

描述 / Descriptions

SOP-8 塑封封装 双通道放大器。Dual Operational Amplifiers in a SOP-8 Plastic Package.

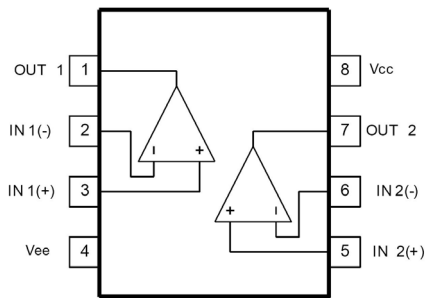
特征 / Features

内部单位增益频率补偿, 有较大的直流电压增益: 100dB, 工作电压范围宽 ($V_{CC} = 3V \sim 36V$), 输入共模电压范围接近地电平, 输出电压范围大: 从 $0 \sim V_{CC} - 1.5V$, 适用于电池工作时的电力消耗。
Internally frequency compensated for unity gain, Large DC voltage gain: 100dB, Wide operating supply range ($V_{CC} = 3V \sim 36V$), Input common mode voltage includes ground, Large output voltage swing: From 0 to $V_{CC} - 1.5V$, Power drain suitable for battery operation.

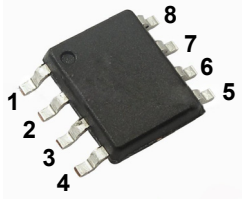
用途 / Applications

适用于传感器放大器, 直流增益模块和所有传统的运算放大器电路。
Application areas include transducer amplifier, DC gain blocks and all the conventional OP amp circuits.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 见内部等效电路 / PIN See Equivalent Circuit.

印章代码 / Marking

见印章说明 / See Marking Instructions

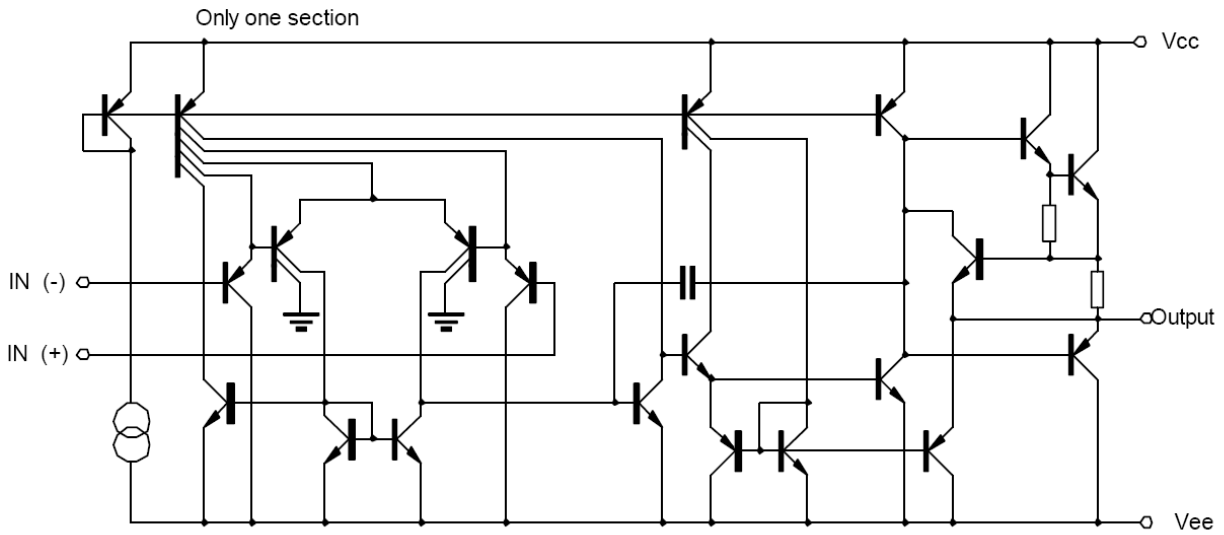
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|----------------------------|----------------------|--------------|------------|
| Supply Voltage | V _{CC} | ±18 | V |
| Differential input voltage | V _{I(DIFF)} | 36 | V |
| Input Voltage | V _I | -0.3~36 | V |
| Power Dissipation | P _d | 570 | mW |
| Operating Temperature | T _{opr} | 0 ~ 70 | °C |
| Storage Temperature | T _{stg} | -65 ~ 150 | °C |

