



STD10100

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	10 (2x5) A
V_{RRM}	100V
T_{Jmax}	150 °C
$V_{F(max)}$	0.55V (@ $T_j=125^\circ\text{C}$)

用途

- 低压、高频整流
- 低压续流电路和保护电路

APPLICATIONS

- Low voltage, high frequency rectifier
- Free wheeling diodes, polarity protection applications

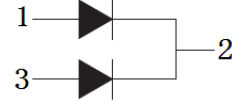
产品特性

- 低功耗，高效率
- 良好的高温特性
- 沟槽 MOS 肖特基技术，高可靠性
- 环保 (RoHS) 产品

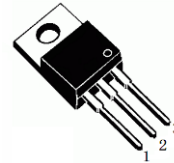
FEATURES

- Low power loss, high efficiency
- High Operating Junction Temperature
- Trench MOS Schottky technology, High reliability
- RoHS product

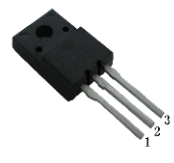
封装 Package



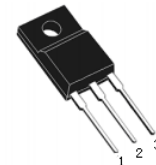
TO-220



TO-220HF



TO-220MF-K1



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		
STD10100-CA-B	STD10100-CA-BR	N/A	N/A	STD10100	TO-220
STD10100-FA-B	STD10100-FA-BR	N/A	N/A	STD10100	TO-220HF
STD10100-F1-B	STD10100-F1-BR	N/A	N/A	STD10100	TO-220MF-K1



绝对最大额定值 ABSOLUTE RATINGS (T_c=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}	100	V
最大直流阻断电压 Maximum DC blocking voltage		V _{DC}	100	V
正向平均整流电 流 Average forward current	T _c =125℃ (TO-220)	I _{F(AV)}	10	A
	T _c =100℃ (TO-220HF/TO -220MF-K1)		5	
正向平均整流电流T _c =100℃ Average Rectified Forward Current		I _{F(AV)}	10	A
正向峰值浪涌电流 Surge non repetitive forward current (额定负载 10ms 半正弦波) 10 ms single half-sine-wave		I _{FSM}	150	A
最高结温 Maximum junction temperature		T _j	150	℃
工作结温和储存温度范围 Storage temperature range		T _{Jmax} /T _{STG}	-40~+150	℃

电特性 ELECTRICAL CHARACTERISTICS

项 目 Parameter	测试条件 Tests conditions		典型值 Value(typ)	最大值 Value(max)	单 位 Unit
I _R	T _j =25℃	V _R =V _{RRM}	0.02	0.05	mA
	T _j =125℃	V _R =V _{RRM}	3.0	20	
V _F	T _j =25℃	I _F =5A	0.54	0.60	V
	T _j =25℃	I _F =10A	0.65	0.7	
	T _j =125℃	I _F =5A	0.51	0.55	
	T _j =125℃	I _F =10A	0.62	0.65	

