

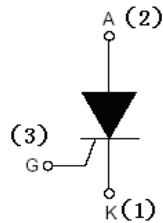


# 3CT8B

## 主要参数 MAIN CHARACTERISTICS

$I_{T(A)}$	5 A
$V_{DRM}/V_{RRM}$	600 V
$I_{GT}$	10-140 $\mu$ A

### 封装 Package



### 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

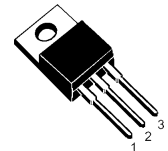
- Glass-passivated mesa chip for reliability and uniform
- Low on-state voltage and High  $I_{TSM}$
- RoHS products

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

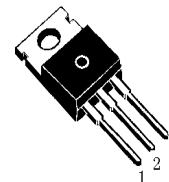
#### DPAK



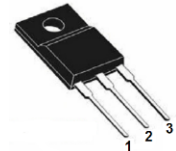
#### TO-220



#### TO-220C



#### TO-220MF-K1





## 订货信息 ORDER MESSAGE

订货型号 Order codes				印记 Marking	封装 Package
有卤-编带	无卤-编带	有卤-袋装	无卤-袋装	3CT8B	DPAK
Halogen-Reel	Halogen-Free- Reel	Halogen-Bag	Halogen-Free-Bag		
3CT8B-R-A	3CT8B-R-AR	N/A	N/A		
有卤-袋装	无卤-袋装	有卤-条管	无卤-条管	3CT8B	T0-220
Halogen-Bag	Halogen-Free-Bag	Halogen-Tube	Halogen-Free- Tube		
3CT8B -CA-C	3CT8B-CA-CR	3CT8B-CA-B	3CT8B-CA-BR		
有卤-袋装	无卤-袋装	有卤-条管	无卤-条管	3CT8B	T0-220C
Halogen-Bag	Halogen-Free-Bag	Halogen-Tube	Halogen-Free- Tube		
3CT8B-C-C	3CT8B-C-CR	3CT8B-C-B	3CT8B-C-BR		
有卤-袋装	无卤-袋装	有卤-条管	无卤-条管	3CT8B	T0-220MF-K1
Halogen-Bag	Halogen-Free-Bag	Halogen-Tube	Halogen-Free- Tube		
3CT8B -F1-C	3CT8B-F1-CR	3CT8B-F1-B	3CT8B-F1-BR		

## 绝对最大额定值 ABSOLUTE RATINGS (Tc=25°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	$V_{DRM}$	600	V
反向重复峰值电压 Repetitive peak reverse voltage	$V_{RRM}$	600	V
通态平均电流 Average on-state current	$I_T(AV)$	5.0	A
通态方均根电流 On-state RMS current ( half sine wave)	$I_{T(RMS)}$	8.0	A
非重复浪涌峰值通态电流 Non- repetitive surge peak on-state current ( half sine wave ,t=10ms)	$I_{TSM}$	75	A
$I^2t$ for fusing ( t=10ms)	$I^2t$	28	A <sup>2</sup> s
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
平均门极功率 Average gate power( over any 20ms period)	$P_{G(AV)}$	0.5	W
存储温度 Storage temperature	$T_{stg}$	-40~150	°C
操作结温 Operation junction temperature	$T_J$	125	°C



**电特性 ELECTRICAL CHARACTERISTIC (T<sub>C</sub>=25°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 <sub>DRM</sub>	V <sub>DM</sub> =V <sub>DRM</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	-	-	0.5	mA
反向峰值重复电流 Peak Repetitive Reverse Current	I <sub>RRM</sub>	V <sub>RM</sub> =V <sub>RRM</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V <sub>TM</sub>	I <sub>TM</sub> =16A	-	-	1.6	V
门极触发电流 Gate trigger current	I <sub>GT</sub>	V <sub>DM</sub> =12V, I <sub>T</sub> =0.1A	10	-	140	μA
门极触发电压 Gate trigger voltage	V <sub>GT</sub>	V <sub>DM</sub> =12V, I <sub>T</sub> =0.1A	-	0.6	0.8	V
维持电流 Holding current	I <sub>H</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	5	mA
擎住电流 Latching current	I <sub>L</sub>	V <sub>DM</sub> =12V, I <sub>GT</sub> =0.1A	-	-	10	mA

**动态特性 DYNAMIC CHARACTERISTICS (T<sub>C</sub>=25°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 <sub>DM</sub> =67% V <sub>DRM(MAX)</sub> , T <sub>j</sub> =125°C, R <sub>GK</sub> =1KΩ	10	-	-	V/μs

**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	DPAK	R <sub>th(j-c)</sub>	2.2 max
	TO-220(C)	R <sub>th(j-c)</sub>	2.0 max
结到散热片的热阻 Thermal resistance junction to heatsink	TO-220MF/TO-220MF-K1	R <sub>th(j-hs)</sub>	5.0 max
		R <sub>th(j-a)</sub>	60 typ

