

MPSA62 MPSA65
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MPSA64

**SILICON
PNP DARLINGTON TRANSISTORS**



TO-92 CASE



www.centrasemi.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 | θ_{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 | | | $^\circ\text{C}$ |
| θ_{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 |

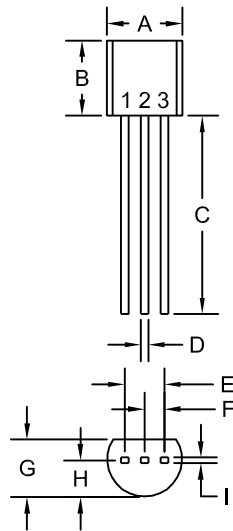
R1 (18-March 2014)

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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

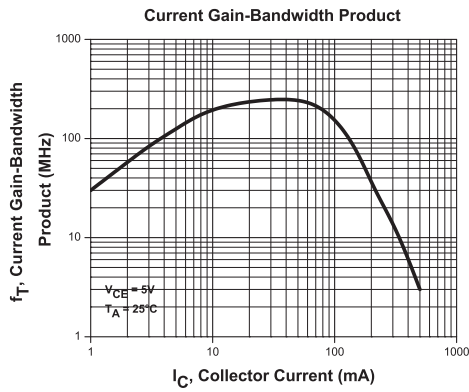
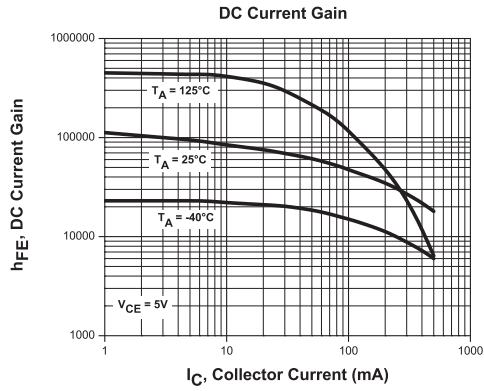
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TYPICAL ELECTRICAL CHARACTERISTICS



R1 (18-March 2014)

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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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



<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.

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.



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Product End of Life Notification

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

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Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

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