



3CT16A

主要参数 MAIN CHARACTERISTICS

$I_{T(AV)}$	16A
V_{DRM}/V_{RRM}	1200V
I_{GT}	1-16mA

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
- 低通态电流和高浪涌电流能力
- 环保 RoHS 产品

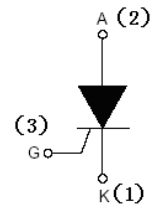
FEATURES

- Glass-passivated mesa chip for reliability and uniform
- Low on-state voltage and High I_{TSM}
- RoHS products

订货信息 ORDER MESSAGE

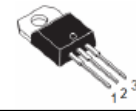
订货型号 Order codes				印 记 Marking	封 装 Package
有卤-条管 Halogen-Tube	无卤-条管 Halogen Free-Tube	有卤-编带 Halogen-Reel	无卤-编带 Halogen Free--Reel		
3CT16A-C-B	N/A	N/A	N/A	3CT16A	TO-220C
3CT16A-CB-B	N/A	N/A	N/A	3CT16A	TO-220S
有卤-袋装 Halogen-Bag	无卤-袋装 Halogen Free--Bag			印 记 Marking	封 装 Package
3CT16A-C-B	N/A	N/A	N/A	3CT16A	TO-220C
3CT16A-CB-B	N/A	N/A	N/A	3CT16A	TO-220S

封装 Package

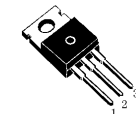


序号 Pin	引线名称 Description	
1	阴极	K
2	阳极	A
3	门极	G

TO-220S



TO-220C



绝对最大额定值 ABSOLUTE RATINGS ($T_c=25^\circ\text{C}$)

项 目 Parameter	符 号 Symbol	数 值 Value	单 位 Unit
断态重复峰值电压 Repetitive peak off-state voltage	V_{DRM}	1200	V
反向重复峰值电压 Repetitive peak reverse voltage	V_{RRM}	1200	V
通态平均电流 Average on-state current (half sine wave)	$I_{\text{T(AV)}}$	16	A
通态方均根电流 On-state RMS current (all conduction angles)	$I_{\text{T(RMS)}}$	22	A
非重复浪涌峰值通态电流 Non-repetitive surge peak on-state current (half sine wave, $t=10\text{ms}$)	I_{TSM}	200	A
I^2t for fusing ($t=10\text{ms}$)	I^2t	128	A^2s
门极峰值电流 Peak gate current	I_{GM}	2	A
门极峰值电压 Peak gate voltage	V_{GM}	5	V
反向门极峰值电压 Peak reverses gate voltage	V_{RGM}	5	V
门极峰值功率 Peak gate power	P_{GM}	5	W
门极平均功率 Average gate power (over any 20ms period)	$P_{\text{G(AV)}}$	0.5	W
存储温度 Storage temperature	T_{stg}	-40~150	$^\circ\text{C}$
操作结温 Operation junction temperature	T_{VJ}	125	$^\circ\text{C}$

静态特性 STATIC CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless otherwise stated)

项 目 Parameter	符 号 Symbol	测试条件 Tests conditions	最小 min	典型 typ	最大 max	单 位 Unit
断态峰值重复电流 Peak Repetitive Blocking Current	I_{DRM}	$V_{\text{DM}}=V_{\text{DRM(MAX)}}$, $T_j=125^\circ\text{C}$	-	-	1.0	mA
反向峰值重复电流 Peak Repetitive Reverse Current	I_{RRM}	$V_{\text{RM}}=V_{\text{RRM(MAX)}}$, $T_j=125^\circ\text{C}$	-	-	1.0	mA
峰值通态电压 Peak on-state voltage	V_{TM}	$I_{\text{TM}}=40\text{A}$	-	1.45	1.80	V
门极触发电流 Gate trigger current	I_{GT}	$V_{\text{DM}}=12\text{V}, I_{\text{T}}=0.1\text{A}$	1	10	16	mA
门极触发电压 Gate trigger voltage	V_{GT}	$V_{\text{DM}}=12\text{V}, I_{\text{T}}=0.1\text{A}$	-	0.8	1.5	V
维持电流 Holding current	I_{H}	$V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	-	50	mA
擎住电流 Latching current	I_{L}	$V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	-	40	mA

动态特性 DYNAMIC CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless otherwise stated)

项 目 Parameter	符 号 Symbol	测试条件 Tests conditions	最小 min	典型 typ	最大 max	单 位 Unit
断态临界电压上升率 Critical rate of rise of off-state voltage	dV/dt	$V_{\text{DM}}=67\% V_{\text{DRM(MAX)}}$, $T_j=125^\circ\text{C}$	50	200	-	$\text{V}/\mu\text{s}$



