

## MBR10100 肖特基二极管 SCHOTTKY DIODE

### FEATURES

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

### APPLICATIONS

- High frequency switch Power supply
- Free wheeling diodes, Polarity protection applications

### 主要参数 MAIN CHARACTERISTICS

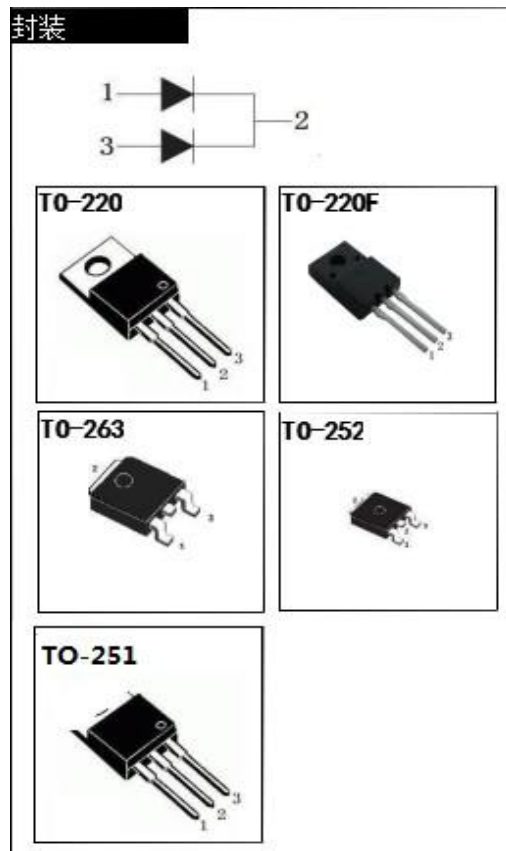
$I_{F(AV)}$	10 (2×5) A
$V_{F(max)}$	0.7V (@T <sub>j</sub> =125℃)
T <sub>j</sub>	175 ℃
V <sub>R<sub>RM</sub></sub>	100 V

### 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

### 用途

- 高频开关电源
- 低压续流电路和保护电路



### 产品型号信息 PRODUCT MESSAGE

型号 Model	印记 Marking	封装 Package
MBR10100	MBR10100	TO-220C
MBRF10100	MBRF10100	TO-220F
MBR10100S	MBR10100S	TO-263
MBR10100R	MBR10100R	TO-252
MBR10100V	MBR10100V	TO-251
MBR10100C	MBR10100C	TO-220

# MBR10100 肖特基二极管 SCHOTTKY DIODE

## 绝对最大额定值 ABSOLUTE RATINGS (Tc=25°C)

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 <sub>RRM</sub>	100	V
最大直流阻断电压 Maximum DC blocking voltage		V <sub>DC</sub>	100	V
正向平均整流电流 Average forward current	T <sub>C</sub> =150°C (TO-220/263/252)	I <sub>F(AV)</sub>	10	A
	T <sub>C</sub> =125°C (TO-220F)		5	
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 <sub>FSM</sub>	120	A
最高结温 Maximum junction temperature		T <sub>j</sub>	175	°C
储存温度 Storage temperature range		T <sub>STG</sub>	-40~+150	°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 <sub>R</sub>	T <sub>j</sub> =25°C	V <sub>R</sub> =V <sub>RRM</sub>			10	μA
	T <sub>j</sub> =125°C				5	mA
V <sub>F</sub>	T <sub>j</sub> =25°C	I <sub>F</sub> =5A		0.77	0.83	V
	T <sub>j</sub> =125°C			0.64	0.7	V
	T <sub>j</sub> =25°C	I <sub>F</sub> =10A		0.86	0.9	V
	T <sub>j</sub> =125°C			0.73	0.8	V

