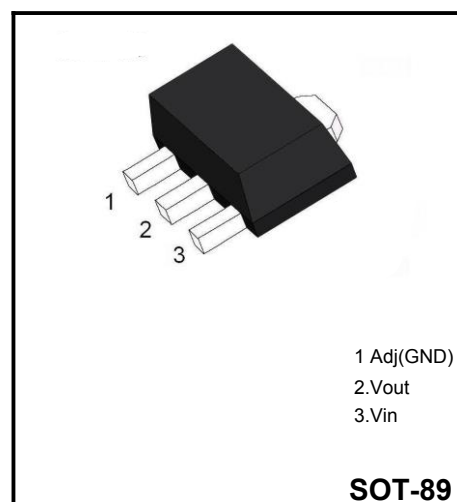


Low Dropout Linear Regulator

Features

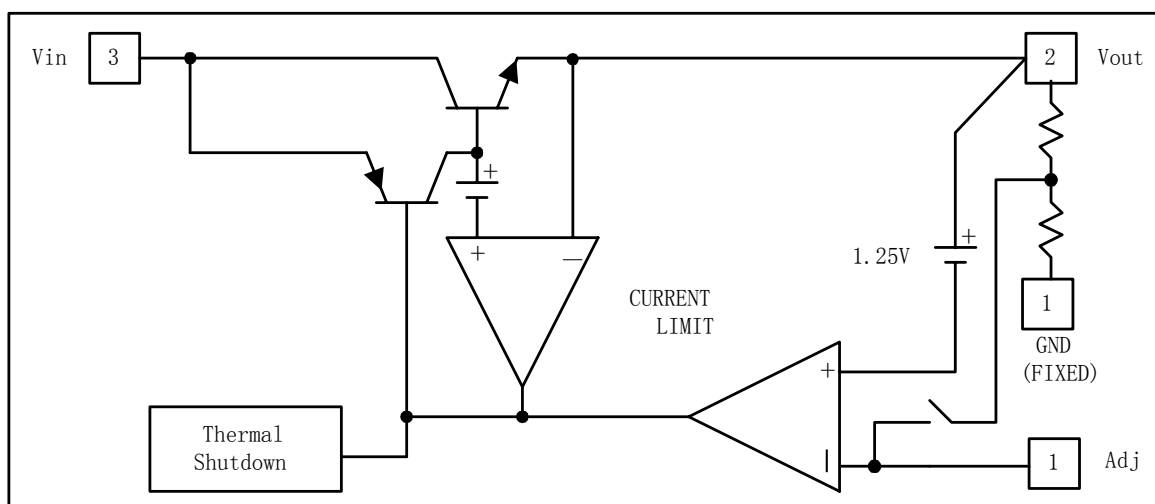
- Low dropout voltage
 - Load regulation: 0.2% typical
 - Optimized for Low Voltage
 - On-chip thermal limiting
 - 1A Adjustable/Fixed Low Dropout Linear Regulator
 - Three-terminal adjustable or fixed low drop out
- 1.2V, 1.25V, 1.5V, 1.8V, 1.9V, 2.5V, 2.85V, 3.3V, 5V. Regulators



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Maximum Input Voltage	V _{in}	18	V
Power Dissipation	P _D	Internally Limited	
Operating Junction Temperature Range	T _J	150	°C
Storage Temperature	T _{ST}	-65 to +150	°C

