

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 V_o 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 ☐

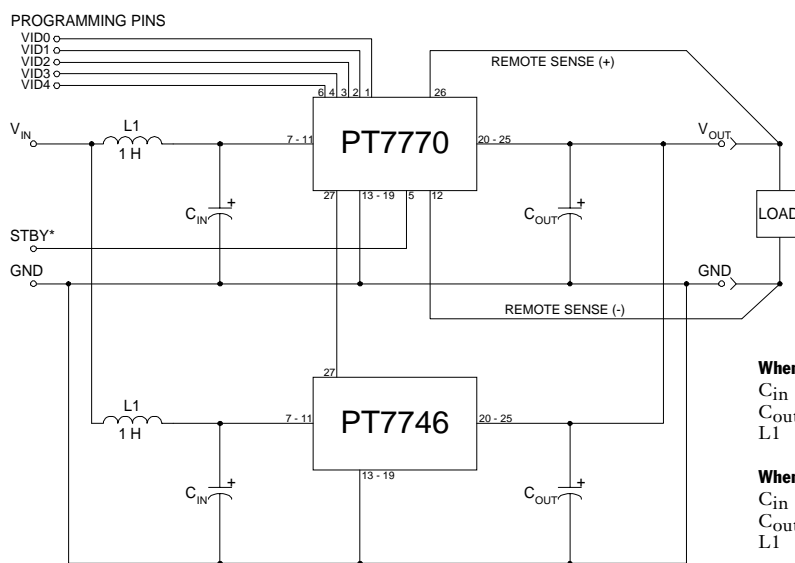
(For dimensions and PC Board layout, see Package Styles 1020 and 1030.)

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.

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