Positive Voltage Regulator

Features

• Output Current Up To1000mA
• Highly Accurate ± 2%
• Low Power Consumption 4mA (TYP.)

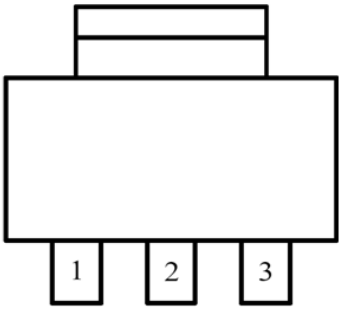
General Description

The FS1117 series of adjustable and fixed voltage regulators are designed to provide 1A output current and to operate down to 1V input-to-output differential. The dropout voltage of the device is guaranteed maximum 1.3V at maximum output current, decreasing at lower load currents.

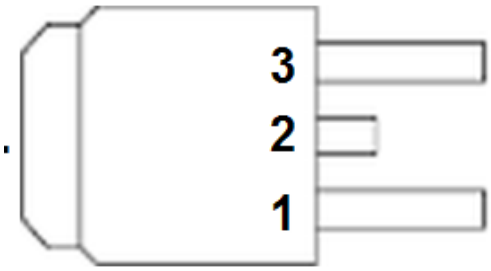
On-chip trimming adjusts the reference voltage to 1%. Current limit is also trimmed, minimizing the stress under overload conditions on both the regulator and power source circuitry.

The FS1117 devices are pin compatible with other three-terminal SCSI regulators and are offered in the low profile surface mount

Package Information



SOT223

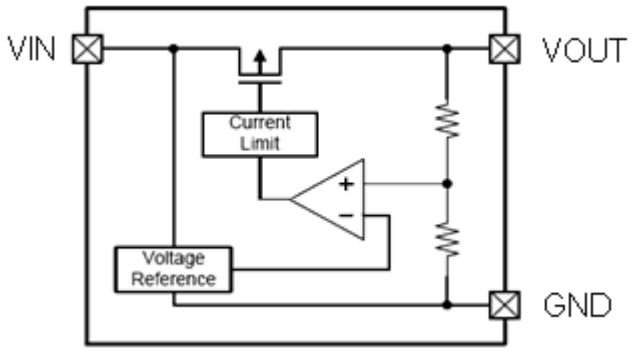


TO252

Pin Configurations

PIN	SOT223	SOT223-ADJ	TO252
1	GND	ADJ	GND
2	V_{OUT}	V_{OUT}	V_{OUT}
3	V_{IN}	V_{IN}	V_{IN}

Functional Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Limit	Unit
Input Voltage	Vin	-0.3 to 24	V
Output Current	Iout	1050	mA
Output Voltage	Vout	Vss-0.3 to VIN +0.3	V
Power Dissipation (Tamb = 25℃)	SOT223	1.4	W
Operating Temperature	Topr	40 to +125	℃
Storage Temperature	Tstg	65 to +150	℃

Electrical Characteristics

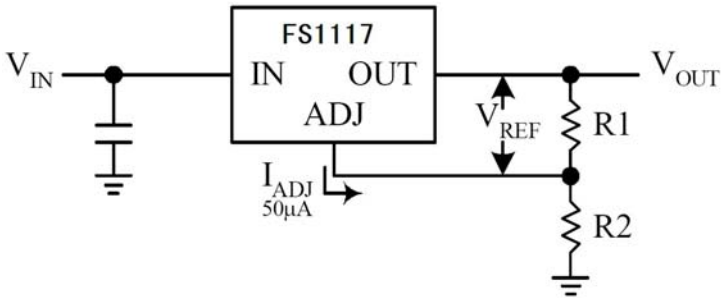
Vin=Vout+3V, Ta=25℃, Cin=10uF,CL=22uF, unless otherwise sepcified.

