



# CD2635T3A/CD2650T3A

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	26A
$V_{DRM}/V_{RRM}$	1200V
$I_{GT(1,2,3)}$ (CD2635T3A)	<35mA
$I_{GT(1,2,3)}$ (CD2650T3A)	<50mA

## 用途

- 交流开关
- 相位控制

## APPLICATIONS

- AC switching
- Phase control

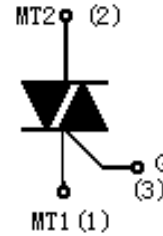
## 产品特性

- 玻璃钝化芯片，高可靠性和一致性
- 环保 RoHS 产品
- 三象限可控硅，触发电流的一致性

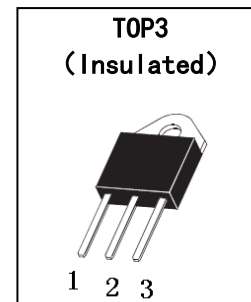
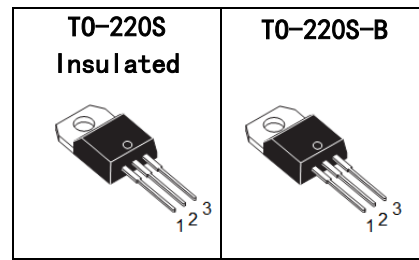
## FEATURES

- Glass-passivated mesa chip for reliability and uniform
- RoHS products
- Uniform gate trigger currents in three quadrants

## 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



## 订货信息 ORDER MESSAGES

订货型号 Order codes				印记 Marking	封装 Package
有卤-条管 Halogen-Tube	无卤-条管 halogen-Free-Tube	有卤-编带 Halogen- -Reel	无卤-编带 Halogen- Free-Reel		
CD2635T3A-GF-B	CD2635T3A-GF-BR	N/A	N/A	CD2635T3A	TOP3
CD2650T3A-GF-B	CD2650T3A-GF-BR	N/A	N/A	CD2650T3A	TOP3
CD2635T3A-CB-B	CD2635T3A-CB-BR	N/A	N/A	CD2635T3A	TO-220S
CD2650T3A-CB-B	CD2650T3A-CB-BR	N/A	N/A	CD2650T3A	TO-220S
CD2635T3A-CD-B	CD2635T3A-CD-BR	N/A	N/A	CD2635T3A	TO-220S-B
CD2650T3A-CD-B	CD2650T3A-CD-BR	N/A	N/A	CD2650T3A	TO-220S-B



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	$V_{\text{DRM}}$		$\pm 1200$	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave,	26	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, $t=20\text{ms}$	250	A
		full sine wave, $t=16.7\text{ms}$	260	A
		$I^2t$	$t=10\text{ms}$	340
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	$di/dt$	$I_{\text{TM}}=30\text{A}$ , $I_{\text{G}}=0.2\text{A}$ , $di_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	$I_{\text{GM}}$		2	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	1.0	W
存储温度 Storage temperature	$T_{\text{stg}}$		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	$T_{\text{VJ}}$		-40~125	$^\circ\text{C}$

电特性 ELECTRICAL CHARACTERISTIC ( $T_c=25^\circ\text{C}$ )

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	$I_{\text{DRM}}$	$V_{\text{DM}}=V_{\text{DRM}}$ , $T_j=125^\circ\text{C}$ , gate open	-	-	3.0	mA
峰值通态电压 Peak on-state voltage	$V_{\text{TM}}$	$I_{\text{TM}}=30\text{A}$	-		1.6	V
门极开通时间 Gate controlled turn-on time	tgt	$I_{\text{TM}}=20\text{A}$ , $V_{\text{DM}}=V_{\text{DRM(MAX)}}$ , $I_{\text{G}}=0.1\text{A}$ , $di_{\text{G}}/dt=5\text{A}/\mu\text{S}$	-	2	-	$\mu\text{s}$

## 电绝缘特性 ELECTRICAL ISOLATION

项目 Parameter	符号 Symbol	条件 Condition	数值 Value	单位 Unit
绝缘电压 Isolation voltage	$V_{\text{ISOL}}$	1 minute, leads to mounting tab TO-220S TOP3	2000	V



