

1、Description

The CST1117 series of adjustable and fixed voltage regulators are designed to provide 800mA output current and to operatedown to 1V input-to-output differential. The dropout voltage of the device is guaranteed maximum 1.3V at maximum outputcurrent, decreasing at lower load currents. On-chip trimming adjusts the reference voltage to 1%. Current limit is also trimmed, minimizing the stress under overloadconditions on both the regulator and power source circuitry.


2、Applications

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

3、Features

- Three Terminal Adjustable or Fixed Voltages*
- 1.5V, 1.8V, 2.5V, 2.85V, 3.3V and 5.0V
- Output Current of 800mA
- Operates Down to 1V Dropout
- Line Regulation: 0.2% Max.
- Load Regulation: 0.4% Max.

4、Pinning information

PIN	Description	Simplified outline	
1	Gnd/Tab	 TO-220	
2	Output		
3	Input		

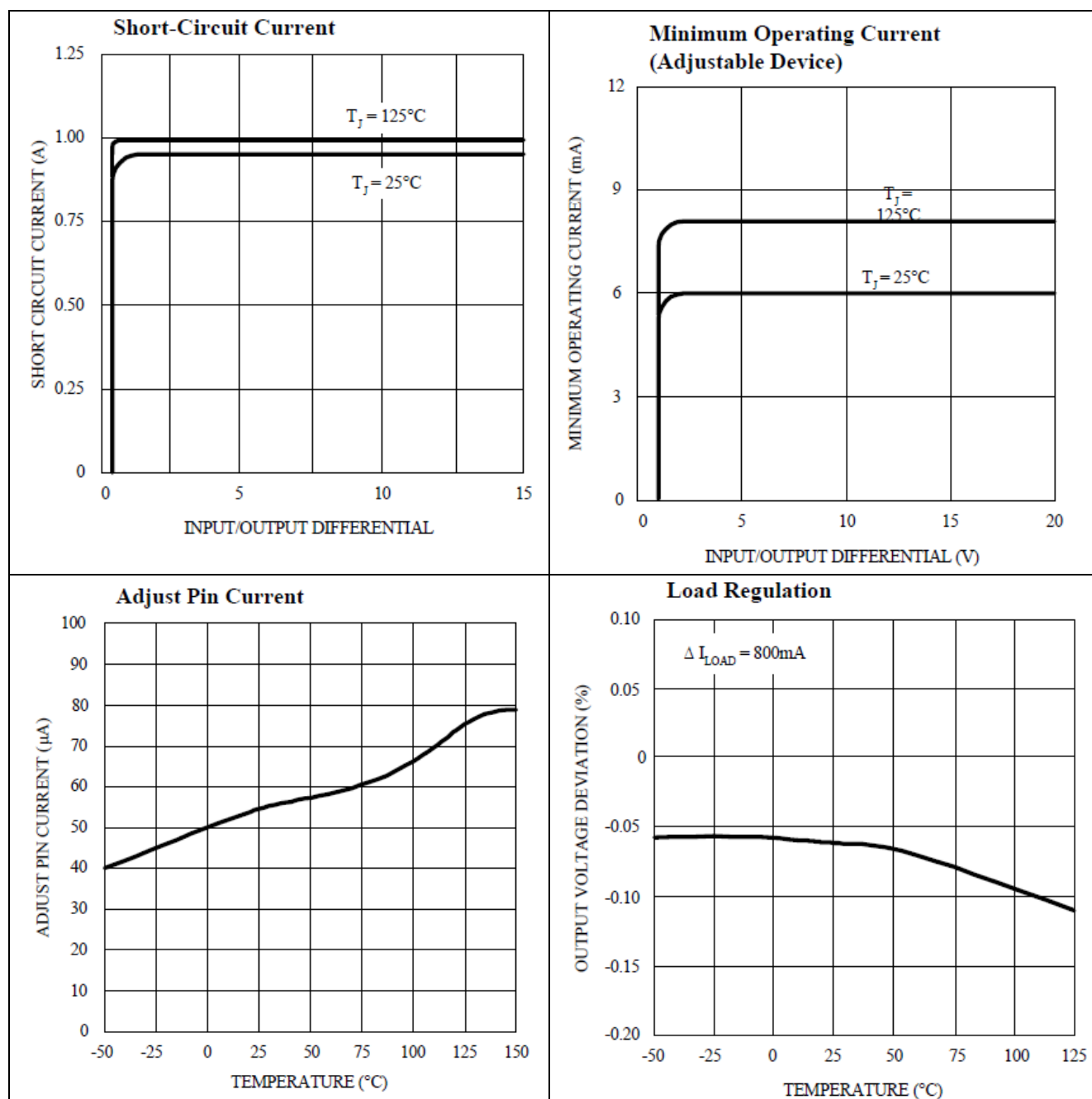
5、Absolute Maximum Rating

PARAMETER	SYMBOL	MAX	UNIT
Input Voltage	V _{in}	15	V
Thermal resistance junction-case	R _{thJC}	5	°C/W
Thermal resistance junction-ambient	R _{thJA}	50	°C/W
Operating Junction Temperature Range	T _j	0~+125	°C
Storage Temperature Range	T _{stg}	-65~+150	°C

