

CXTA27
SURFACE MOUNT
NPN SILICON
DARLINGTON TRANSISTOR

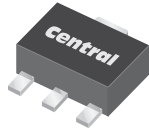


www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CXTA27 type is a NPN Silicon Darlington Transistor manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for applications requiring extremely high gain.

MARKING: FULL PART NUMBER



SOT-89 CASE

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

| | | | |
|--|----------------|-------------|--------------------|
| Collector-Emitter Voltage | V_{CES} | 60 | V |
| Emitter-Base Voltage | V_{EBO} | 10 | V |
| Continuous 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 | $^\circ\text{C/W}$ |

SYMBOL

| | | |
|----------------|-------------|--------------------|
| V_{CES} | 60 | V |
| V_{EBO} | 10 | V |
| I_C | 500 | mA |
| P_D | 1.2 | W |
| T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | 104 | $^\circ\text{C/W}$ |

UNITS

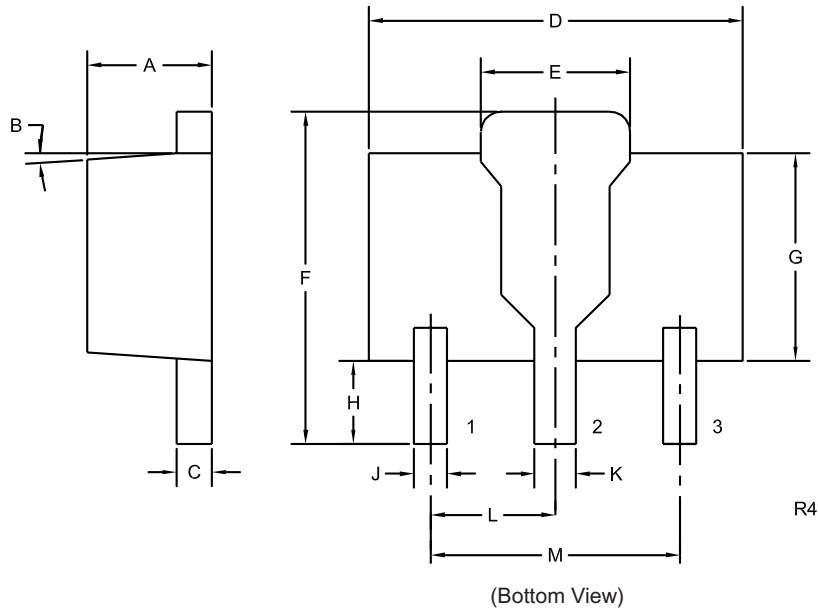
ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|--------|-----|-------|
| I_{CBO} | $V_{CB}=50\text{V}$ | | 100 | nA |
| I_{CES} | $V_{CE}=50\text{V}$ | | 500 | nA |
| I_{EBO} | $V_{EB}=10\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 60 | | V |
| BV_{CES} | $I_C=100\mu\text{A}$ | 60 | | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=0.1\text{mA}$ | | 1.5 | V |
| $V_{BE(ON)}$ | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$ | | 2.0 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 10,000 | | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$ | 10,000 | | |
| f_T | $V_{CE}=50\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 125 | | MHz |

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SOT-89 CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING:
FULL PART NUMBER

| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.055 | 0.067 | 1.40 | 1.70 |
| B | 4° | | 4° | |
| C | 0.014 | 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 (23-February 2010)