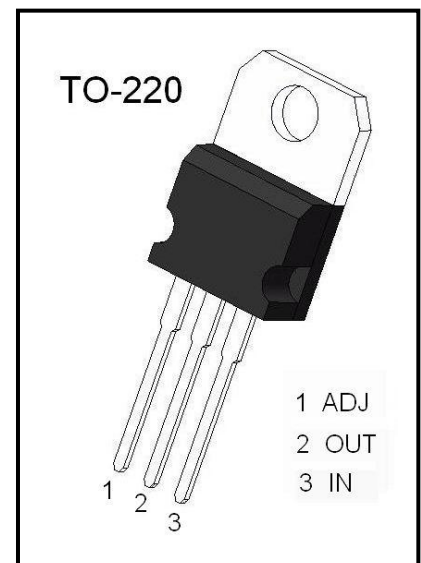


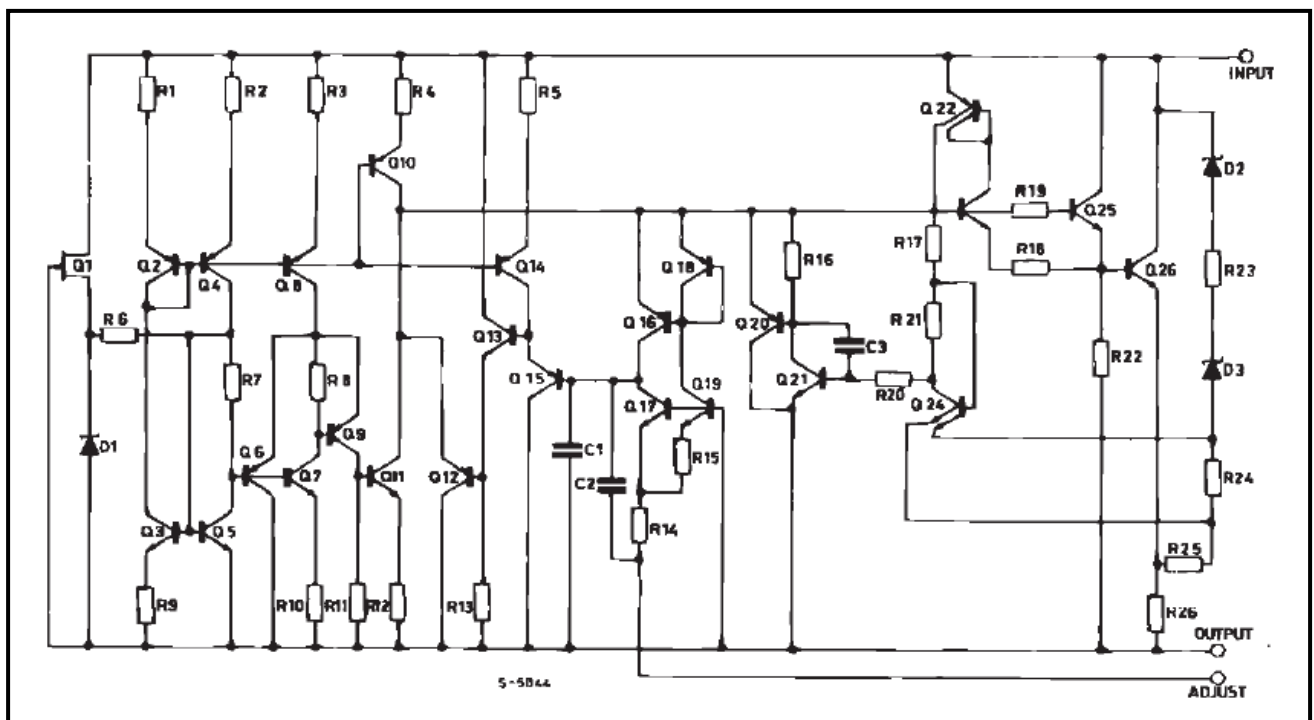
The LM317 are monolithic integrated circuit in TO-220 packages intended for use as positive adjustable voltage regulators. They are designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range. The nominal output voltage is selected by means of only a resistive divider, making the device exceptionally easy to use and eliminating the stocking of many fixed regulators

Features

- Output Voltage Range : 1.2 TO 37V
- Output Current in excess of 1.5A
- 0.1% Line and Load Regulation Voltages
- Floating Operation For High
- Complete Series of Protections:
Current Limiting, Thermal Shutdown and SOA Control



Schematic Diagram



Absolute Maximum Ratings

Symbol	Parameter	Value	Unit
V_{i-o}	Input-output Differential Voltage	40	V
I_o	Output Current	Internally Limited	
V_o	Output Voltage	5	V
T_{OP}	Operating Junction Temperature	$0 \sim +125$	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	$-60 \sim +150$	$^{\circ}\text{C}$

Electrical Characteristics

(Vi - Vo = 5 V, Io = 500 mA, IMAX = 1.5A and PMAX = 20W, unless otherwise specified)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Line Regulation	ΔV_o	$V_i - V_o = 3 \text{ to } 40\text{V}$	$T_j = 25^{\circ}\text{C}$		0.04	%V
					0.07	
Load Regulation	ΔV_o	$V_o \leq 5\text{V}$ $I_o = 10\text{mA} \sim I_{\text{MAX}} 1.5\text{A}$	$T_j = 25^{\circ}\text{C}$		25	mV
					70	
		$V_o \geq 5\text{V}$ $I_o = 10\text{mA} \sim I_{\text{MAX}} 1.5\text{A}$	$T_j = 25^{\circ}\text{C}$		0.5	%V
					1.5	
Adjustment Pin Current	I_{ADJ}	$T_j = 25^{\circ}\text{C}$			100	μA
Adjustment Pin Current	ΔI_{ADJ}	$V_i - V_o = 2.5 \text{ to } 40\text{V}$ $I_o = 10\text{mA} \sim I_{\text{MAX}} 1.5\text{A}$			5	μA
Output Voltage Drift	$\Delta V / \Delta T$	$I_o = 5\text{mA}$		-0.8		$\text{mV}/^{\circ}\text{C}$
Reference Voltage (between pin3 and pin1)	V_{REF}	$V_i - V_o = 2.5 \text{ to } 40\text{V}$ $I_o = 10\text{mA} \sim I_{\text{MAX}} 1.5\text{A}$ $P_D \leq P_{\text{MAX}}$	1.2	1.25	1.3	V
Output Voltage Temperature Stability	$\Delta V_o / \Delta V_o$			1		%
Minimum Load Current	$I_{o(\text{min})}$	$V_i - V_o = 40\text{V}$			10	mA
Maximum Load Current	$I_{o(\text{max})}$	$V_i - V_o \leq 15\text{V}, P_D < P_{\text{MAX}}$	1.5			A
		$V_i - V_o = 40\text{V}, P_D < P_{\text{MAX}}, T_j = 25^{\circ}\text{C}$		0.4		