

# CD1625H4B

## 主要参数 MAIN CHARACTERISTICS

$I_{T(RMS)}$	16A
$V_{DRM}$	1000V
$I_{GT1-3/4}$	25/50mA

## 用途

- 交流开关
- 相位控制

## APPLICATIONS

- AC switching
- Phase control

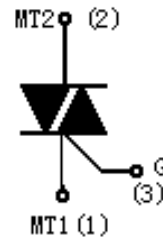
## 产品特性

- 玻璃钝化芯片，高可靠性和一致性
- 四象限可控硅，触发电流的一致性好
- 环保 RoHS 产品

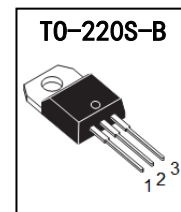
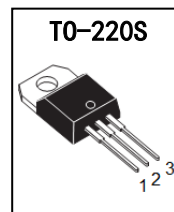
## FEATURES

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

## 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	无卤-条管		
Halogen-Tube	Halogen-Free-Tube		
CD1625H4B-CB-B	CD1625H4B-CB-BR	CD1625H4B	TO-220S
CD1625H4B-CD-B	CD1625H4B-CD-BR	CD1625H4B	TO-220S-B

## 概述 GENERAL DESCRIPTION

**CD1625H4B**是玻璃钝化芯片结构的四象限双向晶闸管，具有较高的使用可靠性。可适用于容易出现较高 $dV/dt$ 或 $dI/dt$ 的交流全波控制线路中，特别推荐应用与电感性负载控制（如电机控制线路）。器件封装形式：TO-220S（引线与散热片绝缘），TO-220S-B（引线与散热片非绝缘）。

CD1625H4B are Glass passivated four quadrant triacs, designed for high performance full-wave ac control applications where high static and dynamic  $dV/dt$  and high  $dI/dt$  can occur. They are specially recommended for use on inductive loads such as motor control circuits. Available package is TO-220S (internally insulated), TO-220S-B (NON-internally insulated).

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	$V_{\text{DRM}}$		$\pm 1000$	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 , $t=20\text{ms}$	140	A
$I^2t$ value for fusing ( $t_p=10\text{ms}$ )	$I^2t$	$t=10\text{ms}$	98	$\text{A}^2\text{s}$
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	$di/dt$	$I_{\text{TM}}=22.5\text{A}$ , $I_{\text{G}}=0.2\text{A}$ , $di_{\text{G}}/dt=0.2\text{A}/\mu\text{s}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	$I_{\text{GM}}$		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	1.0	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<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> =125°C, gate open	-	-	3.0	mA	
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =22.5A	-	-	1.6	V	
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	
门极开通时间 Gate controlled turn-on time	t <sub>gt</sub>	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	
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, R <sub>L</sub> =100Ω	MT1(-),MT2(+),G(+)	-	-	25	mA
			MT1(-),MT2(+),G(-)	-	-		mA
			MT1(+),MT2(-),G(-)	-	-		mA
			MT1(+),MT2(-),G(+)	-	-	50	mA
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	40	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(+)	-	-	50	mA
			MT1(-),MT2(+),G(-)	-	-	50	mA
			MT1(+),MT2(-),G(-)	-	-	50	mA
			MT1(+),MT2(-),G(+)	-	-	80	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	500	-	-	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-220S)			2.2	°C/W
		full cycle(TO-220S-B)			1.2	°C/W

