# High Output Current LDO Regulator , High PSRR , Low Dropout, ME6217 Series

## General Description

The ME6217 Series is a positive voltage regulator with a low dropout voltage,high output voltage accuracy,and low crrent consumption developed based on CMOS technology.

A built-in low on-resistance transistor provides a low dropout voltage and large output current, a built-in overcurrent protector prevents the load current from exceeding the current capacitance of the output transistor. An ON/OFF circuit ensures a long battery life. Compared with the voltage regulators using the conventional CMOS process, a larger variety of capacitors are available, including small ceramic capacitors.

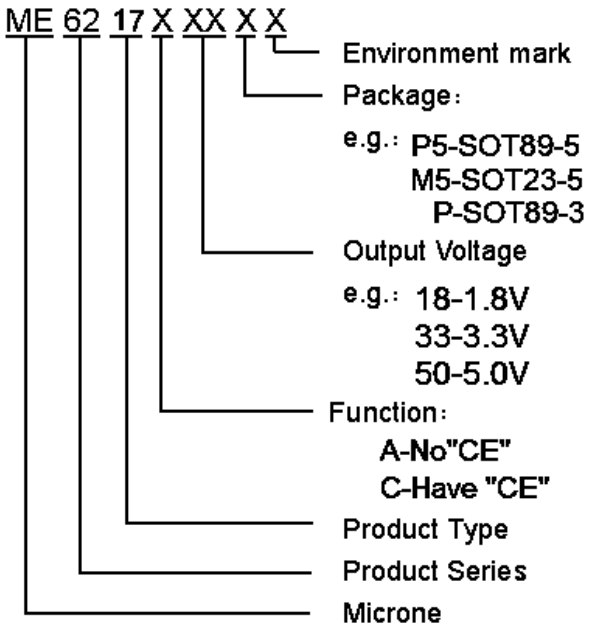
## Features

- Maximum Output Current: 800 mA
  （$V_{IN}$≥$V_{OUT}$(T)+1.0V）
- Dropout Voltage:
  100mV@ $I_{OUT}$ =300mA, $V_{OUT}$ =5.0V
- Operating Voltage Range: 2V～6.5V
- Output Voltage：1.5V~5.6V ，selectable in 0.1V steps
- Highly Accuracy: ±1％
- Low Current Consumption:
  During Operation: 100uA（TYP.）
  During Shutdown:0.1uA（TYP.）
- High Ripple Rejection: 65dB@1KHz (ME6217C50)
- Line Regulation: 0.05％（TYP.）
- Thermal Shutdown Protection：160℃
- Small Packages: SOT-89-5,SOT23-5，SOT89-3

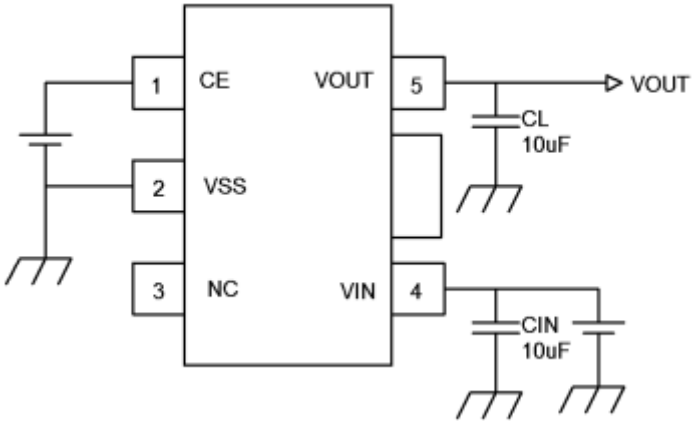
## Typical Application

- Power supply for DVD and CD-ROM drives
- Power supply for personal communication device
- Power supply for battery-powered devices
- Power supply for note PCs

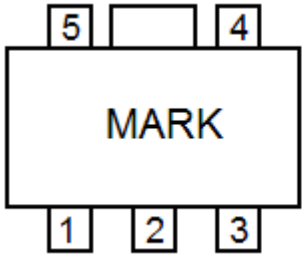
## Selection Guide



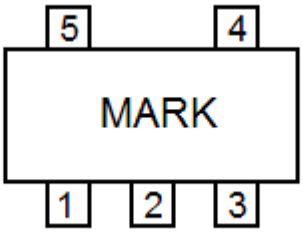

## Typical Application Circuit



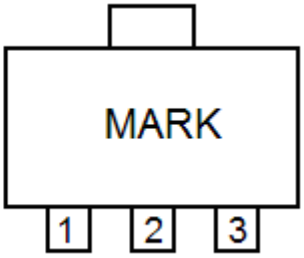
## Pin Configuration




SOT-89-5




SOT23-5




SOT89-3

## Pin Assignment

ME6217AXX

| Pin Number | Pin Name | Functions |
|---|---|---|
| SOT89-3 | | |
| 1 | $V_{SS}$ | Ground |
| 2 | $V_{IN}$ | Input Voltage |
| 3 | $V_{OUT}$ | Output Voltage |

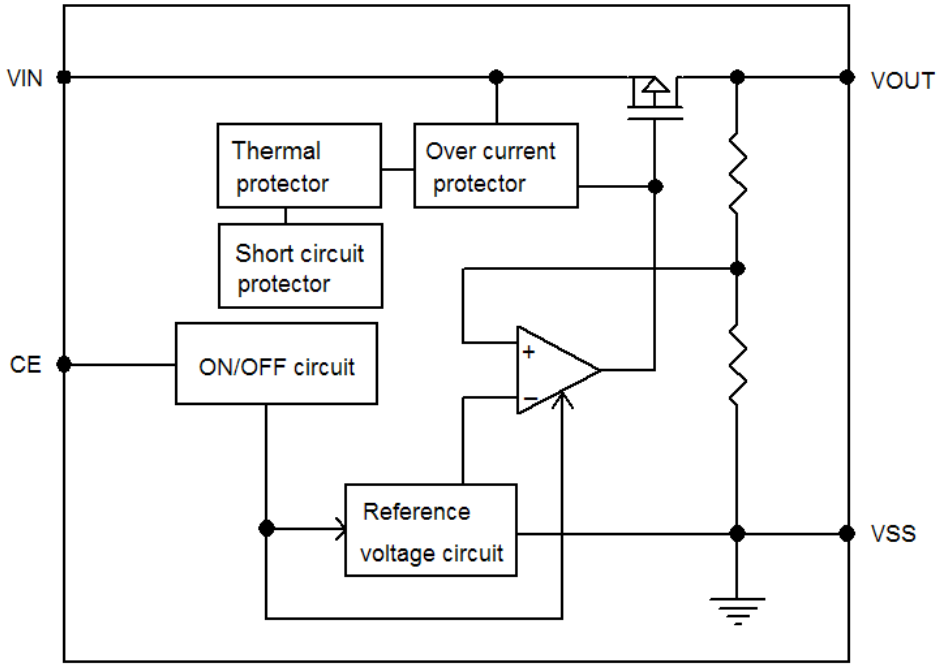
ME6217CXX

| Pin Number | | Pin Name | Functions |
|---|---|---|---|
| SOT89-5 | SOT23-5 | | |
| 1 | 3 | CE | ON / OFF Control |
| 2 | 2 | $V_{SS}$ | Ground |
| 3 | 4 | NC | No Connect |
| 4 | 1 | $V_{IN}$ | Input Voltage |
| 5 | 5 | $V_{OUT}$ | Output Voltage |

## Absolute Maximum Ratings

| Parameter | | Symbol | Ratings | Units |
|---|---|---|---|---|
| Input Voltage | | $V_{IN}$ | 7.0 | V |
| Output Current | | $I_{OUT}$ | 800 | mA |
| Output Voltage | | $V_{OUT}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| CE Pin Voltage | | $V_{CE}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| Power Dissipation | SOT-89-5 | $P_D$ | 1000 | mW |
| Operating Temperature Range | | $T_{OPR}$ | －40～＋85 | ℃ |
| Storage Temperature Range | | $T_{STG}$ | －40～＋125 | ℃ |

## Block Diagram



## Electrical Characteristics

($V_{IN}$= $V_{OUT}$ (T) +1.0V， $V_{CE}$ = $V_{IN}$， $C_{IN}$=$C_L$=10uF， Ta=25°C ,unless otherwise noted)

| Parameter | Symbol | Conditions | | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Output Voltage | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=100mA | | X 0.99 | $V_{OUT}$ (T) (Note 1) | X 1.01 | V |
| Input voltage | $V_{IN}$ | - | | 2.0 | - | 6.5 | V |
| Maximum Output Current | $I_{OUTMAX}$ (Note 4) | $V_{IN}$≥ $V_{OUT}$ (T) +1.0V | | - | 800 | - | mA |
| Load Regulation | $\Delta V_{OUT}$ | 1mA≤$I_{OUT}$≤300mA | | - | 10 | 50 | mV |
| Line Regulation | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =100mA<br>$V_{OUT}$ (T) +0.5V ≤$V_{IN}$≤6.5V | | - | 0.1 | 0.3 | %/V |
| Dropout Voltage | $V_{DIF}$ (Note 3) | $I_{OUT}$ =300mA | 1.8V≤$V_{OUT}$ (T)≤2.0V | - | 200 | 260 | mV |
| | | | 3.0V≤$V_{OUT}$ (T)≤5.5V | - | 100 | 180 | |
| Current consumption during operation | $I_{SS1}$ | CE pin = ON,<br>no load | | - | 100 | 130 | μA |
| Current consumption during shutdown | $I_{SS2}$ | CE pin = OFF,<br>no load | | - | 0.1 | 1.0 | μA |
| CE “High” Voltage | $V_{CEH}$ | Start up,$R_L$=1.0KΩ | | 1.5 | - | - | V |
| CE “Low” Voltage | $V_{CEL}$ | Shut down, $R_L$=1.0KΩ | | - | - | 0.3 | V |
| CE “High” Current | $I_{CEH}$ | $V_{IN}$=6.5V,$V_{CE}$=6.5V | | -0.1 | - | 0.1 | μA |
| CE “Low” Current | $I_{CEL}$ | $V_{IN}$=6.5V,$V_{CE}$=0V | | -0.1 | - | 0.1 | μA |
| Ripple Rejection Rate | \|RR\| | $V_{IN}$=6V ,<br>△Vrip=0.5Vrms,<br>$I_{OUT}$=100mA,<br>f=1kHz | 1.8V≤$V_{OUT}$ (T)≤2.0V | - | 70 | - | dB |
| | | | 3.0V≤$V_{OUT}$ (T)≤5.5V | - | 65 | - | |
| Short-circuit current | $I_{short}$ | CE pin = ON,<br>VOUT = 0 V | | - | 350 | - | mA |
| Thermal Shutdown Protection | $T_{sd}$ | $I_{OUT}$=1mA,$V_{IN}$= $V_{OUT}$+1V | | | 160 | | ℃ |

Note ：

1. $V_{OUT}$ (T) ： Specified Output Voltage

2.$V_{OUT}$ (E) ： Effective Output Voltage ( Ie. The output voltage when “$V_{OUT}$ (T)+1.0V”is provided at the Vin pin while maintaining a certain Iout value.)

3.$V_{DIF}$： $V_{IN1}$ –$V_{OUT}$ (E)’

$V_{IN1}$ ： The input voltage when $V_{OUT}$(E)’ appears as input voltage is gradually decreased.

$V_{OUT}$ (E)’=A voltage equal to 98% of the output voltage whenever an amply stabilized Iout {$V_{OUT}$ (T)+1.0V} is input.

4. $I_{OUTMAX}$： Due to restrictions on the package power dissipation, this value may not be satisfied. Attention should be paid to the power dissipation of the package when the output current is large.This specification is guaranteed by design.

## Operation

1. Basic operation

Figure 1 shows the block diagram of the ME6217 Series.

The error amplifier compares the reference voltage (Vref) with Vfb, which is the output voltage resistance-divided by feedback resistors Rs and Rf. It supplies the output transistor with the gate voltage necessary to ensure a certain output voltage free of any fluctuations of input voltage and temperature.

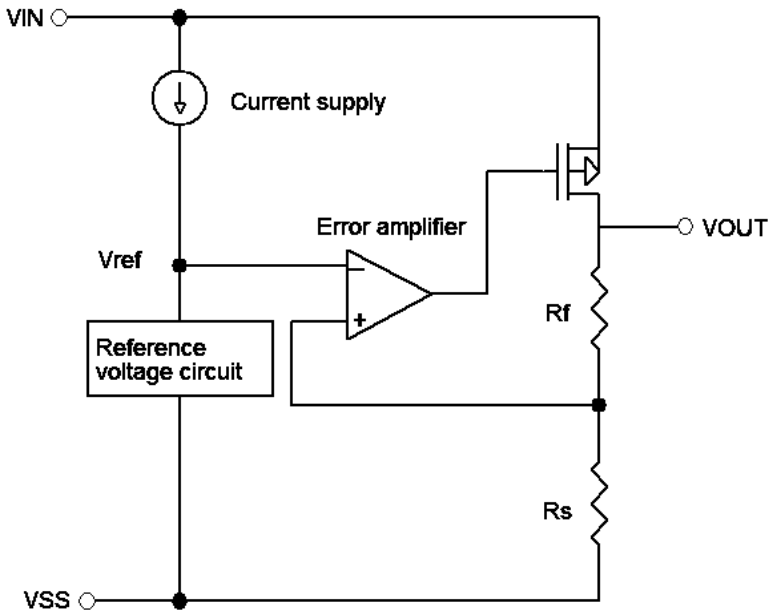



Figure 1

2. Output transistor

The ME6217 Series uses a low on-resistance P-channel MOS FET as the output transistor.Be sure that VOUT does not exceed VIN + 0.3 V to prevent the voltage regulator from being damaged due to inverse current flowing from VOUT pin through a parasitic diode to VIN pin.

3. Shutdown pin (CE pin)

This pin starts and stops the regulator.

When the CE pin is set to the shutdown level, the operation of all internal circuits stops, and the built-in P-channel MOS FET output transistor between the VIN pin and VOUT pin is turned off to substantially reduce the current consumption. The VOUT pin becomes the VSS level due to the internally divided resistance of several hundreds kΩ between the VOUT pin and VSS pin. Since the CE pin is neither pulled down nor pulled up internally, do not use it in the floating state. In addition, note that the current consumption increases if a voltage of 0.3 V to VIN − 0.3 V is applied to the CE pin.

Table 1

| CE Pin | Internal Circuits | VOUT Pin Voltage | Current Consumption |
|---|---|---|---|
| “H” Power on | Operating | Set value | $I_{SS1}$ |
| “L” Power off | Stopped | Vss level | $I_{SS2}$ |

## Precautions

1. Wiring patterns for the VIN, VOUT and GND pins should be designed so that the impedance is low.When mounting an output capacitor between the VOUT and VSS pins (CL) and a capacitor for stabilizing the input between VIN and VSS pins (CIN), the distance from the capacitors to these pins should be as short as possible.
2.Note that the output voltage may increase when a series regulator is used at low load current (1.0 mA or less).
3.Generally a series regulator may cause oscillation, depending on the selection of external parts. The following conditions are recommended for this IC. However, be sure to perform sufficient evaluation under the actual usage conditions for selection, including evaluation of temperature characteristics.

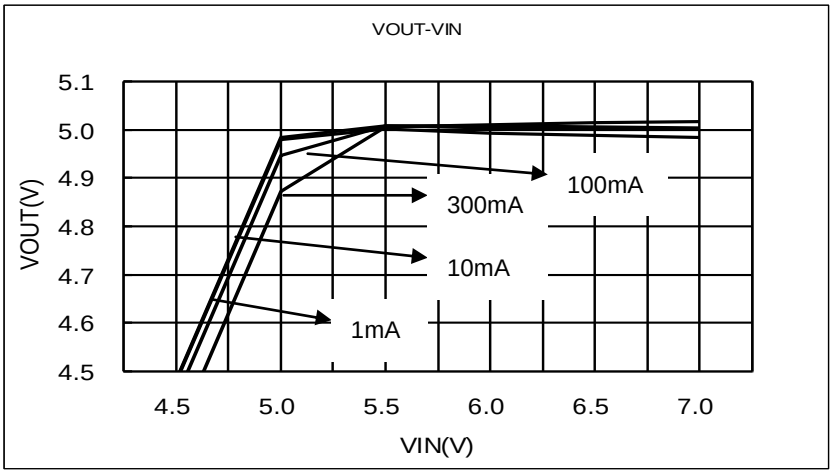
Input capacitor (CIN): 4.7 µF or more
Output capacitor (CL): 4.7 µF or more
Equivalent series resistance (ESR): 0.5 Ω or less

4. The voltage regulator may oscillate when the impedance of the power supply is high and the input capacitor is small or an input capacitor is not connected.
5.The application conditions for the input voltage, output voltage, and load current should not exceed the package power dissipation.
6. Do not apply an electrostatic discharge to this IC that exceeds the performance ratings of the built-in electrostatic protection circuit.
7. SII claims no responsibility for any disputes arising out of or in connection with any infringement by products including this IC of patents owned by a third party.

