National Semiconductor

LM3210
PRODUCT BRIEF

June 1, 2009

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

General 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 V_{CON} 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.

Notice: This document is not a full datasheet. For more information regarding this product or to order samples please contact your local National Semiconductor sales office or visit http://www.national.com/support/dir.html

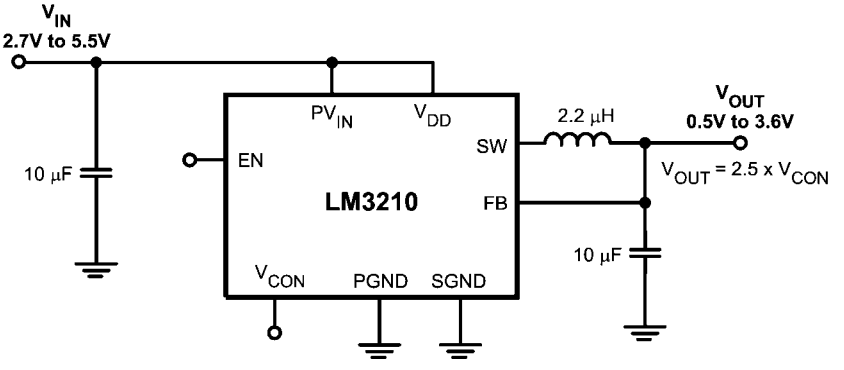
Features

- 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



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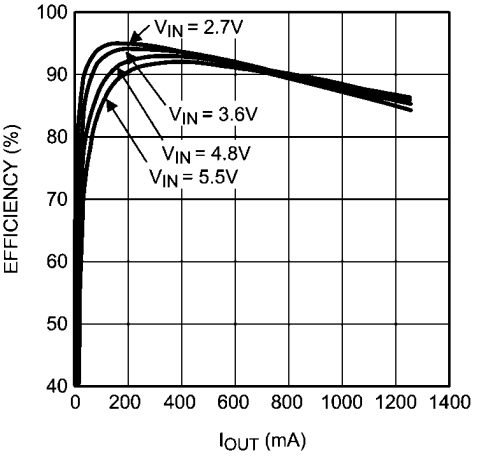

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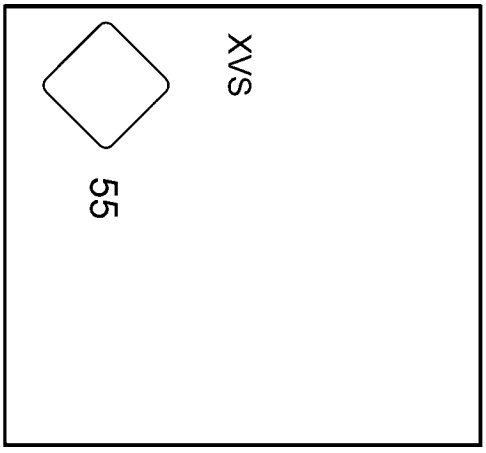
For detailed datasheet or samples, please contact National Semiconductor sales.

Pin Identification



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Package Mark — Top View

Order Information

Order Number	Package Marking (Note)	Supplied As
LM3210TLE	XVS/55	250 units, Tape-and-Reel
LM3210TLX	XVS/55	1000 units, Tape-and-Reel

Note: The actual physical placement of the package marking will vary from part to part. The package marking “X” designates the date code. “V” is an NSC internal code for die traceability. Both will vary in production. “S” designates device type as switcher and “55” identifies the device (part number).

Notes

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LVDS	www.national.com/lvds	Packaging	www.national.com/packaging
Power Management	www.national.com/power	Green Compliance	www.national.com/quality/green
Switching Regulators	www.national.com/switchers	Distributors	www.national.com/contacts
LDOs	www.national.com/ldo	Quality and Reliability	www.national.com/quality
LED Lighting	www.national.com/led	Feedback/Support	www.national.com/feedback
Voltage Reference	www.national.com/vref	Design Made Easy	www.national.com/easy
PowerWise® Solutions	www.national.com/powerwise	Solutions	www.national.com/solutions
Serial Digital Interface (SDI)	www.national.com/sdi	Mil/Aero	www.national.com/milaero
Temperature Sensors	www.national.com/tempsensors	SolarMagic™	www.national.com/solarmagic
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