

FEATURES

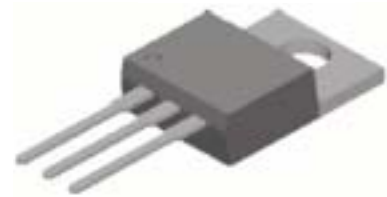
- ◆ Three Terminal Adjustable or Fixed Voltages 1.5V, 1.8V, 2.5V, 2.85V, 3.3V and 5.0V
- ◆ Output Current of 1A
- ◆ Operates Down to 1V Dropout
- ◆ Line Regulation: 0.2% Max.
- ◆ Load Regulation: 0.4% Max.
- ◆ SOT-223 ,TO252 and TO-220 package available



SOT-223



TO-252-2



TO-220

APPLICATIONS

- ◆ High Efficiency Linear Regulators
- ◆ Post Regulators for Switching Supplies
- ◆ Microprocessor Supply
- ◆ 5V to 3.3V Linear Regulator
- ◆ Power Management for Notebook
- ◆ Battery Chargers
- ◆ Battery Powered Instrumentation
- ◆ Active SCSI Terminators

ORDERING INFORMATION

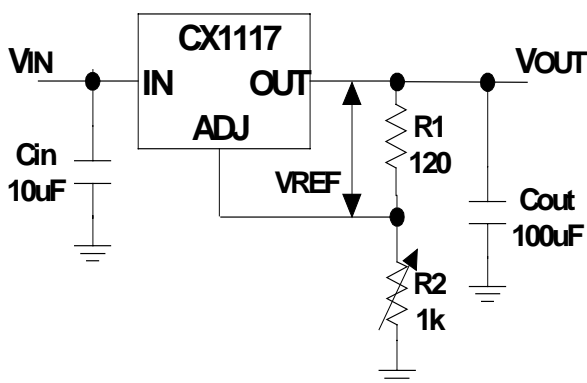
PACKAGE TYPE			OPERATING JUNCTION TEMPERATURE RANGE
SOT-223	TO-252	TO-220	
CX1117-ADJ	CX1117-ADJ	CX1117-ADJ	0 to 125° C
CX1117-1.5	CX1117-1.5	CX1117-1.5	0 to 125° C
CX1117-1.8	CX1117-1.8	CX1117-1.8	0 to 125° C
CX1117-2.5	CX1117-2.5	CX1117-2.5	0 to 125° C
CX1117-2.85	CX1117-2.85	CX1117-2.85	0 to 125° C
CX1117-3.3	CX1117-3.3	CX1117-3.3	0 to 125° C
CX1117-5.0	CX1117-5.0	CX1117-5.0	0 to 125° C

ELECTRICAL CHARACTERISTICS

Electrical Characteristics at $I_{OUT} = 0 \text{ mA}$, and $T_J = +25^\circ\text{C}$ unless otherwise specified.

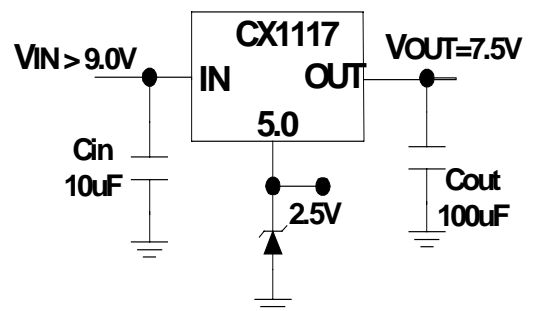
Parameter	Device	Conditions	Min	Typ	Max	Units
Output Voltage	CX1117	$I_{OUT} = 10 \text{ mA}$ $10\text{mA} \leq I_{OUT} \leq 1\text{A}$, $1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 12\text{V}$			1.0	%
					2.0	%
Line Regulation	CX1117	$I_{OUT} = 10 \text{ mA}$, $1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 12\text{V}$		0.015	0.2	%
				0.035	0.2	%
Load Regulation (Notes 2, 3)	CX1117	$(V_{IN} - V_{OUT}) = 3\text{V}$, $10\text{mA} \leq I_{OUT} \leq 1\text{A}$		0.1	0.3	%
				0.2	0.4	%
Dropout Voltage ($V_{IN} - V_{OUT}$)	CX1117	$\Delta V_{OUT}, \Delta V_{REF} = 1\%$, $I_{OUT} = 1\text{A}$		1.1	1.3	V
Current Limit	CX1117	$(V_{IN} - V_{OUT}) = 5\text{V}$	900	1,100	1,500	mA
Minimum Load Current	CX1117	$(V_{IN} - V_{OUT}) = 12\text{V}$		5	10	mA
Quiescent Current	CX1117	$V_{IN} \leq 12\text{V}$		5	10	mA
Ripple Rejection	CX1117	$f = 120\text{Hz}$, $C_{OUT} = 22\mu\text{F}$ Tantalum, $I_{OUT} = 1\text{A}$, $(V_{IN} - V_{OUT}) = 3\text{V}$, $C_{ADJ} = 10\mu\text{F}$	60	75		dB
Thermal Regulation	CX1117	$T_A = 25^\circ\text{C}$, 30ms pulse		0.008	0.04	%/W
Adjust Pin Current	CX1117	$10\text{mA} \leq I_{OUT} \leq 1\text{A}$, $1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 12\text{V}$		55	120	μA
						μA
Adjust Pin Current Change	CX1117	$10\text{mA} \leq I_{OUT} \leq 1\text{A}$, $1.5\text{V} \leq (V_{IN} - V_{OUT}) \leq 12\text{V}$		0.2	5	μA
Thermal Resistance Junction-to-Case					15	$^\circ\text{C}/\text{W}$

APPLICATION CIRCUITS



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

Application 1: 1.25V to 10V Adjustable Regulator



$V_{out} = 7.5\text{V}$

Application 2: Regulator with reference