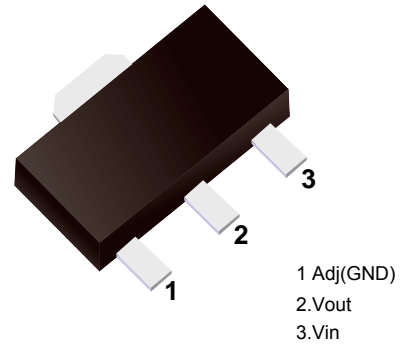


■ **Low Dropout Linear Regulator**

■ **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



■ **Simplified outline(SOT-89)**

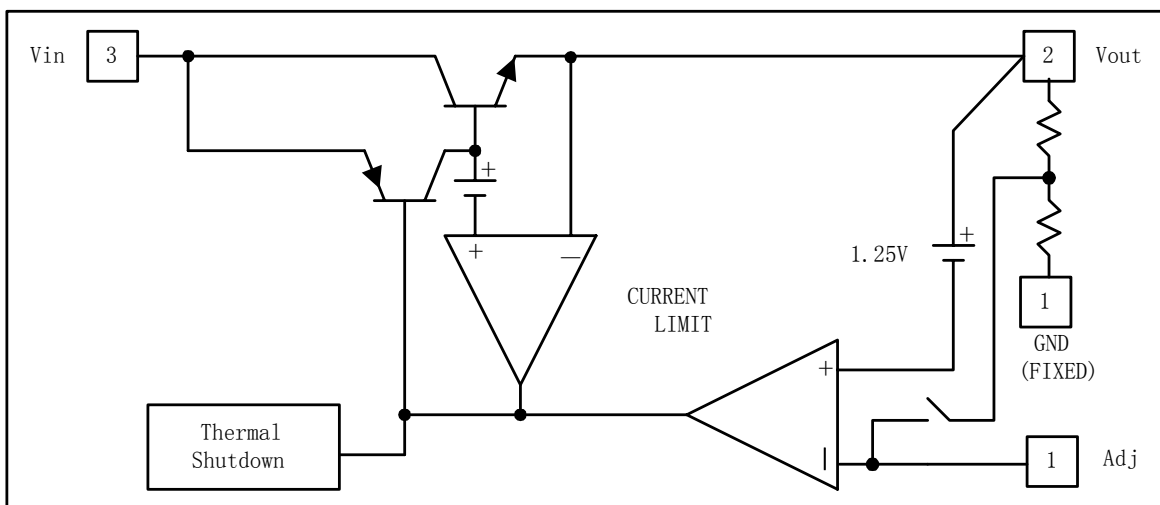
■ **Marking**

Marking	1117-X.X
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■ **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°C

