



MCR100-8B

主要参数 MAIN CHARACTERISTICS

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

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）

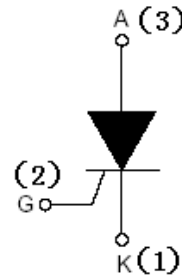
APPLICATIONS

- Half AC switching
- Phase control

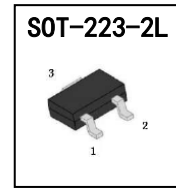
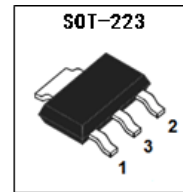
FEATURES

- 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 Marking	封装 Package
Halogen-Reel	Halogen-Free-Reel	Halogen-Bag		
MCR100-8B--NL-A	N/A	N/A	MCR100-8	SOT-223-2L
MCR100-8B-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}		900	V
反向重复峰值电压 Repetitive peak reverse voltage	V_{RRM}		900	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 ($t=10\text{ms}$), $T_j=25^\circ\text{C}$	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	$^\circ\text{C}$



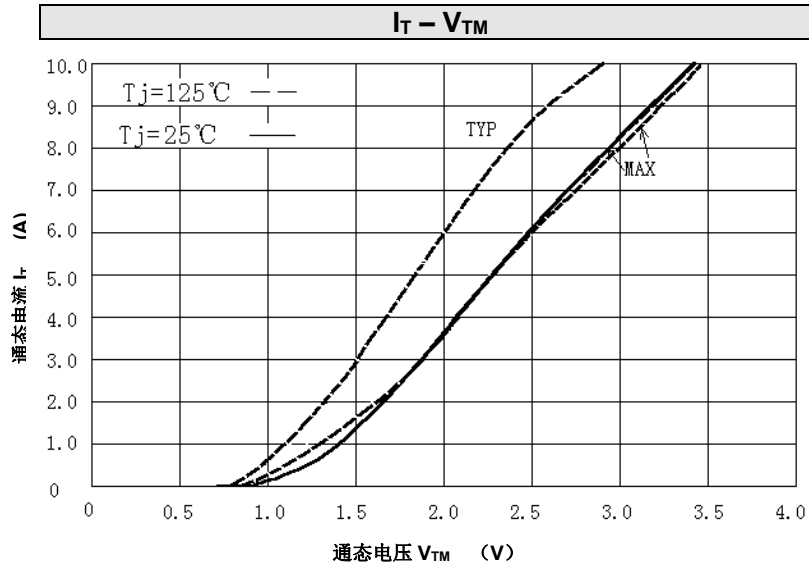
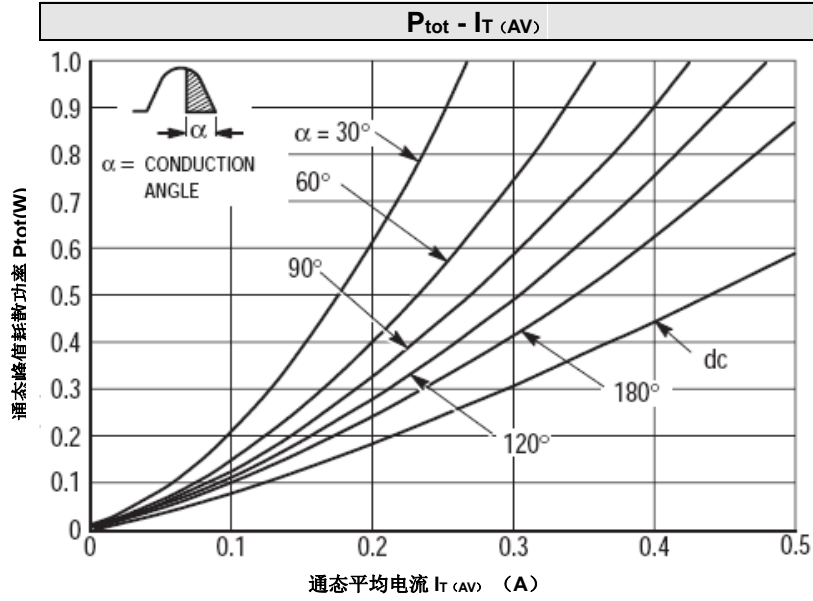
电特性 ELECTRICAL CHARACTERISTIC (T_c=25°C)