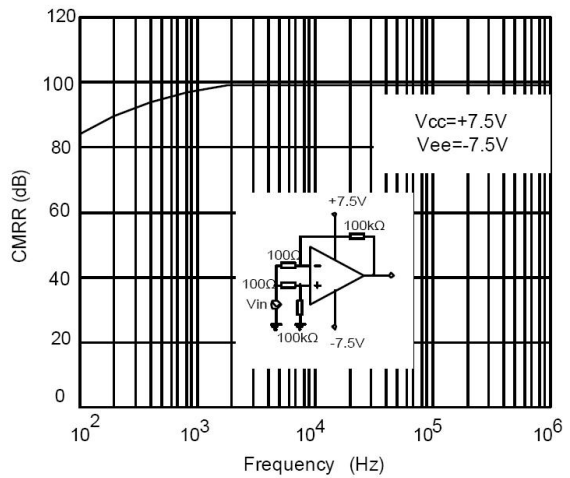
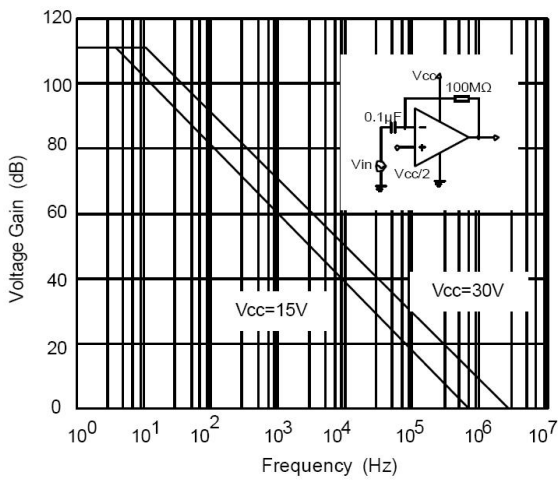
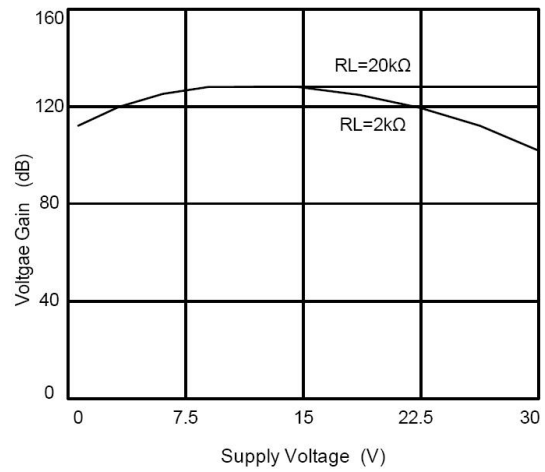
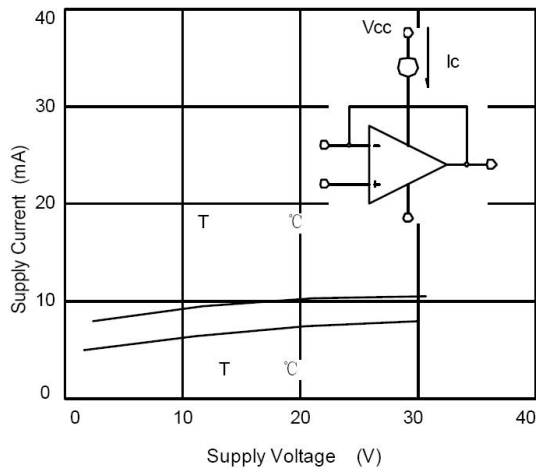
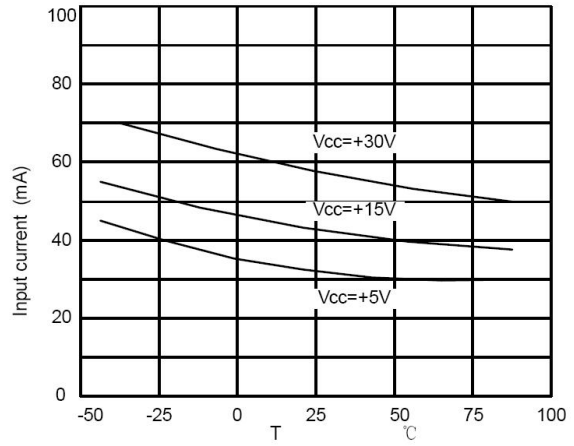
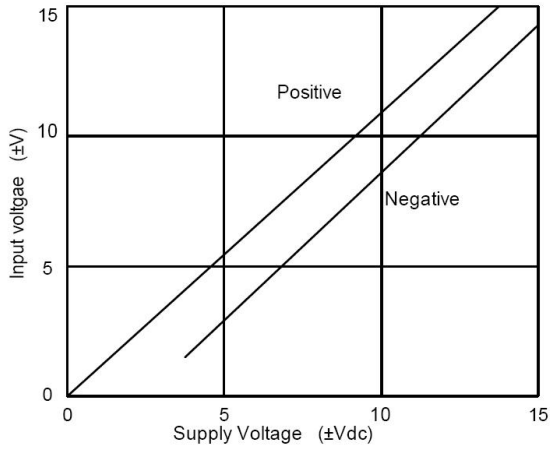
电性能参数 / Electrical Characteristics(Ta=25°C)

