

## 1.5A Fixed Voltage LDO Linear Regulator

### Features

- Operating Voltage Range : +2.5V to +6.5V
- Output Voltages : +1.0V to +5.0V (0.1V Step)
- Maximum Output Current : 1.5A
- Dropout Voltage : 800mV @ 1.5A(Typ.)
- 35 uS Fast Response when Power-on
- Low Current Consumption : 40μA (Typ.)
- ±2% Output Voltage Accuracy,  $V_{OUT} \geq 1.8V$
- Low ESR Capacitor Compatible
- High Ripple Rejection : 55 dB (Typ.)
- Output Current Limit Protection : 2.0A (Typ.)
- Short Circuit Protection : 1.0A (Typ.)
- Thermal Overload Shutdown Protection
- SOT-223 and TO-252 Packages
- RoHS Compliant and 100% Lead (Pb)-Free and Green (Halogen Free with Commercial Standard)

### Applications

- Active SCSI Terminators
- High Efficiency Linear Regulators
- Monitor Microprocessors
- Low Voltage Micro-Controllers
- Post Regulator for Switching Power

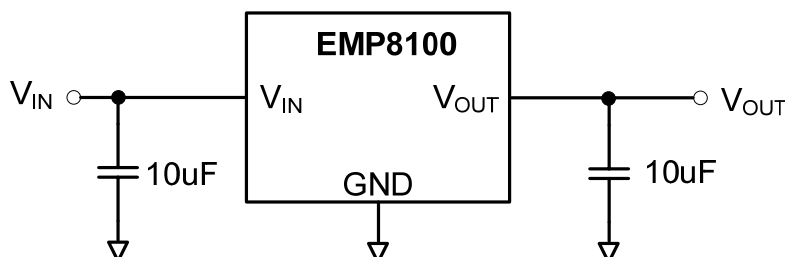
### General Description

The EMP8100 series is a CMOS low-dropout linear regulator that operates in the input voltage range from +2.5V to +6.5V and delivers 1.5A output current.

The EMP8100 is available fixed output voltage type is preset at an internally trimmed voltage 1.8V, 2.5V, or 3.3V. Other options 1.2V, 1.5V, 2.85V, 3.0V and 3.6V are available by special order only.

The EMP8100 consists of a 0.95V bandgap reference, an error amplifier, and a P-channel pass transistor. Other features include short-circuit protection and thermal shutdown protection. The EMP8100 series devices are available in both of SOT-223 and TO-252 packages.

### Simplified Application Circuit



Ordering Information

Package	Vout	Product ID.	Marking	Packing
SOT-223	1.0-5.0V	EMP8100-XXVEJ3NRR		Tape & Reel 2.5kpcs
SOT-223	1.0-5.0V	EMP8100-XXVEG3NRR		Tape & Reel 2.5kpcs
SOT-223	1.0-5.0V	EMP8100-XXVEX3NRR		Tape & Reel 2.5kpcs
TO-252	1.0-5.0V	EMP8100-XXTBP3NRR		Tape & Reel 3kpcs
TO-252	1.0-5.0V	EMP8100-XXTBR3NRR		Tape & Reel 3kpcs

Example

EMP8100-XXVEJ3NRR

- XX Output voltage (Vout Range)
- VEJ3 SOT-223 Package (Package Code)
- NRR RoHS & Halogen free package  
Commercial Grade Temperature  
Rating: -40 to 85°C  
Package in Tape & Reel

**Vout Code :**

**V<sub>OUT</sub> Range : 1.0V~5.0V** Exam. 12=1.2V, 25=2.5V, 50=5.0V **Default :** None Digit=Adjustable Output

**Package Code :**

**VEJ :** SOT-223\*

**VEG :** SOT-223\*

**VEX :** SOT-223\*

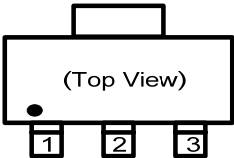
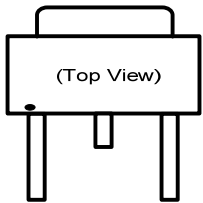
**TBP :** TO-252\*

**TBR :** TO-252\*

Note :

\* The difference between “J”, “G” & “X” type and “P” & “R” type, please refer to “Pin Description”.

**Pin Description**

Part NO.	Pin			Symbol	Pin Description
	SOT-223(J)	SOT-223(G)	SOT-223(X)		
 <p>(Top View) SOT-223</p>	3	1	3	V <sub>IN</sub>	Regulator Input Pin.
	1	2	2	GND	Ground Pin.
	2	3	1	V <sub>OUT</sub>	Regulator Output Pin.
Part NO.	Pin		Symbol	Pin Description	
	TO-252 (P)	TO-252 (R)			
 <p>(Top View) TO-252</p>	1	3	V <sub>IN</sub>	Regulator Input Pin.	
	2	1	GND	Ground Pin.	
	3	2	V <sub>OUT</sub>	Regulator Output Pin.	