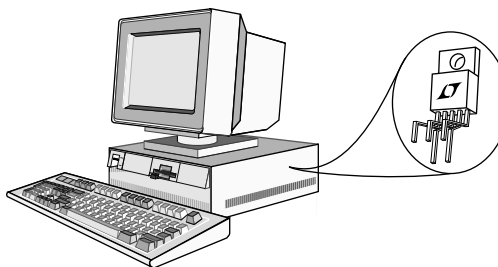


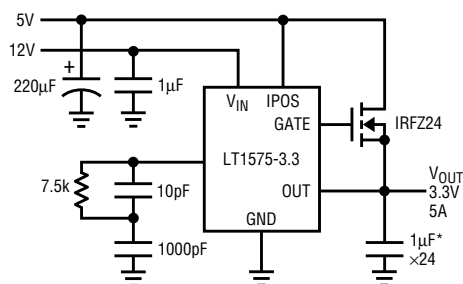
ICs for Low Voltage Microprocessor, Logic and Bus Termination

- Linear Regulation Solutions Featuring Fast Transient Response
- Switching Regulators for Up to 30A at > 90% Efficiency
- GTL+ Termination Solutions
- Reset Generation for PCI Applications
- 15kV ESD Tolerant RS232 Interface



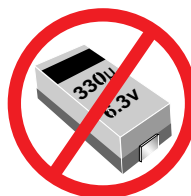
UltraFast™ Regulator Eliminates Bulk Output Capacitors

LT®1575 Combines Fast Transient Response with Precision Regulation



*REQUIRES ONLY CERAMIC OUTPUT CAPACITORS

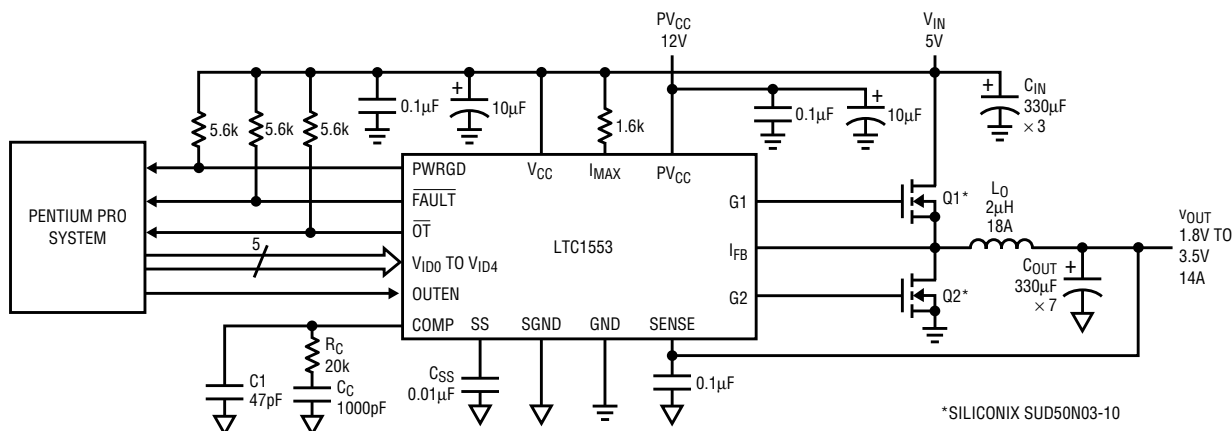
- 5V to 3.3V Regulation at > 7A
- Reduces Cost by Eliminating Aluminum and Tantalum Output Capacitors
- Guaranteed 1% Output Voltage Accuracy (Over Temperature)
- Short-Circuit Protection Without Current Sense Resistor
- Extremely Low Dropout Voltage Possible: 0.1V at 10A



