

SK317

LINEAR INTEGRATED CIRCUIT

GENERAL DESCRIPTION

The SK317 is an adjustable 3-terminal positive voltage regulator capable of supplying more than 1.5A over an output voltage range of 1.25V to 37V, and features 1.5mA low standby current.

The SK317 is available in SOT223, SOT89-3 and TO220 packages.

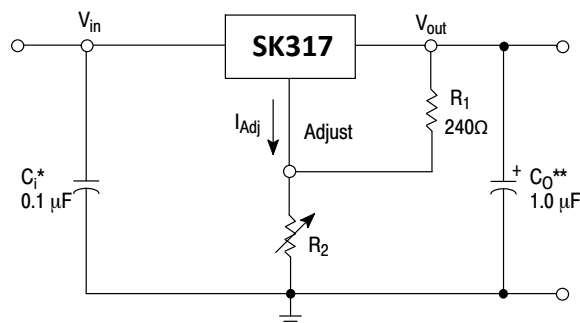
FEATURES

- Output voltage adjustable from 1.25V ~ 37V
- Output current in excess of 1.5A

APPLICATIONS

- Power Management for Computer Mother Board, Graphic Card
- LCD Monitor and LCD TV
- DVD Decode Board
- ADSL Modem
- Post Regulators for Switching Supplies

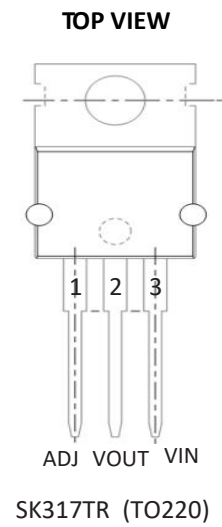
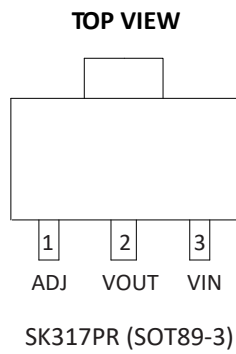
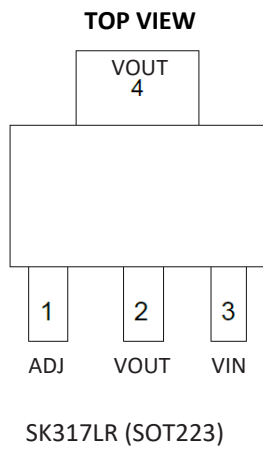
TYPICAL APPLICATION CIRCUIT



1. The Reference voltage (V_{REF}) is 1.25V (typ.), R_1 and R_2 are required to set the output voltage. V_{OUT} is calculated as shown:

$$V_{OUT} = V_{REF}(1 + R_2/R_1) + (I_{ADJ} \times R_2)$$
 I_{ADJ} is typically 50uA and negligible in most applications.
2. C_i is recommended, particularly if the regulator is not in close proximity to the power-supply filter capacitors. A 0.1uF or 1uF ceramic or tantalum capacitor provides sufficient bypassing for most applications, especially when adjustment and output capacitors are used.
3. C_o is not needed for stability, however it does improve transient response.

PIN CONFIGURATION



PPIN DESCRIPTION

PIN NO.			PIN NAME	FUNCTION
SOT223	SOT89-3	TO220		
1	1	1	ADJ	ADJ pin
2/4	2	2	VOUT	Output voltage pin
3	3	3	VIN	Input voltage pin

hw59wlbD LbChw a !£Lhb

Ordering Number	Package	Quantity	Packing
SK317LR	SOT-223	2500	Tape Reel
SK317PR	SOT89-3	1500	Tape Reel
SK317TR	TO-220	1000	Tube

The SK317 devices are Pb-free and RoHS compliant.

ABSOLUTE MAXIMUM RATINGS

$T_A=25^{\circ}\text{C}$, unless otherwise specified.

