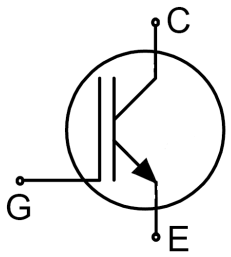
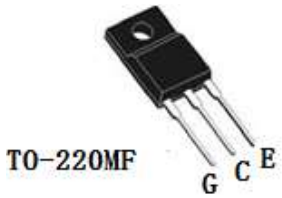
JT050N036FA/ABA

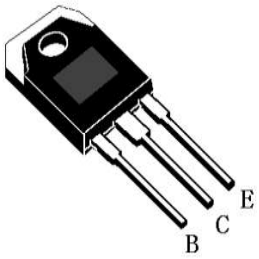
主要参数 MAIN CHARACTERISTICS

Ic	50 A
VCES	360 V
Vcesat（@Vge=15V）	1.6V

封装 Package







TO-3PB

用途

- 逆变器
- PDP
- UPS 电源

APPLICATIONS

- General purpose inverters
- PDP
- UPS

产品特性

- 低栅极电荷
- PT 技术,
- 通态压降, VCE(sat), typ = 1.6V @ IC = 50A and TC = 25°C
- RoHS 产品

FEATURES

- Low gate charge
- PT Technology,
- saturation voltage: VCE(sat), typ = 1.6V @ IC = 50A and TC = 25°C
- 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 Non halogen-Tube	有卤-编带 Halogen-Reel	无卤-编带 Non halogen-Reel		
JT050N036FA-F-B	JT050N036FA-F-BR	N/A	N/A	JT050N036FA	TO-220MF
JT050N036ABA-GD-B	N/A	N/A	N/A	JT050N036ABA	TO-3PB

绝对最大额定值 ABSOLUTE RATINGS (Tc=25℃)

项 目 Parameter	符 号 Symbol	数 值 Value		单位 Unit
		JT050N036FA	JT050N036ABA	
最高集电极－发射极直流电压 Collector-Emmiter Voltage	V_{ces}	360		V
*连续集电极电流 Drain Current-continuous	I_C T=25℃	100		A
	T=100℃	50		A
最大脉冲集电极极电流（注 1） Collector Current – pulse （note 1）	I_{CM}	240		A
最高栅极发射极电压 Gate-Emmiter Voltage	V_{GES}	±30		V
Turn-off safe area	-	200		A
耗散功率 Power Dissipation	P_D T_C=25℃	30	312	W
最高结温及存储温度 Operating and Storage Temperature Range	T_J，T_{STG}	-55～+150		℃
引线最高焊接温度 Maximum Lead Temperature for Soldering Purposes	T_L	300		℃

*连续集电极电流由最高结温限制

*Collector current limited by maximum junction temperature

电特性 ELECTRICAL CHARACTERISTICS

项　　目 Parameter	符　号 Symbol	测试条件 Tests conditions	最小 Min	典型 Typ	最大 Max	单　位 Units
关态特性 Off –Characteristics						
集电极－发射极击穿电压 Collector-Emmiter Voltage	BV_{CES}	I_C=500μA, V_{GS}=0V	360	-	-	V
击穿电压温度特性 Breakdown Voltage Temperature Coefficient	$\Delta BV_{CES}/\Delta T_J$	I_C=1mA, referenced to 25℃	-	0.5	-	V/℃
零栅压下集电极漏电流 Zero Gate Voltage Collector Current	I_{CES}	V_{CE}=360V,　V_{GE}=0V, T_C=25℃	-	-	10	μA
正向栅极体漏电流 Gate-body leakage current, forward	I_{GESF}	V_{CE}=0V,　V_{GE} =30V	-	-	400	nA
反向栅极体漏电流 Gate-body leakage current, reverse	I_{GESR}	V_{CE}=0V,　V_{GE} =-30V	-	-	-400	nA
通态特性 On-Characteristics						
阈值电压 Gate Threshold Voltage	$V_{GE(th)}$	V_{CE} = V_{GE} ,　I_C=250μA	2.0	-	4.5	V
饱和压降 Collector-Emmiter saturation Voltage	V_{CESAT}	VGE=15V　IC=35A Tc=25℃	-	1.4	1.6	V
		VGE=15V　IC=50A Tc=25℃	-	1.6	1.8	V
动态特性 Dynamic Characteristics						
输入电容 Input capacitance	C_{iss}	V_{CE}=25V, V_{GE}=0V, f=1.0MHz	-	1500	-	pF
输出电容 Output capacitance	C_{oss}		-	100	-	pF
反向传输电容 Reverse transfer capacitance	C_{rss}		-	50	-	pF