Block Diagram



Electrical Characteristics (Ta=25℃, unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reference Voltage	VREF	AMS1117-ADJ	10mA ≤ I _{OUT} ≤ 800mA, 1.5V ≤ V _{IN} - V _{OUT} ≤ 12V	1.225	1.25	1.275	
Output Voltage	V _{OUT}	AMS1117-1.2	0 ≤ I _{OUT} ≤ 800mA, 2.6V ≤ V _{IN} - V _{OUT} ≤ 12V	1.175	1.2	1.225	V
		AMS1117-1.25	0 ≤ I _{OUT} ≤ 800mA, 2.65V ≤ V _{IN} - V _{OUT} ≤ 12V	1.238	1.25	1.275	
		AMS1117-1.5	0 ≤ I _{OUT} ≤ 800mA, 2.9V ≤ V _{IN} - V _{OUT} ≤ 12V	1.47	1.5	1.53	
		AMS1117-1.8	0 ≤ I _{OUT} ≤ 800mA, 3.2V ≤ V _{IN} - V _{OUT} ≤ 12V	1.764	1.8	1.836	
		AMS1117-1.9	0 ≤ I _{OUT} ≤ 800mA, 3.3V ≤ V _{IN} - V _{OUT} ≤ 12V	1.862	1.9	1.938	
		AMS1117-2.5	0 ≤ I _{OUT} ≤ 800mA, 3.9V ≤ V _{IN} - V _{OUT} ≤ 12V	2.45	5.5	2.55	
		AMS1117-2.85	0 ≤ I _{OUT} ≤ 800mA, 4.25V ≤ V _{IN} - V _{OUT} ≤ 12V	2.822	2.85	2.878	
		AMS1117-3.3	0 ≤ I _{OUT} ≤ 800mA, 4.75V ≤ V _{IN} - V _{OUT} ≤ 12V	3.234	3.3	3.366	
		AMS1117-5.0	0 ≤ I _{OUT} ≤ 800mA, 6.5V ≤ V _{IN} - V _{OUT} ≤ 12V	4.9	5	5.1	
Line Regulation	ΔV _{OUT}	AMS1117-ADJ	I _{OUT} =10mA, 1.5V ≤ V _{IN} -V _{OUT} ≤ 12V		0.035	0.2	%
		AMS1117-1.2	I _{OUT} =10mA, 2.6V ≤ V _{IN} -V _{OUT} ≤ 12V		9	12	mV
		AMS1117-1.25	I _{OUT} =10mA, 2.65V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-1.5	I _{OUT} =10mA, 2.9V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-1.8	I _{OUT} =10mA, 3.2V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-1.9	I _{OUT} =10mA, 3.3V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-2.5	I _{OUT} =10mA, 3.9V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-2.85	I _{OUT} =10mA, 4.25V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-3.3	I _{OUT} =10mA, 4.75V ≤ V _{IN} -V _{OUT} ≤ 12V				
		AMS1117-5.0	I _{OUT} =10mA, 6.5V ≤ V _{IN} -V _{OUT} ≤ 12V				
Load Regulation	ΔV _{OUT}	AMS1117-ADJ	V _{IN} -V _{OUT} =3V, 10mA ≤ I _{OUT} ≤ 800mA		0.2	0.4	%
		AMS1117-1.2	V _{IN} =2.6V, 10mA ≤ I _{OUT} ≤ 800mA		3	10	mV
		AMS1117-1.25	V _{IN} =2.65V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-1.5	V _{IN} =2.9V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-1.8	V _{IN} =3.2V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-1.9	V _{IN} =3.3V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-2.5	V _{IN} =3.9V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-2.85	V _{IN} =4.25V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-3.3	V _{IN} =4.75V, 10mA ≤ I _{OUT} ≤ 800mA				
		AMS1117-5.0	V _{IN} =6.5V, 10mA ≤ I _{OUT} ≤ 800mA				
Dropout Voltage	V _{IN} -V _{OUT}	AMS1117-XXX	ΔV _{OUT} , ΔV _{REF} =1%, I _{OUT} =0.1A		1.11	1.2	V
			ΔV _{OUT} , ΔV _{REF} =1%, I _{OUT} =0.5A		1.18	1.25	
			ΔV _{OUT} , ΔV _{REF} =1%, I _{OUT} =0.8A		1.26	1.3	
Current Limit	I _{limit}	AMS1117-XXX	V _{IN} -V _{OUT} =5V, T _J = 25℃	1.25	1.4	1.6	A
		AMS1117-XXX	AMS1117-ADJ		5	10	mA
Adjust Pin Current	I _{ADJ}				55	120	uA
Adjust Pin Current Change	I _{Change}				0.2		

