

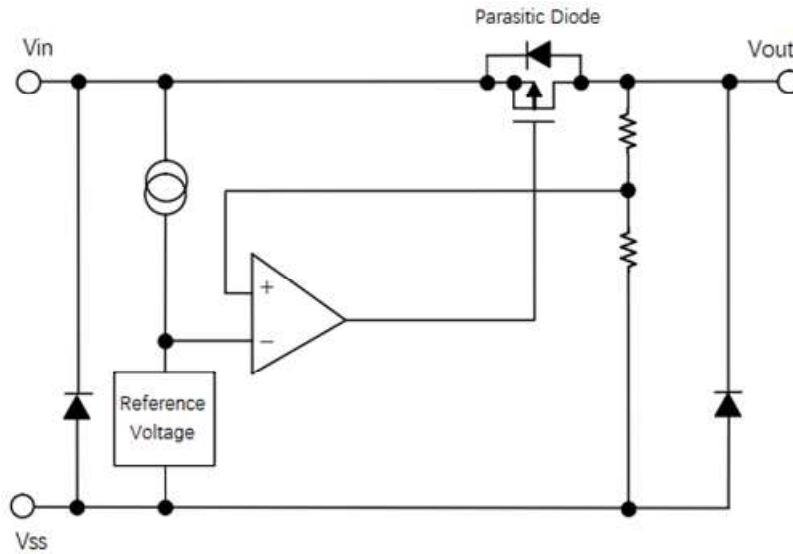
■ 概述:

SS814CXX系列是基于CMOS技术的低压差线性三端稳压器。输出电压由内部固定。SS814CXX 系列具有较高的输出电压精度 ($\pm 2.0\%$)和较低的输入/输出电压差($V_{dif}=0.12\text{ V}@I_{out}=10\text{ mA}$ for SS814C50) 等特点, 产品本身电流消耗也很低, 因此, 当应用于使用电池供电的设备时, 能有更长的电池使用时间。

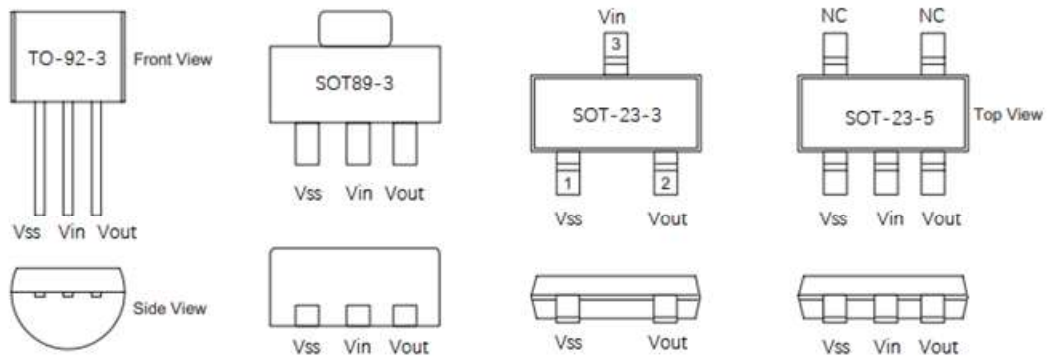
■ 特点:

- 低消耗电流: 2.5uA(典型值)。
- 低输入/输出电压差: (SS814C50: $0.12\text{ V}@I_{out}=10\text{ mA}$)。
- 高输出电压精度: $\pm 2.0\%$ 。
- 宽应用电压: 24 V(最高)。
- 多种封装形式: TO-92-3 ; SOT-89-3; SOT-23-3; SOT-23-5 。

■ 内部方框图:



■ 外形引脚图:



