



CD1610H1/CD1625H1

主要参数 MAIN CHARACTERISTICS

$I_{T(AV)}$	16A
V_{DRM}/V_{RRM}	1000V
I_{GT}	10/25

用途

- 半交流开关
- 相位控制

APPLICATIONS

- Half AC switching
- Phase control

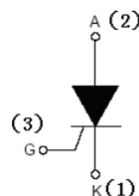
产品特性

- 玻璃钝化芯片, 高可靠性和一致性
- 环保 RoHS 产品

FEATURES

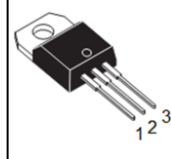
- Glass-passivated mesa chip for reliability and uniform
- RoHS products

封装 Package

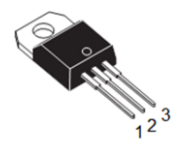


序号 Pin	引线名称 Description
1	阴极 K
2	阳极 A
3	门极 G

T0-220S
Insulated



T0-220S-B
Non-Insulated



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-袋装 Halogen- Bag	无卤-袋装 Halogen-Free-Bag		
CD1610H1-CB-B	CD1610H1-CB-BR	N/A	N/A	CD1610H1	TO-220S
CD1625H1-CB-B	CD1625H1-CB-BR	N/A	N/A	CD1625H1	TO-220S
CD1610H1-CD-B	CD1610H1-CD-BR	N/A	N/A	CD1610H1	TO-220S-B
CD1625H1-CD-B	CD1625H1-CD-BR	N/A	N/A	CD1625H1	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	$V_{\text{DRM}}/$ V_{RRM}		1000	V
通态方均根电流 Average on-state current	$I_{\text{T(AV)}}$	half sine wave	16	A
均方均根电流 RMS On-state current	$I_{\text{T(RMS)}}$	all conduction angles	25	A
非重复浪涌峰值通态电流 Non- repetitive surge peak on-state current	I_{TSM}	full sine wave , $t=10\text{ms}$	250	A
	I^2t	$t=10\text{ms}$	312.5	A^2s
通态电流临界上升率 Repetitive rate of rise of on-state current after triggering	di/dt	$I_G=2\times I_{\text{GT}}$	50	$\text{A}/\mu\text{s}$
峰值门极电流 Peak gate current	I_{GM}		4	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	$P_{\text{G(AV)}}$		2.0	W
存储温度 Storage temperature	T_{stg}		-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	T_{VJ}		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	$I_{\text{DRM}}/$ I_{RRM}	$V_{\text{DM}}=V_{\text{DRM}}, V_{\text{RM}}=V_{\text{RRM}} T_j=125^\circ\text{C},$ gate open	-	-	4	mA
峰值通态电压 Peak on-state voltage	V_{TM}	$I_{\text{TM}}=40\text{A}$	-	-	1.6	V
门极触发电流 Gate trigger current	I_{GT}	CD1610H1: $V_{\text{DM}}=12\text{V}, R_L=100\Omega$ CD1625H1: $V_{\text{DM}}=12\text{V}, R_L=100\Omega$	-	-	10 25	mA mA
门极触发电压 Gate trigger voltage	V_{GT}	CD1610H1: $V_{\text{DM}}=12\text{V}, R_L=100\Omega$ CD1625H1: $V_{\text{DM}}=12\text{V}, R_L=100\Omega$	-	0.8 0.8	1.5 1.5	V V
维持电流 Holding current	I_{H}	CD1610H1: $I_T=0.5\text{A}$ CD1625H1: $I_T=0.5\text{A}$	-	-	30 60	mA mA
擎住电流 Latching current	I_{L}	CD1610H1: $V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$ CD1625H1: $V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	-	40 70	mA mA
断态临界电压上升率 Rise of off- state voltage	dV/dt	$V_{\text{DM}}=67\% V_{\text{DRM(MAX)}},$ $T_j=125^\circ\text{C},$ gate open	1000	-	-	$\text{V}/\mu\text{s}$



**热特性 THERMAL CHARACTERISTIC**

项目 Parameter	封装 Package	最小 Min	典型 Typ	最大 Max	单位 Unit
结到管壳的热阻 Thermal resistance junction to case	TO-220S(INS)			2.2	°C/W
	TO-220S-B(Non-Ins)			1.1	°C/W

