



# CS2010H1A

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	20A
$V_{DRM}$	800V
$I_{GT}$	10mA

## 用途

- 交流开关
- 相位控制

## APPLICATIONS

- AC switching
- Phase control

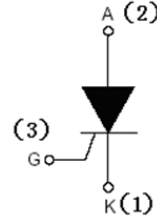
## 产品特性

- 玻璃钝化芯片高可靠性、一致性
- 低通态电压和高浪涌电流能力
- 环保 RoHS 产品

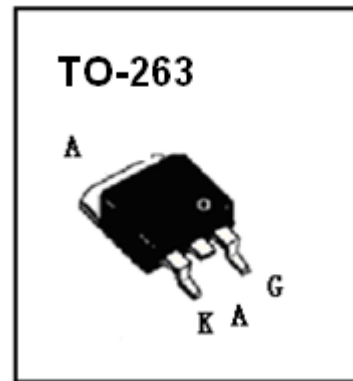
## FEATURES

- 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	阴极 K
2	阳极 A
3	门极 G



**订货信息 ORDER MESSAGES**

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		
CS2010H1A-S-B	CS2010H1A-S-BR	CS2010H1A-A-A	CS2010H1A-S-AR	CS2010H1A	T0-263

**绝对最大额定值 ABSOLUTE RATINGS (T<sub>c</sub>=25°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 <sub>DRM</sub>		±960	V
通态方均根电流 On-state RMS current	I <sub>T(RMS)</sub>	full sine wave	20	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I <sub>TSM</sub>	full sine wave ,t=20ms	180	A
		full sine wave ,t=16.7ms	197	A
	I <sup>2</sup> t	t=10ms	162	A <sup>2</sup> s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	I <sub>TM</sub> =20A, I <sub>G</sub> =0.2A, dI <sub>G</sub> /dt=0.2A/μs	100	A/μs
峰值门极电流 Peak gate current	I <sub>GM</sub>		4	A
峰值门极电压 Peak gate voltage	V <sub>GM</sub>		5	V
峰值门极功率 Peak gate power	P <sub>GM</sub>		5	W
平均门极功率 Average gate power	P <sub>G(AV)</sub>	over any 20ms period	1	W
存储温度 Storage temperature	T <sub>stg</sub>		-40~150	°C
操作结温 Operation junction temperature	T <sub>VJ</sub>		150	°C

电特性 ELECTRICAL CHARACTERISTIC (T<sub>c</sub>=25℃)

