



CD2450T3A

主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	24A
V_{DRM}/V_{RRM}	1200V
$I_{GT(1,2,3)}$	<50mA

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
- 环保 RoHS 产品
- 三象限可控硅，触发电流的一致性好

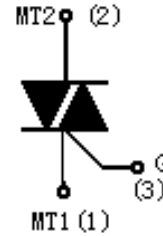
APPLICATIONS

- AC switching
- Phase control

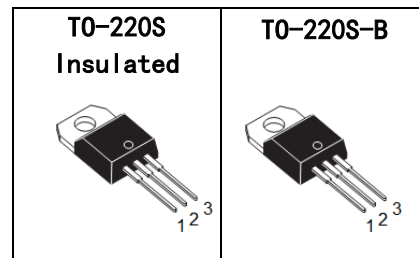
FEATURES

- 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		
CD2450T3A-CB-B	CD2450T3A-CB-BR	N/A	N/A	CD2450T3A	TO-220S
CD2450T3A-CD-B	CD2450T3A-CD-BR	N/A	N/A	CD2450T3A	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_{DRM}		± 1200	V
通态方均根电流 On-state RMS current	$I_{\text{T(RMS)}}$	full sine wave,	24	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current	I_{TSM}	full sine wave, $t=20\text{ms}$	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_{GM}		2	A
峰值门极电压 Peak gate voltage	V_{GM}		5	V
峰值门极功率 Peak gate power	P_{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_{stg}		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	T_{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_{DRM}	$V_{\text{DM}}=V_{\text{DRM}}$, $T_{\text{j}}=125^\circ\text{C}$, gate open	-	-	3.0	mA
峰值通态电压 Peak on-state voltage	V_{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	-	μs

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_{ISOL}	1 minute, leads to mounting tab TO-220S	2000	V

电特性 ELECTRICAL CHARACTERISTIC (T_C=25°C)

项目 Parameter	符号 Symbol	测试条件 Condition			CD2450T3A	单位 Unit
门极触发电流 Gate trigger current	I _{GT}	V _{DM} =12V, R _L =100Ω	I - II - III	MAX	50	mA
门极触发电压 Gate trigger voltage	V _{GT}		ALL	MAX	1.5	V
维持电流 Holding current	I _H	V _{DM} =12V, I _{GT} =0.1A		MAX	80	mA
擎住电流 Latching current	I _L	V _{DM} =12V, I _{GT} =0.1A	I - III	MAX	90	mA
			II	MAX	120	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		MAX	1000	V/μs

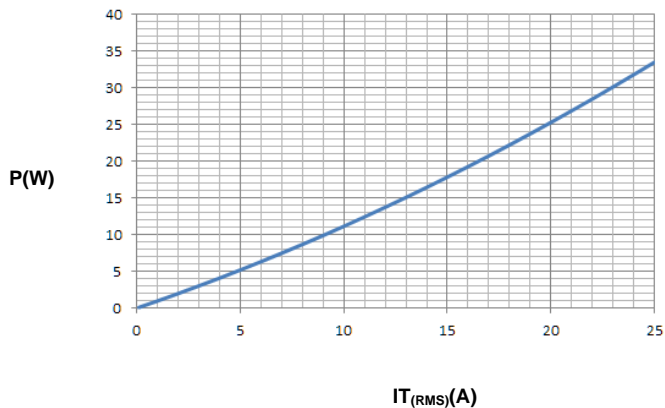
热特性 THERMAL CHARACTERISTIC

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 _{th(j-c)}	full cycle(TO-220S-B)			1.1	°C/W
		full cycle(TO-220S)			1.5	°C/W