| 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 |
|--------------------------------|----------------------|---|------------|----------------------|-----------------|------------|
| Input offset voltage | V _{IO} | V _{CM} =0 to V _{CC} -1.5 V _{o(p)} =1.4V R _s =0 | | 2.0 | 3.0 | mV |
| Input offset current | I _{IO} | | | 2.0 | 30 | nA |
| Input Bias current | I _b | | | 45 | 100 | nA |
| Input Commonmode voltage range | V _{I(R)} | V _{CC} =30V | 0 | V _{CC} -1.5 | | V |
| Supply Current | I _{CC} | R _L =∞ V _{CC} =30V | | 0.8 | 2.0 | mA |
| | | V _{CC} =5V | | 0.5 | 1.2 | mA |
| Large signal Voltage Gain | G _V | V _{CC} =15V R _L >2kΩ V _{o(p)} =1V to 11V | 25 | 100 | | V/mV |
| Output voltage Swing | V _(OH) | V _{CC} =30V R _L =2kΩ | 26 | | | V |
| | | V _{CC} =30V R _L =10kΩ | 27 | 28 | | V |
| | V _(OL) | V _{CC} =5V R _L =10kΩ | | 5 | 20 | mV |
| Commonmode rejection Ratio | CMRR | | 65 | 75 | | dB |
| Power supply rejection Ratio | PSRR | | 65 | 100 | | dB |
| Chanel Separation | CS | f=1kHz to 20kHz | | 5 | 20 | mV |
| Short circuit to GND | I _{sc} | | | 40 | 60 | mA |
| Output current | I _{source} | V _{I(+)} =1V V _{I(-)} =0 V _{CC} =15V V _{o(p)} =2V | 20 | 40 | | mA |
| | | V _{I(+)} =0V V _{I(-)} =1V V _{CC} =15V V _{o(p)} =2V | 10 | 13 | | mA |
| | I _{sink} | V _{I(+)} =1V V _{I(-)} =0 V _{CC} =15V V _{o(p)} =200mV | 12 | 45 | | μA |
| Differential input voltage | V _{I(diff)} | | | | V _{CC} | V |

