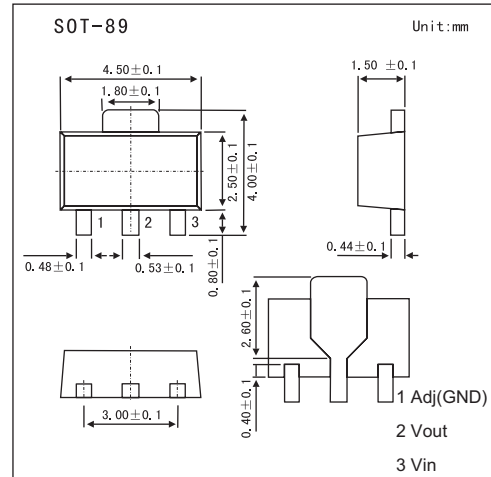


1A Low Dropout Positive Adjustable or Fixed-Mode Regulator

Features

- 1.4V maximum dropout at full load current
- Fast transient response
- Output current limiting
- Built-in thermal shutdown
- Good noise rejection
- 3-Terminal Adjustable or Fixed 1.5V, 1.8V, 1.9V, 2.5V, 3.3V, 5.0V

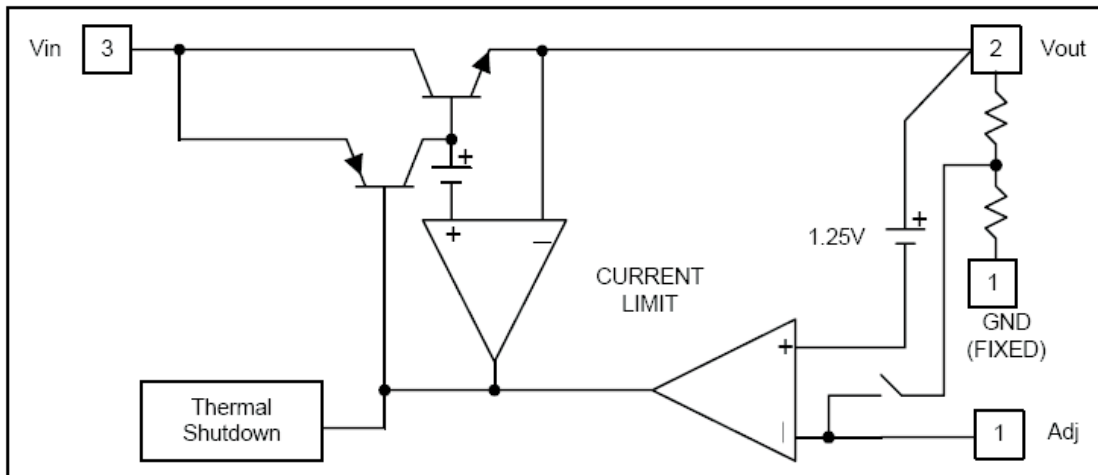


Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
DC Supply Voltage	V_{in}	-0.3 to 12	V
Power Dissipation	P_D	Internally Limited	
Thermal Resistance Junction-to-Ambient	θ_{JA}	300	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction-to-Case *	θ_{JC}	100	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OP}	0 to +150	$^\circ\text{C}$
Storage Temperature	T_{ST}	-65 to +150	$^\circ\text{C}$