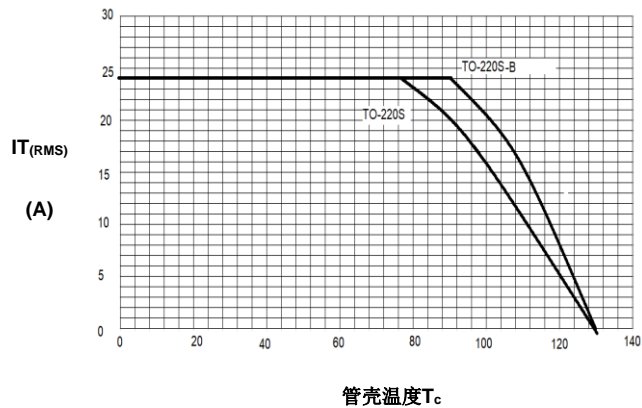


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

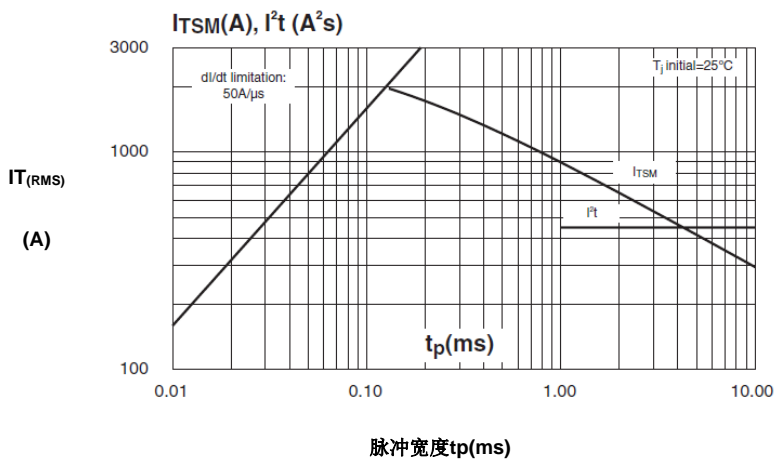
$P_{tot} - I_{T(RMS)}$



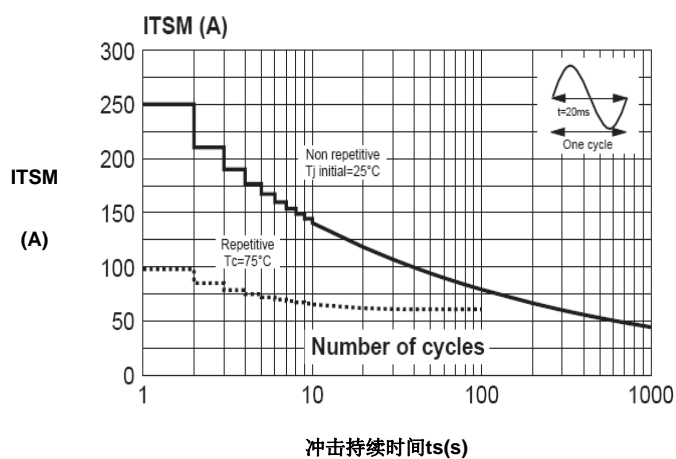
$I_{T(RMS)} - T_c$



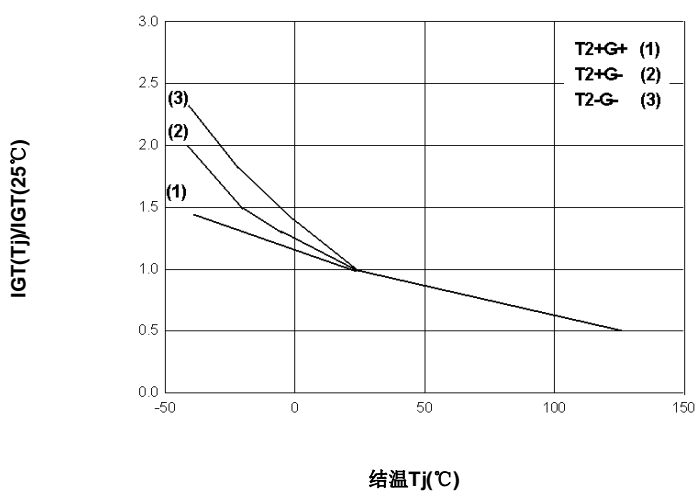
$I_{TSM} - t_p$



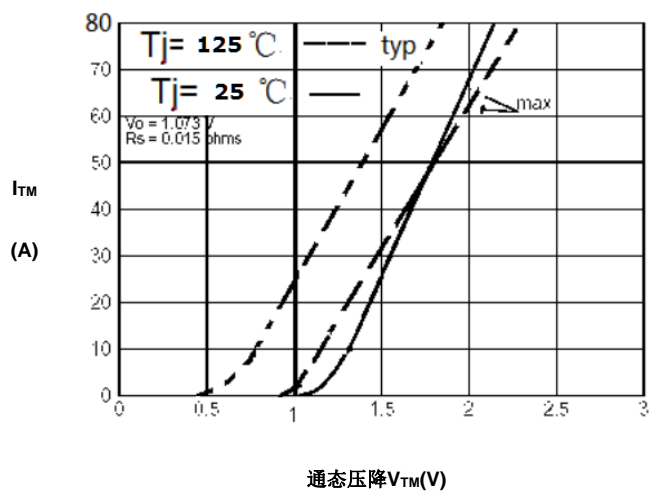
$I_{T(RMS)} - t_s$