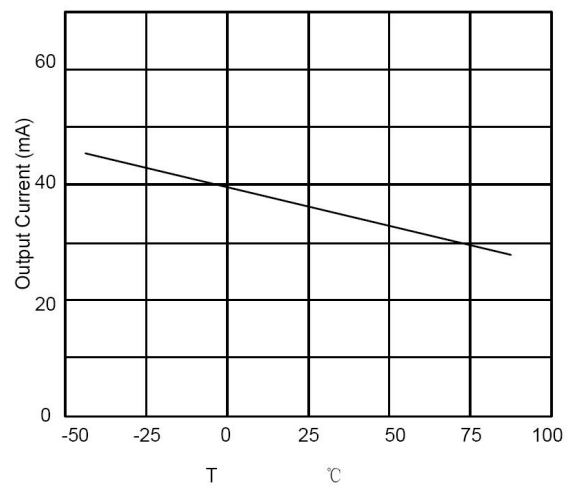
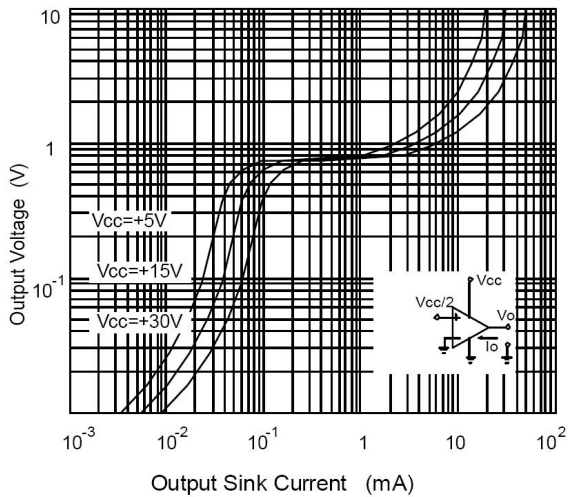
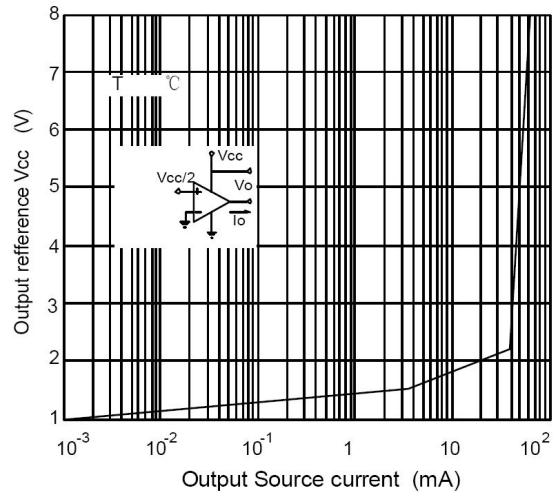
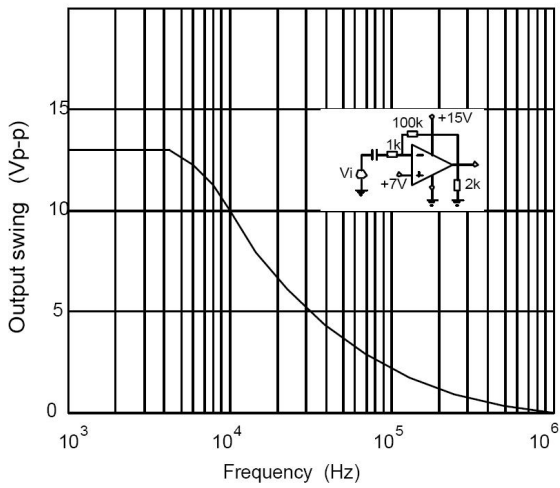
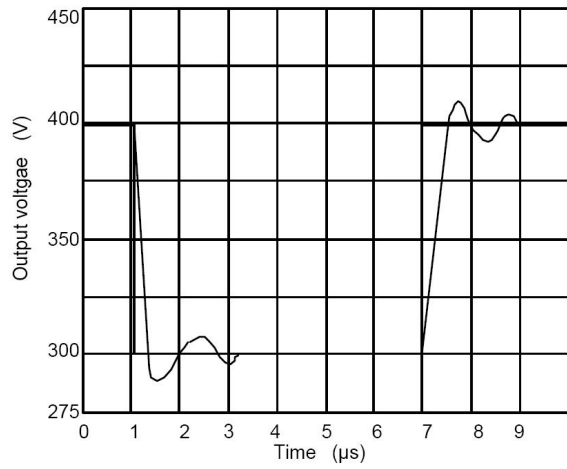
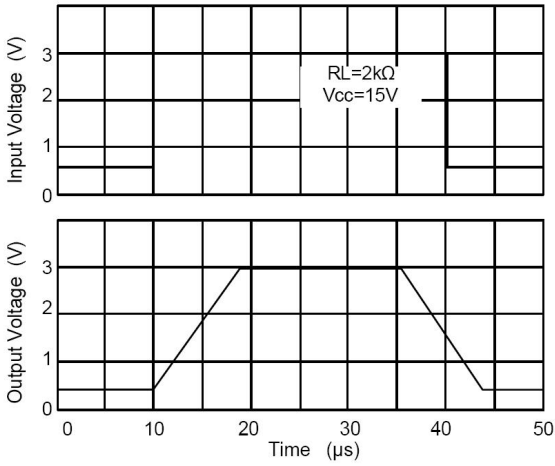
原理框图 / Functional Block Diagram



