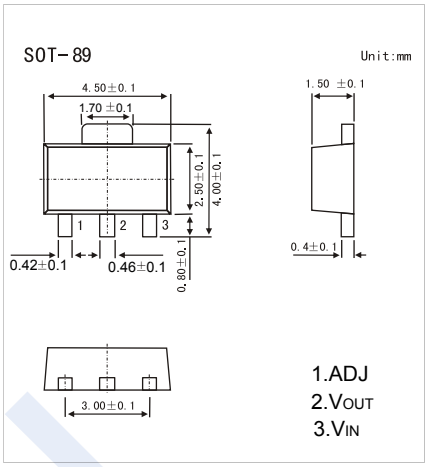
Three-Terminal Adjustable Regulator

LM317LF

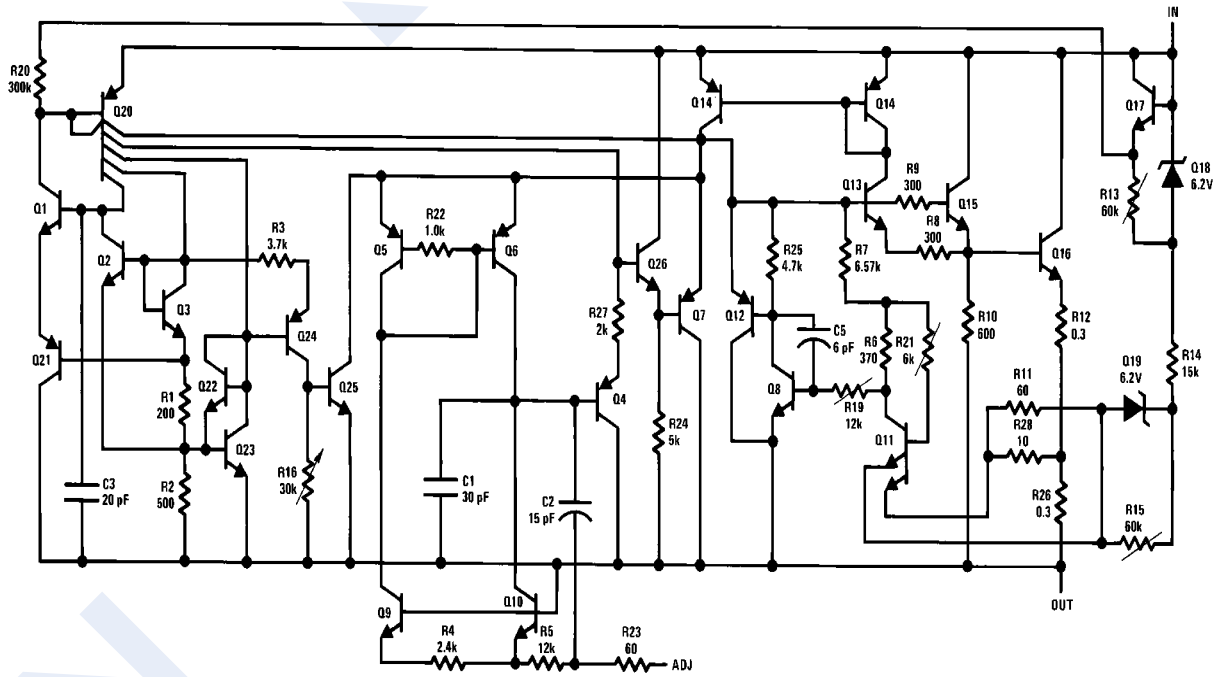


■ Features

- Adjustable output down to 1.2V
- Guaranteed 100 mA output current
- Line regulation typically 0.01%/V
- Load regulation typically 0.1%
- Eliminates the need to stock many voltages
- Output is short circuit protected

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	FR101FH	Unit
Input-Output Voltage Differential	Vi /Ao	-0.3~40	V
Power Dissipation	PD	Internally Limited	W
Junction Temperature	Tj	125	℃
Lead Temperature (Soldering, 4 seconds)	TL	250	
Storage Temperature	Tstg	-55 to 150	