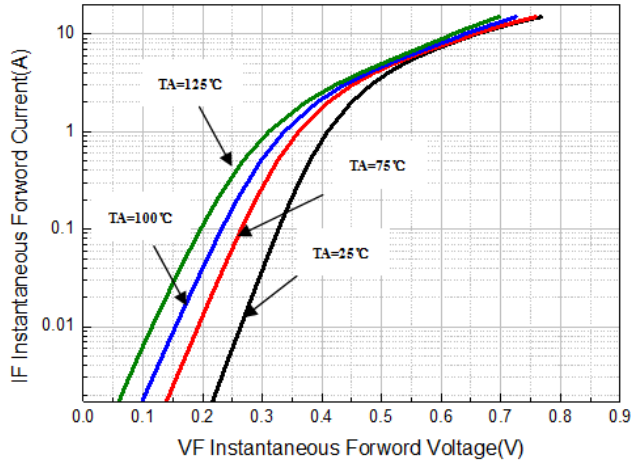
热特性 THERMAL CHARACTERISTICS

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)}		1.9 2.5 3.5	℃/W

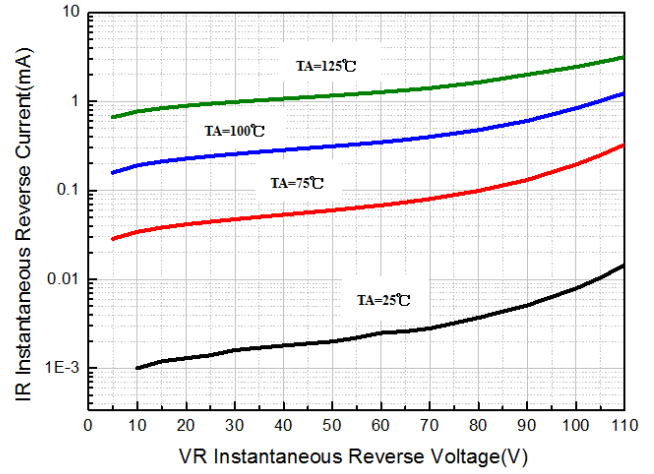


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

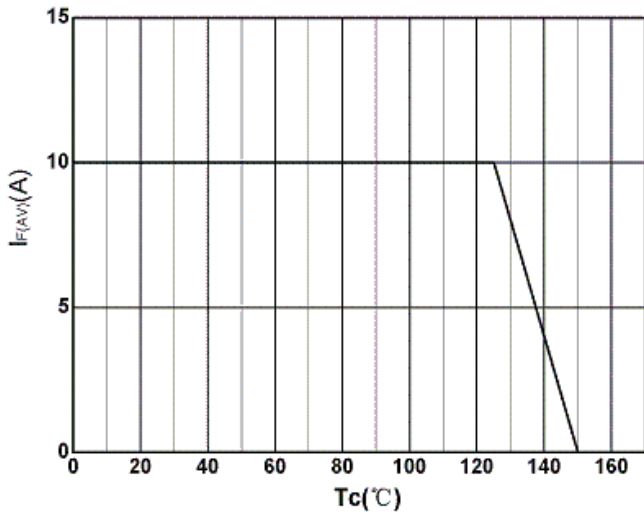
I_F vs V_F



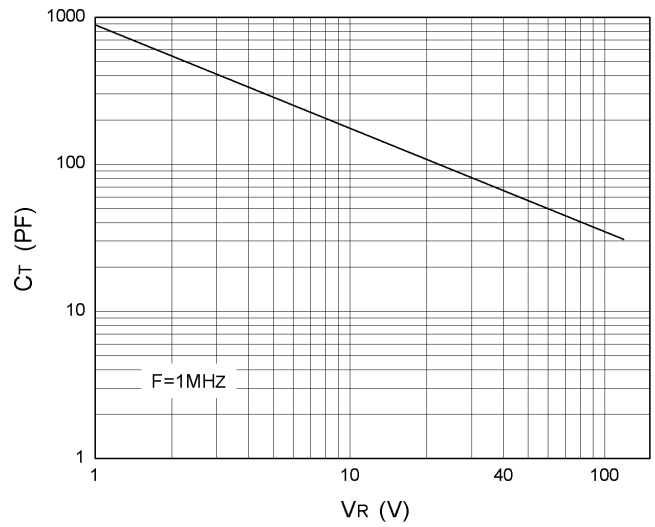
I_R vs V_R



$I_{F(AV)}$ vs T_c



C_T vs V_R

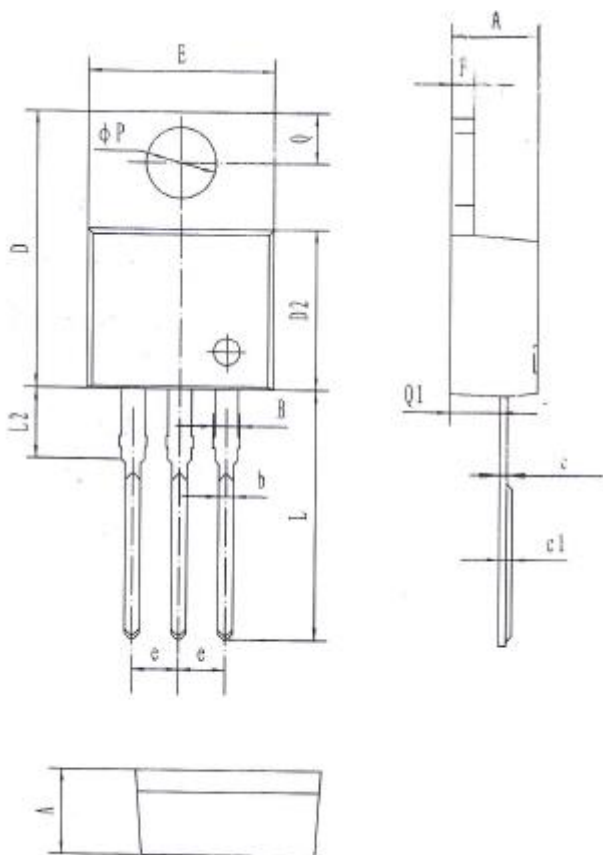




外形尺寸PACKAGE MECHANICAL DATA

TO-220

单位 Unit : mm



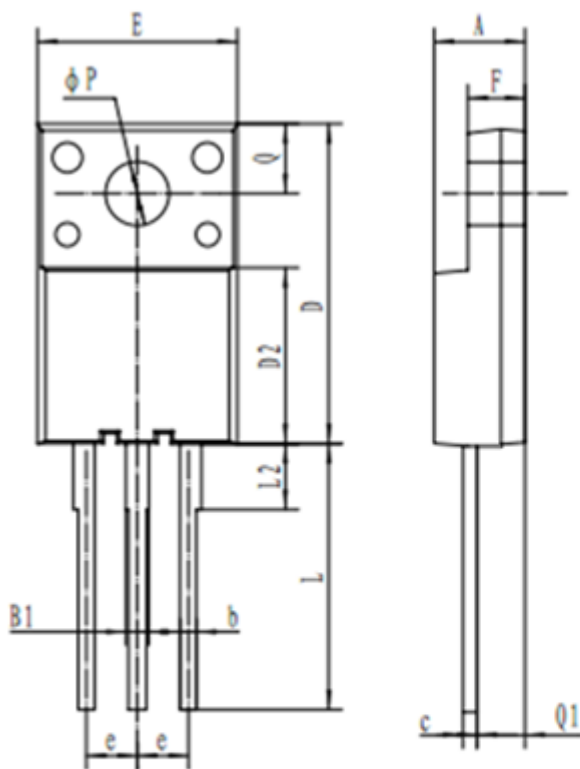
符号 symbol	MIN	MAX
A	4.40	4.80
B	1.10	1.40
b	0.70	0.95
c	0.28	0.48
c1	0.32	0.52
D	14.45	16.00
D2	8.20	9.20
E	9.60	10.40
e	2.39	2.69
F	1.20	1.35
L	13.05	14.05