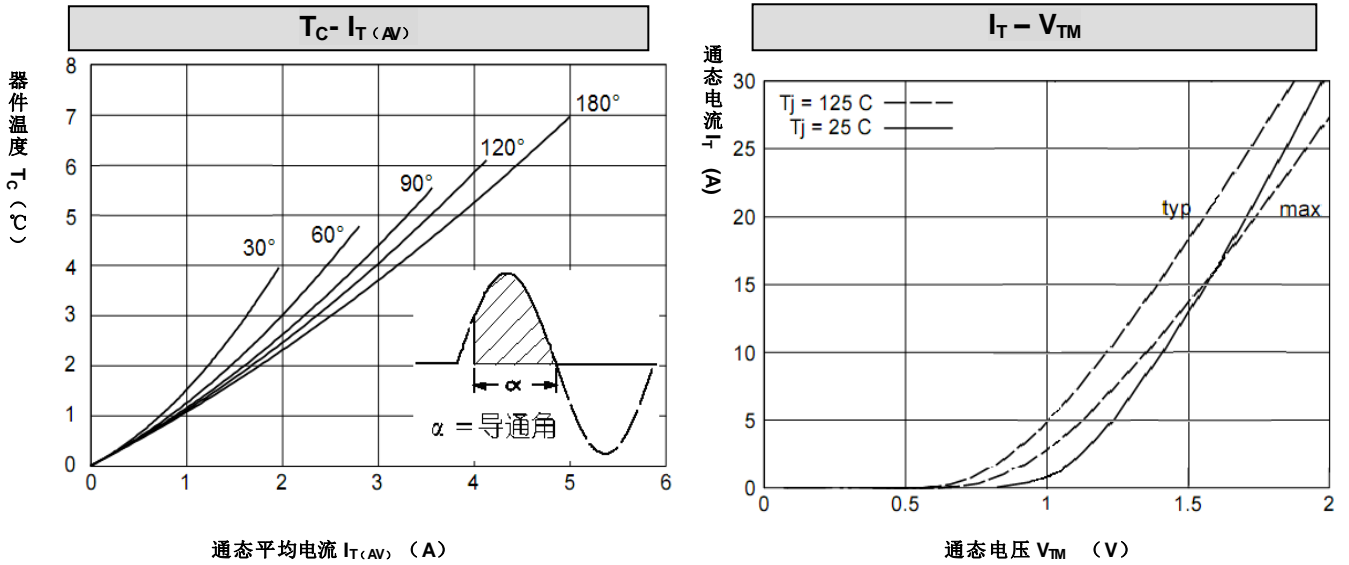
**电绝缘特性 ELECTRICAL ISOLATION**

项 目 Parameter	符号 Symbol	测试条件 Tests conditions	数值 Value	单位 Unit
绝缘电压 Isolation voltage	V <sub>ISOL</sub>	1 minute, leads to mounting tab TO-220MF/TO-220MF-K1	2000	V





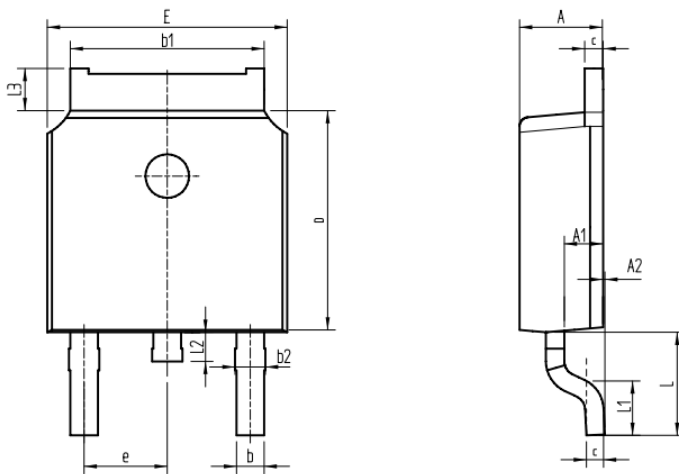
特征曲线 ELECTRICAL CHARACTERISTICS (curves)



外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm



<b>A</b>	2.16-2.41
<b>A1</b>	0.97-1.17
<b>A2</b>	0.00-0.15
<b>b</b>	0.63-0.93
<b>b1</b>	5.13-5.53
<b>b2</b>	0.66-0.96
<b>c</b>	0.40-0.60
<b>D</b>	5.80-6.40
<b>E</b>	6.30-6.90
<b>e</b>	2.286 BSC
<b>L</b>	2.50-3.30
<b>L1</b>	1.20-1.80
<b>L2</b>	0.60-1.00
<b>L3</b>	0.85-1.30