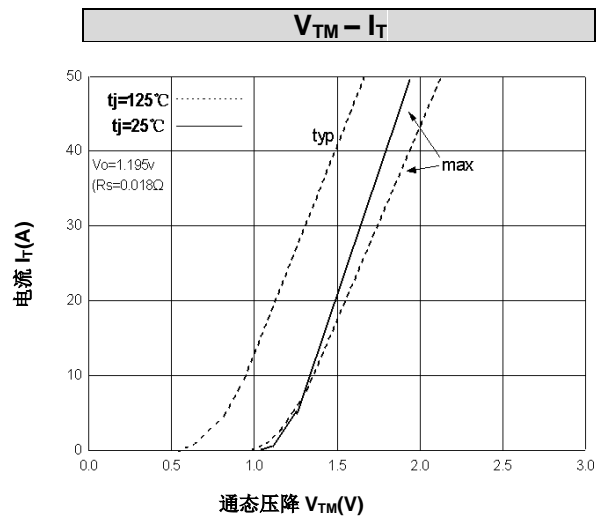
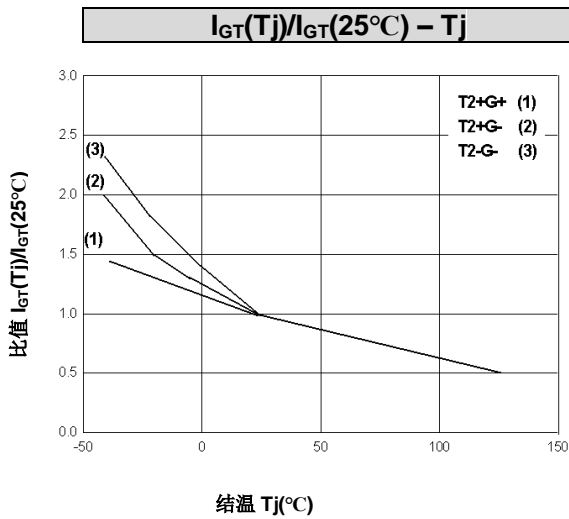
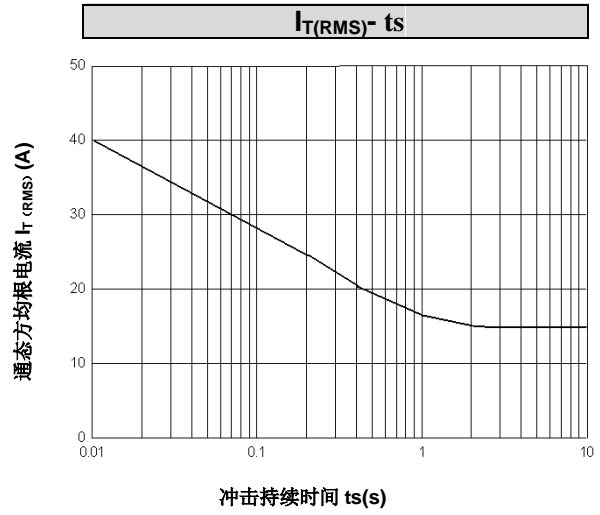
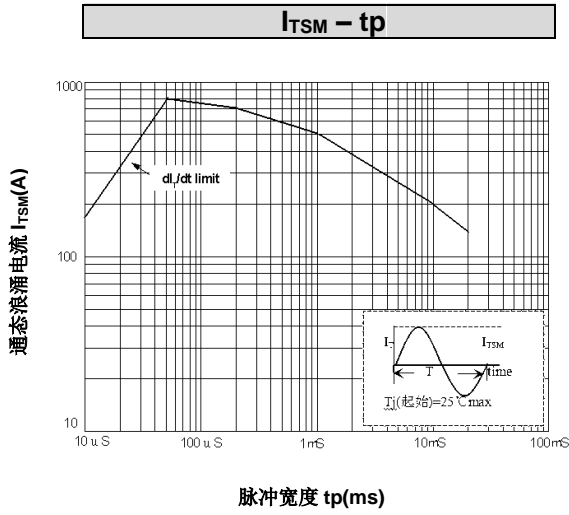
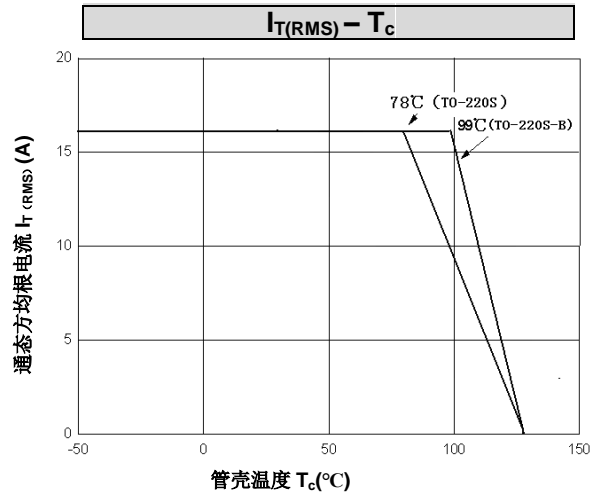
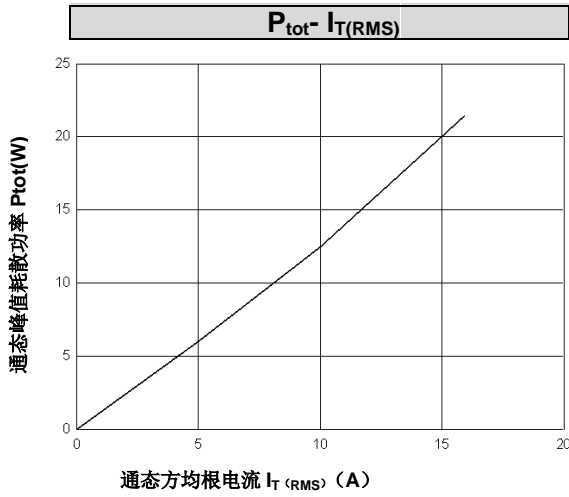
## 电绝缘特性 ELECTRICAL ISOLATION

