



30F60UA3

主要参数 MAIN CHARACTERISTICS

$I_{F(AV)}$	15×2 A
V_{RRM}	600 V
$T_{J(max)}$	175℃
$V_F(typ)$	1.95V
$t_{rr} (typ)$	28ns

用途

- UPS
- 开关电源
- PFC
- 逆变焊机

APPLICATIONS

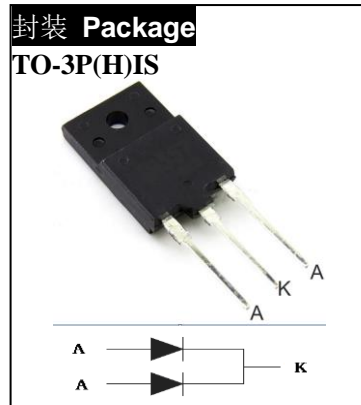
- UPS
- Switch power supply
- PFC
- Inversion Welder

产品特性

- 低正向压降
- 低 IRM 和 Qrr
- 高可靠性
- 环保 (RoHS) 产品

FEATURES

- Low Forward Voltage
- Low IRM and reverse recovery charge
- High reliability
- RoHS product



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		
30F60UA3-GA-B	30F60UA3-GA-BR	30F60UA3	TO-3P(H)IS



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}	600	V
最大反向工作峰值电压 Working Peak Reverse Voltage	V_{RWM}	600	V
平均正向整流电流 $T_c=100^\circ\text{C}$ Average Forward Rectified Current	Per Package $I_{F(AV)}$	30	A
	Per Diode	15	A
非重复浪涌正向电流 Non-Repetitive Surge Forward Current $t=8.3\text{ms}$	I_{FSM}	160	A
雪崩能量 Avalanche Energy(per diode) $L=40\text{mH}$	E_{AVL}	20	mJ
最高工作结温 Maximum operating junction temperature	T_j	175	$^\circ\text{C}$
储存温度 Storage temperature range	T_{STG}	-65~+175	$^\circ\text{C}$

电特性 ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless otherwise specified) per diode

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_R	$I_R=50\mu\text{A}$	600	680		V
I_R	$T_j=25^\circ\text{C}$			10	μA
	$T_j=150^\circ\text{C}$		40	400	μA
V_F	$T_j=25^\circ\text{C}$		1.95	2.2	V
	$T_j=150^\circ\text{C}$		1.4	1.7	V
C_j	$V_R=4.0\text{V}, f=1.0\text{MHz}$		100		pF
T_{rr}	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{RR}=0.25\text{A}$		24	30	ns
T_{rr}	$I_F=1\text{A}, V_R=30\text{V}, di_F/dt=-200\text{A}/\mu\text{s}$		28	45	ns
T_{rr}	$I_F=15\text{A}, V_R=400\text{V}, di_F/dt=100\text{A}/\mu\text{s}$		120		ns
I_{RM}	$T_j=125^\circ\text{C}$		3.1	5.0	A

热特性 THERMAL CHARACTERISTICS

项 目 Parameter	符 号 Symbol	最大值 Value(max)	单 位 Unit
结到管壳的热阻 Thermal Resistance Junction to Case	Per Package $R_{th(j-c)}$	2.7	$^\circ\text{C}/\text{W}$
	Per Diode	3.5	





特征曲线 ELECTRICAL CHARACTERISTICS (curves)

