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Texas Instruments
PT7741A

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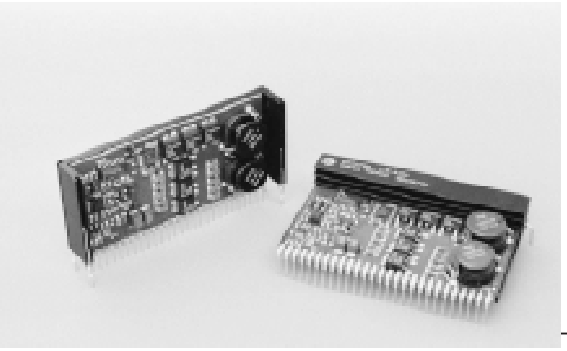
PT7741—5V

32 Amp "Current Booster" for PT7775/PT7779 Regulators

Power Trends Products from Texas Instruments

SLTS118
(Revised 8/31/2000)



Description

The PT7741 is a high-output 32 Amp "Current Booster" designed to operate with the PT7775 and PT7779 regulators. Up to two PT7741 boosters will operate in parallel with one regulator, boosting output current in increments of 32A. Combinations of one regulator and PT7741 current boosters can supply enough power for virtually any multiple mega-processor application.

The booster adds a parallel output stage that is driven directly by the regulator. Both operate in perfect sychronization for a low noise solution.

The PT7741 only operates with the PT7775 and PT7775 regulators. It is not a stand-alone product. Please refer to the appropriate data sheet for the performance specifications. The current booster has the same package options as the companion regulators.

Features

- 32A Current Boost
- Tracks Vo of either a PT7775 or PT7779
- High Efficiency
- Input Voltage Range: 4.5V to 5.5V
- Synchronized with Regulator
- 27-pin SIP Package
- Run up to 2 in Parallel (96A)

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

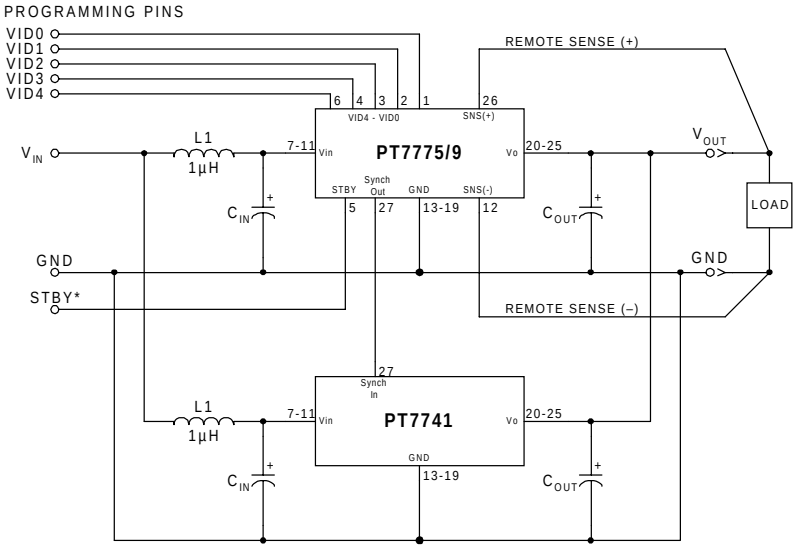
PT7741❑

(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



External Capacitors: *When used with a PT7779, the PT7741 requires a minimum ouput capacitance of 330µF. The maximum allowable output capacitance is 30,000µF. The PT7741 also requires a minimum input capacitance of 2400µF, which must be rated for a minimum of 2.0Arms of ripple current. For transient or dynamic load applications, additional capacitance may be required. For further information, see the accompanying application note on capacitor selection for this product.*

Input Filter: *An input filter inductor is optional for most applications. The input inductor must be sized to handle 32ADC with a typical value of 1µH.*

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
PT7741A	LIFEBUY	SIP MODULE	EJA	27		TBD	Call TI	Call TI			

(1) The marketing status values are defined as follows:
ACTIVE: Product device recommended for new designs.
LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.
NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.
PREVIEW: Device has been announced but is not in production. Samples may or may not be available.
OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check http://www.ti.com/productcontent for the latest availability information and additional product content details.
TBD: The Pb-Free/Green conversion plan has not been defined.
Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.
Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.
Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

(6) Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

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