



MBR3045C

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	30 (2×15) A
V_{RRM}	45V
T_j	150 °C
$V_{F(max)}$	0.56V (@ $T_j=125^{\circ}C$)

用途

- 高频开关电源
- 低压续流电路和保护电路

产品特性

- 共阴结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保（RoHS）产品

APPLICATIONS

- High frequency switch power supply
- Free wheeling diodes, polarity protection applications

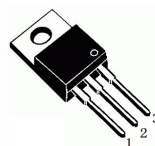
FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

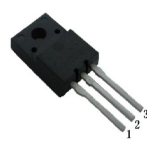
封装 Package



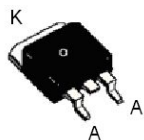
TO-220



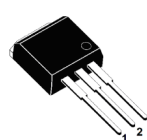
TO-220HF



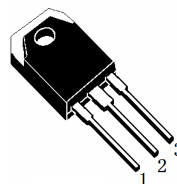
TO-263



TO-262



TO-3PB



订货信息 ORDER MESSAGE

订货型号 Order codes	印记 Marking	封装 Package	无卤素 Halogen Free	包装 Packaging	器件重量 Device Weight
MBR3045CZ	MBR3045C	TO-220	否 NO	条管 Tube	1.98 g(typ)
MBR3045CZR	MBR3045C	TO-220	是 YES	条管 Tube	1.98 g(typ)
MBR3045CHF	MBR3045C	TO-220HF	否 NO	条管 Tube	1.70 g(typ)
MBR3045CHFR	MBR3045C	TO-220HF	是 YES	条管 Tube	1.70 g(typ)
MBR3045CS	MBR3045C	TO-263	否 NO	条管 Tube	1.90 g(typ)
MBR3045CSR	MBR3045C	TO-263	是 YES	条管 Tube	1.90 g(typ)
MBR3045CS	MBR3045C	TO-263	否 NO	编带 Reel	1.90 g(typ)
MBR3045CSR	MBR3045C	TO-263	是 YES	编带 Reel	1.90 g(typ)
MBR3045CB	MBR3045C	TO-262	否 NO	条管 Tube	1.90 g(typ)
MBR3045CBR	MBR3045C	TO-262	是 YES	条管 Tube	1.90 g(typ)
MBR3045CAB	MBR3045C	TO-3PB	否 NO	条管 Tube	5.20 g(typ)
MBR3045CABR	MBR3045C	TO-3PB	是 YES	条管 Tube	5.20 g(typ)



**绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)**

项 目 Parameter			符 号 Symbol	数 值 Value	单 位 Unit
最大反向重复峰值电压 Repetitive peak reverse voltage			V_{RRM}	45	V
最大直流阻断电压 Maximum DC blocking voltage			V_{DC}	45	V
正向平均整流电流 Average forward current	$T_C=125^{\circ}\text{C}$ (TO-220, TO-262, TO-263, TO-3PB)	整个器件 per device	$I_{F(AV)}$	30	A
	$T_C=100^{\circ}\text{C}$ (TO-220HF)	单 侧 per diode		15	
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method)			I_{FSM}	200	A
最高结温 Maximum junction temperature			T_j	150	$^{\circ}\text{C}$
储存温度 Storage temperature range			T_{STG}	-40~+150	$^{\circ}\text{C}$

电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	测试条件 Tests conditions		最小值 Value(min)	典型值 Value(typ)	最大值 Value(max)	单位 Unit
I_R	$T_j = 25^{\circ}\text{C}$	$V_R = V_{RRM}$			50	μA
	$T_j = 125^{\circ}\text{C}$				30	mA
V_F	$T_j = 25^{\circ}\text{C}$	$I_F = 15\text{A}$		0.58	0.62	V
	$T_j = 125^{\circ}\text{C}$			0.52	0.56	V

