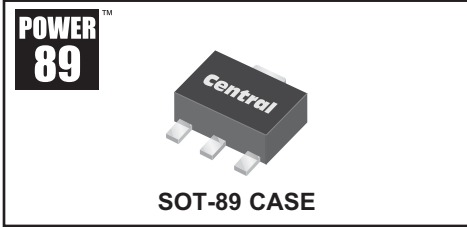


**CXT3090L**  
**SURFACE MOUNT**  
**LOW  $V_{CE(SAT)}$**   
**NPN SILICON POWER TRANSISTOR**



[www.centrasemi.com](http://www.centrasemi.com)

**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: FULL PART NUMBER**

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

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

SYMBOL		UNITS
$V_{CBO}$	45	V
$V_{CEO}$	15	V
$V_{EBO}$	6.0	V
$I_C$	3.0	A
$I_{CM}$	5.0	A
$P_D$	1.2	W
$T_J, T_{stg}$	-65 to +175	$^\circ\text{C}$
$\theta_{JA}$	125	$^\circ\text{C/W}$

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

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

**CXT3090L**  
**SURFACE MOUNT**  
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**SOT-89 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

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

**MARKING:**  
**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)

R5 (23-February 2010)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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