

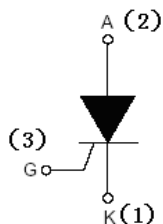


3CT8B

主要参数 MAIN CHARACTERISTICS

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

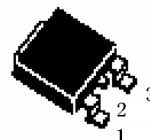
- 玻璃钝化芯片，高可靠性和一致性
- 低通态电流和高浪涌电流能力
- 环保 RoHS 产品

FEATURES

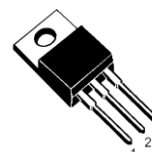
- Glass-passivated mesa chip for reliability and uniform
- Low on-state voltage and High I_{TSM}
- RoHS products

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

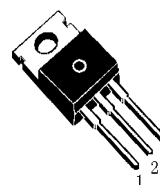
DPAK



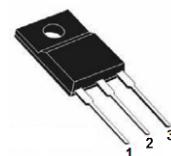
TO-220



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 _{RPM}	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 ² t for fusing (t=10ms)	I ² t	28	A ² 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 ($T_c=25^\circ\text{C}$ 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}	$V_{\text{DM}}=V_{\text{DRM}}, T_j=125^\circ\text{C}, R_{\text{GK}}=1\text{K}\Omega$	-	-	0.5	mA
反向峰值重复电流 Peak Repetitive Reverse Current	I_{RRM}	$V_{\text{RM}}=V_{\text{RRM}}, T_j=125^\circ\text{C}, R_{\text{GK}}=1\text{K}\Omega$	-	-	0.5	mA
峰值通态电压 Peak on-state voltage	V_{TM}	$I_{\text{TM}}=16\text{A}$	-	-	1.6	V
门极触发电流 Gate trigger current	I_{GT}	$V_{\text{DM}}=12\text{V}, I_{\text{T}}=0.1\text{A}$	10	-	140	μA
门极触发电压 Gate trigger voltage	V_{GT}	$V_{\text{DM}}=12\text{V}, I_{\text{T}}=0.1\text{A}$	-	0.6	0.8	V
维持电流 Holding current	I_{H}	$V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	-	5	mA
擎住电流 Latching current	I_{L}	$V_{\text{DM}}=12\text{V}, I_{\text{GT}}=0.1\text{A}$	-	-	10	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	$V_{\text{DM}}=67\% V_{\text{DRM(MAX)}}, T_j=125^\circ\text{C}, R_{\text{GK}}=1\text{K}\Omega$	10	-	-	V/ μs

