

# ED0949-01-581

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	16A
$V_{DRM}$	800V
$I_{GT(1,2,3)}$	35mA

## 用途

- 交流开关
- 相位控制

## APPLICATIONS

- AC switching
- Phase control

## 产品特性

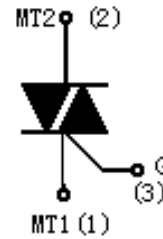
- 台面工艺芯片，高可靠性和一致性
- 三象限可控硅，触发电流的一致性好
- 环保 RoHS 产品
- 150℃ 高结温产品

## FEATURES

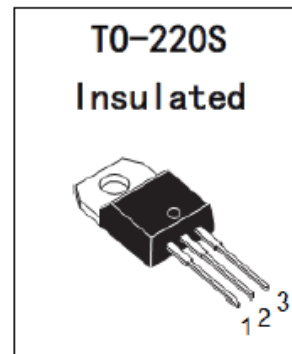
- Glass-passivated mesa chip for high reliability and uniform
- Uniform gate trigger currents in three quadrants
- RoHS products
- 150℃ High operating junction temperature

## 订货信息 ORDER MESSAGES

## 封装 Package



序号 Pin	引线名称 Description
1	主电极 1 MT1
2	主电极 2 MT2
3	门极 G



订货型号 Order codes				印 记 Marking	封 装 Package
有卤-条管	无卤-条管	有卤-编带	无卤-编带		
Halogen-Tube	Halogen-Free-Tube	Halogen-Reel	Halogen-Free-Reel		
ED0949-01-581	ED0949-01-581	N/A	N/A	ED0949-01-581	TO-220S

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	$V_{\text{DRM}}$		$\pm 800$	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave,	16	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	$I_{\text{TSM}}$	full sine wave ,t=20ms	160	A
		full sine wave ,t=16.7ms	176	A
	$I^2t$	t=10ms	128	$\text{A}^2\text{s}$
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	dl/dt	$I_{\text{TM}}=20\text{A}$ , $I_{\text{G}}=0.2\text{A}$ , $dl_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	100	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	$I_{\text{GM}}$		4	A
峰值门极电压 Peak gate voltage	$V_{\text{GM}}$		5	V
峰值门极功率 Peak gate power	$P_{\text{GM}}$		5	W
平均门极功率 Average gate power	$P_{\text{G(AV)}}$	over any 20ms period	1	W
存储温度 Storage temperature	$T_{\text{stg}}$		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	$T_{\text{VJ}}$		-40~150	$^\circ\text{C}$

