

**NPN MJE 系列晶体管/MJE SERIES TRANSISTORS**

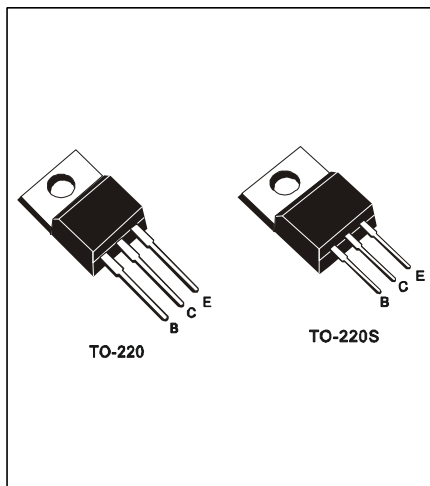
**MJE13009**

- 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

参数 PARAMETER	符号 SYMBOL	额定值 VALUE	单位 UNIT
集电极-基极电压 Collector-Base Voltage	V <sub>CB0</sub>	700	V
集电极-发射极电压 Collector-Emitter Voltage	V <sub>CEO</sub>	400	V
发射极-基极电压 Emitter- Base Voltage	V <sub>EBO</sub>	9	V
集电极电流 Collector Current	I <sub>C</sub>	12	A
集电极耗散功率 Total Power Dissipation	P <sub>tot</sub>	100	W
最高工作温度 Junction Temperature	T <sub>j</sub>	150	°C
贮存温度 Storage Temperature	T <sub>stg</sub>	-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 <sub>CB0</sub>	V <sub>CB</sub> =700V		100	μA
集电极-发射极截止电流 Collector-Emitter Cutoff Current	I <sub>CEO</sub>	V <sub>CE</sub> =400V, I <sub>B</sub> =0		250	μA
集电极-基极电压 Collector-Base Voltage	V <sub>CB0</sub>	I <sub>C</sub> =1mA, I <sub>E</sub> =0	700		V
集电极-发射极电压 Collector-Emitter Voltage	V <sub>CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0	400		V
发射极-基极电压 Emitter- Base Voltage	V <sub>EBO</sub>	I <sub>E</sub> =1mA, I <sub>C</sub> =0	9		V
集电极-发射极饱和电压 Collector-Emitter Saturation Voltage	V <sub>cesat</sub>	I <sub>C</sub> =8.0A, I <sub>B</sub> =1.6A I <sub>C</sub> =12A, I <sub>B</sub> =3.0A		0.8 1.8	V
发射极-基极饱和电压 Base-Emitter Saturation Voltage	V <sub>besat</sub>	I <sub>C</sub> =8A, I <sub>B</sub> =1.6A		1.5	V
电流放大倍数 DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA V <sub>CE</sub> =5V, I <sub>C</sub> =3A V <sub>CE</sub> =5V, I <sub>C</sub> =12A	7 10 5		
贮存时间/Storage Time	t <sub>s</sub>	V <sub>CC</sub> =5V, I <sub>C</sub> =0.5A	5.0	9.0	μs
下降时间/Falling Time	t <sub>r</sub>	(UI9600)		0.18	

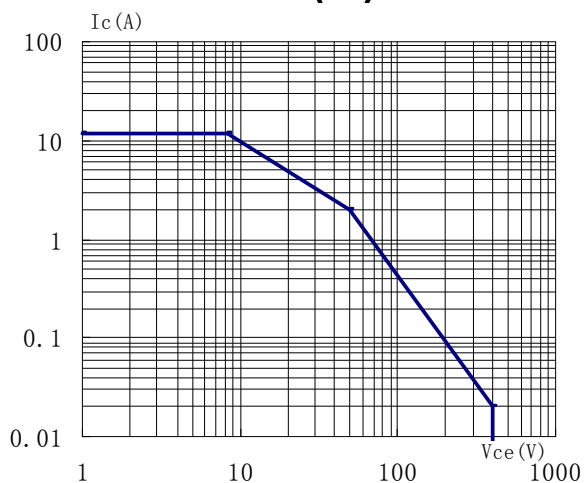
●订单信息/ORDERING INFORMATION:

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	MJE13009 TO-220	MJE13009 TO-220-HF
TO-220S 普通袋装/NORMAL PACKING	MJE13009 TO-220S	MJE13009 TO-220S-HF
TO-220 条管装/TUBE PACKING	MJE13009 TO-220-TU	MJE13009 TO-220-TU-HF

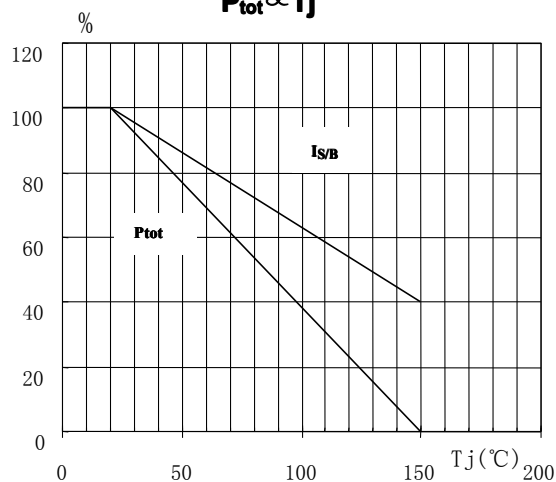
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MJE13009