Switching Regulator for Pentium® Pro Processor Includes Digital Control

LTC®1553 High Efficiency Switching Regulator Controller

- Digitally Programmable 1.8V to 3.5V Fixed Output Voltage
- Provides All Features Required by the Intel Pentium® Pro Processor Specifications
- Flags for Power Good, Over-Temperature and Over-Voltage Fault
- Output Current Exceeds 14A from a 5V or 12V Supply
- All N-Channel External MOSFETs
- Excellent Output Regulation: $\pm 1\%$ Over Line, Load and Temperature Variations
- High Efficiency: Over 95% Possible
- Adjustable Current Limit Without External Sense Resistors
- Fast Transient Response
- Available in 20-Pin SSOP



*SILICONIX SUD50N03-10

1553 F01

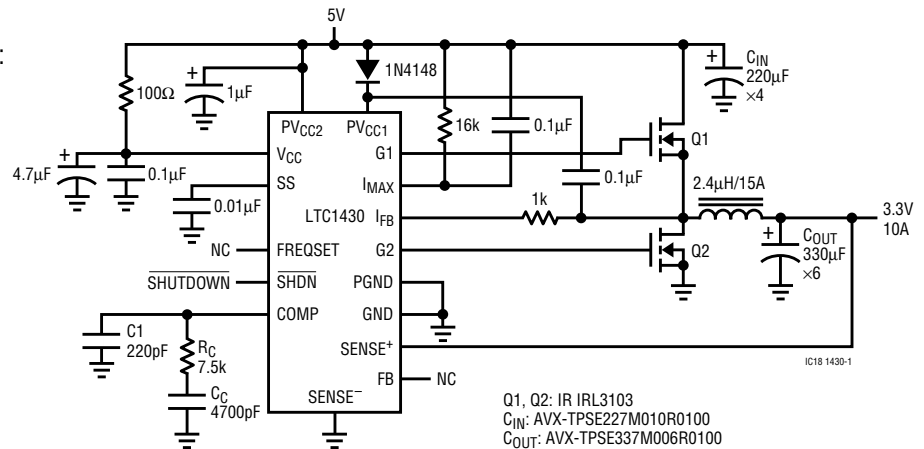
LT, LTC and LT are registered trademarks of Linear Technology Corporation.
UltraFast is a trademark of Linear Technology Corporation.
Pentium is a registered trademark of Intel Corporation.

Rev E 0197

High Power, High Efficiency Switching Regulator Controller Solution

LTC1430 Drives Large N-Channel MOSFETs for High Output Currents

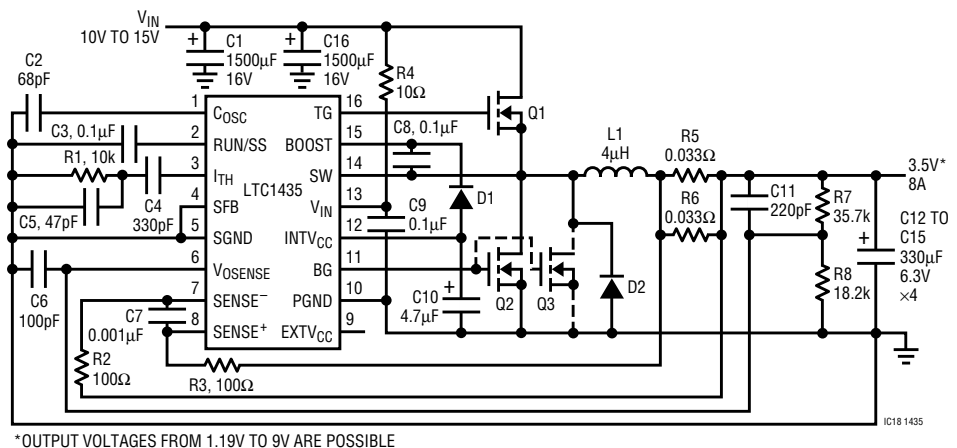
- High Power 5V to 3.xV Switching Controller:
Can Exceed 10A Output
- All N-Channel External MOSFETs
- Excellent Output Regulation:
 $\pm 1\%$ Over Line and Load
- Constant Frequency Operation—Small L
- High Efficiency: Over 95% Possible
- Fast Transient Response
- Adjustable or Fixed 3.3V Output
- Available in 8- and 16-Lead DIP and Narrow SO Packages



