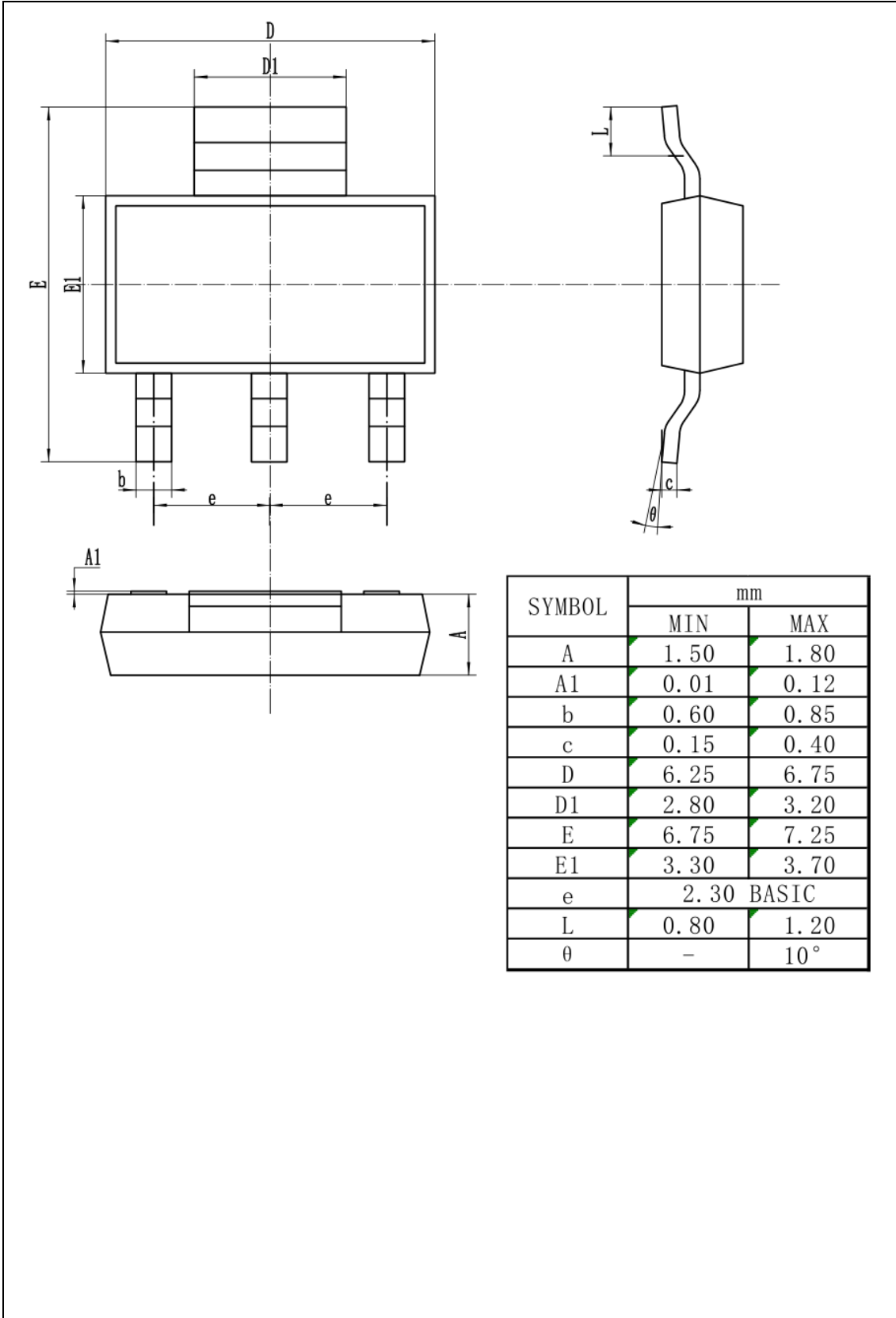




## 外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

单位 Unit : mm

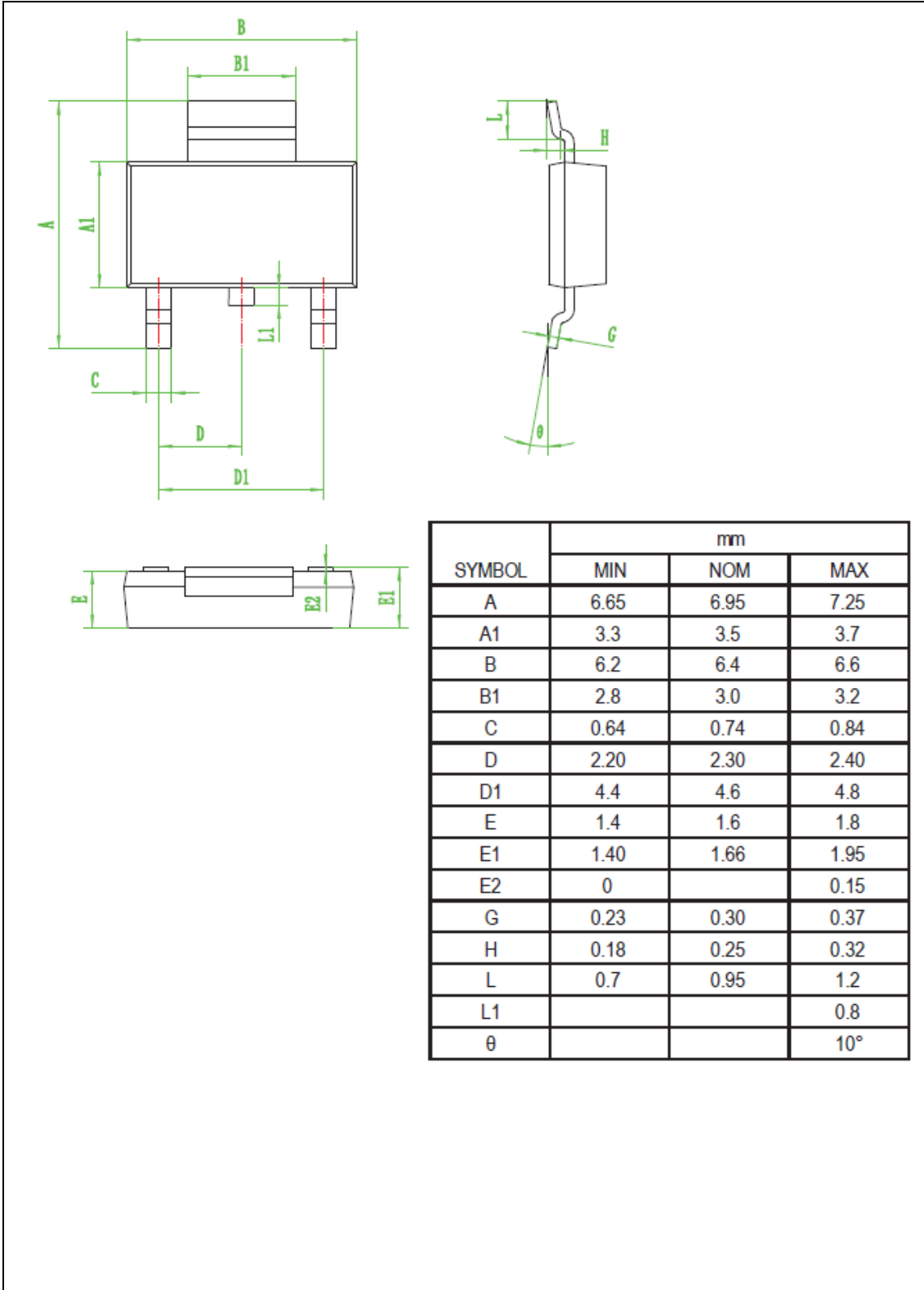


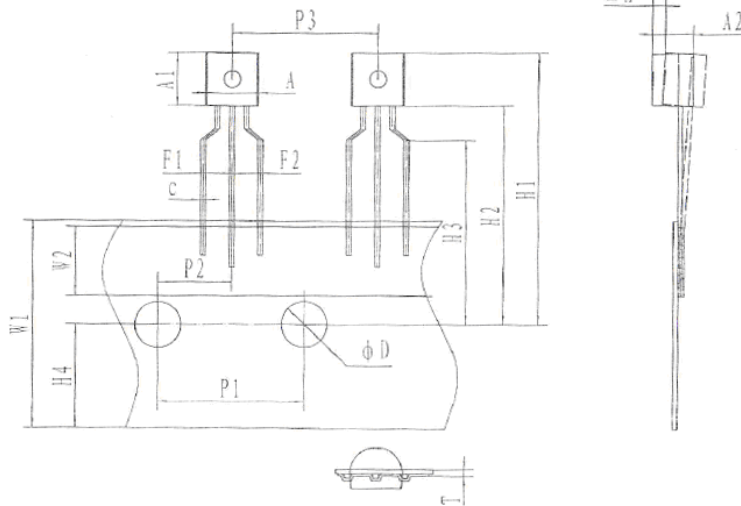
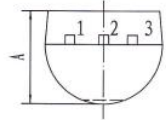
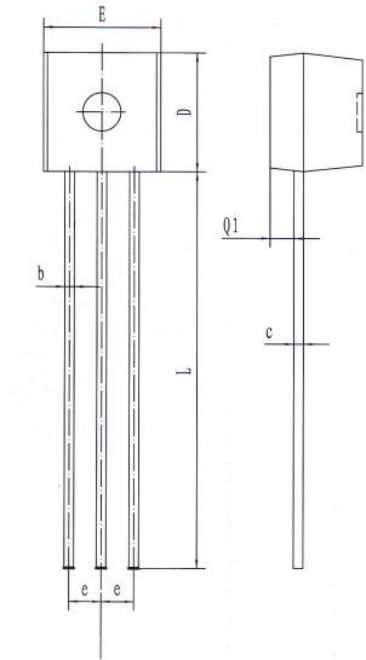


## 外形尺寸 PACKAGE MECHANICAL DATA

SOT-223-2L

单位 Unit : mm





<b>A</b>	3.30-3.90
<b>b</b>	0.35-0.55
<b>c</b>	0.31-0.51
<b>D</b>	4.30-4.90
<b>E</b>	4.30-4.90
<b>e</b>	1.17-1.37
<b>L</b>	12.50-15.50
<b>Q1</b>	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



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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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