■ 产品选型表:

| 型 号 | 封装形式 | 输出电压 | 丝 印 |
|-----------|----------|------|-----------|
| SS814C30T | TO-92-3 | 3.0V | SS814C30T |
| SS814C30Q | SOT-89-3 | | B30XXX |
| SS814C30S | SOT-23-3 | | B30XXX |
| SS814C30M | SOT-23-5 | | B30XXX |
| SS814C33T | TO-92-3 | 3.3V | SS814C33T |
| SS814C33Q | SOT-89-3 | | B33XXX |
| SS814C33S | SOT-23-3 | | B33XXX |
| SS814C33M | SOT-23-5 | | B33XXX |
| SS814C36T | TO-92-3 | 3.6V | SS814C36T |
| SS814C36Q | SOT-89-3 | | B36XXX |
| SS814C36S | SOT-23-3 | | B36XXX |
| SS814C36M | SOT-23-5 | | B36XXX |
| SS814C40T | TO-92-3 | 4.0V | SS814C40T |
| SS814C40Q | SOT-89-3 | | B40XXX |
| SS814C40S | SOT-23-3 | | B40XXX |
| SS814C40M | SOT-23-5 | | B40XXX |
| SS814C44T | TO-92-3 | 4.4V | SS814C44T |
| SS814C44Q | SOT-89-3 | | B44XXX |
| SS814C44S | SOT-23-3 | | B44XXX |
| SS814C44M | SOT-23-5 | | B44XXX |
| SS814C50T | TO-92-3 | 5.0V | SS814C50T |
| SS814C50Q | SOT-89-3 | | B50XXX |
| SS814C50S | SOT-23-3 | | B50XXX |
| SS814C50M | SOT-23-5 | | B50XXX |
| SS814C60T | TO-92-3 | 6.0V | SS814C60T |
| SS814C60Q | SOT-89-3 | | B60XXX |
| SS814C60S | SOT-23-3 | | B60XXX |
| SS814C60M | SOT-23-5 | | B60XXX |
| SS814C90T | TO-92-3 | 9.0V | SS814C90T |
| SS814C90Q | SOT-89-3 | | B90XXX |
| SS814C90S | SOT-23-3 | | B90XXX |
| SS814C90M | SOT-23-5 | | B90XXX |

*丝印支持客制。

■ 极限参数:

| | | | | |
|----------------|-------------|--|------|----------------|
| 工作电压 | -0.3V - 36V | | 储存温度 | -50°C to 125°C |
| 功率耗散 (SOT89) | 500mW | | 工作温度 | -40°C to 85°C |
| 功率耗散 (TO-92-3) | 250mW | | 输出电流 | 150mA |
| 功率耗散 (SOT23) | 250mW | | | |

备注: 1. 如果超过极限值使用, 将容易使本产品损坏。

2. 如果长时间工作在极限值, 将容易使本产品损坏。

■ 电器特性:

SS814C33, +3.3V

Ta=25°C

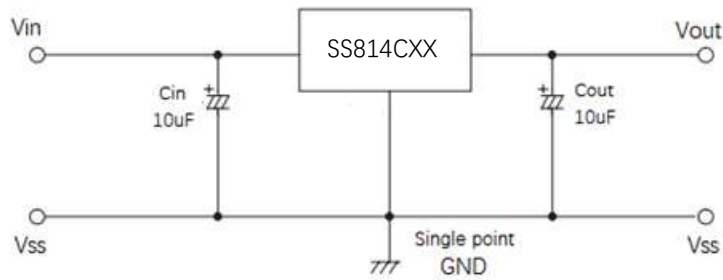
| 项目 | 参数说明 | 测试条件 | | 最小 | 典型 | 最大 | 单位 |
|---|--------------------------|-----------------|--|-------|-------|-------|-------|
| | | V _{IN} | Conditions | | | | |
| V _{OUT} | Output Voltage Tolerance | 5.3V | I _{OUT} =10mA | 3.234 | 3.300 | 3.366 | V |
| I _{OUT} | Output Current | 5.3V | — | — | 100 | — | mA |
| ΔV _{OUT} | Load Regulation | 5.3V | 1mA ≤ I _{OUT} ≤ 50mA | — | 60 | 150 | mV |
| V _{dif} | Voltage Drop | — | I _{OUT} = 10mA | — | 120 | — | mV |
| I _{SS} | Current Consumption | 5.3V | No load | — | 2.0 | 7 | μA |
| $\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$ | Line Regulation | — | 4.3V ≤ V _{IN} ≤ 9V I _{OUT} =1mA | — | 0.2 | — | %/V |
| V _{IN} | Input Voltage | — | I _{OUT} =1mA | — | — | 36 | V |
| $\frac{V_{OUT}}{T_a}$ | Temperature Coefficient | 5.3V | I _{OUT} =10mA 0°C < T _a < 85°C | — | ±0.5 | — | mV/°C |