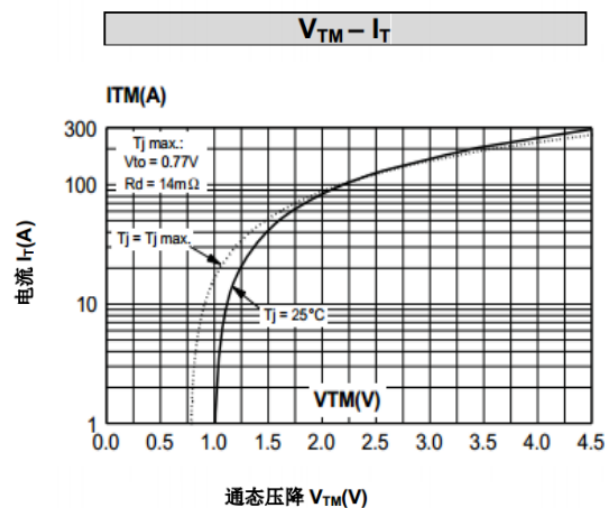
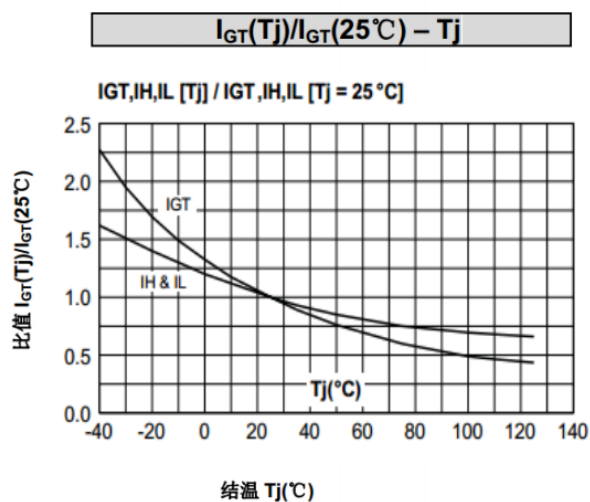
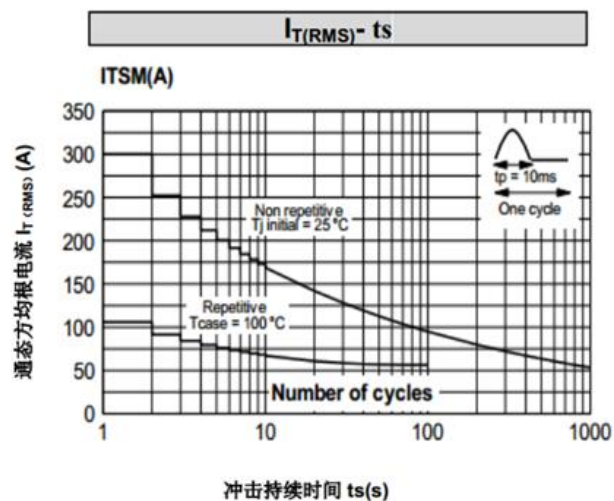
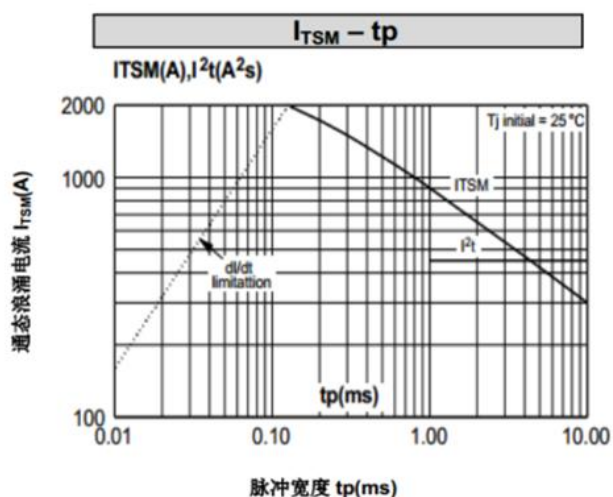
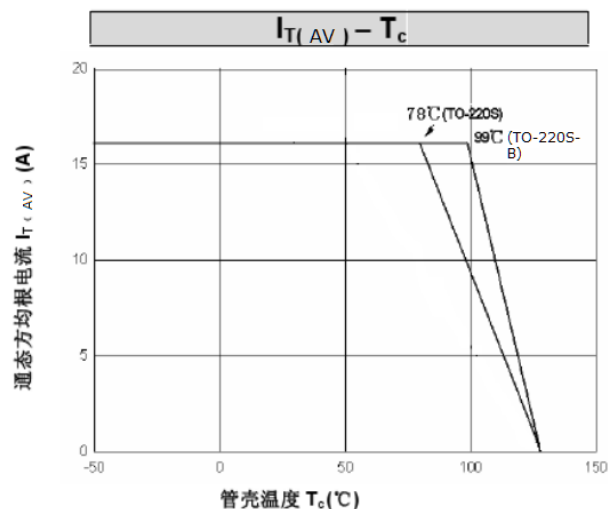
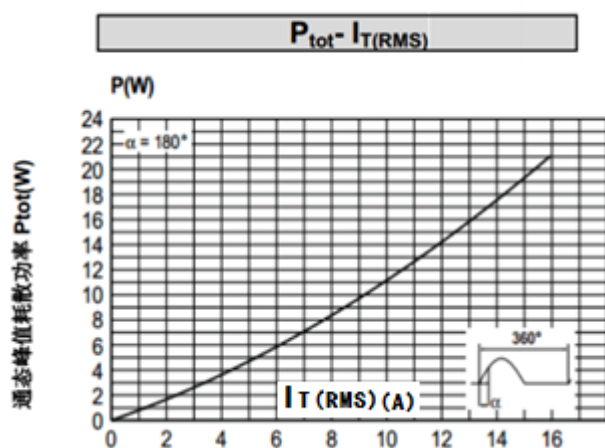
电绝缘特性 ELECTRICAL ISOLATION