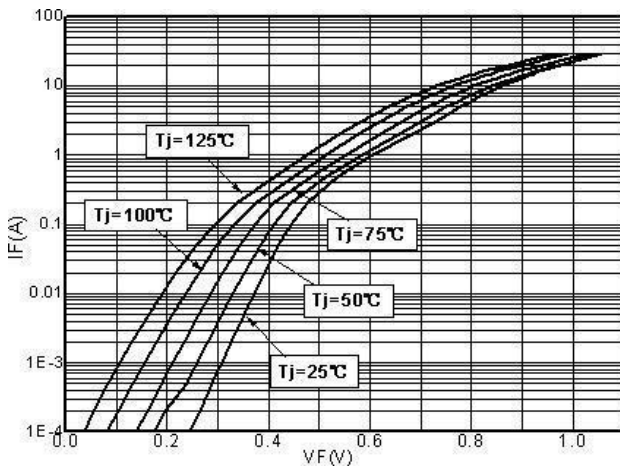
## 热特性 THERMAL CHARACTERISTICS

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		1.9	°C/W
	TO-220F		3.5	
	TO-263	R <sub>th(j-c)</sub>	1.9	
	TO-252		3	

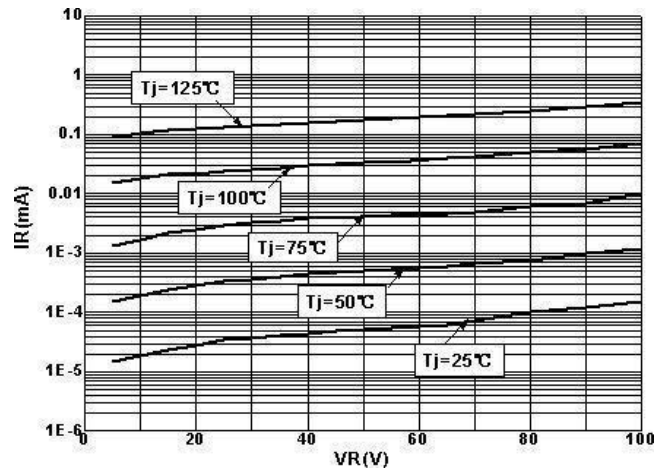
# MBR10100 肖特基二极管 SCHOTTKY DIODE

## 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