电参数曲线图 / Electrical Characteristic Curve



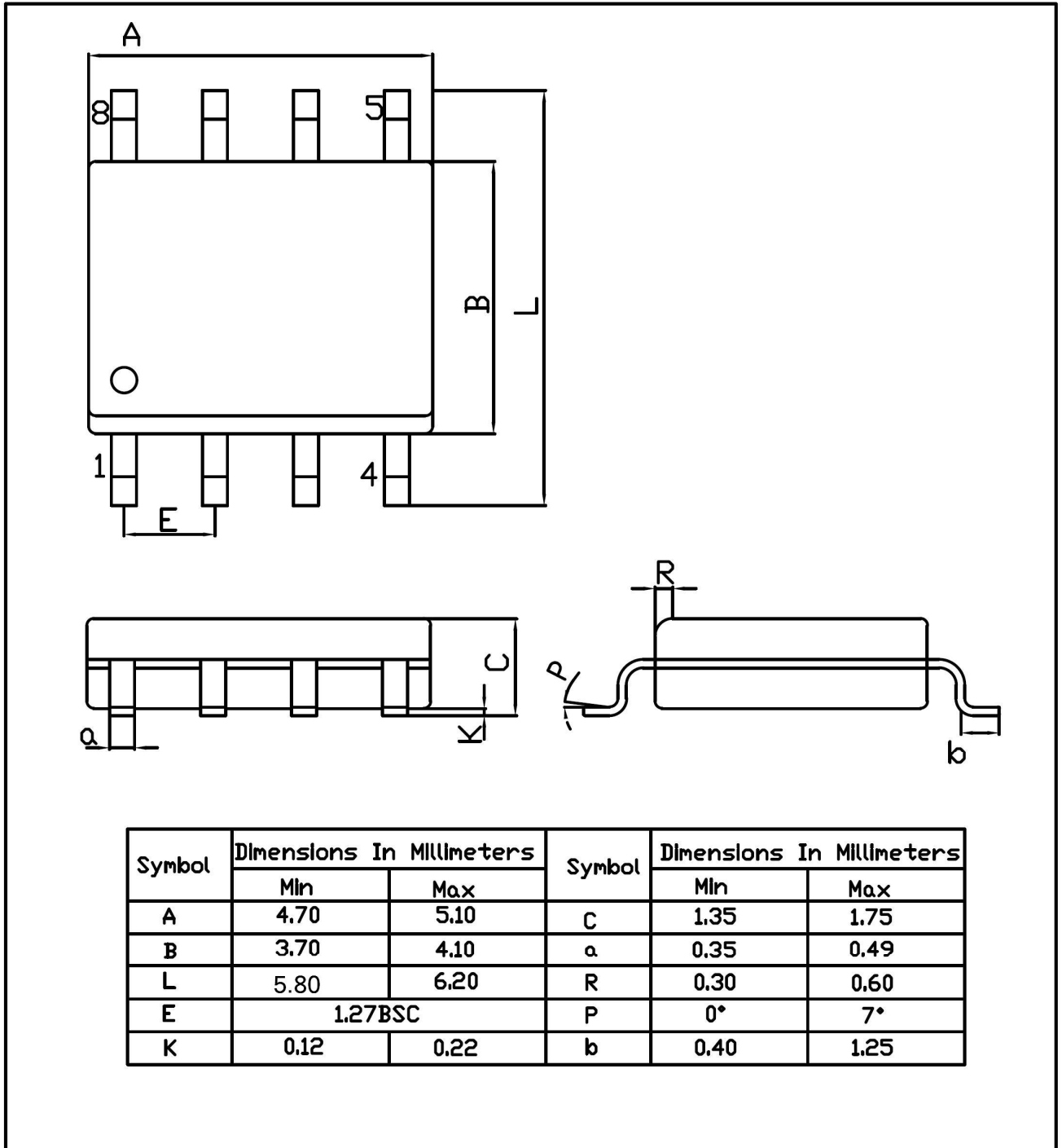
电参数曲线图 / Electrical Characteristic Curve