电特性 ELECTRICAL CHARACTERISTICS

开关特性 Switching Characteristics						
延迟时间 Turn-On delay time	t_d(on)	V_{CE}=200V,I_c=35A,R_G=5Ω	-	30		ns
上升时间 Turn-On rise time	t_r	R_L= 4.5 Ω	-	100		ns
延迟时间 Turn-Off delay time	t_d(off)	T_C=25℃	-	100		ns
下降时间 Turn-Off Fall time	t_f		-	150		ns
栅极电荷总量 Total Gate Charge	Q_g	V_{CE} =150V ,	-	67		nC
栅极-反射极 Gate to emitter charge	Qge	I_C=35A		11.7		nC
栅极-集电极 Gate to collector charge	Qgc	V_{GE}=15V （note 2，3）		23.5		nC

项 目 Parameter	符 号 Symbol	最大 Max		单 位 Unit
		JT050N036FA	JT050N036ABA	
结到管壳的热阻 Thermal Resistance, Junction to Case	$R_{th(j-c)}$	2.6	0.4	℃/W
结到环境的热阻 Thermal Resistance, Junction to Ambient	$R_{th(j-A)}$	62	40	℃/W

注释：

1：脉冲宽度由最高结温限制

2：脉冲测试：脉冲宽度≤300μs,占空比≤2%

3：基本与工作温度无关

Notes:

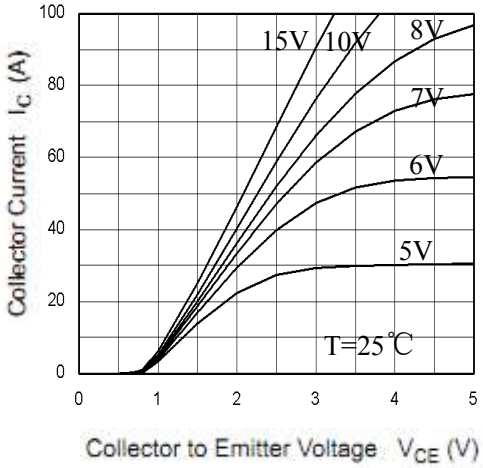
1：Pulse width limited by maximum junction temperature

2：Pulse Test：Pulse Width ≤300μs,Duty Cycle≤2%

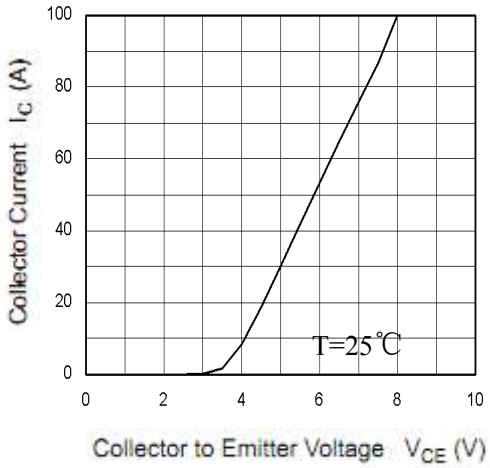
3：Essentially independent of operating temperature

特征曲线 ELECTRICAL CHARACTERISTICS (curves)

