

CZT7120

**SURFACE MOUNT  
PNP SILICON SWITCHING  
POWER TRANSISTOR**

**POWER  
223™**



**SOT-223 CASE**

**Central™**  
Semiconductor Corp.

[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT7120 PNP Switching Power Transistor, manufactured by the epitaxial planar process, combines both power and high speed switching characteristics in a SOT-223 Surface Mount Package. Typical applications include drivers, DC-DC converters, and general fast switching applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
$V_{CB0}$	120	V
$V_{CEO}$	70	V
$V_{EBO}$	7.0	V
$I_C$	3.0	A
$P_D$	2.0	W
$T_J, T_{stg}$	-65 to +150	$^\circ\text{C}$
$\theta_{JA}$	62.5	$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$ )

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=80\text{V}$			1.0	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$			1.0	$\mu\text{A}$
$BV_{CBO}$	$I_C=50\mu\text{A}$	120	156		V
$BV_{CEO}$	$I_C=10\text{mA}$	70	118		V
$BV_{EBO}$	$I_E=50\mu\text{A}$	7.0	24		V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		295	500	mV
$V_{BE(ON)}$	$I_C=2.0\text{A}, V_{CE}=1.0\text{V}$		0.93	1.1	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	100	210		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=500\text{mA}$	100	162	300	
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=3.0\text{A}$	40	65		
$f_T$	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1.0\text{MHz}$	8.0			MHz

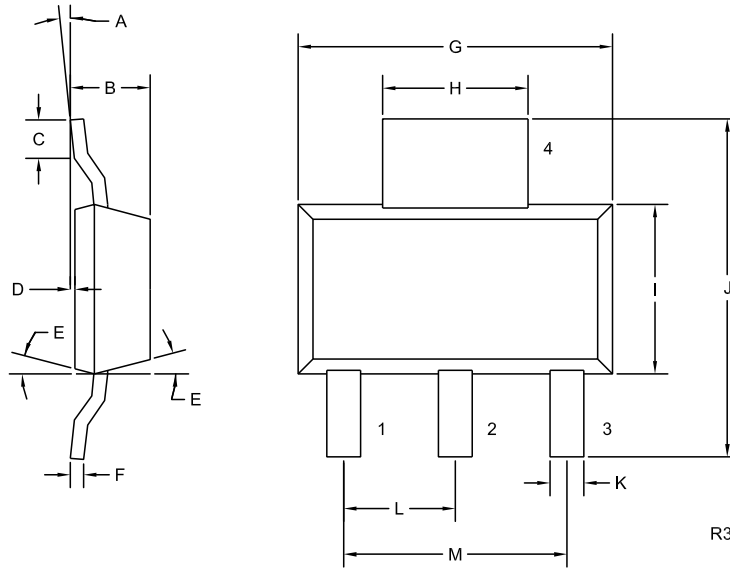
R3 (1-March 2010)

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**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- 4) Collector

**MARKING:**

**FULL PART NUMBER**

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	10°	0°	10°
B	0.059	0.071	1.50	1.80
C	0.018	—	0.45	—
D	0.000	0.004	0.00	0.10
E	15°		15°	
F	0.009	0.014	0.23	0.35
G	0.248	0.264	6.30	6.70
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.70
J	0.264	0.287	6.70	7.30
K	0.024	0.033	0.60	0.85
L	0.091		2.30	
M	0.181		4.60	

SOT-223 (REV: R3)

R3 (1-March 2010)