High Efficiency 12V to 3.xV Conversion for High Performance Processors

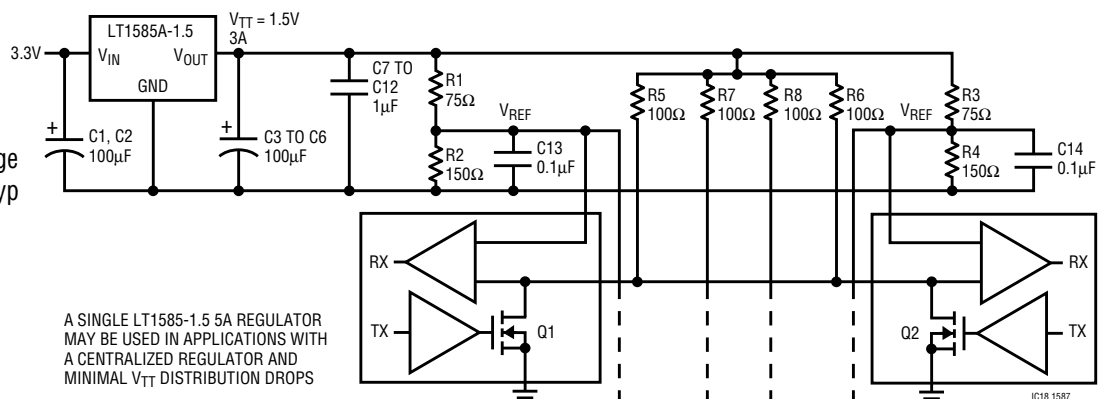
LTC1435 Handles Wide Input Voltage Range and Large N-Channel MOSFETs

- Dual N-Channel MOSFET Synchronous Drive
- Programmable Fixed Frequency
- Wide V_{IN} Range: 3.5V to 36V Operation
- Ultrahigh Efficiency
- Programmable Soft Start
- Remote Output Voltage Sense
- Foldback Current Limiting (Optional)
- Current Mode Operation for Excellent Line and Load Transient Response
- Available in 16-Lead Narrow SO and SSOP Packages
- 1.19V $\pm 1\%$ Reference



GTL+ Bus Regulator Has Fast Response and Tight Regulation

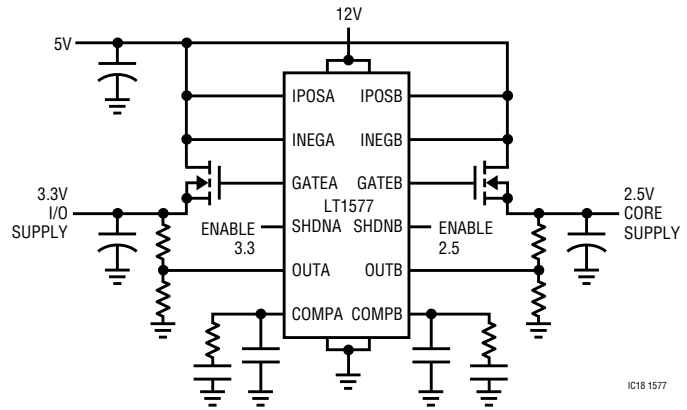
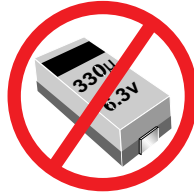
- Best Solution for Intel Pentium Pro Processor GTL+ Supply
- Fast Transient Response
- Guaranteed Dropout Voltage
- Load Regulation: 0.05% Typ
- Trimmed Current Limit
- On-Chip Thermal Limiting



