

The PT7749 is a high-performance 18 Amp “Current Booster” for the PT7705/6 Regulators housed in a 27-pin SIP package.

Multiple PT7749 boosters will operate in parallel with the PT7705/6 regulators, boosting output current in increments of 18A. Combinations of a PT7705/6 and PT7749 current boosters can easily supply enough power for virtually any multiple megaprocessor application.

A PT7749 current booster adds a parallel output stage driven directly by the main regulator. As such, the system runs in perfect synchronization providing a low noise solution.

The PT7749 only operates in combination with the PT7705/6 regulators and is not a stand-alone product. Therefore please refer the appropriate series data sheet for performance specifications.

**Features**

- Current Boost
- Tracks Vout of PT7705/06/07
- High Efficiency
- Input Voltage Range: 3V to 5.5V
- Synchronized with Regulator
- 27-pin SIP Package
- Run up to 4 in Parallel - 90 Amps

**Pin-Out Information**

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

**Ordering Information**

**PT7749□**

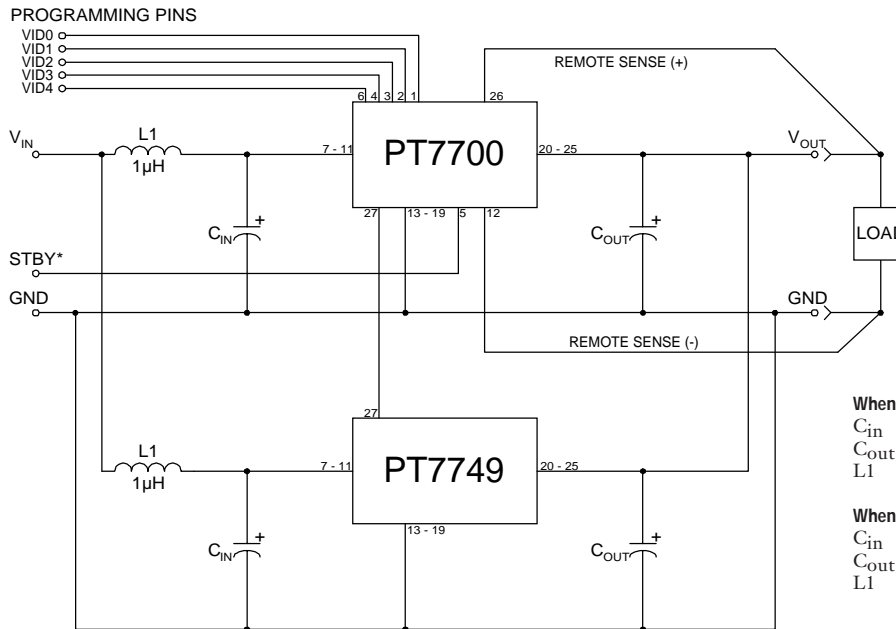
(For dimensions and PC Board layout, see Package Styles 800 and 810.)

**PT Series Suffix (PT1234X)**

**Case/Pin Configuration**

Vertical Through-Hole	<b>N</b>
Horizontal Through-Hole	<b>A</b>
Horizontal Surface Mount	<b>C</b>

**Standard Application**



**When used with PT7705/7706:**  
 C<sub>in</sub> = Required 1200µF electrolytic  
 C<sub>out</sub> = Required 1200µF electrolytic  
 L1 = Optional 1µH input choke

**When used with PT7707:**  
 C<sub>in</sub> = Required 1200µF electrolytic  
 C<sub>out</sub> = Required 330µF electrolytic  
 L1 = Optional 1µH input choke

**Output Capacitors:** When used with a PT7705 or PT7706, the PT7749 requires a minimum output capacitance of 1200µF. When used with a PT7707, the PT7749 requires a minimum output capacitance of 330µF for proper operation. Do not use Oscon type capacitors. The maximum allowable output capacitance is 15,000µF.

**Input Filter:** An input filter is optional for most applications. The input inductor must be sized to handle 18ADC with a typical value of 1µH. The input capacitance must be rated for a minimum of 1.3Arms of ripple current. For transient or dynamic load applications, additional capacitance may be required.

## IMPORTANT NOTICE

Texas Instruments Incorporated and its subsidiaries (TI) reserve the right to make corrections, modifications, enhancements, improvements, and other changes to its products and services at any time and to discontinue any product or service without notice. Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to TI's terms and conditions of sale supplied at the time of order acknowledgment.