Parameter	Symbol	Ratings	Unit
Input - Output Voltage Difference	$V_{IN}-V_{OUT}$	40	V
Power Dissipation	P_D	Internal limited	
Junction Temperature	T_J	+125	$^{\circ}\text{C}$
Operating Temperature	T_{OPR}	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-40 ~ +150	$^{\circ}\text{C}$

Note: Absolute maximum ratings are stress ratings only and functional device operation is not implied. The device could be damaged beyond Absolute maximum ratings.

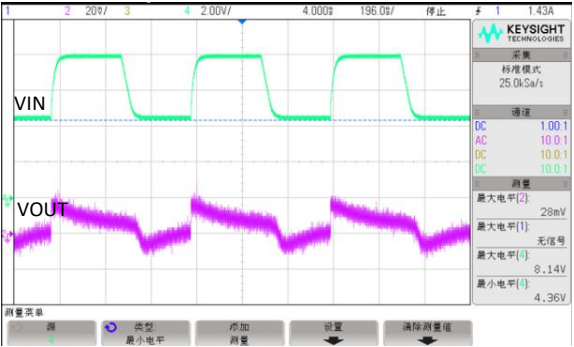
ELECTRICAL CHARACTERISTICS

$T_A=25^{\circ}\text{C}$, unless otherwise specified.

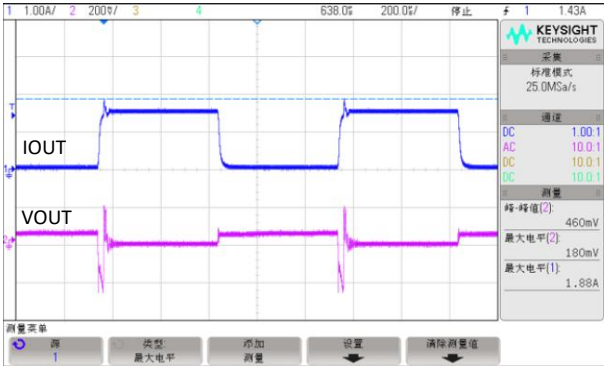
Parameter	Test Conditions		Min	Typ	Max	Unit
Line regulation	$V_I-V_O=3\text{V to }40\text{V}$	$T_A=25^{\circ}\text{C}$	-5	--	5	mV
Load regulation	$I_O=10\text{mA to }1500\text{mA}$		-25	--	25	mV
Reference voltage			1.2	1.25	1.3	V
Output-voltage Temperature stability	$T_J=0^{\circ}\text{C to }125^{\circ}\text{C}$			0.7		$\%V_O$
Maximum output current	$V_I - V_O \leq 15\text{V}, T_J=25^{\circ}\text{C}$		--	1.5	--	A