* Control Circuitry/Power Transistor

Block Diagram



1A Low Dropout Positive Adjustable or Fixed-Mode Regulator

Electrical Characteristics Ta = 25°C

Parameter		Testconditons	Min	Typ	Max	Unit
Reference Voltage	FS1117-ADJ	T _J =25°C,(V _{IN} -V _{OUT})=1.5V,I _o =10mA	1.225	1.250	1.275	V
Output Voltage	FS1117-1.5	I _{OUT} = 10mA, T _J = 25°C, 3V ≤ V _{IN} ≤ 12V	1.470	1.500	1.530	V
	FS1117-1.8	I _{OUT} = 10mA, T _J = 25°C, 3.3V ≤ V _{IN} ≤ 12V	1.764	1.800	1.836	V
	FS1117-1.9	I _{OUT} = 10mA, T _J = 25°C, 3.3V ≤ V _{IN} ≤ 12V	1.862	1.900	1.938	V
	FS1117-2.5	I _{OUT} = 10mA, T _J = 25°C, 4V ≤ V _{IN} ≤ 12V	2.450	2.500	2.550	V
	FS1117-3.3	I _{OUT} = 10mA, T _J = 25°C, 4.8V ≤ V _{IN} ≤ 12V	3.235	3.300	3.365	V
	FS1117-5.0	I _{OUT} = 10mA, T _J = 25°C, 6.5V ≤ V _{IN} ≤ 12V	4.900	5.000	5.100	V
Line Regulation	FS1117-XXX	I _o =10mA,V _{OUT} +1.5V < V _{IN} < 12V, T _J =25°C			0.2	%
Load Regulation	FS1117-ADJ	V _{IN} =3.3V,V _{adj} =0,0mA < I _o < 1A,T _J =25°C			1	%
	FS1117-1.5	V _{IN} =3V,0mA < I _o < 1A,T _J =25°C		12	15	mV
	FS1117-1.8	V _{IN} =3.3V,0mA < I _o < 1A,T _J =25°C		15	18	mV
	FS1117-1.9	V _{IN} =3.3V,0mA < I _o < 1A,T _J =25°C		16	19	mV
	FS1117-2.5	V _{IN} =4V,0mA < I _o < 1A,T _J =25°C		20	25	mV
	FS1117-3.3	V _{IN} =5V,0mA < I _o < 1A,T _J =25°C		26	33	mV
	FS1117-5.0	V _{IN} =8V,0mA < I _o < 1A,T _J =25°C		40	50	mV
Dropout Voltage (V _{IN} -V _{OUT})	FS1117-XXX	I _{OUT} = 1A ,ΔV _{OUT} =0.1%V _{OUT}		1.3	1.4	V
Current Limit	FS1117-XXX	(V _{IN} -V _{OUT}) = 5V	1.1			A
Minimum Load Current	FS1117-XXX	0°C ≤ T _J ≤ 125°C		5	10	mA
Thermal Regulation		T _A =25°C, 30ms pulse		0.008	0.04	%/W
Ripple Rejection		F=120Hz,C _{OUT} =25uF Tantalum, I _{OUT} =1A				
	FS1117-XXX	V _{IN} =V _{OUT} +3V		60	70	dB
Temperature Stability		I _o =10mA		0.5		%

