

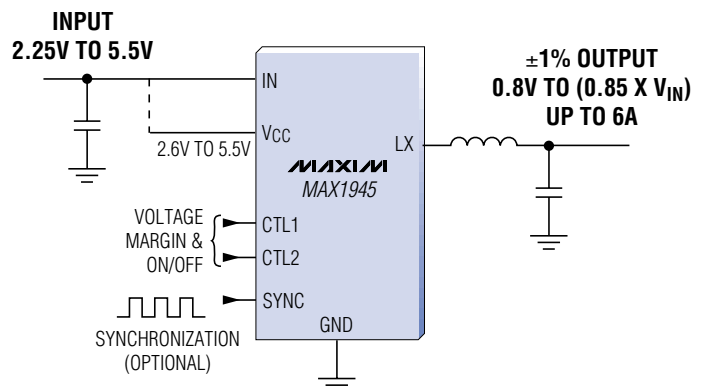
SMALLEST 6A STEP-DOWN DC-DC IS 1% ACCURATE

Fits in 0.76in² and Integrates Voltage Margining Circuitry

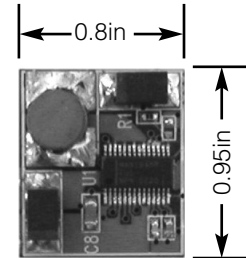
The MAX1945 simplifies step-down regulator design, layout, and testing in cellular base stations, servers, storage, network and telecom equipment by integrating high-power MOSFET switches and voltage margining control. Its 500kHz/1MHz switching frequency allows use of small external components and provides the flexibility of using ceramic or electrolytic capacitors. Additionally, the MAX1945's current-mode PWM control and high switching frequency provide excellent transient response.

- ◆ 2.25V Input with 3V/5V Bias
- ◆ 500kHz or 1MHz Operation
- ◆ Synchronize to Clock (Optional)
- ◆ Ceramic or Electrolytic Capacitors
- ◆ ±5% or ±10% Voltage Margining
- ◆ Short-Circuit and Thermal-Overload Protection
- ◆ Priced at \$4.20[†]
- ◆ For 2 Outputs, Run 2 MAX1945s Out-of-Phase to Reduce Input Capacitance

MAX1945 INTEGRATES POWER MOSFETS AND SIMPLIFIES STEP-DOWN DC-DC DESIGNS



	MAX1945	Competition
Switch R _{DS(on)}	43mΩ (max)	65mΩ (max). 51% higher. May violate T _j max rating in worst-case conditions.
Voltage Margining	Integrated	No. Needs external components.
Output Capacitor	1 x 180μF	2 x 150μF
All Ceramic Design	Yes	No
Maximum Frequency	1MHz	700kHz
Minimum Output	0.8V	0.9V
Out-of-Phase Operation (2 devices)	Built-in, saves capacitors.	No. Needs external components.
2.25V operation	Yes, with 3V/5V bias	No



Voltage margining permits logic controls to shift the output voltage to ±5% (MAX1945R) and ±10% (MAX1945S) extremes to perform production line corner tests.

[†]1000-up recommended resale. Prices provided are for design guidance and are FOB USA. International prices will differ due to local duties, taxes, and exchange rates. Not all packages are offered in 1k increments, and some may require minimum order quantities.



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