MJE15033

Rev.F Mar.-2016

描述 / Descriptions

TO-220 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a TO-220 Plastic Package.

特征 / Features

直流电流增益高，集电极 - 发射极击穿电压高，高电流增益-带宽积，与 MJE15032 互补。

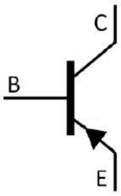
High DC current gain, High V_{CEO}, High f_T, Complementary pair with MJE15032.

用途 / Applications

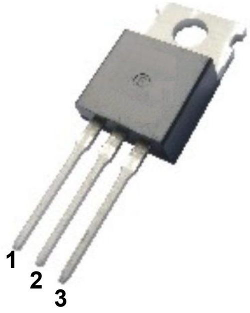
用于功率放大器的高频驱动。

Designed for us as high-frequency drivers in audio amplifiers.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1：Base　　PIN 2：Collector　　PIN 3：Emitter

放大及印章代码 / h_{FE} Classifications & Marking

见印章说明。See Marking Instructions.

极限参数 / Absolute Maximum Ratings(Ta=25℃)

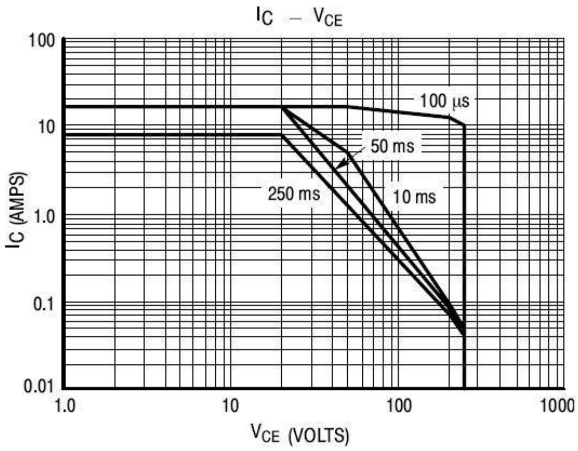
参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Collector to Base Voltage	V_{CBO}	-250	V
Collector to Emitter Voltage	V_{CEO}	-250	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-8	A
Base Current - Continuous	I_B	-2	A
Collector Power Dissipation	P_D	2	W
	P_D(Tc=25℃)	50	W
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	-65～150	℃
Thermal Resistance, Junction to Case	$R_{\theta JC}$	2.5	℃/W
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	62.5	℃/W

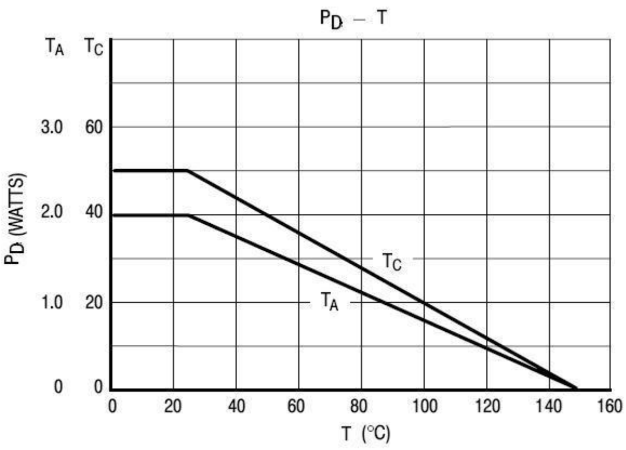
电性能参数 / Electrical Characteristics(Ta=25℃)