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Output Voltage	VOUT(E)	IOUT = 40mA VIN=VOUT (T)+1V	0.98 × VOUT (T)	VOUT (T)	1.02 × VOUT (T)	V
Maximum Output Current	IOUT max	VIN = VOUT+3V		1000	--	mA
Load Regulation	△IOUT	VIN = VOUT+1V 1mA ≤ IOUT ≤ 150mA	--	--	0.4	%
Supply Current	ISS	VIN = VOUT + 1V	--	4	6	mA
Line Regulation	△VOUT/ (△VIN`VOUT)	IOUT = 40mA VOUT + 1V ≤ VIN ≤ 6V	--	0.05	0.2	%
Input Voltage	VIN	--	--	--	24	V
Output Voltage Temperature Characteristics	△VOUT/ (△VIN`VOUT)	IOUT = 40mA -40℃ ≤ Ta ≤ 85℃	--	± 100	--	ppm /℃

Note:

Vout (T) = Specified output Voltage.

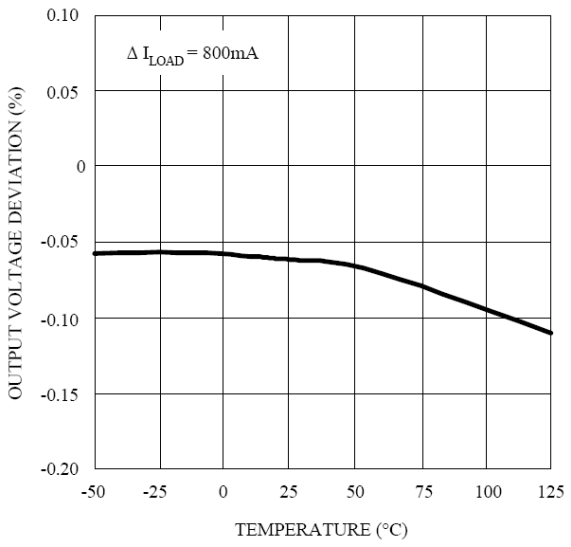
- **Typical Performance Characteristics** (TJ =25 Noted)



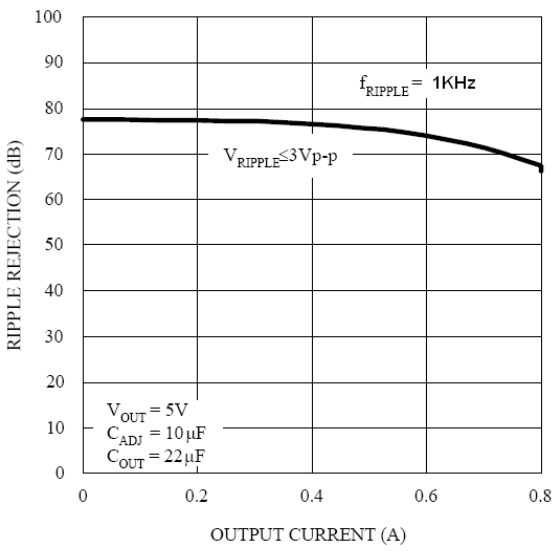
$$V_{OUT} = V_{REF}(1+ R2/R1)+I_{ADJ}R2$$

