



# STD2080

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
$V_{RRM}$	80 V
$T_j$	150 °C
$V_{F(Type)}$	0.48V (@ $T_A=125^{\circ}C$ )

### 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
- 沟槽技术，高可靠性
- 环保 (RoHS) 产品

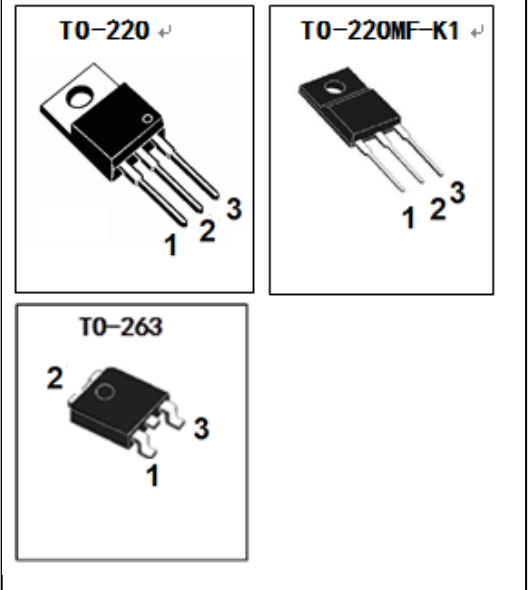
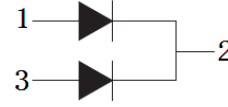
### APPLICATIONS

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

### FEATURES

- Common cathode structure
- Low power loss, high efficiency
- High Operating Junction Temperature
- Trench technology, High reliability
- RoHS product

## 封装 Package



## 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		
STD2080-CA-B	STD2080-CA-BR	N/A	N/A	STD2080	TO-220
STD2080-F1-B	STD2080-F1-BR	N/A	N/A	STD2080	TO-220MF-K1
STD2080-S-B	STD2080-S-BR	STD2080-S-A	STD2080-S-AR	STD2080	TO-263

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
最大反向重复峰值电压 Repetitive peak reverse voltage	$V_{RRM}$	80	V
最大直流阻断电压 Maximum DC blocking voltage	$V_{DC}$	80	V
正向平均整流电流 Average forward current	$I_{F(AV)}$	$T_c=125^\circ\text{C}$ (TO-220/TO-263) 整个器件 per device	20
		$T_c=100^\circ\text{C}$ (TO-220MF-K1) 单 侧 per diode	10
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)	$I_{FSM}$	180	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
$I_R$	$T_j=25^\circ\text{C}$	$V_R=V_{RRM}$		25	40	$\mu\text{A}$
	$T_j=125^\circ\text{C}$			6.6	20	mA
$V_F$	$T_j=25^\circ\text{C}$	$I_F=5.0\text{A}$		0.46	0.50	V
	$T_j=125^\circ\text{C}$			0.38		V
	$T_j=25^\circ\text{C}$	$I_F=10\text{A}$		0.53	0.57	
	$T_j=125^\circ\text{C}$			0.48		V

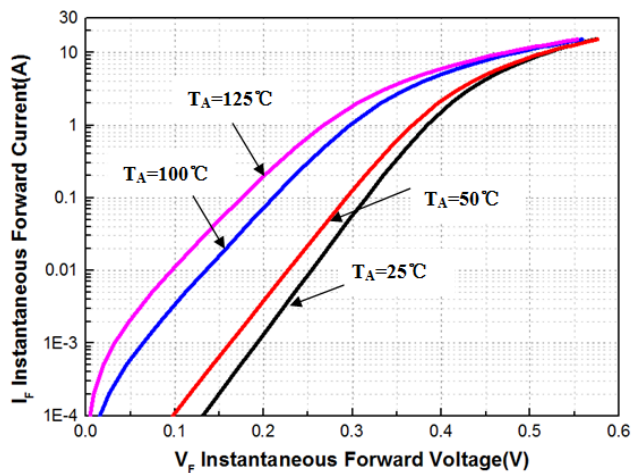
## 热特性 THERMAL CHARACTERISTICS

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	$R_{th(j-c)}$	TO-220	1.9	$^\circ\text{C}/\text{W}$
		TO-263	2.0	
		TO-220MF-K1	2.5	

