

2SC1815
 2SC1815-O
 2SC1815-Y
 2SC1815-GR
 2SC1815-BL

SILICON NPN TRANSISTORS



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2SC1815 Series are silicon NPN transistors, manufactured by the epitaxial planar process, designed for general purpose amplifier applications.

MARKING: FULL PART NUMBER



TO-92 CASE

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

| | SYMBOL | | UNITS |
|--------------------------------------------|----------------|-------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 60 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base Voltage | V_{EBO} | 5.0 | V |
| Continuous Collector Current | I_C | 150 | mA |
| Power Dissipation | P_D | 400 | mW |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -55 to +125 | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 250 | $^\circ\text{C/W}$ |

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

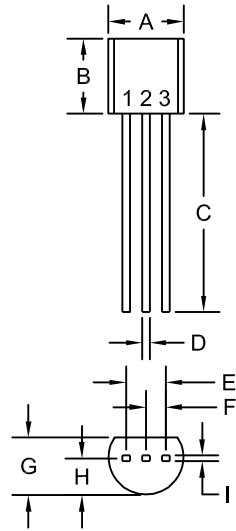
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|-------------------------------------------------------|-----|------|-------|
| I_{CBO} | $V_{CB}=60\text{V}$ | | 100 | nA |
| I_{CEO} | $V_{CE}=50\text{V}$ | | 100 | nA |
| I_{EBO} | $V_{EB}=5.0\text{V}$ | | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 60 | | V |
| BV_{CEO} | $I_C=100\mu\text{A}$ | 50 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.25 | V |
| $V_{BE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 1.0 | V |
| V_{BE} | $I_E=310\text{mA}$ | | 1.45 | V |
| h_{FE} | $V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815) | 70 | 700 | |
| h_{FE} | $V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-O) | 70 | 140 | |
| h_{FE} | $V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-Y) | 120 | 240 | |
| h_{FE} | $V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-GR) | 200 | 400 | |
| h_{FE} | $V_{CE}=6.0\text{V}, I_C=2.0\text{mA}$ (2SC1815-BL) | 350 | 700 | |
| f_T | $V_{CE}=10\text{V}, I_C=1.0\text{mA}, f=30\text{MHz}$ | 80 | | MHz |

R1 (10-May 2018)

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TO-92 CASE - MECHANICAL OUTLINE



R1

| SYMBOL | INCHES | | MILLIMETERS | |
|---------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.175 | 0.205 | 4.45 | 5.21 |
| B | 0.170 | 0.210 | 4.32 | 5.33 |
| C | 0.500 | - | 12.70 | - |
| D | 0.016 | 0.022 | 0.41 | 0.56 |
| E | 0.100 | | 2.54 | |
| F | 0.050 | | 1.27 | |
| G | 0.125 | 0.165 | 3.18 | 4.19 |
| H | 0.080 | 0.105 | 2.03 | 2.67 |
| I | 0.015 | | 0.38 | |

TO-92 (REV: R1)

LEAD CODE:

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

MARKING: FULL PART NUMBER

R1 (10-May 2018)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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