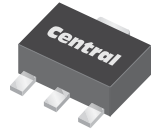


CXT2907A
SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-89 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXT2907A type is a PNP silicon transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for small signal general purpose and switching applications.

MARKING: FULL PART NUMBER

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

| | SYMBOL | | UNITS |
|--|----------------|-------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 60 | V |
| Collector-Emitter Voltage | V_{CEO} | 60 | V |
| Emitter-Base Voltage | V_{EBO} | 5.0 | V |
| Continuous Collector Current | I_C | 600 | 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} | $V_{CB}=50\text{V}$ | | 10 | nA |
| I_{CBO} | $V_{CB}=50\text{V}, T_A=125^\circ\text{C}$ | | 10 | μA |
| I_{CEV} | $V_{CE}=30\text{V}, V_{BE}=0.5\text{V}$ | | 50 | nA |
| BV_{CBO} | $I_C=10\mu\text{A}$ | 60 | | V |
| BV_{CEO} | $I_C=10\text{mA}$ | 60 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=150\text{mA}, I_B=15\text{mA}$ | | 0.4 | V |
| $V_{CE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | 1.6 | V |
| $V_{BE(SAT)}$ | $I_C=150\text{mA}, I_B=15\text{mA}$ | | 1.3 | V |
| $V_{BE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | 2.6 | V |
| h_{FE} | $V_{CE}=10\text{V}, I_C=0.1\text{mA}$ | 75 | | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=1.0\text{mA}$ | 100 | | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=10\text{mA}$ | 100 | | |
| h_{FE} | $V_{CE}=10\text{V}, I_C=150\text{mA}$ | 100 | 300 | |

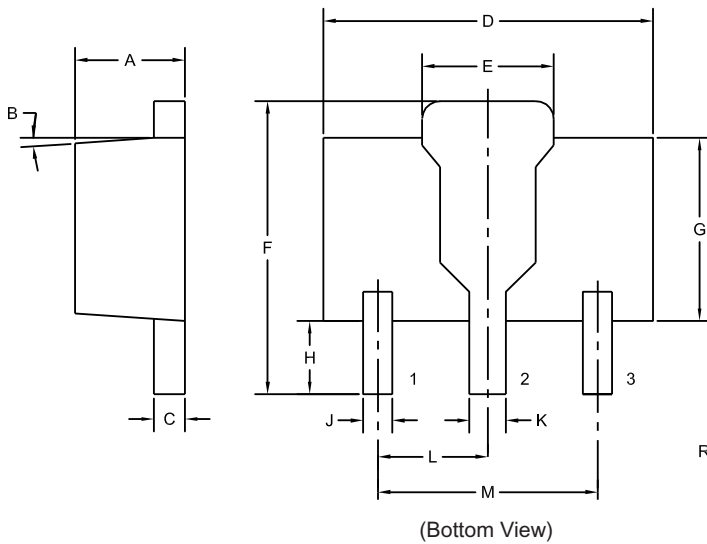
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|-----------|--|-----|-----|-------|
| h_{FE} | $V_{CE}=10\text{V}$, $I_C=500\text{mA}$ | 50 | | |
| f_T | $V_{CE}=20\text{V}$, $I_C=50\text{mA}$, $f=100\text{MHz}$ | 200 | | MHz |
| C_{ob} | $V_{CB}=10\text{V}$, $I_E=0$, $f=1.0\text{MHz}$ | | 8.0 | pF |
| C_{ib} | $V_{BE}=2.0\text{V}$, $I_C=0$, $f=1.0\text{MHz}$ | | 30 | pF |
| t_{on} | $V_{CC}=30\text{V}$, $V_{BE}=0.5$, $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$ | | 45 | ns |
| t_d | $V_{CC}=30\text{V}$, $V_{BE}=0.5$, $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$ | | 10 | ns |
| t_r | $V_{CC}=30\text{V}$, $V_{BE}=0.5$, $I_C=150\text{mA}$, $I_{B1}=15\text{mA}$ | | 40 | ns |
| t_{off} | $V_{CC}=6.0\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$ | | 100 | ns |
| t_s | $V_{CC}=6.0\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$ | | 80 | ns |
| t_f | $V_{CC}=6.0\text{V}$, $I_C=150\text{mA}$, $I_{B1}=I_{B2}=15\text{mA}$ | | 30 | ns |

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)

R4

LEAD CODE:

- 1) Emitter
- 2) Collector
- 3) Base

MARKING:

FULL PART NUMBER

R7 (23-February 2010)