- **Typical Performance Characteristics**

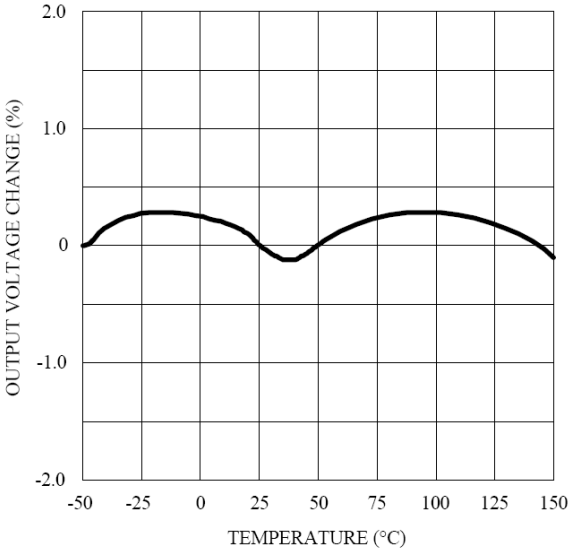
Load Regulation



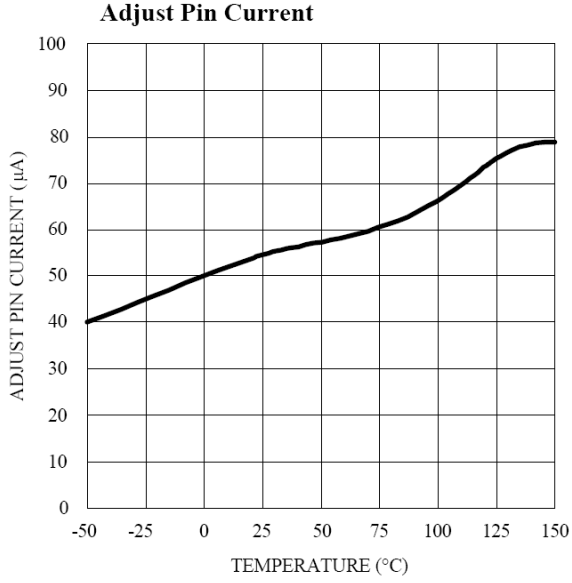
Ripple Rejection vs. Current



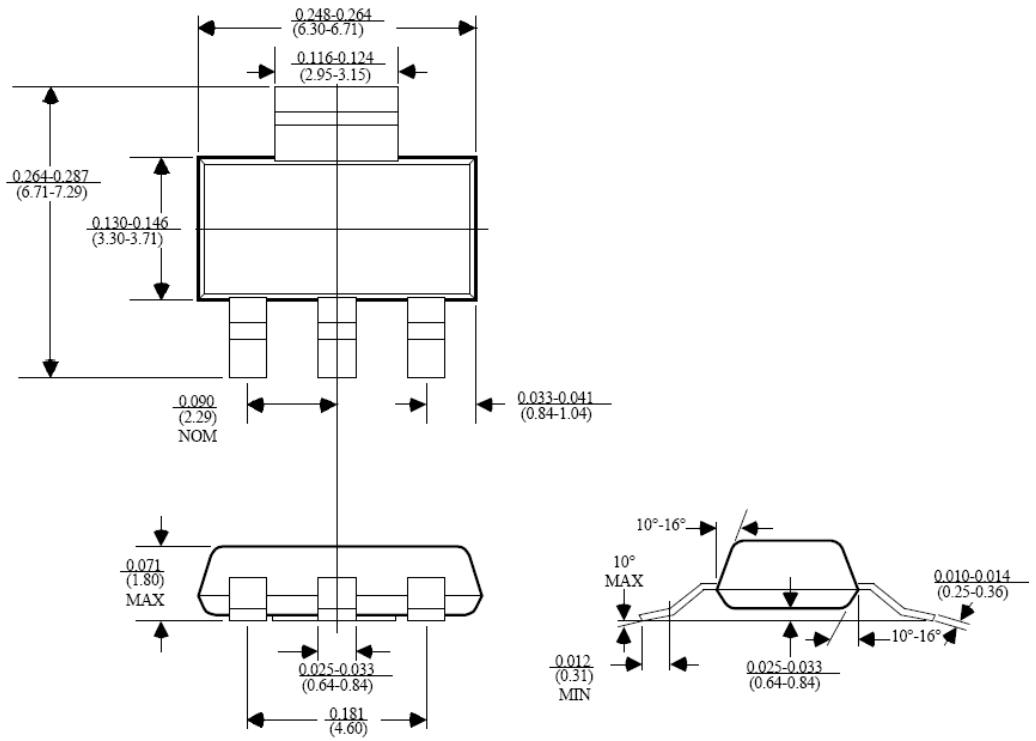
Temperature Stability



Adjust Pin Current



- **Package Information**



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