

MPSA75
MPSA76
MPSA77

SILICON
PNP DARLINGTON TRANSISTORS



TO-92 CASE



www.centralemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPSA75 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 |
| Collector-Emitter Voltage |
| Emitter-Base Voltage |
| Continuous Collector Current |
| Power Dissipation |
| Operating and Storage Junction Temperature |
| Thermal Resistance |

| SYMBOL | MPSA75 | MPSA76 | MPSA77 | UNITS |
|----------------|--------|-------------|--------|---------------------------|
| V_{CBO} | 40 | 50 | 60 | V |
| V_{CES} | 40 | 50 | 60 | V |
| V_{EBO} | | 10 | | V |
| I_C | | 500 | | mA |
| P_D | | 625 | | mW |
| T_J, T_{stg} | | -65 to +150 | | $^\circ\text{C}$ |
| Θ_{JA} | | 200 | | $^\circ\text{C}/\text{W}$ |

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

| SYMBOL | TEST CONDITIONS | MPSA75 | | MPSA76 | | MPSA77 | | UNITS |
|---------------|--|--------|-----|--------|-----|--------|-----|-------|
| | | MIN | MAX | MIN | MAX | MIN | MAX | |
| I_{CBO} | $V_{CB}=30\text{V}$ | - | 100 | - | - | - | - | nA |
| I_{CBO} | $V_{CB}=40\text{V}$ | - | - | - | 100 | - | - | nA |
| I_{CBO} | $V_{CB}=50\text{V}$ | - | - | - | - | - | 100 | nA |
| I_{CES} | $V_{CE}=30\text{V}$ | - | 500 | - | - | - | - | nA |
| I_{CES} | $V_{CB}=40\text{V}$ | - | - | - | 500 | - | - | nA |
| I_{CES} | $V_{CB}=50\text{V}$ | - | - | - | - | - | 500 | nA |
| I_{EBO} | $V_{EB}=10\text{V}$ | - | 100 | - | 100 | - | 100 | nA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 40 | - | 50 | - | 60 | - | V |
| BV_{CES} | $I_C=100\mu\text{A}$ | 40 | - | 50 | - | 60 | - | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=0.1\text{mA}$ | - | 1.5 | - | 1.5 | - | 1.5 | V |
| $V_{BE(ON)}$ | $V_{CE}=5.0\text{V}, I_B=100\text{mA}$ | - | 2.0 | - | 2.0 | - | 2.0 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 10K | - | 10K | - | 10K | - | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=100\text{mA}$ | 10K | - | 10K | - | 10K | - | |
| f_T | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 125 | - | 125 | - | 125 | - | MHz |

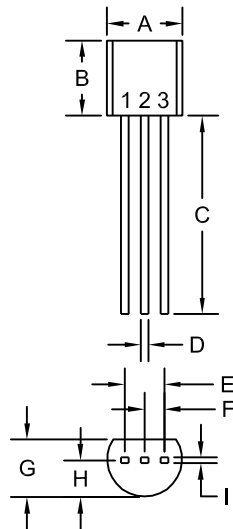
R1 (18-March 2014)

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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

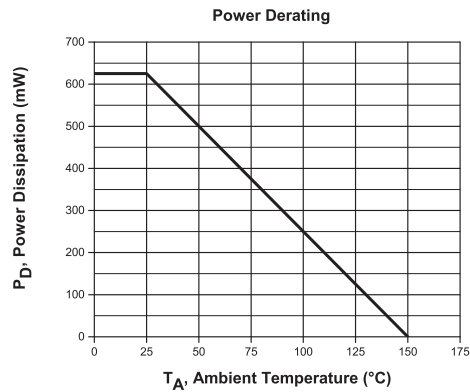
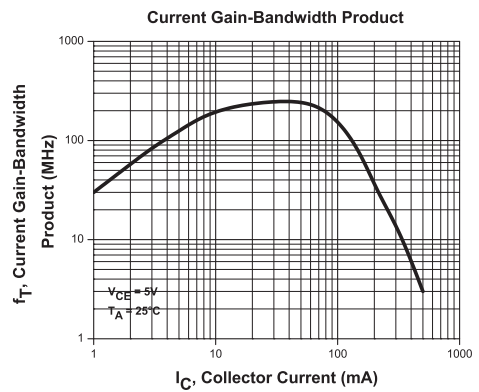
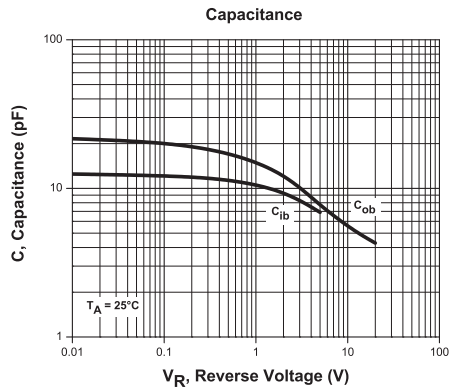
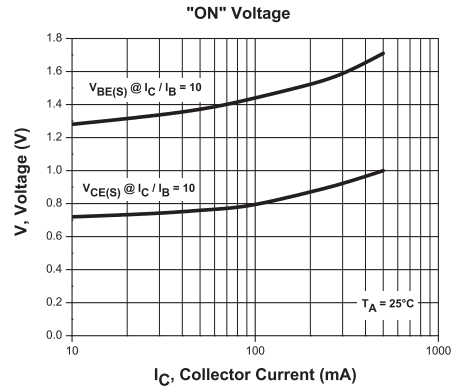
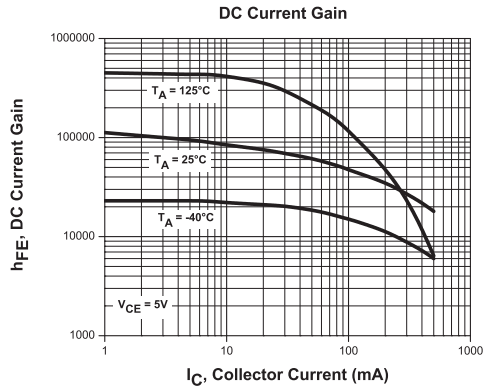
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TYPICAL ELECTRICAL CHARACTERISTICS



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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