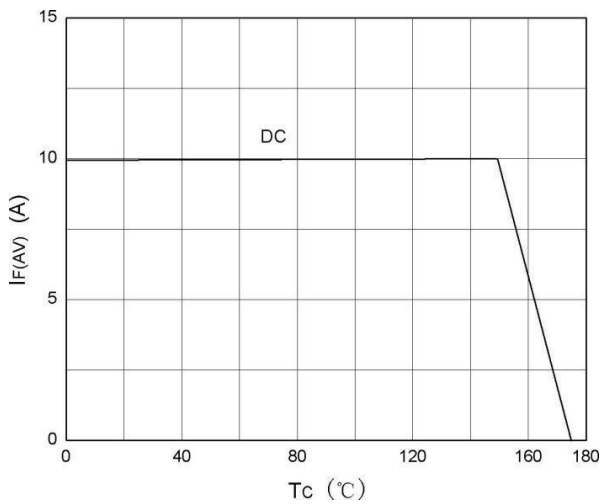
$I_F$  vs  $V_F$



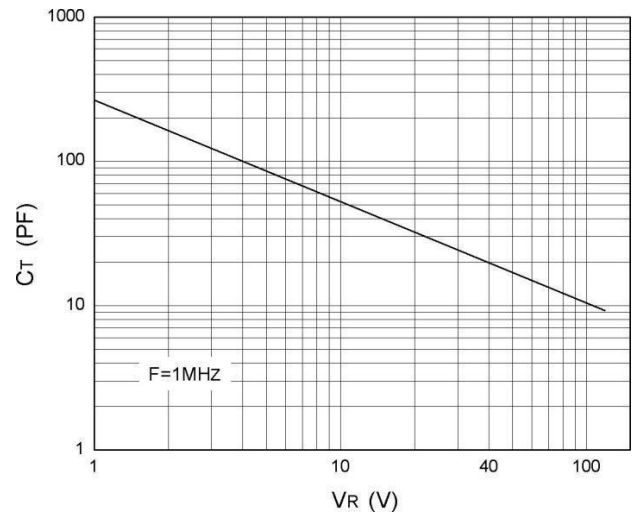
$I_R$  vs  $V_R$



$I_F(\text{AV})$  vs  $T_c$



$C_T$  vs  $V_R$

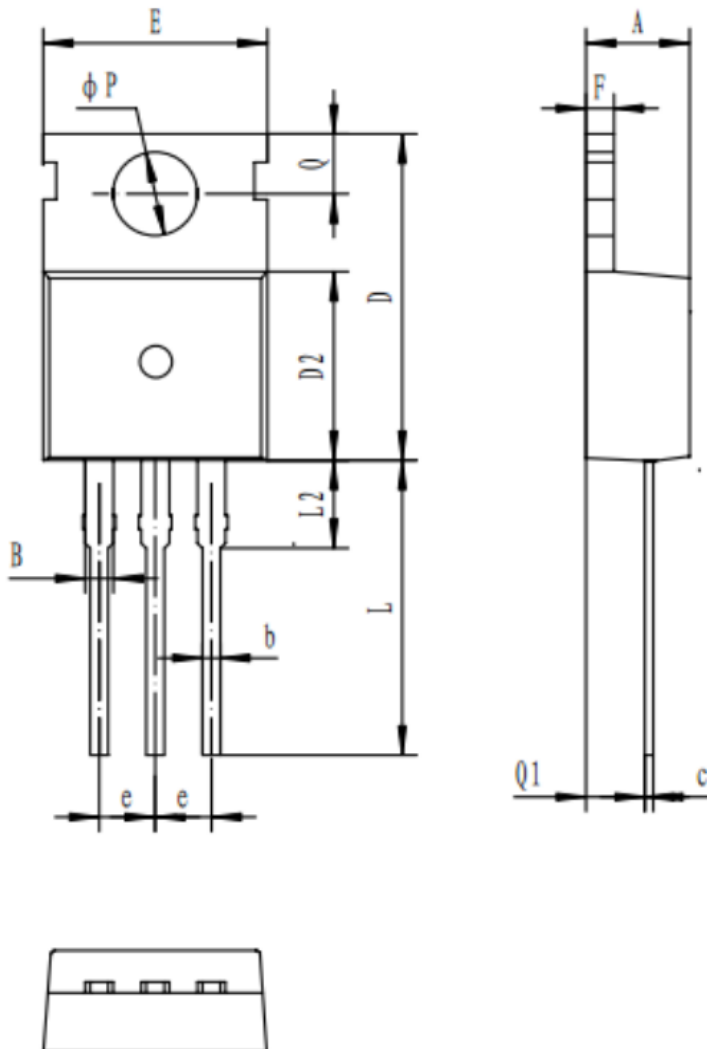


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## 外形尺寸 PACKAGE MECHANICAL DATA

