



12F60UHF/12F60UC

主要参数 MAIN CHARACTERISTICS

I _{F(AV)}	12A
V _{RRM}	600 V
T _{j(max)}	175℃
V _{F(typ)}	1.60V
t _{rr (typ)}	25ns

用途

- 有源功率校正电路
- 开关电源

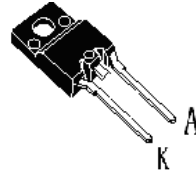
APPLICATIONS

- Active power factor correction
- Switch power supply

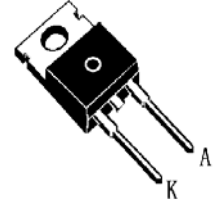
封装 Package



TO-220HF2L



TO-220C2L



产品特性

- 低功耗，高效率
- 高可靠性
- 环保（RoHS）产品

FEATURES

- Low power loss, high efficiency
- High reliability
- RoHS product

订货信息 ORDER MESSAGE

订货型号 Order codes	印 记 Marking	封 装 Package	包 装 Packaging	器件重量 Device Weight
12F60UHF	12F60UHF	TO-220HF2L	条管 Tube	1.65 g(typ)
12F60UC	12F60UC	TO-220C2L	条管 Tube	2.10 g(typ)



**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_{RRM}	600	V
正向平均整流电流 Average forward current	$I_{F(AV)}$	12	A
峰值单脉冲浪涌电流 Peak one Cycle Surge Forward Current(Non-Repetitive) t=10ms	I_{FSM}	180	A
结温 Junction Temperature	T_j	-55~+150	°C
储存温度 Storage temperature range	T_{STG}	-55~+150	°C

电特性 ELECTRICAL CHARACTERISTICS (Tc=25°C unless otherwise specified)

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
V_{RRM}	$I_R = 50\mu A$	600			V
I_R	$T_j = 25^\circ C$	$V_R = V_{RRM}$		50	μA
	$T_j = 125^\circ C$			500	μA
V_F	$T_j = 25^\circ C$	$I_F = 12A$	1.60	2.1	V
	$T_j = 125^\circ C$		1.30	1.8	V
trr	$I_F = 1A, V_R = 30V, di_F/dt = -200A/\mu s$		25	30	ns
	$T_j = 25^\circ C$	$I_F = 12A$		60	ns
	$T_j = 125^\circ C$	$V_R = 100V$ $di_F/dt = -200A/\mu s$		90	ns

热特性 THERMAL CHARACTERISTICS

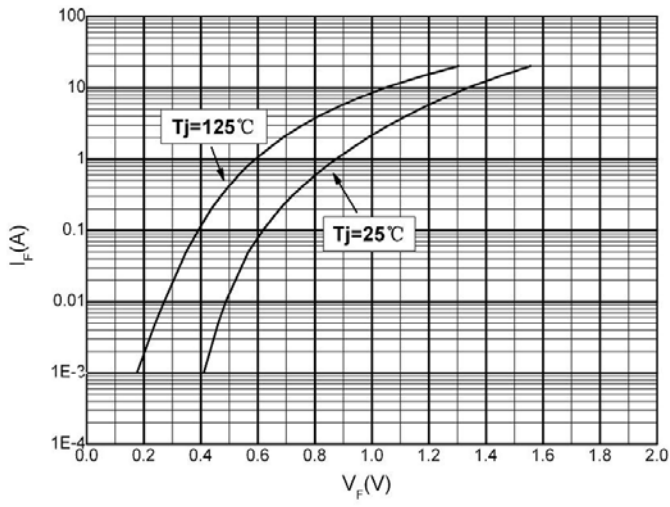
项 目 Parameter	符 号 Symbol	最小值 Value(min)	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal resistance from junction to case	TO-220HF2L $R_{th(j-c)}$		3.5	°C/W
	TO-220C2L $R_{th(j-c)}$		3.0	°C/W