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

项目 Parameter	符号 Symbol	测试条件 Condition			CD2635 T3A	CD2650 T3A	单位 Unit
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	I - II - III	MAX	35	50	mA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>		ALL	MAX	1.5	1.5	V
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A		MAX	60	80	mA
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	I - III	MAX	70	90	mA
			II	MAX	90	120	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> =125°C, gate open		MAX	1000	1000	V/μs

## 热特性 THERMAL CHARACTERISTIC

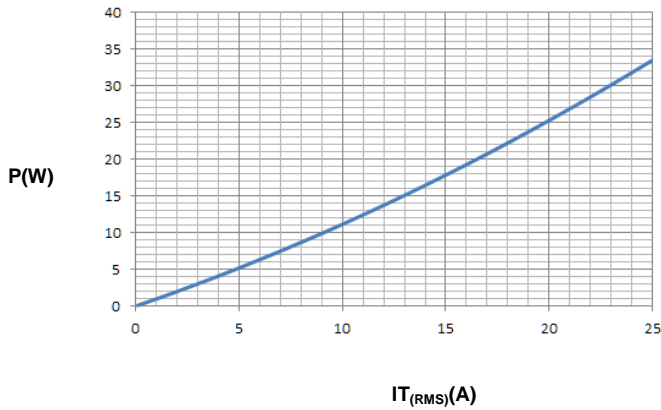
项目 Parameter	符号 Symbol	条件 Condition	最小 Min	典型 Typ	最大 Max	单位 Unit
结到管壳的热阻 Thermal resistance junction to case	R <sub>th(j-c)</sub>	full cycle(TOP3)			1.0	°C/W
		full cycle(TO-220S-B)			1.1	°C/W
		full cycle(TO-220S)			1.5	°C/W



