



3FT1T1/3FT1N1

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1.0A
V_{DRM}	800V
I_{GT}	3mA/5mA/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

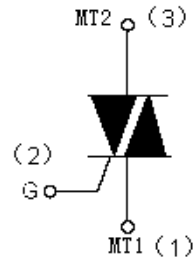
APPLICATIONS

- AC switching
- Phase control

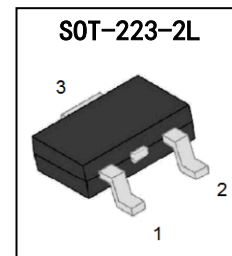
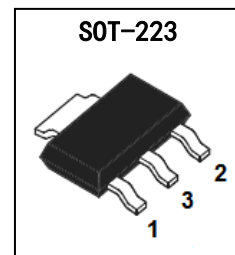
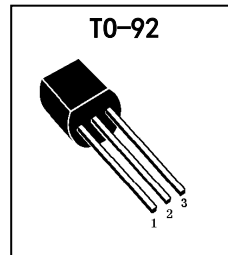
FEATURES

- 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



订货信息 ORDER MESSAGES

订货型号 Order codes		印记 Marking	封装 Package
有卤-编带弹带盒装 Halogen-Tape	无卤-编带弹带盒装 Halogen-Free-Tape	3FT1T1	TO-92
3FT1T1-T-E	3FT1T1-T-ER		
有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel	3FT1T1	SOT-223
3FT1T1-NC-A	3FT1T1-NC-AR		
有卤-编带 Halogen-Reel	无卤-编带 Halogen-Free-Reel	3FT1T1	SOT-223-2L
3FT1T1-NL-A	3FT1T1-NL-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	1.0	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I_{TSM}	full sine wave , $t=20\text{ms}$	12	A
		full sine wave , $t=16.7\text{ms}$	12.8	A
	I^2t	$t=10\text{ms}$	0.72	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	MT1(-),MT2(+),G(+); MT1(-),MT2(+),G(-); MT1(+),MT2(-),G(-)	20	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	I_{GM}		1	A
平均门极功率 Average gate power	$P_{\text{G(AV)}}$		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}		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} =2A	-	-	1.7	V		
门极触发电压 Gate trigger voltage	V _{GT}	V _{DM} =12V, R _L =100Ω	-	-	1.5	V		
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	3FT1T1 3FT1N1 3mA 档	3FT1T1 3FT1N1 5mA 档	3FT1T1 3FT1N1 10mA 档	单位 Unit		
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100Ω	MT1(-),MT2(+),G(+)	Max.	3	5	10	mA
			MT1(-),MT2(+),G(-)	Max.	3	5	10	mA
			MT1(+),MT2(-),G(-)	Max.	3	5	10	mA
			MT1(+),MT2(-),G(+)	Max.	7	10	25	mA
维持电流 Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A	Max.	5	10	12	mA	
擎住电流 Latching current	I _L	V _{DM} =12V, I _{GT} =0.1A	Max.	15	20	25	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	Min.	10	20	50	V/μs	

