

CMXT3090L

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



SOT-26 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMXT3090L is a low $V_{CE(SAT)}$ NPN transistor in a six lead Power SOT-26 surface mount package designed for LAN cards, motor control, power management, strobe flash units and DC-DC converters for mobile systems.

MARKING CODE: X309L

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}	6.0	A
P_D	350	mW
T_J, T_{stg}	-65 to +150	$^\circ\text{C}$
θ_{JA}	357	$^\circ\text{C/W}$

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}	$V_{CE}=2.0\text{V}, I_C=3.0\text{A}$	150			
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

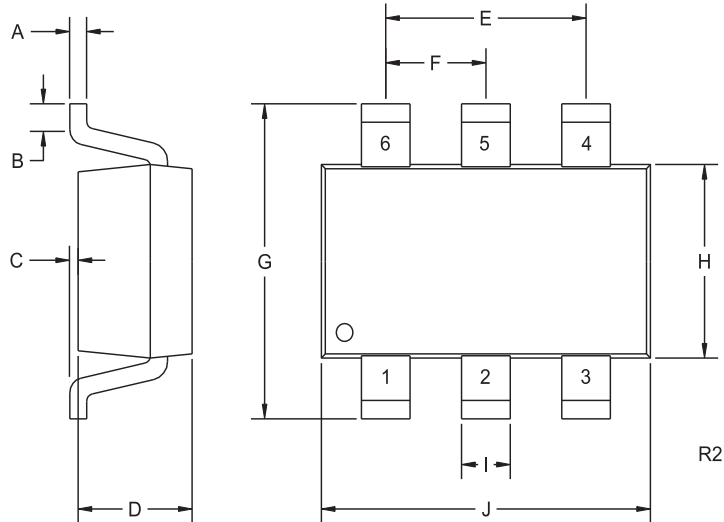
R3 (21-May 2013)

CMXT3090L

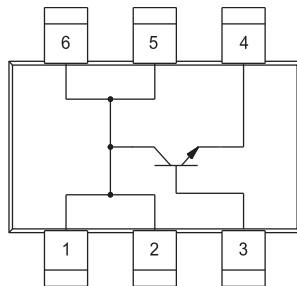
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SOT-26 CASE - MECHANICAL OUTLINE



PIN CONFIGURATION



LEAD CODE:

- 1) Collector
 - 2) Collector
 - 3) Base
 - 4) Emitter
 - 5) Collector
 - 6) Collector
- (Pins 1, 2, 5 and 6 are common.)

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SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.004	0.007	0.11	0.19
B	0.016	-	0.40	-
C	-	0.004	-	0.10
D	0.039	0.047	1.00	1.20
E	0.074	0.075	1.88	1.92
F	0.037	0.038	0.93	0.97
G	0.102	0.118	2.60	3.00
H	0.059	0.067	1.50	1.70
I	0.016		0.41	
J	0.110	0.118	2.80	3.00

SOT-26 (REV: R2)

R3 (21-May 2013)