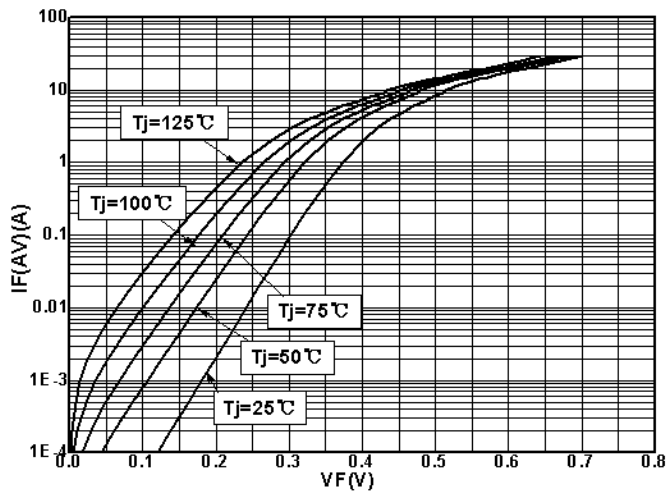
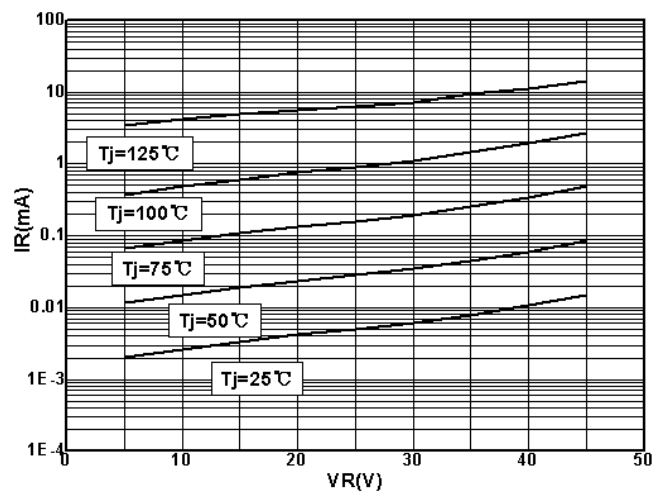
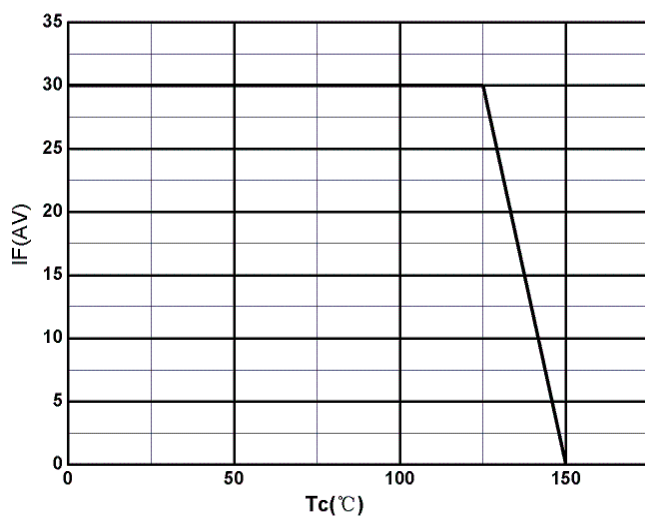
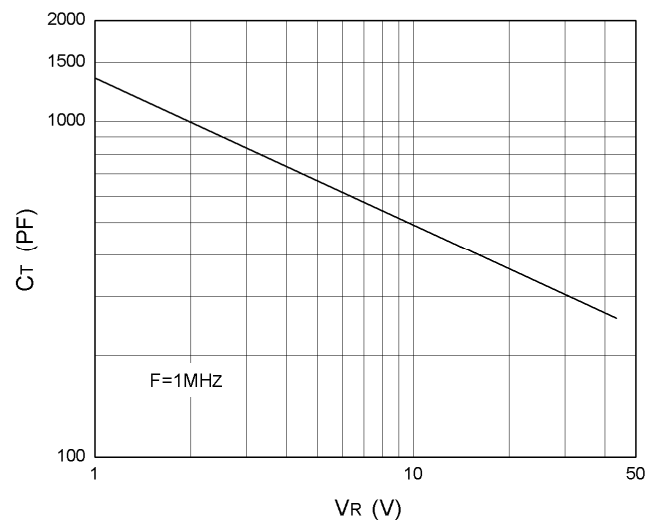
热特性 THERMAL CHARACTERISTICS

