

Keywords: step-down regulator, step-down converter, buck regulator, all-ceramic capacitors, high efficiency, USB

## APPLICATION NOTE 479

# All-Ceramic 320mA Step-Down Converter for USB

Dec 01, 2000

*Abstract: This application note shows how a 320mA all-ceramic, step-down converter can generate the high efficiency needed for USB. The MAX1692 low-noise, step-down regulator is featured.*

Additional information:

- [Technical support: power](#)

A USB-powered device is constrained to draw no more than 0.5A from the input supply. Efficiency is paramount in order to maximize the available power from the port, so a synchronous buck regulator with internal switches is the best choice. In addition, this application can be implemented with all-ceramic capacitors for lowest profile and high availability. This [MAX1692](#) circuit delivers +3.18V at 320mA from +5.25V input with 90.7% efficiency.

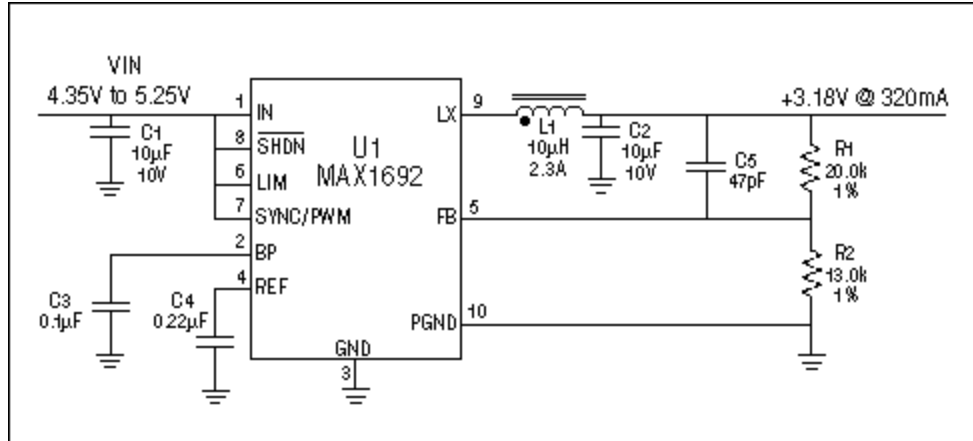


Figure 1.

### Related Parts

[MAX1692](#)

Low-Noise, 5.5V Input, PWM Step-Down Regulator

[Free Samples](#)

### More Information

For Technical Support: <http://www.maximintegrated.com/support>

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