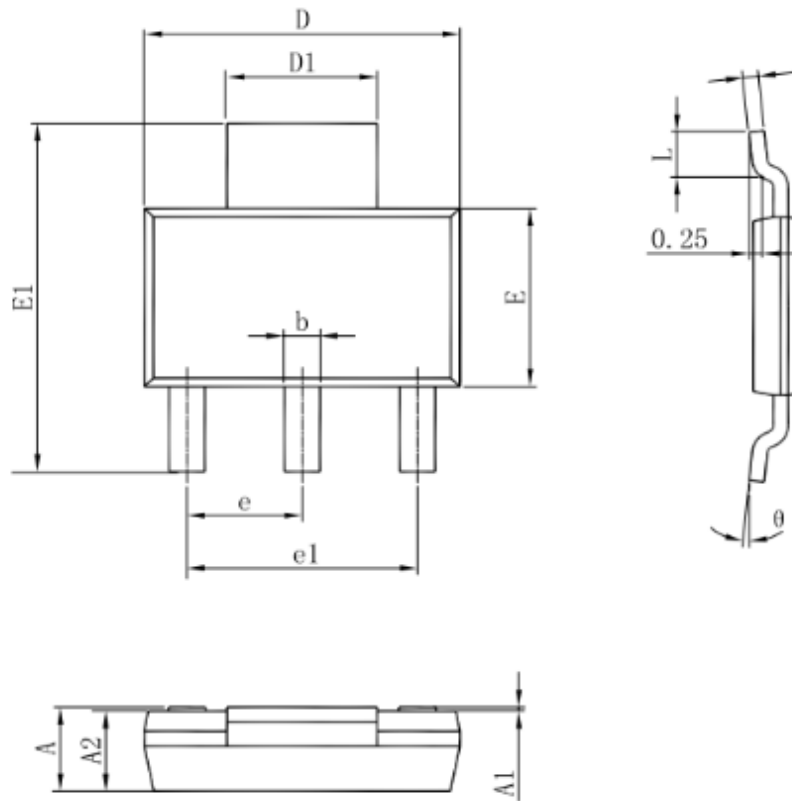
TYPICAL PERFORMANCE CHARACTERISTICS

Line Transient Response

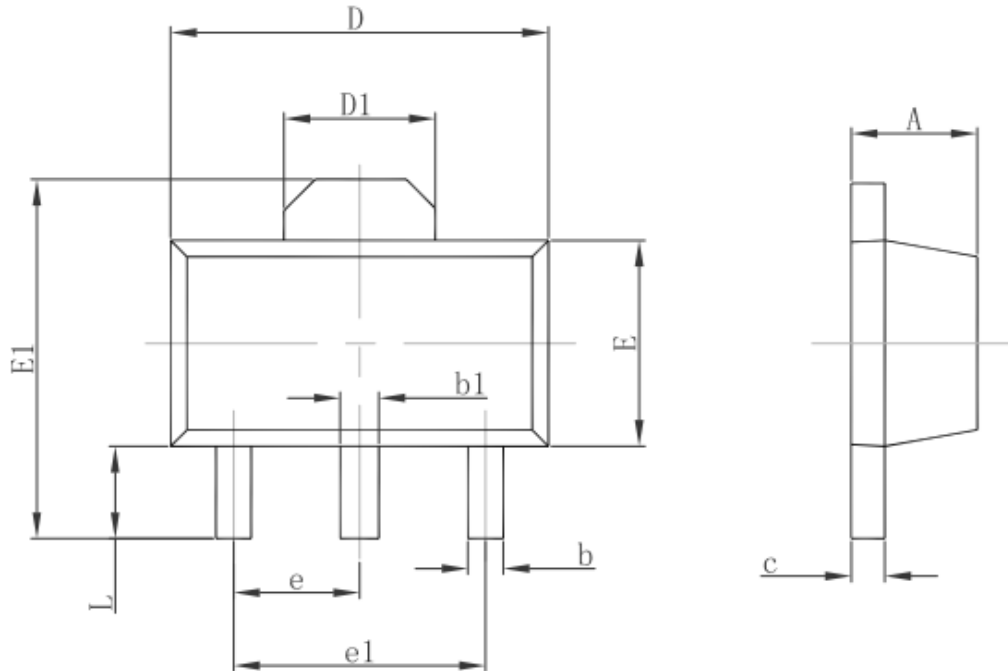


Load Transient Response



PACKAGE DIMENSION: SOT223


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.520	1.800	0.060	0.071
A1	0.000	0.100	0.000	0.004
A2	1.500	1.700	0.059	0.067
b	0.660	0.820	0.026	0.032
c	0.250	0.350	0.010	0.014
D	6.200	6.400	0.244	0.252
D1	2.900	3.100	0.114	0.122
E	3.300	3.700	0.130	0.146
E1	6.830	7.070	0.269	0.278
e	2.300(BSC)		0.091(BSC)	
e1	4.500	4.700	0.177	0.185
L	0.900	1.150	0.035	0.045
θ	0°	10°	0°	10°

PACKAGE DIMENSION: SOT89-3


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

PACKAGE DIMENSION: TO220