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reference Voltage	VREF	YFW1117-ADJ	10mA ≤ IOUT ≤ 800mA, 1.5V ≤ VIN - VOUT ≤ 12V	1.225	1.25	1.275	V
Output Voltage	VOUT	YFW1117-1.2	0 ≤ IOUT ≤ 800mA, 2.6V ≤ VIN - VOUT ≤ 12V	1.175	1.2	1.225	
		YFW1117-1.25	0 ≤ IOUT ≤ 800mA, 2.65V ≤ VIN - VOUT ≤ 12V	1.238	1.25	1.275	
		YFW1117-1.5	0 ≤ IOUT ≤ 800mA, 2.9V ≤ VIN - VOUT ≤ 12V	1.47	1.5	1.53	
		YFW1117-1.8	0 ≤ IOUT ≤ 800mA, 3.2V ≤ VIN - VOUT ≤ 12V	1.764	1.8	1.836	
		YFW1117-1.9	0 ≤ IOUT ≤ 800mA, 3.3V ≤ VIN - VOUT ≤ 12V	1.862	1.9	1.938	
		YFW1117-2.5	0 ≤ IOUT ≤ 800mA, 3.9V ≤ VIN - VOUT ≤ 12V	2.45	5.5	2.55	
		YFW1117-2.85	0 ≤ IOUT ≤ 800mA, 4.25V ≤ VIN - VOUT ≤ 12V	2.822	2.85	2.878	
		YFW1117-3.3	0 ≤ IOUT ≤ 800mA, 4.75V ≤ VIN - VOUT ≤ 12V	3.234	3.3	3.366	
Line Regulation	ΔVOUT	YFW1117-ADJ	IOUT=10mA, 1.5V ≤ VIN-VOUT ≤ 12V		0.035	0.2	%
		YFW1117-1.2	IOUT=10mA, 2.6V ≤ VIN-VOUT ≤ 12V		9	12	mV
		YFW1117-1.25	IOUT=10mA, 2.65V ≤ VIN-VOUT ≤ 12V				
		YFW1117-1.5	IOUT=10mA, 2.9V ≤ VIN-VOUT ≤ 12V				
		YFW1117-1.8	IOUT=10mA, 3.2V ≤ VIN-VOUT ≤ 12V				
		YFW1117-1.9	IOUT=10mA, 3.3V ≤ VIN-VOUT ≤ 12V				
		YFW1117-2.5	IOUT=10mA, 3.9V ≤ VIN-VOUT ≤ 12V				
		YFW1117-2.85	IOUT=10mA, 4.25V ≤ VIN-VOUT ≤ 12V				
		YFW1117-3.3	IOUT=10mA, 4.75V ≤ VIN-VOUT ≤ 12V				
YFW1117-5.0	IOUT=10mA, 6.5V ≤ VIN-VOUT ≤ 12V						
Load Regulation	ΔVOUT	YFW1117-ADJ	VIN-VOUT=3V, 10mA ≤ IOUT ≤ 800mA		0.2	0.4	%
		YFW1117-1.2	VIN=2.6V, 10mA ≤ IOUT ≤ 800mA		3	10	mV
		YFW1117-1.25	VIN=2.65V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-1.5	VIN=2.9V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-1.8	VIN=3.2V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-1.9	VIN=3.3V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-2.5	VIN=3.9V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-2.85	VIN=4.25V, 10mA ≤ IOUT ≤ 800mA				
		YFW1117-3.3	VIN=4.75V, 10mA ≤ IOUT ≤ 800mA				
YFW1117-5.0	VIN=6.5V, 10mA ≤ IOUT ≤ 800mA						
Dropout Voltage	VIN-VOUT	YFW1117-XXX	ΔVOUT, ΔVREF=1%, IOUT=0.1A		1.11	1.2	V
			ΔVOUT, ΔVREF=1%, IOUT=0.5A		1.18	1.25	
			ΔVOUT, ΔVREF=1%, IOUT=0.8A		1.26	1.3	
Current Limit	Ilimit	YFW1117-XXX	VIN-VOUT=5V, TJ = 25°C	1.25	1.4	1.6	A
		YFW1117-XXX	YFW1117-ADJ		5	10	mA
Adjust Pin Current	IADJ				55	120	uA
Adjust Pin Current Change	IChange				0.2		

■ Electrical Characteristics Ta = 25°C

Quiescent Current	IQ	YFW1117-1.2	VIN-VOUT=1.25V		4	8	mA
		YFW1117-1.25					
		YFW1117-1.5					
		YFW1117-1.8					
		YFW1117-1.9					
		YFW1117-2.5					
		YFW1117-2.85					
		YFW1117-3.3					
YFW1117-5.0							