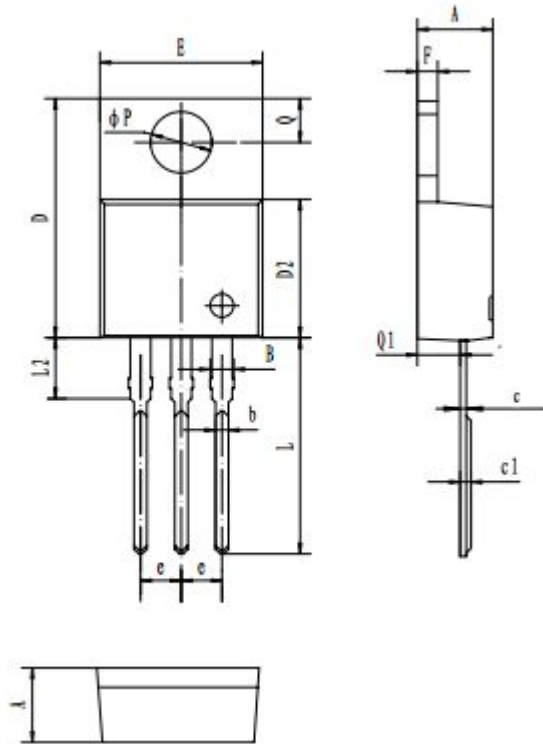
项 目 Parameter		符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220	$R_{th(j-c)}$		1.6	$^{\circ}\text{C/W}$
	TO-263			1.6	
	TO-262			1.6	
	TO-3PB			1.8	
	TO-220HF			3.5	





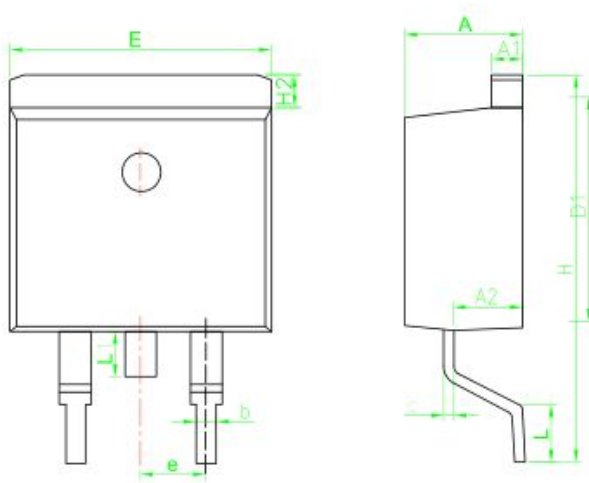
特征曲线 ELECTRICAL CHARACTERISTICS (curves)

 I_F vs V_F  I_R vs V_R  $I_F(AV)$ vs T_C  C_T vs V_R 



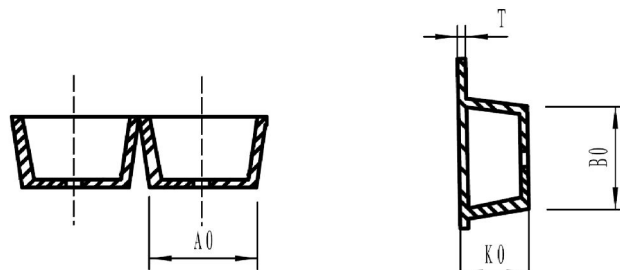
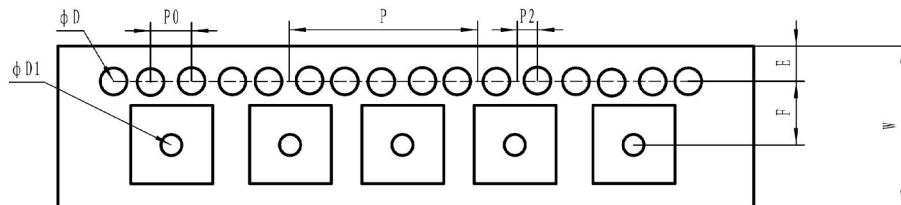
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00