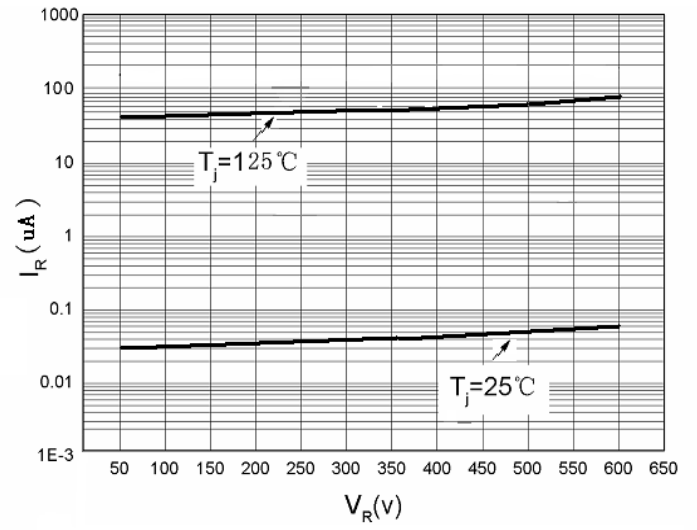


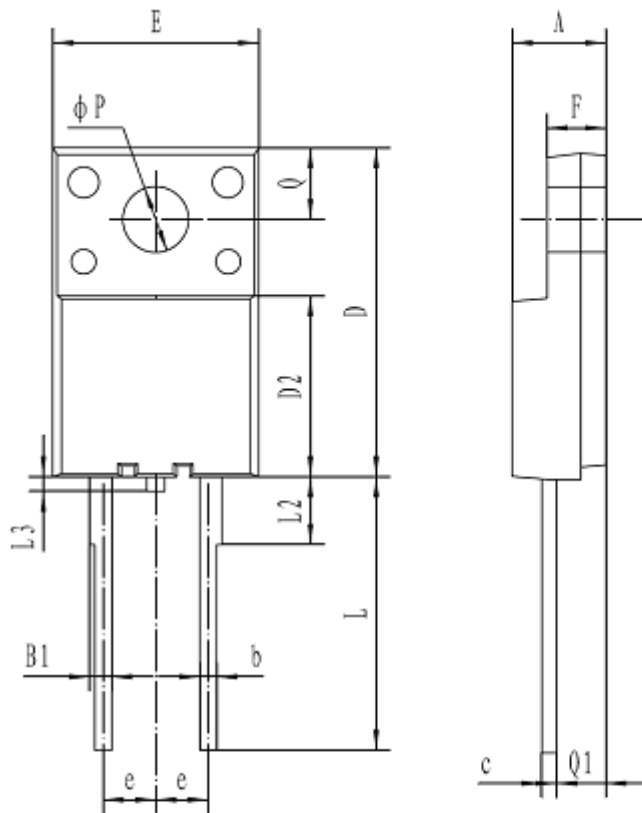
特征曲线 ELECTRICAL CHARACTERISTICS (curves)

I_F vs V_F



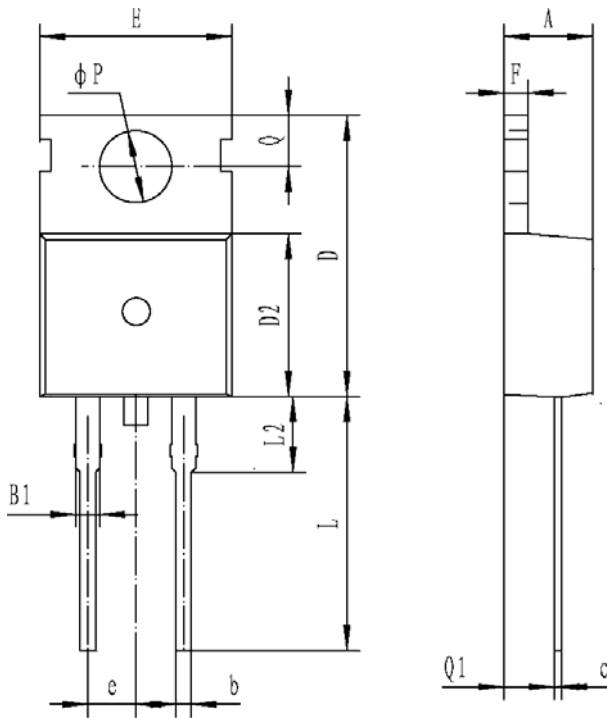
I_R vs V_R



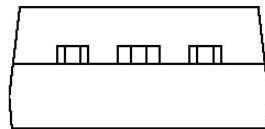


符号 Symbol	Min	Max
A	4.0	5.0
B1	0.87	1.27
b	0.72	0.92
c	0.5	0.70
D	15.0	16.5
D2	7.8	9.4
E	9.62	10.62
e	2.54(typ)	
F	2.3	3.3
L	12.0	14.0
L2	3.1	3.5
ϕP	3.0	3.4
Q	3.15	3.55
Q1	2.2	2.5





符号 Symbol	Min	Max
A	4.3	4.7
B1	1.22	1.4
b	0.7	0.95
c	0.4	0.65
D	15.2	16.2
D2	9.0	9.4
E	9.7	10.1
e	2.39	2.69
F	1.25	1.4
L	12.60	13.60
L2	2.8	3.2
ΦP	3.5	3.8
Q	2.6	3.0
Q1	2.2	2.6



**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

NOTES

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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

