

ME6231

18V, Low Power, High Accuracy, High PSRR LDO Regulators

Description

The ME6231 series are high accuracy, CMOS LDO Voltage Regulators, offering low power, high ripple rejection ratio and low dropout. the ME6231 series is ideal for today's cutting edge mobile phone. Internally the ME6231 includes a reference voltage source, error amplifiers, driver transistors, current limiters and phase compensators. The ME6231's current limiters' foldback circuit also operates as a short protect for the output current limiter and the output pin. The ME6231 series is also fully compatible with low ESR ceramic capacitors, reducing cost and improving output stability. This high level of output stability is maintained even during frequent load fluctuations, due to the excellent transient response performance and high PSRR achieved across a broad range of frequencies. The CE function allows the output of regulator to be turned off, resulting in greatly reduced power consumption.

Applications

- Mobile phones
- Cordless phones, radio communication equipment
- Portable games
- Cameras, Video cameras
- Reference voltage sources
- Battery powered equipment

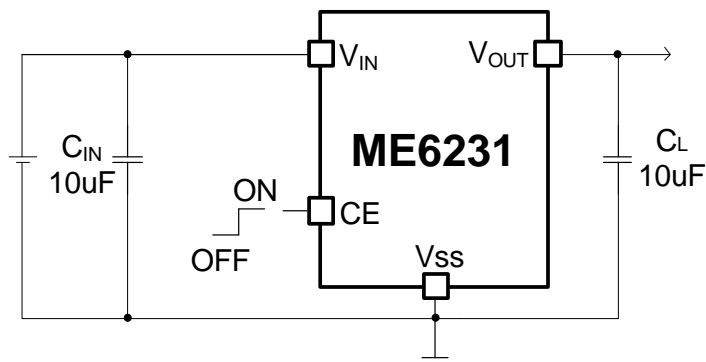
Feature

- Maximum Output Current: 500mA
($V_{IN}=4.3V, V_{OUT}=3.3V$)
- Dropout Voltage: 125mV@ $I_{OUT}=100mA$ ($V_{OUT}=3.3V$)
- Operating Voltage Range: 3V~18V
- Output Voltage Range: 1.6V~5.0V
- Highly Accuracy: $\pm 1\%$
- Low Power Consumption: 1.8uA (TYP.)
- Standby Current: 0 uA (TYP.)
- High Ripple Rejection: 65dB@1KHz (ME6231C33)
- Line Regulation: 0.035%/V (TYP.)
- Built-in temperature protection and current limiting protection

Package

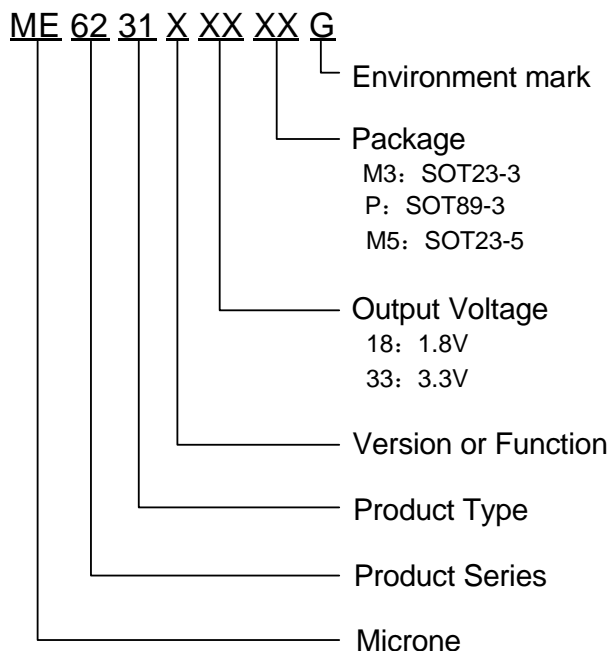
- 3-pin SOT23-3、SOT89-3
- 5-pin SOT23-5

Typical Application Circuit



Note: Ceramic capacitor with X7R and X5R offer improved voltage and temperature coefficients. 10uF Ceramic capacitor is recommended for excellent load transient response and line transient response.