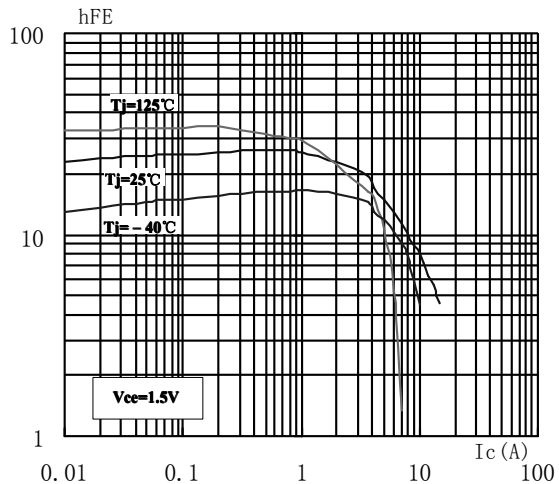
SOA (DC)



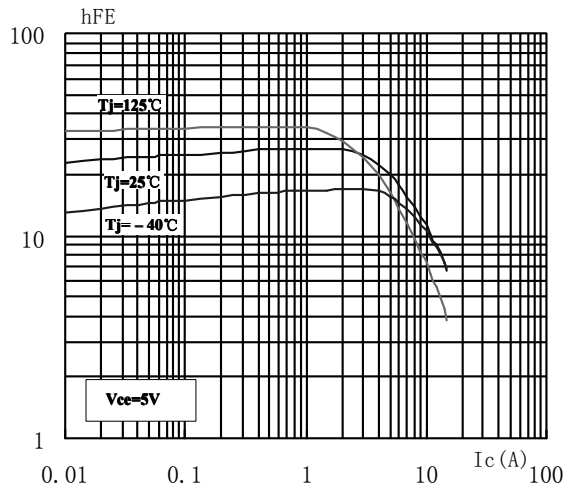
$P_{tot} \propto T_j$



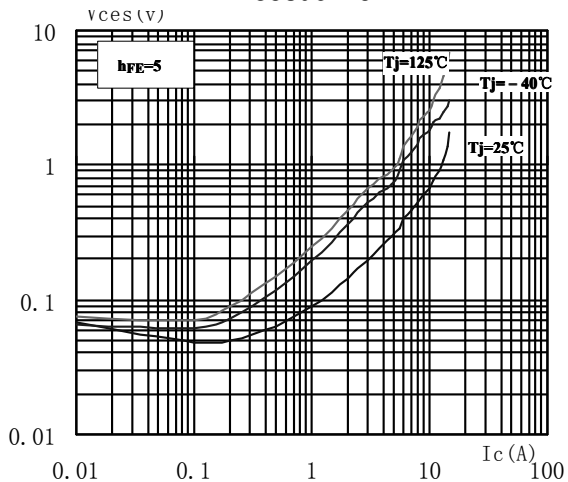
$h_{FE} - I_c$



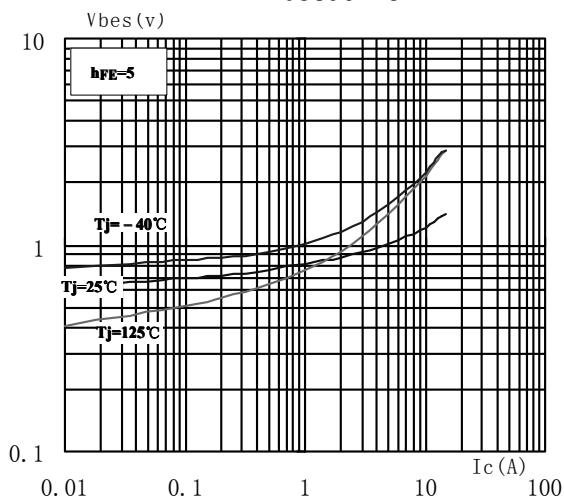
$h_{FE} - I_c$



$V_{cesat} - I_c$



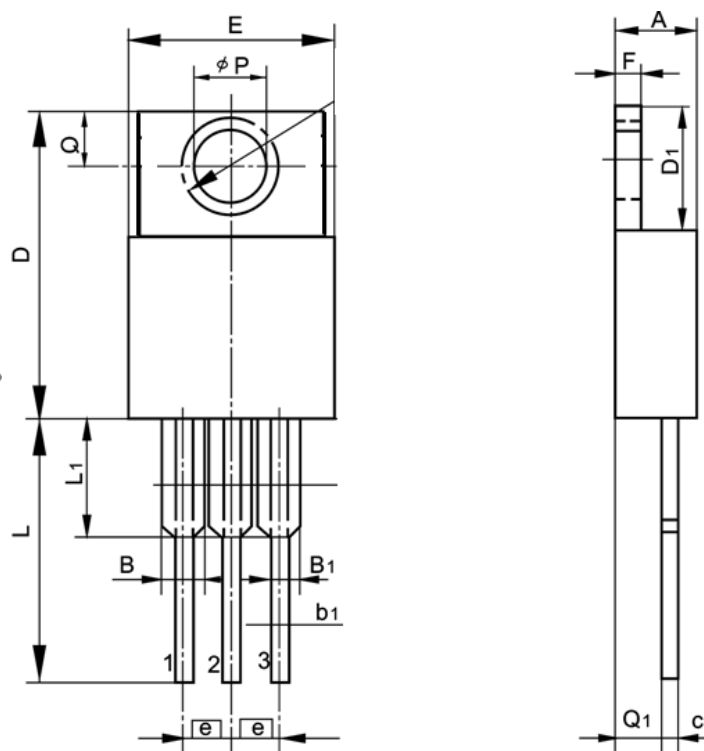
$V_{besat} - I_c$



## 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
				$\phi P$	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