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	-	50	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 _D =540V, T _j =125°C, R _{GK} =1KΩ	200	-	-	V/μs
		V _D =540V, T _j =125°C, R _{GK} =220Ω	500	-	-	



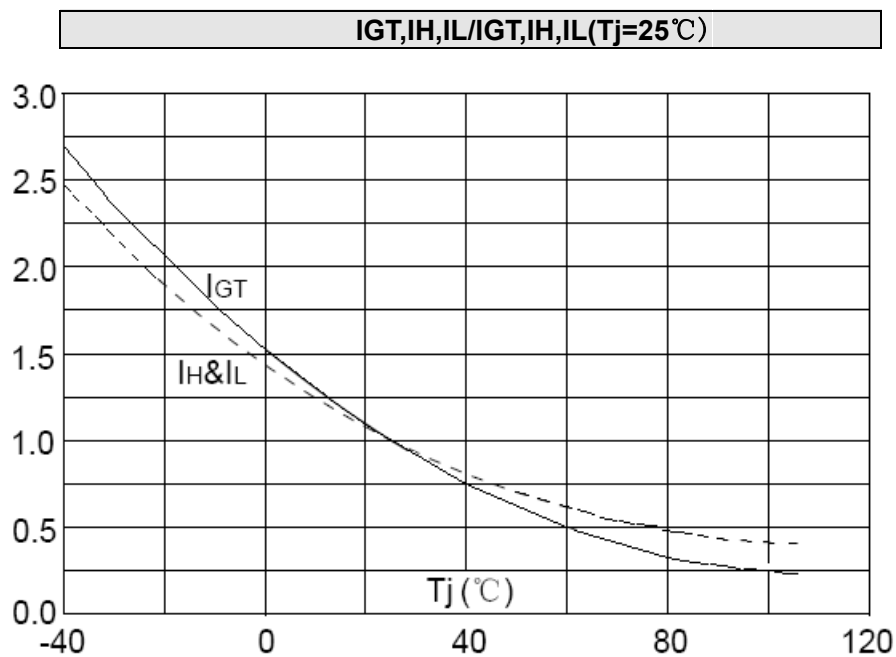


特征曲线 ELECTRICAL CHARACTERISTICS (curves)