SS814C50, +5.0V

Ta=25°C

| 项目 | 参数说明 | 测试条件 | | 最小 | 典型 | 最大 | 单位 |
|---|--------------------------|-----------------|--|-------|-------|-------|-------|
| | | V _{IN} | Conditions | | | | |
| V _{OUT} | Output Voltage Tolerance | 7V | I _{OUT} =10mA | 4.900 | 5.000 | 5.100 | V |
| I _{OUT} | Output Current | 7V | — | — | 100 | — | mA |
| ΔV _{OUT} | Load Regulation | 7V | 1mA ≤ I _{OUT} ≤ 50mA | — | 60 | 150 | mV |
| V _{dif} | Voltage Drop | — | I _{OUT} = 10mA | — | 120 | — | mV |
| I _{SS} | Current Consumption | 7V | No load | — | 2.5 | 7 | μA |
| $\frac{V_{OUT}}{V_{IN} \times V_{OUT}}$ | Line Regulation | — | 6V ≤ V _{IN} ≤ 9V I _{OUT} =1mA | — | 0.2 | — | %/V |
| V _{IN} | Input Voltage | — | I _{OUT} =1mA | — | — | 36 | V |
| $\frac{V_{OUT}}{T_a}$ | Temperature Coefficient | 7V | I _{OUT} =10mA 0°C < T _a < 85°C | — | ±0.75 | — | mV/°C |

■ 典型应用电路:



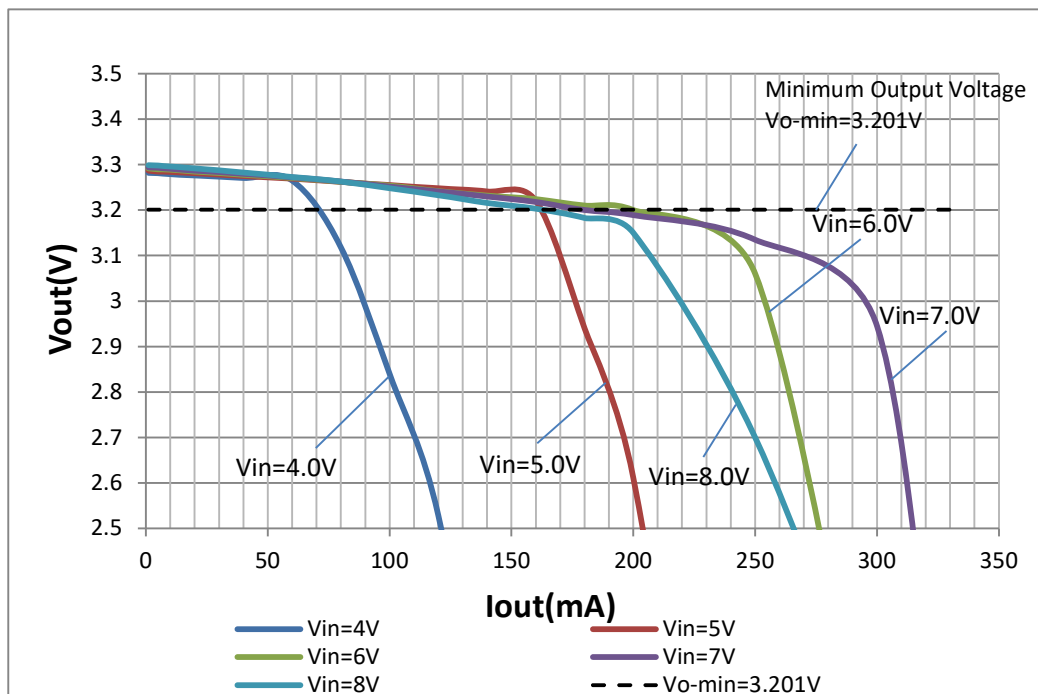
备注:

- 1, 输入/输出电容应尽可能靠近 Vin 和 Vout 引脚
- 2, 注意输入/输出电压和负载电流情况, 避免 IC 内部功耗超过所选封装允许的极限功耗。
通常建议不超过极限值的 70%来应用。

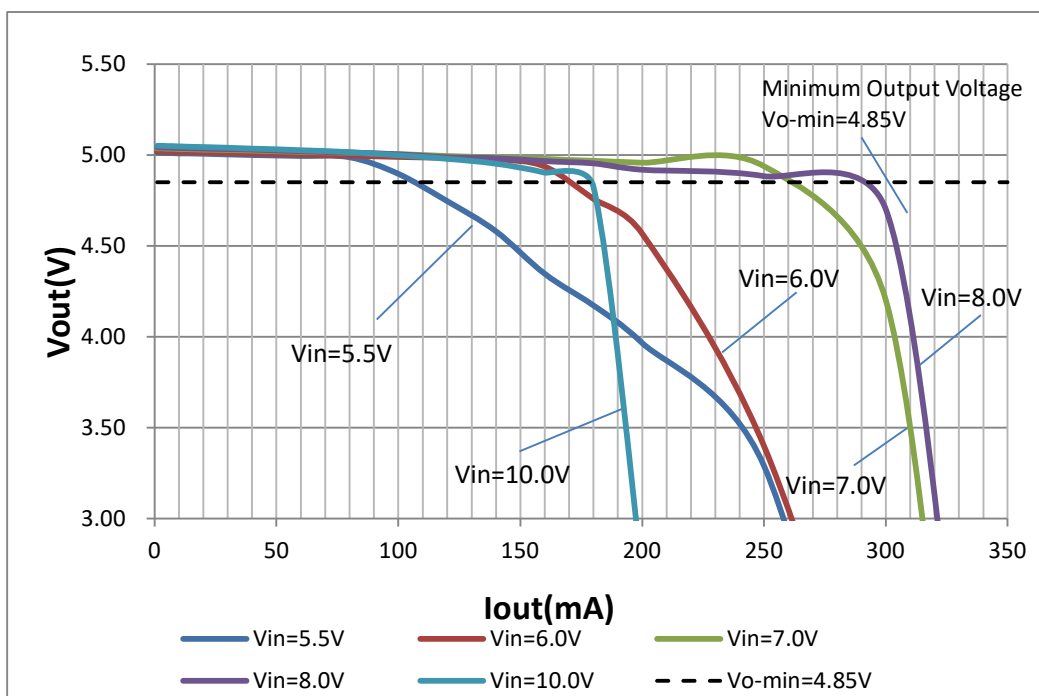
■ 特性曲线:

输出电压 和 输出电流

SS814C33

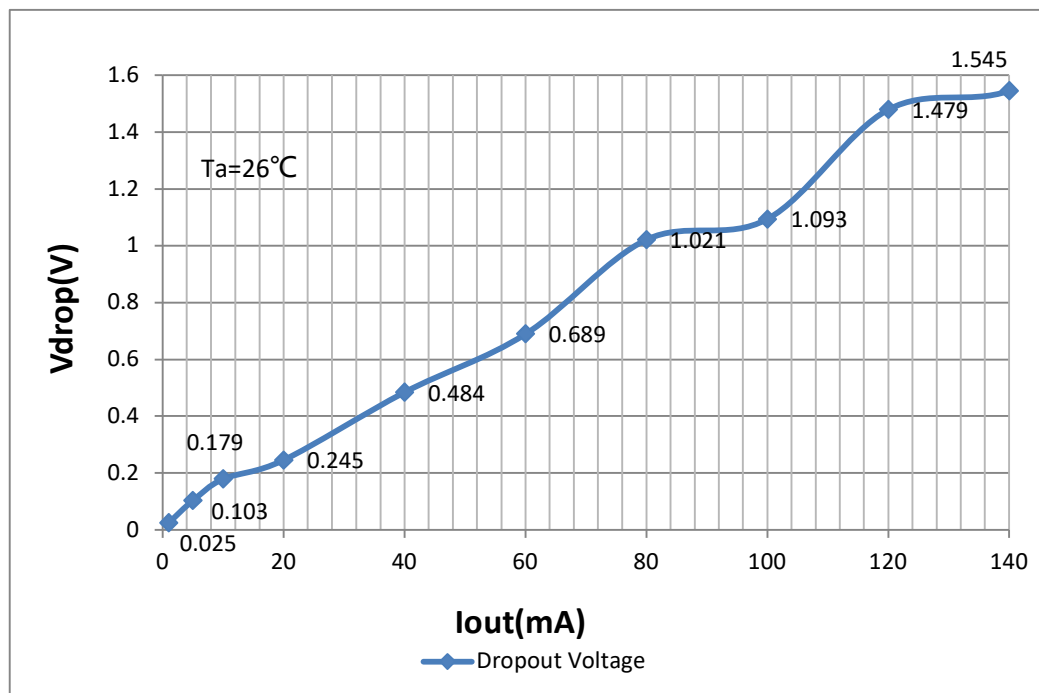


SS814C50

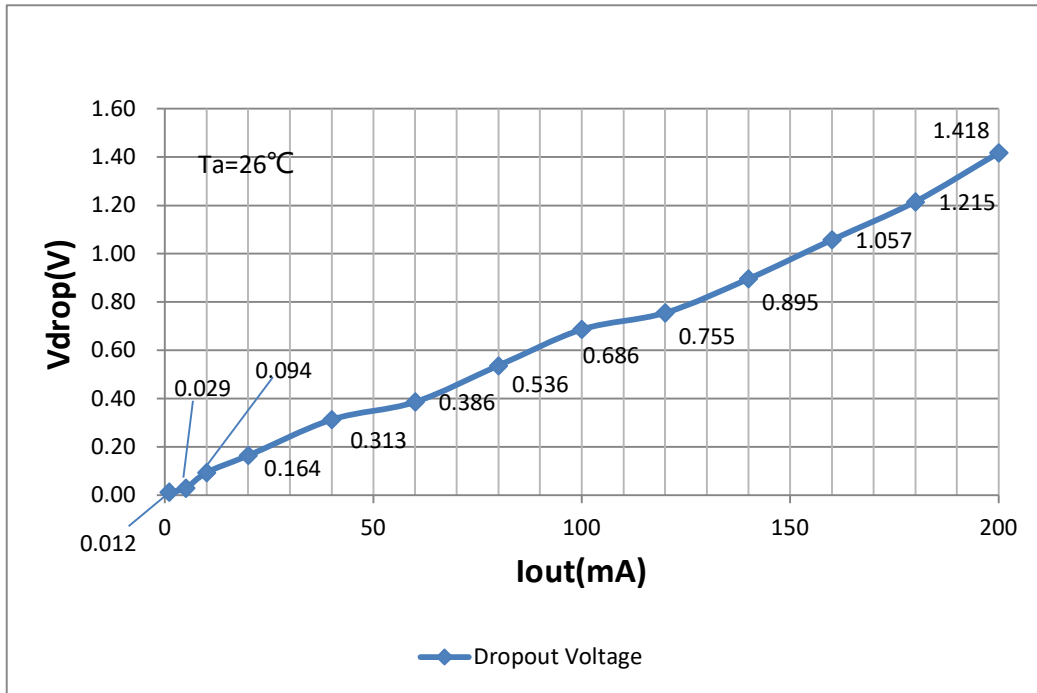


输入/输出电压差和电流

SS814C33

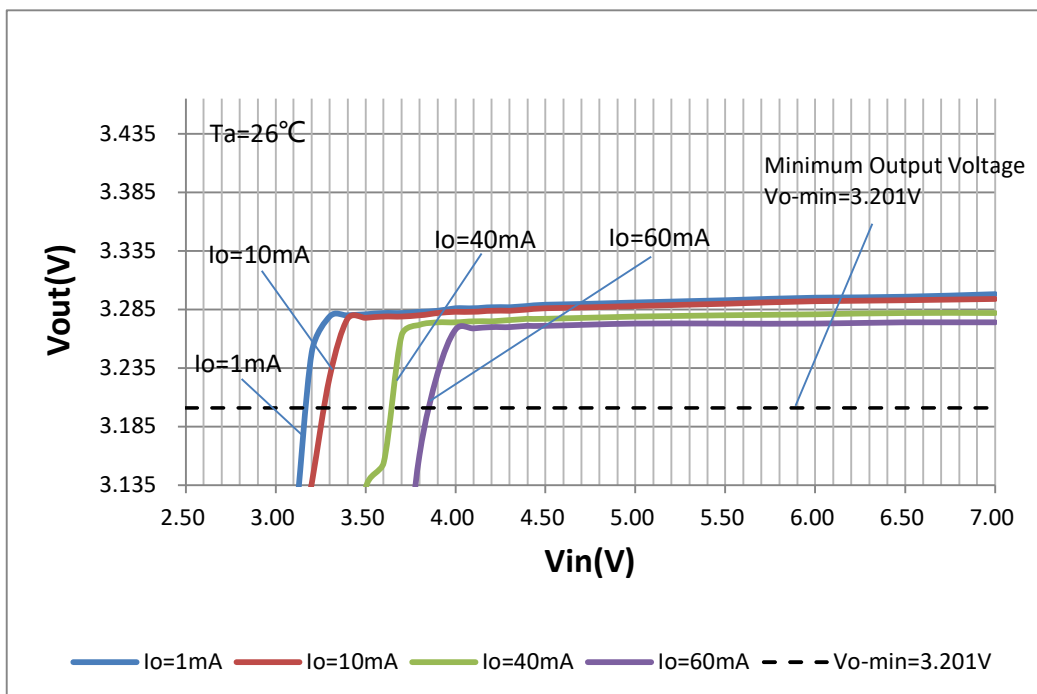


SS814C50

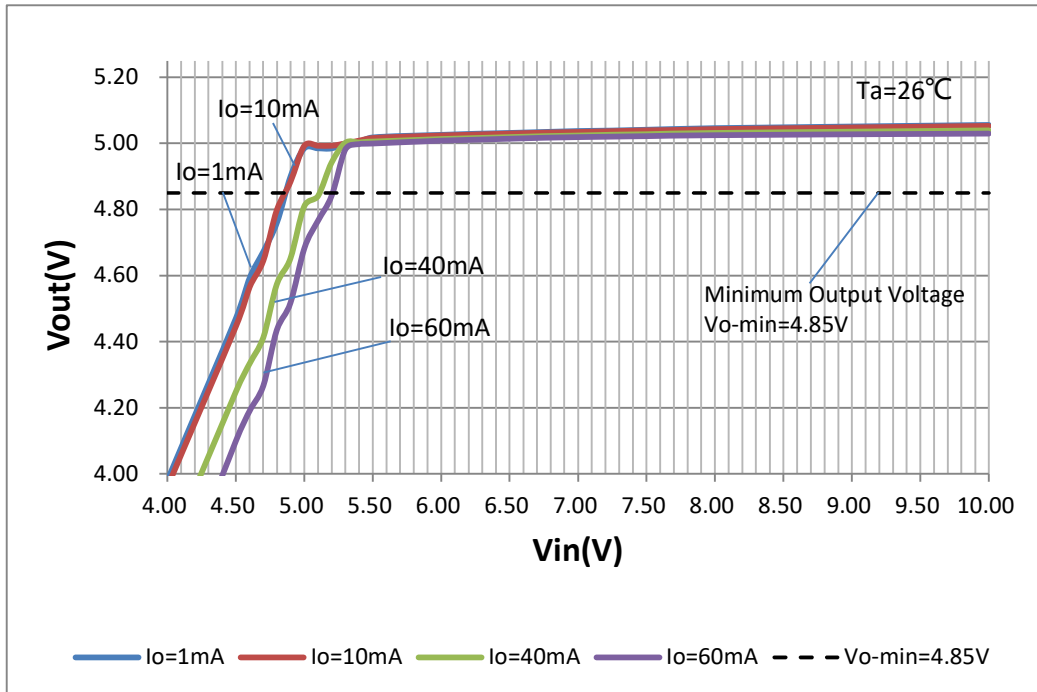