**热特性 THERMAL CHARACTERISTIC**

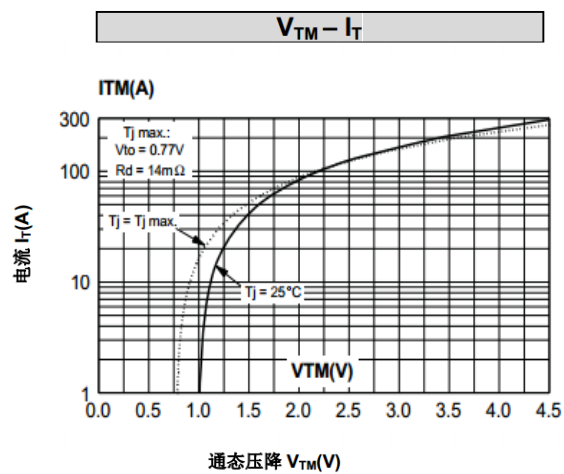
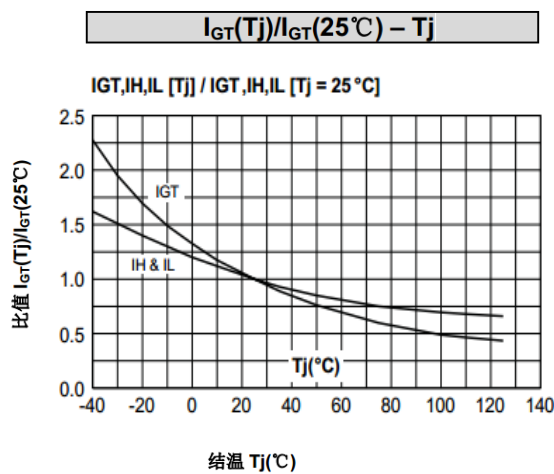
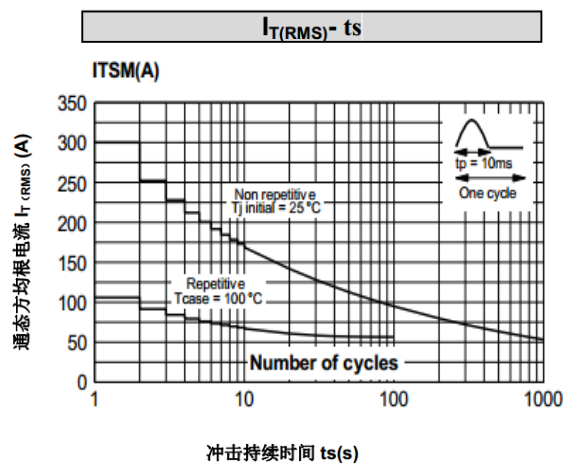
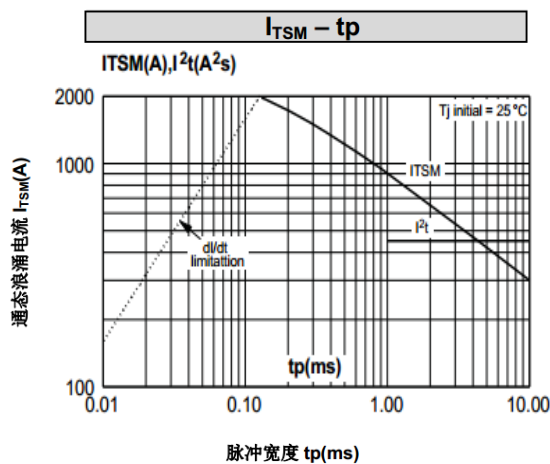
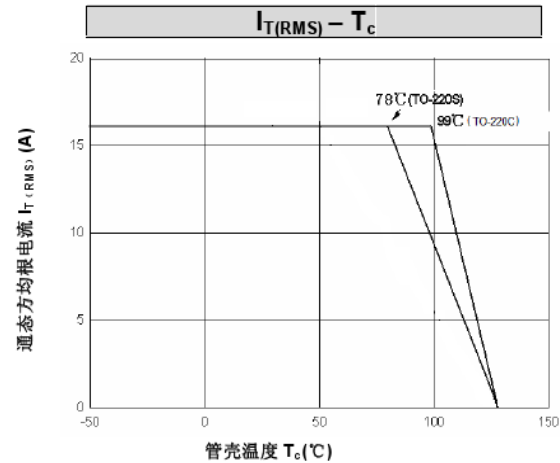
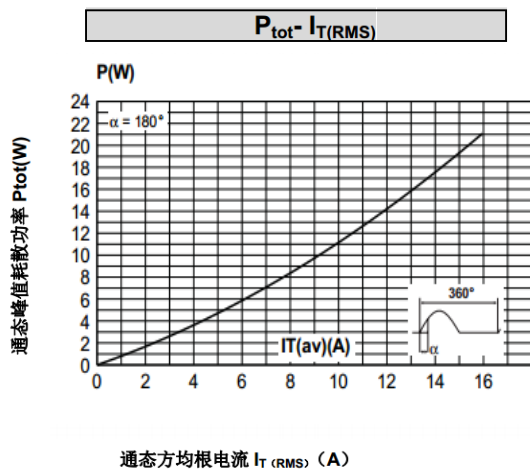
项 目 Parameter	符 号 Symbol	值 value	单位 Unit
结到管壳的热阻 Thermal resistance junction to case (TO-220C)	$R_{th(j-c)}$	1.1 max	°C/W
结到管壳的热阻 Thermal resistance junction to case (TO-220S)	$R_{th(j-c)}$	2.2max	°C/W

