

LM3210 – 1.25A Miniature, Adjustable, Step-Down DC-DC Converter for RF Power Amplifiers

Description

The LM3210 is a DC-DC converter optimized for powering RF power amplifiers (PAs) from a single Lithium-Ion cell. However, it may be used in many other applications. It steps down an input voltage in the range from 2.7V to 5.5V to an adjustable output voltage of 0.5V to 3.6V. Output voltage is set by using a VCON analog input to control power levels and efficiency of the RF PA.

The LM3210 offers superior performance for mobile phones and similar RF PA applications. Fixed-frequency PWM operation minimizes RF interference. A shutdown function turns the device off and reduces battery consumption to 0.01 μA (typ.).

Only three small external surface-mount components, an inductor and two ceramic capacitors, are required.

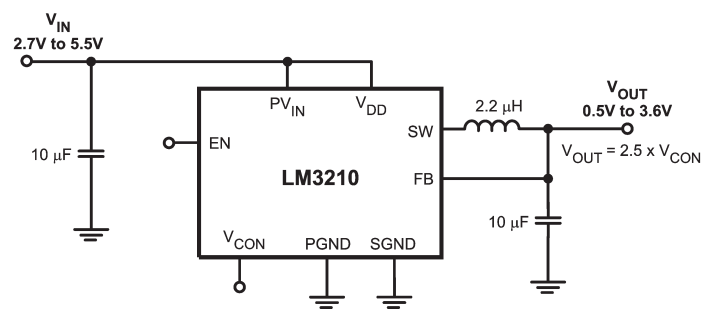
Features

- Operates from a single Li-Ion cell (2.7V to 5.5V)
- Adjustable Output Voltage (0.5V to 3.6V)
- Fast Output Voltage Transient (0.5V to 2.7V in 30 μs max)
- 1.25A Maximum load capability
- High Efficiency
- Current Overload Protection
- Thermal Overload Protection

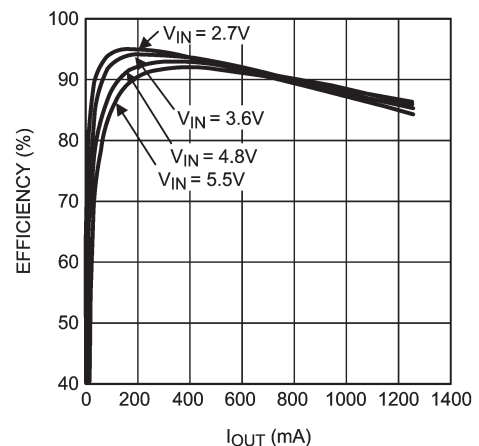
Applications

- Cellular Phones
- Hand-Held Radios
- RF PC Cards
- Battery Powered RF Devices

Typical Applications



Efficiency vs Output Current ($V_{\text{OUT}} = 2.1\text{V}$)



For detailed datasheet or samples, please contact National Semiconductor sales.

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