Electrical Characteristics (Ta=25℃, unless otherwise specified)

Quiescent Current	I _Q	AMS1117-1.2	V _{IN} -V _{OUT} =1.25V		4	8	mA
		AMS1117-1.25					
		AMS1117-1.5					
		AMS1117-1.8					
		AMS1117-1.9					
		AMS1117-2.5					
		AMS1117-2.85					
		AMS1117-3.3					
		AMS1117-5.0					

Typical Characteristics

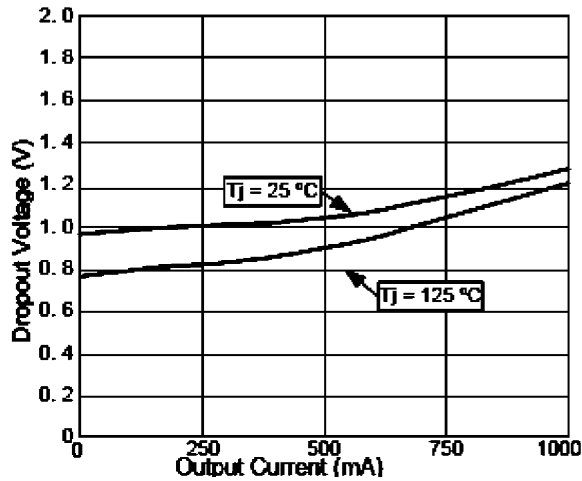


Fig.1 Dropout Voltage vs Output Current

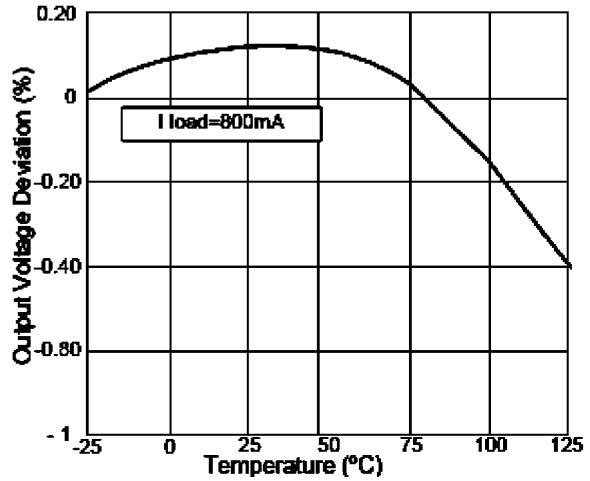


Fig.2 Load Regulation vs Temperature

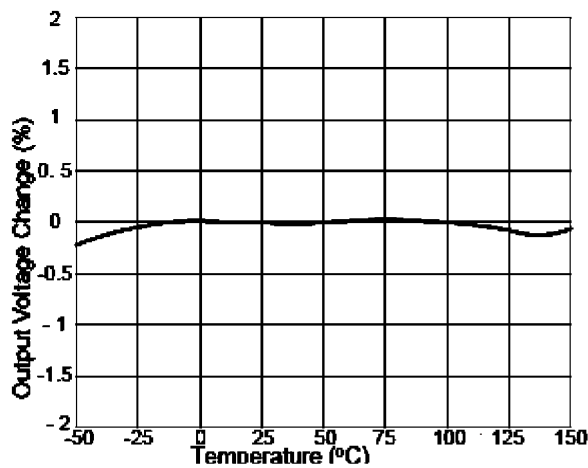


Fig.3 Percent Change in Output Voltage vs Temperature

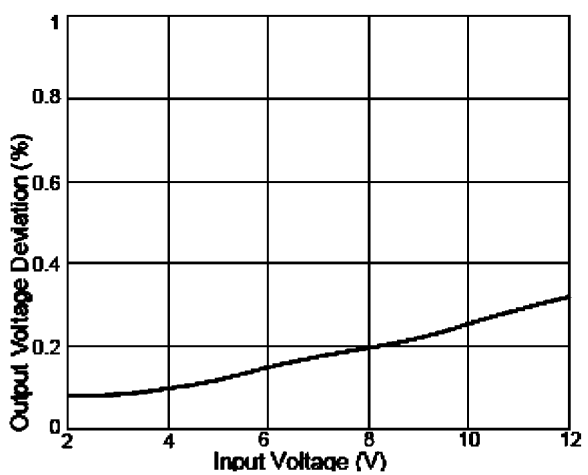


Fig.4 Line Regulation

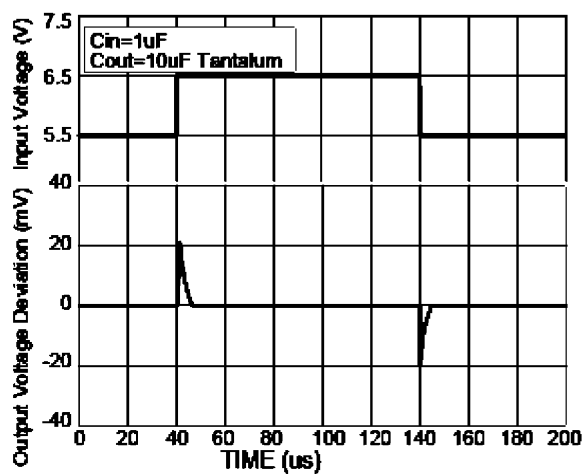


Fig.5 Line Transient Response