Three-Terminal Adjustable Regulator

LM317LF

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Voltage	V_{ref}	3V≤(V_{IN}-V_{OUT}) ≤40V, 5mA≤I_{OUT}≤100mA, P≤625mW	1.15	1.25	1.35	V
Line Regulation	Regline	3V≤(V_{IN}-V_{OUT})≤40V,I≤20mA			0.05	%/ V
Line Regulation	Regline	T_j=25℃, I_L≤20mA 3V≤(V_{IN}-V_{OUT})≤40V			0.05	
Adjustment Pin Current	I_{adj}			50	100	uA
Adjustment Pin Current Change	△I_{adj}	5mA≤I_L≤100mA 3V≤(V_{IN}-V_{OUT}) ≤40V, P≤625mW		0.2	6	
Minimum Load Current	I_{Lmin}	(V_{IN}-V_{OUT}) ≤40V		3.5	17	mA
		3V≤(V_{IN}-V_{OUT}) ≤15V		1.5	6	
Current Limit	I_{max}	3V≤(V_{IN}-V_{OUT}) ≤13V	40		260	
		(V_{IN}-V_{OUT}) =40V	25		70	
Load Regulation	Regload	T_j=25℃, 5mA≤I_{OUT}≤I_{MAX}		0.1	0.5	%
Load Regulation	Regload	5mA≤I_{OUT}≤100mA		0.3	1.2	
Temperature Stability	T_S	T_{MIN}≤T_j≤T_{MAX}		0.65		
Rms Noise % of Vo	N	T_j=25℃, 10Hz≤f≤10KHz		0.003	0.008	
Long-Term Stability	S	T_j= 125℃, 1000 Hours		0.3	1	
Ripple Rejection	RR	V_{OUT}=10V, f=120Hz, C_{ADJ}=0		65	80	dB
		C_{ADJ}=10uF	66	80		

