

2N4851
2N4852
2N4853

**PN SILICON
UNIUNCTION TRANSISTOR**



TO-18 (UJT) CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N4851, 2N4852, and 2N4853 are Silicon PN Unijunction Transistors designed for timing, sensing, and trigger circuits.

MARKING: FULL PART NUMBER

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

| | | | |
|--|------------|-------------|------------------|
| Emitter Reverse Voltage | V_{B2E} | 30 | V |
| Interbase Voltage | V_{B2B1} | 35 | V |
| RMS Emitter Current | I_e | 50 | mA |
| Peak Emitter Current (Duty Cycle $\leq 1\%$, PRR ≤ 10 pps) | i_e | 1.5 | A |
| RMS Power Dissipation | P_D | 300 | mW |
| Operating Junction Temperature | T_J | -65 to +125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -65 to +200 | $^\circ\text{C}$ |

SYMBOL

| | | |
|------------|-------------|--|
| V_{B2E} | 30 | |
| V_{B2B1} | 35 | |
| I_e | 50 | |
| i_e | 1.5 | |
| P_D | 300 | |
| T_J | -65 to +125 | |
| T_{stg} | -65 to +200 | |

UNITS

| |
|------------------|
| V |
| V |
| mA |
| A |
| mW |
| $^\circ\text{C}$ |
| $^\circ\text{C}$ |

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

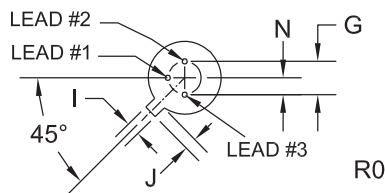
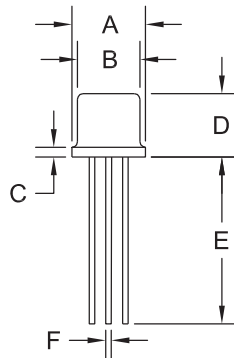
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|------------|---|------|------|---------------|
| η | $V_{B2B1}=10\text{V}$ (2N4851) | 0.56 | 0.75 | |
| η | $V_{B2B1}=10\text{V}$ (2N4852, 2N4853) | 0.70 | 0.85 | |
| R_{BB} | $V_{B2B1}=3.0\text{V}$ | 4.7 | 9.1 | k Ω |
| I_{EB2O} | $V_{B2E}=30\text{V}$ (2N4851, 2N4852) | | 100 | nA |
| I_{EB2O} | $V_{B2E}=30\text{V}$ (2N4853) | | 50 | nA |
| I_V | $V_{B2B1}=20\text{V}$, $R_{B2}=100\Omega$ (2N4851) | 2.0 | | mA |
| I_V | $V_{B2B1}=20\text{V}$, $R_{B2}=100\Omega$ (2N4852) | 4.0 | | mA |
| I_V | $V_{B2B1}=20\text{V}$, $R_{B2}=100\Omega$ (2N4853) | 6.0 | | mA |
| I_P | $V_{B2B1}=25\text{V}$ (2N4851, 2N4852) | | 2.0 | μA |
| I_P | $V_{B2B1}=25\text{V}$ (2N4853) | | 0.4 | μA |
| V_{OB1} | $V_1=20\text{V}$ (2N4851) | 3.0 | | V |
| V_{OB1} | $V_1=20\text{V}$ (2N4852) | 5.0 | | V |
| V_{OB1} | $V_1=20\text{V}$ (2N4853) | 6.0 | | V |

2N4851
2N4852
2N4853

PN SILICON
UNIJUNCTION TRANSISTOR



TO-18 (UJT) CASE - MECHANICAL OUTLINE



LEAD CODE:

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

MARKING: FULL PART NUMBER

| SYMBOL | DIMENSIONS | | DIMENSIONS | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A (DIA) | 0.209 | 0.230 | 5.31 | 5.84 |
| B (DIA) | 0.178 | 0.195 | 4.52 | 4.95 |
| C | - | 0.030 | - | 0.76 |
| D | 0.170 | 0.210 | 4.32 | 5.33 |
| E | 0.500 | - | 12.70 | - |
| F (DIA) | 0.016 | 0.019 | 0.41 | 0.48 |
| G (DIA) | 0.100 | | 2.54 | |
| H | 0.050 | | 1.27 | |
| I | 0.036 | 0.046 | 0.91 | 1.17 |
| J | 0.028 | 0.048 | 0.71 | 1.22 |

TO-18 (UJT) (REV: R0)

R2 (13-December 2010)

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

Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.
145 Adams Avenue
Hauppauge, NY 11788 USA
Main Tel: (631) 435-1110
Main Fax: (631) 435-1824
Support Team Fax: (631) 435-3388
www.centrasemi.com

Worldwide Field Representatives:
www.centrasemi.com/wwreps

Worldwide Distributors:
www.centrasemi.com/wwdistributors

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centrasemi.com/terms