## Type Characteristics

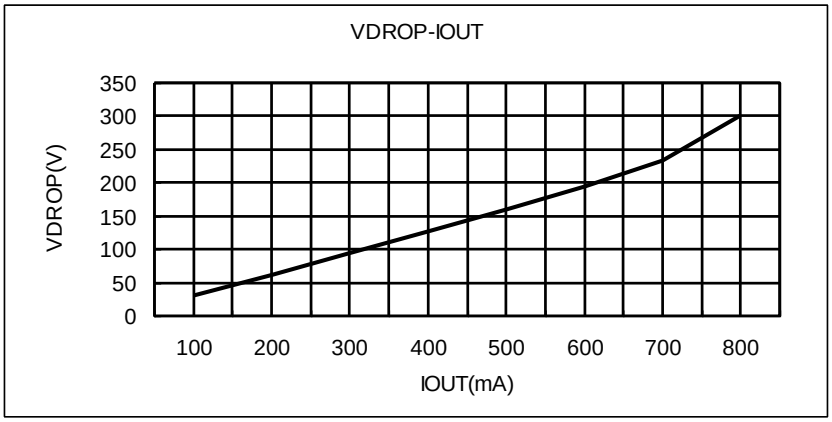
（1） Input VoltageVS.Output Voltage（Ta = 25 °C）

ME6217C50P5G



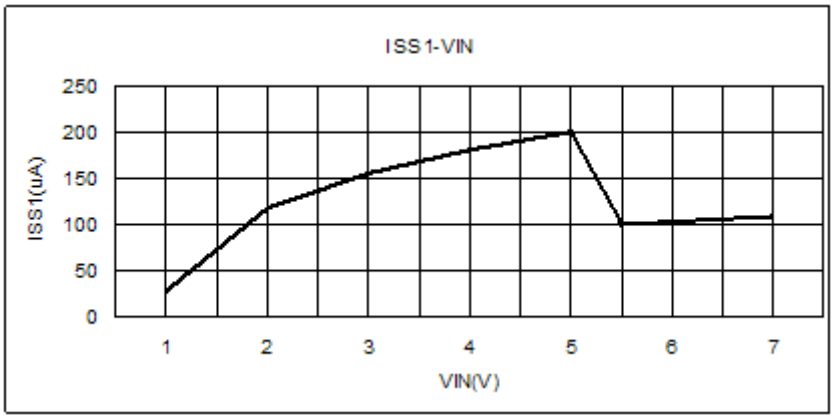

（2） Output Current VS.Droput Voltage（$V_{IN}$= $V_{OUT}$ (T) +1.0V,Ta = 25 °C）

ME6217C50P5G



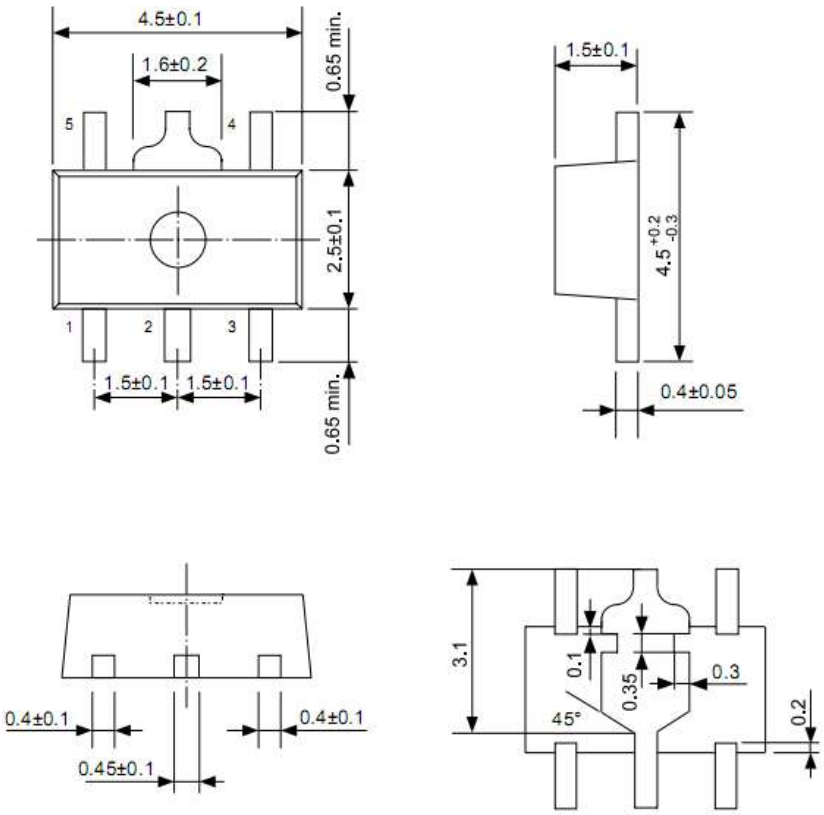

（3）Input Voltage VS. Current Consumption（Ta = 25 °C）

ME6217C50P5G

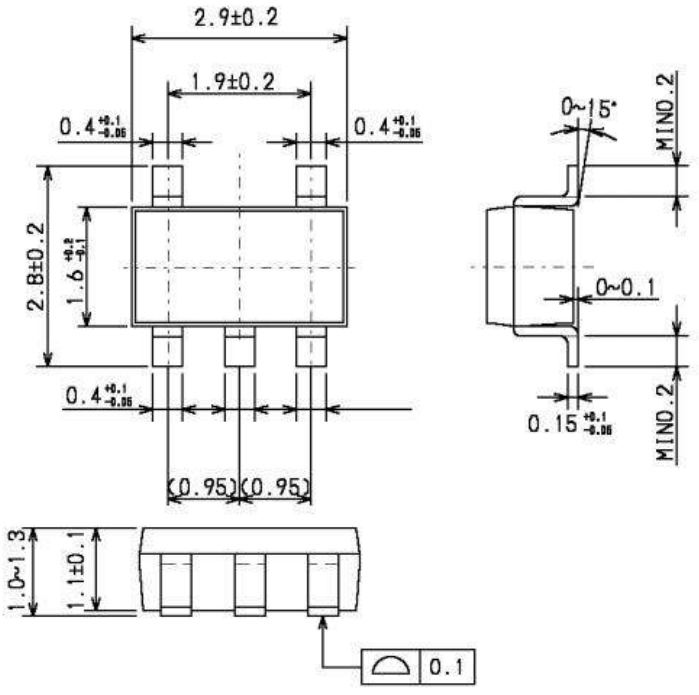


**Package Information:**

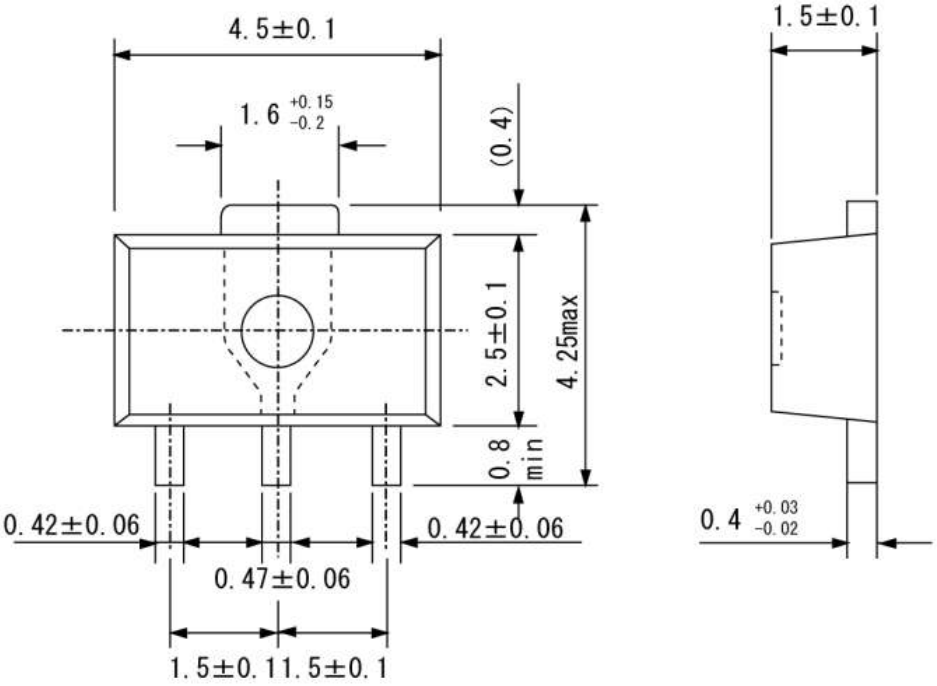
SOT89-5




SOT23-5



SOT89-3


4.5±0.1
1.6 +0.15 -0.2
(0.4)
2.5±0.1
4.25max
0.8 min
0.42±0.06
0.42±0.06
0.47±0.06
1.5±0.1
1.5±0.1
0.4 +0.03 -0.02

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# 150 mA, high input voltage LDO Linear Regulators ME6208 Series

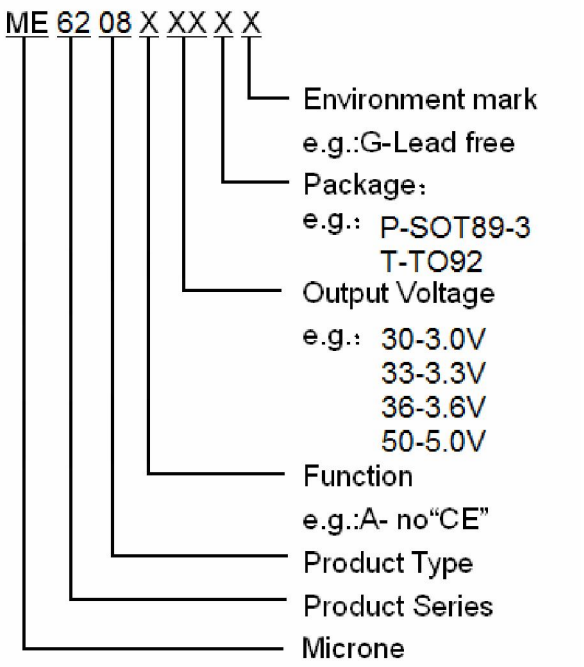
## General Description

ME6208 series are low-dropout linear voltage regulators with a built-in voltage reference module, error correction module and phase compensation module. ME6208 series are based on the CMOS process and allow high voltage input with low quiescent current. This series has the function of internal feedback resistor setting from 3V to 5V. The output accuracy is ± 2%.

## Features

- High output accuracy：± 2%
- Input voltage：up to 18 V
- Output voltage：2.0 V ~ 12.0V
- Ultra-low quiescent current (Typ. = 3 μ A)
- Output Current：Iout = 200mA (When Vin = 7V and Vout =5V)
- Importation good stability：Typ. 0.05% / V
- Low temperature coefficient
- Ceramic capacitor can be used
- Package：SOT89-3、TO92

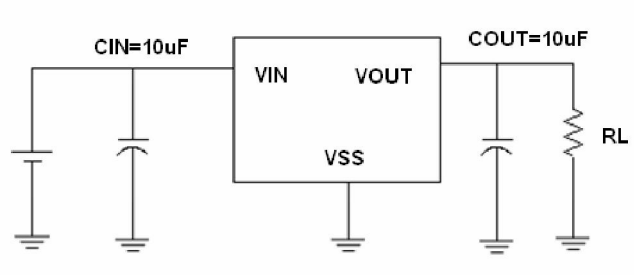
## Selection Guide



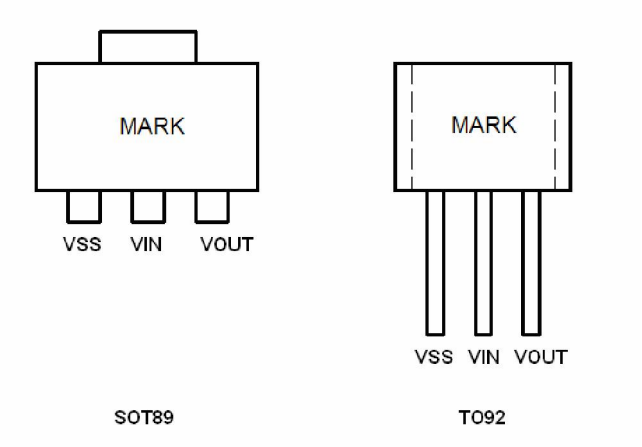

## Typical Application

- Electronic weighbridge
- SCM
- Phones, cordless phones
- Security Products
- Water meters, power meters

## Typical Application Circuit



## Pin Configuration




## Pin Assignment

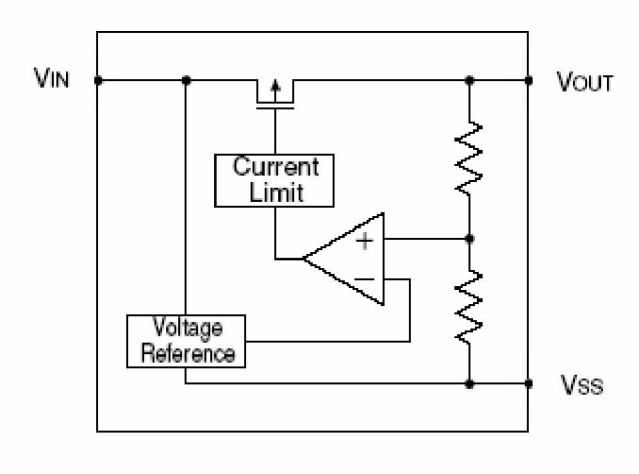
ME6208AXX

| Pin Number | | Pin Name | Functions |
|---|---|---|---|
| SOT89-3 | TO92 | | |
| 1 | 1 | $V_{SS}$ | Ground |
| 2 | 2 | $V_{IN}$ | Power Input |
| 3 | 3 | $V_{OUT}$ | Output |

## Absolute Maximum Ratings

| Parameter | | Symbol | Ratings | Units |
|---|---|---|---|---|
| Input Voltage | | $V_{IN}$ | 18 | V |
| Output Current | | $I_{OUT}$ | 250 | mA |
| Output Voltage | | $V_{OUT}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| Power Dissipation | SOT89-3 | $P_D$ | 500 | mW |
| | TO92 | | 500 | mW |
| Operating Temperature Range | | $T_{OPR}$ | －25～＋85 | ℃ |
| Storage Temperature Range | | $T_{STG}$ | －40～＋125 | ℃ |
| Lead Temperature | | | 260℃，10sec | |

## Block Diagram




## Electrical Characteristics

### ME6208A

($V_{IN}$= $V_{OUT}$+2.0V，$C_{IN}$=$C_L$=10uF，Ta=25°C, unless otherwise noted)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|
| Output Voltage | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=40mA, $V_{IN}$=Vout+2V | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| Input Voltage | $V_{IN}$ | | | | 18 | V |
| Maximum Output Voltage | $I_{OUT}$_max | $V_{IN}$=Vout+2V | 150 | | | mA |
| Load Regulation | $\Delta V_{OUT}$ | $V_{IN}$=Vout+2V, 1mA≤$I_{OUT}$≤100mA | | 10 | | mV |
| Dropout Voltage (Note 3) | $V_{dif1}$ | $I_{OUT}$ =50mA | | 250 | | mV |
| | $V_{dif2}$ | $I_{OUT}$ =100mA | | 500 | | mV |
| | $V_{dif3}$ | $I_{OUT}$ =200mA | | 1000 | | mV |
| Supply Current | $I_{SS}$ | $V_{IN}$=Vout+2V | | 3 | | μA |
| Line Regulations | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \times V_{OUT}}$ | $I_{OUT}$ =40mA Vout+2V ≤$V_{IN}$≤18V | | 0.05 | | %/V |

Note ：

1. $V_{OUT}$ (T) ：Specified Output Voltage

2.$V_{OUT}$ (E) ：Effective Output Voltage ( ie. The output voltage when “$V_{OUT}$ (T)+2.0V”is provided at the Vin pin while maintaining a certain Iout value.)