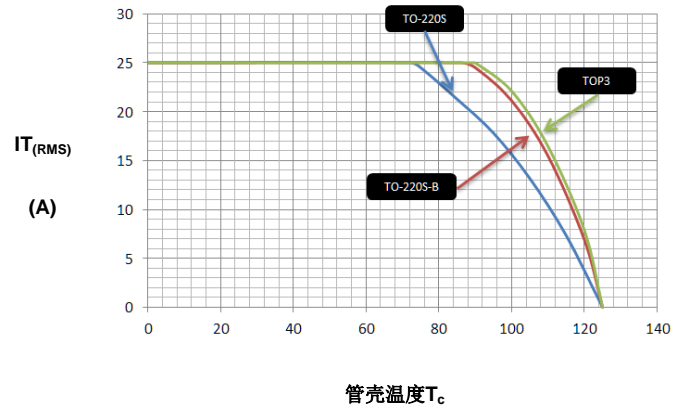


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

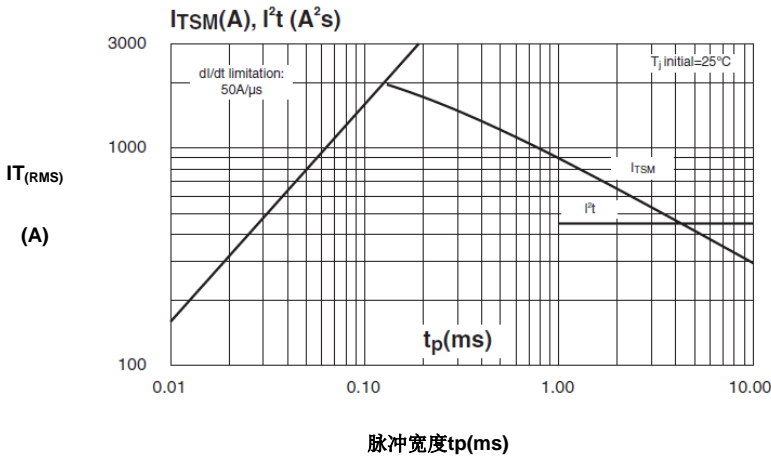
$P_{tot} - I_{T(RMS)}$



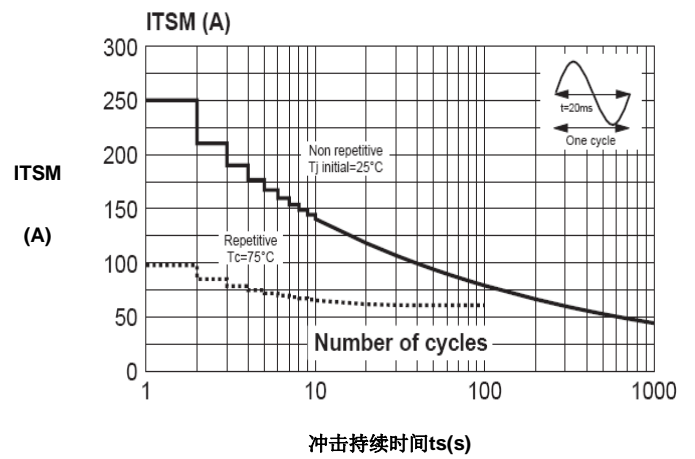
$I_{T(RMS)} - T_c$



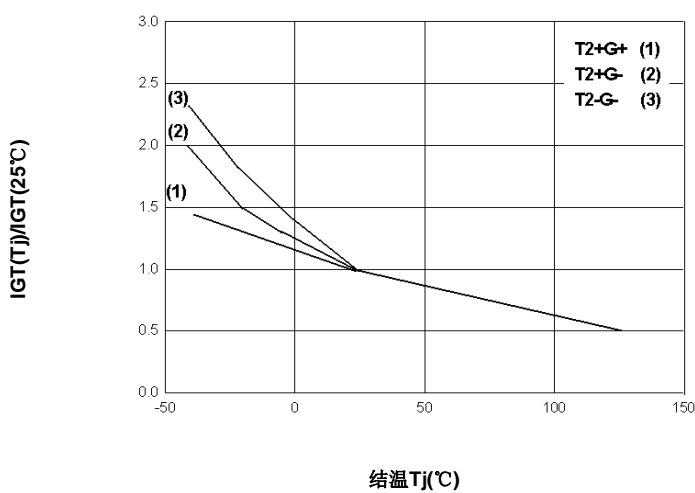
$I_{TSM} - t_p$



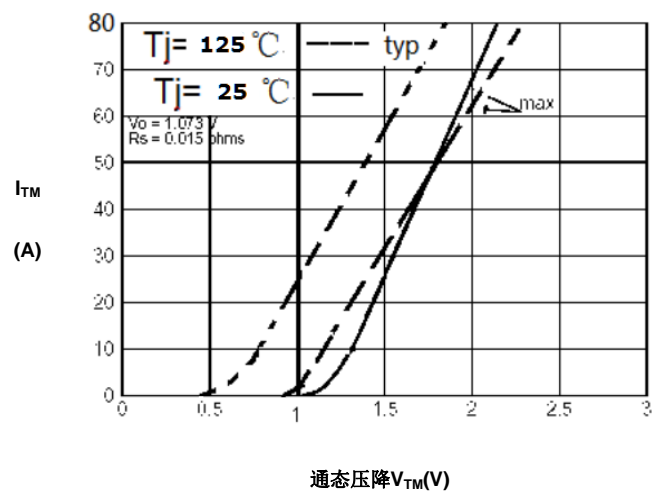
$I_{T(RMS)} - t_s$



$I_{GT}(T_j)/I_{GT}(25^\circ C) - T_j$



$V_{TM} - I_{TM}$

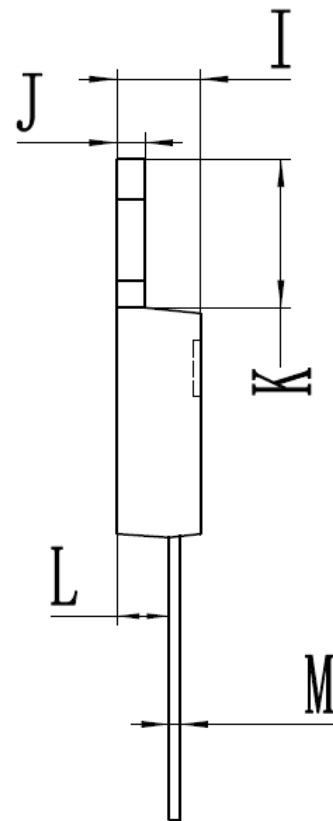
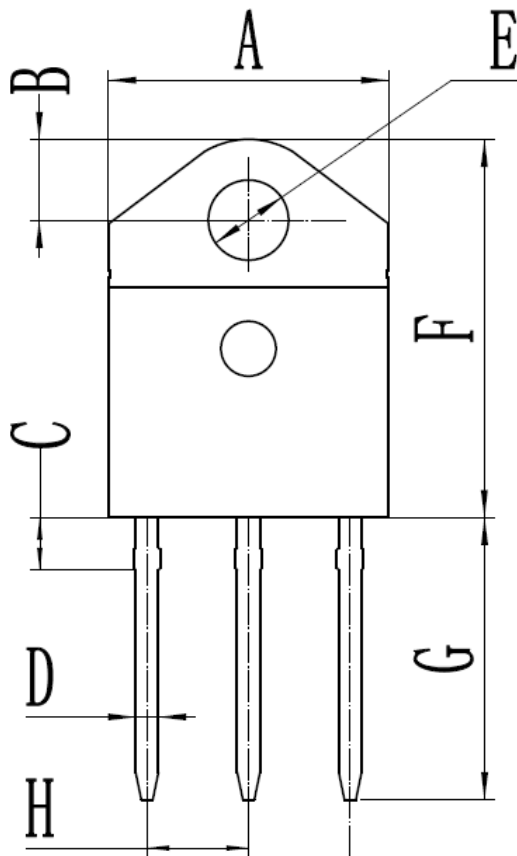