■ Typical Applications

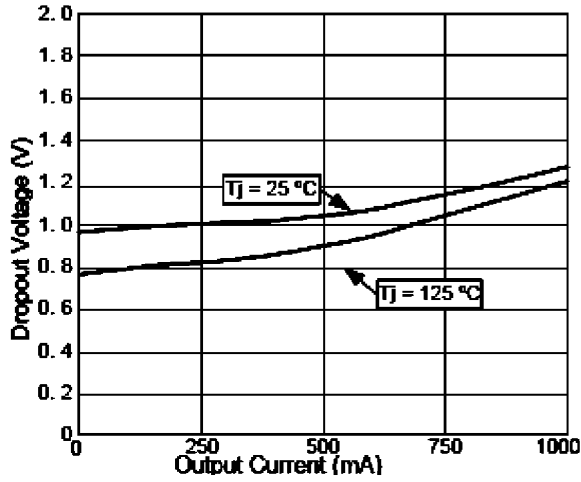


Fig.1 Dropout Voltage vs Output Current

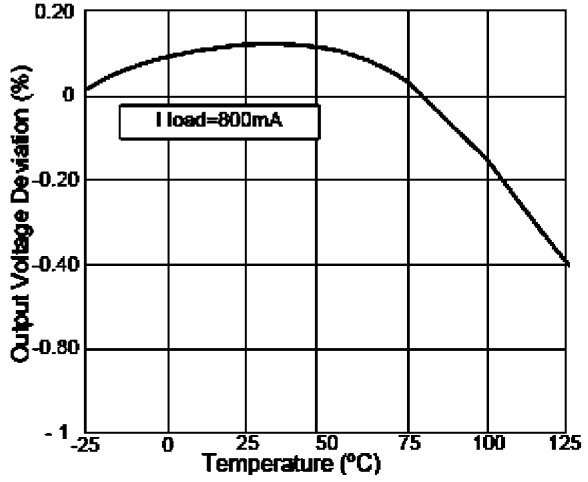


Fig.2 Load Regulation vs Temperature

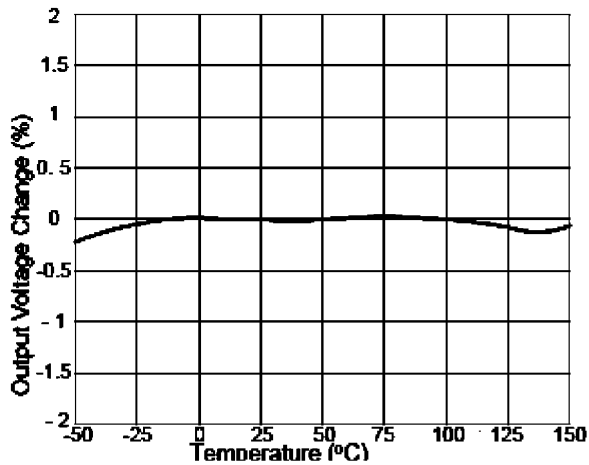


Fig.3 Percent Change in Output Voltage vs Temperature

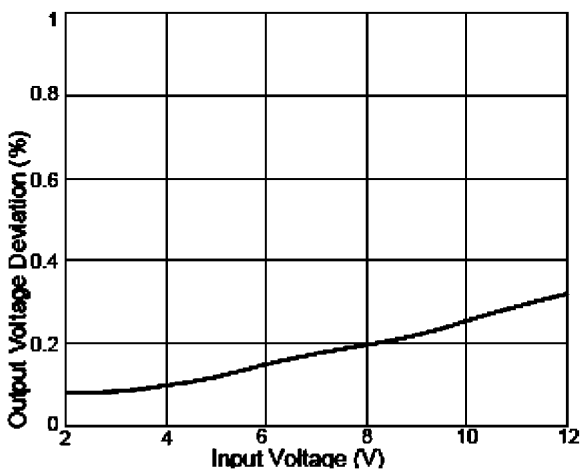


Fig.4 Line Regulation

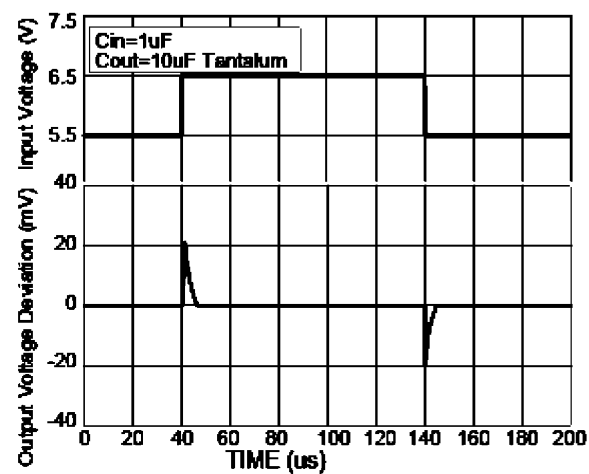