3.$V_{DIF}$：$V_{IN1}$ –$V_{OUT}$ (E)’

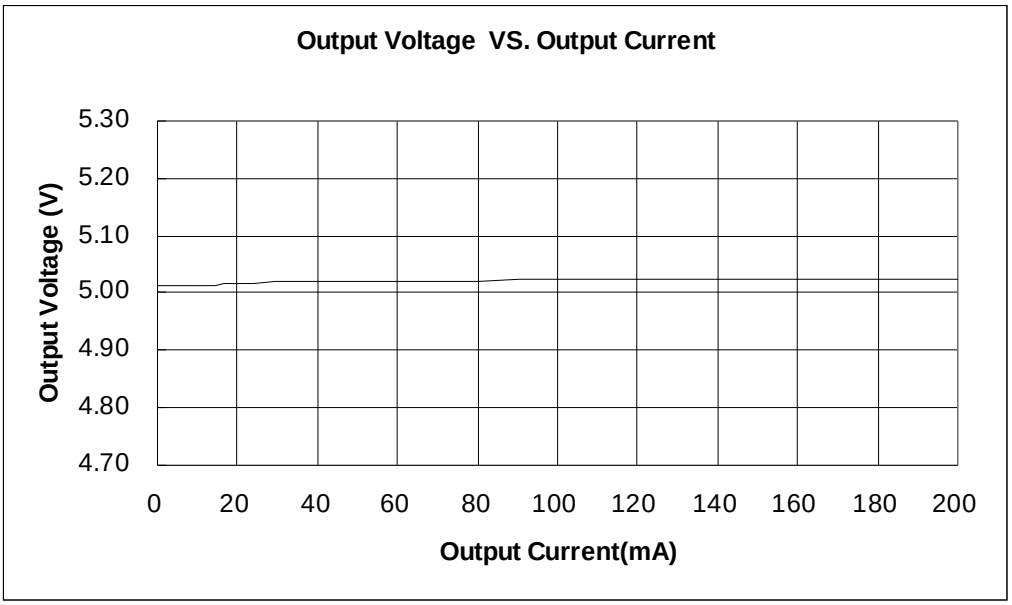
$V_{IN1}$ ：The input voltage when $V_{OUT}$(E)’ appears as input voltage is gradually decreased.

$V_{OUT}$ (E)’=A voltage equal to 98% of the output voltage whenever an amply stabilized Iout and {$V_{OUT}$ (T)+2.0V} is input.

## Type Characteristics

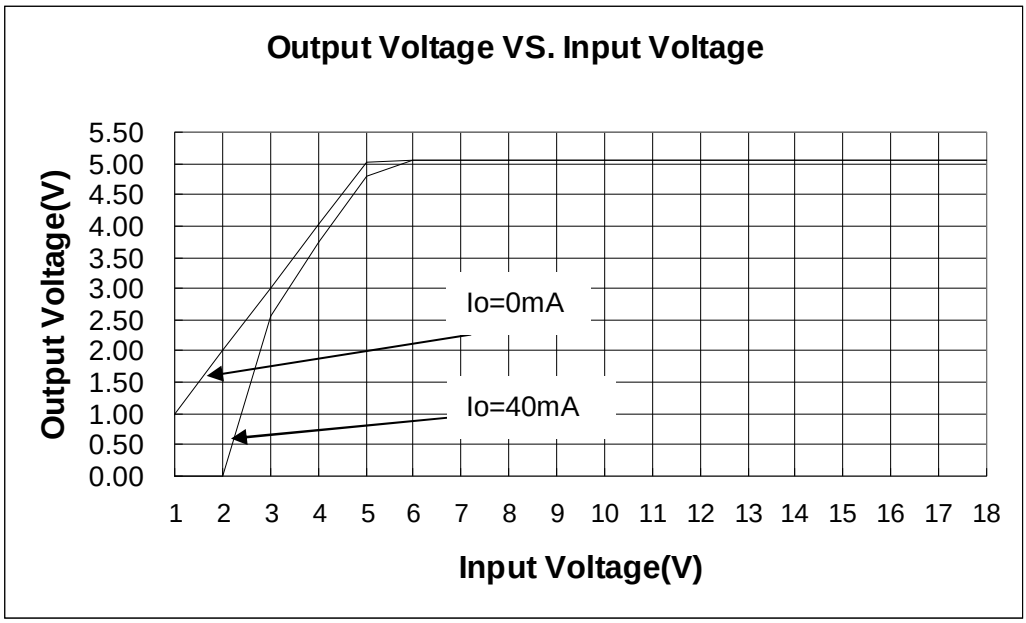
（1）Output CurrentVS.Output Voltage（ **Ta = 25 °C**）

ME6208A50



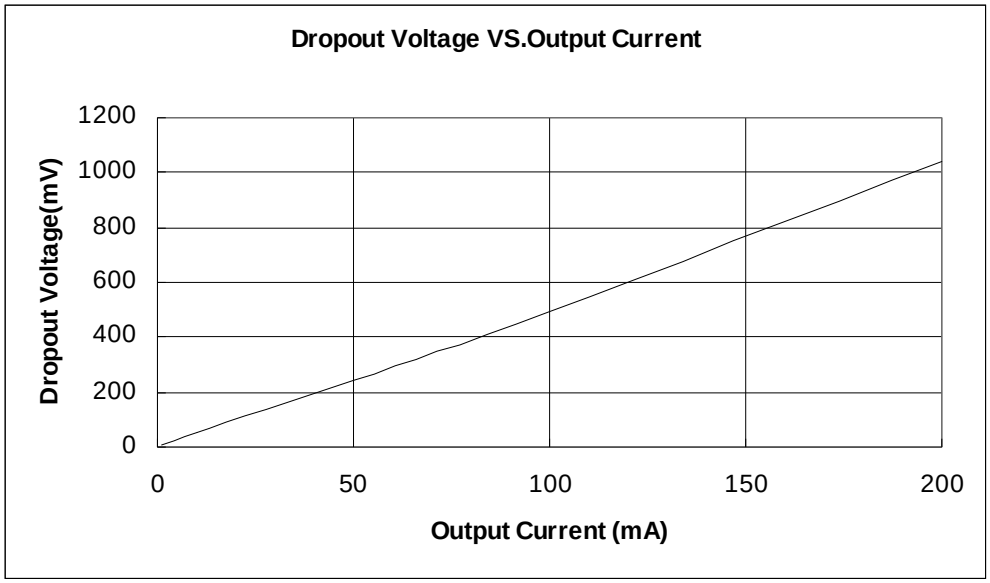

（2）Input VoltageVS.Output Voltage（**Ta = 25 °C**）

ME6208A50



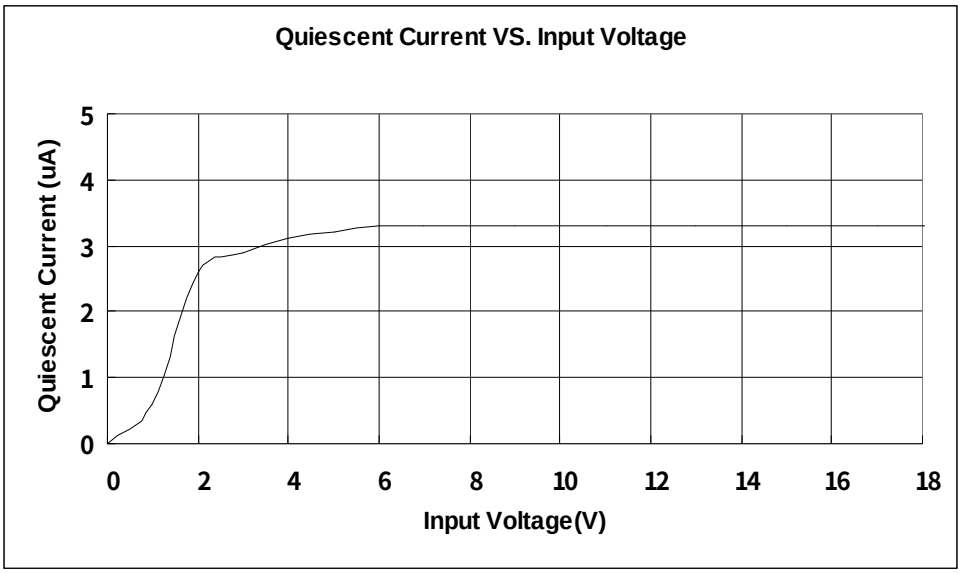
（3）Output Current VS.Droput Voltage（ **Ta = 25 °C**）

ME6208A50



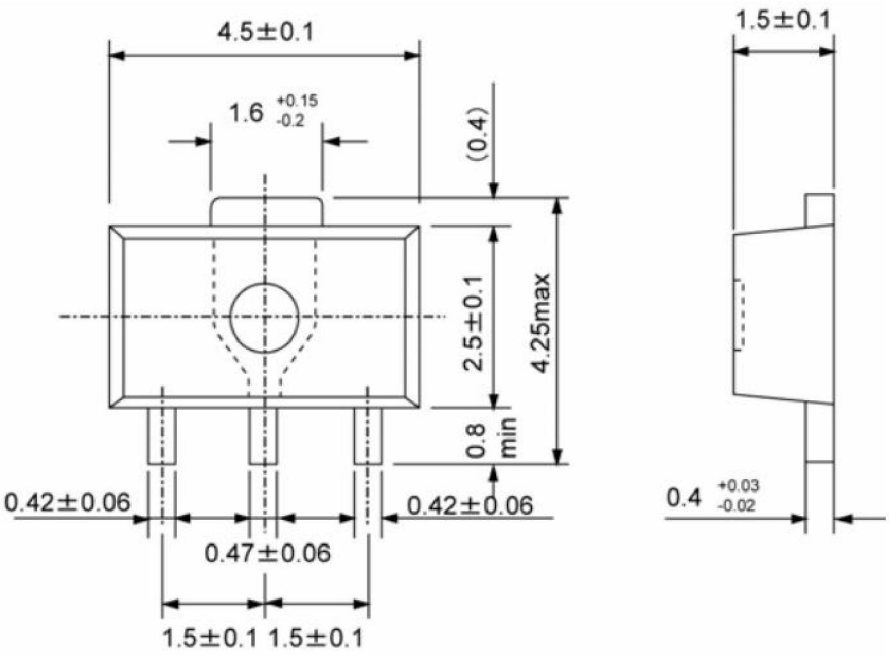

（4）Input Voltage VS. Supply Current（**Ta = 25 °C**）

ME6208A50

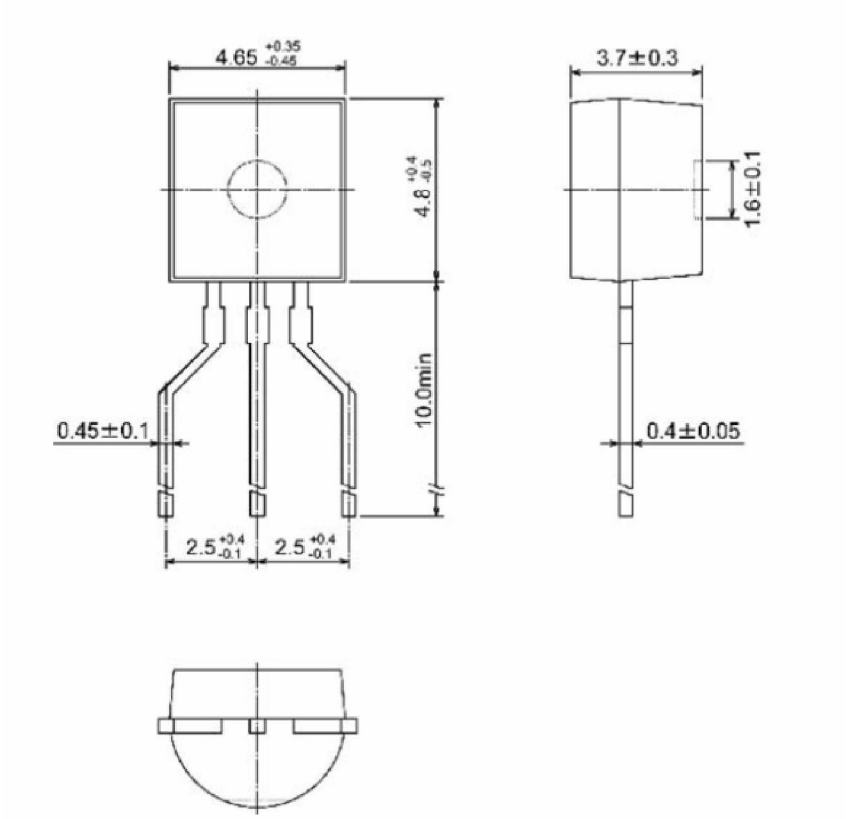


## Packaging Information

● SOT89-3




● TO-92



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# High Output Current LDO Regulator , High PSRR , Low Dropout, ME6207 Series

## General Description

The ME6207 Series is a positive voltage regulator with a low dropout voltage,high output voltage accuracy,and low crrent consumption developed based on CMOS technology.

A built-in low on-resistance transistor provides a low dropout voltage and large output current, a built-in overcurrent protector prevents the load current from exceeding the current capacitance of the output transistor. An ON/OFF circuit ensures a long battery life. Compared with the voltage regulators using the conventional CMOS process, a larger variety of capacitors are available, including small ceramic capacitors.

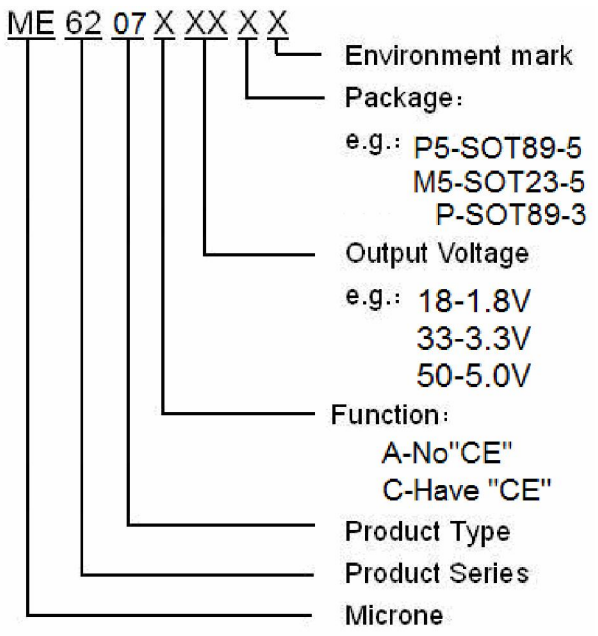
## Features

- Maximum Output Current: 800 mA ($V_{IN} \geq V_{OUT}(T)+1.0V$)
- Dropout Voltage: 100mV@ $I_{OUT}$ =300mA,$V_{OUT}$ =5.0V
- Operating Voltage Range: 2V～6.5V
- Highly Accuracy: ±1%
- Low Current Consumption: During Operation: 82uA（TYP.） During Shutdown:0.1uA（TYP.）
- High Ripple Rejection: 65dB@1KHz (ME6207C50)
- Line Regulation: 0.05%（TYP.）
- Small Packages: SOT-89-5,SOT23-5，SOT89-3

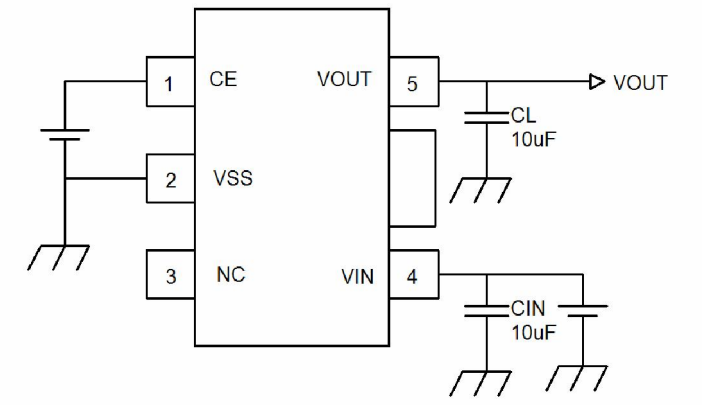
## Typical Application

- Power supply for DVD and CD-ROM drives
- Power supply for personal communication device
- Power supply for battery-powered devices
- Power supply for note PCs

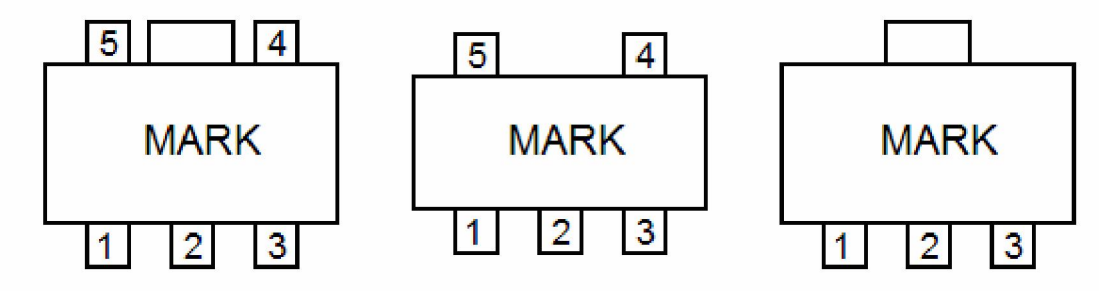
## Selection Guide




## Typical Application Circuit



## Pin Configuration




**SOT-89-5** **SOT23-5** **SOT89-3**

## Pin Assignment

ME6207AXX

| Pin Number | Pin Name | Functions |
|---|---|---|
| SOT89-3 | | |
| 1 | $V_{SS}$ | Ground |
| 2 | $V_{IN}$ | Input Voltage |
| 3 | $V_{OUT}$ | Output Voltage |