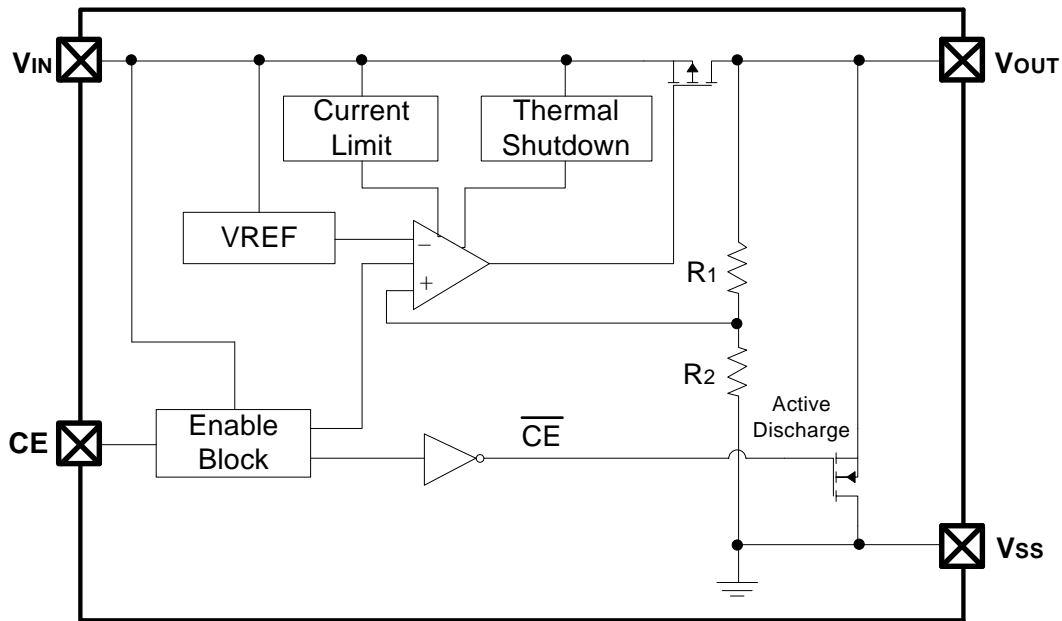
Selection Guide



product serie	Product Function
ME6231A33M3G	$V_{OUT}=3.3V$; Package: SOT23-3
ME6231A33PG	$V_{OUT}=3.3V$; Package: SOT89-3
ME6231C18M5G	Enable can be set; $V_{OUT}=1.8V$; Package: SOT23-5
ME6231C33M5G	Enable can be set; $V_{OUT}=3.3V$; Package: SOT23-5

NOTE: At present, there are two kinds of voltage value: 1.8V, 3.3V.
If you need other voltage and package, please contact our sales staff.

Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units	
Input Voltage	V_{IN}	-0.3 ~ 20	V	
CE Pin Voltage	V_{CE}	$V_{IN} - 0.3 \sim V_{IN} + 0.3$	V	
V_{OUT} Voltage	V_{OUT}	$V_{IN} - 0.3 \sim V_{IN} + 0.3$	V	
V_{OUT} Current	I_{OUT}	600	mA	
Internal Power Dissipation ($T_A = 25^\circ\text{C}$) 可提供样品测试 技术支持 V : runzexin-18	SOT23-5	Pd	0.6	W
	SOT23-3		0.54	
	SOT89-3		0.7	
Thermal resistance (Junction to air)	SOT23-5	θ_{JA}	210	$^\circ\text{C/W}$
	SOT23-3		230	
	SOT89-3		180	
Operating Ambient Temperature Range	T_{Opr}	-40 ~ +85	$^\circ\text{C}$	
Storage Temperature Range	T_{stg}	-55 ~ +150	$^\circ\text{C}$	
Maximum junction temperature	T_J	-40 ~ +150	$^\circ\text{C}$	