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

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

TI does not warrant or represent that any license, either express or implied, is granted under any TI patent right, copyright, mask work right, or other TI intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information published by TI regarding third-party products or services does not constitute a license from TI to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

Reproduction of TI information in TI data books or data sheets is permissible only if reproduction is without alteration and is accompanied by all associated warranties, conditions, limitations, and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. TI is not responsible or liable for such altered documentation. Information of third parties may be subject to additional restrictions.

Resale of TI products or services with statements different from or beyond the parameters stated by TI for that product or service voids all express and any implied warranties for the associated TI product or service and is an unfair and deceptive business practice. TI is not responsible or liable for any such statements.

TI products are not authorized for use in safety-critical applications (such as life support) where a failure of the TI product would reasonably be expected to cause severe personal injury or death, unless officers of the parties have executed an agreement specifically governing such use. Buyers represent that they have all necessary expertise in the safety and regulatory ramifications of their applications, and acknowledge and agree that they are solely responsible for all legal, regulatory and safety-related requirements concerning their products and any use of TI products in such safety-critical applications, notwithstanding any applications-related information or support that may be provided by TI. Further, Buyers must fully indemnify TI and its representatives against any damages arising out of the use of TI products in such safety-critical applications.

TI products are neither designed nor intended for use in military/aerospace applications or environments unless the TI products are specifically designated by TI as military-grade or "enhanced plastic." Only products designated by TI as military-grade meet military specifications. Buyers acknowledge and agree that any such use of TI products which TI has not designated as military-grade is solely at the Buyer's risk, and that they are solely responsible for compliance with all legal and regulatory requirements in connection with such use.

TI products are neither designed nor intended for use in automotive applications or environments unless the specific TI products are designated by TI as compliant with ISO/TS 16949 requirements. Buyers acknowledge and agree that, if they use any non-designated products in automotive applications, TI will not be responsible for any failure to meet such requirements.

Following are URLs where you can obtain information on other Texas Instruments products and application solutions:

<b>Products</b>		<b>Applications</b>	
Amplifiers	<a href="http://amplifier.ti.com">amplifier.ti.com</a>	Audio	<a href="http://www.ti.com/audio">www.ti.com/audio</a>
Data Converters	<a href="http://dataconverter.ti.com">dataconverter.ti.com</a>	Automotive	<a href="http://www.ti.com/automotive">www.ti.com/automotive</a>
DLP® Products	<a href="http://www.dlp.com">www.dlp.com</a>	Communications and Telecom	<a href="http://www.ti.com/communications">www.ti.com/communications</a>
DSP	<a href="http://dsp.ti.com">dsp.ti.com</a>	Computers and Peripherals	<a href="http://www.ti.com/computers">www.ti.com/computers</a>
Clocks and Timers	<a href="http://www.ti.com/clocks">www.ti.com/clocks</a>	Consumer Electronics	<a href="http://www.ti.com/consumer-apps">www.ti.com/consumer-apps</a>
Interface	<a href="http://interface.ti.com">interface.ti.com</a>	Energy	<a href="http://www.ti.com/energy">www.ti.com/energy</a>
Logic	<a href="http://logic.ti.com">logic.ti.com</a>	Industrial	<a href="http://www.ti.com/industrial">www.ti.com/industrial</a>
Power Mgmt	<a href="http://power.ti.com">power.ti.com</a>	Medical	<a href="http://www.ti.com/medical">www.ti.com/medical</a>
Microcontrollers	<a href="http://microcontroller.ti.com">microcontroller.ti.com</a>	Security	<a href="http://www.ti.com/security">www.ti.com/security</a>
RFID	<a href="http://www.ti-rfid.com">www.ti-rfid.com</a>	Space, Avionics & Defense	<a href="http://www.ti.com/space-avionics-defense">www.ti.com/space-avionics-defense</a>
RF/IF and ZigBee® Solutions	<a href="http://www.ti.com/lprf">www.ti.com/lprf</a>	Video and Imaging	<a href="http://www.ti.com/video">www.ti.com/video</a>
		Wireless	<a href="http://www.ti.com/wireless-apps">www.ti.com/wireless-apps</a>