

CEN-U95
PNP SILICON
DARLINGTON TRANSISTOR



TO-202 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CEN-U95 is a PNP silicon Darlington transistor designed for general purpose amplifier and driver applications where high gain and high power dissipation is required.

MARKING: FULL PART NUMBER

APPLICATIONS:

- Designed for general purpose amplifiers and drivers

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

| |
|--|
| Collector-Base Voltage |
| Collector-Emitter Voltage |
| Emitter-Base Voltage |
| Continuous Collector Current |
| Power Dissipation |
| Power Dissipation ($T_C=25^\circ\text{C}$) |
| Operating and Storage Junction Temperature |
| Thermal Resistance |
| Thermal Resistance |

FEATURES:

- High Collector Current (2.0A)
- High DC Current Gain (25K MIN)

| SYMBOL | | UNITS |
|----------------|-------------|--------------------|
| V_{CBO} | 50 | V |
| V_{CES} | 40 | V |
| V_{EBO} | 10 | V |
| I_C | 2.0 | A |
| P_D | 1.0 | W |
| P_D | 10 | W |
| T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | 125 | $^\circ\text{C/W}$ |
| θ_{JC} | 12.5 | $^\circ\text{C/W}$ |

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

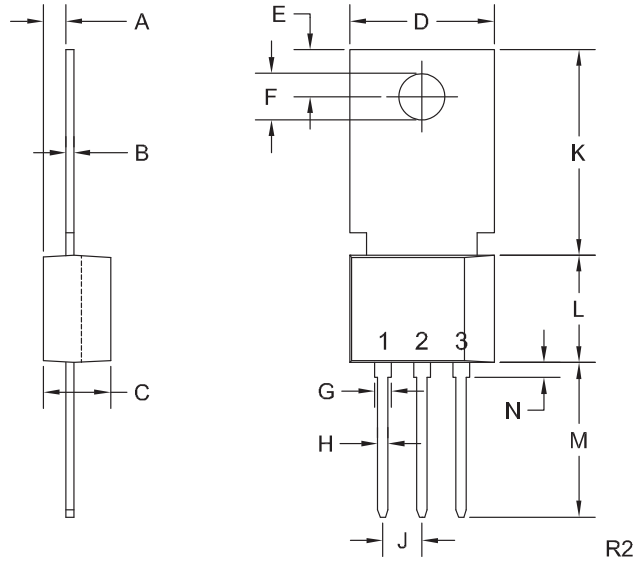
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|------|-------|
| I_{CBO} | $V_{CB}=30\text{V}$ | | 100 | nA |
| I_{EBO} | $V_{EB}=8.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 50 | | V |
| BV_{CES} | $I_C=100\mu\text{A}$ | 40 | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 10 | | V |
| $V_{CE(SAT)}$ | $I_C=1.0\text{A}, I_B=2.0\text{mA}$ | | 1.5 | V |
| $V_{BE(SAT)}$ | $I_C=1.0\text{A}, I_B=2.0\text{mA}$ | | 2.0 | V |
| $V_{BE(ON)}$ | $V_{CE}=5.0\text{V}, I_C=1.0\text{A}$ | | 2.0 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=200\text{mA}$ | 25K | 150K | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=500\text{mA}$ | 15K | | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=1.0\text{A}$ | 4K | | |
| f_T | $V_{CE}=5.0\text{V}, I_C=200\text{mA}, f=100\text{MHz}$ | 50 | | MHz |
| C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 12 | pF |

R1 (23-January 2012)

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TO-202 CASE - MECHANICAL OUTLINE



LEAD CODE:
1) Emitter
2) Base
3) Collector
Tab is common to pin 3

MARKING:
FULL PART NUMBER

| SYMBOL | INCHES | | MILLIMETERS | |
|---------|--------|-------|-------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.055 | 0.071 | 1.40 | 1.80 |
| B | 0.016 | 0.024 | 0.40 | 0.60 |
| C | 0.173 | 0.181 | 4.40 | 4.60 |
| D | 0.374 | 0.413 | 9.50 | 10.5 |
| E | 0.118 | 0.154 | 3.00 | 3.90 |
| F (DIA) | 0.124 | 0.150 | 3.15 | 3.80 |
| G | 0.035 | 0.055 | 0.90 | 1.40 |
| H | 0.023 | 0.031 | 0.59 | 0.80 |
| J | 0.094 | 0.106 | 2.39 | 2.69 |
| K | 0.459 | 0.559 | 11.66 | 14.21 |
| L | 0.280 | 0.346 | 7.12 | 8.80 |
| M | 0.406 | 0.531 | 10.3 | 13.5 |
| N | 0.024 | 0.059 | 0.60 | 1.50 |

TO-202 (REV: R2)

R1 (23-January 2012)

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