Fig.5 Line Transient Response

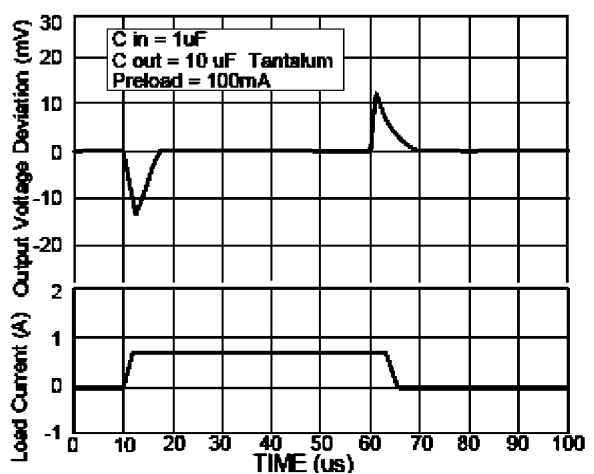
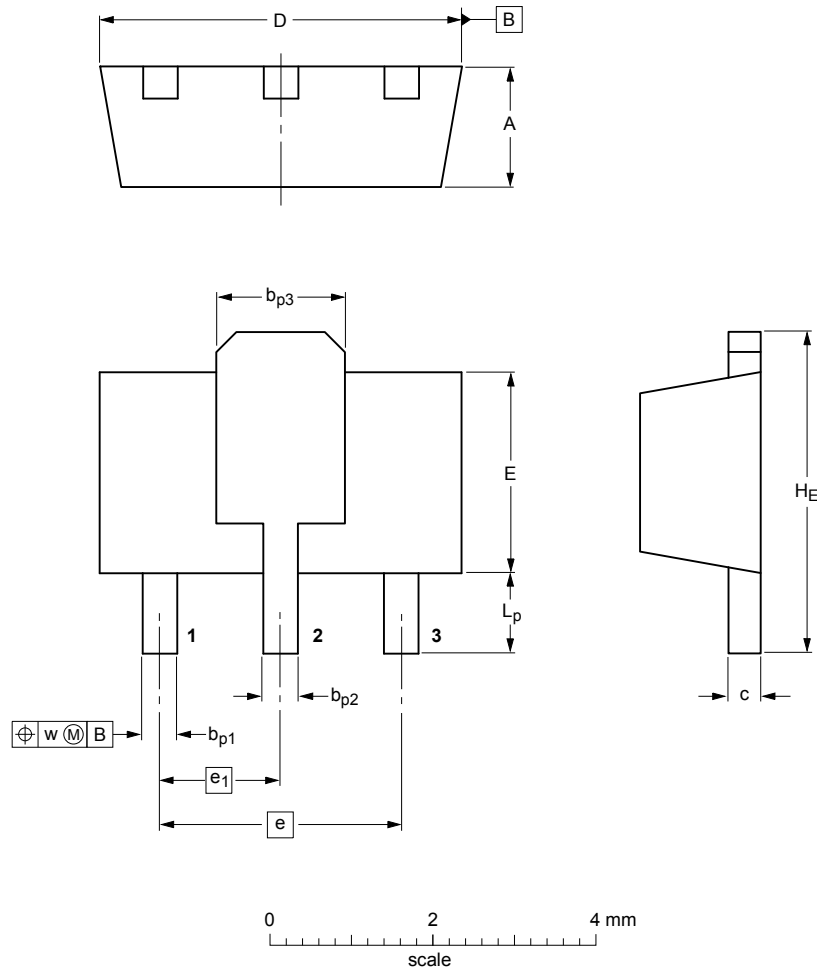


Fig.6 Load Transient Response

Package Outline

SOT-89



DIMENSIONS (mm are the original dimensions)

UNIT	A	b _{p1}	b _{p2}	b _{p3}	c	D	E	e	e ₁	H _E	L _p	w
mm	1.6 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-89	Tape/Reel, 7" reel	1000	EIA-481-1

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