Dual High Performance Regulator for Microprocessor Core and I/O Supplies

LT1577 Dual Regulator Controller Handles High Current Loads

- UltraFast Transient Response Eliminates Tantalum and Electrolytic Output Capacitors
- 1% Reference for Each Regulator
- Typical Load Regulation: 1mV
- High Side Current Sense Limit
- Independent Enables for Proper Sequencing

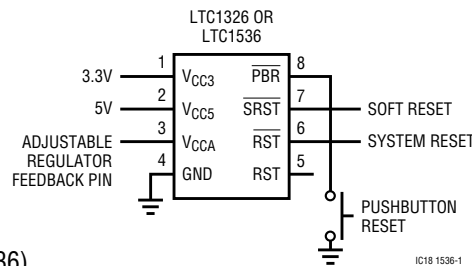


IC18 1577

Triple Supply Monitor for PCI Applications

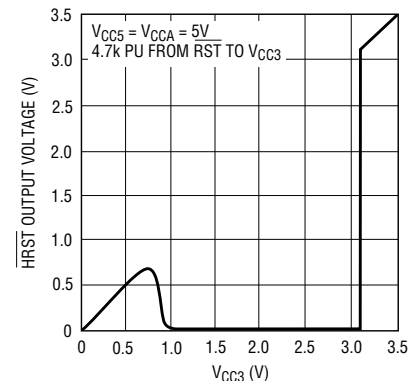
LTC1536 Monitors Multiple Supply Voltages with High Accuracy

- Monitors 5V, 3.3V and Adjustable Inputs Simultaneously
- Guaranteed Threshold Accuracy: $\pm 0.5\%$
- Low Supply Current: 20 μ A (LTC1326)
65 μ A (LTC1536)
- Internal Reset Time Delay: 200ms
- Manual Pushbutton Reset Input
- Active Low and Active High Reset Outputs
- Active Low Soft Reset Output
- Power Supply Glitch Immunity
- Guaranteed Reset for $V_{CC3} \geq 1V$
- Meets PCI t_{FALL} Timing Specifications (LTC1536)
- 8-Pin SO and MSOP Packages



IC18 1536-1

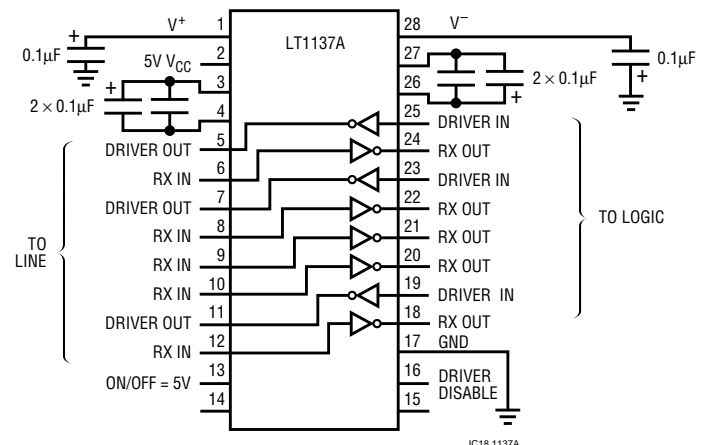
RST Output Voltage vs Supply Voltage



IC18 1536-2

Low Power 5V RS232 Transceiver Has 15kV ESD Protection

- ESD Protection over $\pm 15kV$
- Uses Small Capacitors: 0.1 μ F, 0.2 μ F
- 1 μ A Supply Current in Shutdown
- Operates to 120kbaud
- CMOS Comparable Low Power: 60mW
- Operates from a Single 5V Supply
- Easy PC Layout: Flowthrough Architecture
- Rugged Bipolar Design
- Outputs Assume a High Impedance State When Off or Powered Down
- Improved Protection: RS232 I/O Lines Can Be Forced to $\pm 30V$ Without Damage



