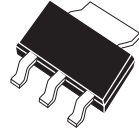


**CZT651**  
**SURFACE MOUNT**  
**NPN HIGH CURRENT**  
**SILICON TRANSISTOR**



**SOT-223 CASE**

# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT651 type is a NPN Silicon Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current applications

**MARKING CODE: FULL PART NUMBER**

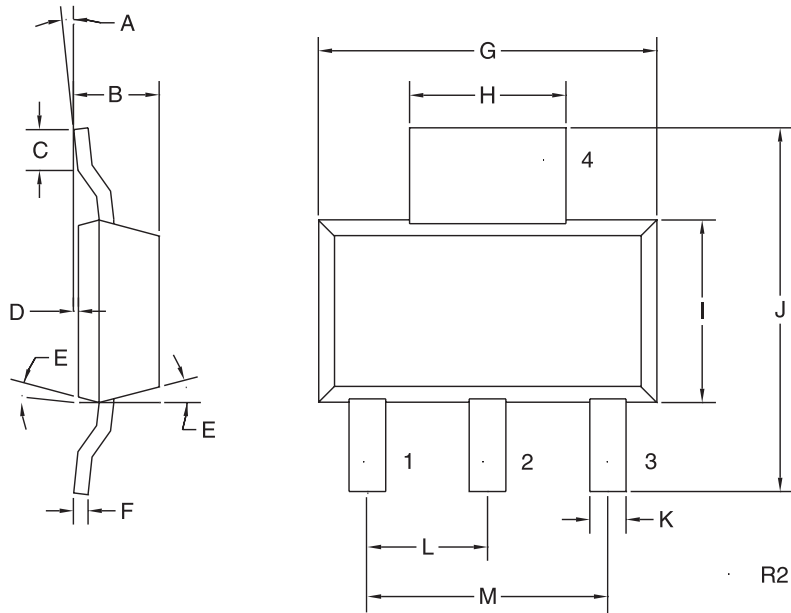
**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$ 80	V
Collector-Emitter Voltage	$V_{CEO}$ 60	V
Emitter-Base Voltage	$V_{EBO}$ 5.0	V
Collector Current	$I_C$ 2.0	A
Power Dissipation	$P_D$ 2.0	W
Operating and Storage		
Junction Temperature	$T_J, T_{stg}$ -65 to +150	$^\circ\text{C}$
Thermal Resistance	$\theta_{JA}$ 62.5	$^\circ\text{C/W}$

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

<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=80\text{V}$		100	nA
$I_{EBO}$	$V_{EB}=4.0\text{V}$		100	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	80		V
$BV_{CEO}$	$I_C=10\text{mA}$	60		V
$BV_{EBO}$	$I_E=10\mu\text{A}$	5.0		V
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		0.3	V
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		0.5	V
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=100\text{mA}$		1.2	V
$V_{BE(ON)}$	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$		1.0	V
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=50\text{mA}$	75		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	75		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$	75		
$h_{FE}$	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	40		
$f_T$	$V_{CE}=5.0\text{V}, I_C=50\text{mA}, f=100\text{MHz}$	75		MHz

**SOT-223 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- 4) COLLECTOR

**MARKING CODE:**

**FULL PART NUMBER**

SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0°	7°	0°	7°
B	0.063	0.067	1.60	1.70
C	0.022		0.55	
D	0.001	0.004	0.03	0.10
E	15°		15°	
F	0.009	0.013	0.23	0.33
G	0.248	0.264	6.30	6.71
H	0.114	0.122	2.90	3.10
I	0.130	0.146	3.30	3.71
J	0.264	0.287	6.71	7.29
K	0.024	0.031	0.61	0.79
L	0.091		2.31	
M	0.181		4.60	

SOT-223 (REV: R2)

R2 (14-November 2002)