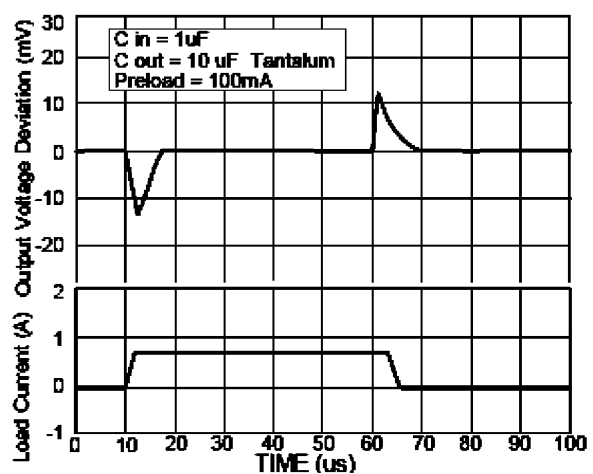


Fig.6 Load Transient Response

Ordering information

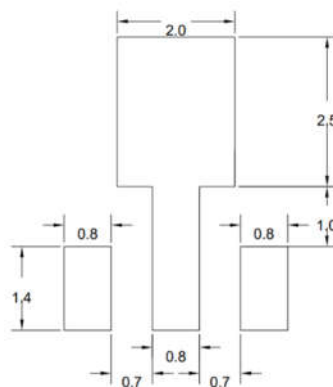
Package	Packing Description	Base Quantity	Packing Quantity
SOT-89	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-89

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.40	1.60	0.055	0.063
b	0.32	0.52	0.013	0.020
b1	0.38	0.58	0.015	0.023
c	0.35	0.45	0.014	0.018
D	4.40	4.60	0.173	0.181
D1	1.45	1.65	0.057	0.065
D2	1.70	1.80	0.067	0.071
E	2.30	2.60	0.091	0.102
E1	3.95	4.25	0.156	0.167
E2	1.80	2.00	0.071	0.079
e	1.40	1.60	0.055	0.063
e1	2.80	3.20	0.110	0.126
L	0.90	1.20	0.035	0.047

The recommended mounting pad size



UNIT:MM

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