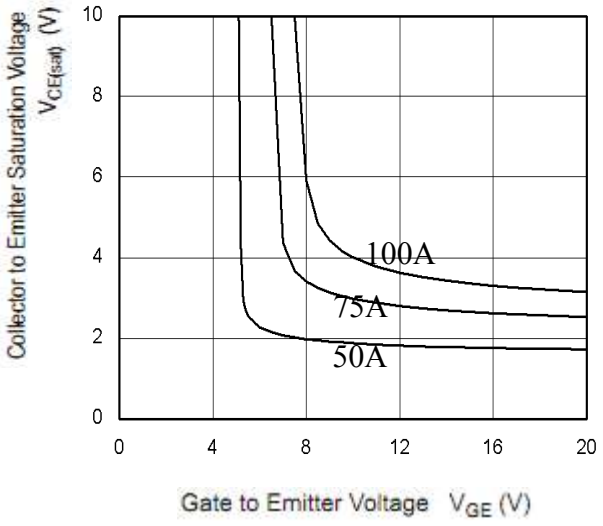
Typical Output Characteristics



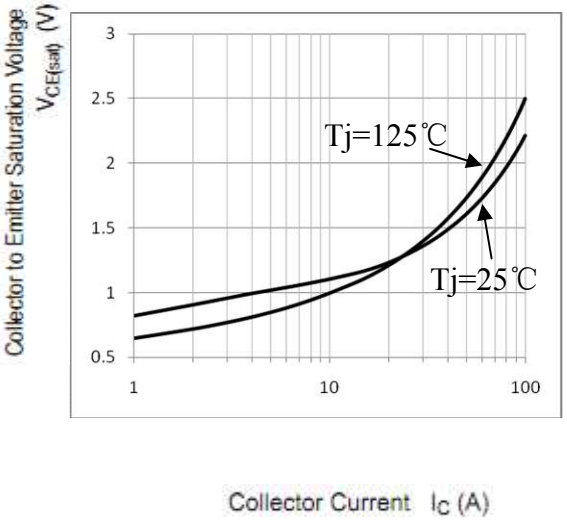
Typical Saturation Voltage Characteristics



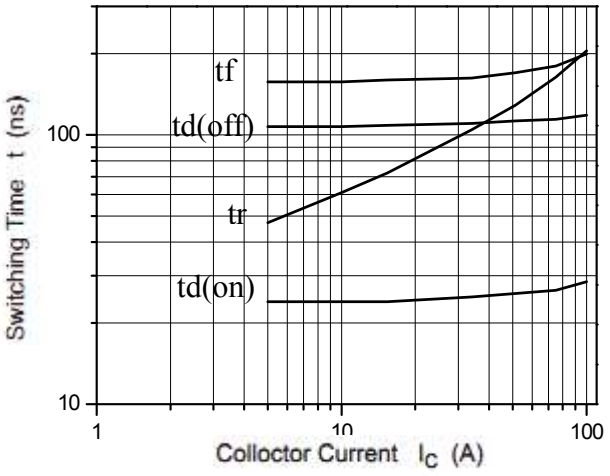
Saturation Voltage vs. VGE



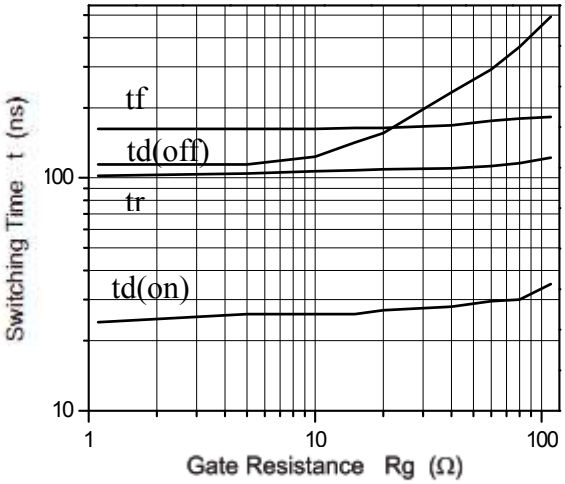
Collector to Emitter Saturation Voltage vs. Collector Current



