3FT1N2

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	1.0A
V_{DRM}	800V
I_{GT}	10mA

用途

- 交流开关
- 相位控制

APPLICATIONS

- AC switching
- Phase control

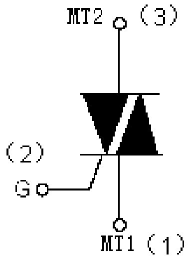
产品特性

- 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

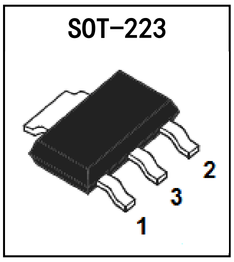
FEATURES

- 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	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	无卤-编带	3FT1N2	SOT-223
Halogen-Reel	Halogen-Free- Reel		
3FT1N2-NC-A	3FT1N2-NC-AR		

绝对最大额定值　ABSOLUTE RATINGS (T_C=25℃)

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	$I_{T(RMS)}$	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=20ms	10	A
		full sine wave ,t=16.7ms	11	A
	I^2t	t=10ms	0.5	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(-)	50	A/μs
峰值门极电流　Peak gate current	I_{GM}		2	A
平均门极功率　Average gate power	$P_{G(AV)}$		0.5	W
存储温度　Storage temperature	T_{stg}		-40~150	℃
操作结温 Operation junction temperature	T_{VJ}		125	℃

电特性 ELECTRICAL CHARACTERISTIC (T_C=25℃)

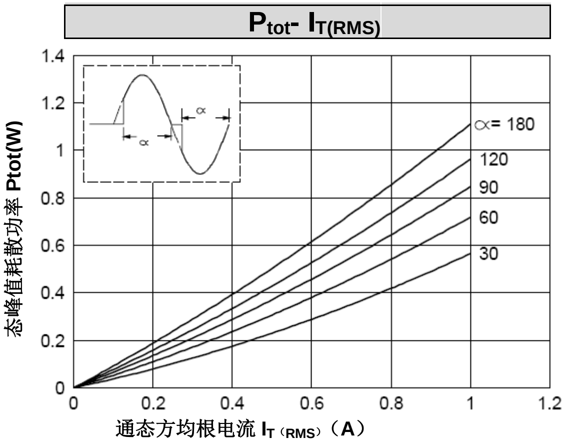
项　目 Parameter	符　号 Symbol	测 试 条 件 Condition		最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I_{DRM}	V_{DM}=V_{DRM}, Tj=125℃, gate open		-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V_{TM}	I_{TM}=2A		-	-	1.5	V
门极触发电流 Gate trigger current	I_{GT}	V_{DM}=12V, R_L=100Ω	MT1(-),MT2(+),G(+)	-	-	10	mA
			MT1(-),MT2(+),G(-)				mA
			MT1(+),MT2(-),G(-)				mA
			MT1(+),MT2(-),G(+)	-	-	25	mA
门极触发电压 Gate trigger voltage	V_{GT}	V_{DM}=12V,R_L=100Ω		-	-	1.5	V
维持电流 Holding current	I_H	V_{DM}=12V, I_{GT}=0.1A		-	-	15	mA
擎住电流 Latching current	I_L	V_{DM}=12V, I_{GT}=0.1A		-	-	20	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V_{DM}=67% $V_{DRM(MAX)}$, Tj=125℃, gate open		-	30	-	V/μs

热特性 THERMAL CHARACTERISTIC

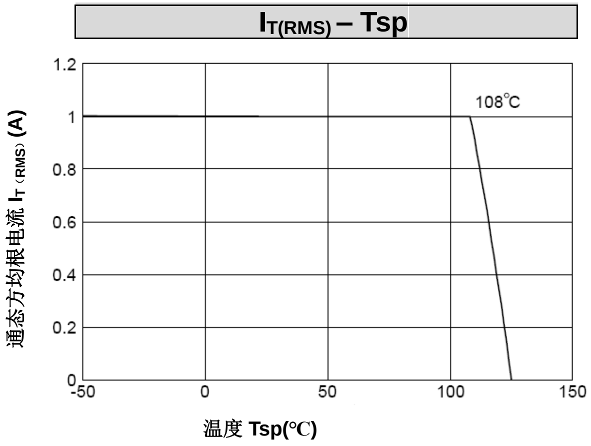
项　目 Parameter	符　号 Symbol	条　件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到引线的热阻 Thermal resistance junction to solder point	$R_{th(j-sp)}$	full cycle（SOT-223）	-	-	15	℃/W

特征曲线　ELECTRICAL CHARACTERISTICS (curves)