## 外形尺寸 PACKAGE MECHANICAL DATA

TOP3

单位 Unit : mm



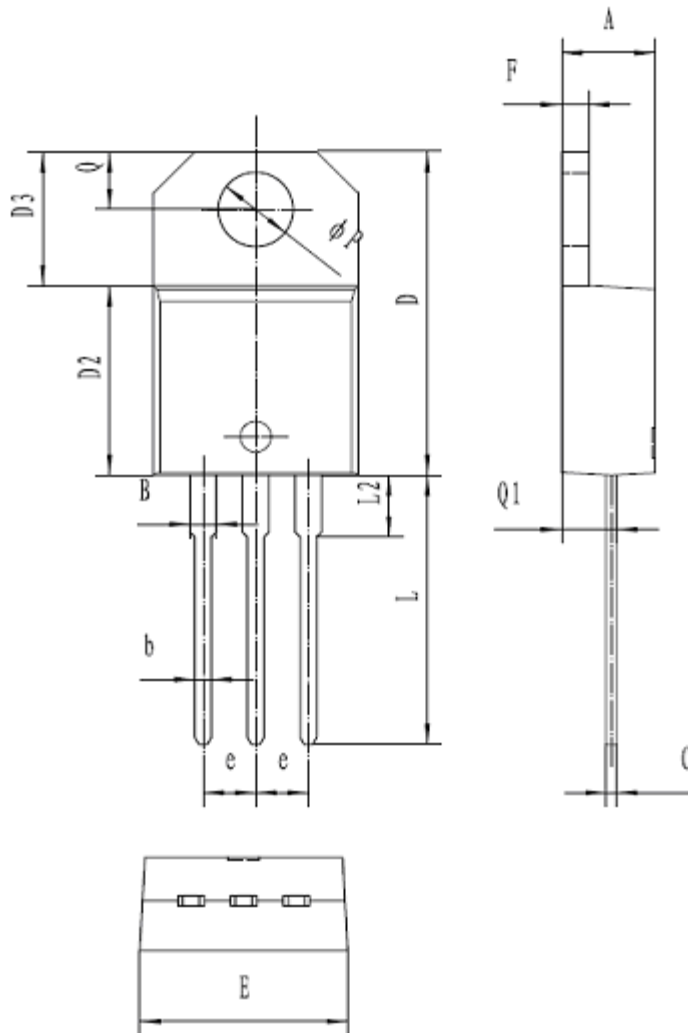
SYMBOL	MM	
	MIN	MAX
A	14.80	15.45
B	4.00	4.70
C	2.45	3.25
D	1.10	1.35
E	4.10	4.35
F	20.15	20.80
G	14.95	15.60
H	5.30	5.65
I	4.35	4.70
J	1.38	1.65
K	7.80	8.25
L	2.68	3.00
M	0.50	0.75





## 外形尺寸PACKAGE MECHANICAL DATA

TO-220STO-220S-B 单位 Unit : mm



符号 symbol	MIN	MAX
A	4.40	4.60
B	1.14	1.70
b	0.61	0.88
C	0.47	0.70
D	15.20	15.90
D2	8.60	9.70
D3	6.20	6.60
E	10.00	10.40
e	2.40	2.70
F	1.23	1.32
L	13.00	14.00
L2	typ. 3.75	
Q	2.65	2.95
Q1	2.89	3.42
P	3.72	3.85



**注意事项**

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