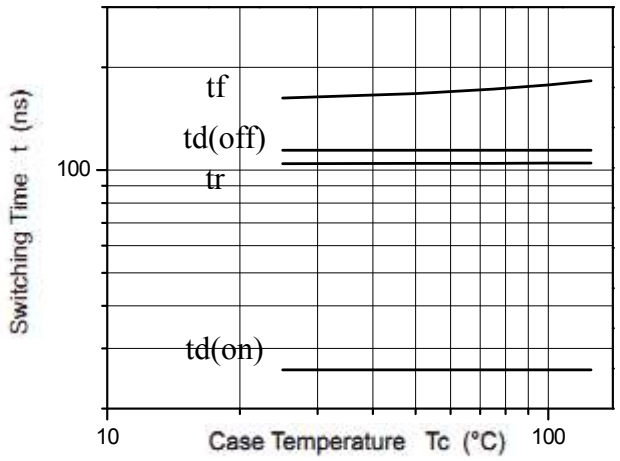
Switching Loss vs. Collector Current



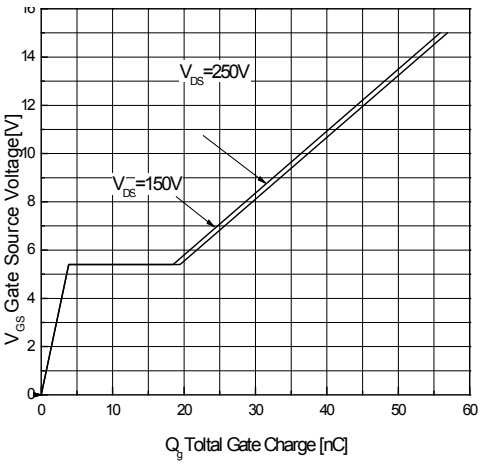
Switching Loss vs. Gate Resistance



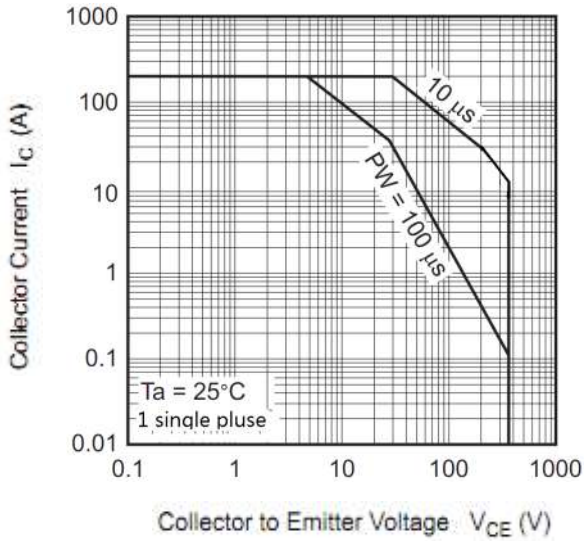
Switching Loss vs. Case Temperature