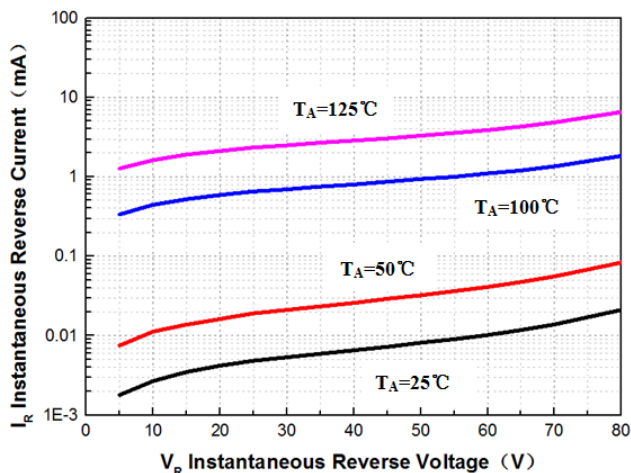


### 特征曲线 ELECTRICAL CHARACTERISTICS (curves)

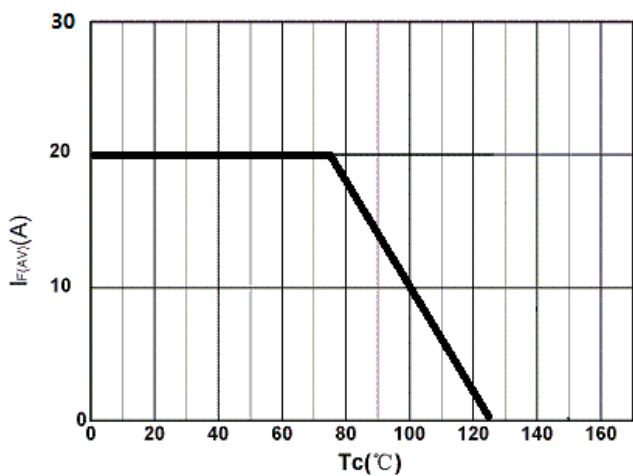
IF vs VF



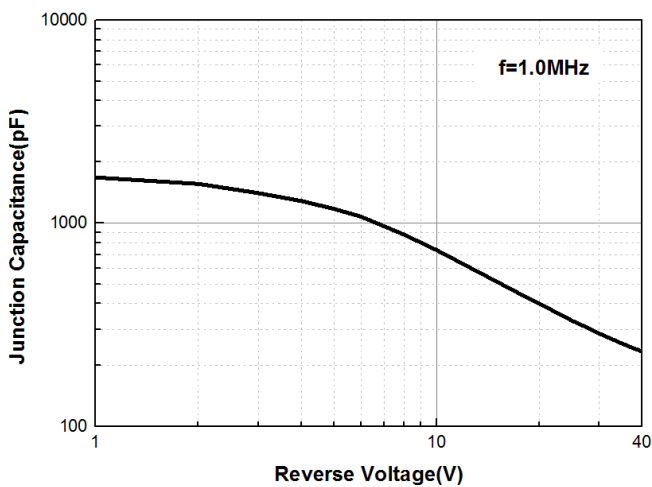
IR vs VR



IF(AV) vs Tc

