

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			

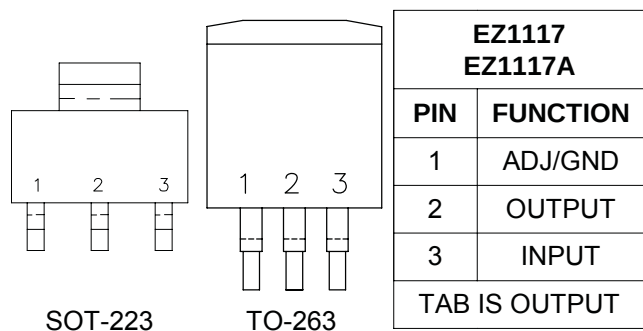
Electrical Characteristics (Cont.)

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

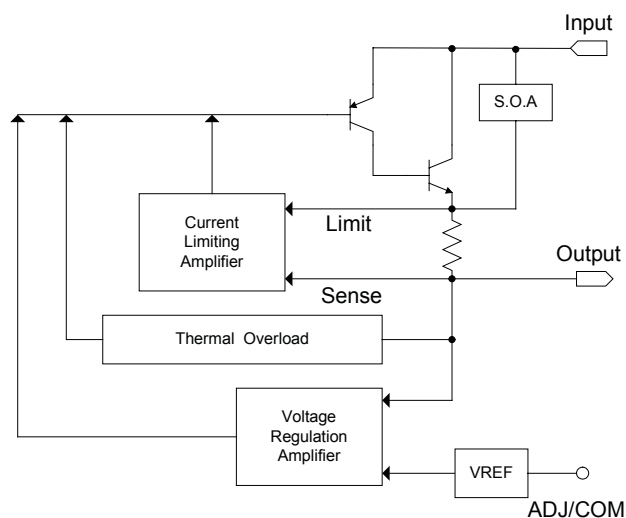
NOTES:

- (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.

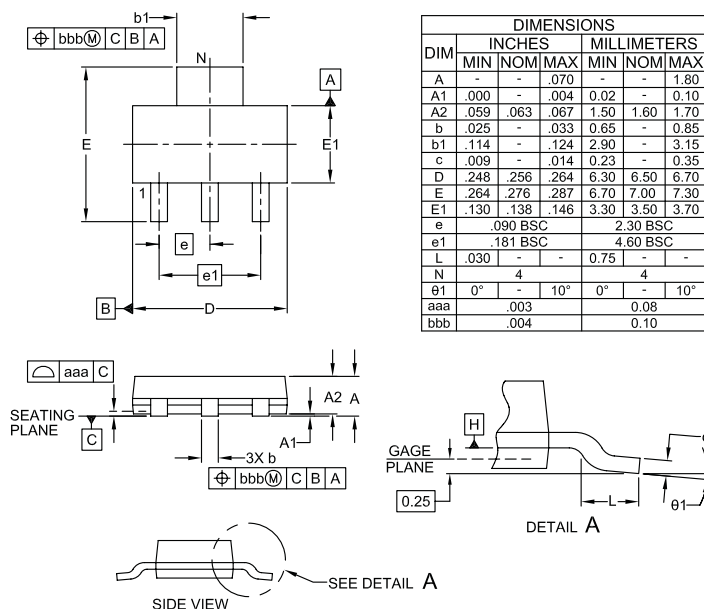
Pin Configurations



Block Diagram



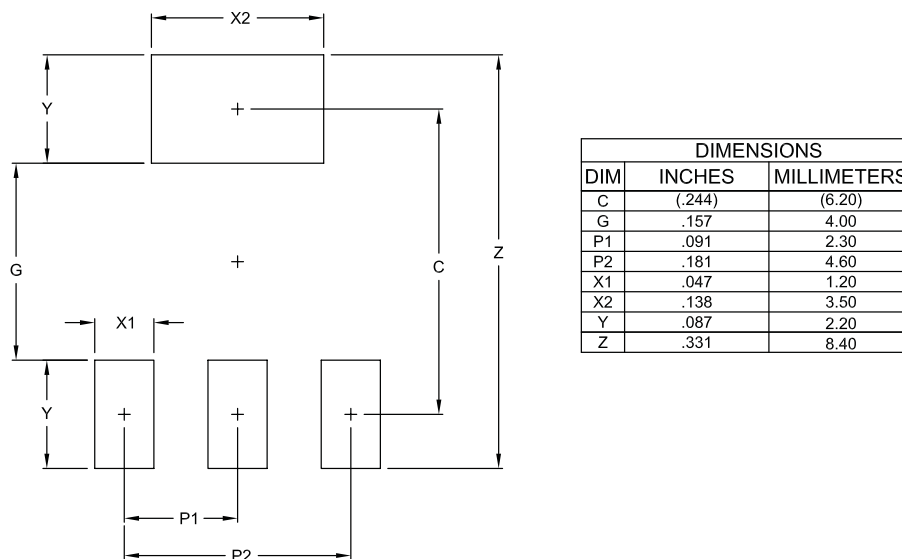
Outline Drawing - SOT-223



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.

