



VISHAY INTERTECHNOLOGY, INC.

Low Dropout Voltage Regulators (LDOs)

Power IC

Power Good

noise = $30\mu\text{V}_{\text{rms}}$

3.3V
3.0V
2.8V

1.8V
1.5V

PRODUCT OVERVIEW



Vishay Siliconix offers a complete family of high-performance low-dropout voltage regulators (LDOs) with maximum current outputs from 150 mA to 5 A. Combining low dropout voltages and ultra-fast transient response times, Vishay Siliconix LDOs are ideal for providing power to the signal circuitry in digital phones, notebook computers, MP3 players, digital cameras, and other portable and non-portable systems.

Built on CMOS or BiCMOS technology, all devices in the 150-mA to 500-mA family feature an input voltage range of 2 V to 6 V, with fixed output voltages from 1.2 V to 5 V, as well as adjustable versions.

For low-current, battery-operated applications, designers will find appropriate devices whether the priority is minimizing noise, (Si91841/3), availability of an error flag feature, (Si91842/4), or both (Si91845/6). A price sensitive alternative is the Si9183. These devices are offered in the SOT-23 package.

For 250-mA to 350-mA current applications, Vishay offers the Si9181 and Si9182 family, LDOs packaged in the TSSOP-8 and MSOP-8 formats, with an error flag on board. The new Si91871 and Si91872 offer low noise or error flag at 300 mA in a tiny leadless PowerPAK™ package. For applications requiring still higher levels of current, the new Si9185 delivers 500 mA in a tiny MLP33 PowerPAK package, measuring just 3 mm by 3 mm and featuring a dropout voltage of 150 mV at 500 mA of load.

Vishay Siliconix also offers 400-mA smart LDOs for network interface cards (NICs) and networking equipment, with two or three input voltages of 5 V and 3.3 V and a single output voltage at 3.3 V. These smart LDOs, the Si91861 and Si91860, are provided in the SO-8 package.

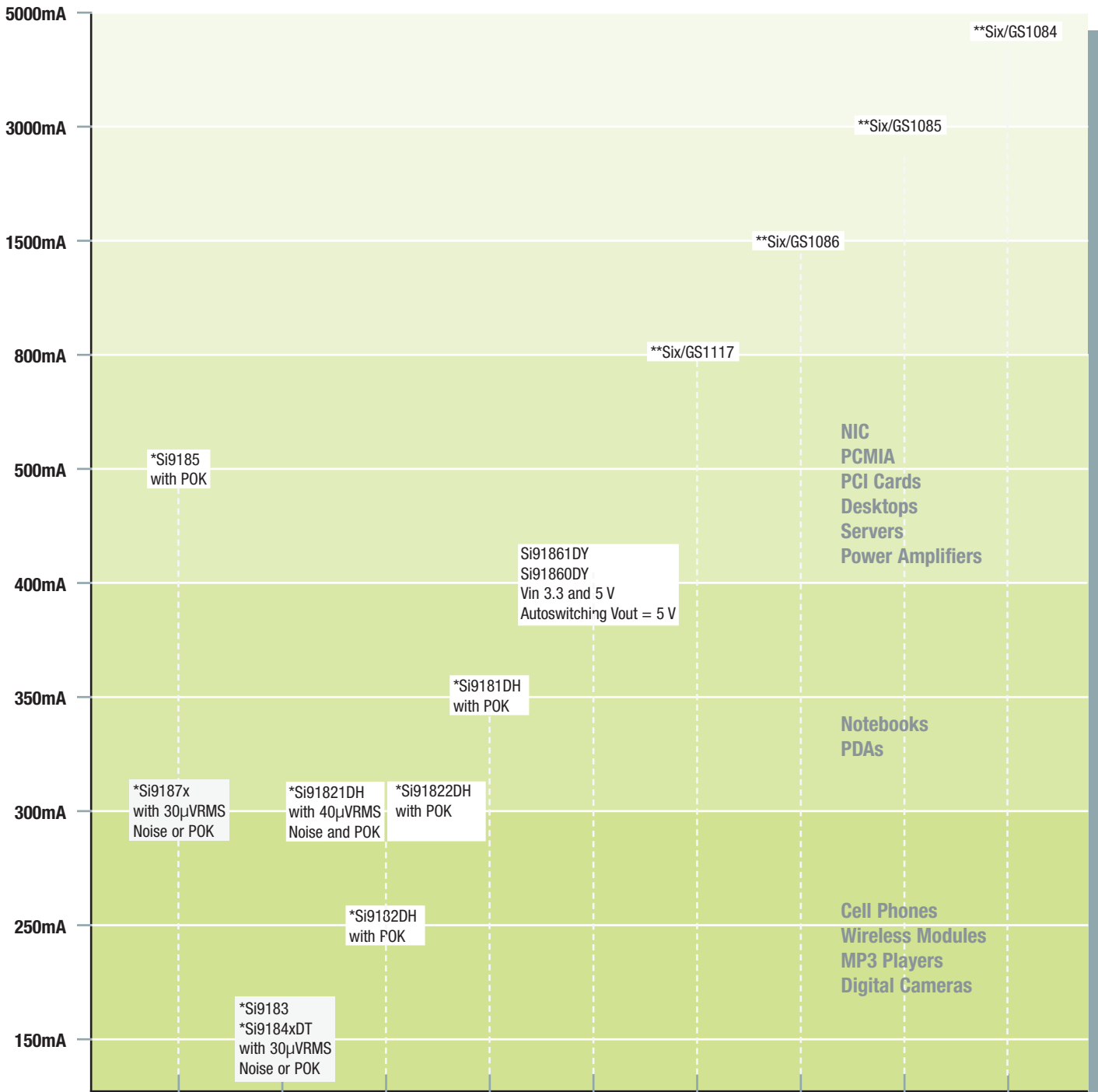
For current levels of 800 mA up to 5 A, Vishay offers a line of rugged LDOs in SOT-223, TO-252, and TO-263 as well as the industry workhorse TO-220 package. These devices feature a fast transient response, excellent line and load regulation, and internal thermal and over current protection. The input voltage ranges from 2.9 V to 7 V, with fixed output voltages of 1.8 V, 2.5 V, 2.85 V, 3.3 V and 5 V, as well as an adjustable output voltage. These products are ideally suited as post regulators in microprocessor and I/O applications.

Data sheets, application notes, and demo board information are available on our Web site: http://www.vishay.com/products/power_ics/

For more information, please contact: Power_IC@vishay.com

LDO Offering

Current



Package

MLP 3 x 3mm	SOT-23-5 3 x 3mm	MSOP-8 3 x 4.9mm	TSSOP-8 3 x 6.4mm	SOIC-8 4 x 6mm	SOT-223 3.5 x 6.5mm	TO-252 5.4 x 5.5mm	TO-263 9.1 x 5.5mm	TO-220 10.2 x 15.4mm
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*V_{in} = 2.0 V to 6.0 V
V_{out} = 1.2 V to 5.0 V and Adjustable
**V_{in} = 2.7 V to 7.0 V
V_{out} = 1.8 V to 5.0 V and Adjustable