



# SPH20S200

## 主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	20 (2×10) A
$V_{RRM}$	200 V
$T_j$	175 °C
$V_{F(max)}$	0.8V (@ $T_j=125^{\circ}C$ )

### 用途

- 高频开关电源
- 低压续流电路和保护电路

### APPLICATIONS

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

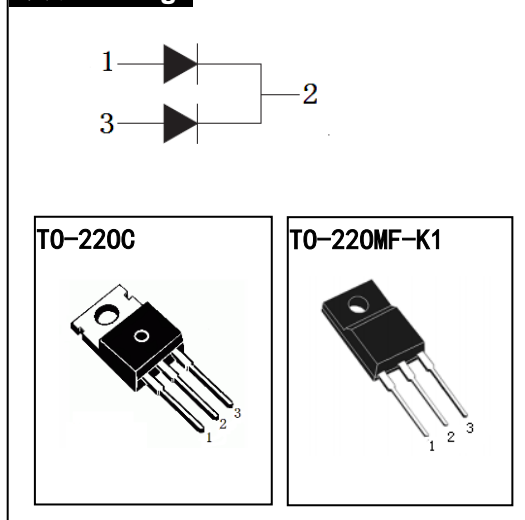
### 产品特性

- 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

### 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



## 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		
SPH20S200-C-B	SPH20S200-C-BR	N/A	N/A	SPH20S200	TO-220C
SPH20S200-F1-B	SPH20S200-F1-BR	N/A	N/A	SPH20S200	TO-220MF-K1



## 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 <sub>RRM</sub>	200	V
最大直流阻断电压 Maximum DC blocking voltage		V <sub>DC</sub>	200	V
正向平均整流电流 Average forward current	T <sub>C</sub> =100℃ 整个器件 per device  单 侧 per diode	I <sub>F(AV)</sub>	20  10	A
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>	-40~+175	℃
储存温度 Storage temperature range		T <sub>STG</sub>	-40~+175	℃

## 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℃	V <sub>R</sub> =V <sub>RRM</sub>			10	μA
	T <sub>j</sub> =125℃				6	mA
V <sub>F</sub>	T <sub>j</sub> =25℃	I <sub>F</sub> =10A		0.85	0.90	V
	T <sub>j</sub> =125℃				0.8	V

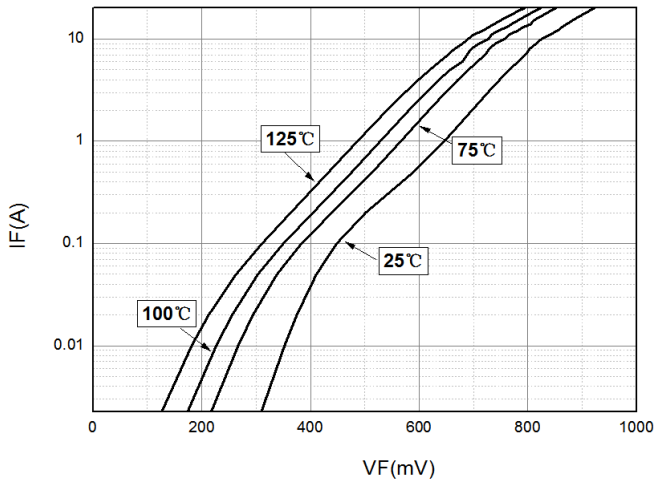
## 热特性 THERMAL CHARACTERISTICS

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	R <sub>th(j-c)</sub>		3.0 3.5	℃/W
				TO-220C TO-220MF-K1