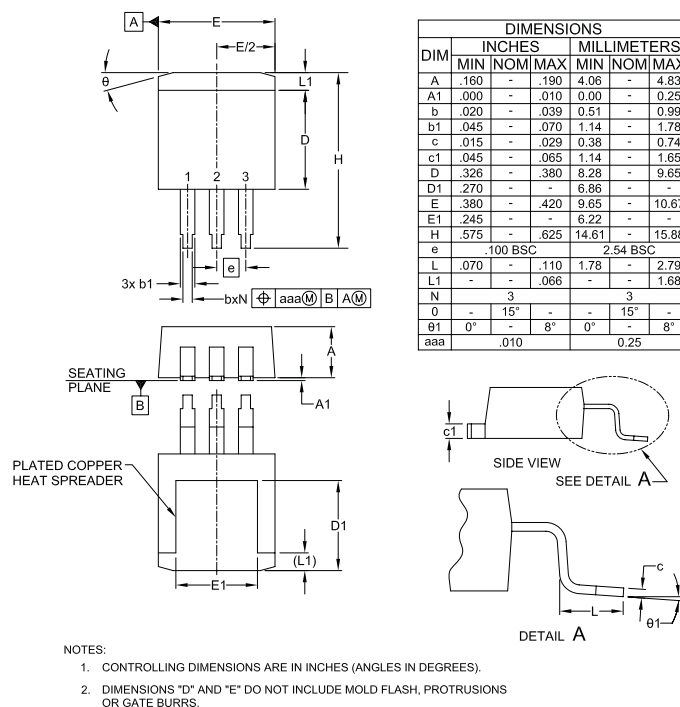
Land Pattern - SOT-223



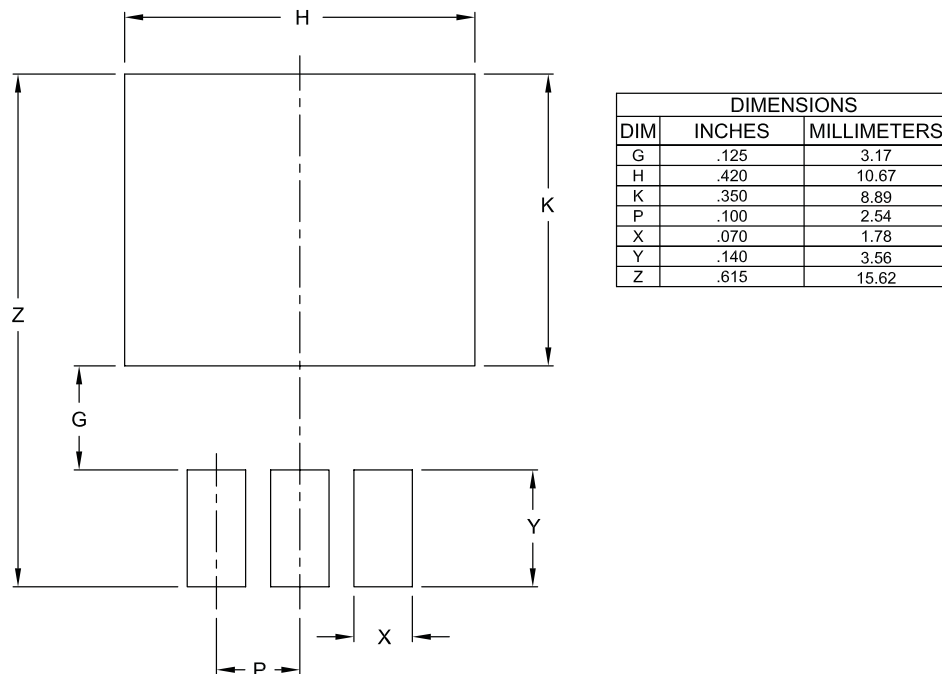
NOTES:

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:**
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