

Absolute Maximum Ratings

Parameter	Symbol	Max	Units
Input Supply Voltage	V_{IN}	7	V
Power Dissipation	P_D	Internally Limited	W
Thermal Resistance Junction to Case SOT-223	θ_{JC}	15	°C/W
TO-263		3	
Thermal Resistance Junction to Ambient SOT-223	θ_{JA}	156	°C/W
TO-263		60	
Operating Junction Temperature Range	T_J	0 to 125	°C
Storage Temperature Range	T_{STG}	-65 to 150	°C
Lead Temperature (Soldering) 10 Sec	T_{LEAD}	260	°C

Electrical Characteristics⁽⁶⁾

Adj. Option: $V_{IN} = 2.65V$ to $7.0V$ and Adj $I_O = 10mA$ to I_{RATED}

Fixed Options: $I_O = 0mA$ to I_{RATED}

Fixed 2.5V: $V_{IN} = 3.9V$ to $7.0V$

Fixed 2.85V: $V_{IN} = 4.25V$ to $7.0V$

Fixed 3.3V: $V_{IN} = 4.75V$ to $7.0V$

Parameter	Symbol	Test Conditions			Test Limits			
		V_{IN}	I_O	$T_J^{(5)}$	Min	Typ	Max	Units
Output Voltage ⁽¹⁾ (Fixed Voltage Versions)	V_D	5V	0mA	25°C	0.99 V_O	V_O	1.01 V_O	V
				O.T.	0.98 V_O	V_O	1.02 V_O	
Reference Voltage ⁽¹⁾ (Adj Voltage Version)	V_{REF}	5V	10mA	25°C	1.238	1.250	1.262	V
				O.T.	1.225	1.250	1.270	
Line Regulation ⁽¹⁾	$REG_{(LINE)}$		10mA	O.T.		0.035	0.2	%
Load Regulation ⁽¹⁾	$REG_{(LOAD)}$	5V		O.T.		0.2	0.4	%
Dropout Voltage ⁽²⁾ EZ1117A	V_D		100mA 500mA 800mA 1,000mA	O.T.		1.00 1.05 1.10 1.10	1.10 1.15 1.20 1.30	V
Current Limit EZ1117 EZ1117A	I_{CL}			O.T.	0.8 1.0			

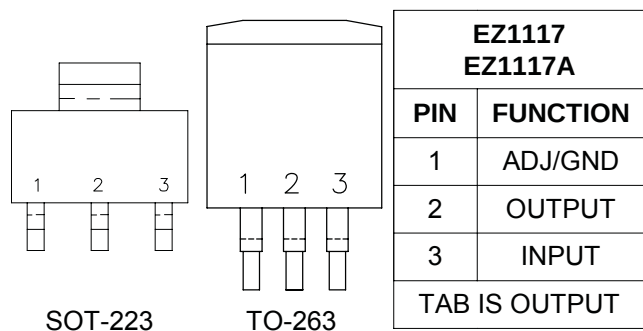
Electrical Characteristics (Cont.)

Parameter	Symbol	Test Conditions			Test Limits			
		V_{IN}	I_O	$T_J^{(5)}$	Min	Typ	Max	Units
Quiescent Current Fixed Voltage Version	I_Q	5V		O.T.		10	13	mA
Temperature Coefficient	T_C			O.T.		0.005		%/°C
Adjust Pin Current	I_{ADJ}			O.T.		55	90	μA
Adjust Pin Current Change	ΔI_{ADJ}			O.T.		0.2	5	μA
Temperature Stability	T_S			O.T.		0.5		%
Minimum Load Current Adj Voltage Version	I_O	5V		O.T.		5	10	mA
RMS Output Noise ⁽³⁾	V_N			25°C		0.003		% V_O
Ripple Rejection Ratio ⁽⁴⁾	R_A	5V		O.T.	60	72		dB

