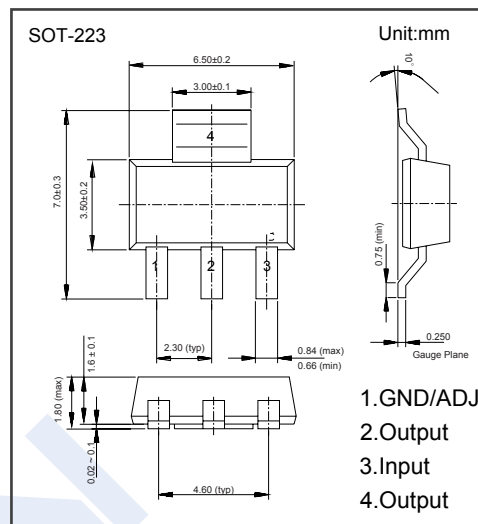


Low Dropout Linear Regulator

LMT1117-X.X

■ Features

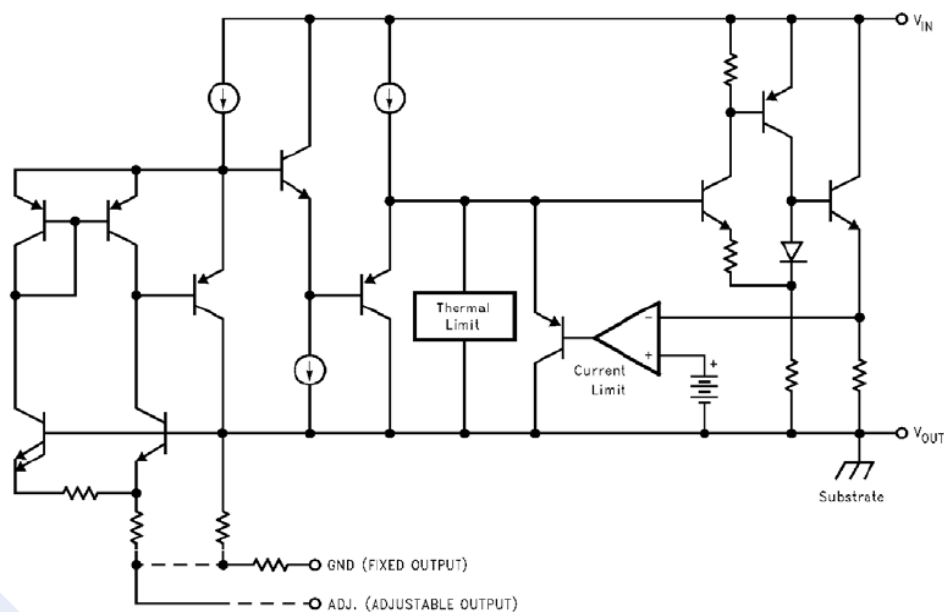
- Output Current of 1A
- Line Regulation: 0.2% Max.
- Load Regulation: 0.4% Max.
- Output voltage accuracy up to $\pm 1.5\%$
- Three Terminal Adjustable or Fixed Voltages
1.5V, 1.8V, 2.5V, 2.85V, 3.3V, and 5.0V



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

Parameter	Symbol	Rating	Unit
Input Voltage	V_{IN}	18	V
Thermal Resistance, Junction- to-Ambient	$R_{\theta JA}$	120	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Maximum Ambient Temperature	T_A	140	
Lead Temperature (10 sec)		300	
Storage Temperature Range	T_{stg}	-65 to 150	

■ Function Block Diagram



Low Dropout Linear Regulator

LMT1117-X.X

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Voltage	V _{REF}	I _{OUT} =10mA, V _{IN} -V _{OUT} =2V, 10mA≤I _{OUT} ≤1A, 1.5V≤V _{IN} -V _{OUT} ≤12V,	1.231 1.225	1.25 1.25	1.269 1.275	
Output Voltage	V _{OUT}	LMT 1117-1.5, I _{OUT} =10mA, V _{IN} =3.5V 10mA≤I _{OUT} ≤1A, 3.0V≤V _{IN} ≤12V	1.477 1.47	1.5 1.5	1.523 1.53	V
		LMT 1117-1.8, I _{OUT} =10mA, V _{IN} =3.8V 10mA≤I _{OUT} ≤1A, 3.2V≤V _{IN} ≤12V	1.773 1.764	1.8 1.8	1.827 1.836	
		LMT 1117-2.5, I _{OUT} =10mA, V _{IN} =4.5V 10mA≤I _{OUT} ≤1A, 3.9V≤V _{IN} ≤12V	2.463 2.45	2.5 2.5	2.537 2.55	
		LMT 1117-2.85, I _{OUT} =10mA, V _{IN} =4.85V 10mA≤I _{OUT} ≤1A, 4.25V≤V _{IN} ≤12V	2.807 2.793	2.85 2.85	2.893 2.907	
		LMT 1117-3.3, I _{OUT} =10mA, V _{IN} =5V 10mA≤I _{OUT} ≤1A, 4.75V≤V _{IN} ≤12V	3.25 3.234	3.3 3.3	3.35 3.366	
		LMT 1117-5.0, I _{OUT} =10mA, V _{IN} =7V 10mA≤I _{OUT} ≤1A, 6.5V≤V _{IN} ≤12V	4.925 4.9	5 5	5.075 5.1	
Line Regulation	ΔV _{OUT}	LMT 1117-ADJ I _{OUT} =10mA, 1.4V≤V _{IN} -V _{OUT} ≤10.75V		0.035	0.2	%
		LMT 1117 Fixed Version I _{OUT} =10mA, V _{OUT} +1.4V≤V _{IN} ≤12V		9	12	mV
Load Regulation	ΔV _{OUT}	LMT 1117-ADJ V _{IN} -V _{OUT} =3V, 10mA≤I _{OUT} ≤1A		0.2	0.4	%
		LMT 1117 Fixed Version V _{IN} =V _{OUT} +1.4V, 10mA≤I _{OUT} ≤1A		3	10	mV
Dropout Voltage	V _{IN} -V _{OUT}	ΔV _{REF} =1%, I _{OUT} =0.1A			1.2	V
		ΔV _{REF} =1%, I _{OUT} =0.5A			1.25	
		ΔV _{REF} =1%, I _{OUT} =1A			1.3	
Current Limit	I _{limit}	V _{IN} -V _{OUT} =2V, T _J =25°C	1.25		1.6	A
		LMT 1117-ADJ			10	mA
Adjust Pin Current	I _{ADJ}				120	uA
Adjust Pin Current Change	I _{Change}				5	
Quiescent Current	I _Q	LMT 1117 Fixed Version, V _{IN} -V _{OUT} =1.25V			8	mA
Temperature Stability	T _S				0.5	%