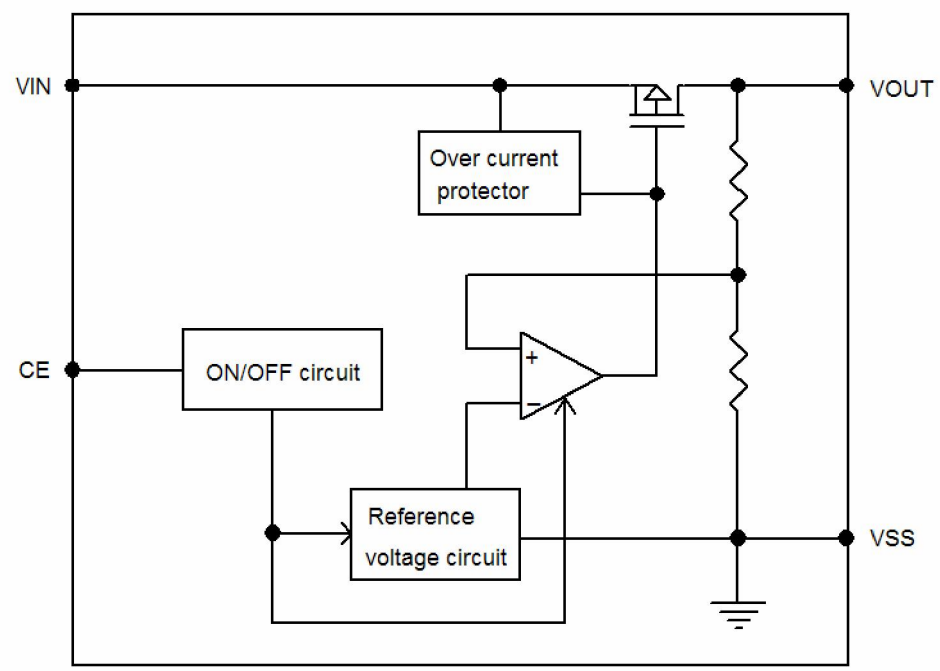
ME6207CXX

| Pin Number | | Pin Name | Functions |
|---|---|---|---|
| SOT-89-5 | SOT23-5 | | |
| 1 | 3 | CE | ON / OFF Control |
| 2 | 2 | $V_{SS}$ | Ground |
| 3 | 4 | NC | No Connect |
| 4 | 1 | $V_{IN}$ | Input Voltage |
| 5 | 5 | $V_{OUT}$ | Output Voltage |

## Absolute Maximum Ratings

| Parameter | | Symbol | Ratings | Units |
|---|---|---|---|---|
| Input Voltage | | $V_{IN}$ | 7.0 | V |
| Output Current | | $I_{OUT}$ | 800 | mA |
| Output Voltage | | $V_{OUT}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| CE Pin Voltage | | $V_{CE}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| Power Dissipation | SOT-89-5 | $P_D$ | 1000 | mW |
| Operating Temperature Range | | $T_{OPR}$ | −40～+85 | ℃ |
| Storage Temperature Range | | $T_{STG}$ | −40～+125 | ℃ |

## Block Diagram



## Electrical Characteristics

($V_{IN}$= $V_{OUT}$ (T) +1.0V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=10uF，Ta=25°C ,unless otherwise noted)

| Parameter | Symbol | Conditions | | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|---|---|
| Output Voltage | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=100mA | | X 0.99 | $V_{OUT}$ (T) (Note 1) | X 1.01 | V |
| Input voltage | $V_{IN}$ | - | | 2.0 | - | 6.5 | V |
| Maximum Output Current | $I_{OUTMAX}$ (Note 4) | $V_{IN}$≥ $V_{OUT}$ (T) +1.0V | | - | 800 | - | mA |
| Load Regulation | **Δ**$V_{OUT}$ | 1mA≤$I_{OUT}$≤300mA | | - | 10 | 100 | mV |
| Line Regulation | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =100mA<br>$V_{OUT}$ (T) +0.5V ≤$V_{IN}$≤6.5V | | - | 0.05 | 0.3 | %/V |
| Dropout Voltage | $V_{DIF}$ (Note 3) | $I_{OUT}$ =300mA | 1.8V≤$V_{OUT}$ (T)≤2.0V | - | 200 | 260 | mV |
| | | | 3.0V≤$V_{OUT}$ (T)≤5.5V | - | 100 | 180 | |
| Current consumption during operation | $I_{SS1}$ | CE pin = ON,<br>no load | | - | 82 | 160 | μA |
| Current consumption during shutdown | $I_{SS2}$ | CE pin = OFF,<br>no load | | - | 0.1 | 1.0 | μA |
| CE “High” Voltage | $V_{CEH}$ | Start up,$R_L$=1.0KΩ | | 1.5 | - | - | V |
| CE “Low” Voltage | $V_{CEL}$ | Shut down, $R_L$=1.0KΩ | | - | - | 0.3 | V |
| CE “High” Current | $I_{CEH}$ | $V_{IN}$=6.5V,$V_{CE}$=6.5V | | -0.1 | - | 0.1 | μA |
| CE “Low” Current | $I_{CEL}$ | $V_{IN}$=6.5V,$V_{CE}$=0V | | -0.1 | - | 0.1 | μA |
| Ripple Rejection Rate | \|RR\| | $V_{IN}$=6V ,<br>△Vrip=0.5Vrms,<br>$I_{OUT}$=100mA,<br>f=1kHz | 1.8V≤$V_{OUT}$ (T)≤2.0V | - | 70 | - | dB |
| | | | 3.0V≤$V_{OUT}$ (T)≤5.5V | - | 65 | - | |
| Short-circuit current | $I_{short}$ | CE pin = ON,<br>VOUT = 0 V | | - | 350 | - | mA |

Note ：

1. $V_{OUT}$ (T) ：Specified Output Voltage

2.$V_{OUT}$ (E) ：Effective Output Voltage ( Ie. The output voltage when “$V_{OUT}$ (T)+1.0V”is provided at the Vin pin while maintaining a certain Iout value.)

3.$V_{DIF}$：$V_{IN1}$ –$V_{OUT}$ (E)’

$V_{IN1}$ ：The input voltage when $V_{OUT}$(E)’ appears as input voltage is gradually decreased.

$V_{OUT}$ (E)’=A voltage equal to 98% of the output voltage whenever an amply stabilized Iout {$V_{OUT}$ (T)+1.0V} is input.

4. $I_{OUTMAX}$：Due to restrictions on the package power dissipation, this value may not be satisfied. Attention should be paid to the power dissipation of the package when the output current is large.This specification is guaranteed by design.

## Operation

1. Basic operation

Figure 1 shows the block diagram of the ME6207 Series.

The error amplifier compares the reference voltage (Vref) with Vfb, which is the output voltage resistance-divided by feedback resistors Rs and Rf. It supplies the output transistor with the gate voltage necessary to ensure a certain output voltage free of any fluctuations of input voltage and temperature.

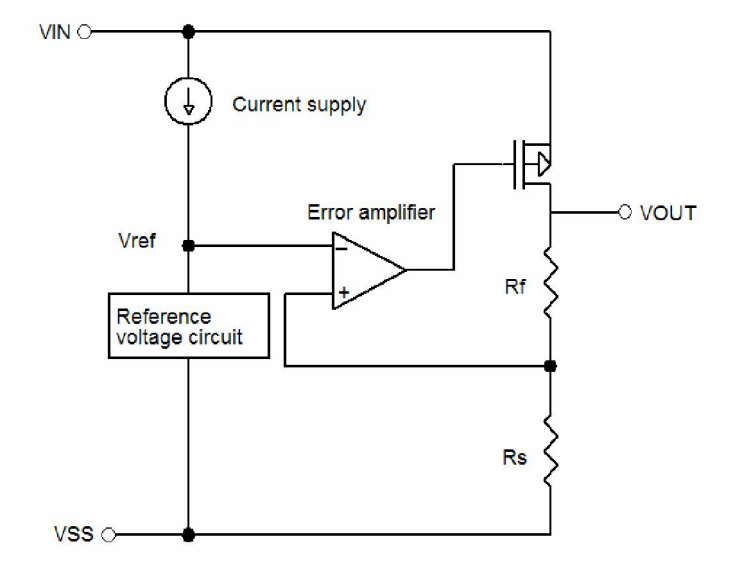



Figure 1

2. Output transistor

The ME6207 Series uses a low on-resistance P-channel MOS FET as the output transistor.Be sure that VOUT does not exceed VIN + 0.3 V to prevent the voltage regulator from being damaged due to inverse current flowing from VOUT pin through a parasitic diode to VIN pin.

3. Shutdown pin (CE pin)

This pin starts and stops the regulator.

When the CE pin is set to the shutdown level, the operation of all internal circuits stops, and the built-in P-channel MOS FET output transistor between the VIN pin and VOUT pin is turned off to substantially reduce the current consumption. The VOUT pin becomes the VSS level due to the internally divided resistance of several hundreds kΩ between the VOUT pin and VSS pin. Since the CE pin is neither pulled down nor pulled up internally, do not use it in the floating state. In addition, note that the current consumption increases if a voltage of 0.3 V to VIN − 0.3 V is applied to the CE pin.

Table 1

| CE Pin | Internal Circuits | VOUT Pin Voltage | Current Consumption |
|---|---|---|---|
| “H” Power on | Operating | Set value | $I_{SS1}$ |
| “L” Power off | Stopped | Vss level | $I_{SS2}$ |

## Precautions

1. Wiring patterns for the VIN, VOUT and GND pins should be designed so that the impedance is low.When mounting an output capacitor between the VOUT and VSS pins (CL) and a capacitor for stabilizing the input between VIN and VSS pins (CIN), the distance from the capacitors to these pins should be as short as possible.
2.Note that the output voltage may increase when a series regulator is used at low load current (1.0 mA or less).
3.Generally a series regulator may cause oscillation, depending on the selection of external parts. The following conditions are recommended for this IC. However, be sure to perform sufficient evaluation under the actual usage conditions for selection, including evaluation of temperature characteristics.

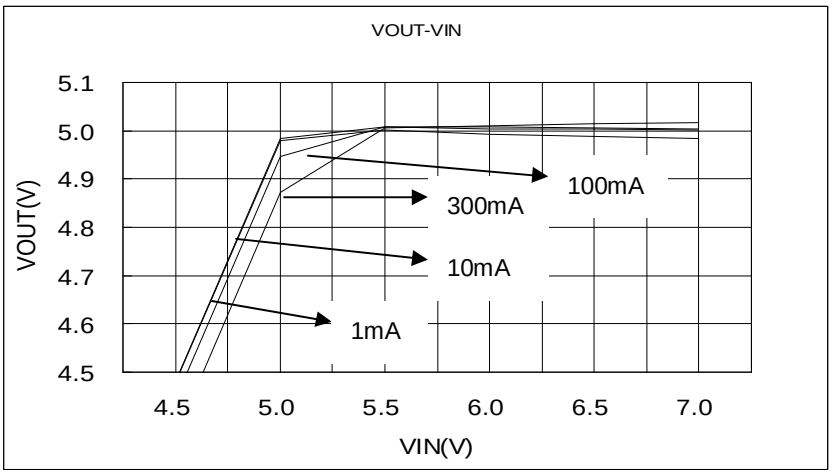
Input capacitor (CIN): 4.7 µF or more
Output capacitor (CL): 4.7 µF or more
Equivalent series resistance (ESR): 0.5 Ω or less

4. The voltage regulator may oscillate when the impedance of the power supply is high and the input capacitor is small or an input capacitor is not connected.
5.The application conditions for the input voltage, output voltage, and load current should not exceed the package power dissipation.
6. Do not apply an electrostatic discharge to this IC that exceeds the performance ratings of the built-in electrostatic protection circuit.
7. SII claims no responsibility for any disputes arising out of or in connection with any infringement by products including this IC of patents owned by a third party.

## Type Characteristics

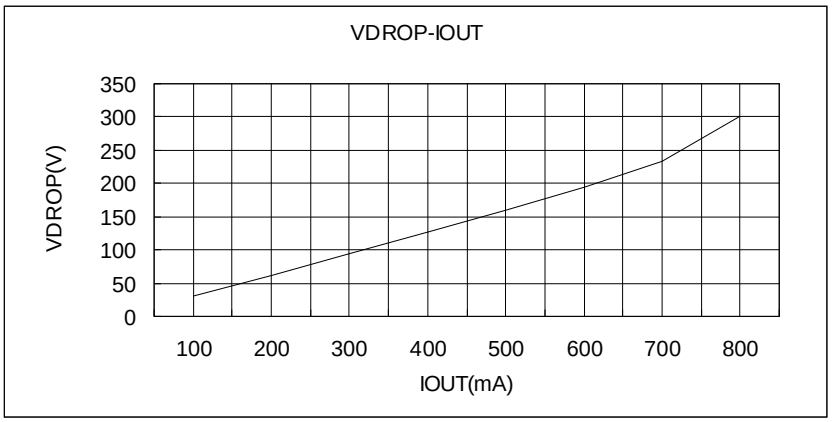
（1） Input VoltageVS.Output Voltage（Ta = 25 °C）

