

# PT7743 Series

**20 AMP "CURRENT BOOSTER"  
FOR PT7709 REGULATOR**

Preliminary 2/18/2000

**Advanced  
Information**

The PT7743 is a high-performance 20 Amp "Current Booster", specifically designed to operate with the PT7709 series regulator.

A PT7743 booster will operate in parallel with a PT7709 to provide an additional 20A of output current.

A combination of a PT7709 and up to four PT7743 boosters can power virtually any multiple mega-processor application with up to 100A of supply current.

Each PT7743 current booster adds another output stage to the PT7709 regulator and operates in perfect synchronization.

The PT7743 is not a stand-alone product and can only be used in combination with the PT7709. Please refer to the PT7709 series data sheet for the performance specifications. The PT7743 booster has the same mechanical dimensions and package options as the PT7709 regulator.

### Features

- 20A Current Boost
- Output Tracks PT7709
- High Efficiency
- Short Circuit Protection
- Input Voltage Range: 4.5V to 5.5V
- Synchronized with PT7709
- 27-pin SIP Package
- Run up to 4 in Parallel - 100 Amps
- Short Circuit Protection

### 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

**PT7743** □

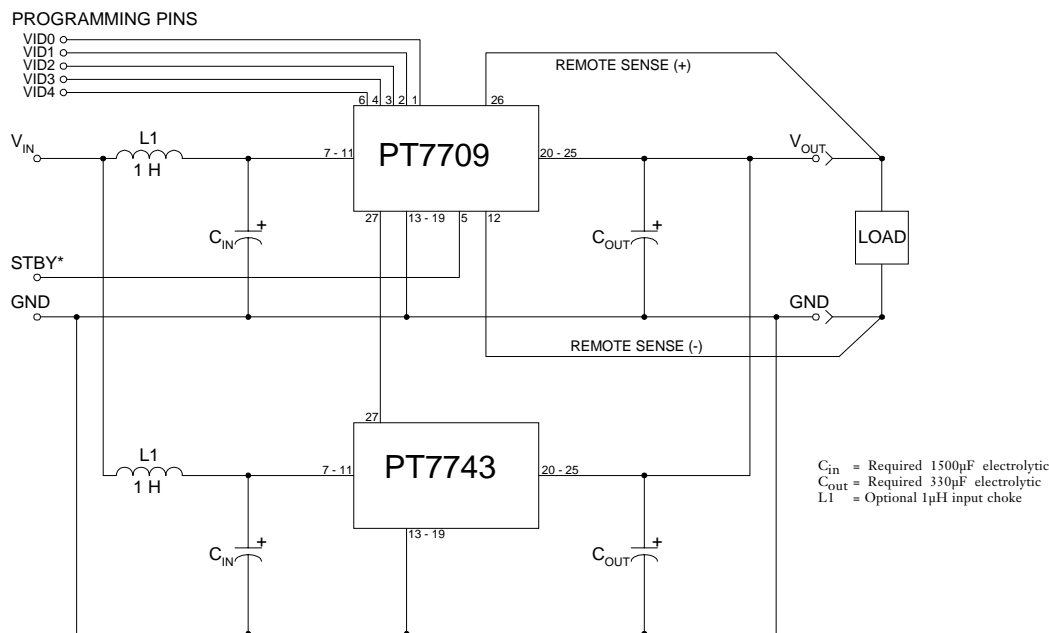
(For dimensions and PC Board layout, see Package Styles 800 and 810.)

### 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



**Output Capacitors:** The PT7709 and PT7743 each require a minimum output capacitance of 330µF for proper operation. Do not use Oscon type capacitors.

**Input Filter:** An input filter is optional for most applications. The input inductor must be sized to handle 20ADC 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.