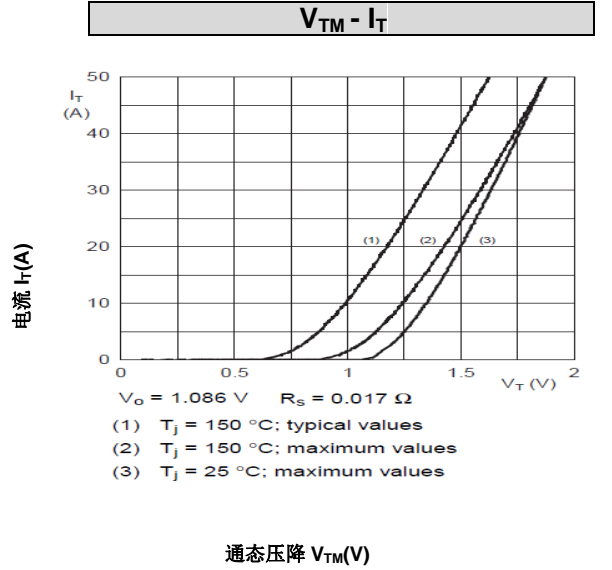
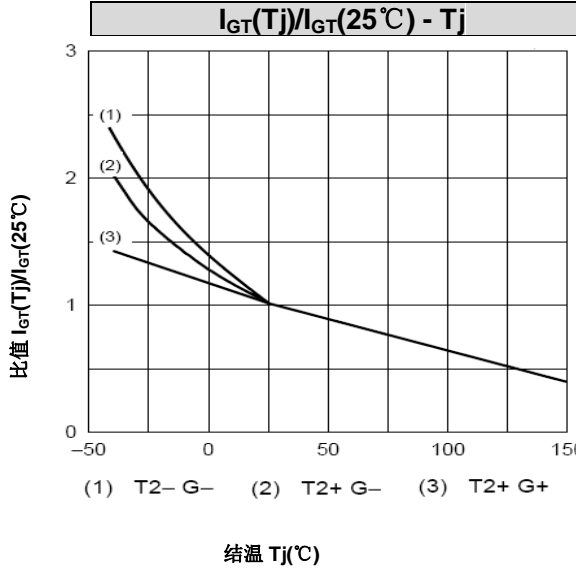
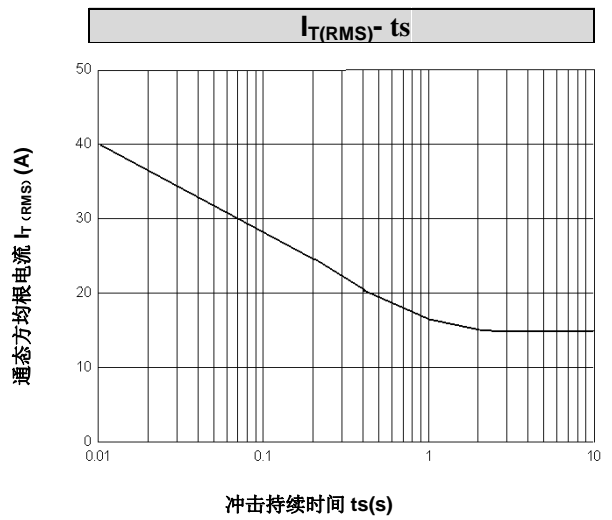
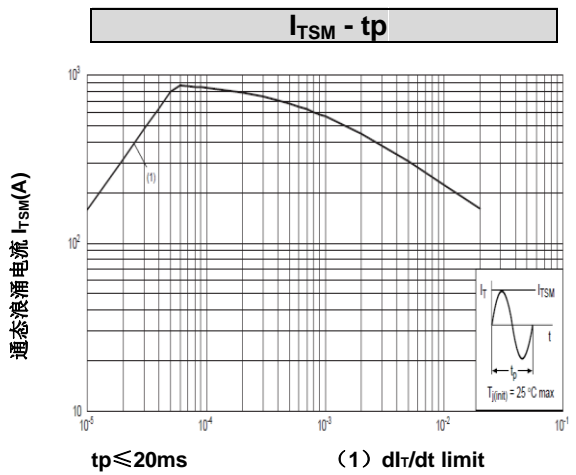
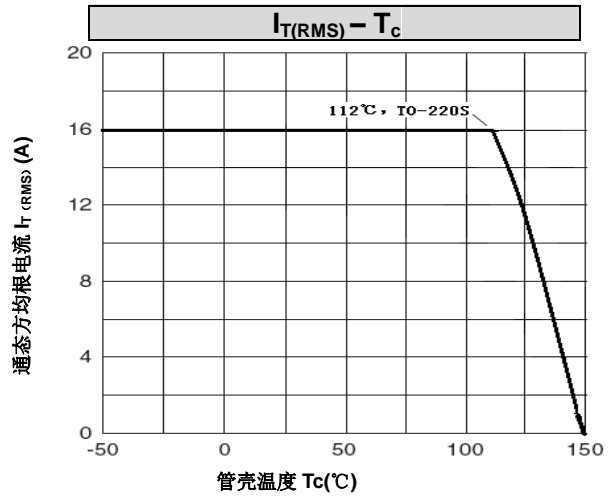
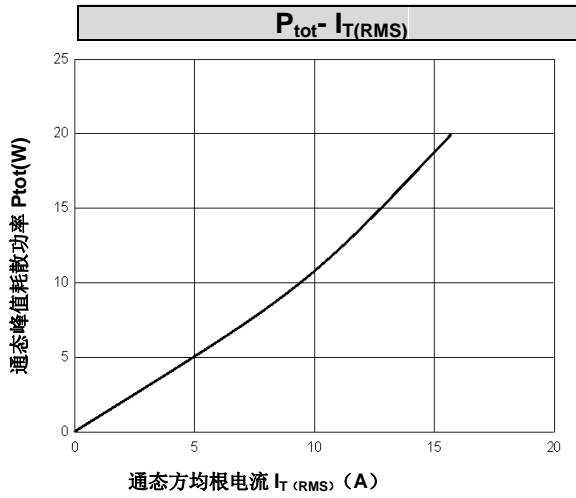
电特性 ELECTRICAL CHARACTERISTIC (T<sub>C</sub>=25°C)