单位 Unit : mm

### TO-220C

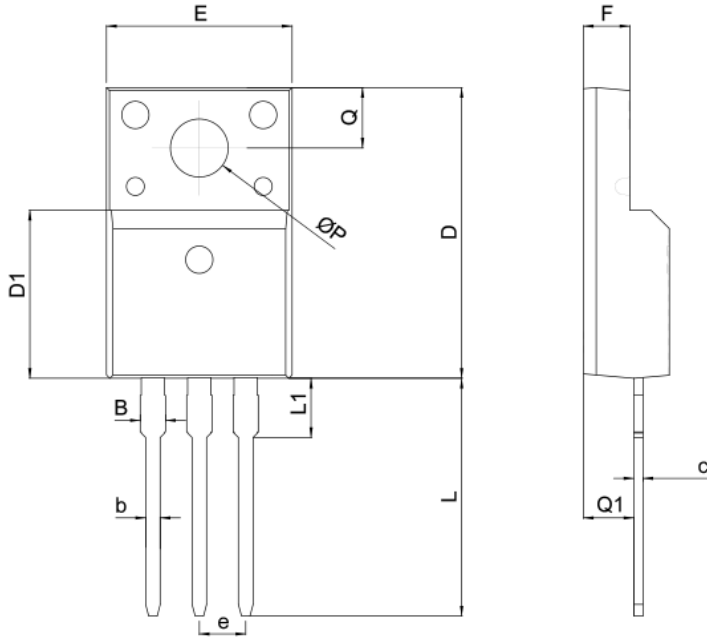


符号 symbol	MIN	MAX
A	4.30	4.70
B	1.10	1.45
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	8.80	9.40
E	9.70	10.30
e	2.39	2.69
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
Q	2.60	3.00
Q1	2.20	2.60
P	3.50	3.80

# MBR10100 肖特基二极管 SCHOTTKY DIODE

外形尺寸 PACKAGE MECHANICAL DATA  
TO-220F

单位 Unit : mm

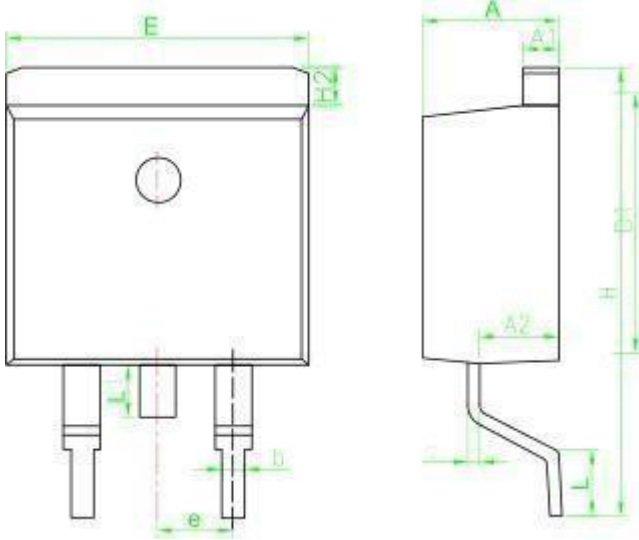


SYMBOL	mm	
	MIN	MAX
A	4.5	4.9
B	1.22	1.47
b	0.7	0.9
c	0.45	0.60
D	15.6	16.1
D1	9.0	9.3
e	2.54TYPE	
E	9.9	10.4
F	2.3	2.8
L	12.6	13.3
L1	3.1	3.4
Q	3.2	3.4
Q1	2.6	2.9
ΦP	3.0	3.5

# MBR10100 肖特基二极管 SCHOTTKY DIODE

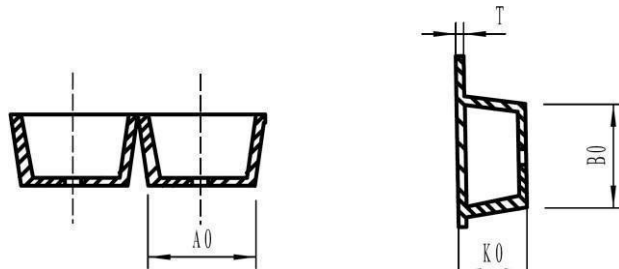
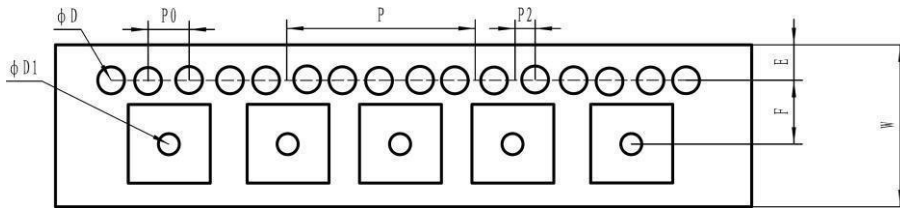
## 外形尺寸 PACKAGE MECHANICAL DATA TO-263

