# Small Signal Transistors

TO-39 Case (Continued)

| TYPE NO. | DESCRIPTION | $V_{CBO}$ (V) | $V_{CEO}$ (V) *$V_{CER}$ | $V_{EBO}$ (V) | $I_{CBO}$ (µA) *ICEO **ICES ***ICEV ****ICER | @ $V_{CB}$ (V) | $h_{FE}$ | | @ $I_C$ (mA) | @ $V_{CE}$ (V) | $V_{CE(SAT)}$ (V) | @ $I_C$ (mA) | $f_T$ (MHz) *TYP | $C_{ob}$ (pF) *TYP | $t_{on}$ (ns) *TYP | $t_{off}$ (ns) *TYP | NF (dB) *TYP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MIN | MIN | MIN | | | MIN | MAX | | | MAX | | MIN | MAX | MAX | MAX | MAX |
| **2N4030** | PNP AMPL/SWITCH | 60 | 60 | 5.0 | 0.50 | 50 | 40 | 120 | 100 | 5.0 | 0.50 | 500 | 100 | 20 | - - | - - | - - |
| **2N4031** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.50 | 60 | 100 | 300 | 100 | 5.0 | 0.50 | 500 | 150 | 20 | - - | - - | - - |
| **2N4032** | PNP AMPL/SWITCH | 60 | 60 | 5.0 | 0.50 | 50 | 40 | 120 | 100 | 5.0 | 0.50 | 500 | 100 | 20 | - - | - - | - - |
| **2N4033** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.05 | 60 | 100 | 300 | 100 | 5.0 | 0.50 | 500 | 150 | 20 | - - | - - | - - |
| **2N4036** | PNP AMPL/SWITCH | 90 | 65 | 7.0 | 1.0 | 90 | 40 | 140 | 150 | 10 | 0.65 | 150 | 60 | 30 | - - | - - | - - |
| **2N4037** | PNP AMPL/SWITCH | 60 | 40 | 7.0 | 0.25 | 60 | 50 | 250 | 150 | 10 | 1.40 | 150 | 60 | 30 | - - | - - | - - |
| **2N4046** | NPN CORE DRIVER | 50 | 30 | 6.0 | 1.70 | 40 | 40 | 150 | 100 | 1.0 | 0.75 | 1,000 | 250 | 12 | 35 | 60 | - - |
| **2N4047** | NPN CORE DRIVER | 80 | 50 | 6.0 | 1.70 | 60 | 40 | 150 | 100 | 1.0 | 0.95 | 1,000 | 250 | 10 | 35 | 60 | - - |
| **2N4234** | PNP AMPL/SWITCH | 40 | 40 | 7.0 | 100 | 40 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 3.0 | 100 | - - | - - | - - |
| **2N4235** | PNP AMPL/SWITCH | 60 | 60 | 7.0 | 100 | 60 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 3.0 | 100 | - - | - - | - - |
| **2N4236** | PNP AMPL/SWITCH | 80 | 80 | 7.0 | 100 | 80 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 3.0 | 100 | - - | - - | - - |
| **2N4237** | NPN POWER AMPL | 50 | 40 | 6.0 | 100 | 50 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 2.0 | 100 | - - | - - | - - |
| **2N4238** | NPN POWER AMPL | 80 | 60 | 6.0 | 100 | 80 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 2.0 | 100 | - - | - - | - - |
| **2N4239** | NPN POWER AMPL | 100 | 80 | 6.0 | 100 | 100 | 30 | 150 | 250 | 1.0 | 0.60 | 1,000 | 2.0 | 100 | - - | - - | - - |
| **2N4270** | NPN POWER AMPL | 200 | 140 | 6.0 | 1.00 | 150 | 40 | 200 | 10 | 10 | 1.00 | 10 | - - | 5.0 | - - | - - | - - |
| **2N4271** | NPN AMPL/SWITCH | 175 | 140 | 6.0 | 0.50 | 30 | 20 | 140 | 200 | 10 | 0.80 | 200 | 20 | 25 | - - | - - | - - |
| **2N4272** | NPN AMPL/SWITCH | 175 | 140 | 6.0 | 0.10 | 50 | 20 | 140 | 200 | 10 | 0.20 | 2,000 | 10 | 75 | - - | - - | - - |
| **2N4300** | NPN AMPL/SWITCH | 100 | 80 | 6.0 | 10 | 90 | 30 | 120 | 1.0 | 2.0 | 0.30 | 1.0 | 30 | - - | - - | - - | - - |
| **2N4314** | PNP AMPL/SWITCH | 90 | 65 | 7.0 | 0.25 | 60 | 50 | 250 | 150 | 10 | 1.40 | 150 | 60 | 30 | - - | - - | - - |
| **2N4358** | PNP HIGH VOLTAGE | 240 | 240 | 6.0 | 0.20 | 200 | 80 | 300 | 10 | 10 | 0.50 | 10 | - - | - - | - - | - - | - - |
