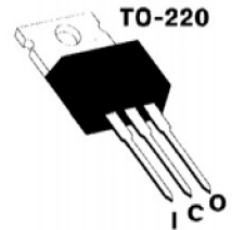
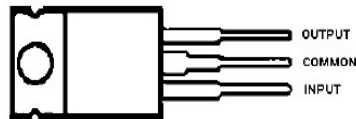


Description

This series of fixed-voltage monolithic integrated-circuit voltage regulators is designed for a wide range of applications. These applications include on-card regulation for elimination of noise and distribution associated with single-point regulation. In addition, they can be used with power-pass elements to make high-current voltage regulators. Each The internal of these regulators can deliver up to 1.0 A of output current.

Features

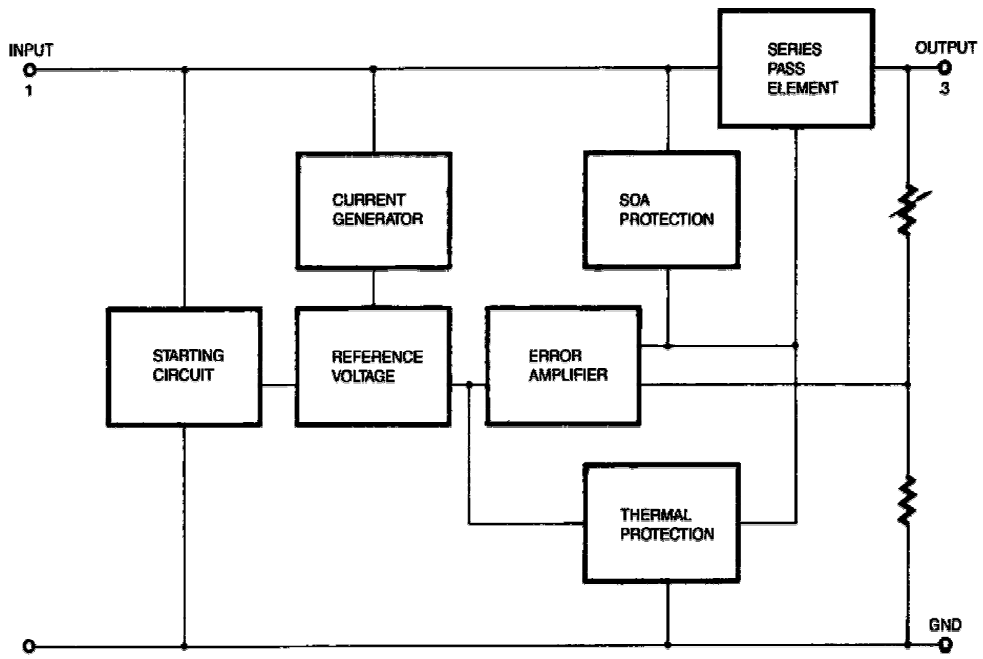
- Output Current in Excess of 1.0A
- No External Components Required
- Internal Short Circuit Current Limiting
- Internal Thermal Overload Protection
- Output Transistor Safe-Area Compensation
- Output Voltage Offered in 4% Tolerance



Package TO-220
(top view)

Package

Internal Block Diagram



Absolute Maximum Ratings

Maximum Input Voltage: 35V

Operation Junction Temperature Range: -40 °C to 125 °

Electrical Characteristics

($V_{in}=10V$, $I_o=0.5A$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, $T_j=25^\circ$, unless otherwise noted.)

Characteristic	Symbol	Test Condition	Min	Max	Unit
Output Voltage	V_o		4.8	5.2	V
Output Voltage	V_o	$5.0mA \leq I_o \leq 1.0A$; $7.0V \leq V_{in} \leq 20V$ $0^\circ C \leq T_j \leq 125^\circ C$	4.75	5.25	V
Line Regulation	ΔV_v	$7V \leq V_{in} \leq 25V$; $8V \leq V_{in} \leq 12V$	-	100 50	mV
Load Regulation	ΔV_i	$5.0mA \leq I_o \leq 1.5A$ $0.25A \leq I_o \leq 0.75A$	-	100 50	mV
Quiescent Current	I_b		-	8.0	mA
Quiescent Current Change	ΔI_b	$7V \leq V_{in} \leq 25V$, $5mA \leq I_o \leq 1.0A$	-	1.3 0.5	mA

Typical Applications Circuit

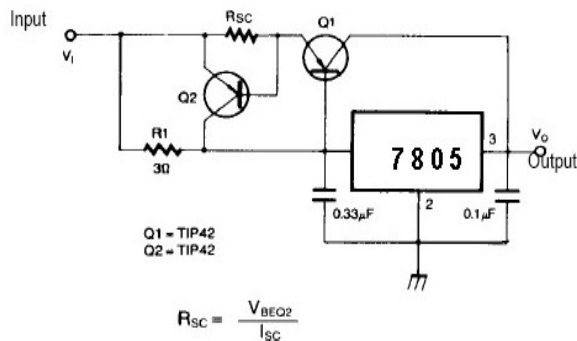
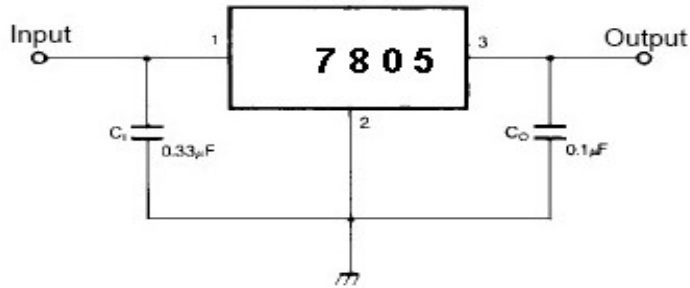
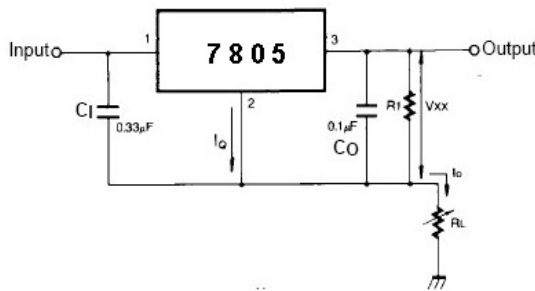


Figure 1. High Output Current with Short Circuit Protection


Figure 2. DC Parameters


$$I_0 = \frac{V_{XX}}{R_1} + I_Q$$

Figure 3. Constant Current Regulator

Ordering Information

ORDERING NUMBER	PACKAGE	MARKING
7805	TO - 220	ET7805

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