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CXT3090L

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

POWERTM
89



SOT-89 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT3090L is a Low $V_{CE(SAT)}$ NPN Transistor in a Power SOT-89 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: ($T_A=25^{\circ}\text{C}$)

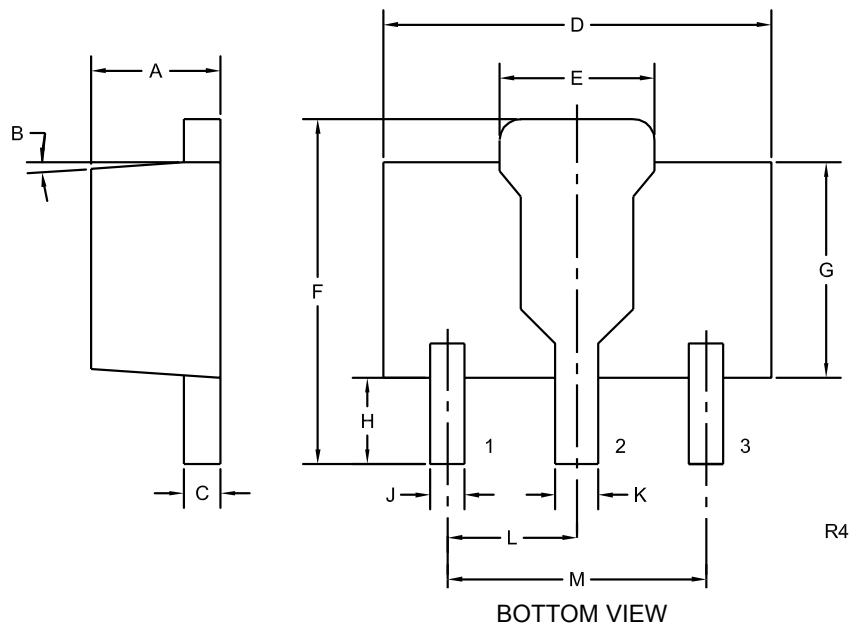
	SYMBOL		UNITS
Collector-Base Voltage	V_{CBO}	45	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Continuous Collector Current	I_C	3.0	A
Peak Pulse Current	I_{CM}	6.0	A
Power Dissipation	P_D	1.2	W
Operating and Storage			
Junction Temperature	T_J, T_{stg}	-65 to +150	$^{\circ}\text{C}$
Thermal Resistance	Θ_{JA}	104	$^{\circ}\text{C/W}$

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 (20-May 2004)

SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING CODE:

FULL PART NUMBER

DIMENSIONS				
SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.014	0.018	0.35	0.46
D	0.173	0.185	4.40	4.70
E	0.064	0.074	1.62	1.87
F	0.146	0.177	3.70	4.50
G	0.090	0.106	2.29	2.70
H	0.028	0.051	0.70	1.30
J	0.014	0.019	0.36	0.48
K	0.017	0.023	0.44	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R4)