单位 Unit : mm



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

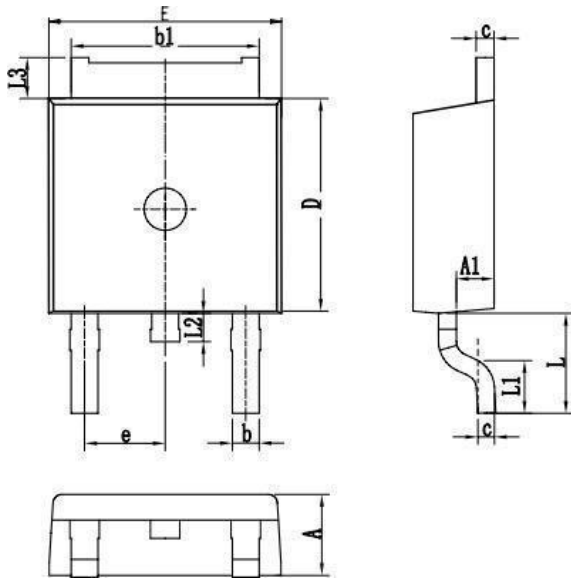


产品尺寸规格 (UNIT: mm)				
规格	W	A0	E	D
尺寸	24 ± 0.3	10.9 ± 0.2	1.75 ± 0.2	1.5 ± 0.2 / -0.1
规格	D1	P0	P2	P
尺寸	1.5 ± 0.2 / -0.1	4 ± 0.2	2 ± 0.2	16 ± 0.2
规格	K0	B0		
尺寸	4.9 ± 0.2	16.0 ± 0.2		

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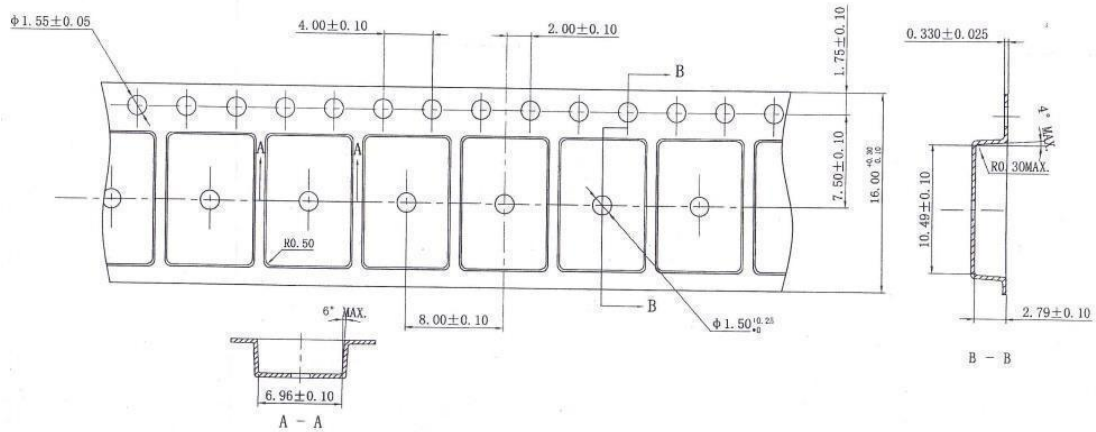
## 外形尺寸 PACKAGE MECHANICAL DATA TO-252

单位 Unit : mm



SYMBOL	mm	
	MIN	MAX
A	2.10	2.50
A1	0.80	1.20
b	0.66	0.96
b1	5.10	5.50
c	0.40	0.62
D	5.85	6.45
E	6.30	6.90
e	2.286BSC	
L	2.40	3.00
L1	0.85	1.45
L2	0.60	1.10
L3	0.67	1.07

## 编带 REEL



# MBR10100 肖特基二极管 SCHOTTKY DIODE

## 外形尺寸 PACKAGE MECHANICAL DATA TO-251

单位 Unit : mm

