

CZT3150

**SURFACE MOUNT NPN
SILICON POWER TRANSISTOR**



www.centrasemi.com

**POWER
223™**



SOT-223 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CZT3150 type is a NPN Silicon Power Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current, high gain, 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
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

V_{CBO}	50
V_{CEO}	25
V_{EBO}	7.0
I_C	5.0
I_B	1.0
P_D	2.0
T_J, T_{stg}	-65 to +150
θ_{JA}	62.5

UNITS

V
V
V
A
A
W
$^\circ\text{C}$
$^\circ\text{C/W}$

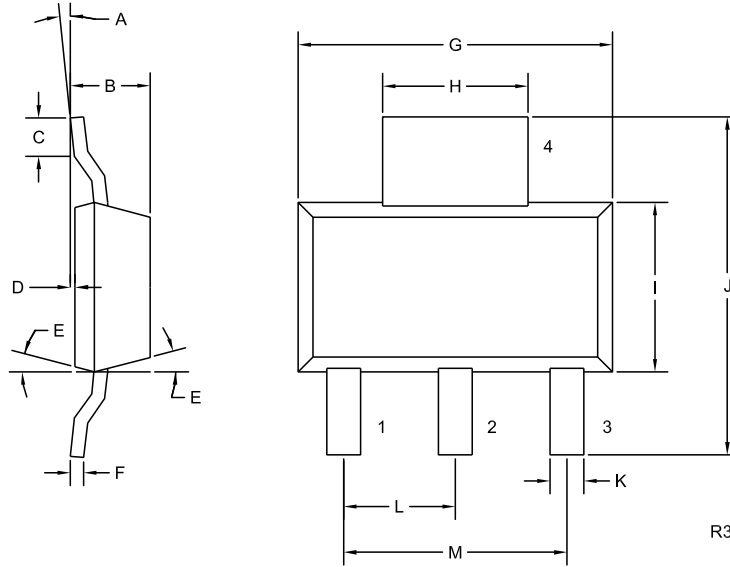
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=50\text{V}$			1.0	μA
I_{EBO}	$V_{EB}=7.0\text{V}$			1.0	μA
BV_{CEO}	$I_C=10\text{mA}$	25			V
$V_{CE(SAT)}$	$I_C=3.0\text{A}, I_B=150\text{mA}$			0.5	V
$V_{CE(SAT)}$	$I_C=4.0\text{A}, I_B=200\text{mA}$			0.6	V
$V_{BE(SAT)}$	$I_C=3.0\text{A}, I_B=150\text{mA}$			1.10	V
$V_{BE(SAT)}$	$I_C=4.0\text{A}, I_B=200\text{mA}$			1.40	V
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	250		550	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	150			
h_{FE}	$V_{CE}=2.0\text{V}, I_C=5.0\text{A}$	50			
f_T	$V_{CE}=6.0\text{V}, I_C=50\text{mA}, f=200\text{MHz}$		150		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			50	pF

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SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING:
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)

R6 (1-March 2010)