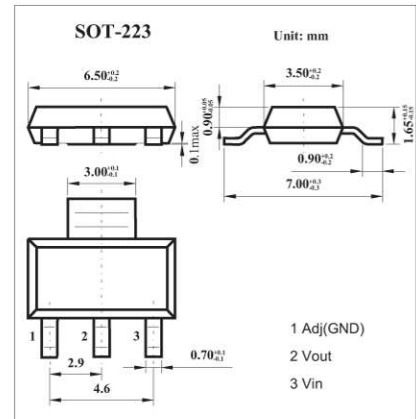


■ Features

- 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

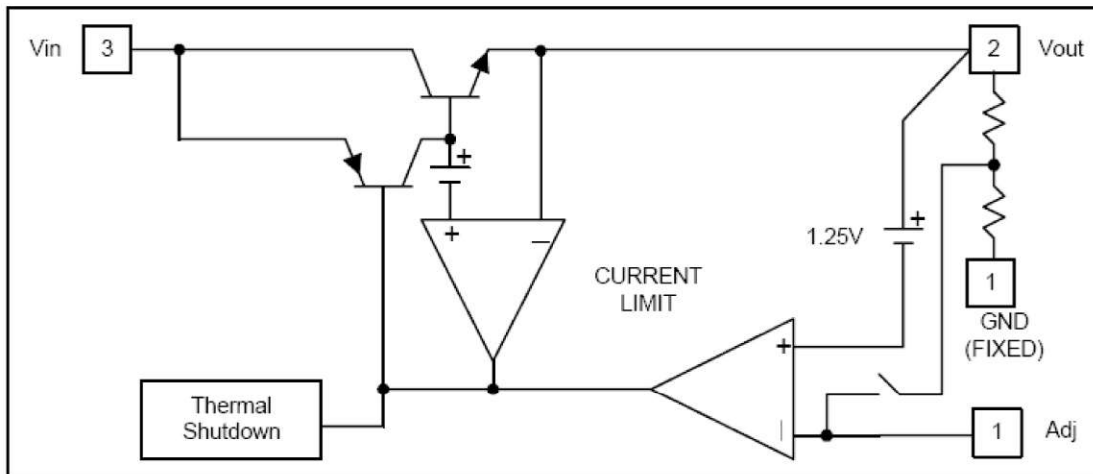


■ Absolute Maximum Ratings Ta = 25°C

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

* Control Circuitry/Power Transistor

■ Block Diagram



■ Electrical Characteristics Ta = 25°C

Parameter	Testconditions	Min	Typ	Max	Unit
Reference Voltage	AMS1117-ADJ T _J =25°C, (V _{IN} -V _{OUT})=1.5V, I _o =10mA	1.225	1.250	1.275	V
Output Voltage	AMS1117-1.5 I _{OUT} = 10mA, T _J = 25°C, 3V ≤ V _{IN} ≤ 12V	1.470	1.500	1.530	V
	AMS1117-1.8 I _{OUT} = 10mA, T _J = 25°C, 3.3V ≤ V _{IN} ≤ 12V	1.764	1.800	1.836	V
	AMS1117-1.9 I _{OUT} = 10mA, T _J = 25°C, 3.3V ≤ V _{IN} ≤ 12V	1.862	1.900	1.938	V
	AMS1117-2.5 I _{OUT} = 10mA, T _J = 25°C, 4V ≤ V _{IN} ≤ 12V	2.450	2.500	2.550	V
	AMS1117-3.3 I _{OUT} = 10mA, T _J = 25°C, 4.8V ≤ V _{IN} ≤ 12V	3.235	3.300	3.365	V
	AMS1117-5.0 I _{OUT} = 10mA, T _J = 25°C, 6.5V ≤ V _{IN} ≤ 12V	4.900	5.000	5.100	V
Line Regulation	AMS1117-XXX I _o =10mA, V _{OUT} +1.5V < V _{IN} < 12V, T _J =25°C			0.2	%
Load Regulation	AMS1117-ADJ V _{IN} =3.3V, V _{adj} =0, 0mA < I _o < 1A, T _J =25°C			1	%
	AMS1117-1.5 V _{IN} =3V, 0mA < I _o < 1A, T _J =25°C		12	15	mV
	AMS1117-1.8 V _{IN} =3.3V, 0mA < I _o < 1A, T _J =25°C		15	18	mV
	AMS1117-1.9 V _{IN} =3.3V, 0mA < I _o < 1A, T _J =25°C		16	19	mV
	AMS1117-2.5 V _{IN} =4V, 0mA < I _o < 1A, T _J =25°C		20	25	mV
	AMS1117-3.3 V _{IN} =5V, 0mA ≤ I _o ≤ 1A, T _J =25°C		26	33	mV
	AMS1117-5.0 V _{IN} =8V, 0mA ≤ I _o ≤ 1A, T _J =25°C		40	50	mV
Dropout Voltage (V _{IN} -V _{OUT})	AMS1117-XXX I _{OUT} = 1A, ΔV _{OUT} =0.1%V _{OUT}		1.3	1.4	V
Current Limit	AMS1117-XXX (V _{IN} -V _{OUT}) = 5V	1.1			A
Minimum Load Current	AMS1117-XXX 0°C ≤ T _J ≤ 125°C		5	10	mA
Thermal Regulation	T _A =25°C, 30ms pulse		0.008	0.04	%/W
Ripple Rejection	F=120Hz, C _{OUT} =25μF Tantalum, I _{OUT} =1A				
	AMS1117-XXX V _{IN} =V _{OUT} +3V		60	70	dB
Temperature Stability	I _o =10mA		0.5		%

Typical Applications

