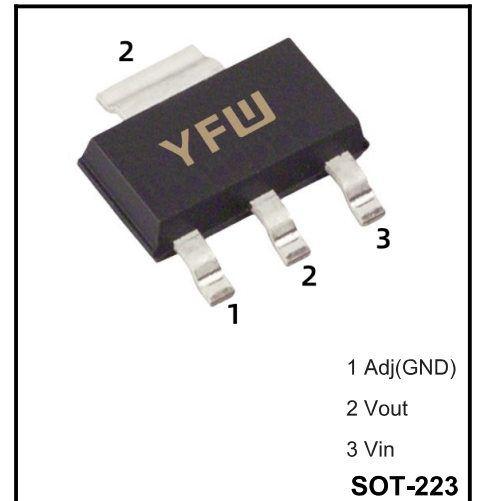


Low Dropout Linear Regulator

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



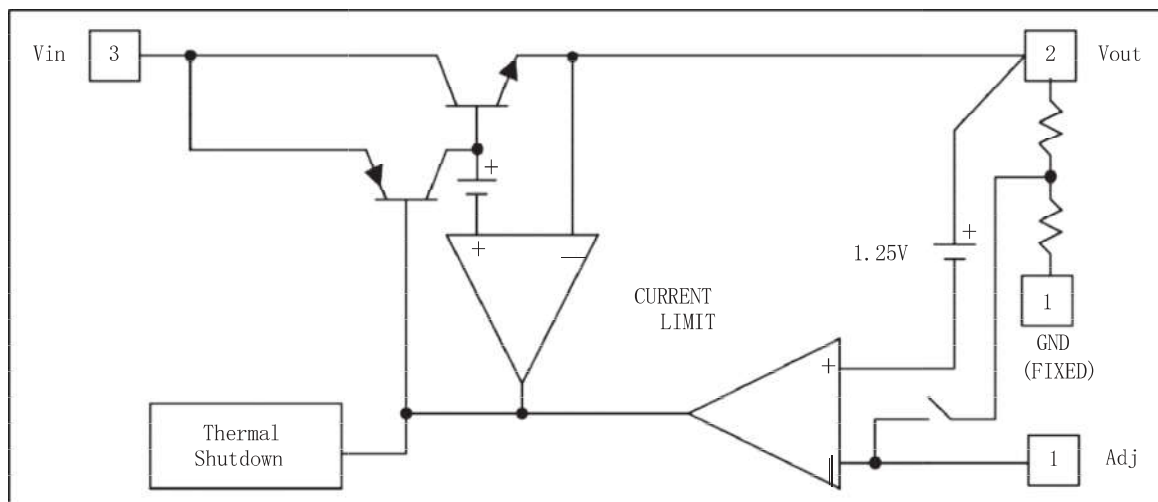
1 Adj(GND)
2 Vout
3 Vin
SOT-223

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Input Voltage	V _{IN}	18	V
Thermal Resistance.Junction- to-Ambient (Note.1)	R _{θJA}	136	°C/W
Thermal Resistance.Junction- to-Case	R _{θJC}	20	
Junction Temperature	T _J	150	°C
Maximum Ambient Temperature	T _A	140	
Lead Temperature (10 sec)		300	
Storage Temperature Range	T _{stg}	-65 to 150	

