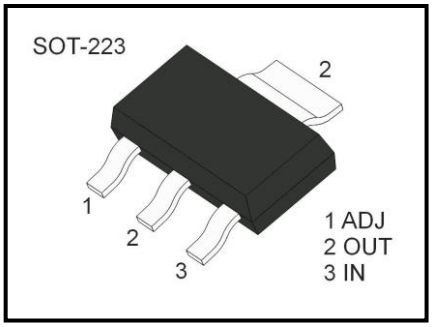
LM317 3-Terminal 1.5A Positive Adjustable Regulator

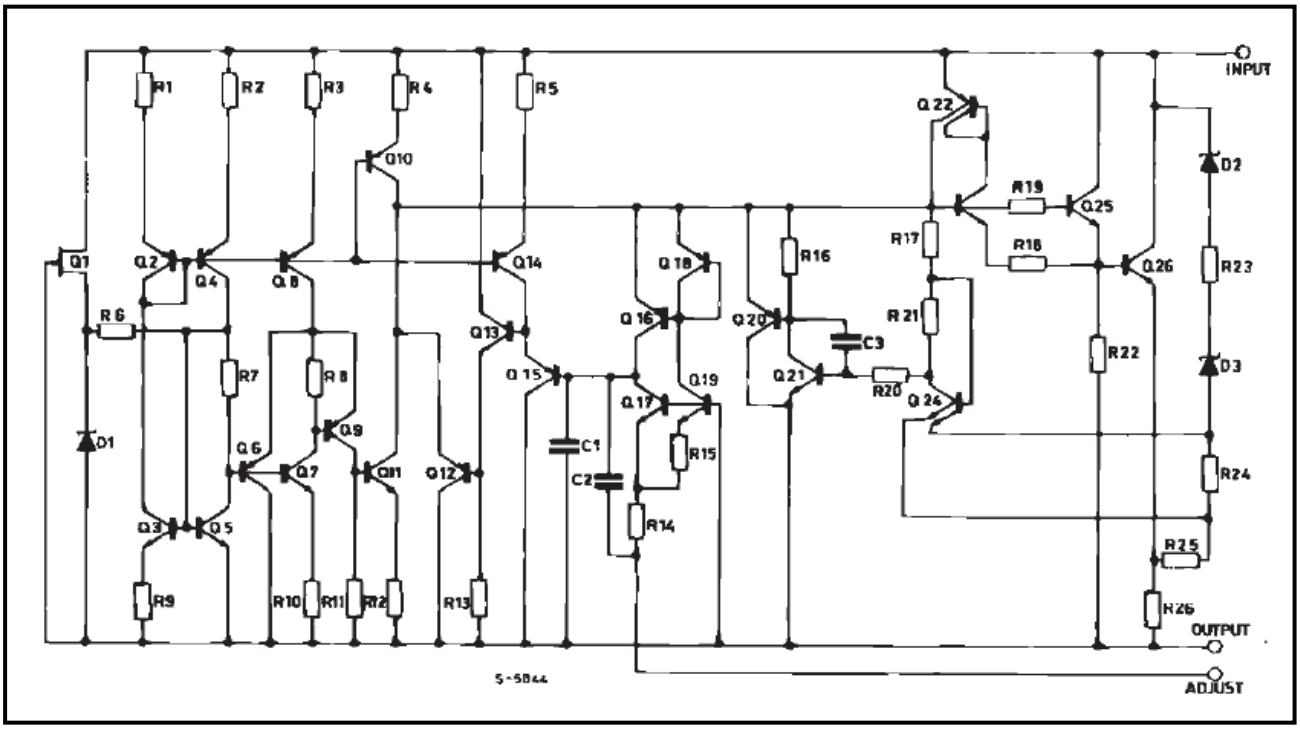
The LM317 are monolithic integrated circuit in SOT-223 packagesintended for use as positive adjustable voltage regulators.They are designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range.
The nominal output voltage is selected by means of only a resistive divider, making the device exceptionally easy to use and eliminatingthestocking 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 Shudown 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	Intenrally Limited	
V_O	Out put Voltage	5	V
T_{OP}	Operating Junction Temperature	0～＋125	℃
T_{STG}	Storage Temperature	-60～＋150	℃

Electrical Characteristics

(Vi - Vo = 5 V, Io = 500 mA, I_{MAX} = 1.5A and P_{MAX} = 20W, unless otherwise specified)

Parameter	Symbol	Conditions		Value			Unit
				Min	Typ	Max	
Line Regulation	ΔV_O	Vi-Vo=3 to 40V	Tj＝25℃			0.04	%V
						0.07	
Load Regulation	ΔV_O	$V_o \leqslant 5V$ I_O = 10mA~I_{Max}1.5A	Tj＝25℃			25	mV
						70	
		$V_o \geqslant 5V$ I_O = 10mA~I_{Max}1.5A	Tj＝25℃			0.5	%V
						1.5	
Adjustment Pin Current	I_{ADJ}	Tj＝25℃				100	μA
Adjustment Pin Current	ΔI_{ADJ}	Vi-Vo = 2.5 to 40V I_O = 10mA~I_{Max}1.5A				5	μA
Output Voltage Drift	$\Delta V / \Delta T$	I_O = 5mA			-0.8		mV/℃
Reference Voltage (between pin3 and pin1)	V_{REF}	Vi-Vo = 2.5 to 40V I_O = 10mA~I_{Max}1.5A $P_D \leqslant P_{MAX}$		1.2	1.25	1.3	V
Output Voltage Temperature Stability	$\Delta V_O / \Delta V_O$				1		%
Minimum Load Current	$I_{O(min)}$	Vi-Vo = 40V				10	mA
Maximum Load Current	$I_{O(max)}$	Vi-Vo ⩽ 15V, $P_D < P_{MAX}$		1.5			A
		Vi-Vo = 40V，$P_D < P_{MAX}$，Tj＝25℃			0.4		