| **2N4404** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.025 | 60 | 40 | 120 | 150 | 10 | 0.50 | 500 | 200 | 10 | - - | - - | - - |
| **2N4405** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.025 | 60 | 100 | 300 | 150 | 1.0 | 0.50 | 500 | 200 | 10 | - - | - - | - - |
| **2N4406** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.025 | 60 | 25 | 100 | 150 | 1.0 | 0.70 | 1,000 | 150 | 15 | - - | - - | - - |
| **2N4407** | PNP AMPL/SWITCH | 80 | 80 | 5.0 | 0.025 | 60 | 75 | 225 | 150 | 1.0 | 0.70 | 1,000 | 150 | 15 | - - | - - | - - |
| **2N4427** | NPN VHF OSCILLATOR | 40 | 20 | 3.5 | 20* | 12 | 10 | 200 | 100 | 5.0 | 0.50 | 100 | 500 | 4.0 | - - | - - | - - |
| **2N4863** | NPN AMPL/SWITCH | 140 | 120 | 6.0 | 0.10 | 60 | 50 | 150 | 0.5 | 5.0 | 0.20 | 0.5 | 50 | 50 | - - | - - | - - |
| **2N4875** | NPN AMPL/SWITCH | 40 | 25 | - - | 0.50 | 15 | 20 | 200 | 50 | 10 | - - | - - | 800 | - - | - - | - - | - - |
| **2N4876** | NPN AMPL/SWITCH | 40 | 30 | - - | 0.50 | 15 | 20 | 200 | 50 | 10 | - - | - - | - - | - - | - - | - - | - - |
| **2N4877** | NPN AMPL/SWITCH | 70 | 60 | 5.0 | 100 | 70 | 20 | 100 | 4,000 | 2.0 | 1.00 | 4,000 | 30 | - - | - - | - - | - - |
| **2N4890** | PNP AMPL/SWITCH | 60 | 40 | 5.0 | 0.25*** | 60 | 50 | 250 | 150 | 10 | 1.40 | 150 | 100 | 15 | - - | - - | - - |
| **2N4895** | NPN AMPL/SWITCH | 120 | 60 | 6.0 | 1.00** | 60 | 40 | 120 | 2,000 | 2.0 | 1.00 | 5,000 | 50 | 80 | - - | - - | - - |
| **2N4896** | NPN AMPL/SWITCH | 120 | 60 | 6.0 | 1.00** | 60 | 100 | 300 | 2,000 | 2.0 | 1.00 | 5,000 | 80 | 80 | - - | - - | - - |
| **2N4897** | NPN AMPL/SWITCH | 150 | 80 | 6.0 | 1.00** | 100 | 40 | 120 | 2,000 | 2.0 | 1.00 | 5,000 | 50 | 80 | - - | - - | - - |
| **2N4924** | NPN AMPL/SWITCH | 100 | 100 | 5.0 | 0.10 | 50 | 40 | 200 | 150 | 10 | 0.25 | 10 | 100 | 10 | - - | - - | - - |
| **2N4925** | NPN HIGH VOLTAGE | 150 | 150 | 5.0 | 0.10 | 75 | 40 | 200 | 150 | 10 | 0.25 | 10 | 100 | 10 | - - | - - | - - |
| **2N4926** | NPN HIGH VOLTAGE | 200 | 200 | 7.0 | 0.10 | 100 | 20 | 200 | 30 | 10 | 1.00 | 10 | 30 | 6.0 | - - | - - | - - |
| **2N4927** | NPN HIGH VOLTAGE | 250 | 250 | 7.0 | 0.10 | 150 | 20 | 200 | 30 | 10 | 1.00 | 10 | 30 | 6.0 | - - | - - | - - |
| **2N4928** | PNP HIGH VOLTAGE | 100 | 100 | 4.0 | 0.50 | 50 | 25 | 200 | 10 | 10 | 0.50 | 10 | 100 | 6.0 | - - | - - | - - |
| **2N4929** | PNP HIGH VOLTAGE | 150 | 150 | 4.0 | 0.50 | 75 | 25 | 200 | 10 | 10 | 0.50 | 10 | 100 | 10 | - - | - - | - - |

## 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.centralsemi.com

**Worldwide Field Representatives:**
www.centralsemi.com/wwreps

**Worldwide Distributors:**
www.centralsemi.com/wwdistributors

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Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
Адрес: 105318, г.Москва, ул.Щербаковская д.3, офис 1107

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

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**Офис по работе с юридическими лицами:**

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:
moschip.ru
moschip.ru_4
moschip.ru_6
moschip.ru_9