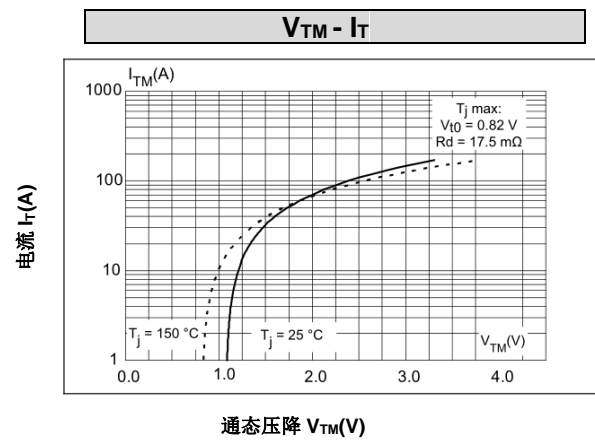
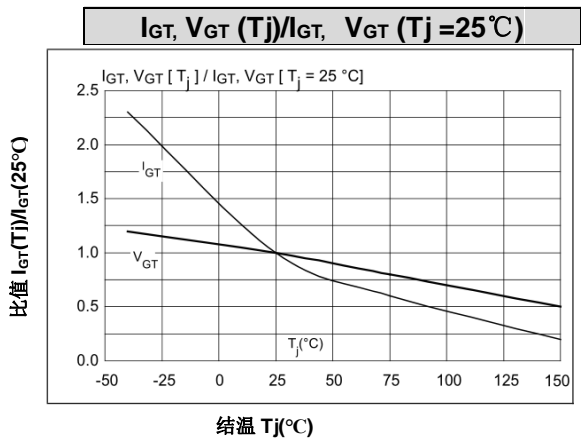
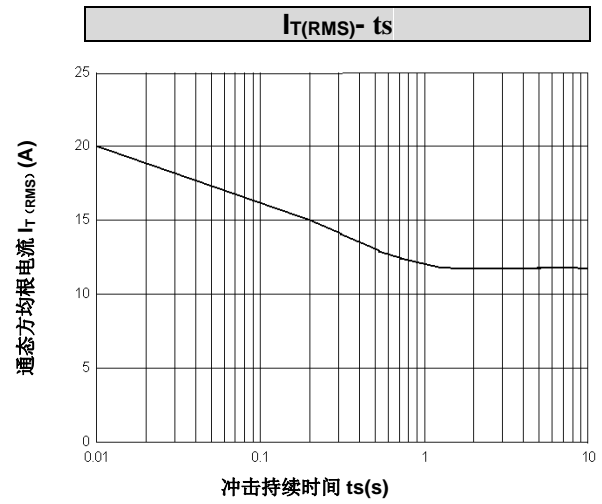
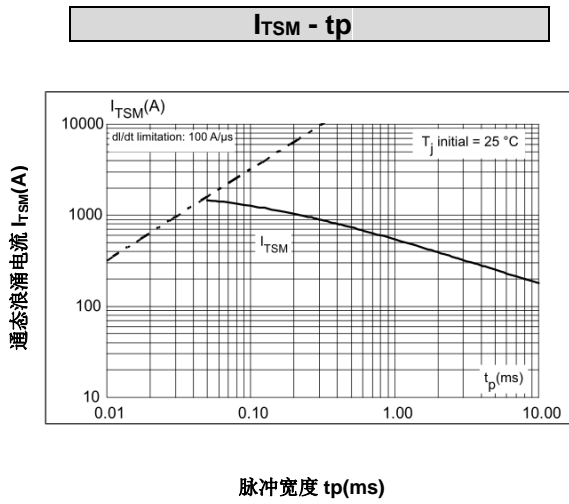
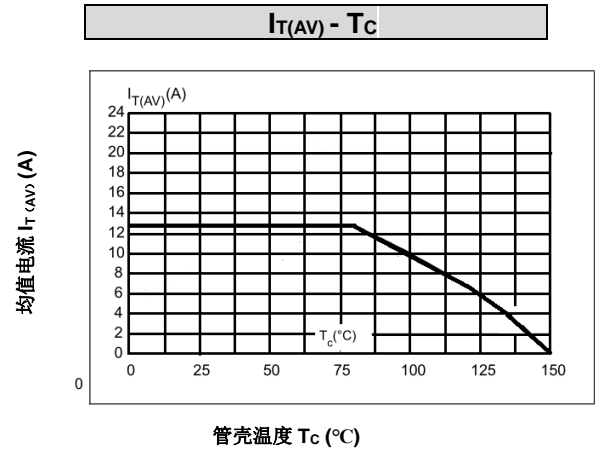
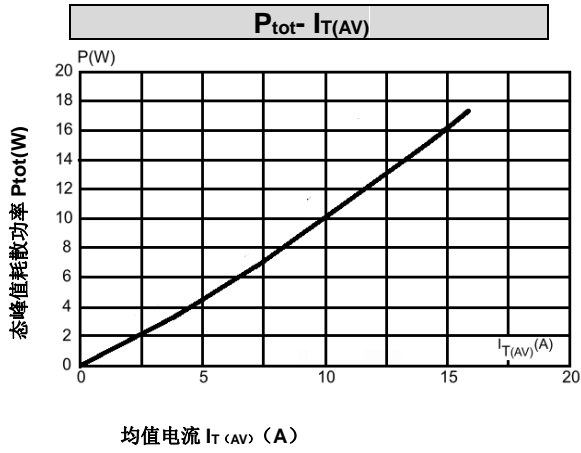
项 目 Parameter	符 号 Symbol	测 试 条 件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
峰值重复断态电流 Peak Repetitive Blocking Current	I <sub>DRM</sub>	V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =150℃, gate open	-	-	2	mA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =16A	-	-	1.45	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	-	5	10	mA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	-	-	1.5	V
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	50	mA
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	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℃, gate open	-	750	-	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
结到管壳的热阻 Thermal resistance junction to case	R <sub>th(j-c)</sub>	full cycle(TO-263)			4.0	℃/W