Note.1: No air flow

Block Diagrams



Electrical Characteristics(TA = 25 °C unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Reference Voltage	V _{REF}	YFW1117-ADJ	10mA ≤ I _{OUT} ≤ 800mA, 1.5V ≤ V _{IN} - V _{OUT} ≤ 12V	1.225	1.25	1.275	
Output Voltage	V _{OUT}	YFW1117-1.2	0 ≤ I _{OUT} ≤ 800mA, 2.6V ≤ V _{IN} - V _{OUT} ≤ 12V	1.175	1.2	1.225	V
		YFW1117-1.25	0 ≤ I _{OUT} ≤ 800mA, 2.65V ≤ V _{IN} - V _{OUT} ≤ 12V	1.238	1.25	1.275	
		YFW1117-1.5	0 ≤ I _{OUT} ≤ 800mA, 2.9V ≤ V _{IN} - V _{OUT} ≤ 12V	1.47	1.5	1.53	
		YFW1117-1.8	0 ≤ I _{OUT} ≤ 800mA, 3.2V ≤ V _{IN} - V _{OUT} ≤ 12V	1.764	1.8	1.836	
		YFW1117-1.9	0 ≤ I _{OUT} ≤ 800mA, 3.3V ≤ V _{IN} - V _{OUT} ≤ 12V	1.862	1.9	1.938	
		YFW1117-2.5	0 ≤ I _{OUT} ≤ 800mA, 3.9V ≤ V _{IN} - V _{OUT} ≤ 12V	2.45	2.5	2.55	
		YFW1117-2.85	0 ≤ I _{OUT} ≤ 800mA, 4.25V ≤ V _{IN} - V _{OUT} ≤ 12V	2.822	2.85	2.878	
		YFW1117-3.3	0 ≤ I _{OUT} ≤ 800mA, 4.75V ≤ V _{IN} - V _{OUT} ≤ 12V	3.234	3.3	3.366	
		YFW1117-5.0	0 ≤ I _{OUT} ≤ 800mA, 6.5V ≤ V _{IN} - V _{OUT} ≤ 12V	4.9	5	5.1	
Line Regulation	ΔV _{OUT}	YFW1117-ADJ	I _{OUT} =10mA, 1.5V ≤ V _{IN} -V _{OUT} ≤ 12V		0.035	0.2	%
		YFW1117-1.2	I _{OUT} =10mA, 2.6V ≤ V _{IN} -V _{OUT} ≤ 12V				mV
		YFW1117-1.25	I _{OUT} =10mA, 2.65V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-1.5	I _{OUT} =10mA, 2.9V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-1.8	I _{OUT} =10mA, 3.2V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-1.9	I _{OUT} =10mA, 3.3V ≤ V _{IN} -V _{OUT} ≤ 12V		9	12	
		YFW1117-2.5	I _{OUT} =10mA, 3.9V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-2.85	I _{OUT} =10mA, 4.25V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-3.3	I _{OUT} =10mA, 4.75V ≤ V _{IN} -V _{OUT} ≤ 12V				
		YFW1117-5.0	I _{OUT} =10mA, 6.5V ≤ V _{IN} -V _{OUT} ≤ 12V				
Load Regulation	ΔV _{OUT}	YFW1117-ADJ	V _{IN} -V _{OUT} =3V, 10mA ≤ I _{OUT} ≤ 800mA		0.2	0.4	%
		YFW1117-1.2	V _{IN} =2.6V, 10mA ≤ I _{OUT} ≤ 800mA				mV
		YFW1117-1.25	V _{IN} =2.65V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-1.5	V _{IN} =2.9V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-1.8	V _{IN} =3.2V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-1.9	V _{IN} =3.3V, 10mA ≤ I _{OUT} ≤ 800mA		3	10	
		YFW1117-2.5	V _{IN} =3.9V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-2.85	V _{IN} =4.25V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-3.3	V _{IN} =4.75V, 10mA ≤ I _{OUT} ≤ 800mA				
		YFW1117-5.0	V _{IN} =6.5V, 10mA ≤ I _{OUT} ≤ 800mA				
Dropout Voltage	V _{IN} -V _{OUT}	YFW1117-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}	YFW1117-XXX	V _{IN} -V _{OUT} =5V, T _J =25?	1.25	1.4	1.6	A
		YFW1117-XXX	YFW1117-ADJ		5	10	mA
Adjust Pin Current	I _{ADJ}				55	120	μA
Adjust Pin Current Change	I _{Change}				0.2		

Electrical Characteristics(TA = 25 °C unless otherwise specified)

Quiescent Current	I _Q	YFW1117-1.2	V _{in} -V _{out} =1.25V			
		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 Application

YFW1117 has an adjustable version and five fixed versions, Chart 1 is its typical application:

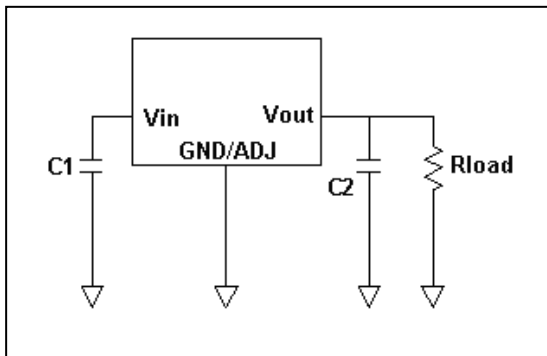


Chart 1: Application circuit of YFW 1117 fixed version

The YFW 1117 adjustable version provide 1.25V Reference Voltage. Any output voltage between 1.25V~13.8V can be available by choosing two external resistors (connection method is shown in chart 2). In chart 2, R1, R2 is the two external resistors.

