



CXT7090L

**SURFACE MOUNT
LOW $V_{CE(SAT)}$
PNP POWER TRANSISTOR**



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT7090L is a Low $V_{CE(SAT)}$ PNP 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: FULL PART NUMBER

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

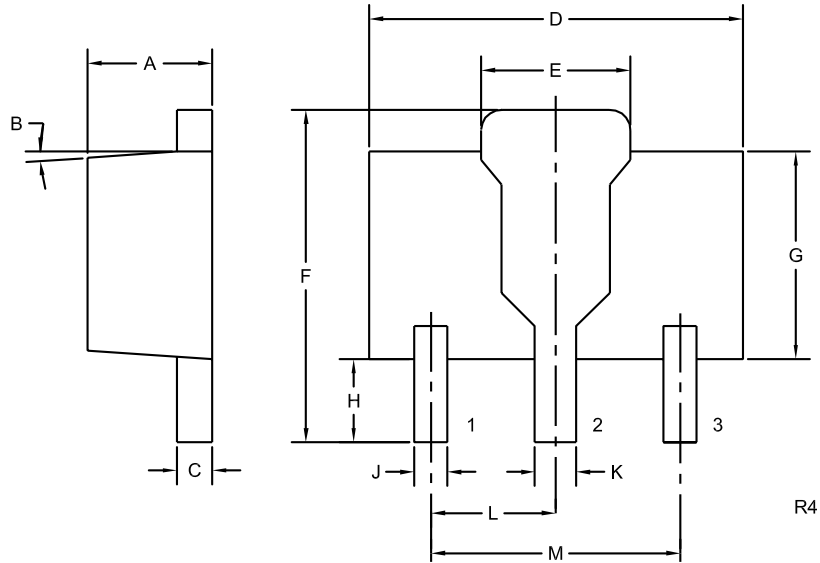
Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Pulse Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL		UNITS
V_{CBO}	50	V
V_{CEO}	40	V
V_{EBO}	5.0	V
I_C	3.0	A
I_{CM}	5.0	A
P_D	1.2	W
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
Θ_{JA}	104	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$			100	nA
I_{CBO}	$V_{CB}=30\text{V}, T_A=100^\circ\text{C}$			10	μA
I_{EBO}	$V_{EB}=4.0\text{V}$			100	nA
BV_{CBO}	$I_C=100\mu\text{A}$	50			V
BV_{CEO}	$I_C=10\text{mA}$	40			V
BV_{EBO}	$I_E=100\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=5.0\text{mA}$		100	250	mV
$V_{CE(SAT)}$	$I_C=1.0\text{A}, I_B=10\text{mA}$		175	450	mV
$V_{CE(SAT)}$	$I_C=2.0\text{A}, I_B=50\text{mA}$		250	750	mV
$V_{BE(SAT)}$	$I_C=1.0\text{A}, I_B=10\text{mA}$		0.8	1.0	V
h_{FE}	$V_{CE}=2.0\text{V}, I_C=10\text{mA}$	300		800	
h_{FE}	$V_{CE}=2.0\text{V}, I_C=500\text{mA}$	250			
h_{FE}	$V_{CE}=2.0\text{V}, I_C=1.0\text{A}$	200			
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	150			
f_T	$V_{CE}=5\text{V}, I_C=50\text{mA}, f=50\text{MHz}$	100			MHz

SOT-89 CASE - MECHANICAL OUTLINE



BOTTOM VIEW

LEAD CODE:

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

MARKING:

FULL PART NUMBER

SYMBOL	DIMENSIONS			
	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)