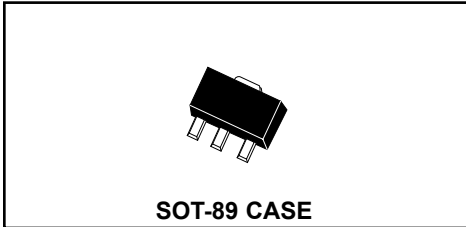


**CXT3019**

**SURFACE MOUNT  
NPN SILICON TRANSISTORS**



# Central<sup>TM</sup>

**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CXT3019 type is an NPN silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high current general purpose amplifier applications.

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

	<b>SYMBOL</b>		<b>UNITS</b>
Collector-Base Voltage	$V_{CB0}$	140	V
Collector-Emitter Voltage	$V_{CEO}$	80	V
Emitter-Base Voltage	$V_{EBO}$	7.0	V
Collector Current	$I_C$	1.0	A
Collector Current (Peak)	$I_{CM}$	1.5	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	$\Theta_{JA}$	104	$^\circ\text{C/W}$

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

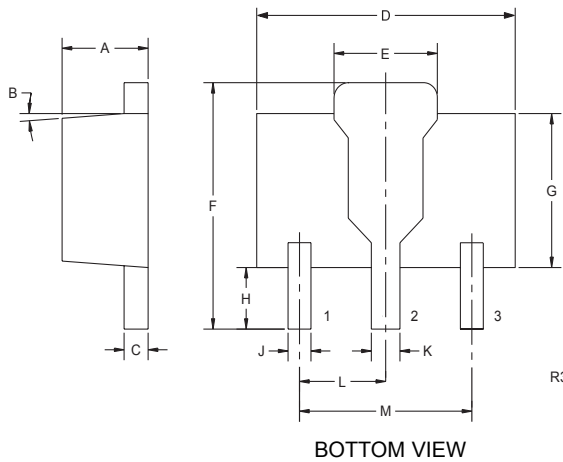
<b>SYMBOL</b>	<b>TEST CONDITIONS</b>	<b>MIN</b>	<b>MAX</b>	<b>UNITS</b>
$I_{CBO}$	$V_{CB}=90\text{V}$		10	nA
$I_{EBO}$	$V_{EB}=5.0\text{V}$		10	nA
$BV_{CBO}$	$I_C=100\mu\text{A}$	140		V
$BV_{CEO}$	$I_C=30\text{mA}$	80		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	7.0		V
$V_{CE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		0.2	V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$		0.5	V
$V_{BE(SAT)}$	$I_C=150\text{mA}, I_B=15\text{mA}$		1.1	V
$h_{FE}$	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	50		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=10\text{mA}$	90		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=150\text{mA}$	100	300	
$h_{FE}$	$V_{CE}=10\text{V}, I_C=500\text{mA}$	50		
$h_{FE}$	$V_{CE}=10\text{V}, I_C=1.0\text{A}$	15		

**SURFACE MOUNT  
NPN SILICON TRANSISTORS**

**ELECTRICAL CHARACTERISTICS** (Continued)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$f_T$	$V_{CE}=10V, I_C=50mA, f=1.0MHz$	100		MHz
$C_{ob}$	$V_{CB}=10V, I_E=0, f=1.0MHz$		12	pF
$C_{ib}$	$V_{EB}=0.5V, I_C=0, f=1.0MHz$		60	pF
NF	$V_{CE}=10V, I_C=100\mu A, R_S=1k\Omega, f=1.0kHz$		4.0	dB

**SOT-89 CASE - MECHANICAL OUTLINE**



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.055	0.067	1.40	1.70
B	4°		4°	
C	0.016	0.018	0.40	0.46
D	0.173	0.185	4.40	4.70
E	0.070	0.074	1.79	1.87
F	0.146	0.177	3.70	4.50
G	0.094	0.106	2.40	2.70
H	0.028	0.051	0.70	1.30
J	0.015	0.019	0.38	0.48
K	0.019	0.023	0.48	0.58
L	0.059		1.50	
M	0.118		3.00	

SOT-89 (REV: R3)

**LEAD CODE:**

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