热特性 THERMAL CHARACTERISTIC

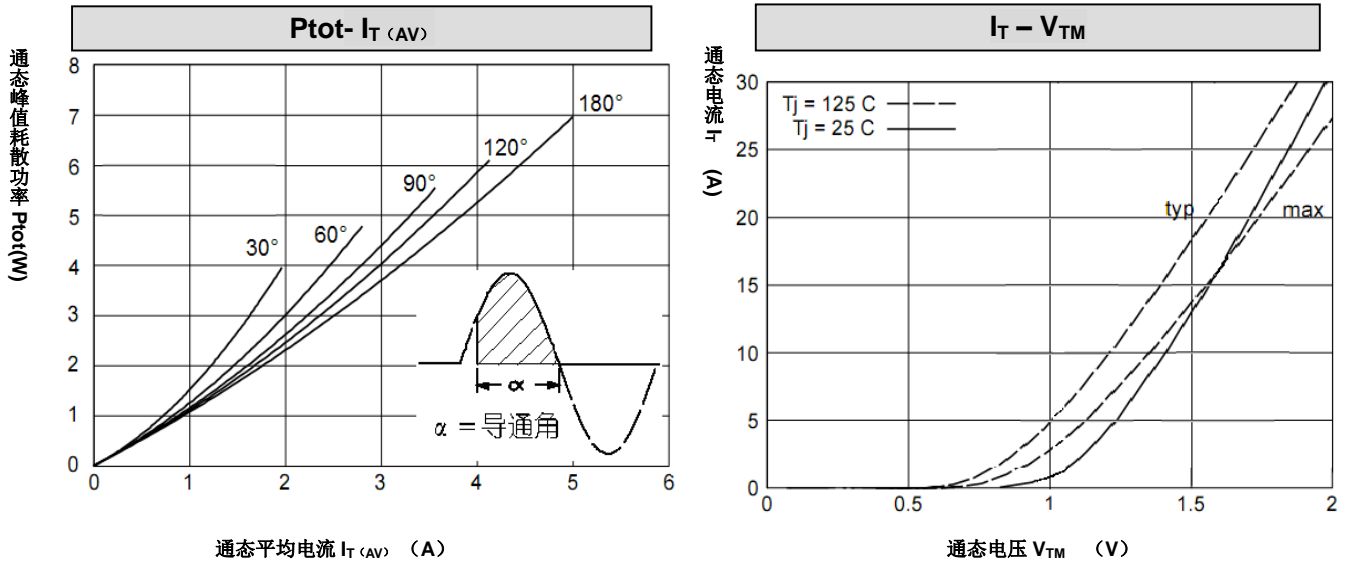
项 目 Parameter	符 号 Symbol	值 value	单位 Unit
结到管壳的热阻 Thermal resistance junction to case	DPAK	$R_{\text{th(j-c)}}$	2.2 max
	TO-220(C)	$R_{\text{th(j-c)}}$	2.0 max
结到散热片的热阻 Thermal resistance junction to heatsink	TO-220MF/TO-220MF-K1	$R_{\text{th(j-hs)}}$	5.0 max
结到环境的热阻 Thermal resistance junction to ambient(half cycle)		$R_{\text{th(j-a)}}$	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_{ISOL}	1 minute, leads to mounting tab TO-220MF/TO-220MF-K1	2000	V



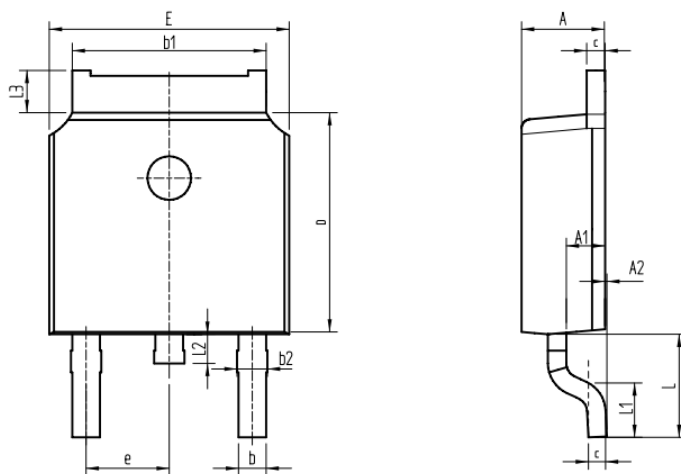
特征曲线 ELECTRICAL CHARACTERISTICS (curves)



外形尺寸 PACKAGE MECHANICAL DATA

DPAK

单位 Unit : mm



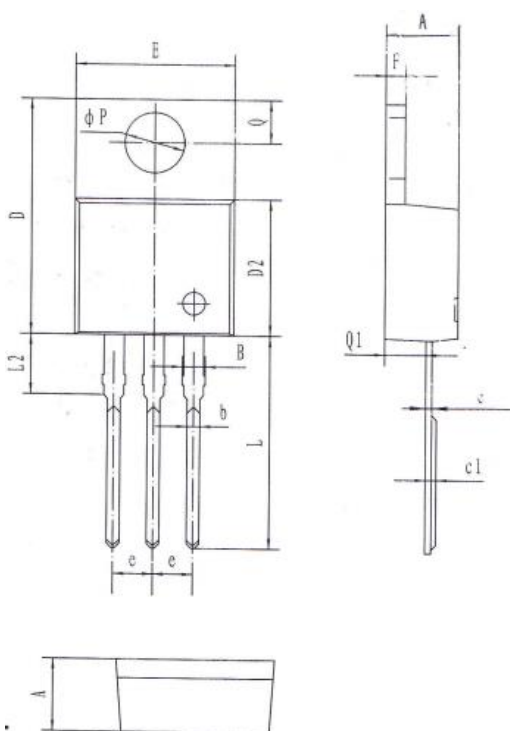
A	2.16-2.41
A1	0.97-1.17
A2	0.00-0.15
b	0.63-0.93
b1	5.13-5.53
b2	0.66-0.96
c	0.40-0.60
D	5.80-6.40
E	6.30-6.90
e	2.286 BSC
L	2.50-3.30
L1	1.20-1.80
L2	0.60-1.00
L3	0.85-1.30