项目 Parameter	符号 Symbol	条件 Condition	数 值 Value	单位 Unit
绝缘电压 Isolation voltage	VISOL	1 minute, leads to mounting tab TO-220S	2000	V





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

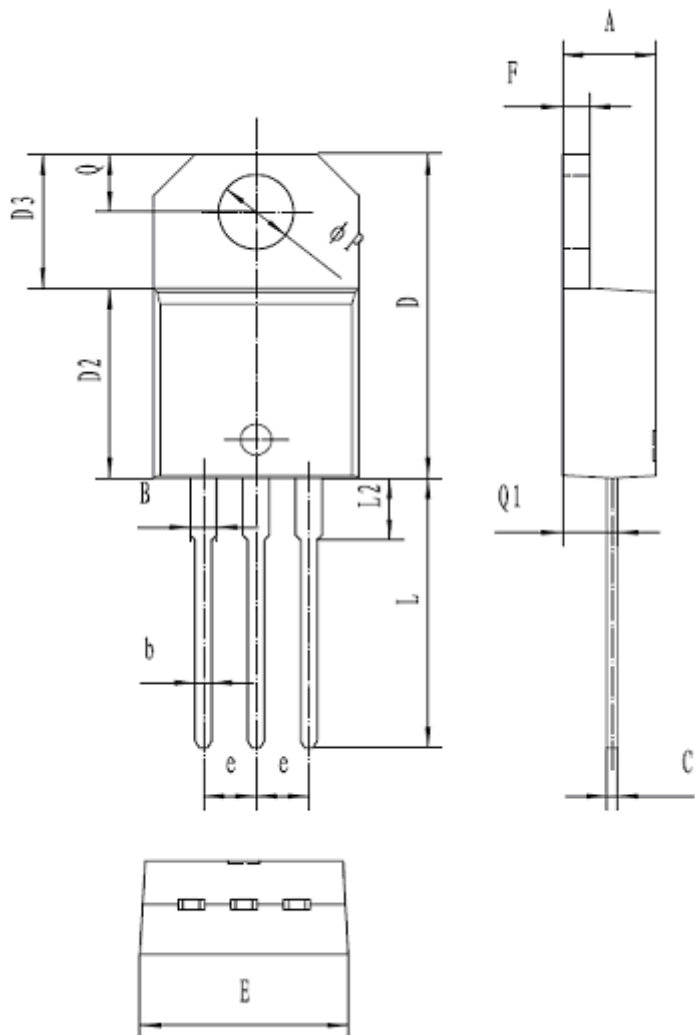




外形尺寸 PACKAGE MECHANICAL DATA

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





注意事项

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4. 本说明书如有版本变更不另外告知。

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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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