

The PT7746 is a high-output 32 Amp “Current Booster” for the PT7770 series housed in a 27-pin SIP package.

Multiple PT7746 boosters will operate in parallel with any of the PT7770 series products, boosting output current in increments of 32A. Combinations of a PT7770 series regulator and PT7746 current boosters can supply enough power for virtually any multiple mega-processor application.

A PT7746 current booster adds a parallel output stage that is driven from the

regulator. As such, the system runs in perfect synchronization providing a low noise solution.

The PT7746 only operates in combination with a PT7770 series regulator and is not a stand-alone product. Please refer to the PT7771, PT7772, or PT7777 series data sheet for performance specifications.

The PT7746 has the same mechanical outline and package options as the PT7770 series.

Features

- 32A Current Boost
- Tracks Vo of a PT7770
- High Efficiency
- Input Voltage Range:
3V to 5.5V
- Synchronized with PT7770
- 27-pin SIP Package
- Run up to 2 in Parallel -
96 Amps

Pin-Out Information

Pin	Function	Pin	Function
1	Do not connect	14	GND
2	Do not connect	15	GND
3	Do not connect	16	GND
4	Do not connect	17	GND
5	Do not connect	18	GND
6	Do not connect	19	GND
7	V_{in}	20	V_{out}
8	V_{in}	21	V_{out}
9	V_{in}	22	V_{out}
10	V_{in}	23	V_{out}
11	V_{in}	24	V_{out}
12	Do not connect	25	V_{out}
13	GND	26	Do not connect
		27	Master Sync In

Ordering Information

PT7746 ☐

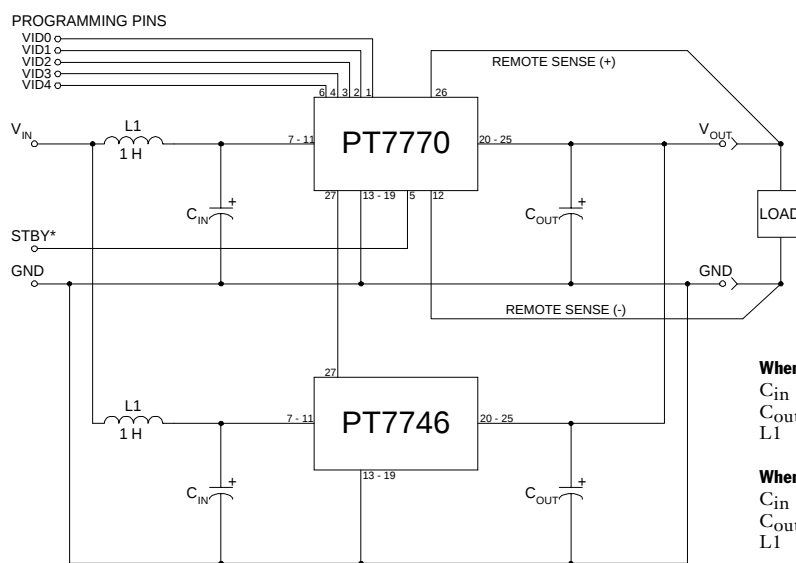
(For dimensions and PC Board layout, see Package Styles 1020 and 1030.)

PT Series Suffix (PT1234X)

Case/Pin Configuration

Vertical Through-Hole	N
Horizontal Through-Hole	A
Horizontal Surface Mount	C

Standard Application



When used with PT7771/7772:

C_{in} = Required 2400μF electrolytic
C_{out} = Required 2400μF electrolytic
L1 = Optional 1μH input choke

When used with PT7777:

C_{in} = Required 2400 μ F electrolytic
 C_{out} = Required 680 μ F electrolytic
 $L1$ = Optional 1 μ H input choke

Output Capacitors: When used with a PT7771 or PT7772, the PT7746 requires a minimum output capacitance of 2400µF. When used with a PT7777, the PT7746 requires a minimum output capacitance of 680µF for proper operation. Do not use Oscon type capacitors. The maximum allowable output capacitance is 30,000µF.

Input Filter: An input filter is optional for most applications. The input inductor must be sized to handle 32ADC with a typical value of 1μH. The input capacitance must be rated for a minimum of 2.6Arms of ripple current. For transient or dynamic load applications, additional capacitance may be required.

IMPORTANT NOTICE

Texas Instruments and its subsidiaries (TI) reserve the right to make changes to their products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgment, including those pertaining to warranty, patent infringement, and limitation of liability.

TI warrants performance of its semiconductor products to the specifications applicable at the time of sale in accordance with TI's standard warranty. Testing and other quality control techniques are utilized to the extent TI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.

Customers are responsible for their applications using TI components.

In order to minimize risks associated with the customer's applications, adequate design and operating safeguards must be provided by the customer to minimize inherent or procedural hazards.

TI assumes no liability for applications assistance or customer product design. TI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of TI covering or relating to any combination, machine, or process in which such semiconductor products or services might be or are used. TI's publication of information regarding any third party's products or services does not constitute TI's approval, warranty or endorsement thereof.