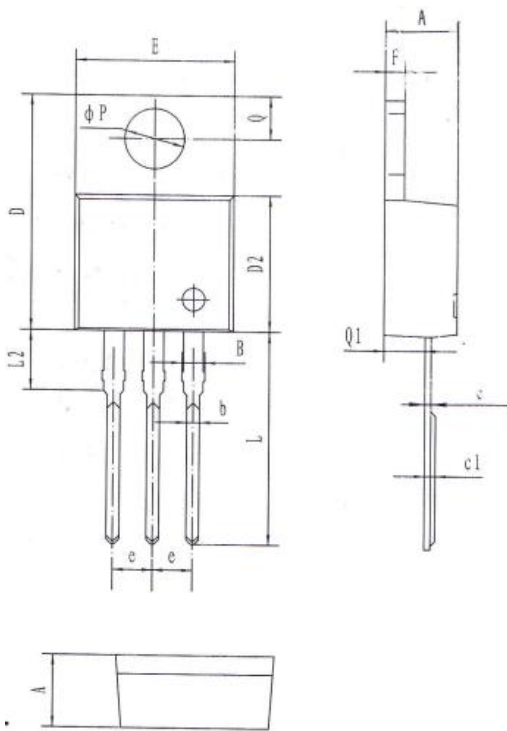




TO-220

3CT8B

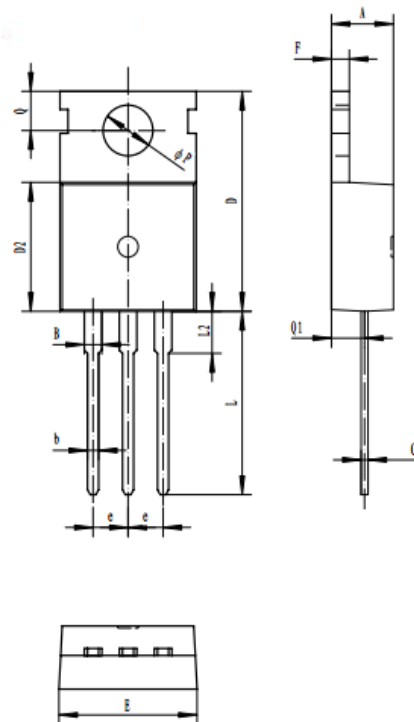
单位 Unit : mm



<b>A</b>	4.40-4.80
<b>B</b>	1.10-1.40
<b>b</b>	0.70-0.95
<b>c</b>	0.28-0.48
<b>c1</b>	0.32-0.52
<b>D</b>	14.45-16.00
<b>D2</b>	8.20-9.20
<b>E</b>	9.60-10.40
<b>e</b>	2.39-2.69
<b>F</b>	1.20-1.35
<b>L</b>	13.05-14.05
<b>L2</b>	3.70-3.90
<b>Q</b>	2.40-3.00
<b>Q1</b>	2.20-2.90
<b>P</b>	3.50-4.00

TO-220C

单位 Unit : mm



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

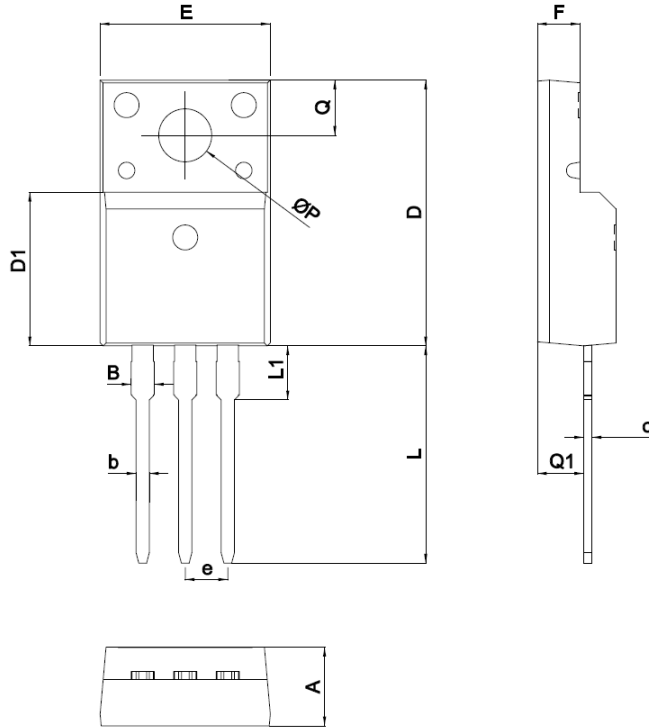




TO-220MF-K1

3CT8B

单位 Unit : mm



SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	2.54TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
$\Phi P$	3.0	3.5



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