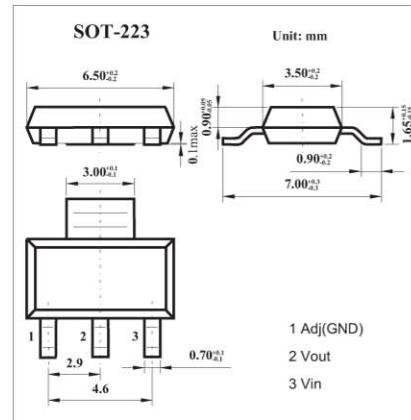


## ■ Features

- 1.4V maximum dropout at full load current
- Fast transient response
- Output current limiting
- Built-in thermal shutdown
- Good noise rejection
- 3-Terminal Adjustable or Fixed 1.5V, 1.8V, 1.9V, 2.5V, 3.3V, 5.0V

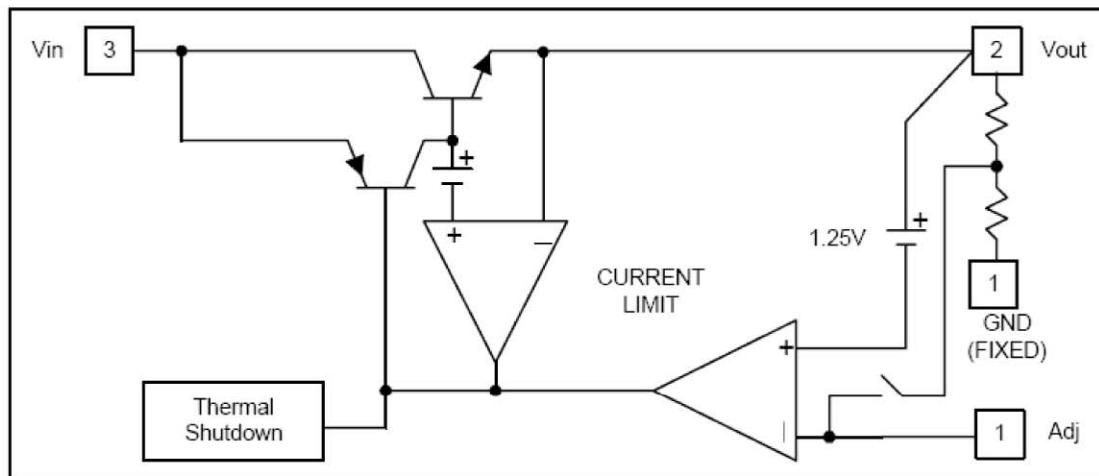


## ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Maximum Input Voltage	V <sub>in</sub>	18	V
Power Dissipation	P <sub>D</sub>	Internally Limited	
Thermal Resistance Junction-to-Ambient	θ <sub>JA</sub>	117	°C/W
Thermal Resistance Junction-to-Case *	θ <sub>JC</sub>	15	°C/W
Operating Junction Temperature Range	T <sub>OP</sub>	0 to +150	°C
Storage Temperature	T <sub>ST</sub>	-65 to +150	°C

\* Control Circuitry/Power Transistor

## ■ Block Diagram



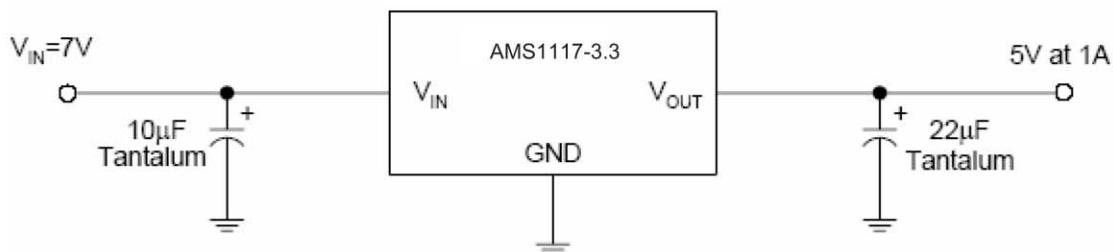
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## ■ Electrical Characteristics Ta = 25°C

Parameter		Testconditons	Min	Typ	Max	Unit
Reference Voltage	AMS1117-ADJ	T <sub>J</sub> =25°C,(V <sub>IN</sub> -OUT)=1.5V,I <sub>O</sub> =10mA	1.225	1.250	1.275	V
Output Voltage	AMS1117-1.5	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 3V≤V <sub>IN</sub> ≤12V	1.470	1.500	1.530	V
	AMS1117-1.8	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 3.3V≤V <sub>IN</sub> ≤12V	1.764	1.800	1.836	V
	AMS1117-1.9	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 3.3V≤V <sub>IN</sub> ≤12V	1.862	1.900	1.938	V
	AMS1117-2.5	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 4V≤V <sub>IN</sub> ≤12V	2.450	2.500	2.550	V
	AMS1117-3.3	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 4.8V≤V <sub>IN</sub> ≤12V	3.235	3.300	3.365	V
	AMS1117-5.0	I <sub>OUT</sub> = 10mA, T <sub>J</sub> = 25°C, 6.5V≤V <sub>IN</sub> ≤12V	4.900	5.000	5.100	V
Line Regulation	AMS1117-XXX	I <sub>O</sub> =10mA,V <sub>OUT</sub> +1.5V<V <sub>IN</sub> <12V, T <sub>J</sub> =25°C			0.2	%
Load Regulation	AMS1117-ADJ	V <sub>IN</sub> =3.3V,V <sub>adj</sub> =0,0mA<I <sub>O</sub> <1A,T <sub>J</sub> =25°C			1	%
	AMS1117-1.5	V <sub>IN</sub> =3V,0mA<I <sub>O</sub> <1A,T <sub>J</sub> =25°C		12	15	mV
	AMS1117-1.8	V <sub>IN</sub> =3.3V,0mA<I <sub>O</sub> <1A,T <sub>J</sub> =25°C		15	18	mV
	AMS1117-1.9	V <sub>IN</sub> =3.3V,0mA<I <sub>O</sub> <1A,T <sub>J</sub> =25°C		16	19	mV
	AMS1117-2.5	V <sub>IN</sub> =4V,0mA<I <sub>O</sub> <1A,T <sub>J</sub> =25°C		20	25	mV
	AMS1117-3.3	V <sub>IN</sub> =5V,0mA≤I <sub>O</sub> ≤1A,T <sub>J</sub> =25°C		26	33	mV
	AMS1117-5.0	V <sub>IN</sub> =8V,0mA≤I <sub>O</sub> ≤1A,T <sub>J</sub> =25°C		40	50	mV
Dropout Voltage (V <sub>IN</sub> -V <sub>OUT</sub> )	AMS1117-XXX	I <sub>OUT</sub> = 1A ,△V <sub>OUT</sub> =0.1%V <sub>OUT</sub>		1.3	1.4	V
Current Limit	AMS1117-XXX	(V <sub>IN</sub> -V <sub>OUT</sub> ) = 5V	1. 1			A
Minimum Load Current	AMS1117-XXX	0°C≤T <sub>J</sub> ≤125°C		5	10	mA
Thermal Regulation		T <sub>A</sub> =25°C, 30ms pulse		0.008	0.04	%/W
Ripple Rejection		F=120Hz,C <sub>OUT</sub> =25uF Tantalum, I <sub>OUT</sub> =1A				
	AMS1117-XXX	V <sub>IN</sub> =V <sub>OUT</sub> +3V		60	70	dB
Temperature Stability		I <sub>O</sub> =10mA		0.5		%

## Typical Applications



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