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



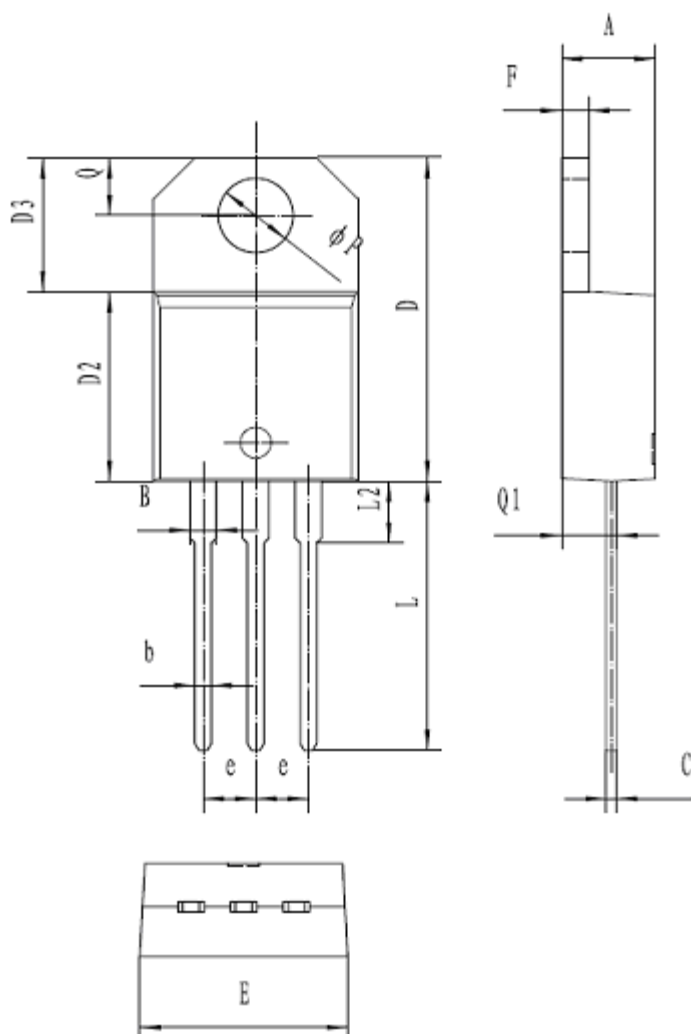
$V_{TM} - I_{TM}$





外形尺寸PACKAGE MECHANICAL DATA

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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4. 本说明书如有版本变更不另外告知。

NOTE

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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