ME6207C50P5G



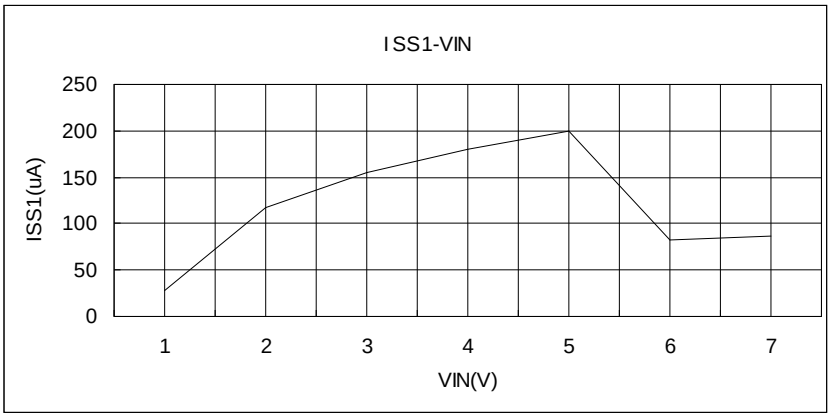

（2） Output Current VS.Droput Voltage（$V_{IN}$= $V_{OUT}$ (T) +1.0V,Ta = 25 °C）

ME6207C50P5G



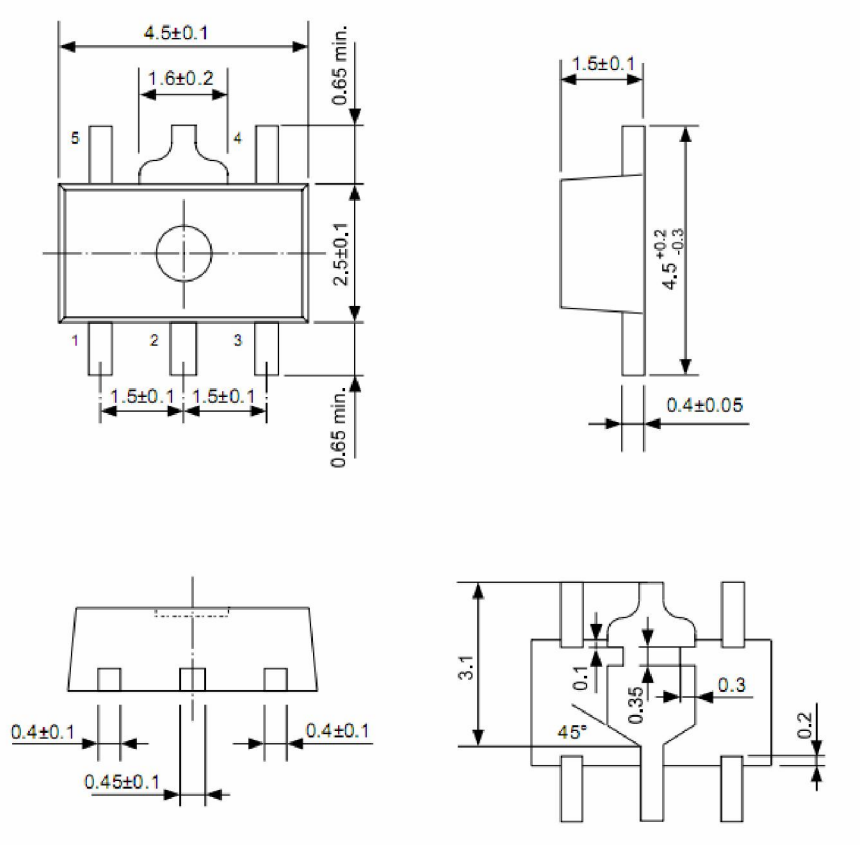

（3）Input Voltage VS. Current Consumption（Ta = 25 °C）

ME6207C50P5G

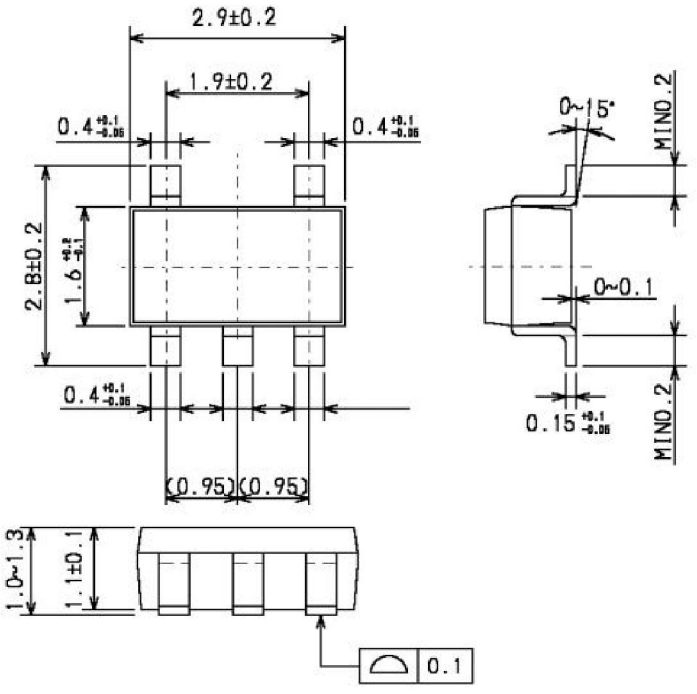


**Package Information:**

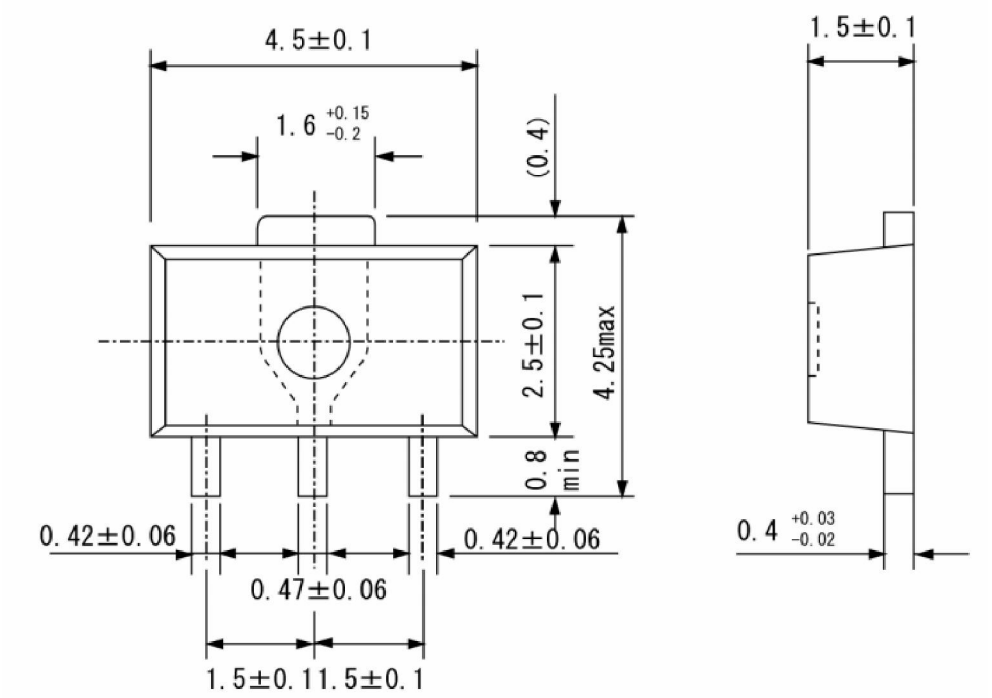
SOT89-5




SOT23-5



SOT89-3


4.5±0.1
1.6 +0.15 -0.2
(0.4)
2.5±0.1
4.25max
0.8 min
0.42±0.06
0.42±0.06
0.47±0.06
1.5±0.1
1.5±0.1
0.4 +0.03 -0.02

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# 高精度、高纹波抑制比、低噪声、超快响应 LDO

## 描述：

**ME6211 系列**是以 CMOS 工艺制造的高精度，高纹波抑制比，低噪音，超快响应低压差线性稳压器。ME6211 系列稳压器稳压器内置固定的参考电压源，误差修正电路，限流电路，相位补偿电路以及低内阻的 MOSFET，达到高纹波抑制，低输出噪音，超快响应低压差的性能。

ME6211 系列兼容体积比钽电容更小的陶瓷电容，而且不需使用 0.1μF 的 By-pass 电容，更能节省空间。

ME6211 系列的高速响应特性能应付负载电流的波动，所以特别适合使用于手持及射频产品上。通过控制芯片上的 CE 脚可将输出关断，在关断后的功耗只有 1μA 以下。

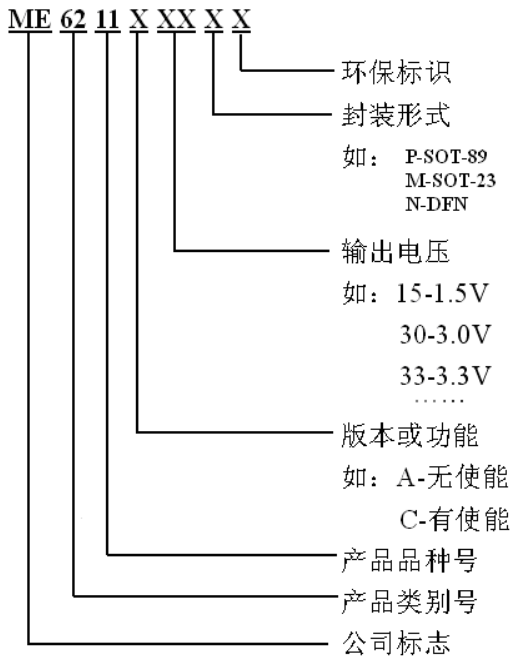
## 特点：

- 最大输出电流：500mA（$V_{IN}$=5V，$V_{OUT}$=3.3V）
- 低压差：100mV@ $I_{OUT}$ =100mA
- 工作电压范围：2V～6.0V
- 输出电压范围：1.2V～5.0V（步长 0.1V）
- 高输出精度：±2%
- 低静态电流：50uA（TYP.）
- 关断电流：0.1uA（TPY.）
- 高纹波抑制比：70dB@1KHz（ME6211C33）
- 低输出噪声：50uVrms
- 输入稳定性好：0.05%（TYP.）
- 封装形式：SOT-89-3，SOT-23-3，SOT-23-5, DFN-6，SOT-353

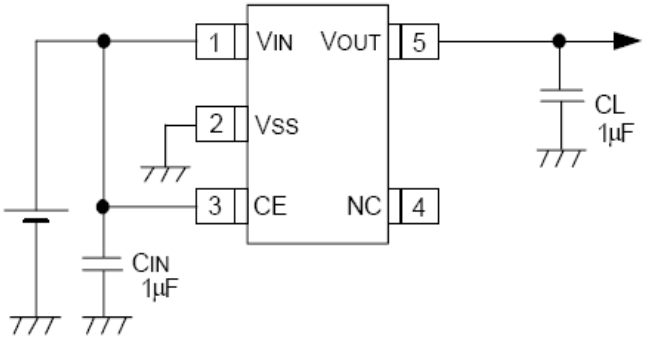
## 典型应用：

- 手机
- 无绳电话设备
- 照相机
- 蓝牙及其他射频产品
- 基准电压源

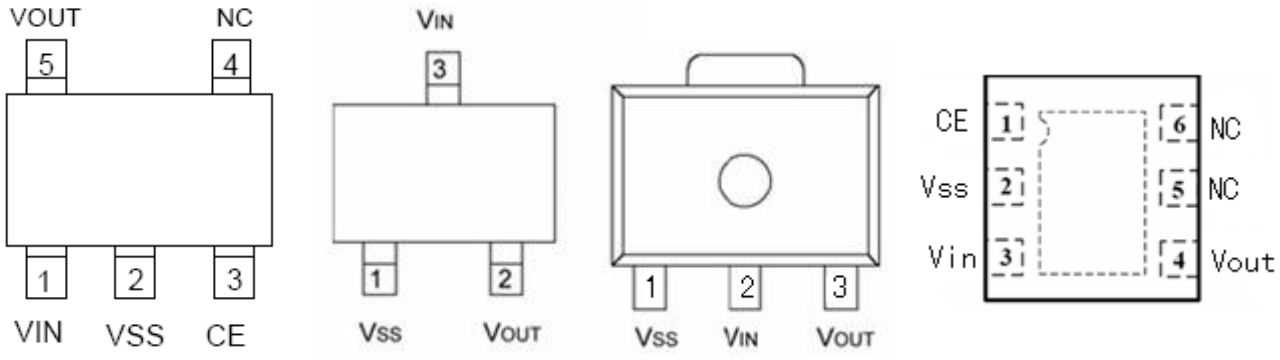
## 选型指南：




## 典型电路：



## 引脚排列图：




SOT-23-5/SOT-353　　SOT-23-3　　SOT-89-3　　DFN6L

## 引脚分配：

ME6211AXX

| 引脚号 | | 符号 | 引脚描述 |
|---|---|---|---|
| SOT-23-3 | SOT-89-3 | | |
| 1 | 1 | $V_{SS}$ | 接地引脚 |
| 2 | 3 | $V_{OUT}$ | 电压输出端 |
| 3 | 2 | $V_{IN}$ | 电压输入端 |

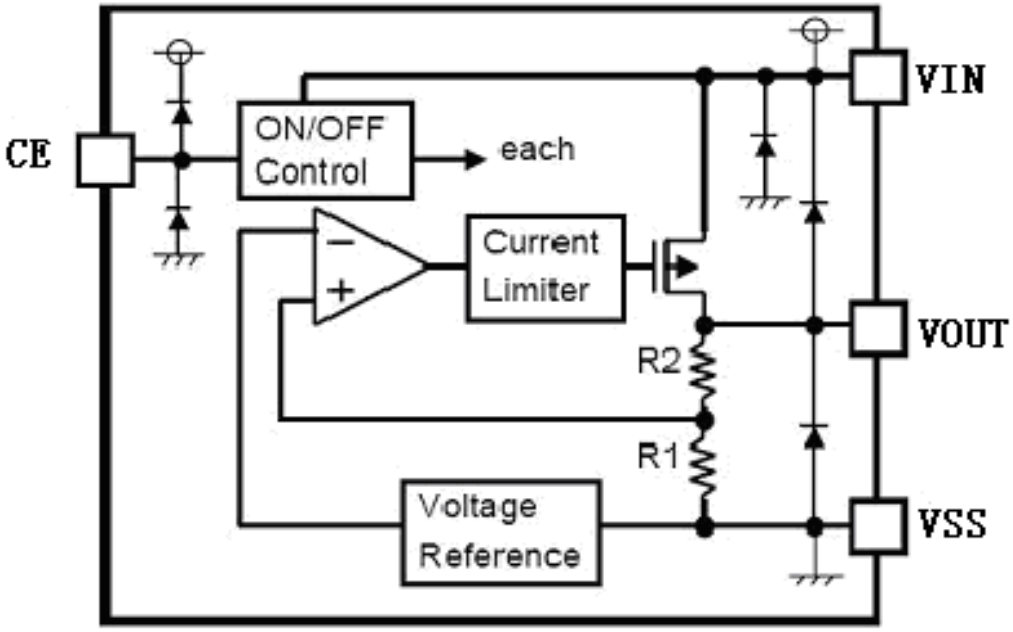
ME6211CXX

| 引脚号 | | 符号 | 引脚描述 |
|---|---|---|---|
| SOT-23-5/SOT-353 | DFN-6 | | |
| 1 | 3 | $V_{IN}$ | 电压输入端 |
| 2 | 2 | $V_{SS}$ | 接地引脚 |
| 3 | 1 | CE | 使能端 |
| 4 | 5,6 | NC | 空 |
| 5 | 4 | $V_{OUT}$ | 电压输出端 |

## 极限参数：

| 参数 | | 符号 | 极限值 | 单位 |
|---|---|---|---|---|
| 输入脚电压 | | $V_{IN}$ | 6.5 | V |
| 输出脚电流 | | $I_{OUT}$ | 600 | mA |
| 输出脚电压 | | $V_{OUT}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| CE 脚电压 | | $V_{CE}$ | Vss-0.3～$V_{IN}$ +0.3 | V |
| 允许最大功率 | SOT-23 | $P_D$ | 250 | mW |
| | SOT-353 | | 250 | |
| | DFN | | 300 | |
| | SOT-89 | | 500 | |
| 工作温度 | | $T_{OPR}$ | －40～＋85 | ℃ |
| 存储温度 | | $T_{STG}$ | －40～＋125 | ℃ |

## 功能模块：




## 主要参数及工作特性

ME6211C12

($V_{IN}$= $V_{OUT}$+1V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=1uF，Ta=25$^O$C,除特别指定)

| 特性 | 符号 | 条件 | | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | | 300 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | | 8 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | | 280 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | | 500 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | | 40 | | μA |
| 关断电流 | $I_{CEL}$ | $V_{CE}$＝0V | | | 0.1 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | | 0.03 | | %/V |
| CE 端“高”电平 | $V_{CEH}$ | Start up | | 1.0 | | | V |
| CE 端“低”电平 | $V_{CEL}$ | Shut down | | | | 0.7 | V |
| 输出噪声 | EN | $I_{OUT}$ =40mA，300Hz~50kHz | | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V+1Vp-p AC | $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | | $I_{OUT}$=100mA,10kHZ | | 62 | | |

ME6211C18

($V_{IN}$= $V_{OUT}$+1V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=1uF，Ta=25$^O$C,除特别指定)

| 特性 | 符号 | 条件 | | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | | 300 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | | 9 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | | 200 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | | 400 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | | 45 | | μA |
| 关断电流 | $I_{CEL}$ | $V_{CE}$＝0V | | | 0.1 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | | 0.05 | | %/V |
| CE 端“高”电平 | $V_{CEH}$ | Start up | | 1.0 | | | V |
| CE 端“低”电平 | $V_{CEL}$ | Shut down | | | | 0.7 | V |
| 输出噪声 | EN | $I_{OUT}$ =40mA，300Hz~50kHz | | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V+1Vp-pAC | $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | | $I_{OUT}$=100mA,10kHZ | | 62 | | |
| 短路电流 | $I_{SHORT}$ | $V_{IN}$= $V_{OUT}$+1V, $V_{CE}$＝$V_{IN}$, $V_{OUT}$＝0V | | | 200 | | mA |

ME6211C28

($V_{IN}$= $V_{OUT}$+1V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=1uF，Ta=25$^O$C,除特别指定)

| 特性 | 符号 | 条件 | | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | | 450 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | | 7 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | | 110 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | | 220 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | | 55 | | μA |
| 关断电流 | $I_{CEL}$ | $V_{CE}$＝0V | | | 0 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | | 0.04 | | %/V |
| CE 端“高”电平 | $V_{CEH}$ | Start up | | 1.0 | | | V |
| CE 端“低”电平 | $V_{CEL}$ | Shut down | | | | 0.7 | V |
| 输出噪声 | EN | $I_{OUT}$ =40mA，300Hz~50kHz | | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V+1Vp-p AC | $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | | $I_{OUT}$=100mA,10kHZ | | 62 | | |
| | | | $I_{OUT}$=200mA,10kHZ | | 62 | | |
| 短路电流 | $I_{SHORT}$ | $V_{IN}$= $V_{OUT}$+1V, $V_{CE}$＝$V_{IN}$, $V_{OUT}$＝0V | | | 120 | | mA |

ME6211C30

($V_{IN}$= $V_{OUT}$+1V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=1uF，Ta=25$^O$C,除特别指定)

