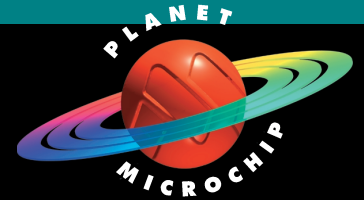


300mA, 500mA, 800mA, LDO Family

Product Information

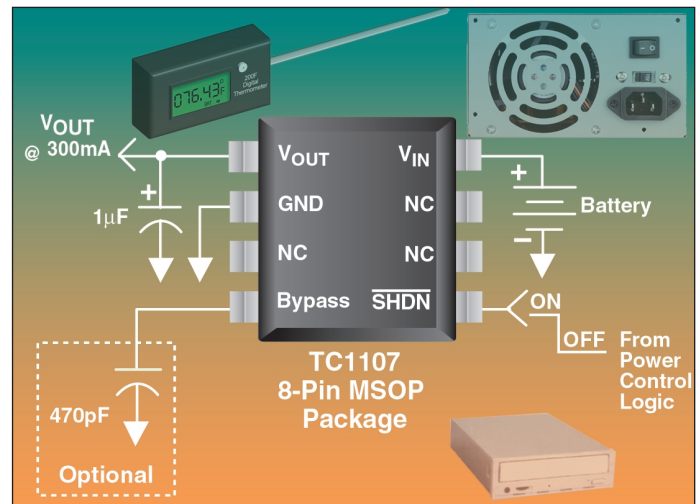


The **TC1107**, **TC1108**, **TC1173**, **TC1174** and **TC1269** are 300mA low dropout linear regulators. The **TC1262** and **TC1263** are 500mA low dropout linear regulators. The **TC1264**, **TC1265** and **TC2117** are 800mA low dropout linear regulators.

Microchip's 300mA to 800mA LDO Family offers excellent dynamic performance with a very low operating current of 80µA, independent of load. A shutdown mode option is available for select devices to reduce total current to less than 0.5µA. The devices also feature low dropout voltage, for higher efficiency, and a very accurate output voltage of maximum $\pm 2.5\%$. These LDOs use an advanced CMOS technology, which provides very low operating current and superior load and line transient responses.

The devices are fully specified from 2.7V to 6.0V over the -40°C to $+125^{\circ}\text{C}$ temperature range. A variety of features is also provided on select devices to address a broad application spectrum; shutdown mode for further power savings, ERROR output for low battery indication or processor reset, reference bypass for output noise reduction, and adjustable output voltage (1.23V to V_{IN}) for maximum voltage flexibility. The devices are available in DDPK, MSOP, SOIC, SOT-223, and TO-220 packages.

The LDO's extremely low operating current, stability with 1µF capacitors, and superior dynamic behavior make the devices ideal for a variety of applications, such as cellular phones, personal digital assistants (PDAs), laptops, MP3 players, hand-held meters, medical instruments, and power supplies. Other applications may include industrial control, optical modules, datacom equipment, modems, flash module cards, PC cards, disk drives, set-top boxes and portable equipment.



Features:

- Low operating current: 130µA maximum
- High $\pm 0.5\%$ output voltage accuracy
- Stable with 1µF output capacitors
- Large variety of output voltage options
- Excellent dynamic performance
- Low dropout voltage:
 - 240mV at 300mA
 - 350mV at 500mA
 - 600mV at 800mA
- Shutdown mode for further power savings
- ERROR output (TC1173/1263/1265)
- Reference Bypass for reduced output noise (TC1107/1173/1174/1263/1265/1269)
- Adjustable output voltage option (TC1174)

Related Application Notes:

- AN23 LDO Thermal Consideration
- AN31 Latch-Up Protection of CMOS ICs
- AN41 Using Microchip's Micropower LDOs

300mA, 500mA, 800mA, LDO Family *Continued*

Additional Information:

- Microchip's web site: www.microchip.com
- Microchip's *Technical Library CD-ROM*, Order No. DS00161
- *Analog Interface Handbook*, Order No. DS00207
- Product Line Card, Order No. DS00148
- *Analog Design Pack CD-ROM*, Order No. DS51205

300mA/500mA/800mA Low Dropout Regulator Family

Product	Output Current	V _{CC} Range	# of Pins/ Package	SHDN	V _{REF} Bypass	ERROR Output	Adj. V _{OUT}	Max. I _Q	Typical V _{OUT} Accuracy	V _{DROP} at I _{OUTMAX}
TC1107	300mA	2.7V to 6.0V	8SN 8MS	✓	✓			80µA	±0.5%	240mV
TC1108	300mA	2.7V to 6.0V	3DB					80µA	±0.5%	240mV
TC1173	300mA	2.7V to 6.0V	8SN 8MS	✓	✓	✓		80µA	±0.5%	240mV
TC1174	300mA	2.7V to 6.0V	8SN 8MS	✓	✓		✓	80µA	±0.5%	240mV
TC1262	500mA	2.7V to 6.0V	3DB 3AB 3EB					130µA	±0.5%	350mV
TC1263	500mA	2.7V to 6.0V	8SN 5AT 5ET	✓	✓	✓		130µA	±0.5%	350mV
TC1264	800mA	2.7V to 6.0V	3DB 3AB 3EB					130µA	±0.5%	450mV
TC1265	800mA	2.7V to 6.0V	8SN 5AT 5ET	✓	✓	✓		130µA	±0.5%	450mV
TC1269	300mA	2.7V to 6.0V	8MS	✓	✓			80µA	±0.5%	240mV
TC2117	800mA	2.7V to 6.0V	3DB 3EB					130µA	±0.5%	600mV

Package Key: AB = TO-220, AT = TO-220 DB = SOT-223 EB = DPAK ET = DPAK MS = MSOP SN = SOIC

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