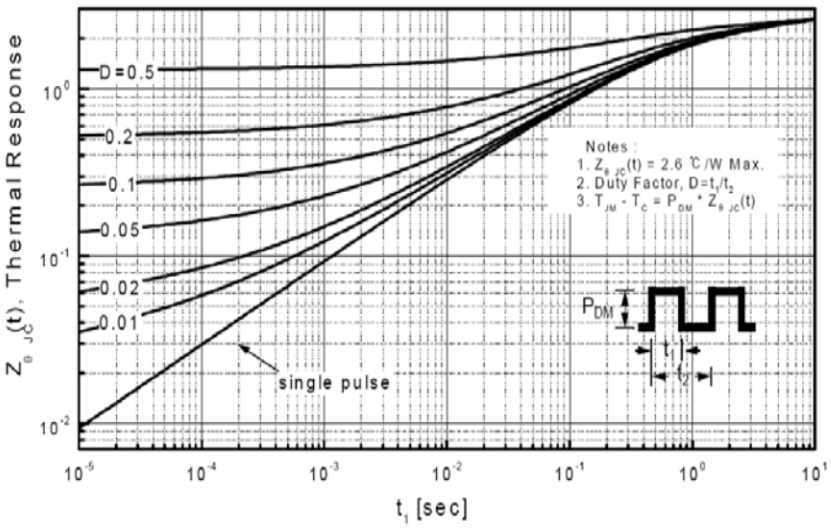
Gate Charge Characteristics



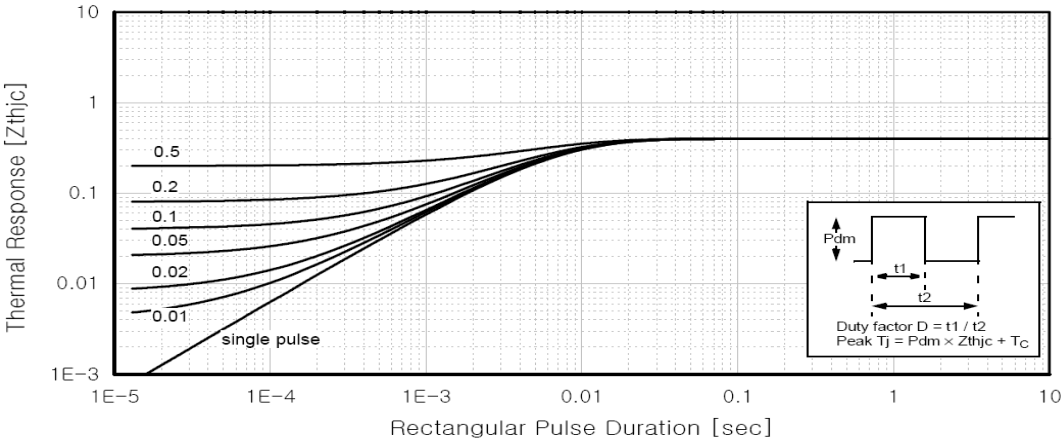
SOA Characteristics

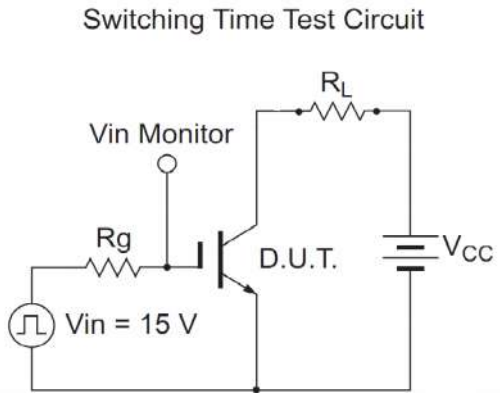


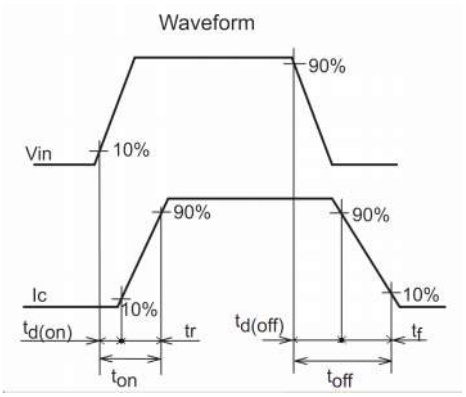
Transient Thermal Impedance For TO-220MF