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | 500 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | 8 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | 100 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | 210 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | 60 | | μA |
| 关断电流 | $I_{CEL}$ | $V_{CE}$＝0V | | 0 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | 0.05 | | %/V |
| CE 端“高”电平 | $V_{CEH}$ | Start up | 1.0 | | | V |
| CE 端“低”电平 | $V_{CEL}$ | Shut down | | | 0.7 | V |
| 输出噪声 | EN | $I_{OUT}$ =40mA，300Hz~50kHz | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V+1Vp-p AC; $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | $I_{OUT}$=100mA,10kHZ | | 62 | | |
| | | $I_{OUT}$=200mA,10kHZ | | 62 | | |
| 短路电流 | $I_{SHORT}$ | $V_{IN}$= $V_{OUT}$+1V, $V_{CE}$＝$V_{IN}$, $V_{OUT}$＝0V | | 120 | | mA |

ME6211C33

($V_{IN}$= $V_{OUT}$+1V，$V_{CE}$ = $V_{IN}$，$C_{IN}$=$C_L$=1uF，Ta=25$^O$C,除特别指定)

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | 500 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | 9 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | 120 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | 260 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | 55 | | μA |
| 关断电流 | $I_{CEL}$ | $V_{CE}$＝0V | | 0.1 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | 0.05 | | %/V |
| CE 端“高”电平 | VCEH | Start up | 1.0 | | | V |
| CE 端“低”电平 | VCEL | Shut down | | | 0.7 | V |
| 输出噪声 | EN | $I_{OUT}$ =40mA，300Hz~50kHz | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V +1Vp-pAC; $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | $I_{OUT}$=100mA,10kHZ | | 62 | | |
| | | $I_{OUT}$=200mA,10kHZ | | 62 | | |
| 短路电流 | $I_{SHORT}$ | $V_{IN}$= $V_{OUT}$+1V, $V_{CE}$＝$V_{IN}$, $V_{OUT}$＝0V | | 150 | | mA |

ME6211A33

($V_{IN}$= $V_{OUT}$+1V， $V_{CE}$ = $V_{IN}$， $C_{IN}$=$C_L$=1uF， Ta=25$^{O}$C,除特别指定)

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=30mA, $V_{IN}$= $V_{OUT}$+1V | X 0.98 | $V_{OUT}$ (T) (Note 1) | X 1.02 | V |
| 最大输出电流 | $I_{OUTMAX}$ | $V_{IN}$= $V_{OUT}$+1V | | 500 | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$= $V_{OUT}$+1V , 1mA≤$I_{OUT}$≤100mA | | 9 | | mV |
| 压差 (Note 3) | $V_{DIF1}$ | $I_{OUT}$ =100mA | | 120 | | mV |
| | $V_{DIF2}$ | $I_{OUT}$ =200mA | | 260 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$= $V_{OUT}$+1V | | 55 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =40mA $V_{OUT}$+1V ≤$V_{IN}$≤6.5V | | 0.05 | | %/V |
| 输出噪声 | EN | $I_{OUT}$ =40mA， 300Hz~50kHz | | 50 | | uVrms |
| 纹波抑制比 | PSRR | $V_{IN}$ = [$V_{OUT}$ +1]V+1Vp-p AC / $I_{OUT}$=10mA,1kHZ | | 70 | | dB |
| | | / $I_{OUT}$=100mA,10kHZ | | 62 | | |
| | | / $I_{OUT}$=200mA,10kHZ | | 62 | | |
| 短路电流 | $I_{SHORT}$ | $V_{IN}$= $V_{OUT}$+1V, $V_{OUT}$＝0V | | 150 | | mA |

注 ：

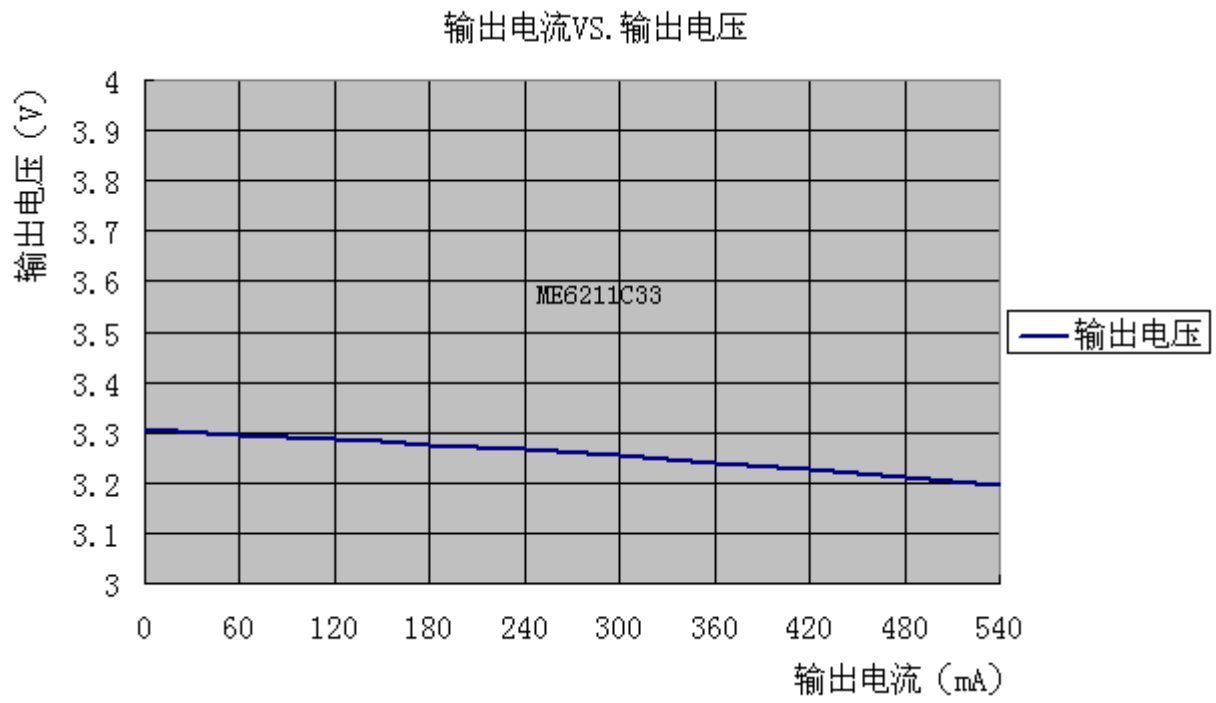
1. $V_{OUT}$ (T) ： 规定的输出电压
2. $V_{OUT}$ (E) ： 有效输出电压 （ 即当 $I_{OUT}$ 保持一定数值， $V_{IN}$ = ($V_{OUT}$ (T)+1.0V)时的输出电压。
3. $V_{dif}$ ： $V_{IN1}$ –$V_{OUT}$ (E)’

