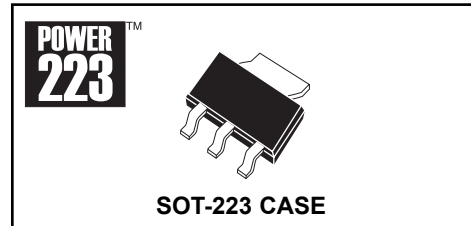


CZT3090L
SURFACE MOUNT
LOW $V_{CE(SAT)}$
NPN SILICON POWER TRANSISTOR



CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CZT3090L is a Low $V_{CE(SAT)}$ NPN Transistor in a space saving Power SOT-223 surface mount package, designed for DC-DC converters for mobile systems and LAN cards, motor control, power management and strobe flash units.

MARKING CODE: FULL PART NUMBER

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

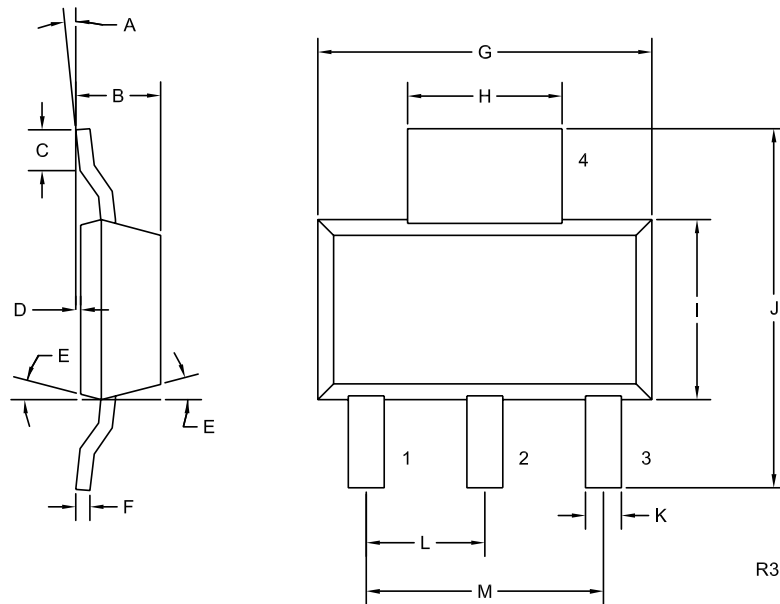
	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	45	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	3.0	A
Peak Pulse Current	I_{CM}	6.0	A
Power Dissipation	P_D	2.0	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	θ_{JA}	62.5	$^{\circ}\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=20\text{V}$			100	nA
I_{EBO}	$V_{EB}=5.0\text{V}$			100	nA
BV_{CBO}	$I_C=10\mu\text{A}$	45			V
BV_{CEO}	$I_C=10\text{mA}$	15			V
BV_{EBO}	$I_E=10\mu\text{A}$	6.0			V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=1.0\text{mA}$		30	50	mV
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=20\text{mA}$		60	150	mV
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=200\text{mA}$		85	200	mV
$V_{CE(SAT)}$	$I_C=3.0\text{A}, I_B=60\text{mA}$		145	300	mV
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	200			
h_{FE}	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$	200			
h_{FE}	$V_{CE}=2.0\text{V}, I_C=3.0\text{A}$	175			
C_{ob}	$V_{CB}=10\text{V}, f=1.0\text{MHz}$			100	pF
f_T	$V_{CE}=10\text{V}, I_C=500\text{mA}$	100			MHz

R2 (17-June 2004)

SOT-223 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE:
FULL PART NUMBER

DIMENSIONS				
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)

R2 (17-June 2004)