■ Marking

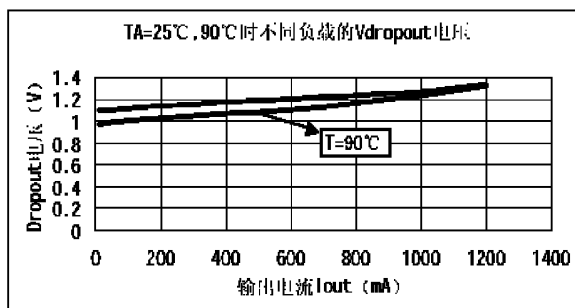
Marking	LMT1117-X.X K****
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Low Dropout Linear Regulator

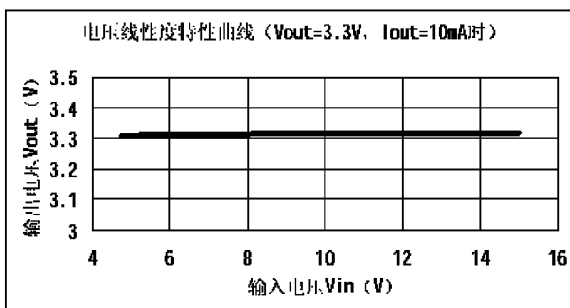
LMT1117-X.X

■ Typical Applications

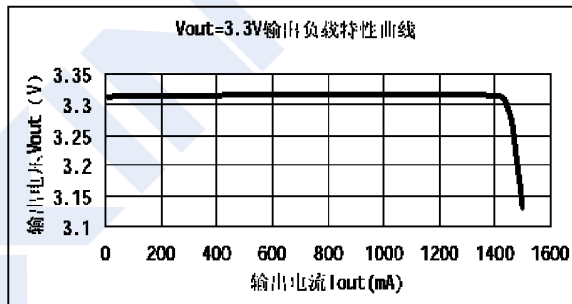
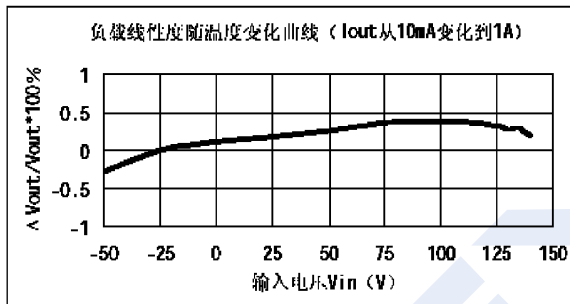
1. 不同负载时输入输出电压差特性曲线



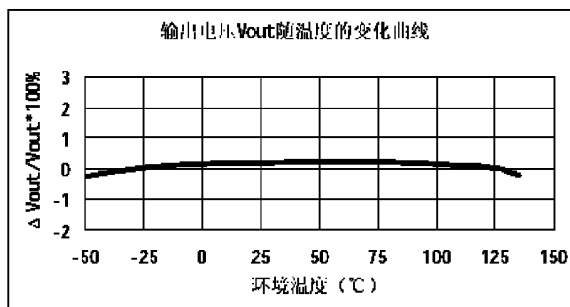
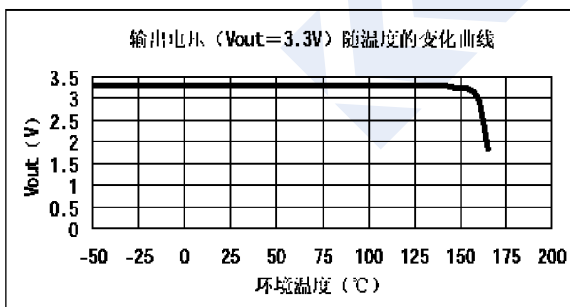
2. 电压线性度特性曲线



3. 负载特性曲线



4. 温度稳定性曲线



5. 可调端输出电流随温度变化曲线

