

NPN MJE 系列晶体管/MJE SERIES TRANSISTORS

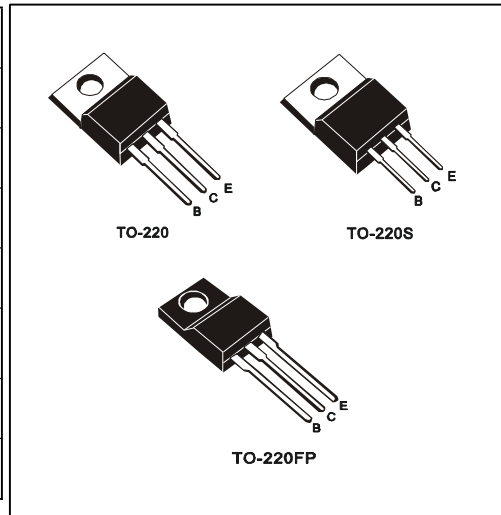
MJE13005

- 特点：耐高压 开关速度快 安全工作区宽 符合 RoHS 规范
- FEATURES: ■HIGH VOLTAGE CAPABILITY ■HIGH SPEED SWITCHING ■WIDE SOA ■RoHS COMPLIANT
- 应用：节能灯 电子镇流器 电子变压器 开关电源
- APPLICATION: ■FLUORESCENT LAMP ■ELECTRONIC BALLAST ■ELECTRONIC TRANSFORMER
■SWITCH MODE POWER SUPPLY

●最大额定值 (Tc=25°C)

●Absolute Maximum Ratings (Tc=25°C) TO-220/220S/220FP

参数 PARAMETER	符号 SYMBOL	额定值 VALUE	单位 UNIT
集电极-基极电压 Collector-Base Voltage	V_{CBO}	700	V
集电极-发射极电压 Collector-Emitter Voltage	V_{CEO}	400	V
发射极-基极电压 Emitter-Base Voltage	V_{EBO}	9	V
集电极电流 Collector Current	I_C	5.0	A
集电极耗散功率 Total Power Dissipation	P_{tot}	TO-220/220S:75 TO-220FP:40	W
最高工作温度 Junction Temperature	T_J	150	°C
贮存温度 Storage Temperature	T_{stg}	-65-150	°C



●电特性 (Tc=25°C)

●Electronic Characteristics (Tc=25°C)

参数名称 CHARACTERISTICS	符号 SYMBOL	测试条件 TEST CONDITION	最小值 MIN	最大值 MAX	单位 UNIT
集电极-基极截止电流 Collector-Base Cutoff Current	I_{CBO}	$V_{CB}=700V$		100	μA
集电极-发射极截止电流 Collector-Emitter Cutoff Current	I_{CEO}	$V_{CE}=400V, I_B=0$		250	μA
集电极-基极电压 Collector-Base Voltage	V_{CBO}	$I_C=1mA, I_E=0$	700		V
集电极-发射极电压 Collector-Emitter Voltage	V_{CEO}	$I_C=10mA, I_B=0$	400		V
发射极-基极电压 Emitter-Base Voltage	V_{EBO}	$I_E=1mA, I_C=0$	9		V
集电极-发射极饱和电压 Collector-Emitter Saturation Voltage	V_{cesat}	$I_C=1.0A, I_B=0.2A$		0.5	V
		$I_C=4.0A, I_B=1.0A$		1.1	
发射极-基极饱和电压 Base-Emitter Saturation Voltage	V_{besat}	$I_C=1A, I_B=0.2A$		1.1	V
电流放大倍数 DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=10mA$	7		
		$V_{CE}=5V, I_C=1.0A$	10	40	
		$V_{CE}=5V, I_C=4A$	5		
贮存时间/Storage Time	t_s	$V_{CC}=5V, I_C=0.5A,$ (UI9600)	2.0	3.5	μs
下降时间/Falling Time	t_f			0.8	

●订单信息/ORDERING INFORMATION:

