

MPSA62 MPSA65  
MPSA63 MPSA66  
MPSA64

**SILICON  
PNP DARLINGTON TRANSISTORS**



**TO-92 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR MPSA62 series devices are silicon PNP Darlington transistors, manufactured by the epitaxial planar process, designed for applications requiring extremely high gain.

**MARKING: FULL PART NUMBER**

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

|  |                |    |             |     |                    |
|--|----------------|----|-------------|-----|--------------------|
| Collector-Base Voltage                     | $V_{CB0}$      | 20 | 30          | 30  | V                  |
| Collector-Emitter Voltage                  | $V_{CES}$      | 20 | 30          | 30  | V                  |
| Emitter-Base Voltage                       | $V_{EBO}$      | 10 | 10          | 8.0 | V                  |
| Continuous Collector Current               | $I_C$          |    | 500         |     | mA                 |
| Power Dissipation                          | $P_D$          |    | 625         |     | mW                 |
| Operating and Storage Junction Temperature | $T_J, T_{stg}$ |    | -65 to +150 |     | $^\circ\text{C}$   |
| Thermal Resistance                         | $\theta_{JA}$  |    | 200         |     | $^\circ\text{C/W}$ |

| SYMBOL         | MPSA63 | MPSA65      | UNITS  |  | UNITS              |
|----------------|--------|-------------|--------|--|--------------------|
|                | MPSA62 | MPSA64      | MPSA66 |  |                    |
| $V_{CB0}$      | 20     | 30          | 30     |  | V                  |
| $V_{CES}$      | 20     | 30          | 30     |  | V                  |
| $V_{EBO}$      | 10     | 10          | 8.0    |  | V                  |
| $I_C$          |        | 500         |        |  | mA                 |
| $P_D$          |        | 625         |        |  | mW                 |
| $T_J, T_{stg}$ |        | -65 to +150 |        |  | $^\circ\text{C}$   |
| $\theta_{JA}$  |        | 200         |        |  | $^\circ\text{C/W}$ |

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

| SYMBOL        | TEST CONDITIONS  | MPSA62    |     | MPSA63    |     | MPSA64    |     | MPSA65    |     | MPSA66    |     | UNITS |
|---------------|--|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-----------|-----|-------|
|               |  | MIN       | MAX | MIN       | MAX | MIN       | MAX | MIN       | MAX | MIN       | MAX |       |
| $I_{CBO}$     | $V_{CB}=15\text{V}$  | -         | 100 | -         | -   | -         | -   | -         | -   | -         | -   | nA    |
| $I_{CBO}$     | $V_{CB}=30\text{V}$  | -         | -   | -         | 100 | -         | 100 | -         | 100 | -         | 100 | nA    |
| $I_{EBO}$     | $V_{EB}=10\text{V}$  | -         | 100 | -         | 100 | -         | 100 | -         | -   | -         | -   | nA    |
| $I_{EBO}$     | $V_{EB}=8.0\text{V}$   | -         | -   | -         | -   | -         | -   | -         | 100 | -         | 100 | nA    |
| $BV_{CES}$    | $I_C=100\mu\text{A}$   | 20        | -   | 30        | -   | 30        | -   | 30        | -   | 30        | -   | V     |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=10\mu\text{A}$   | -         | 1.0 | -         | -   | -         | -   | -         | -   | -         | -   | V     |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=0.1\text{mA}$   | -         | -   | -         | 1.5 | -         | 1.5 | -         | 1.5 | -         | 1.5 | V     |
| $V_{BE(ON)}$  | $V_{CE}=5.0\text{V}, I_B=10\text{mA}$  | -         | 1.4 | -         | -   | -         | -   | -         | -   | -         | -   | V     |
| $V_{BE(ON)}$  | $V_{CE}=5.0\text{V}, I_B=100\text{mA}$   | -         | -   | -         | 2.0 | -         | 2.0 | -         | 2.0 | -         | 2.0 | V     |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$  | 20K       | -   | 5K        | -   | 10K       | -   | 50K       | -   | 75K       | -   |       |
| $h_{FE}$      | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$   | -         | -   | 10K       | -   | 20K       | -   | 20K       | -   | 40K       | -   |       |
| $f_T$         | $V_{CE}=5.0\text{V}, I_C=100\text{mA}, f=100\text{MHz}$                        | -         | -   | 125       | -   | 125       | -   | -         | -   | -         | -   | MHz   |
| $f_T$         | $V_{CE}=10\text{V}, I_C=30\text{mA}, f=50\text{MHz}$                           | -         | -   | -         | -   | -         | -   | 100       | -   | 100       | -   | MHz   |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=100\text{kHz}$                                    | 2.5 (TYP) |     | 2.5 (TYP) |     | 2.5 (TYP) |     | 2.5 (TYP) |     | 2.5 (TYP) |     | pF    |
| NF            | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}, R_S=100\text{k}\Omega, f=1.0\text{kHz}$ | 2.0 (TYP) |     | 2.0 (TYP) |     | 2.0 (TYP) |     | 2.0 (TYP) |     | 2.0 (TYP) |     | dB    |