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

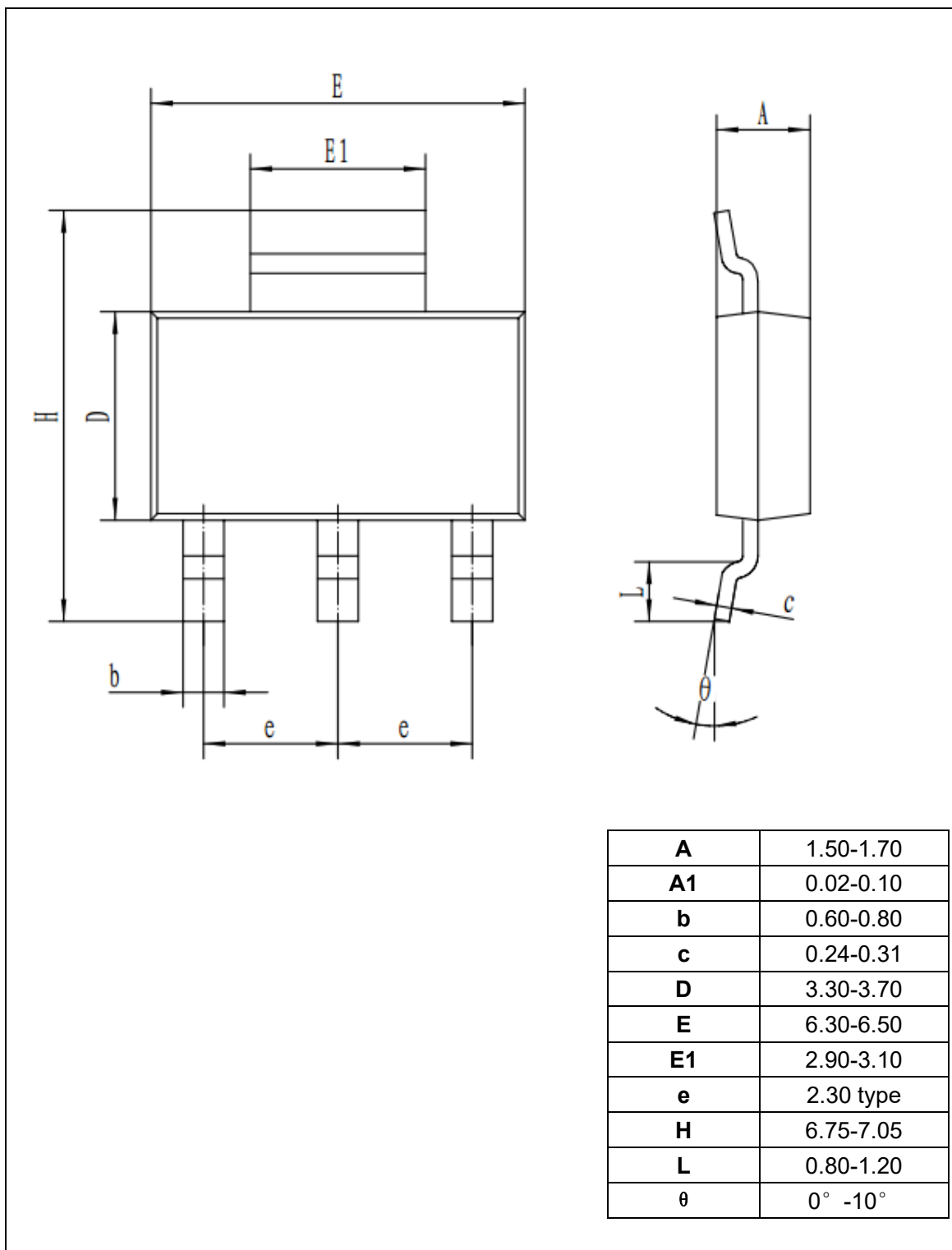




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

单位Unit : mm

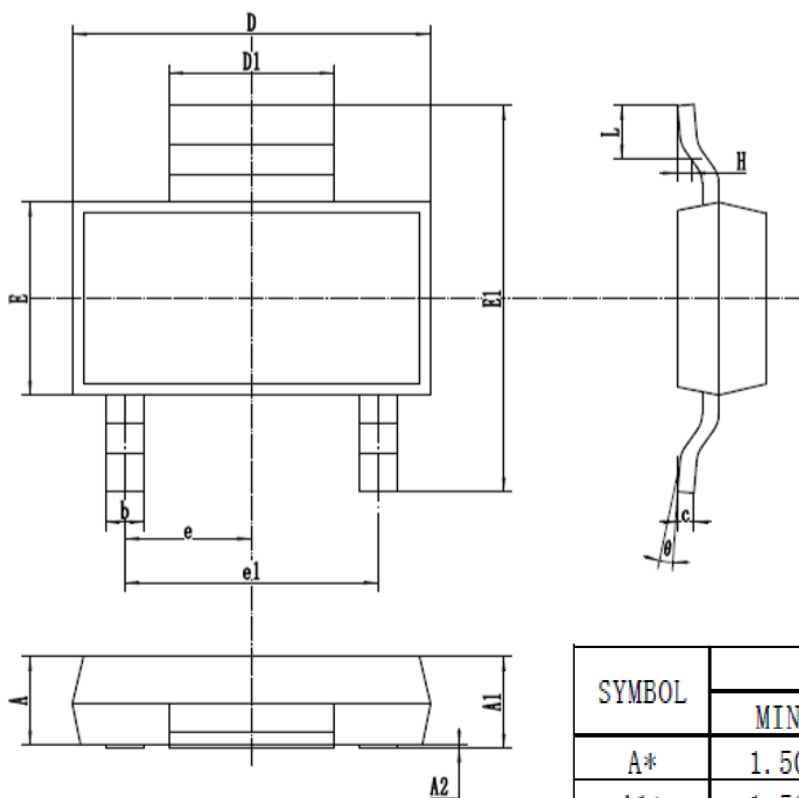




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223-2L

单位 Unit : mm



SYMBOL	mm		
	MIN	NOR	MAX
A*	1.50	1.60	1.70
A1*	1.56	1.66	1.76
A2	0.02	-	0.10
b*	0.65	0.70	0.75
c*	0.25	0.30	0.35
D*	6.35	6.50	6.65
D1*	2.85	3.00	3.15
E*	3.35	3.50	3.65
E1*	6.85	7.00	7.15
e*	2.30 BASIC		
e1*	4.60 BASIC		
L*	0.75	0.95	1.15
H*	0.20	0.25	0.30
θ	-	-	10°

注：*标注为检验项目。



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