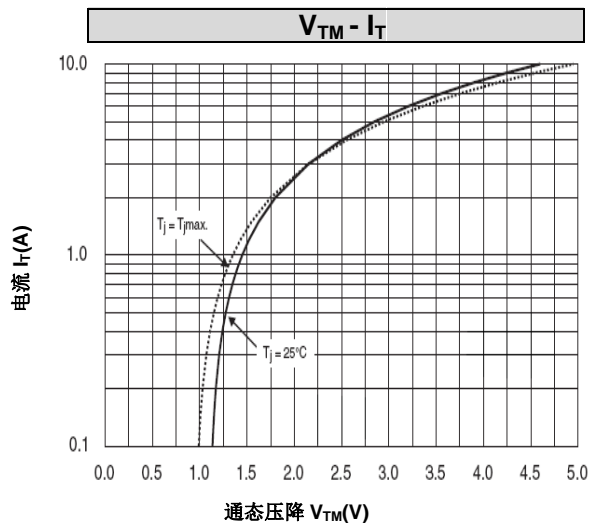
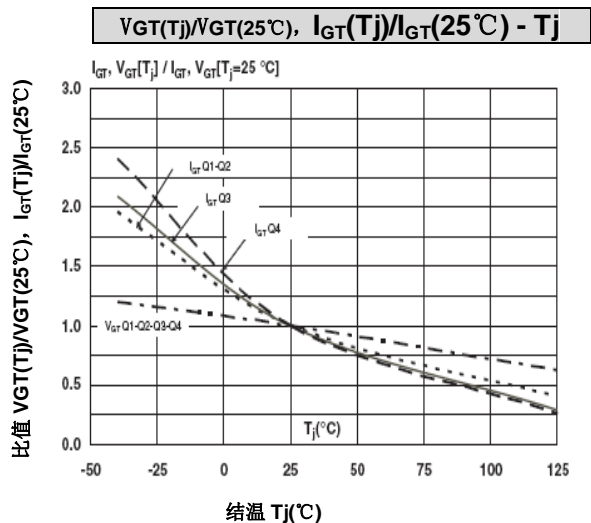
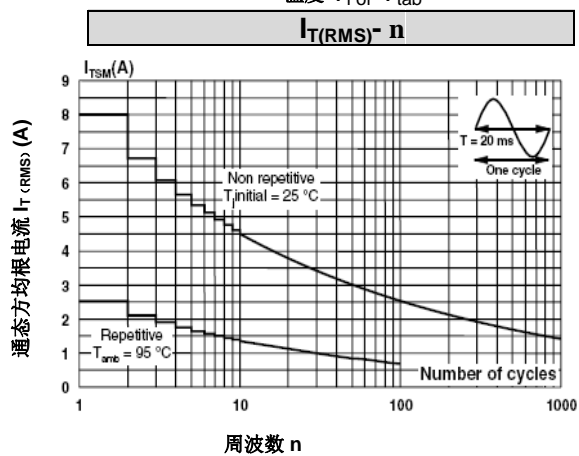
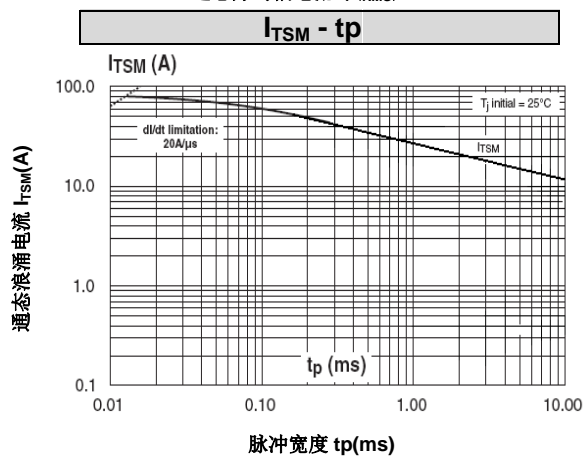
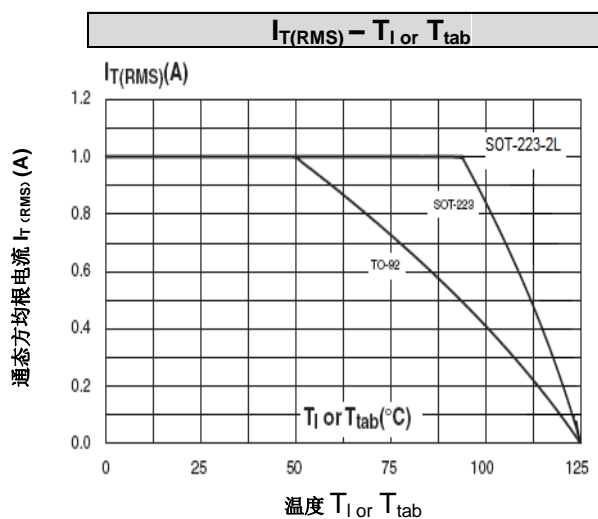
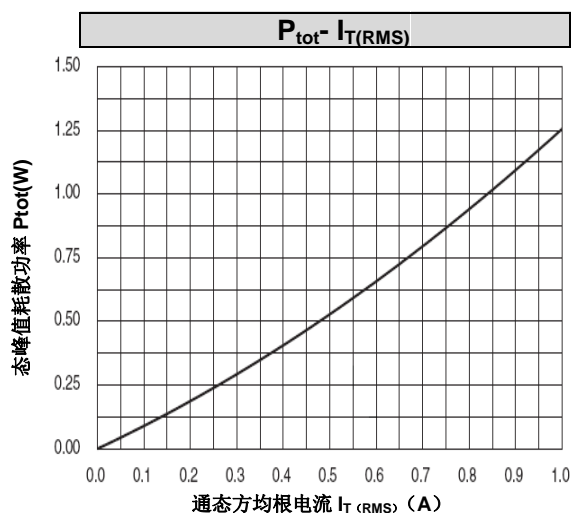
热特性 THERMAL CHARACTERISTIC