特征曲线 ELECTRICAL CHARACTERISTICS (curves)

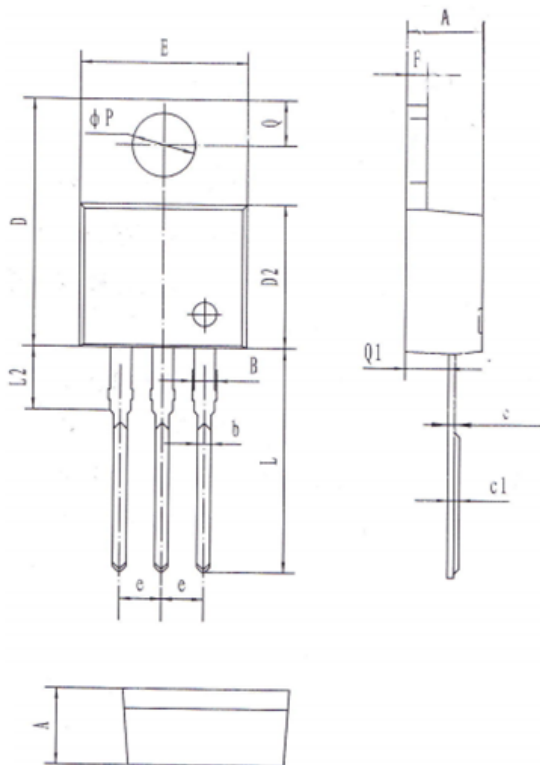




## 外形尺寸 PACKAGE MECHANICAL DATA

TO-220

单位 Unit : mm



<b>A</b> <sub>⊃</sub>	4.40-4.80 <sub>⊃</sub>
<b>B</b> <sub>⊃</sub>	1.10-1.40 <sub>⊃</sub>
<b>b</b> <sub>⊃</sub>	0.70-0.95 <sub>⊃</sub>
<b>c</b> <sub>⊃</sub>	0.28-0.48 <sub>⊃</sub>
<b>c1</b> <sub>⊃</sub>	0.32-0.52 <sub>⊃</sub>
<b>D</b> <sub>⊃</sub>	14.45-16.00 <sub>⊃</sub>
<b>D2</b> <sub>⊃</sub>	8.20-9.20 <sub>⊃</sub>
<b>E</b> <sub>⊃</sub>	9.60-10.40 <sub>⊃</sub>
<b>e</b> <sub>⊃</sub>	2.39-2.69 <sub>⊃</sub>
<b>F</b> <sub>⊃</sub>	1.20-1.35 <sub>⊃</sub>
<b>L</b> <sub>⊃</sub>	13.05-14.05 <sub>⊃</sub>
<b>L2</b> <sub>⊃</sub>	3.70-3.90 <sub>⊃</sub>
<b>Q</b> <sub>⊃</sub>	2.40-3.00 <sub>⊃</sub>
<b>Q1</b> <sub>⊃</sub>	2.20-2.90 <sub>⊃</sub>
<b>P</b> <sub>⊃</sub>	3.50-4.00 <sub>⊃</sub>



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