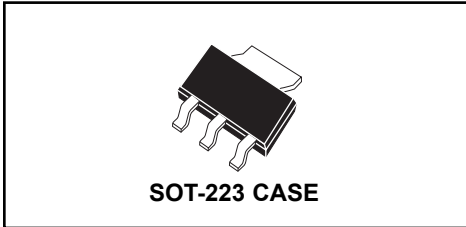


**CZT250K**  
**SURFACE MOUNT**  
**NPN EXTREMELY HIGH  $h_{FE}$**   
**SILICON DARLINGTON TRANSISTOR**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CZT250K type is an NPN silicon Darlington transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

**MARKING CODE: FULL PART NUMBER**

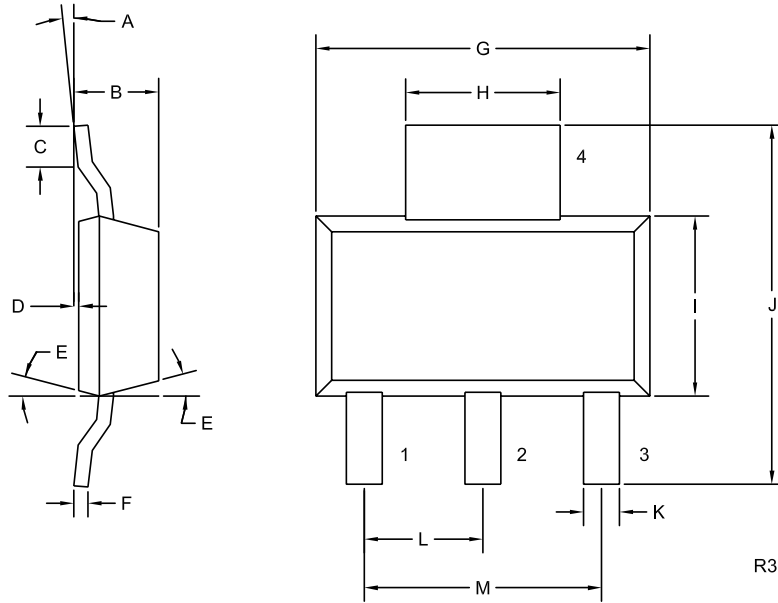
**MAXIMUM RATINGS:** ( $T_A=25^{\circ}\text{C}$ )

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	25	V
Emitter-Base Voltage	$V_{EBO}$	10	V
Collector Current	$I_C$	1.0	A
Power Dissipation	PD	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>
$I_{CBO}$	$V_{CB}=30\text{V}$		100	nA
$BV_{CBO}$	$I_C=10\mu\text{A}$	50		V
$BV_{CEO}$	$I_C=10\text{mA}$	25		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	10		V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=0.1\text{mA}$		1.5	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$		2.0	V
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	250,000		
$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=100\text{mA}$	250,000		
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	125		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°	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)