



CXT3019
SURFACE MOUNT
NPN SILICON TRANSISTORS



SOT-89 CASE

CentralTM
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.

MARKING CODE: FULL PART NUMBER

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

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

SYMBOL		UNITS
V_{CB0}	140	V
V_{CEO}	80	V
V_{EBO}	7.0	V
I_C	1.0	A
I_{CM}	1.5	A
P_D	1.2	W
T_J, T_{stg}	-65 to +175	$^\circ\text{C}$
Θ_{JA}	125	$^\circ\text{C/W}$

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

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CB0}	$V_{CB}=90\text{V}$		10	nA
I_{EBO}	$V_{EB}=5.0\text{V}$		10	nA
BV_{CB0}	$I_C=100\mu\text{A}$	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		

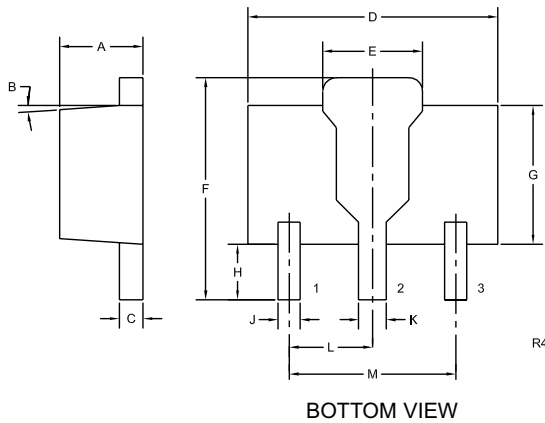
R6 (9-May 2007)

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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	0.014	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)

LEAD CODE:

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

MARKING CODE:

FULL PART NUMBER

R6 (9-May 2007)