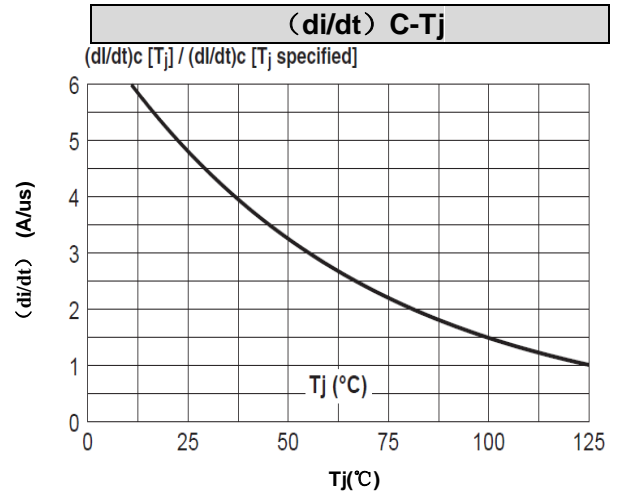
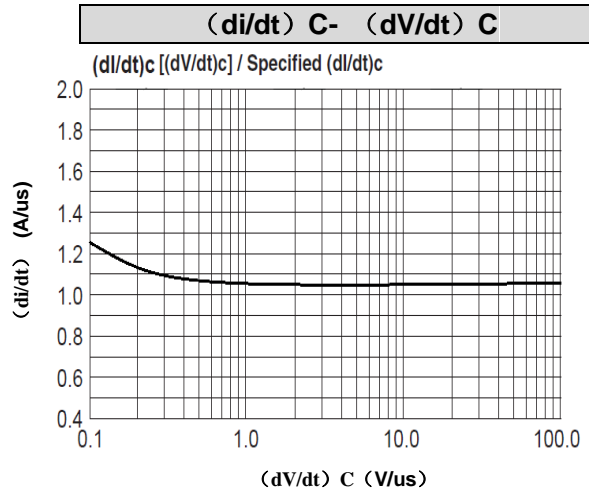
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I <sub>DRM</sub>	V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>J</sub> =150°C, gate open		--	3.0	mA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =20A, T <sub>J</sub> =25°C,		--	1.5	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100 Ω	MT1(-),MT2(+),G(+)	--	35	mA
			MT1(-),MT2(+),G(-)	--	35	mA
			MT1(+),MT2(-),G(-)	--	35	mA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100 Ω	MT1(-),MT2(+),G(+)	-	1.5	V
			MT1(-),MT2(+),G(-)	-	1.5	V
			MT1(+),MT2(-),G(-)	-	1.5	V
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A		--	45	mA
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	MT1(-),MT2(+),G(+)	-	60	mA
			MT1(-),MT2(+),G(-)	-	75	mA
			MT1(+),MT2(-),G(-)	-	60	mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	V <sub>DM</sub> =67% V <sub>DRM(MAX)</sub> , T <sub>J</sub> =150°C, gate open	1000	-	-	V/μs
门极开通时间 Gate controlled turn-on time	tgt	I <sub>TM</sub> =20A, V <sub>DM</sub> =V <sub>DRM(MAX)</sub> , I <sub>G</sub> =0.1A, dI <sub>G</sub> /dt=5A/μs	-	2	-	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
结到管壳的热阻 Thermal resistance junction to case	R <sub>th(j-c)</sub>	full cycle(TO-220S)			1.9	°C/W

特征曲线 ELECTRICAL CHARACTERISTICS (curves)





## 外形尺寸 PACKAGE MECHANICAL DATA

TO-220S

单位 Unit : mm