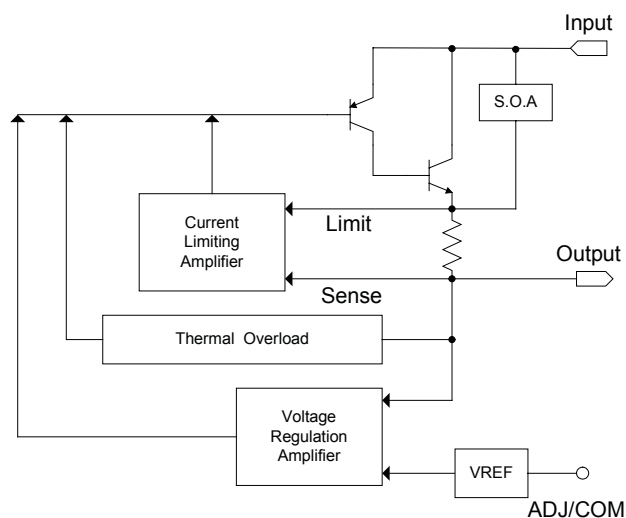
NOTES:

- (1) Low duty cycle pulse testing with Kelvin connections required.
- (2) $\Delta V_{OUT}, \Delta V_{REF} = 1\%$.
- (3) Bandwidth of 10Hz to 10kHz.
- (4) 120Hz input ripple (CAJ for ADJ = 25μF).
- (5) O.T. = over specified operating junction temperature range.
- (6) $I_{RATED} = 1A$ for EZ1117A and 800mA for EZ1117.

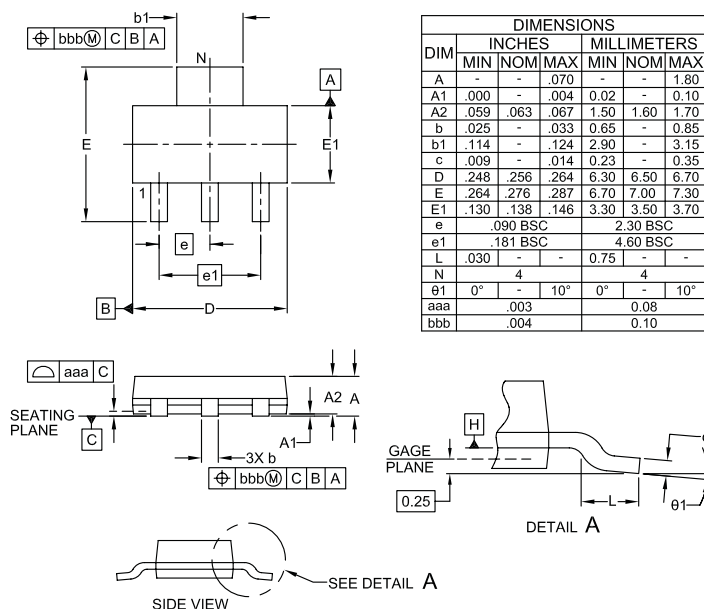
Pin Configurations



Block Diagram



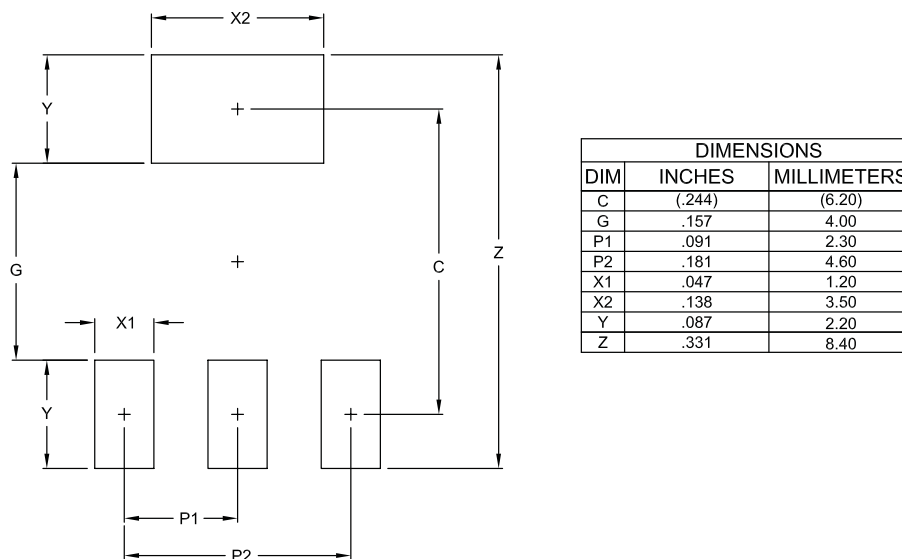
Outline Drawing - SOT-223



NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DATUMS [A] AND [B] TO BE DETERMINED AT DATUM PLANE [H] .
3. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.
4. REFERENCE JEDEC STD TO-261, VARIATION AA.