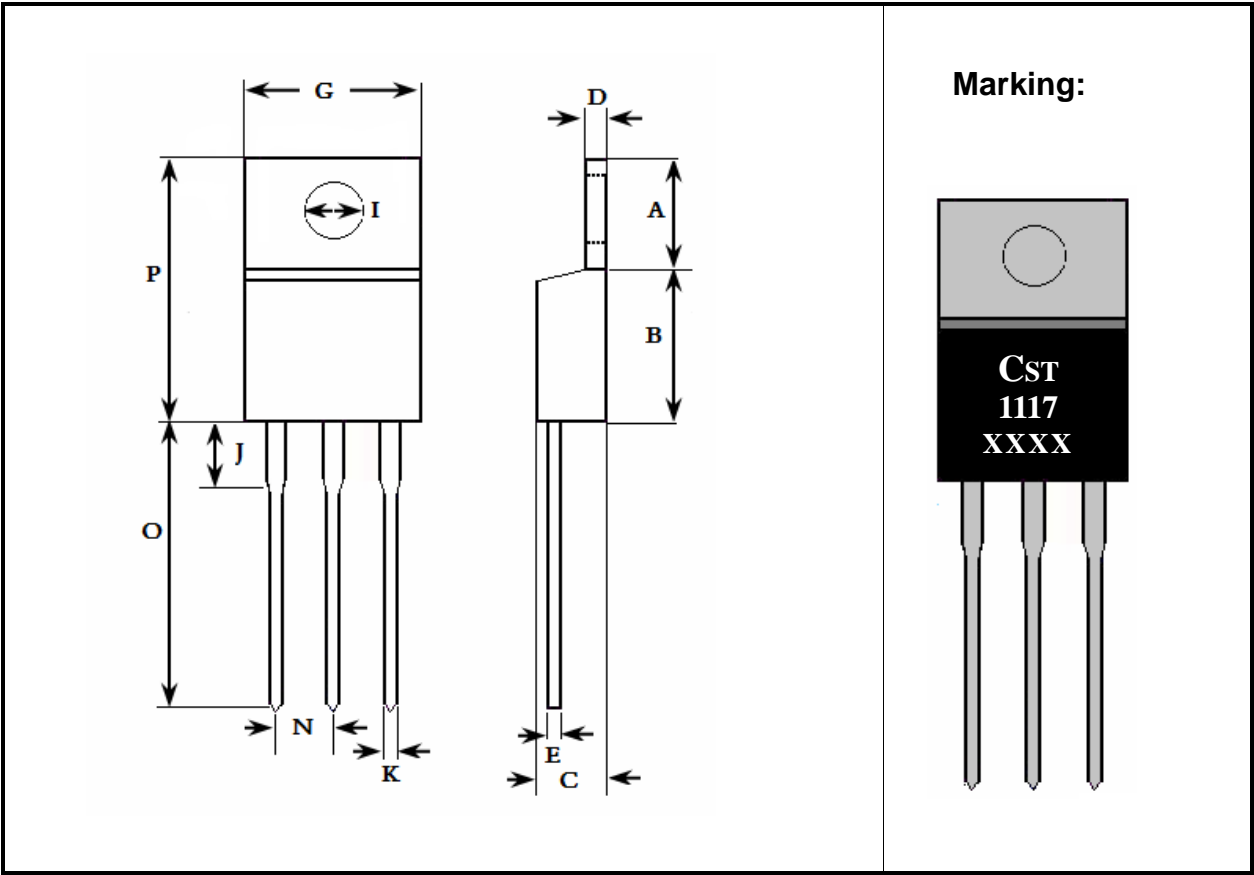
6、Electrical Characteristics (V_{out}=3.3V)(I_{OUT} = 0 mA, and T_J = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	MIN	TYPE	MAX	UNIT
Output voltage	V _{out}	4.75V<V _{in} <12V, 0mA<I _{out} <800mA	3.235	3.3	3.365	V
Line Regulation	REG _{line}	T _j =25°C		0.5	10	mV
		4.75V<V _{in} <12V, 6V<V _{in} <12V,		1.0	10	
Load Regulation	REG _{load}	T _j =25°C		3	25	mV
		0mA<I _{out} <800mA 100mA<I _{out} <500mA		5	15	
Quiescent Current	I _q	I _{out} =0, T _j =25°C		5	10	mA
Quiescent Current Change	ΔI _q	4.75V<V _{in} <12V,			1.0	mA
		0mA<I _{out} <800mA			0.5	
Thermal Regulation	Tr	T _j =25°C, 30ms Pulse		0.008	0.04	%W
Ripple Rejection Ratio	RR	f =120Hz , C _{OUT} =22mF Tantalum, I _{OUT} =800mA V _{IN} = 6.3V	60	72		dB
Voltage Drop	V _{drop}	I _{out} =800mA, T _j =25°C		1.1		V
Adjust Pin Current Change	I _a	10mA<I _{OUT} <800mA , 1.5V<(V _{IN} - V _{OUT})<12V		0.2	5	uA
Temperature Stability	T _s			0.5		%
Long Term Stability	LT	T _A =125°C, 1000Hrs		0.3	1	%
Thermal Resistance Junction-to-Case	Tr				15	°C/W

7、Electrical Characteristics Curve



8、Package outline(TO-220)



DIM	Inches			Millimeters		
	Min	Type	Max	Min	Type	Max
A	0.226	0.258	0.301	5.75	6.55	7.65
B	0.349	0.362	0.369	8.86	9.20	9.38
C	0.171	0.178	0.183	4.35	4.53	4.65
D	0.046	0.051	0.055	1.16	1.30	1.40
E	0.012	0.016	0.020	0.30	0.40	0.50
G	0.367	0.394	0.415	9.31	10.00	10.55
I	-	0.143	0.152	-	3.62	3.85
J	0.087	0.108	0.127	2.22	2.75	3.22
K	0.027	0.031	0.035	0.68	0.8	0.88
N	-	0.100	0.104	-	2.54	2.65
O	0.485	0.514	0.546	12.32	13.05	13.88
P	0.593	0.616	0.648	15.07	15.65	16.47