■ Marking

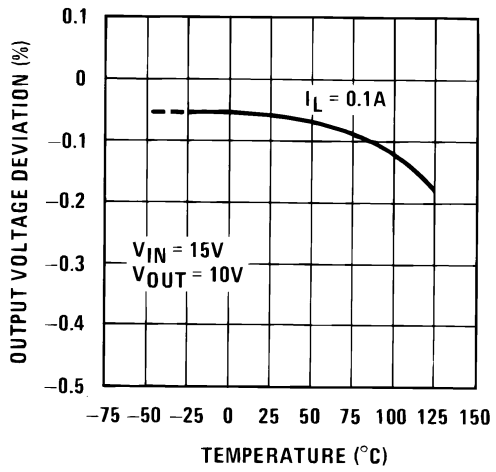
Marking	317LF

Three-Terminal Adjustable Regulator

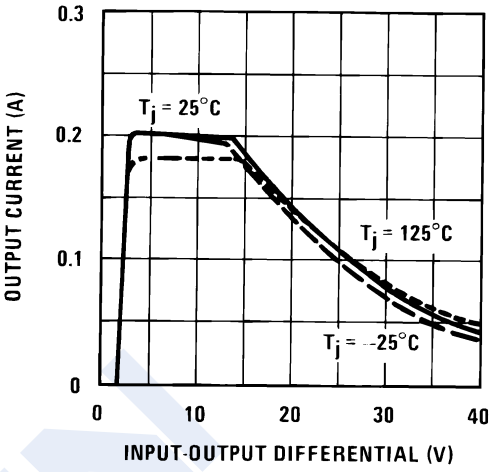
LM317LF

■ Typical Characterisitics

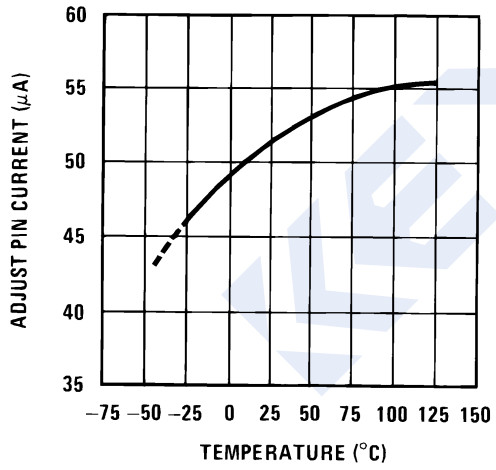
Load Regulation



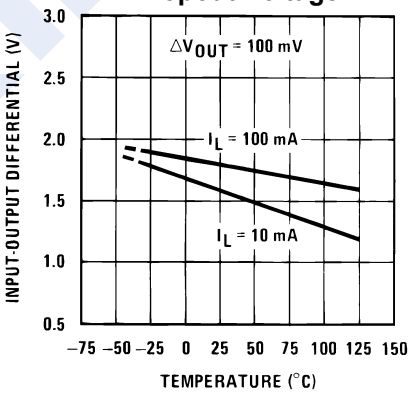
Current Limit



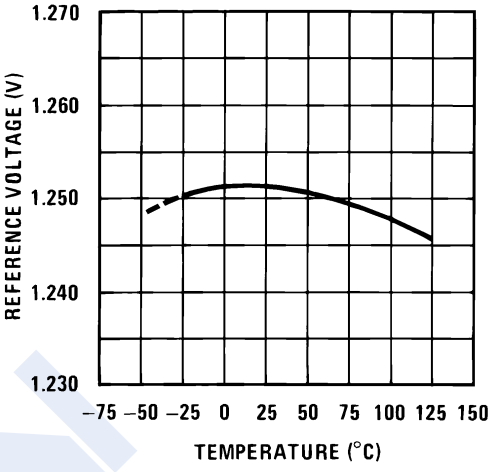
Adjustment Current



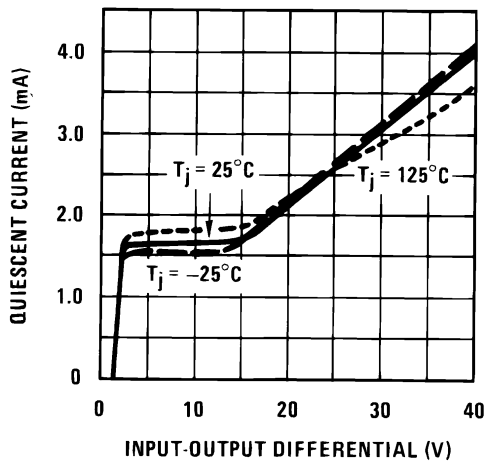
Dropout Voltage



Reference Voltage Temperature Stability



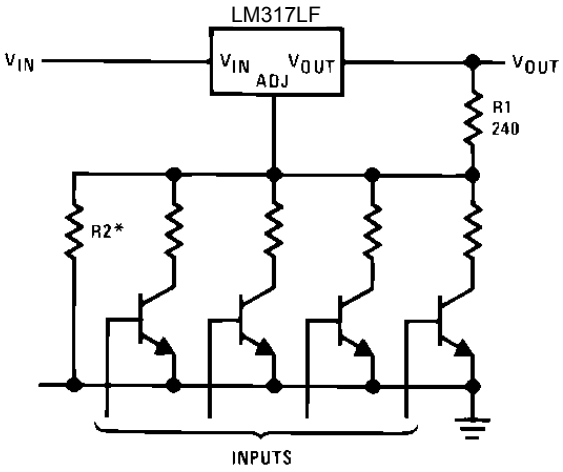
Minimum Operating Current



Three-Terminal Adjustable Regulator

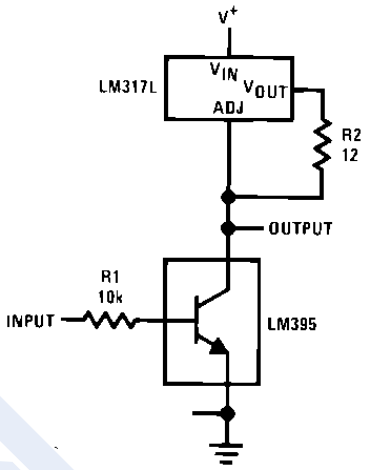
LM317LF

■ Typical Application



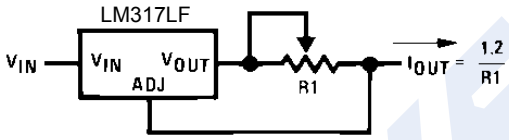
*Sets maximum Vout

Digitally Selected Outputs



High Gain Amplifier

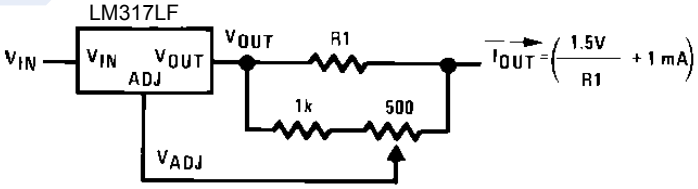
Adjustable Current Limiter



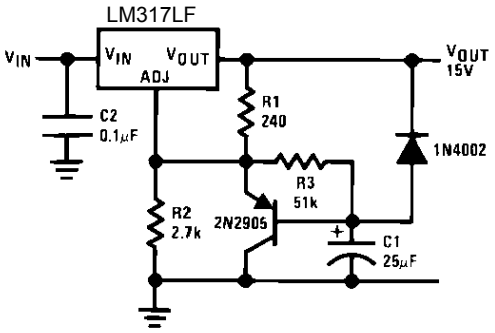
$12 \le R1 \le 240$

Adjustable Current Limiter

Precision Current Limiter



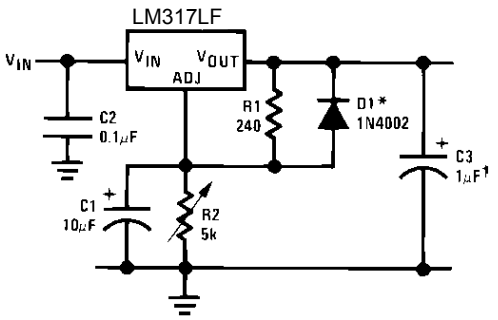
Precision Current Limiter



Slow Turn-on 15V Regulator

Improved Ripple Rejection

Improved Ripple Rejection



+Sold tantalum

*Discharges C1 if output is shorted to ground

Adjustable Regulator with