输出电压和输入电压

SS814C33

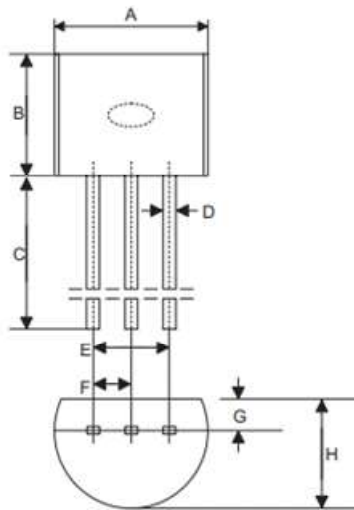


SS814C50



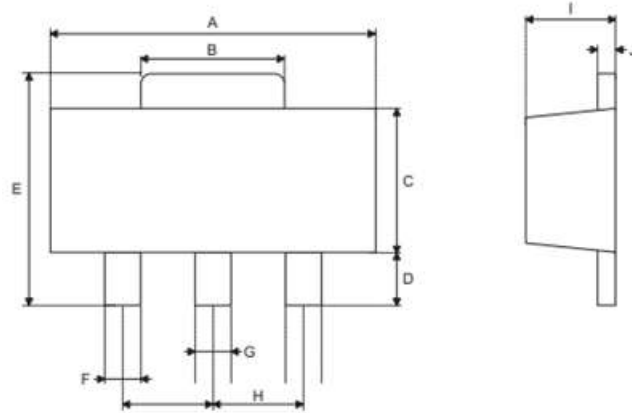
■ 封装信息:

① TO-92-3



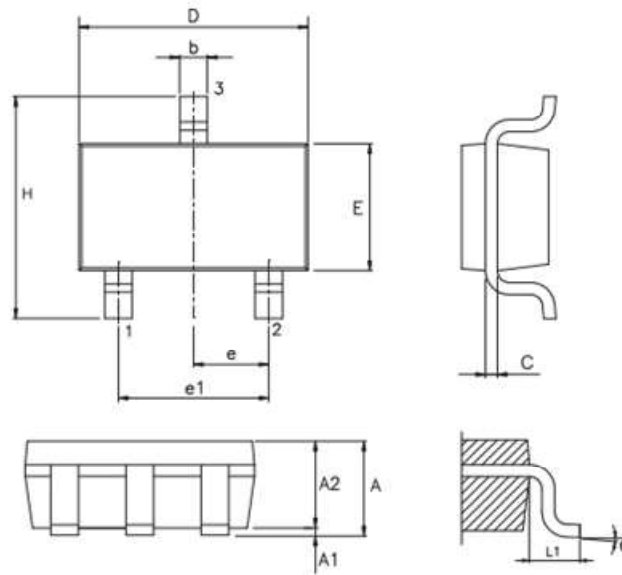
| 项目 | 尺寸(毫米) | | |
|----|--------|----------|------|
| | 最小 | 标准 | 最大 |
| A | 4.39 | 4.57 | 5.21 |
| B | 4.32 | - | 5.33 |
| C | 12.7 | 14.73 | - |
| D | - | 0.38 BSC | - |
| E | - | 2.54 BSC | - |
| F | - | 1.27 BSC | - |
| G | - | 0.89 BSC | - |
| H | 3.18 | 3.61 | 4.19 |