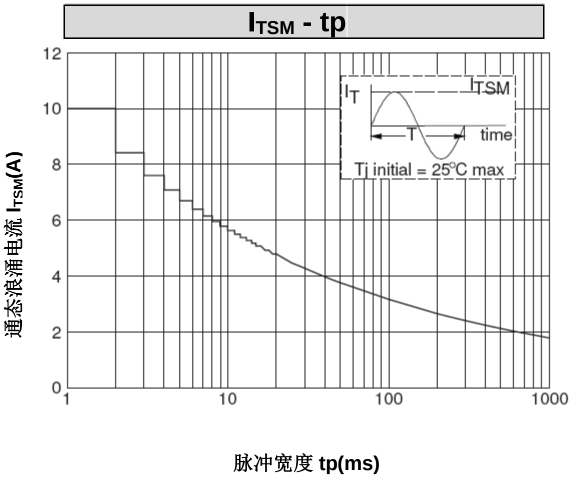
特征曲线　ELECTRICAL CHARACTERISTICS (curves)



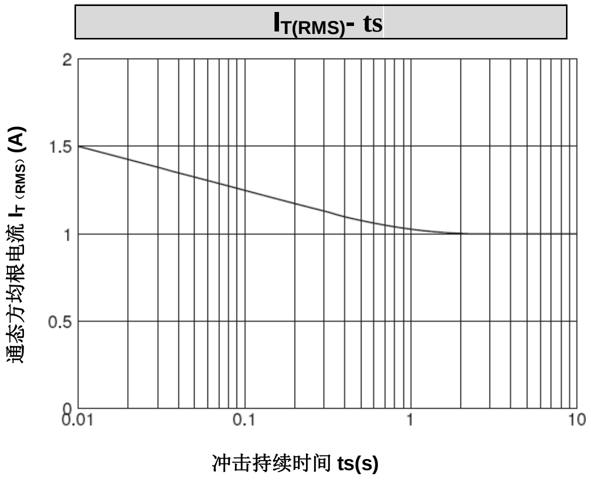
P_{tot}- $I_{T(RMS)}$



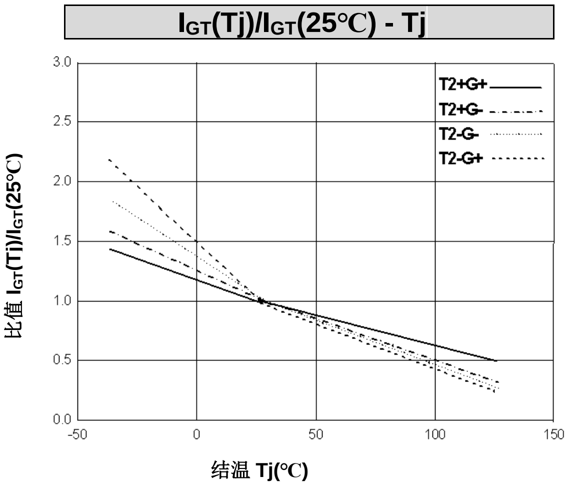
$I_{T(RMS)}$ – Tsp



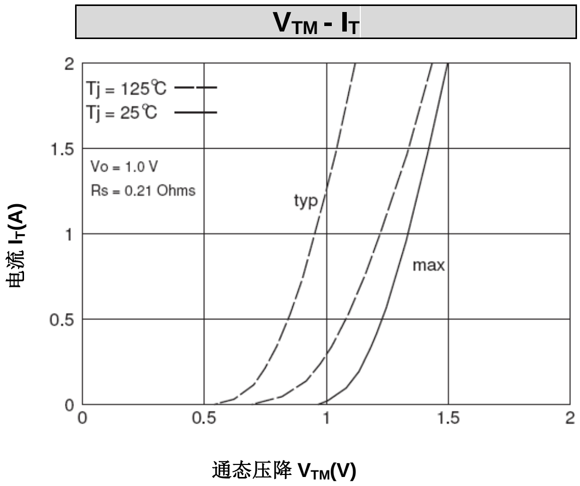
I_{TSM} - tp



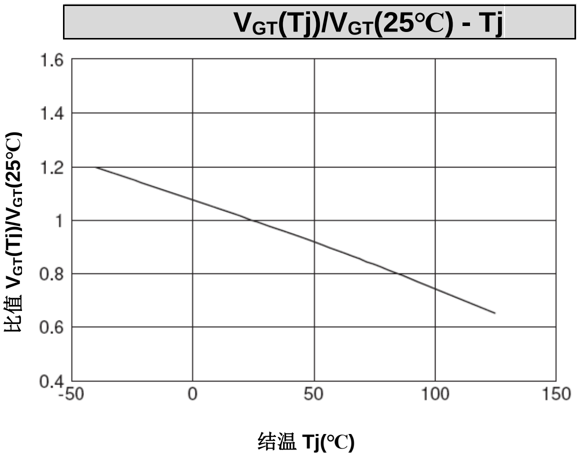
$I_{T(RMS)}$- ts

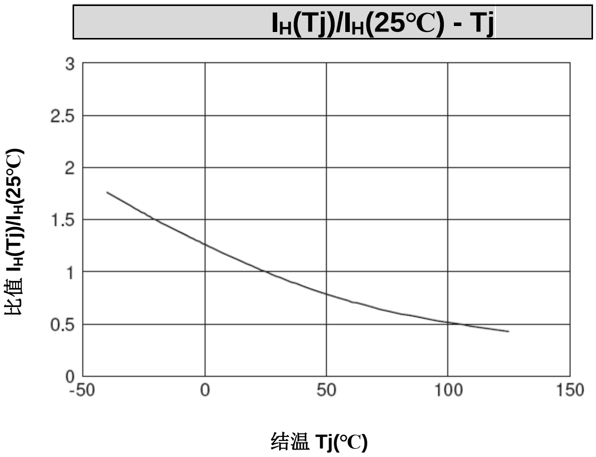


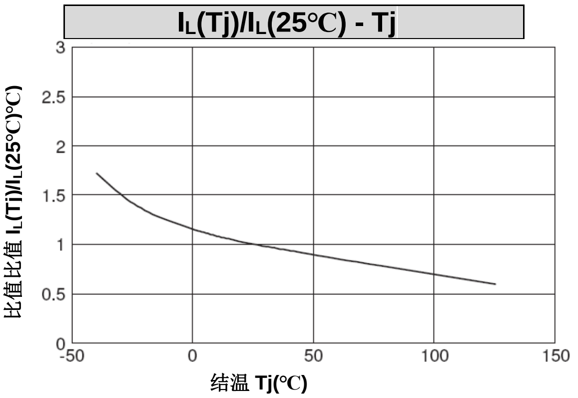
I_{GT}(Tj)/I_{GT}(25℃) - Tj



V_{TM} - I_T

