

1.5A Ultra Low Dropout, Adjustable and Fixed Voltage Regulator

features

- Guaranteed 1.5A Output Current
- Adjustable Output Down to 1.2V from ATX Power Supply
- Fixed Output Voltages of 2.5V and 3.3V
- 2% Output Accuracy
- 560mV Dropout Voltage at 1.5A
- Extremely Tight Voltage and Line Regulation
- Standard 5-Terminal Low Cost TO-220 and TO-263
- Replacement for Industry Standard LT1583

applications

- 3.3V to 2.8V ATX Power Supplies
- 3.3V to 2.9V for Portable Pentium® Processor
- 5V to 3.3V VRM Supply
- High Efficiency "Green" Computer Systems

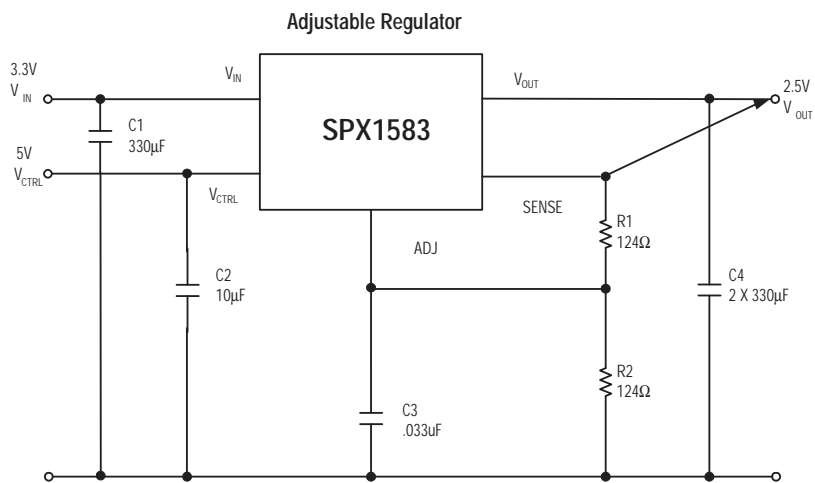
description

The SPX1583 is a 1.5A low dropout regulator with 560mV low dropout voltage. The adjustable version requires only two external resistors to set the output voltage. The fixed version has a preset output of 2.5V or 3.3V and does not require any external resistors. The SPX1583 features a low dropout of 560mV (typ.) and offers fast transient response. This device is suitable for Pentium® processor applications requiring 2.8V or 2.5V from 3.3V ATX power supplies, where a low current input voltage 1V greater than the output voltage is needed. With an external sense pin the load regulation is less than 1mV. This device is an excellent choice for the use in powering low voltage microprocessors that require a lower dropout, fast transient response to regulate from 3.3V and 5V supplies. The SPX1583 is also an excellent choice as a post regulator for switching supplies applications as it offers protection against over-current faults, reversed input polarity, over temperature operation and positive and negative transient voltage.

The SPX1583 is offered in industry standard 5 pin TO-220 and TO-263 packages.



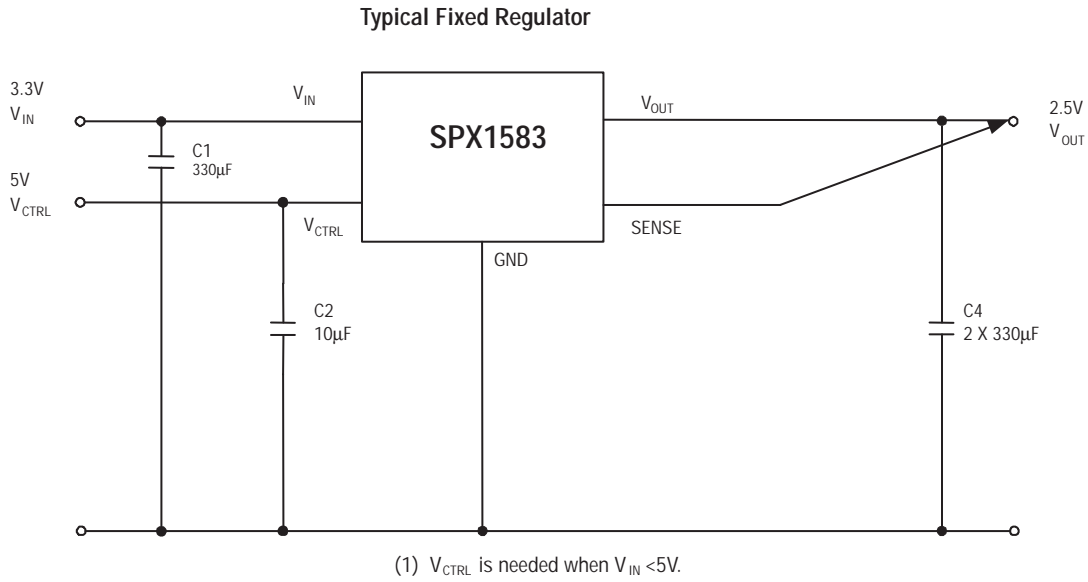
typical application circuit



- (1) V_{CTRL} needed when $V_{IN} < 5V$.
- (2) $V_{OUT} = V_{REF} (1 + R2/R1) + I_{ADJ} R2$.
- (3) V_{REF} is measured across adjust to sense.

SPX1583

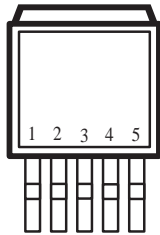
typical application circuit



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packages

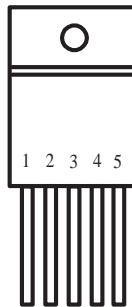
TO-263-5 (T)



Top View

1. SENSE
2. ADJ or FIXED
3. V_{OUT}
4. V_{CTRL}
5. V_{IN}

TO-220-5 (U)



Front View

1. SENSE
2. ADJ or FIXED
3. V_{OUT}
4. V_{CTRL}
5. V_{IN}

ordering information - Please consult the factory for pricing and availability on a Tape-On-Reel option.

Part Number	Accuracy	Output Voltage	Packages
SPX1583U5	2%	Adj.	5 Pin TO-220
SPX1583U5-2.5	2%	2.5V	5 Pin TO-220
SPX1583U5-3.3	2%	3.3V	5 Pin TO-220
SPX1583T5	2%	Adj.	5 Pin TO-263
SPX1583T5-2.5	2%	2.5V	5 Pin TO-263
SPX1583T5-3.3	2%	3.3V	5 Pin TO-263