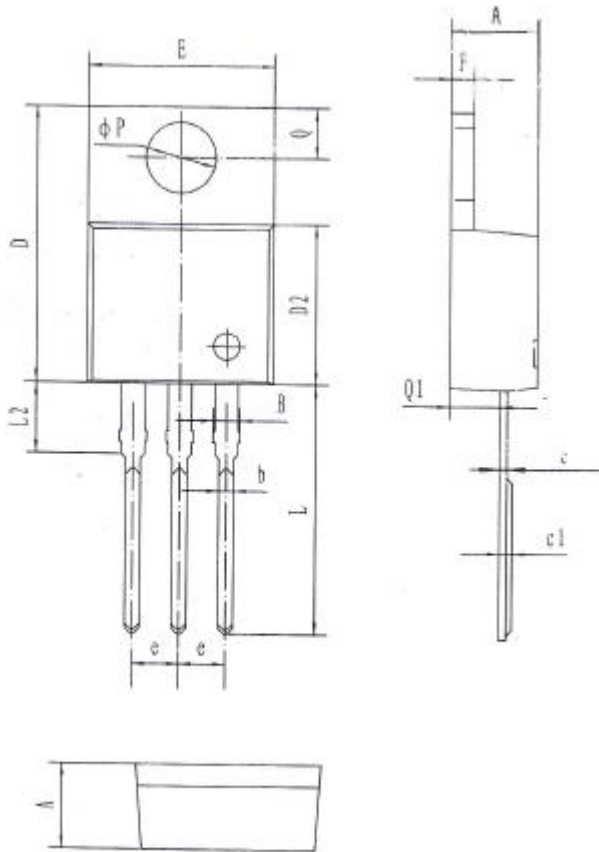


CJ vs VR f=1MHz



外形尺寸PACKAGE MECHANICAL DATA  
T0-220

单位 Unit : mm



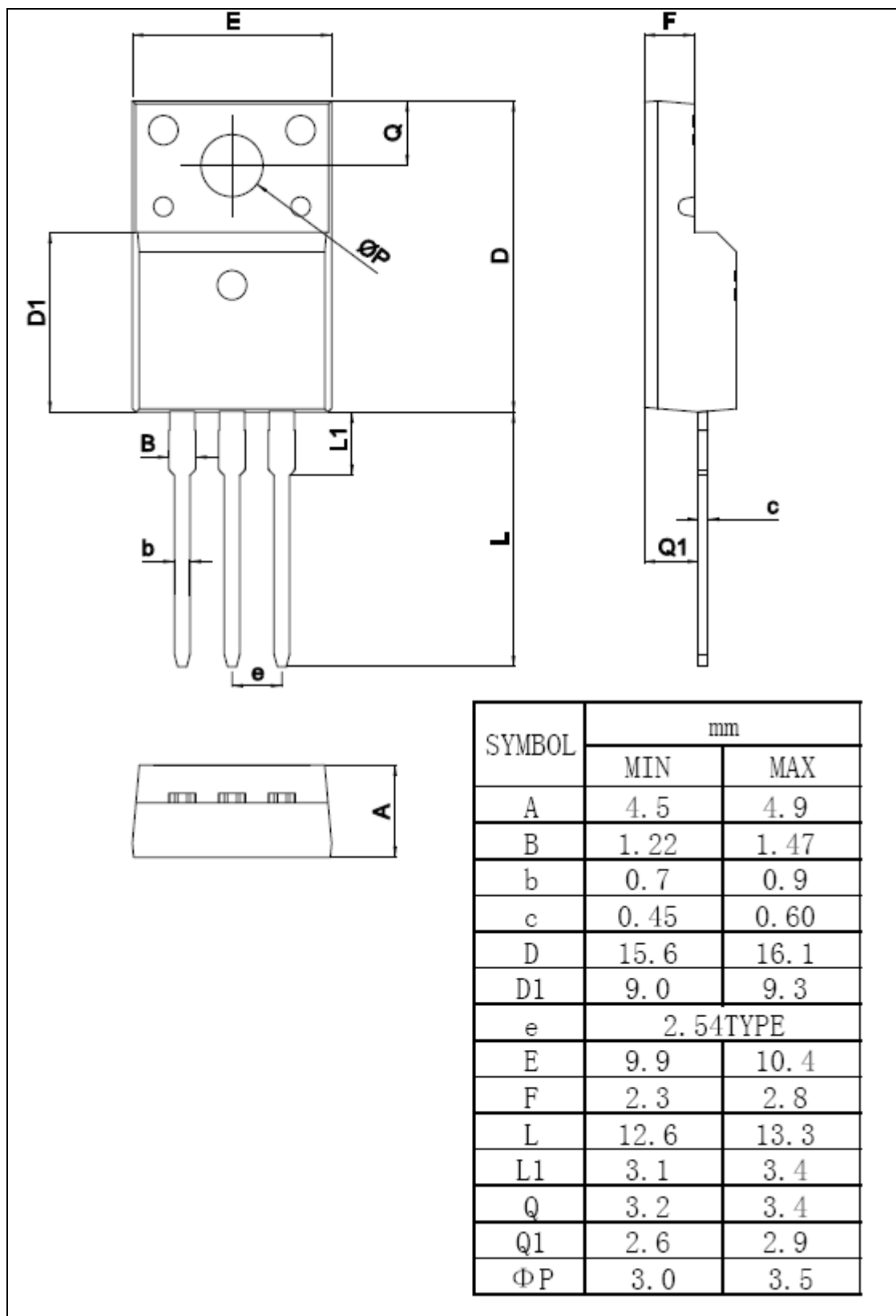
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00



