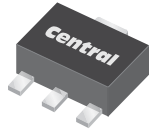


CXT3019
SURFACE MOUNT
NPN SILICON TRANSISTOR



SOT-89 CASE



www.centrasemi.com

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: 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} | 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)

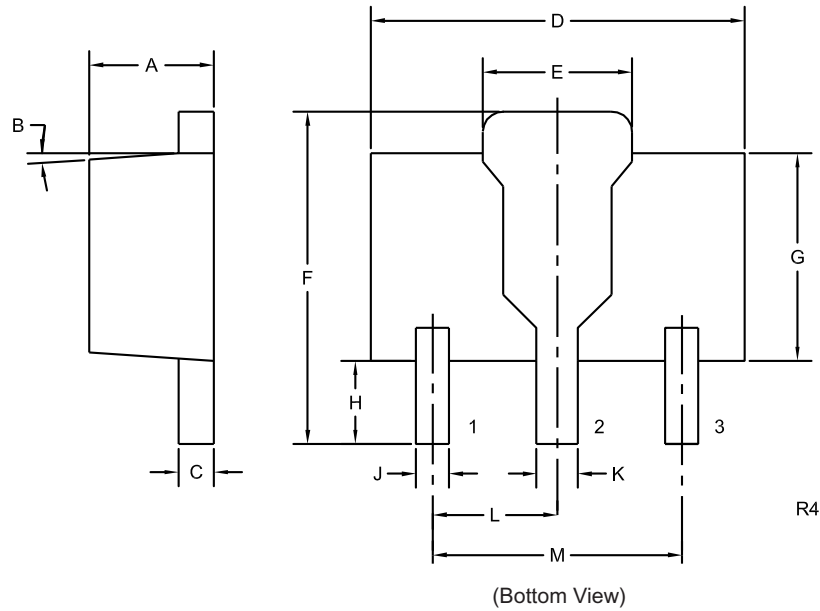
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|-----|-------|
| I_{CBO} | $V_{CB}=90\text{V}$ | | 10 | nA |
| I_{EBO} | $V_{EB}=5.0\text{V}$ | | 10 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 140 | | V |
| BV_{CEO} | $I_C=30\text{mA}$ | 80 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 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 | | |
| f_T | $V_{CE}=10\text{V}, I_C=50\text{mA}, f=1.0\text{MHz}$ | 100 | | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 12 | pF |
| C_{ib} | $V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$ | | 60 | pF |
| NF | $V_{CE}=10\text{V}, I_C=100\mu\text{A}, R_S=1.0\text{k}\Omega, f=1.0\text{kHz}$ | | 4.0 | dB |

R7 (23-February 2010)

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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)

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