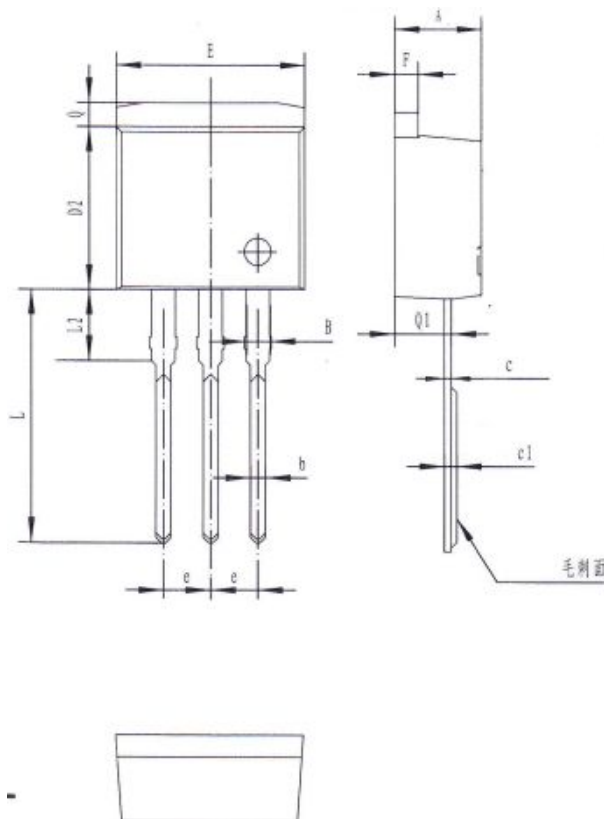
SYMBOL	MM	
	MIN	MAX
A	4.30	4.80
A1	1.12	1.42
A2	2.54	2.84
b	0.67	1.00
c	0.29	0.52
D1	8.40	9.00
E	9.80	10.46
e	2.54BSC	
H	14.00	16.00
H2	1.12	1.45
L	1.50	3.10
L1	1.45	1.70

编带 REEL



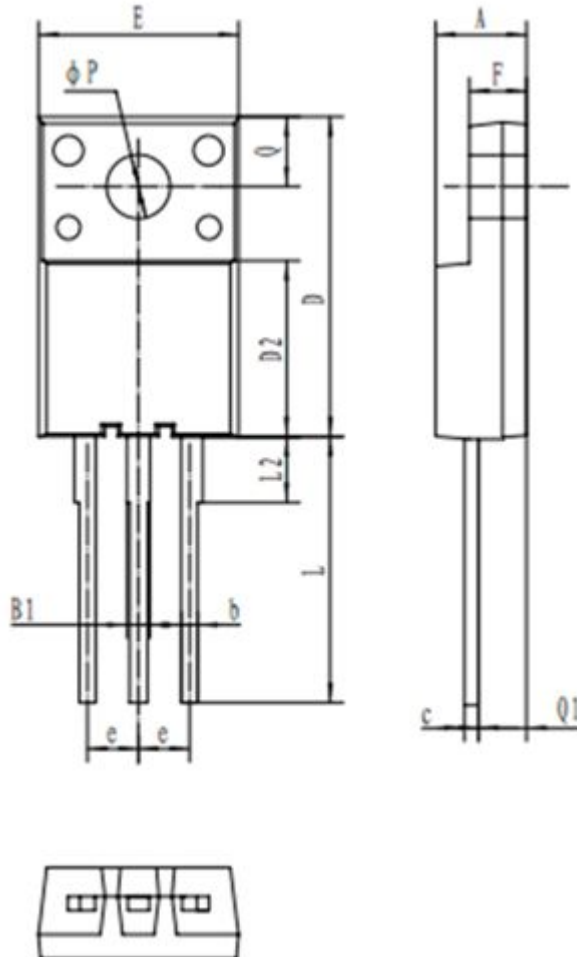
产品尺寸规格 (UNIT: mm)				
规格	W	A0	E	F
尺寸	24 ± 0.3	10.9 ± 0.2	1.75 ± 0.2	11.5 ± 0.2
规格	D1	P0	P2	P
尺寸	1.5 ± 0.2/-0.1	4 ± 0.2	2 ± 0.2	16 ± 0.2
规格	K0	B0		
尺寸	4.9 ± 0.2	16.0 ± 0.2		