Transient Thermal Impedance For TO-3PB



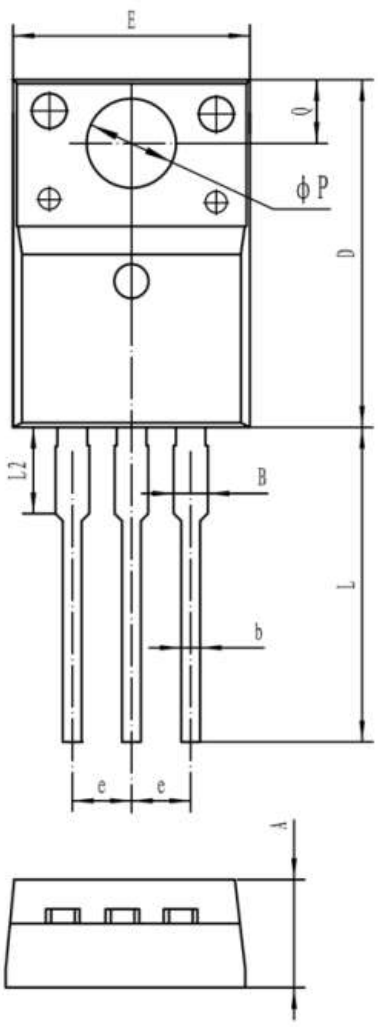


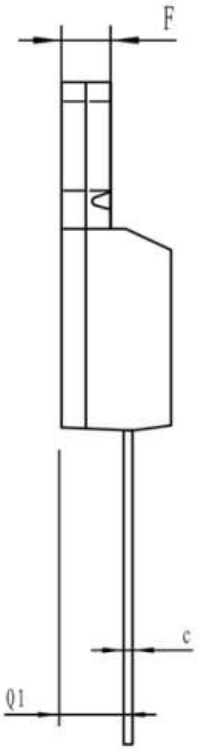


外形尺寸 PACKAGE MECHANICAL DATA

TO-220MF

单位 Unit：mm

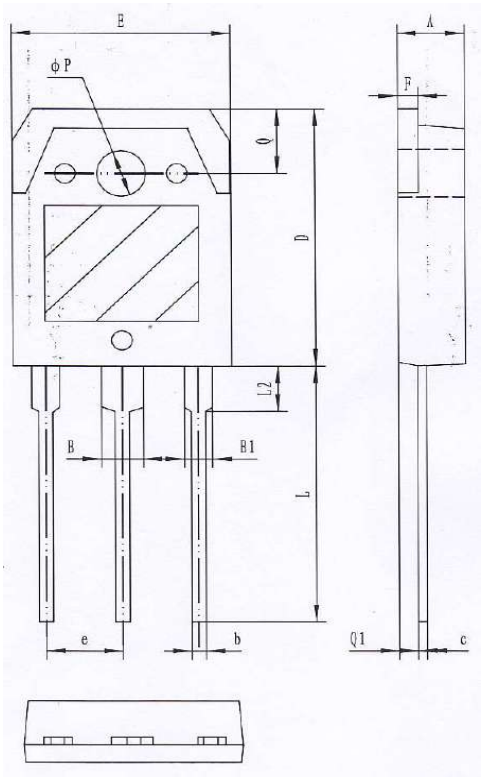




符 号 Symbol	MIN	MAX
A	4.5	4.9
B	-	1.47
b	0.7	0.9
c	0.45	0.6
D	15.67	16.07
E	9.96	10.36
e	2.54TYPE	
F	2.34	2.74
L	12.58	13.38
L2	3.13	3.33
ΦP	3.08	3.28
Q	3.2	3.4
Q1	2.56	2.96

外形尺寸 **PACKAGE MECHANICAL DATA**

TO-3PB



符号 symbol	MIN	MAX
A	4.60	5.00
B	2.90	3.20
B1	1.90	2.20
b	0.90	1.10
c	0.50	0.70
D	19.40	20.40
E	15.40	15.80
e	5.45(TYP)	
F	1.40	1.60
L	19.50	20.50
L2	3.30	3.70
Q	4.90	5.10
Q1	1.30	1.50
P	3.10	3.50

注意事项

1.吉林华微电子股份有限公司的产品销售分为直销和销售代理，无论哪种方式，订货时请与公司核实。

2.购买时请认清公司商标，如有疑问请与公司本部联系。

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

1. Jilin Sino-microelectronics co., Ltd sales its product either through direct sales or sales agent , thus, for customers, when ordering , please check with our company.
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.

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

市场营销部

地址：吉林省吉林市深圳街 99 号

邮编：132013
电话： 86-432-64675588
64675688
64678411-3098/3099
传真: 86-432-64671533

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

MARKET DEPARTMENT

ADD: No.99 Shenzhen Street, Jilin City, Jilin Province, China.
Post Code: 132013
Tel: 86-432-64675588
64675688
64678411-3098/3099
Fax: 86-432-64671533