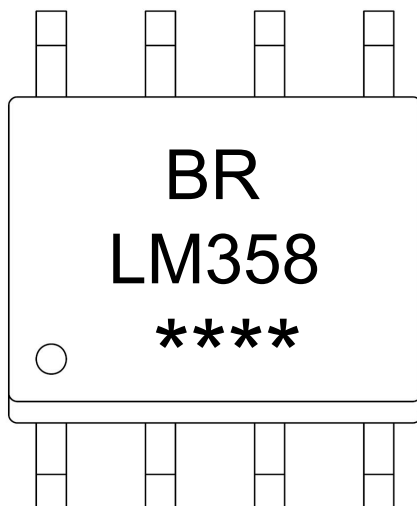
外形尺寸图 / Package Dimensions

SOP-8

Unit:mm



印章说明 / Marking Instructions



说明：

BR： 为公司代码

LM358： 为型号代码

****： 为生产批号代码，随生产批号变化

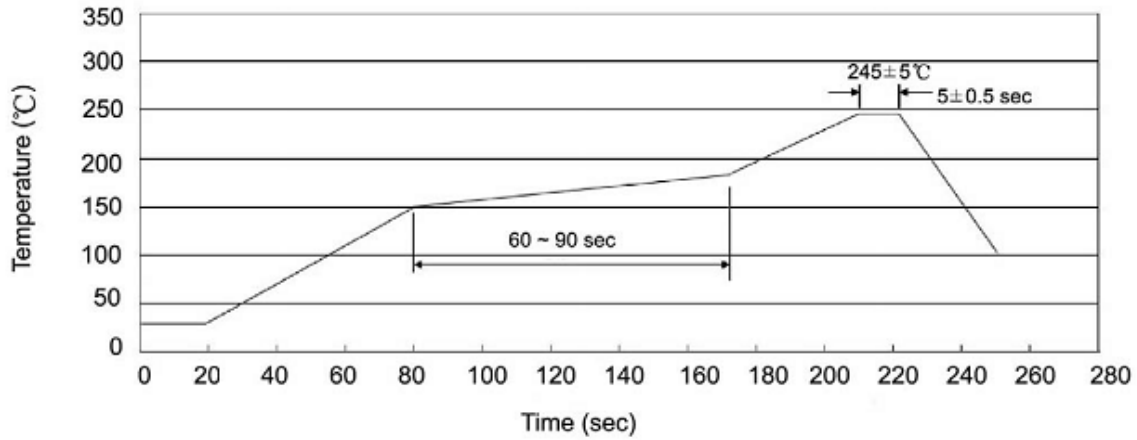
Note:

BR: Company Code.

LM358: Product Type.

****: Lot No. Code, code change with Lot No.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 150 ~ 180°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

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

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box 盒 | Outer Box 箱 |
| SOP/ESOP-8 | 4,000 | 2 | 8,000 | 6 | 48,000 | 13" ×12 | 360×360×50 | 380×335×366 |

使用说明 / Notices