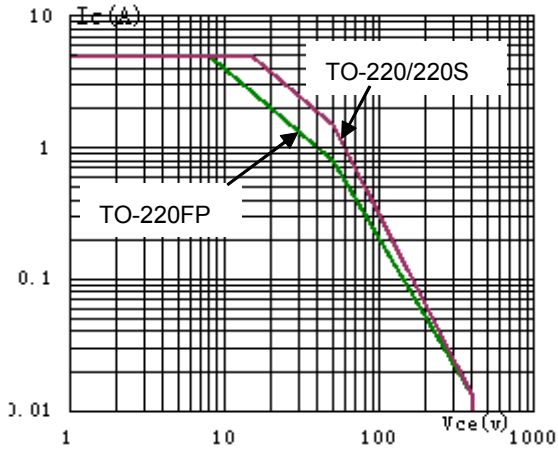
包装形式/PACKING	订货编码/ORDERING CODE	
	普通塑封料/ Normal Package Material	无卤塑封料/Halogen Free
TO-220 普通袋装/NORMAL PACKING	MJE13005 TO-220	MJE13005 TO-220-HF
TO-220S 普通袋装/NORMAL PACKING	MJE13005 TO-220S	MJE13005 TO-220S-HF
TO-220 条管装/TUBE PACKING	MJE13005 TO-220-TU	MJE13005 TO-220-TU-HF
TO-220FP 普通袋装/NORMAL PACKING	MJE13005 TO-220FP	MJE13005 TO-220FP-HF
TO-220FP 条管装/TUBE PACKING	MJE13005 TO-220FP-TU	MJE13005 TO-220FP-TU-HF



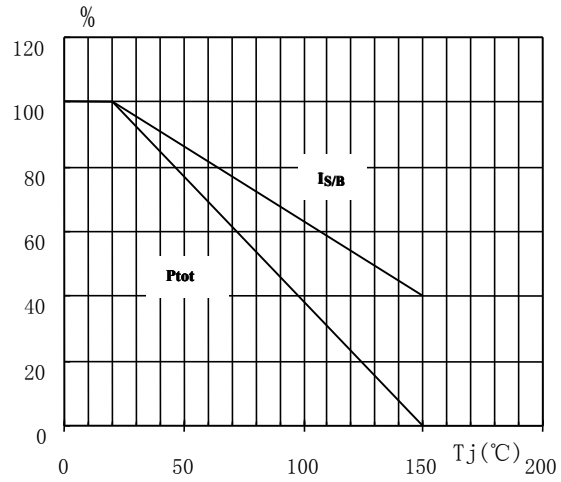
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MJE13005

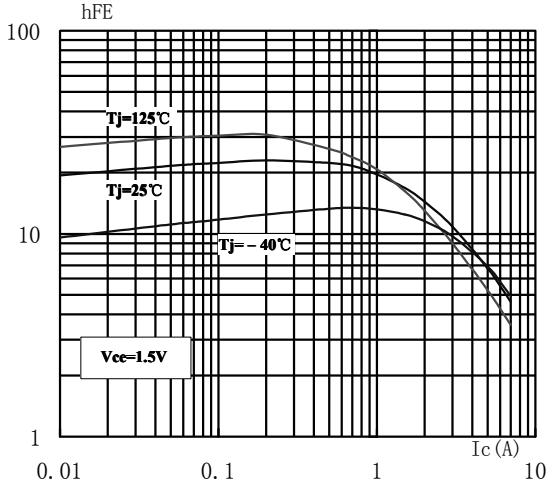
SOA (DC)