   $V_{IN1}$ ： 逐渐减小输入电压，当输出电压降为 $V_{OUT}$ (E) 的 98%时的输入电压。

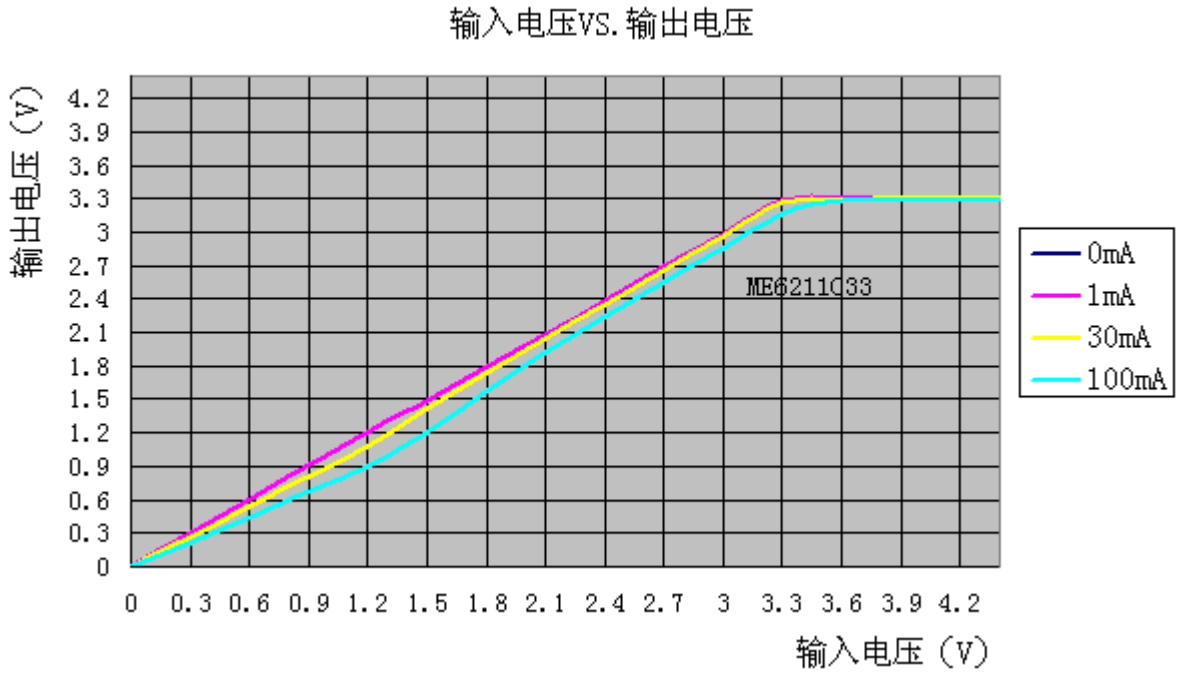
   $V_{OUT}$ (E)’= $V_{OUT}$ (E)*98%

## 工作特性曲线：

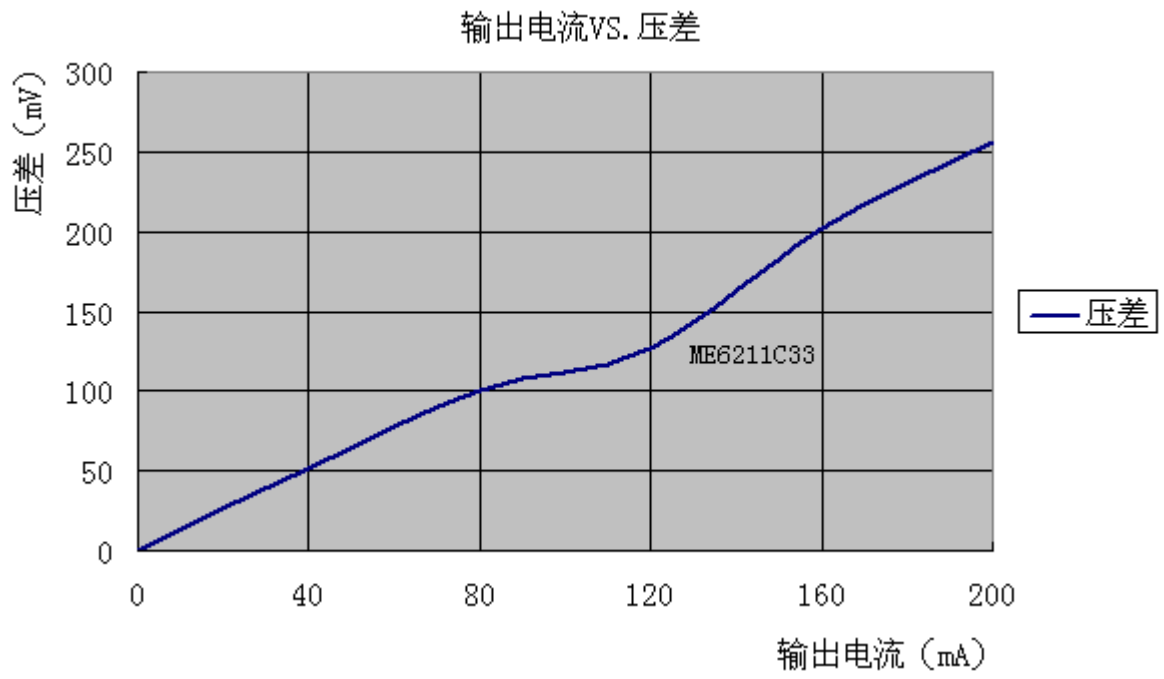
**（1） 输出电压－输出电流：($T_A$=25℃)**



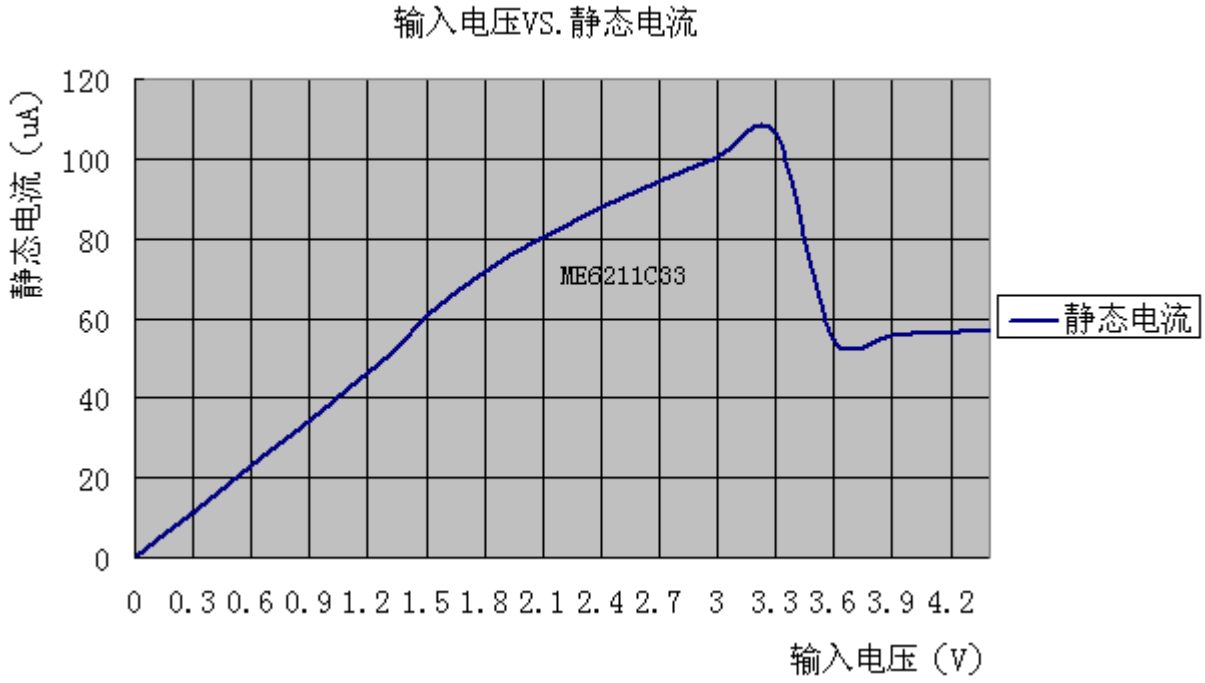

**（2）输出电压－输入电压：**



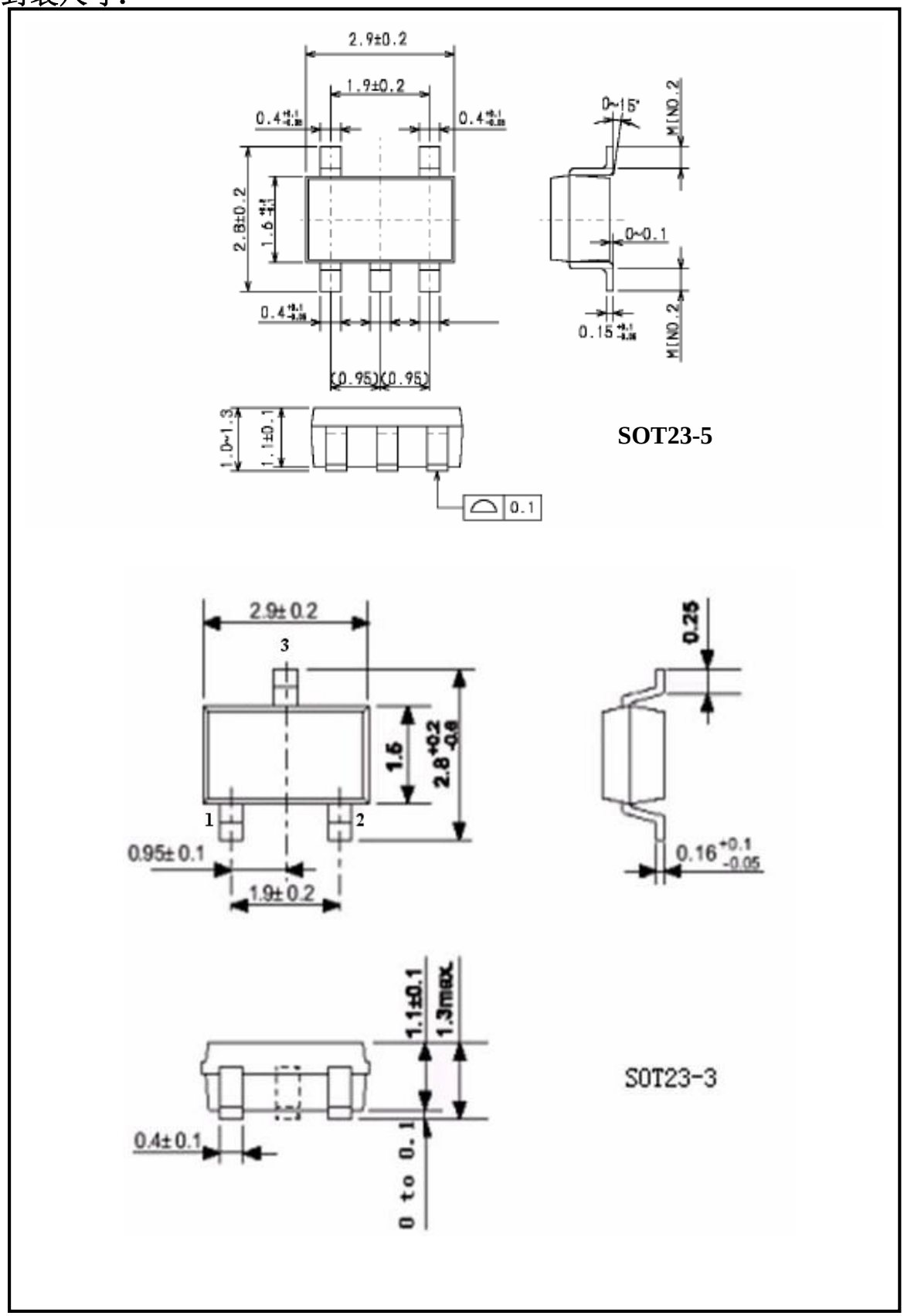
（3）压差－输出电流：

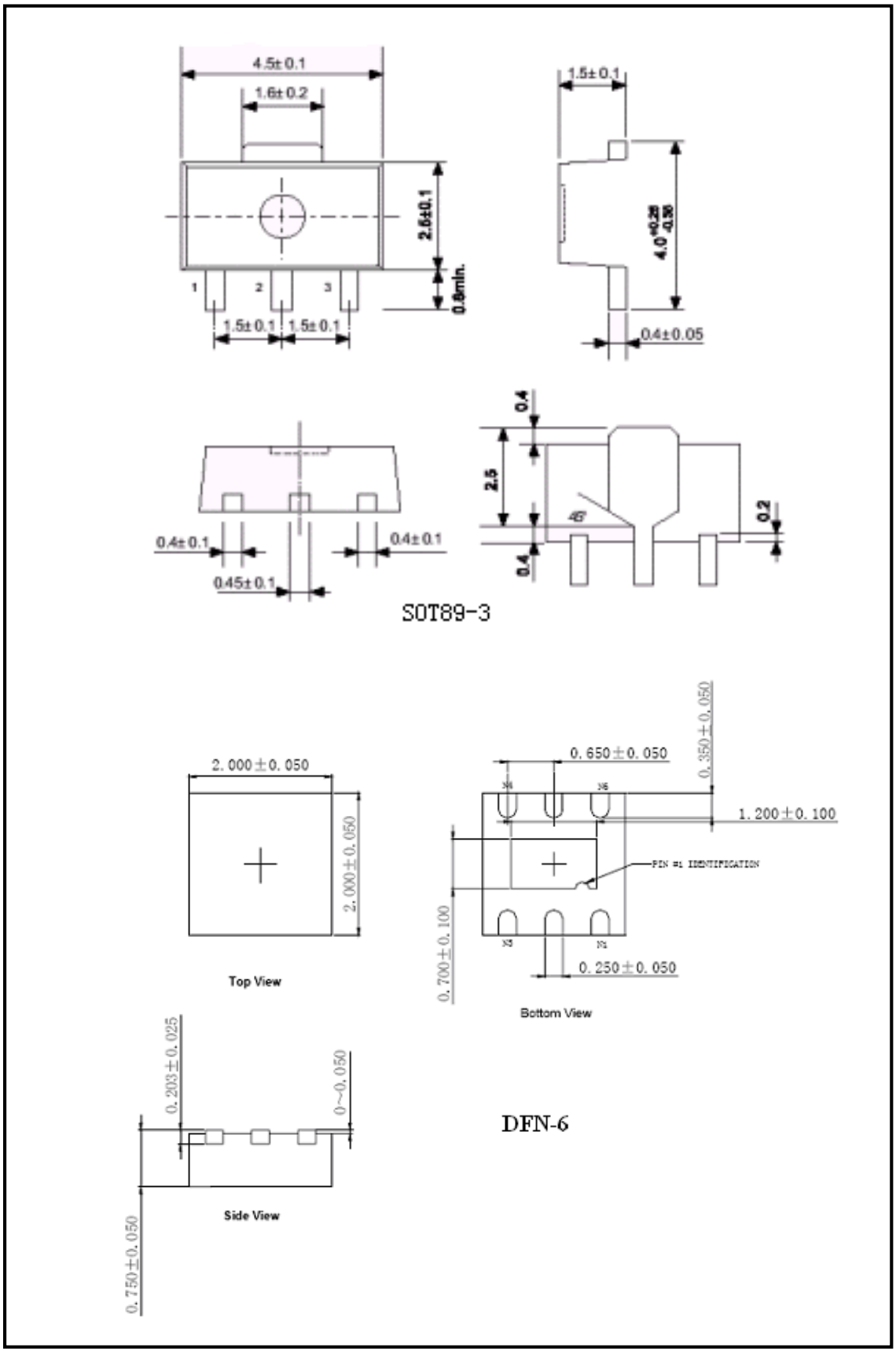


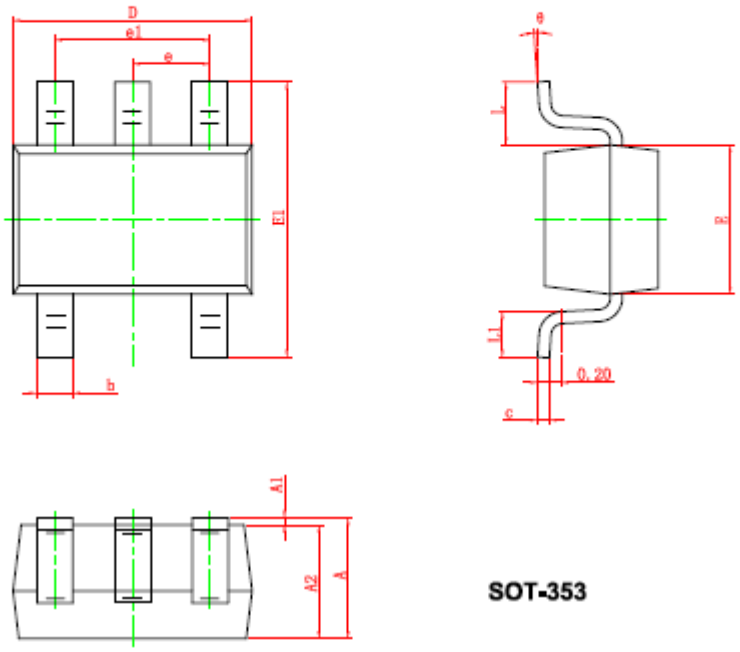

（4）静态电流－输入电压：



封装尺寸：


2.9±0.2
1.9±0.2
0.4
2.8±0.2
1.6
0.95
1.0~1.3
1.1±0.1
0.1
0~0.1
0.15
MIN0.2
SOT23-5
2.9±0.2
3
1.6
1
2
0.95±0.1
1.9±0.2
0.25
0.16
1.1±0.1
1.3max
0.4±0.1
0 to 0.1
SOT23-3


4.5±0.1
1.6±0.2
2.6±0.1
0.8min.
1
2
3
1.5±0.1
1.5±0.1
1.5±0.1
0.4±0.05
0.4
2.5
45°
0.2
0.4
0.4±0.1
0.4±0.1
0.45±0.1
SOT89-3
2.000±0.050
2.000±0.050
Top View
0.650±0.050
0.350±0.050
1.200±0.100
PIN #1 IDENTIFICATION
0.700±0.100
0.250±0.050
Bottom View
0.203±0.025
0~0.050
0.750±0.050
Side View
DFN-6




SOT-353

| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|---|---|---|---|---|
| | Min | Max | Min | Max |
| A | 0.900 | 1.100 | 0.035 | 0.043 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.000 | 0.035 | 0.039 |
| b | 0.150 | 0.350 | 0.006 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.000 | 2.200 | 0.079 | 0.087 |
| E | 1.150 | 1.350 | 0.045 | 0.053 |
| E1 | 2.150 | 2.450 | 0.085 | 0.096 |
| e | 0.650 TYP | | 0.026 TYP | |
| e1 | 1.200 | 1.400 | 0.047 | 0.055 |
| L | 0.525 REF | | 0.021 REF | |
| L1 | 0.260 | 0.460 | 0.010 | 0.018 |
| θ | 0° | 8° | 0° | 8° |

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# 100mA，高输入电压线性稳压器

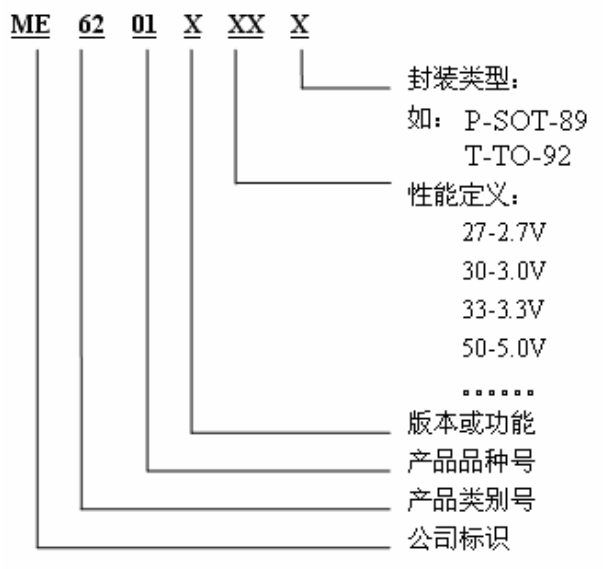
## 描述：

**ME6201 系列** 是以 CMOS 工艺制造的可高电压输入，低功耗，低压差线性稳压器。本系列的稳压器内置固定的参考电压源，误差修正电路及相位补偿电路，内置短路保护电路。输出电压是以内部反馈电阻设定，可设定在 3.0—5.0V 之间，输出精度为 ±2.5%。

## 特点：

- 最大工作电压：16V
- 输出电压范围：3.0V~5.0V(步长 0.1V)
- 高精度：±2.5%
- 极低的静态电流(Typ.=3μA)
- 带载能力强：当 Vin=5.3V 且 Vout=3.3V 时 Iout=100mA(典型值)
- 输入稳定性好：Typ. 0.1%/V
- 超小型封装：SOT-89-3、TO-92
- 短路保护限制电流：30mA(典型值)
- 低的温度调整系数
- 兼容陶瓷电容

## 选型指南：

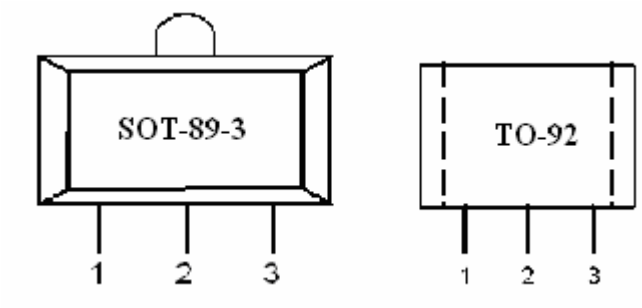



## 应用：

- 移动电话
- 无绳电话、无线通信设备
- 数码相机、录像机
- 便携式游戏机
- 便携式 AV 设备
- 参考电压
- 电池供电设备

| 型号 | 后缀 | 封装 | CE 端 | 特点 |
|---|---|---|---|---|
| ME6201AXX | P | SOT-89-3 | No | |
| | T | TO-92 | | |

## 引脚排列图：

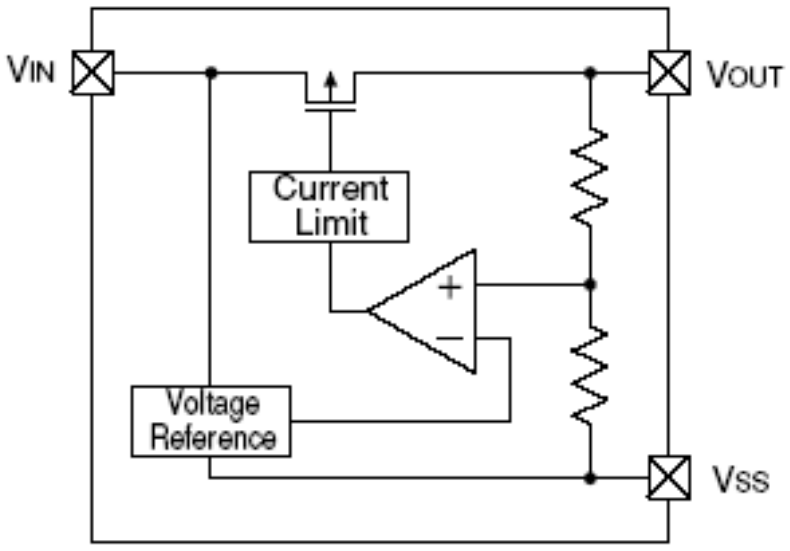



## 引脚分配：

**ME6201Axx**

| 引脚号 | | 符号 | 引脚描述 |
|---|---|---|---|
| SOT-89-3 | TO-92 | | |
| 1 | 1 | Gnd | 接地引脚 |
| 2 | 2 | Vin | 电压输入端 |
| 3 | 3 | Vout | 电压输出端 |

## 功能块框图：



## 极限参数：

| 参数 | | 符号 | 极限值 | 单位 |
|---|---|---|---|---|
| Vin 脚电压 | | $V_{IN}$ | 18.0 | V |
| Vout 脚电流 | | $I_{out}$ | 200 | mA |
| Vout 脚电压 | | $V_{out}$ | Vss-0.3 ~ Vout+0.3 | V |
| 允许最大功耗 | SOT-89-3 | Pd | 500 | mW |
| | TO-92 | Pd | 300 | mW |
| 工作温度 | | $T_{Opr}$ | -25 ~ +85 | ℃ |
| 存贮温度 | | $T_{stg}$ | -40 ~ +125 | ℃ |
| 焊接温度和时间 | | $T_{solder}$ | 260℃, 10s | |

**注意：极限参数是指在任何条件下都不能超过的额定值。万一超过该值，有可能会造成产品恶化等物理性损伤。**

## 主要参数及工作特性：

**ME6201A30**

**(Vin=Vout+2V,Cin=Cout=10uF,Ta=25$^{O}$C 除特别指定)**

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=10mA, $V_{IN}$=Vout+2V | X 0.975 | $V_{OUT}$ (T) | X 1.025 | V |
| 输入电压 | $V_{IN}$ | | 3 | | 16 | V |
| 最大输出电流 | $I_{OUT}$ (max) | $V_{IN}$=Vout+2V | | 100 (Note 4) | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$=Vout+2V, 1mA≤$I_{OUT}$≤80mA | | 40 | | mV |
| 压差 (Note 3) | $V_{dif1}$ | $I_{OUT}$ =10mA | | 170 | | mV |
| | $V_{dif2}$ | $I_{OUT}$ =50mA | | 800 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$=Vout+2V | | 3 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =30mA Vout+2V ≤$V_{IN}$≤16V | | 0.1 | | %/V |

**ME6201A33**

**(Vin=Vout+2V,Cin=Cout=10u,Ta=25$^{O}$C 除特别指定)**

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=10mA, $V_{IN}$=Vout+2V | X 0.975 | $V_{OUT}$ (T) | X 1.025 | V |
| 输入电压 | $V_{IN}$ | | 3.3 | | 16 | V |
| 最大输出电流 | $I_{OUT}$ (max) | $V_{IN}$=Vout+2V | | 100 (Note 4) | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$=Vout+2V, 1mA≤$I_{OUT}$≤80mA | | 40 | | mV |
| 压差 (Note 3) | $V_{dif1}$ | $I_{OUT}$ =10mA | | 150 | | mV |
| | $V_{dif2}$ | $I_{OUT}$ =50mA | | 700 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$=Vout+2V | | 3 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =30mA Vout+2V ≤$V_{IN}$≤16V | | 0.1 | | %/V |