② SOT-89-3



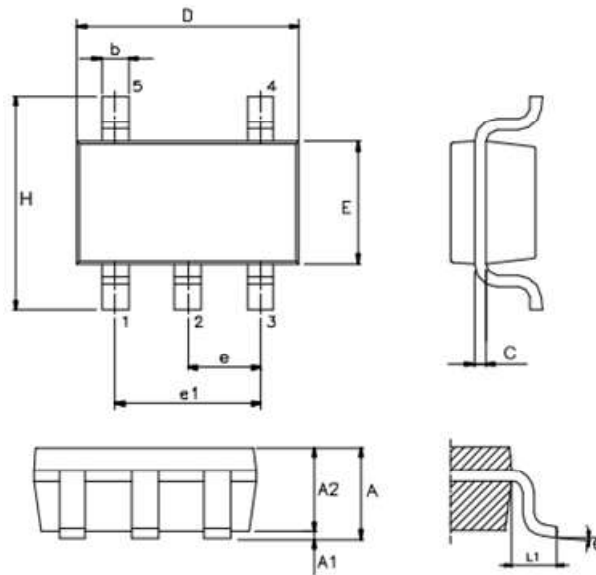
| 项目 | 尺寸(毫米) | | |
|----|--------|----------|------|
| | 最小 | Nom. | 最小 |
| A | 4.40 | - | 4.60 |
| B | 1.35 | - | 1.83 |
| C | 2.29 | - | 2.60 |
| D | 0.89 | - | 1.20 |
| E | 3.94 | - | 4.25 |
| F | 0.36 | - | 0.48 |
| G | 0.44 | - | 0.56 |
| H | - | 1.50 BSC | - |
| I | 1.40 | - | 1.60 |
| J | 0.35 | - | 0.44 |

③ SOT-23-3



| Symbol | Dimensions in mm | | |
|--------|------------------|----------|------|
| | Min. | Nom. | Max. |
| A | - | - | 1.45 |
| A1 | - | - | 0.15 |
| A2 | 0.9 | 1.15 | 1.3 |
| b | 0.3 | - | 0.5 |
| c | 0.08 | - | 0.22 |
| D | - | 2.90 BSC | - |
| E | - | 1.60 BSC | - |
| e | - | 0.95 BSC | - |
| e1 | - | 1.90 BSC | - |
| H | - | 2.80 BSC | - |
| L | - | 0.60 BSC | - |
| 0 | 0° | - | 8° |

④ SOT-23-5



| 项目 | 尺寸(毫米) | | |
|----|--------|----------|------|
| | 最小 | Nom. | 最小 |
| A | - | - | 1.45 |
| A1 | - | - | 0.15 |
| A2 | 0.9 | 1.15 | 1.3 |
| b | 0.3 | - | 0.5 |
| c | 0.08 | - | 0.22 |
| D | - | 2.90 BSC | - |
| E | - | 1.60 BSC | - |
| e | - | 0.95 BSC | - |
| e1 | - | 1.90 BSC | - |
| H | - | 2.80 BSC | - |
| L | - | 0.60 BSC | - |
| θ | 0° | - | 8° |