Fig.1 TYPICAL FORWARD CHARACTERISTICS

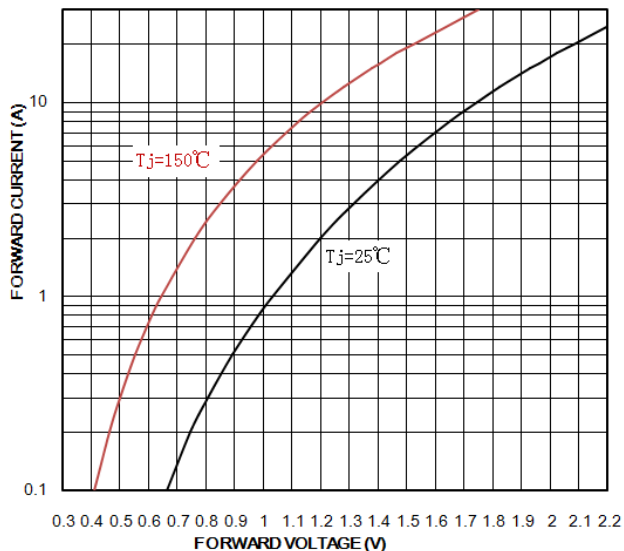


Fig.2 TYPICAL REVERSE CHARACTERISTICS

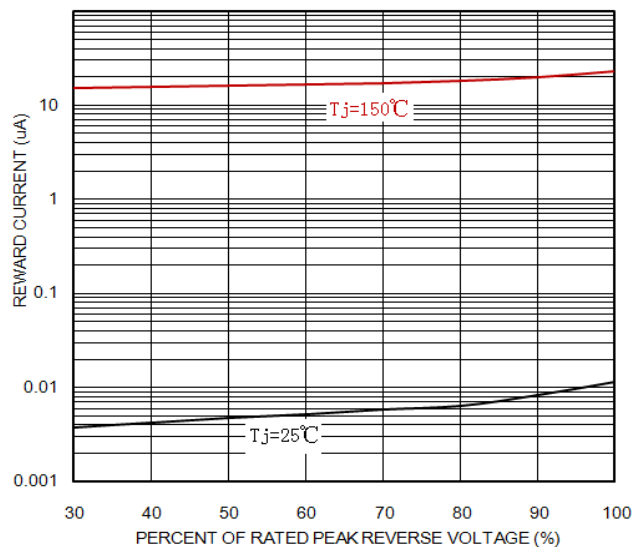


Fig.3 FORWARD CURRENT DERATING CURVE

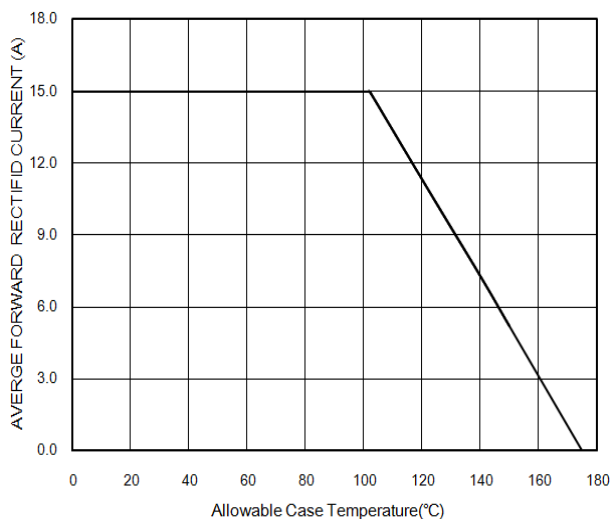


Fig.4 TYPICAL JUNCTION CAPACITANCE

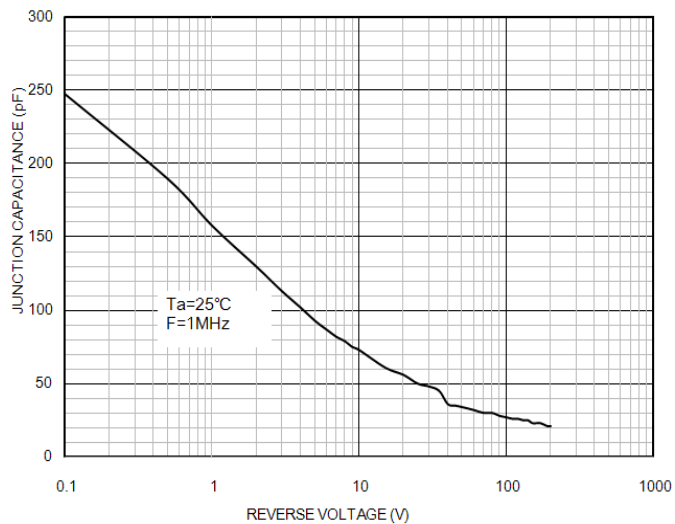


Fig.5 Reverse recovery time versus diF/dt

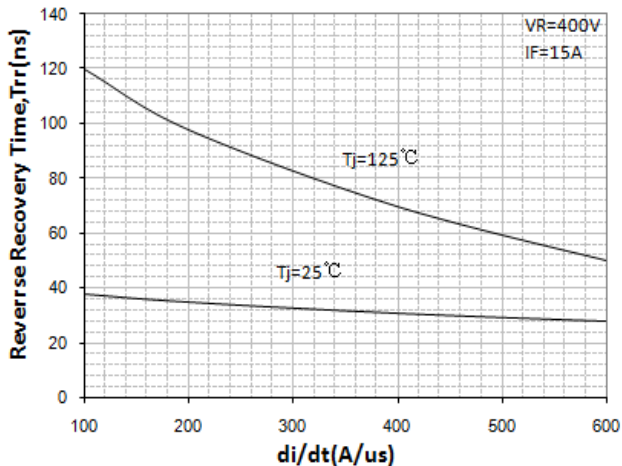
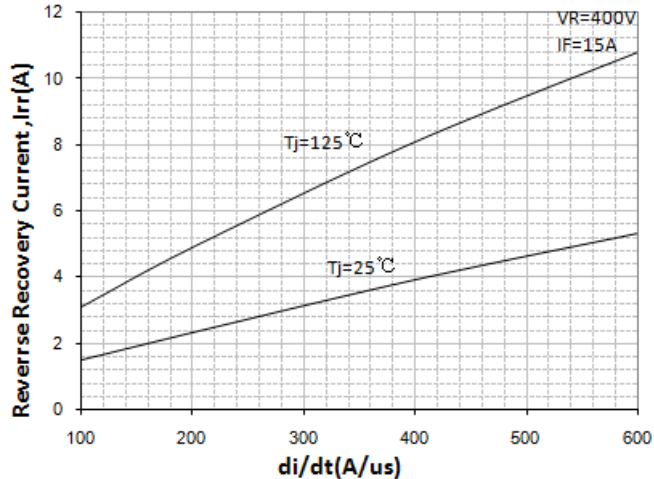
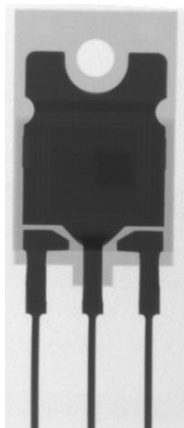