L2	3.70	3.90
Q	2.40	3.00
Q1	2.20	2.90
P	3.50	4.00



外形尺寸PACKAGE MECHANICAL DATA

TO-220HF

单位 Unit : mm



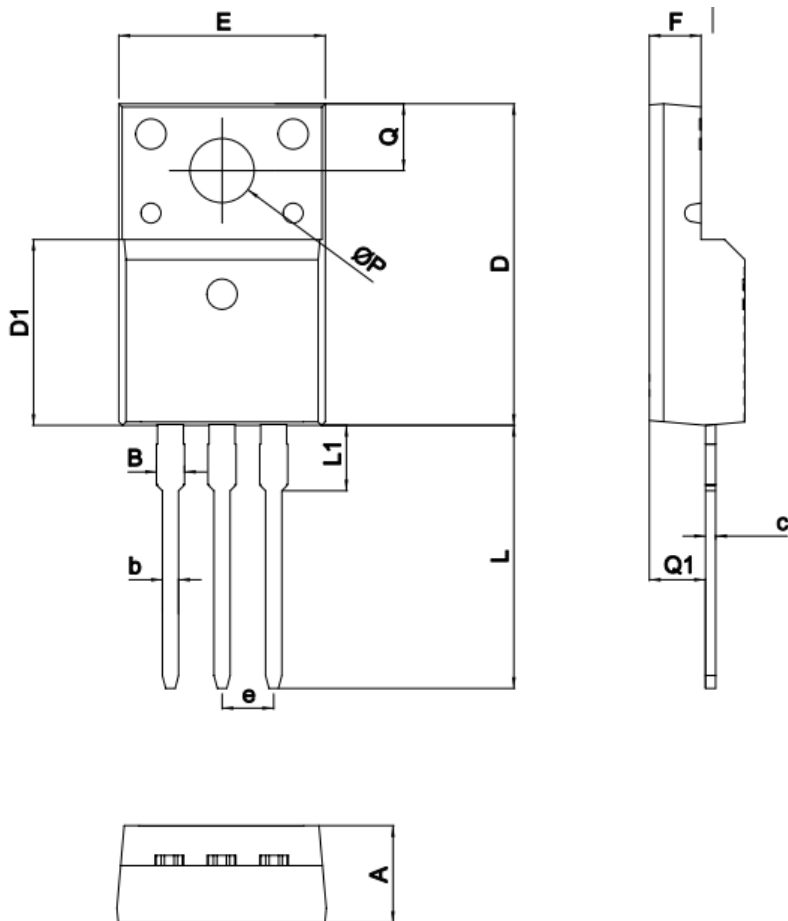
符号 symbol	MIN	MAX
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.7
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54 TYP	
F	2.3	3.3
L	13.0	14.0
L2	3.1	3.5
ϕp	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5





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
ØP	3.0	3.5



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。

NOTE

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3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
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