项 目 Parameter	符 号 Symbol	条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到引线的热阻 Thermal resistance junction to tab	R _{th(j-t)}	full cycle (SOT-223)	-	-	25	°C/W
结到引线的热阻 Thermal resistance junction to lead	R _{th(j-l)}	full cycle (TO-92)	-	-	60	°C/W





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

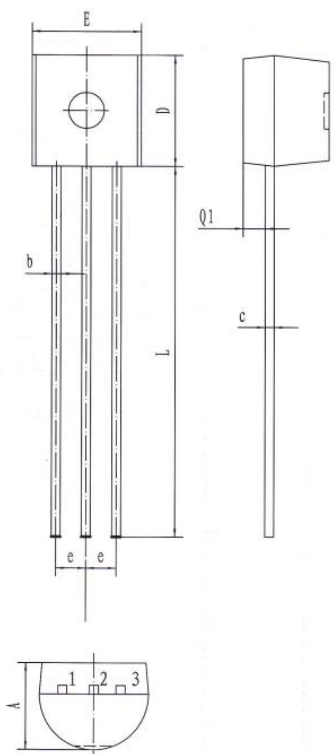




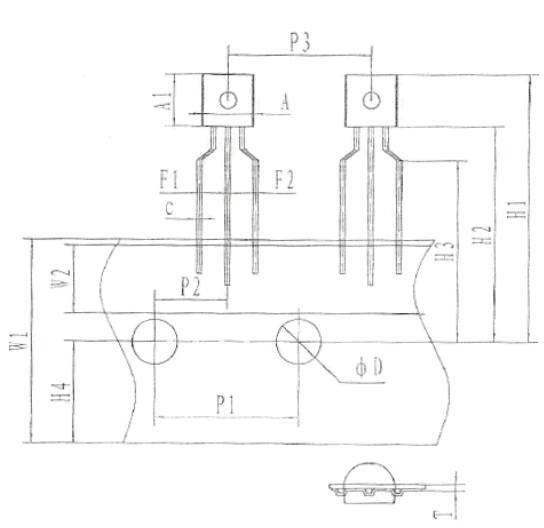
外形尺寸 PACKAGE MECHANICAL DATA

TO-92

单位 Unit : mm



符号 Symbol	尺寸 (mm) Size (mm)
A	3.30-3.90
b	0.35-0.55
c	0.31-0.51
D	4.30-4.90
E	4.30-4.90
e	1.17-1.37
L	12.50-15.50
Q1	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