TO-220

3CT8B

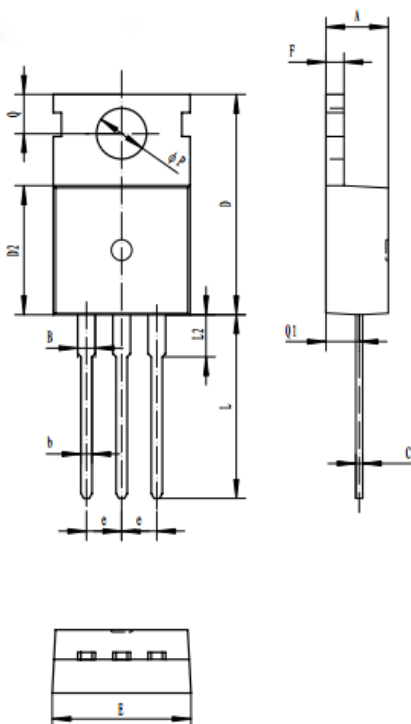
单位 Unit : mm



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

TO-220C

单位 Unit : mm



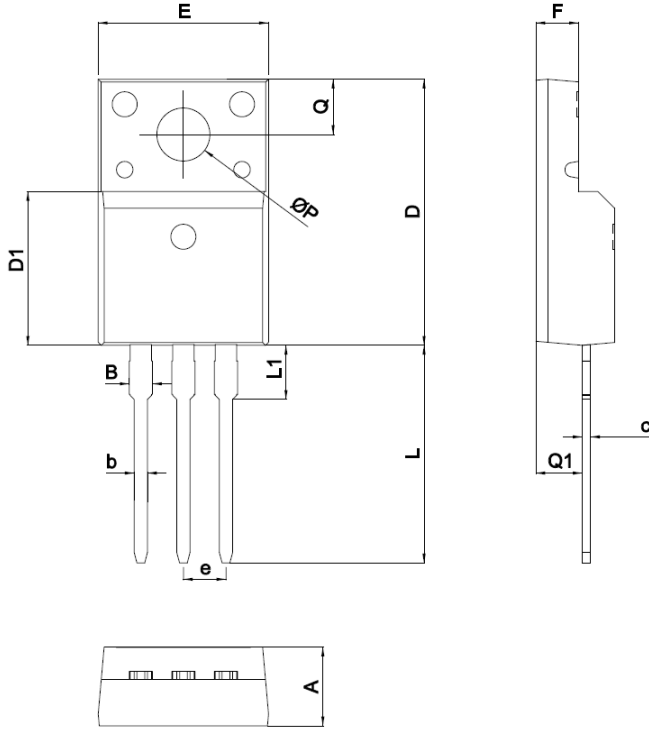
A	4.30-4.70
B	1.22-1.40
b	0.70-0.95
c	0.40-0.65
D	15.2-16.2
D2	9.00-9.40
E	9.70-10.10
e	2.39-2.69
F	1.25-1.40
L	12.60-13.60
L2	2.80-3.20
Q	2.60-3.00
Q1	2.20-2.60
P	3.50-3.80



TO-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
ΦP	3.0	3.5



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