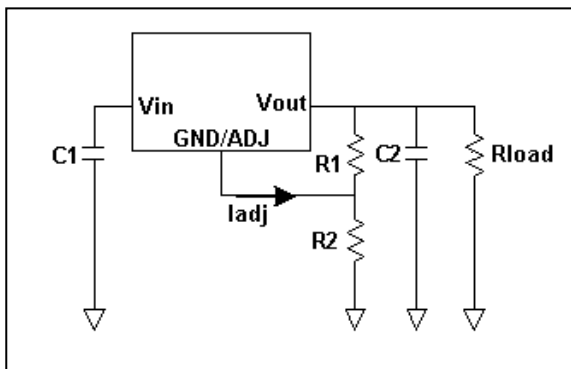


Chart 2. Application Circuit of YFW1117 adjustable version

Typical Application

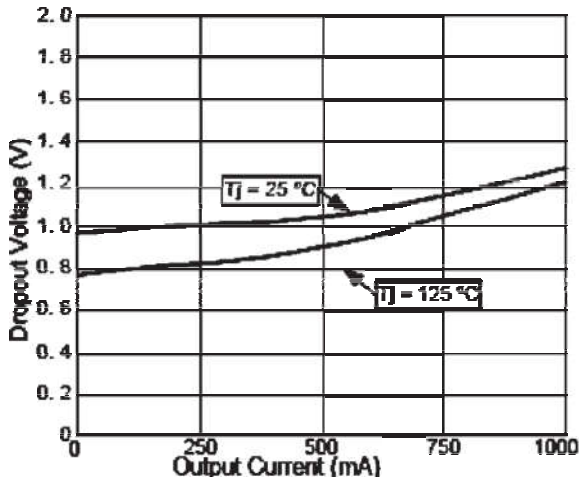


Fig.1 Dropout Voltage vs Output Current

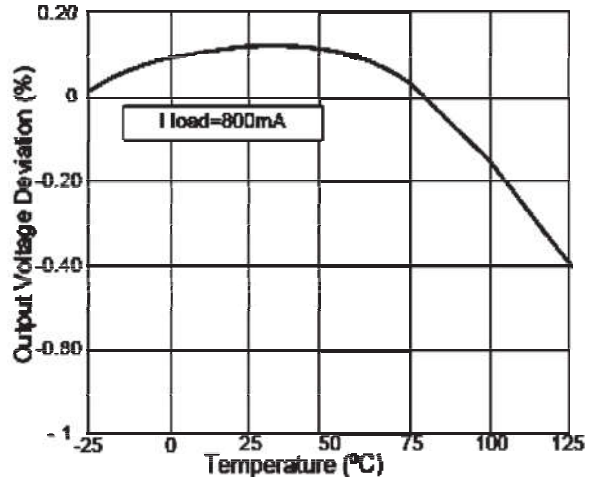


Fig.2 Load Regulation vs Temperature

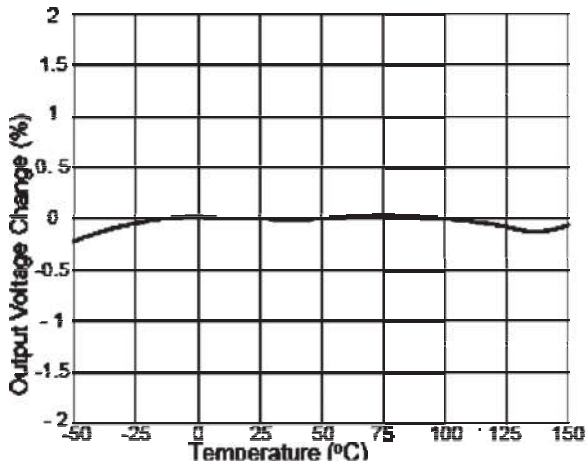


Fig.3 Percent Change in Output Voltage vs Temperature

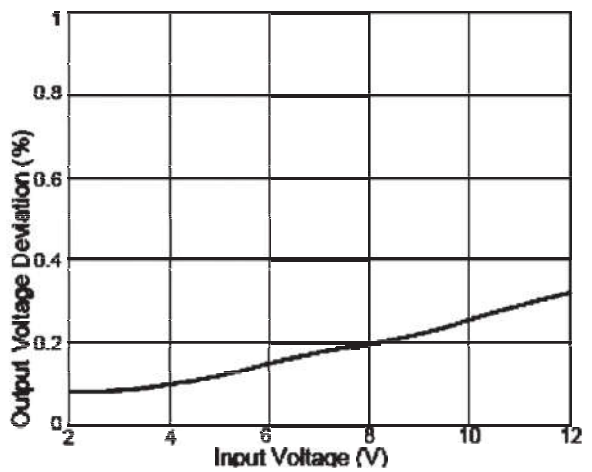


Fig.4 Line Regulation

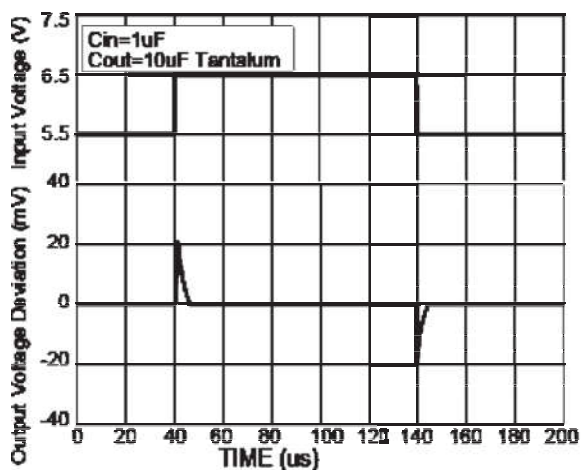


Fig.5 Line Transient Response

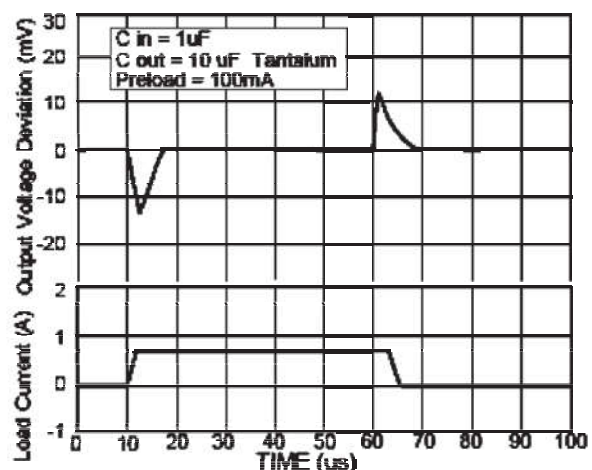


Fig.6 Load Transient Response

Ordering information

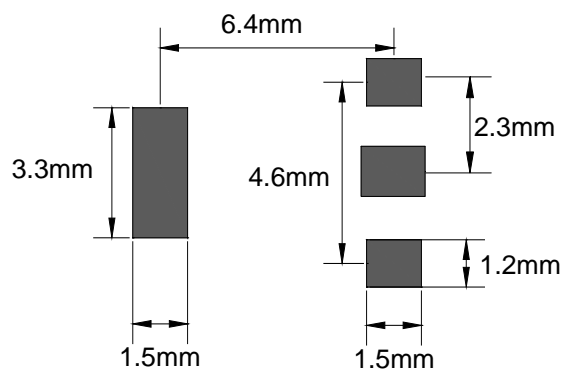
Package	Packing Description	Base Quantity	Packing Quantity
SOT-223	Tape/Reel, 7" reel	1000pcs/Reel	6000PCS/Box 30000PCS/Carton
	Tape/Reel, 13" reel	2500pcs/Reel	5000PCS/Box 30000PCS/Carton

Package Dimensions

SOT-223

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.80	0.059	0.071
A1	0.00	0.10	0.000	0.004
A2	1.50	1.70	0.059	0.067
b	0.65	0.75	0.026	0.030
c	0.20	0.30	0.008	0.012
D	6.40	6.60	0.252	0.260
D1	2.90	3.10	0.114	0.122
E	3.30	3.70	0.130	0.146
E1	6.85	7.15	0.270	0.281
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	1.65	1.85	0.065	0.073
L1	0.90	1.15	0.035	0.045

The recommended mounting pad size



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