## 外形尺寸PACKAGE MECHANICAL DATA

T0-220MF-K1

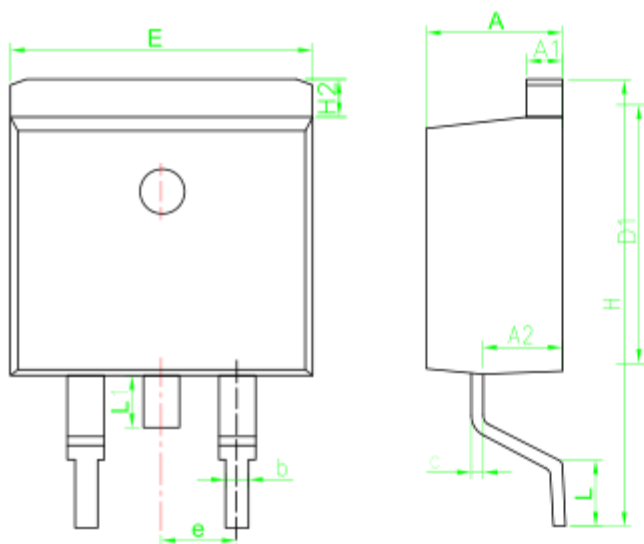
单位 Unit : mm





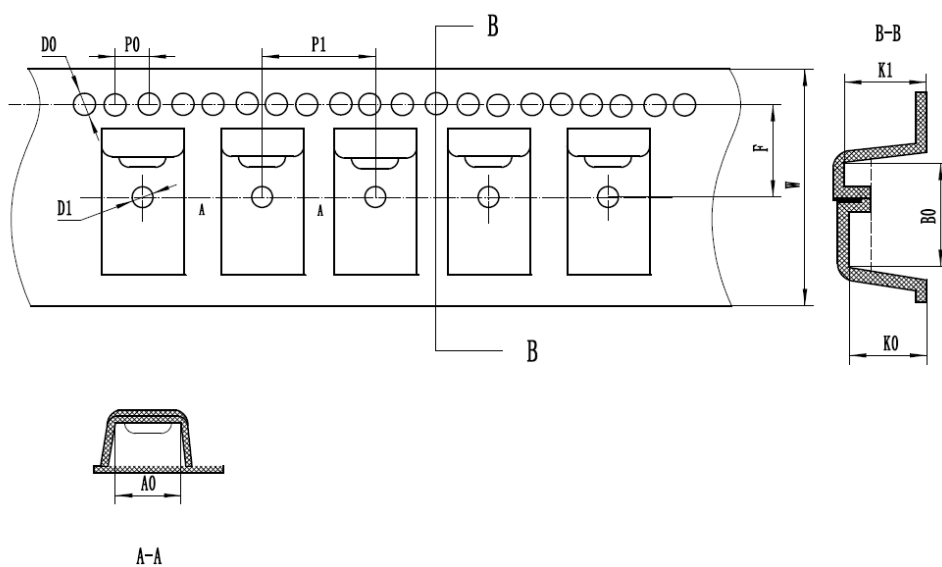
外形尺寸 PACKAGE MECHANICAL DATA  
T0-263

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



Symbol	标准范围 (mm)
A0	10.60±0.20
B0	16.10±0.20
D0	1.55±0.10
D1	1.50±0.15
F	11.50±0.20
K0	4.85±0.20
K1	5.26±0.20
P0	4.00±0.20
P1	16.00±0.20
W	24.00±0.40



### 注意事项

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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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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.

### 联系方式

#### 吉林华微电子股份有限公司

公司地址：吉林省吉林市深圳街 99 号

邮编：132013

总机：86-432-64678411

传真：86-432-64665812

网址：[www.hwdz.com.cn](http://www.hwdz.com.cn)

### CONTACT

#### JILIN SINO-MICROELECTRONICS CO., LTD.

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.

Post Code: 132013

Tel: 86-432-64678411

Fax: 86-432-64665812

Web Site: [www.hwdz.com.cn](http://www.hwdz.com.cn)