**ME6201A50**

**(Vin=Vout+2V,Cin=Cout=10u,Ta=25$^{O}$C 除特别指定)**

| 特性 | 符号 | 条件 | 最小值 | 典型值 | 最大值 | 单位 |
|---|---|---|---|---|---|---|
| 输出电压 | $V_{OUT}$(E) (Note 2) | $I_{OUT}$=10mA, $V_{IN}$=Vout+2V | X 0.975 | $V_{OUT}$ (T) | X 1.025 | V |
| 输入电压 | $V_{IN}$ | | 5 | | 16 | V |
| 最大输出电流 | $I_{OUT}$ (max) | $V_{IN}$=Vout+2V | | 100 (Note 4) | | mA |
| 负载特性 | $\Delta V_{OUT}$ | $V_{IN}$=Vout+2V, 1mA≤$I_{OUT}$≤80mA | | 60 | | mV |
| 压差 (Note 3) | $V_{dif1}$ | $I_{OUT}$ =10mA | | 90 | | mV |
| | $V_{dif2}$ | $I_{OUT}$ =50mA | | 500 | | mV |
| 静态电流 | $I_{SS}$ | $V_{IN}$=Vout+2V | | 4 | | μA |
| 电源电压调整率 | $\frac{\Delta V_{OUT}}{\Delta V_{IN} \bullet V_{OUT}}$ | $I_{OUT}$ =30mA Vout+2V ≤$V_{IN}$≤16V | | 0.1 | | %/V |

**注：**

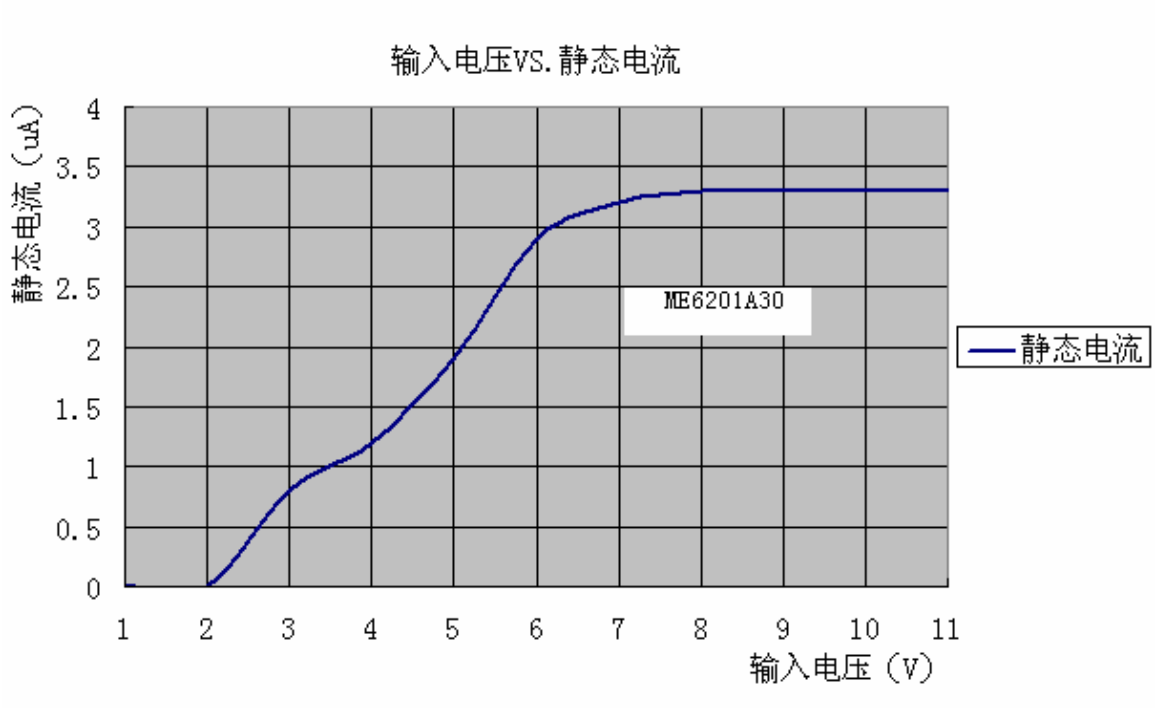
1. $V_{OUT}$ (T) ： 规定的输出电压
2. $V_{OUT}$ (E) ： 有效输出电压 ( 即当 $I_{OUT}$ 保持一定数值，$V_{IN}$ = ($V_{OUT}$ (T)+2.0V)时的输出电压
3. $V_{dif}$ ： $V_{IN1}$ –$V_{OUT}$ (E)’

   $V_{IN1}$ ： 逐渐减小输入电压，当输出电压降为 $V_{OUT}$ (E) 的 98%时的输入电压。

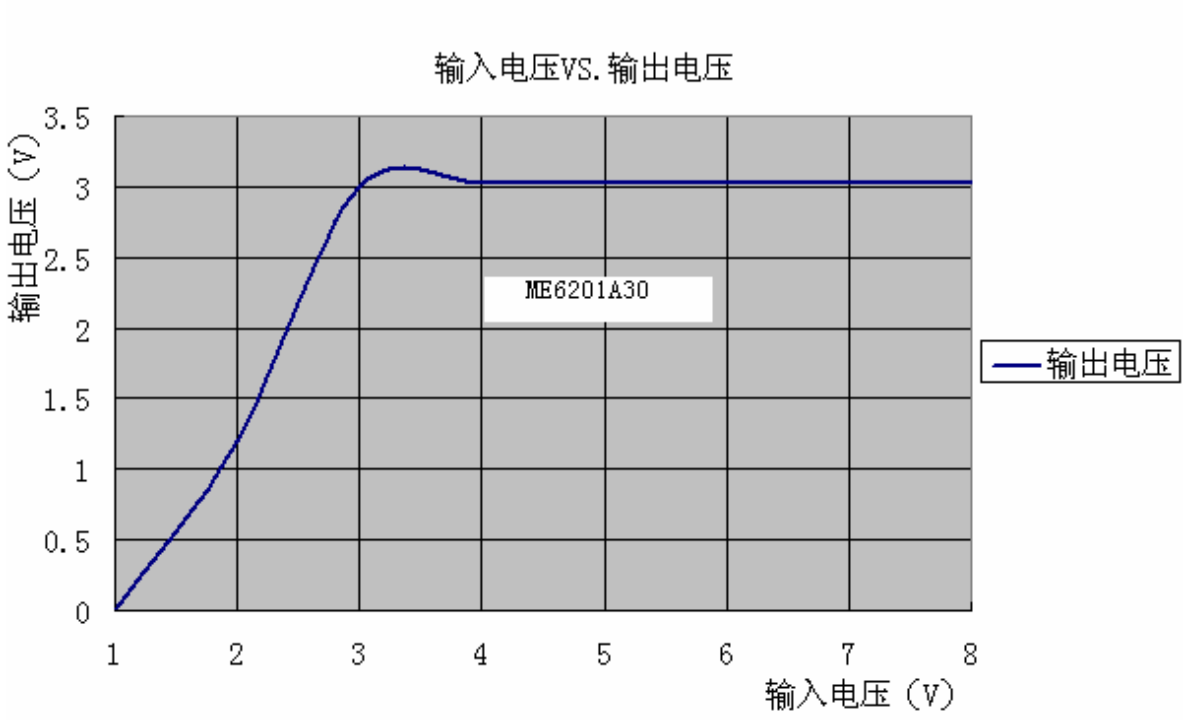
   $V_{OUT}$ (E)’= $V_{OUT}$ (E)X98%
4. 指能够得到此值为止的输出电流。由于封装功耗的限制,也有不能满足此值的情况发生。请注意在输出大电流时的封装容许功耗。此规格为设计保证。

## 工作特性曲线：

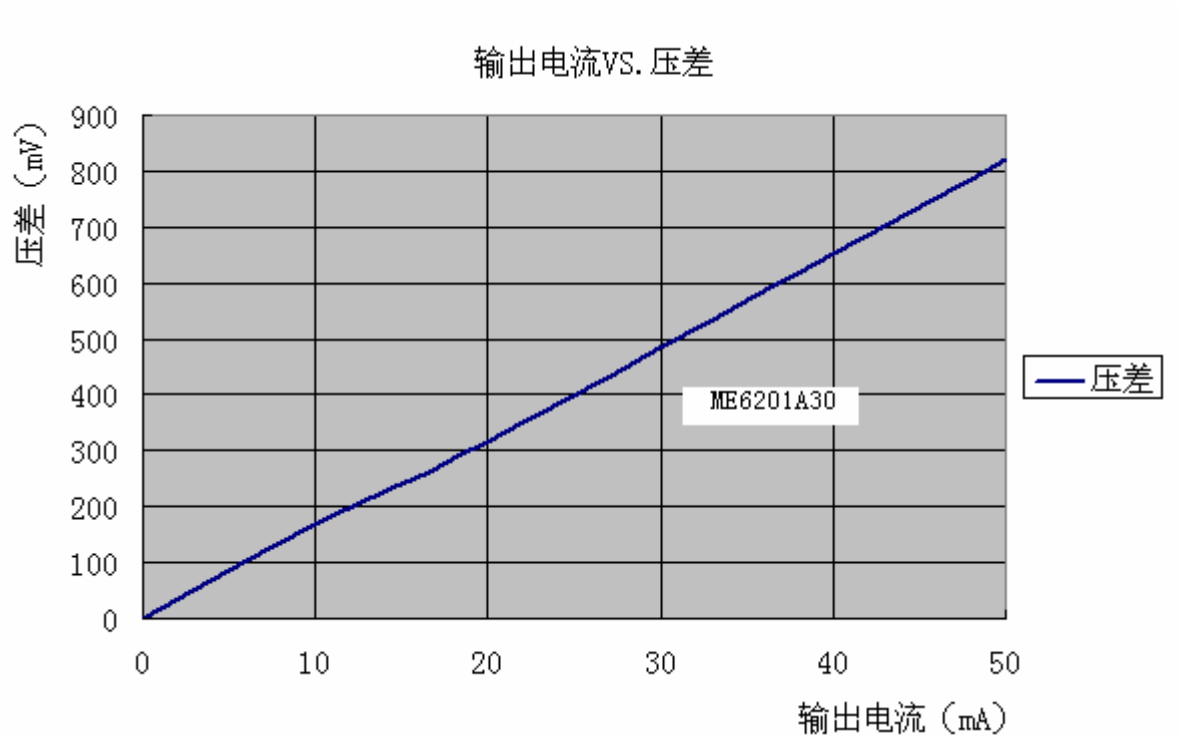
**（1） 输入电压－静态电流电流：（$T_A$=25℃）**



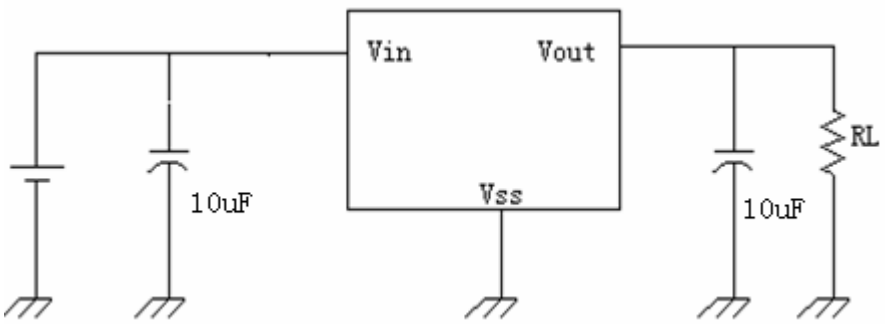

**（2）输入电压－输出电压：（$T_A$=25℃）**



（3）压差－输出电流：（$T_A$=25℃）




## 典型应用：




**注意** 上述连接图以及参数并不作为保证电路工作的依据。实际的应用电路请进行充分的实测基础上设定参数。

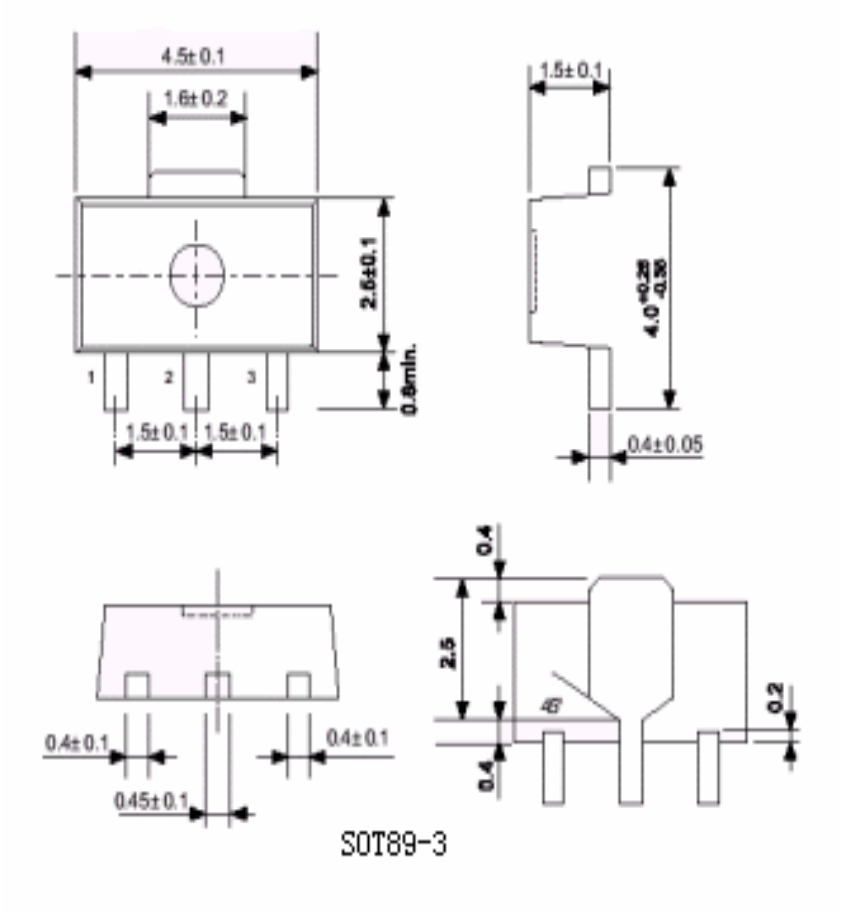
## 使用条件：

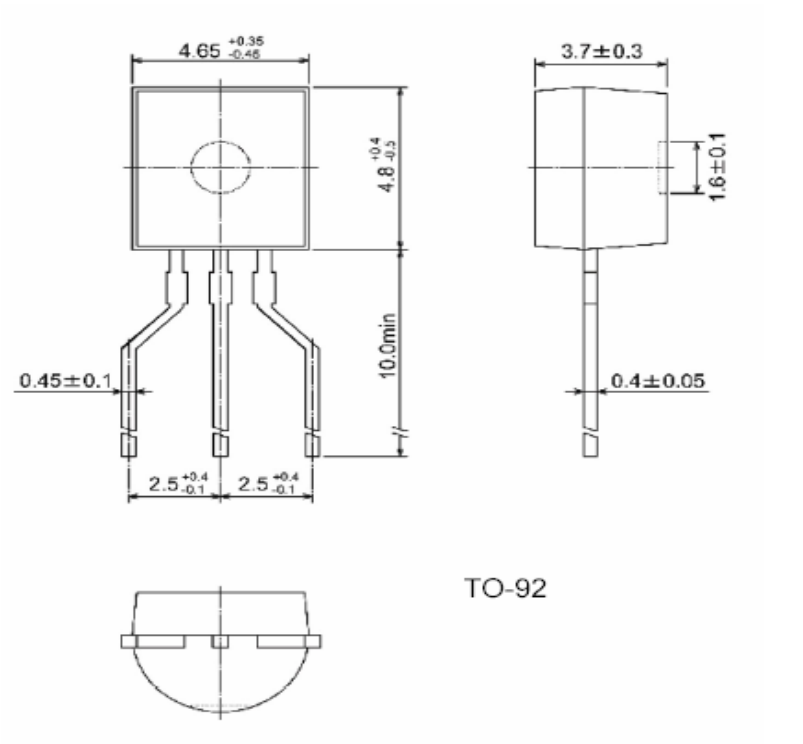
输入电容器： 10uF 以上
输出电容器： 10uF 以上

**注意**

实际应用中 VIN 端、VOUT 端以及 GND 的配线，为降低阻抗，充分注意连线方式；请尽可能将输出电容接在接在 VOUT-VSS 端子附近，尽可能将输入稳定电容器接在 VIN-VSS 端子附近（保证不超过 0.5cm）。

## 封装尺寸：


4.5±0.1
1.6±0.2
2.6±0.1
0.6min.
1
2
3
1.5±0.1
1.5±0.1
1.5±0.1
0.4±0.05
0.4
2.5
45°
0.2
0.4
0.4±0.1
0.4±0.1
0.45±0.1
SOT89-3


4.65 +0.35 -0.46
3.7±0.3
4.8 +0.4 -0.5
1.6±0.1
10.0min
0.45±0.1
0.4±0.05
2.5 +0.4 -0.1
2.5 +0.4 -0.1
TO-92

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