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



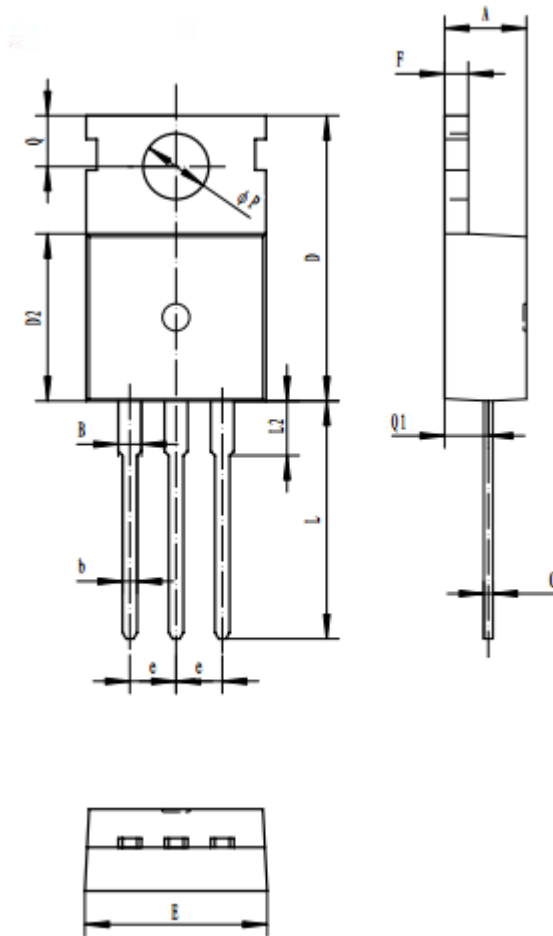
特征曲线 ELECTRICAL CHARACTERISTICS (curves)





外形尺寸 PACKAGE MECHANICAL DATA
TO-220C

单位 Unit : mm



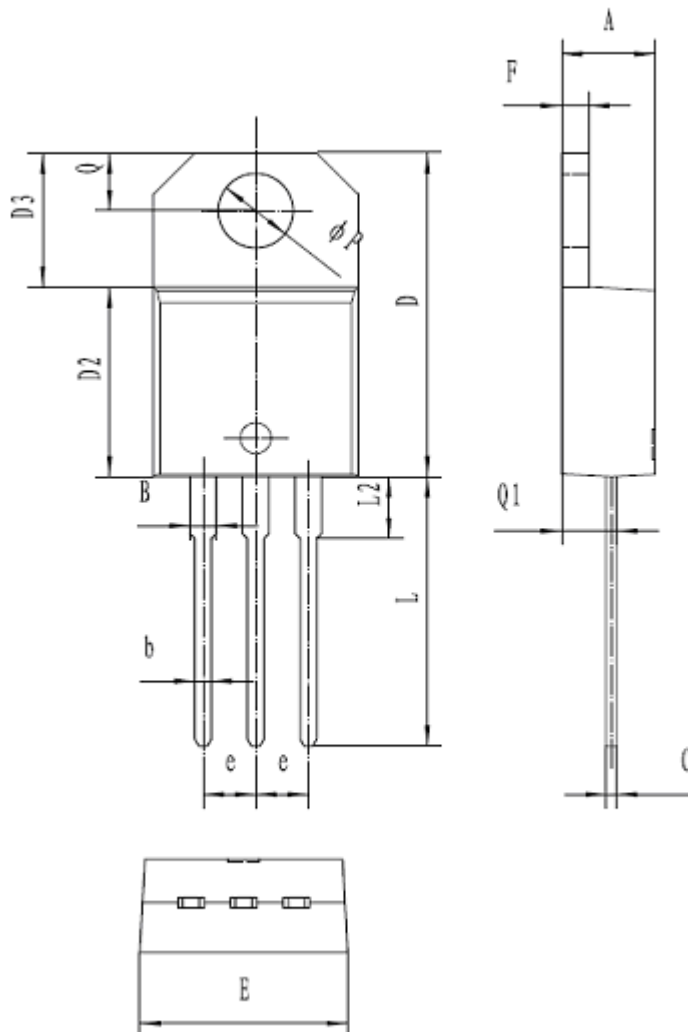
A	4.30-4.70
B	1.22-1.40
b	0.70-0.95
c	0.40-0.65
D	15.2-16.2
D2	9.00-9.40
E	9.70-10.10
e	2.39-2.69
F	1.25-1.40
L	12.60-13.60
L2	2.80-3.20
Q	2.60-3.00
Q1	2.20-2.60
P	3.50-3.80





TO-220S

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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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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