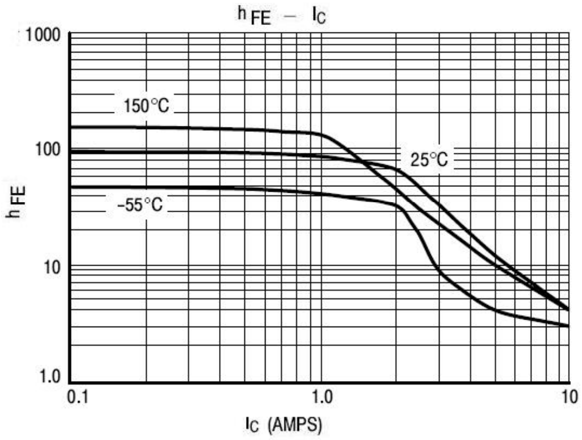
参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Collector to Emitter Breakdown Voltage*	*V_{CEO}	I_C=-10mA I_B=0	-250			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-250V I_E=0			-10	µA
Emitter Cut-Off Current	I_{EBO}	V_{BE}=-5V I_C=0			-10	µA
DC Current Gain	*$h_{FE(1)}$	V_{CE}=-5V I_C=-1A	50		200	
	*$h_{FE(2)}$	V_{CE}=-5V I_C=-0.5A	70			
	*$h_{FE(3)}$	V_{CE}=-5V I_C=-2.0A	10			
Collector to Emitter Saturation Voltage*	*$V_{CE(sat)}$	I_C=-1A I_B=-0.1A			-0.5	V
Base to Emitter On Voltage*	*$V_{BE(on)}$	V_{CE}=-5V I_C=-1A			-1	V
Transition Frequency	f_T	V_{CE}=-10V I_C=-500mA f=1MHz	30			MHz

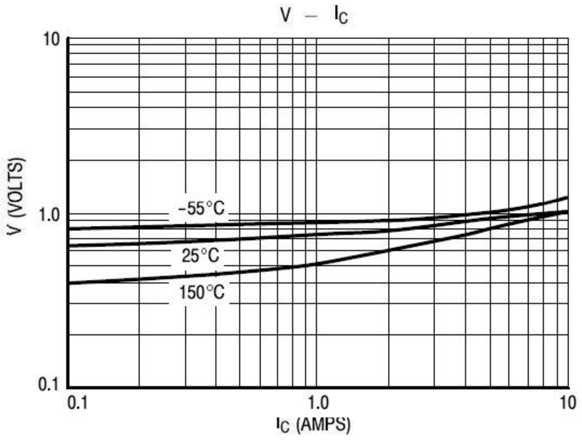
*脉冲测试：脉宽≤300µs，占空比≤2%。*Pulse Test: Pulse Width≤300µs, Duty Cycle≤2%.

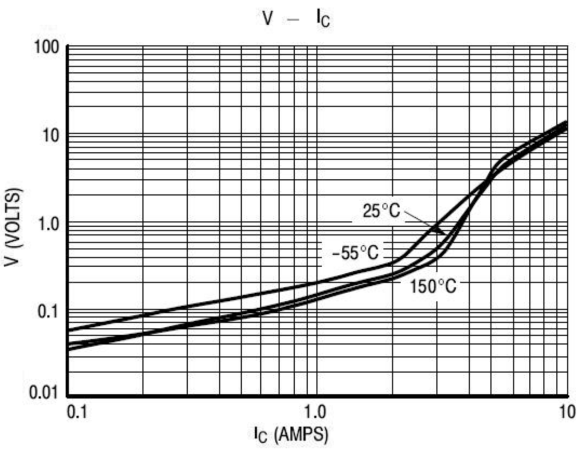
电参数曲线图 / Electrical Characteristic Curve