项 目 Parameter	符 号 Symbol	条 件 Condition	数 值 Value	单 位 Unit
绝缘电压 Isolation voltage	V <sub>ISOL</sub>	1 minute, leads to mounting tab TO-220S	2000	V





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

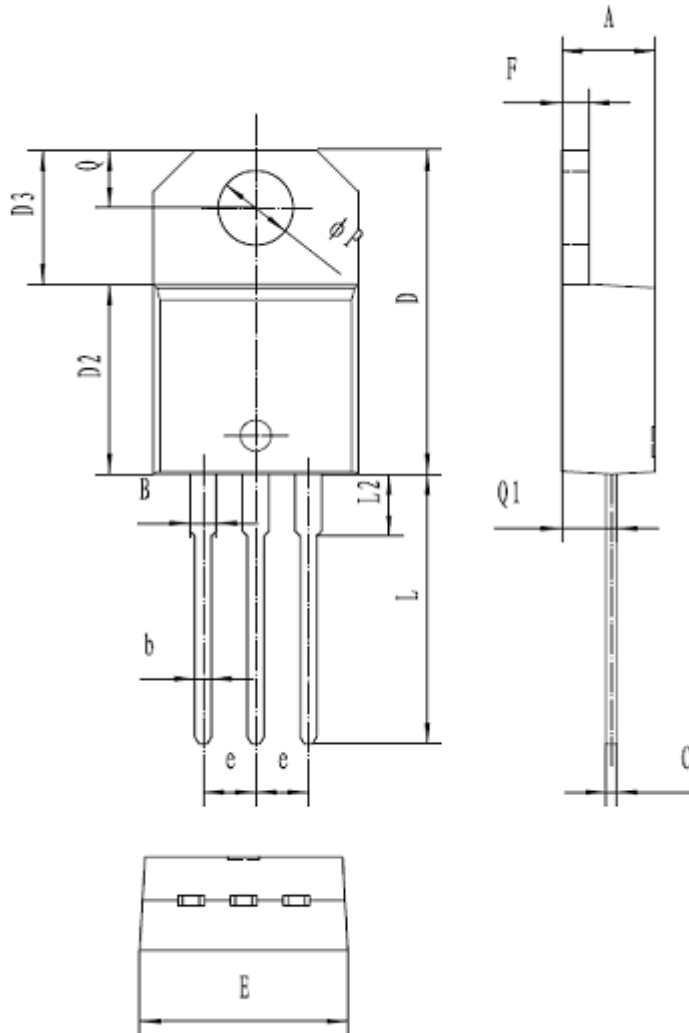




## 外形尺寸 PACKAGE MECHANICAL DATA

TO-220S/TO-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





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