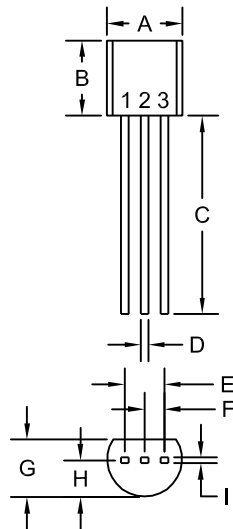
R1 (18-March 2014)

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SILICON  
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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) Base
- 3) Collector

MARKING:  
FULL PART NUMBER

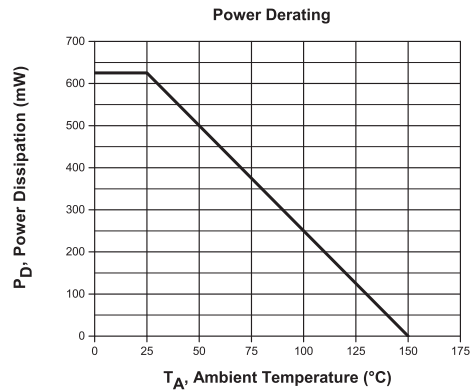
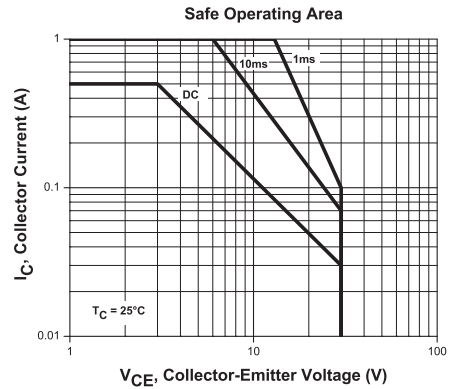
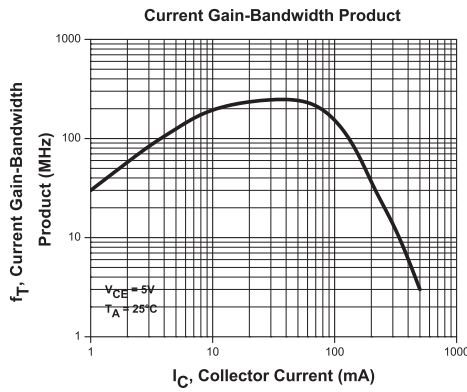
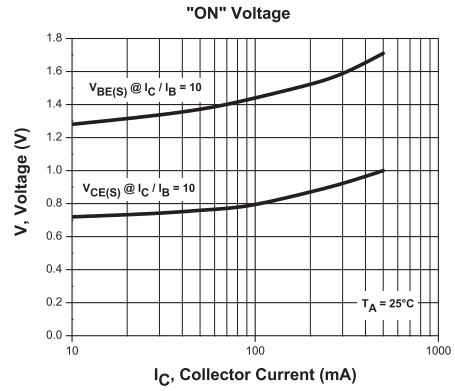
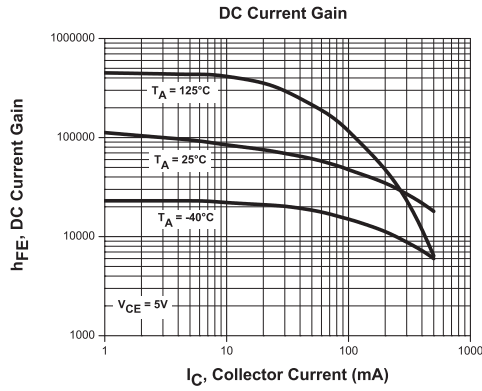
R1 (18-March 2014)

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**SILICON  
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**TYPICAL ELECTRICAL CHARACTERISTICS**



R1 (18-March 2014)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
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Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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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](http://www.centrasemi.com/terms)



<http://www.centrasemi.com>

# Product End of Life Notification

|                    |          |
|--------------------|----------|
| PDN ID:            | PDN01069 |
| Notification Date: | 2/06/18  |
| Last Buy Date:     | N/A      |
| Last Shipment Date | N/A      |

Please be advised that Central Semiconductor must immediately discontinue the product(s) listed in the attached PDN notice. We are unable to accept any further orders for these products **unless** we have available inventory on hand.

You may have purchased one or more of the products listed. Please do not hesitate to contact your local Central Semiconductor sales representative with any questions or needs you may have. Central regrets any inconvenience this may cause.

Sincerely,

Central Semiconductor Corp.

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DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.



<http://www.centrasemi.com>

# Product End of Life Notification

|                           |          |
|---------------------------|----------|
| <b>PDN ID:</b>            | PDN01069 |
| <b>Notification Date:</b> | 2/06/18  |
| <b>Last Buy Date:</b>     | N/A      |
| <b>Last Shipment Date</b> | N/A      |

Summary: The MPSA65 PNP Darlington transistor is discontinued and is now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| MPSA65                     | MPSA64      H      |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to [engineering@centrasemi.com](mailto:engineering@centrasemi.com).

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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.