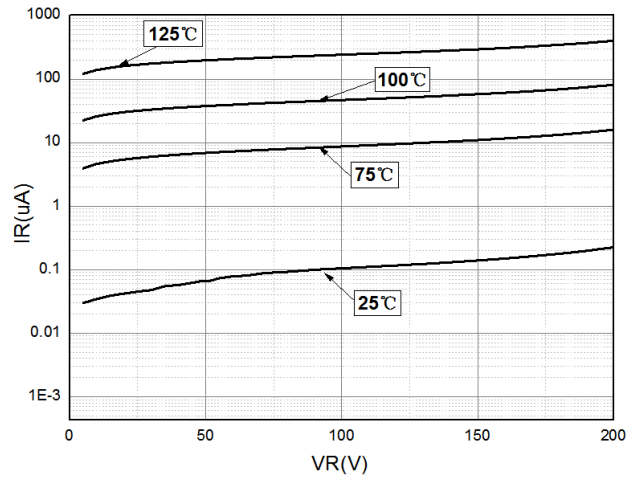


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

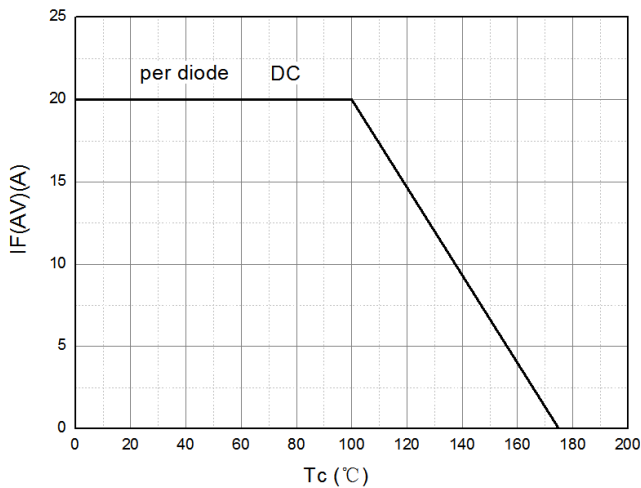
IF vs VF



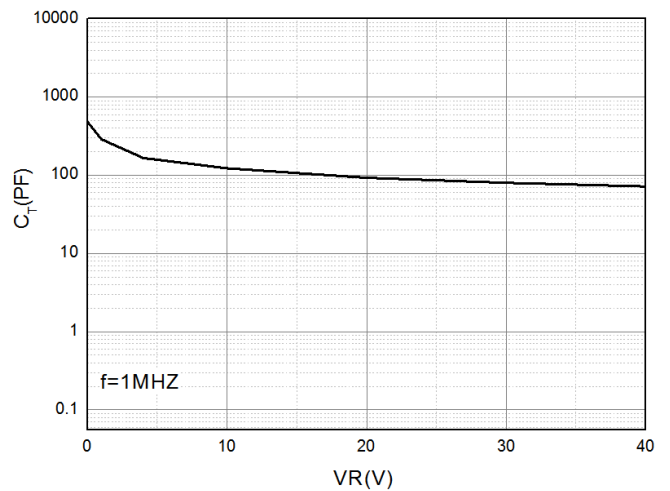
IR vs VR

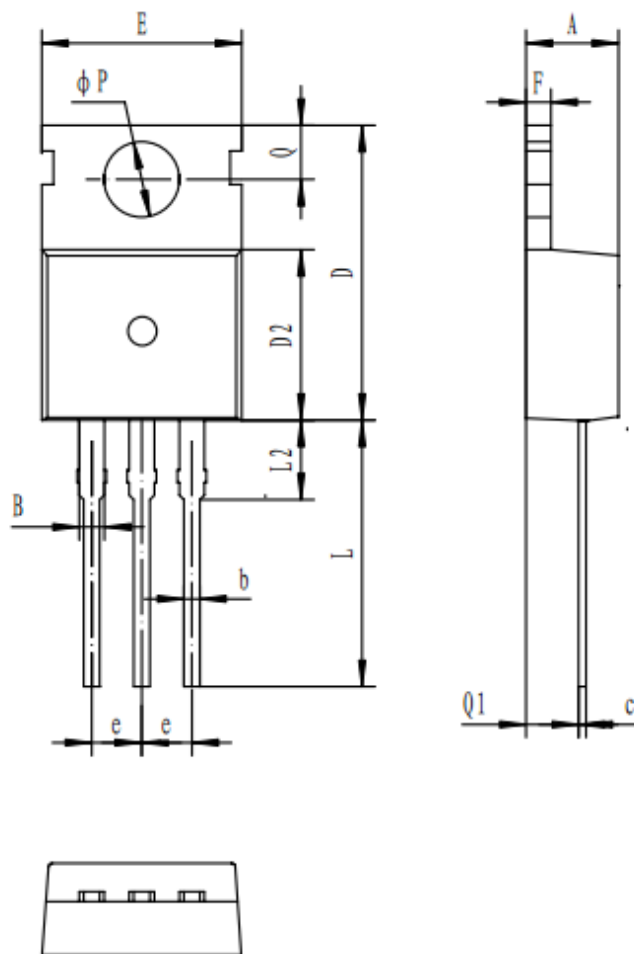


IF(AV) vs Tc



Ct vs VR



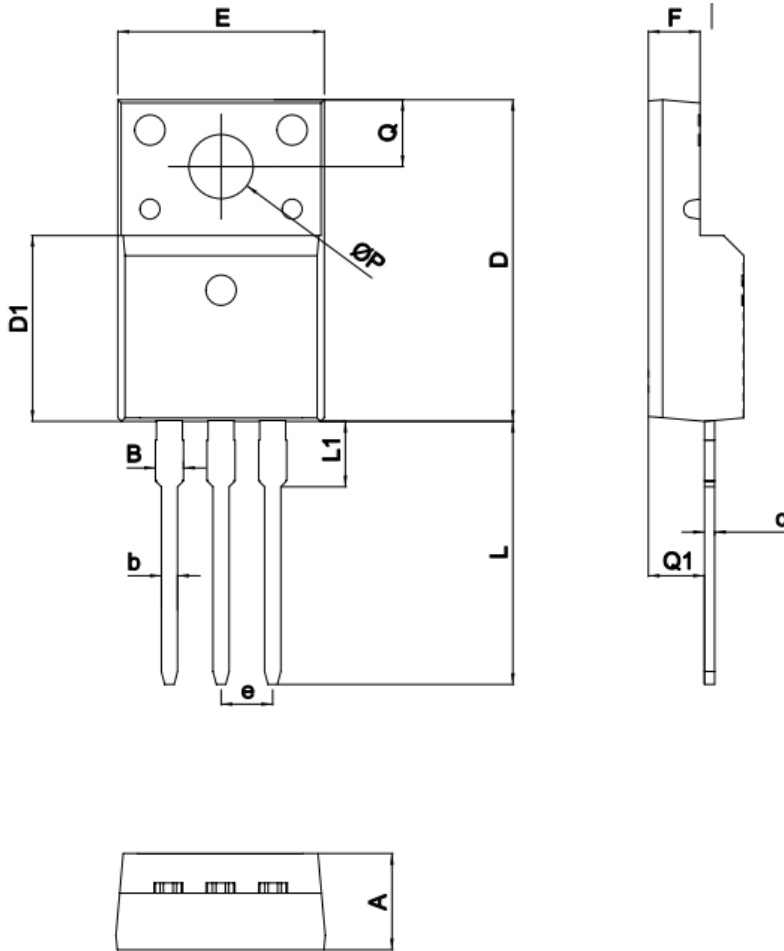


符号 symbol	MIN	MAX
A	4.30	4.70
B	1.10	1.40
b	0.70	0.95
c	0.40	0.65
D	15.20	16.20
D2	9.00	9.40
E	9.70	10.10
e	2.39	2.69
F	1.25	1.40
L	12.60	13.60
L2	2.80	3.20
Q	2.60	3.00
Q1	2.20	2.60
P	3.50	3.80



外形尺寸 PACKAGE MECHANICAL DATA  
TO-220MF-K1

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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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.
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