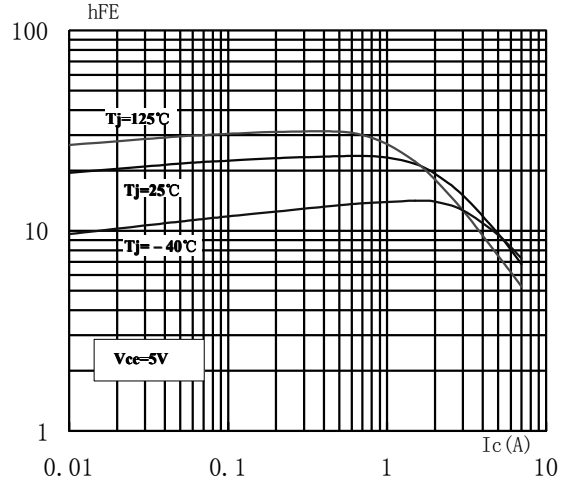
$P_{tot} \propto T_j$



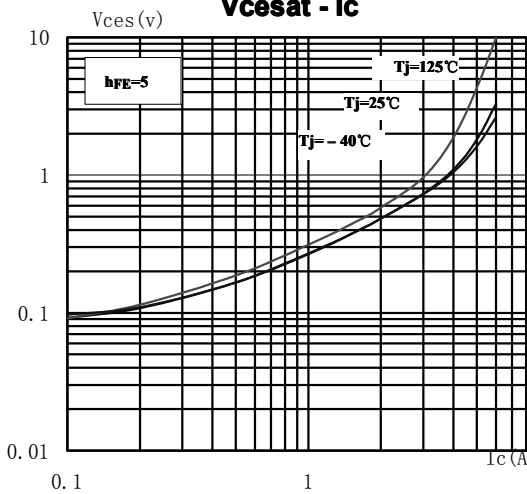
$h_{FE} - I_c$



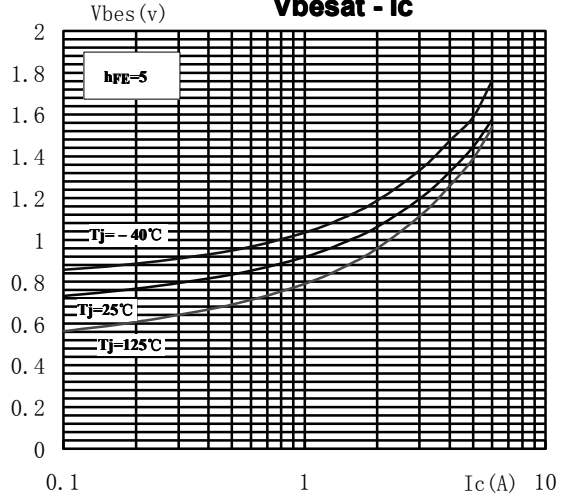
$h_{FE} - I_c$



$V_{cesat} - I_c$



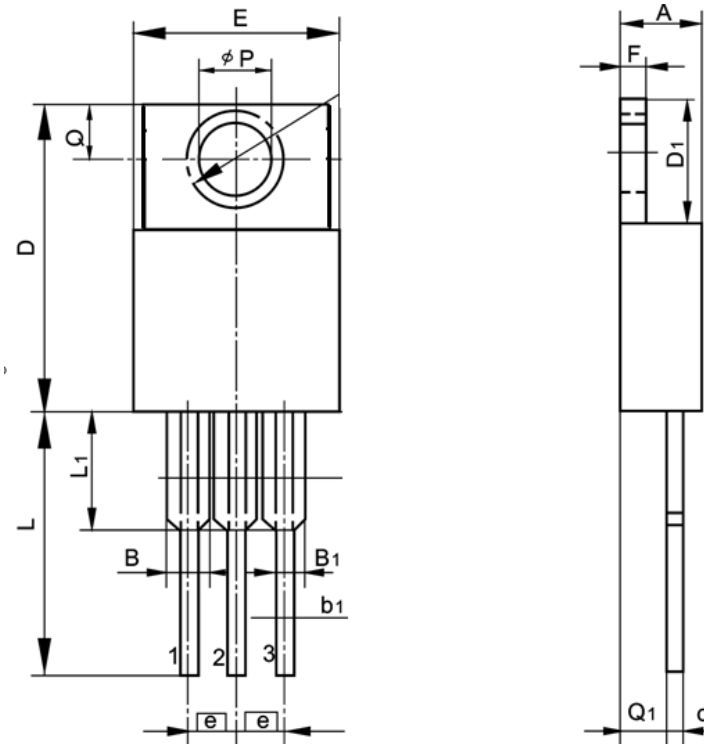
$V_{besat} - I_c$



TO-220 封装机械尺寸 TO-220 MECHANICAL DATA

单位：毫米/UNIT: mm

符号 SYMBOL	最小值 min	典型值 nom	最大值 max	符号 SYMBOL	最小值 min	典型值 nom	最大值 max
A	4.00		4.80	E	9.90		10.70
B	1.20		1.50	e		2.54	
B1	1.00		1.40	F	1.10		1.45
b1	0.65		1.00	L	12.50		14.50
c	0.35		0.75	L1	3.00	3.50	4.00
D	15.00		16.50	Q	2.50		3.00
D1	5.90		6.90	Q1	2.00		3.00
				φ P	3.60		3.90



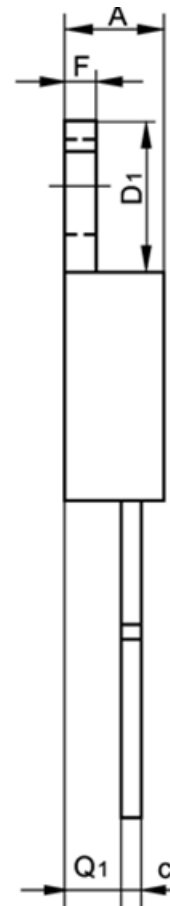
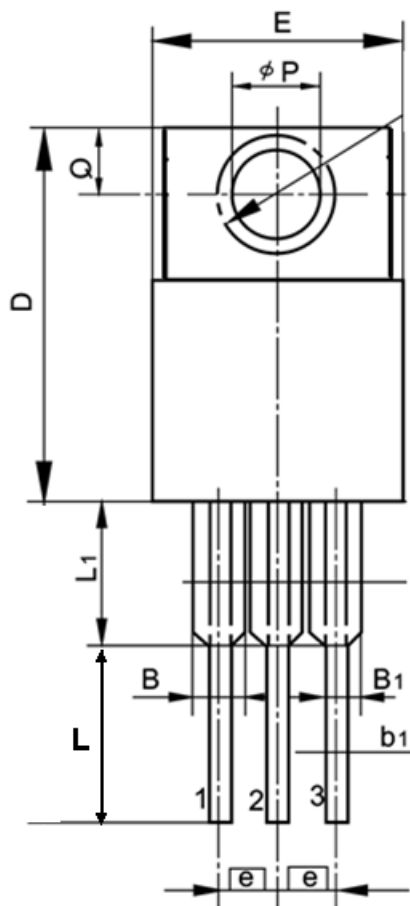