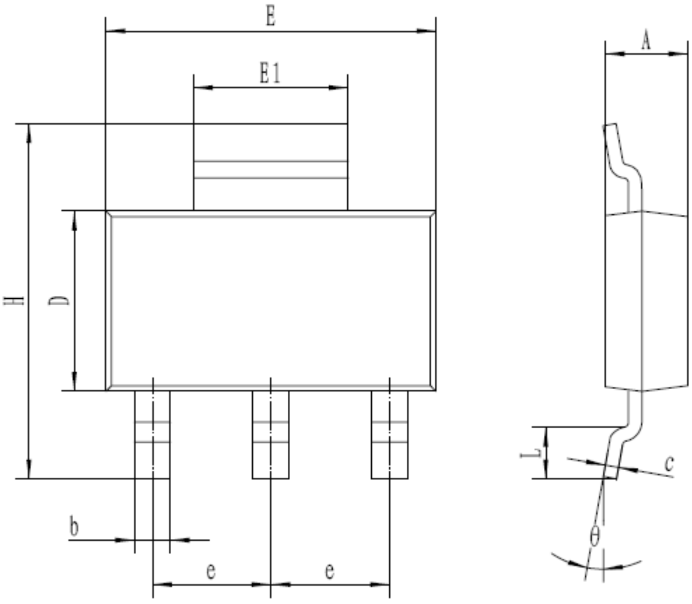

VGT(Tj)/VGT(25℃) - Tj
比值 VGT(Tj)/VGT(25℃)
1.6
1.4
1.2
1
0.8
0.6
0.4
-50
0
50
100
150
结温 Tj(℃)

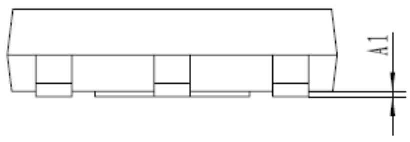

IH(Tj)/IH(25℃) - Tj
比值 IH(Tj)/IH(25℃)
3
2.5
2
1.5
1
0.5
0
-50
0
50
100
150
结温 Tj(℃)


IL(Tj)/IL(25℃) - Tj
比值比值 IL(Tj)/IL(25℃)℃)
3
2.5
2
1.5
1
0.5
0
-50
0
50
100
150
结温 Tj(℃)

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°

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