IC18 1137A

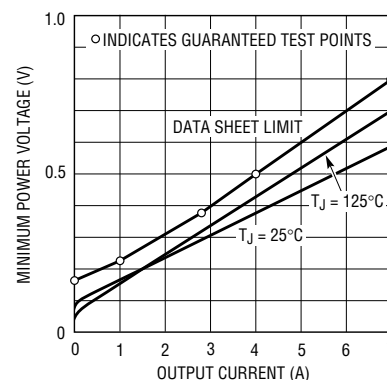
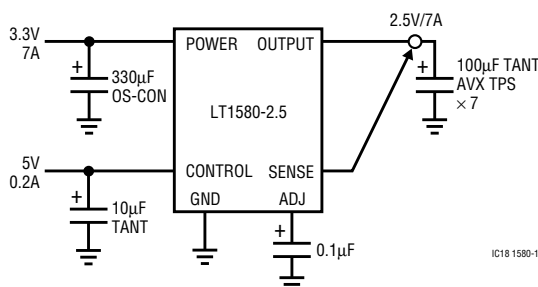
Core Voltage	Core Current	Regulator	I/O Voltage	I/O Current	Regulator
Pentium® Pro Processor 166MHz/180MHz/200MHz					
3.3V ±2%	10A to 14A	LTC1430 (S) or LTC1552 (S)	3.3V ±5%	2A to 5A	LT1575 or LT1585A
GTL+ Terminator					
1.5V ±5%	5.7A	LT1587-1.5 × 2 LT1585A-1.5 LT1575	None	—	—
P55C 160MHz/200MHz					
2.8V ±100mV	5.7A	LTC1430 (S) LT1575 (L)	3.3V ±5%	0.65A	LT1587
P54CS 120MHz/133MHz					
3.3V ±5%	3.575A	LT1575 (L) LTC1430 (S) LT1585 (L)	Same as Core	—	—
Pentium® Processor 133MHz/166MHz/200MHz					
3.5V ±2.9%	4.5A	LT1575 (L) LTC1430 (S) LT1585 (L)	Same as Core	—	—
Pentium Processor 90MHz/100MHz					
3.3V ±5%	4A 7A with Cache	LT1585 (L) LT1584 (L) LT1575 (L)	Same as Core	—	—
Intel DX4 100MHz					
3.45V ±5%	4A with Cache	LT1585 (L) LT1575 (L)	Same as Core	—	—
P54LM-90MHz (Notebooks)					
2.9V ±5%	2.5A	LTC1435 (S)	3.3V +5/-2.5%	0.32A	LTC1435
P54LM-75MHz (Notebooks)					
2.9V ±5%	2.5A	LTC1435 (S)	3.3V +5/-2.5%	0.32A	LTC1435
AMD K5					
2.38V to 3.60V ±5%	4A	LTC1552 (S) LTC1430 (S)	3.3V ±5%	1A to 3A	LT1587
IBM PowerPC™					
3.6V	3A	LT1587-3.6 (L)	Same as Core	—	—
Cyrix Cx486DX2-V80					
4V ±5%	2A	LT1528 (L)	Same as Core	—	—
Nexgen NX586					
4V ±3%	7A	LT1580 (L)	Same as Core	—	—
AMD DXL4 75MHz/100MHz and DXL2 66MHz/80MHz					
3.3V ±5%	3A	LT1587-3.3 (L)	Same as Core	—	—

L = Linear Regulator S = Switching Regulator Pentium is a registered trademark of Intel Corporation PowerPC is a trademark of IBM Corporation

7A, Very Low Dropout Regulator for Low Voltage Microprocessors

LT1580 Regulates from 3.3V to 2.5V with ± 1% Accuracy

- Low Dropout, 540mV at 7A Output Current
- Fast Transient Response
- Remote Sense
- 1mV Load Regulation
- Fixed 2.5V Output or Adjustable Output
- No Supply Sequencing Problems in Dual Supply Mode



IC18 1580-2