1A Low Dropout Positive Adjustable or Fixed-Mode Regulator

Typical Characteristics

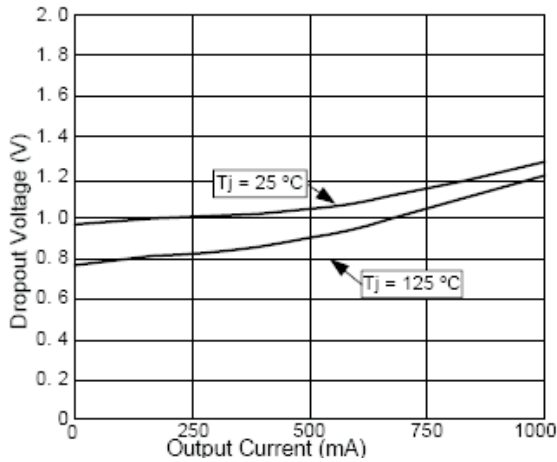


Fig.1 Dropout Voltage vs Output Current

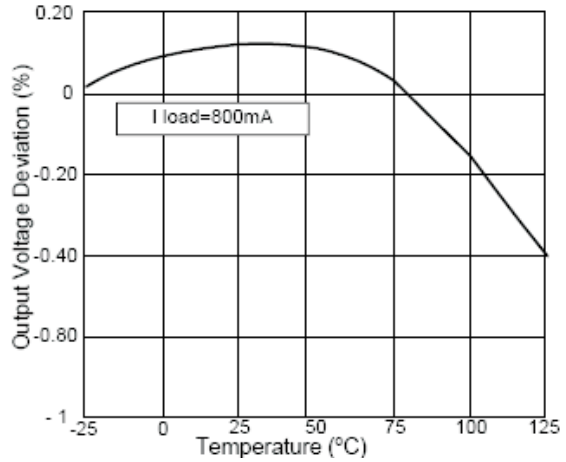


Fig.2 Load Regulation vs Temperature

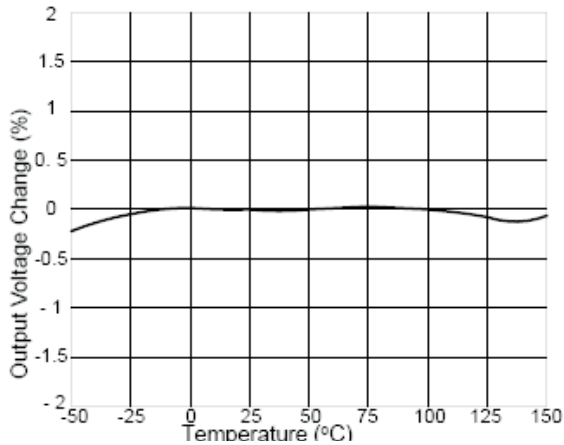


Fig.3 Percent Change in Output Voltage vs Temperature

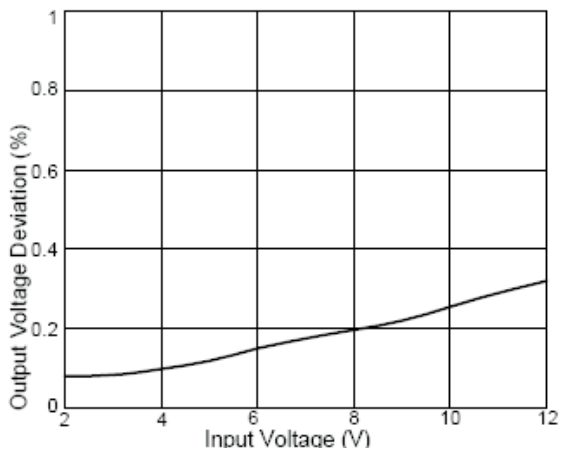


Fig.4 Line Regulation

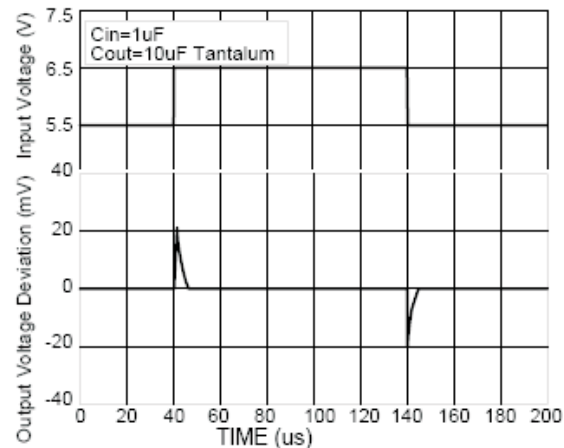


Fig.5 Line Transient Response

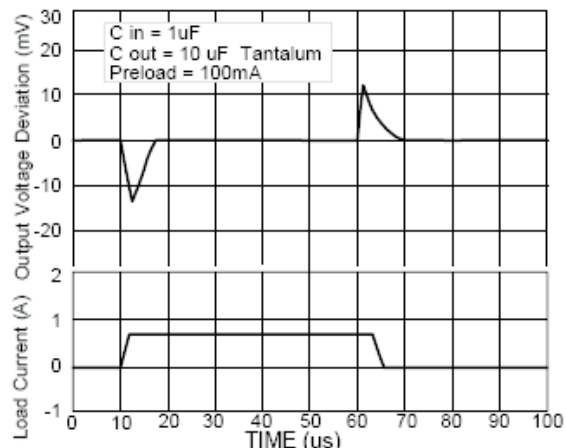


Fig.6 Load Transient Response