TO-220S 封装机械尺寸

TO-220S MECHANICAL DATA

单位：毫米/UNIT: mm

符号 SYMBOL	最小值 min	典型值 nom	最大值 max	符号 SYMBOL	最小值 min	典型值 nom	最大值 max
A	4.00		4.80	E	9.90		10.70
B	1.27		1.50	e		2.54	
B1			1.40	F	1.20		1.45
b1	0.75		1.00	L	3.20		3.80
c	0.38		0.75	L1			3.50
D	15.00		16.5	φP	3.60		3.90
D1	5.90		6.60	Q	2.50		3.00
				Q1	2.00		3.00



TO-220FP 封装机械尺寸 TO-220FP MECHANICAL DATA

单位:毫米/UNIT: mm

符号 SYMBOL	最小值 min	典型值 nom	最大值 max	符号 SYMBOL	最小值 min	典型值 nom	最大值 max
A	4.40		4.95	e		2.54	
A ₁	2.30		2.90	L	12.50		14.30
b	0.45		0.90	L ₁	9.10		10.05
b ₁	1.10		1.70	L ₂	15.00		16.00
c	0.35		0.90	L ₃	3.00		4.00
D	14.50		17.00	øp	3.00		3.50
D ₁	6.10		9.00	Q	2.30		2.80
E	9.60		10.30				