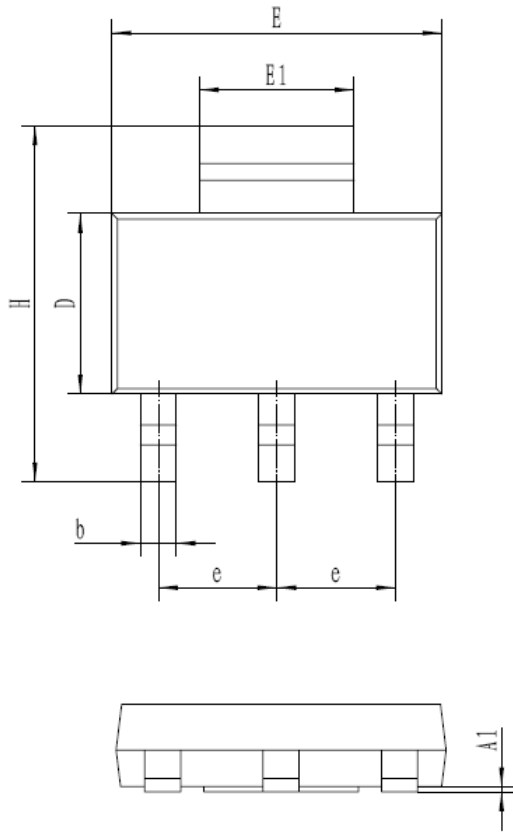




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223

单位 Unit : mm



symbol 符号	MIN	MAX
A	1.50	1.70
A1	0.02	0.10
b	0.60	0.80
c	0.24	0.31
D	3.30	3.70
E	6.30	6.50
E1	2.90	3.10
e	2.30 TYPE	
H	6.75	7.05
L	0.8	1.20
θ	0°	10°

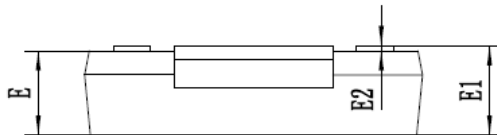
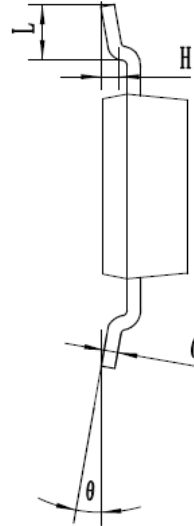
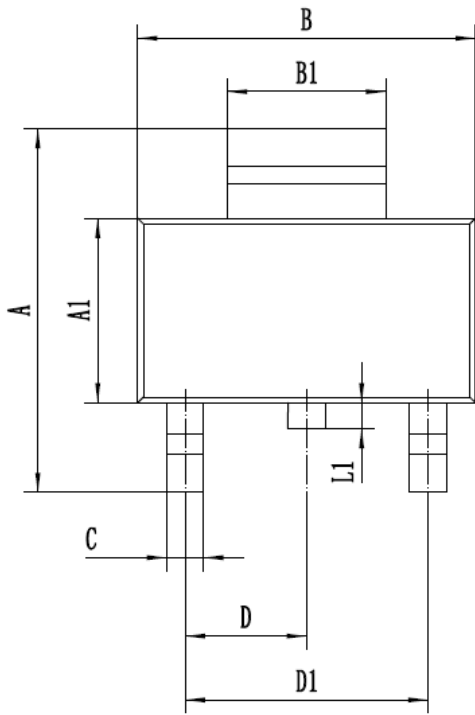




外形尺寸 PACKAGE MECHANICAL DATA

SOT-223-2L

单位 Unit : mm



SYMBOL	mm		
	MIN	NOM	MAX
A	6.65	6.95	7.25
A1	3.3	3.5	3.7
B	6.2	6.4	6.6
B1	2.8	3.0	3.2
C	0.64	0.74	0.84
D	2.20	2.30	2.40
D1	4.4	4.6	4.8
E	1.4	1.6	1.8
E1	1.40	1.66	1.95
E2	0		0.15
G	0.23	0.30	0.37
H	0.18	0.25	0.32
L	0.7	0.95	1.2
L1			0.8
θ			10°





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