

CXT5401
SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-89 CASE

CentralTM

Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT5401 type is an PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for high voltage amplifier applications.

MARKING CODE: FULL PART NUMBER

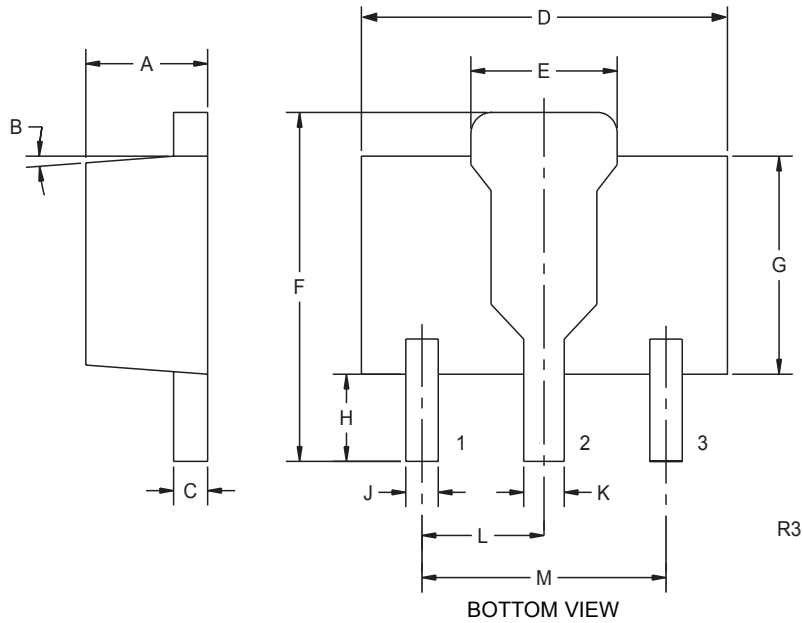
MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

| | SYMBOL | | UNITS |
|---------------------------|----------------|-------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 160 | V |
| Collector-Emitter Voltage | V_{CEO} | 150 | V |
| Emitter-Base Voltage | V_{EBO} | 5.0 | V |
| Collector Current | I_C | 500 | mA |
| Power Dissipation | P_D | 1.2 | W |
| Operating and Storage | | | |
| Junction Temperature | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 104 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|--|-----|-----|---------------|
| I_{CBO} | $V_{CB}=120\text{V}$ | | 50 | nA |
| I_{CBO} | $V_{CB}=120\text{V}, T_A=100^\circ\text{C}$ | | 50 | μA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 160 | | V |
| BV_{CEO} | $I_C=1.0\text{mA}$ | 150 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | 0.2 | V |
| $V_{CE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 0.5 | V |
| $V_{BE(SAT)}$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | 1.0 | V |
| $V_{BE(SAT)}$ | $I_C=50\text{mA}, I_B=5.0\text{mA}$ | | 1.0 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$ | 50 | | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 60 | 240 | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=50\text{mA}$ | 50 | | |
| f_T | $V_{CE}=10\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 100 | 300 | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 6.0 | pF |
| h_{fe} | $V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=1.0\text{kHz}$ | 40 | 200 | |
| NF | $V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=10\Omega$ $f=10\text{Hz to } 15.7\text{kHz}$ | | 8.0 | dB |

SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

**MARKING CODE:
FULL PART NUMBER**

| 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)