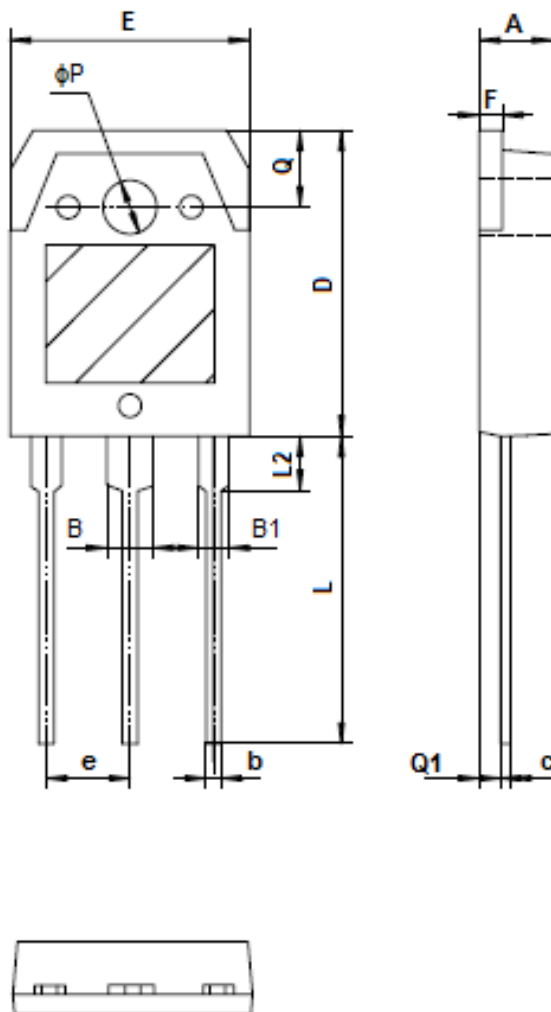
符号 symbol	MIN	MAX
A	4.40	4.90
B	1.10	1.40
b	0.70	0.95
c	0.30	0.60
c1	0.33	0.63
D2	8.20	9.20
E	9.60	10.50
e	2.39	2.69
F	1.20	1.35
L	13.11	14.61
L2	3.55	4.05
Q	1.10	1.40
Q1	2.65	2.85





符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
ϕp	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5





符号 Symbol	MIN	MAX
A	4.60	5.00
B	2.90	3.20
B1	1.90	2.20
b	0.90	1.10
c	0.50	0.70
D	19.40	20.40
E	15.40	15.80
e	5.45(TYP)	
F	1.40	1.60
L	19.50	20.50
L2	3.30	3.70
Q	4.90	5.10
Q1	1.30	1.50
P	3.10	3.50

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3. 在电路设计时请不要超过器件的绝对最大额定值, 否则会影响整机的可靠性。
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.
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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附录 (Appendix): 修订记录 (Revision History)

日期 Date	旧版本 Last Rev.	新版本 New Rev.	修订内容 Description of Changes
2015-3-4	201404A	201503B	Deleted TO-220B spec.
2015-10-28		201510C	Revised TO-220HF, TO-263 Package Mechanical Data.