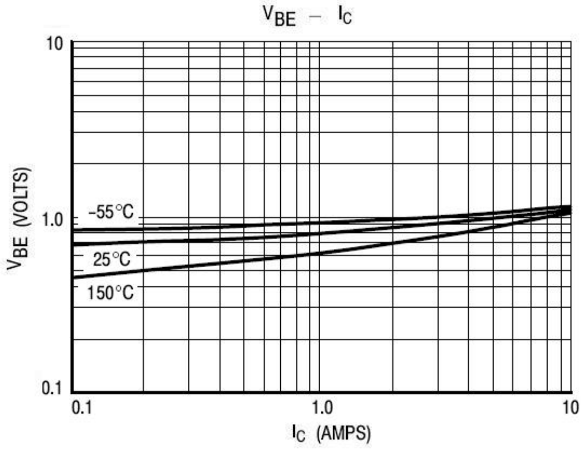






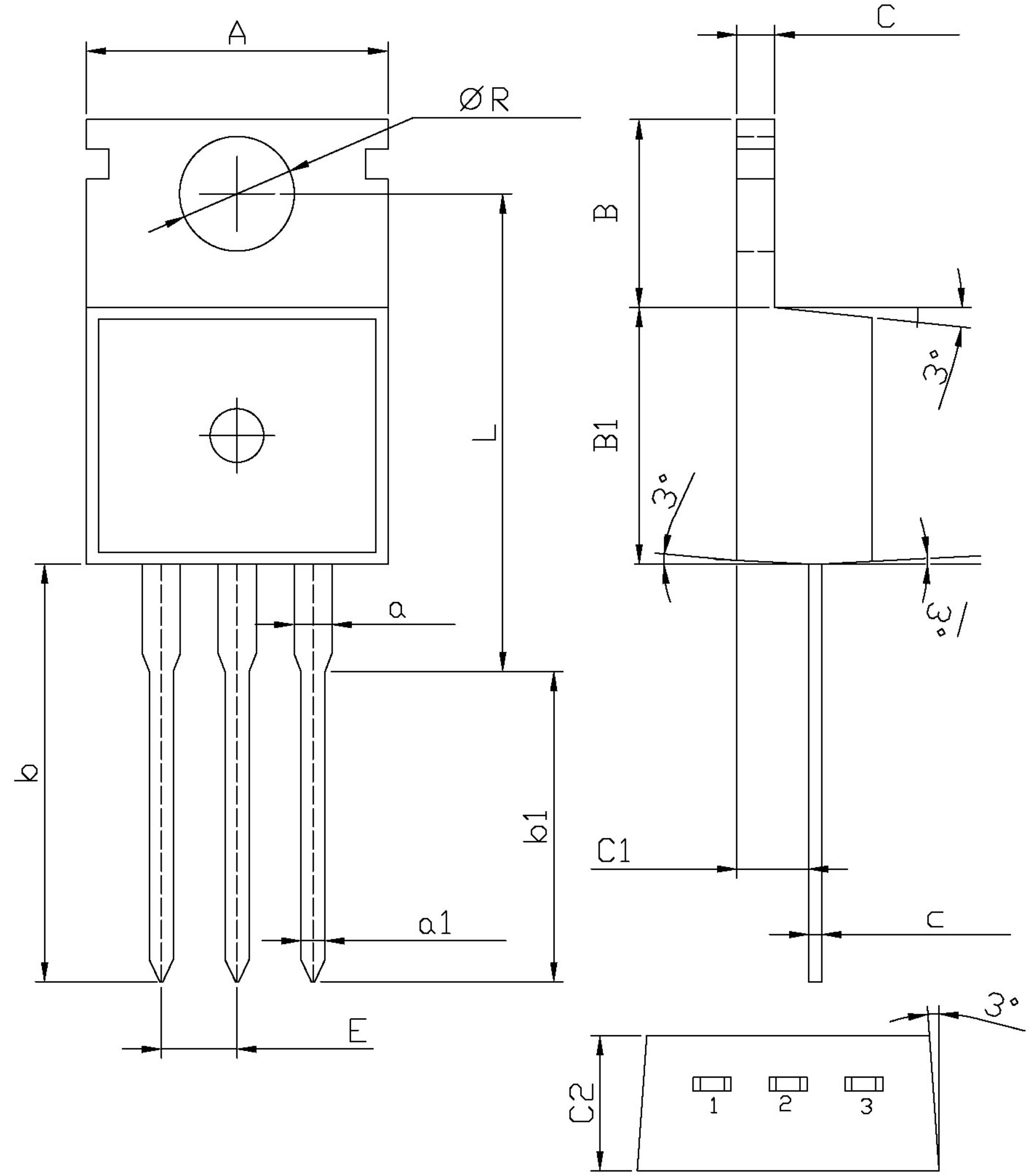






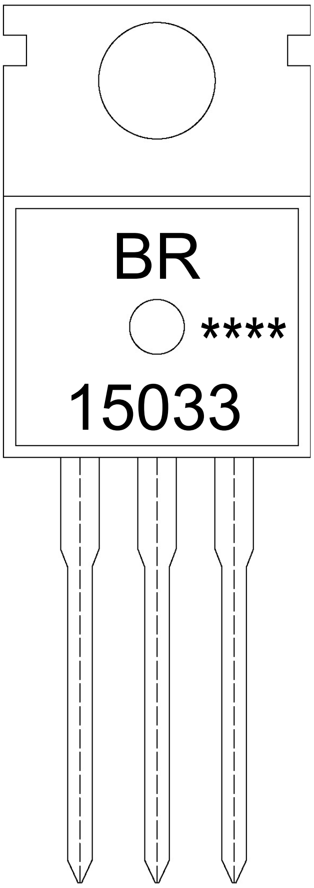
外形尺寸图 / Package Dimensions

TO-220 单位：mm



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
L	15.7	16.1	B1	9.0	9.4
b	12.6	13.6	C1	2.2	2.6
b1	9.6	10.6	a1	0.7	0.9
a	1.22	1.32	c	0.4	0.6
E	2.34	2.74	C2	4.3	4.7

印章说明 / Marking Instructions



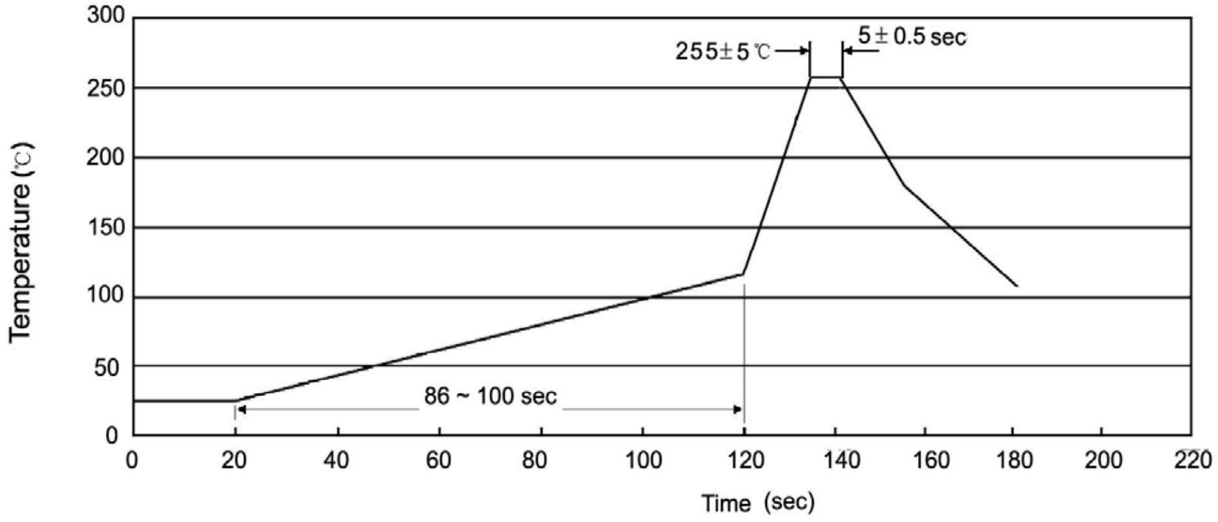
说明：

BR：	为公司代码
15033：	为型号代码
****：	为生产批号代码，随生产批号变化。

Note:

BR:	Company Code
15033:	Product Type.
****:	Lot No. Code, code change with Lot No.

波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)



说明：

1、预热温度 25～150℃，时间 60～90sec;

2、峰值温度 255±5℃，时间持续为 5±0.5sec;

3、焊接制程冷却速度为 2～10℃/sec.

Note:

1.Preheating:25~150℃, Time:60~90sec.

2.Peak Temp.:255±5℃, Duration:5±0.5sec.

3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：270±5℃　　时间：10±1 sec.

Temp.:270±5℃　　Time:10±1 sec

包装规格 / Packaging SPEC.

散件包装 / BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

套管包装 / TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

使用说明 / Notices