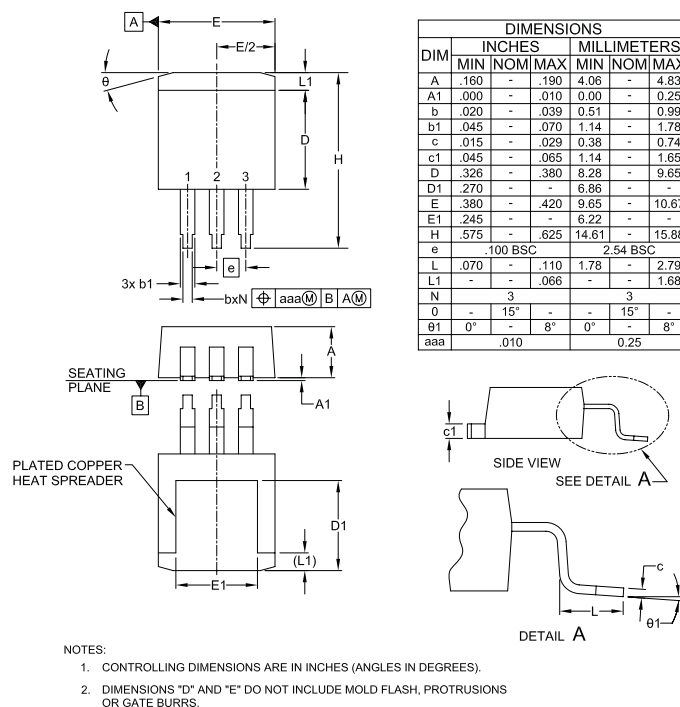
Land Pattern - SOT-223



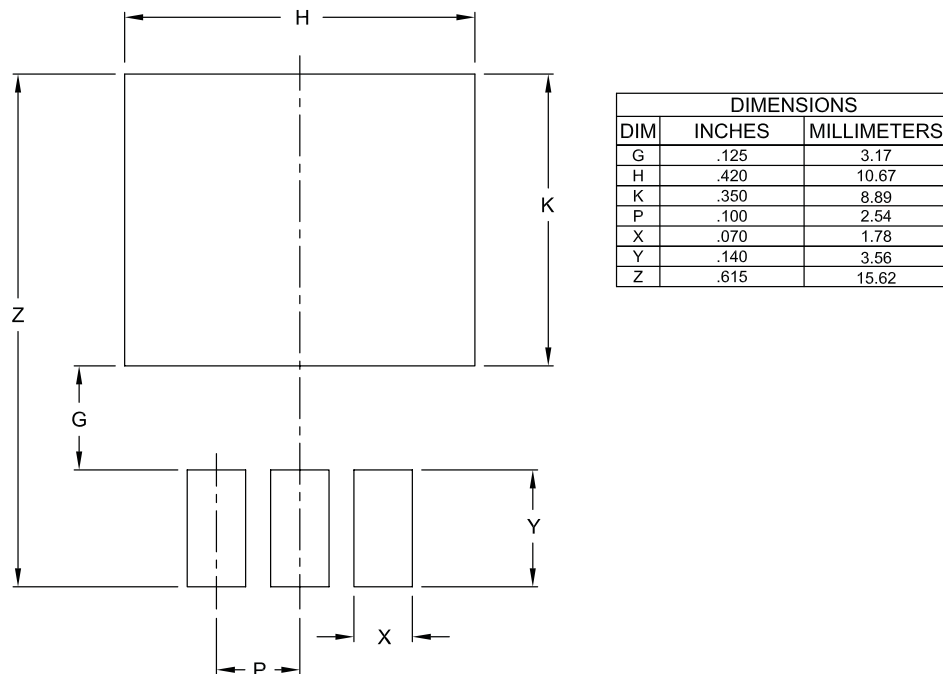
NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.
2. REFERENCE IPC-SM-782A.

Outline Drawing - TO-263



Land Pattern - TO-263



- NOTES:**
1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY
CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR
COMPANY'S MANUFACTURING GUIDELINES ARE MET.

Contact Information

Semtech Corporation
Power Management Products Division
200 Flynn Road, Camarillo, CA 93012
Phone: (805) 498-2111 Fax: (805) 498-3804

www.semtech.com