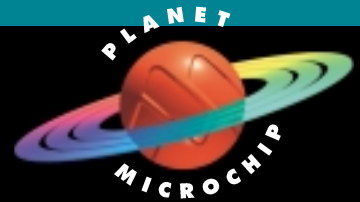


TC1300/1305/1306 Power Management Combo Family

Product Information

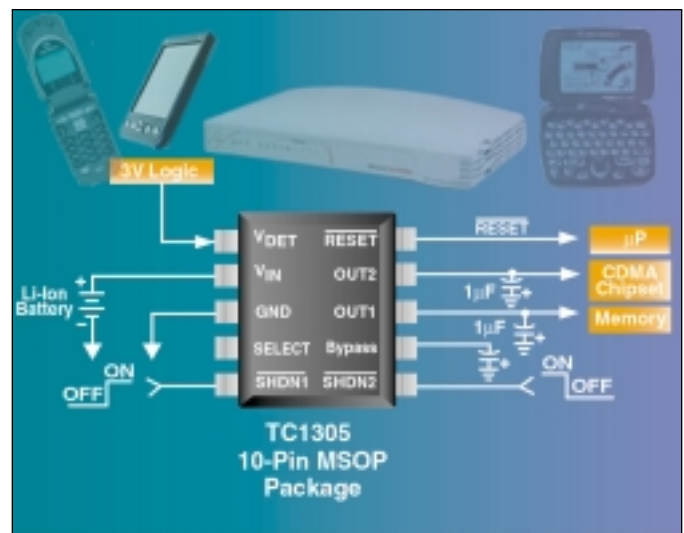


The **TC1300** is a 300mA low dropout linear regulator with an integrated system supervisor. The **TC1305** and **TC1306** are dual 150mA low dropout linear regulators with an integrated system supervisor.

The **TC1300**, **TC1305**, and **TC1306** offer excellent dynamic performance with a very low operating current of 120 μ A, independent of load. A shutdown mode is also available for reducing the regulator's total current to less than 0.5 μ A. The devices also feature low dropout voltage, for higher efficiency, and a very accurate output voltage of maximum $\pm 2.5\%$. Microchip combines supervisory and regulator functions on its power management combo ICs that use an advanced CMOS process resulting in a very low operating current and superior load and line transient response.

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 to address a broad applications spectrum: shutdown mode for further power savings, RESET output for processor reset, reference bypass for output noise reduction, and Select Mode™ operation for maximum output voltage flexibility. All devices are available in small MSOP packages.

The TC130X's extremely low operating current, high integration, and superior dynamic behavior make these devices ideal for battery-powered applications, such as cellular phones, pagers, personal digital assistants (PDA), laptops, MP3 players, and hand-held meters. Other applications may include industrial control, optical modules, datacom equipment, modems, flash module cards, PC cards, and portable equipment.



Features:

- Low operating current: 200 μ A maximum
- $\pm 0.5\%$ typical output voltage accuracy
- Small MSOP packages
- Select Mode™ operation: selectable output voltages (TC1305/1306)
- Excellent dynamic performance
- Very low dropout voltage:
 - 210mV at 300mA (TC1300)
 - 240mV at 150mA (TC1305/1306)
- Integrated system supervisor
- Shutdown mode for further power savings
- Reference Bypass for reduced output noise (TC1300/1305)
- Over-temperature and over-current protection

Related Application Notes:

- AN23 LDO Thermal Consideration
- AN31 Latch Up Protection of CMOS ICs

TC1300/1305/1306

Power Management Combo 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

Power Management Combo Family											
Product	Output Current	V _{CC} Range	# Pins/ Package	Output Channels	Select Mode™ Operation	SHDN	V _{REF} Bypass	RESET Output	Max. I _Q	Typical V _{OUT}	V _{DROP} at I _{OUTMAX}
TC1300	300mA	2.7V to 6.0V	8MS	1		√	√	√	160μA	±0.5%	210mV
TC1305	150mA	2.7V to 6.0V	10UN	2	√	√	√	√	160μA	±0.5%	240mV
TC1306	150mA	2.7V to 6.0V	8MS	2	√	√		√	200μA	±0.5%	240mV

Package Key: MS = MSOP, UN = 10-pin MSOP

Americas

Atlanta (770) 640-0034
 Austin – Analog (512) 345-2030
 Boston (978) 692-3848
 Boston – Analog (978) 371-6400
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