Fig.6 Peak reverse recovery current versus diF/dt



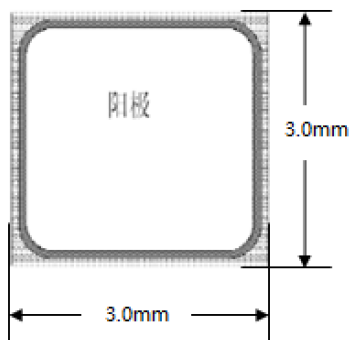
产品信息

1. X光图片



2. 芯片尺寸及规格

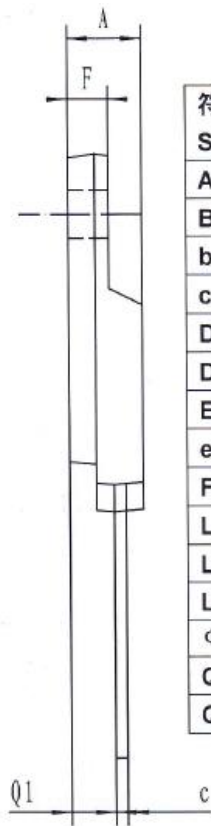
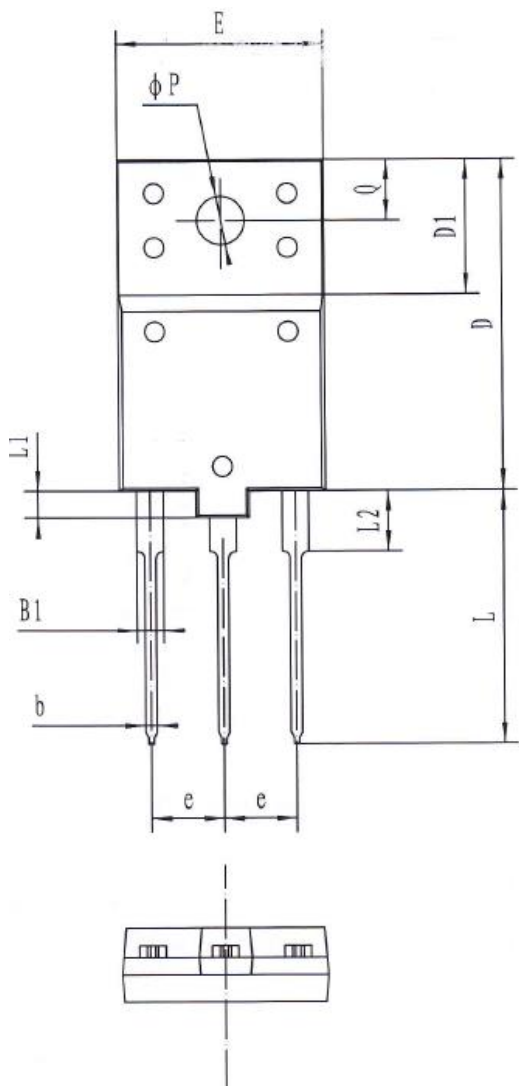
芯片名称	FRD
规格	600V/15A
芯片数量	2
晶粒尺寸(mm*mm)	3.0*3.0
键合线	15mil 铝线每侧各2根
晶圆厂家	吉林华微
晶圆型号	D300E6U
晶圆尺寸	5寸
封装厂家	广州华微





TO-3P(H)IS

单位 Unit : mm



符号 Symbol	Min	Max
A	5.2	5.8
B1	1.8	2.2
b	0.75	1.05
c	0.8	1.1
D	24.0	25.0
D1	9.8	10.2
E	15.0	16.0
e	5.45 (typ)	
F	2.7	3.3
L	18.5	19.5
L1	1.8	2.2
L2	4.3	4.7
ΦP	3.4	3.8
Q	4.3	4.7
Q1	3.1	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

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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