

MPSA05 MPSA06 NPN
MPSA55 MPSA56 PNP

**COMPLEMENTARY
SILICON TRANSISTORS**



TO-92 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MPSA05, MPSA55 series devices are complementary silicon transistors designed for low power output and medium power driver applications.

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
Power Dissipation ($T_C=25^\circ\text{C}$)
Operating and Storage Junction Temperature
Thermal Resistance
Thermal Resistance

| SYMBOL | MPSA05 | MPSA06 | UNITS |
|----------------|---------------|---------------|--------------------|
| | <u>MPSA55</u> | <u>MPSA56</u> | |
| V_{CB0} | 60 | 80 | V |
| V_{CEO} | 60 | 80 | V |
| V_{EBO} | | 4.0 | V |
| I_C | | 500 | mA |
| P_D | | 625 | mW |
| P_D | | 1.5 | W |
| T_J, T_{stg} | | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | | 200 | $^\circ\text{C/W}$ |
| θ_{JC} | | 83.3 | $^\circ\text{C/W}$ |

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

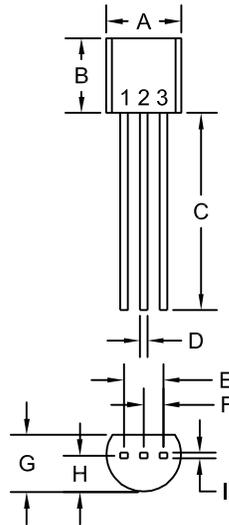
| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|---------------|---|-----|------|-------|
| I_{CBO} | $V_{CB}=\text{Rated } V_{CB0}$ | | 100 | nA |
| I_{CES} | $V_{CE}=60\text{V}$ | | 100 | nA |
| BV_{CEO} | $I_C=1.0\text{mA}$ (MPSA05, 55) | 60 | | V |
| BV_{CEO} | $I_C=1.0\text{mA}$ (MPSA06, 56) | 80 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 4.0 | | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.25 | V |
| $V_{BE(ON)}$ | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$ | | 1.2 | V |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$ | 100 | | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$ | 100 | | |
| f_T | $V_{CE}=2.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ (NPN) | 100 | | MHz |
| f_T | $V_{CE}=1.0\text{V}, I_C=100\text{mA}, f=100\text{MHz}$ (PNP) | 50 | | MHz |

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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 | |

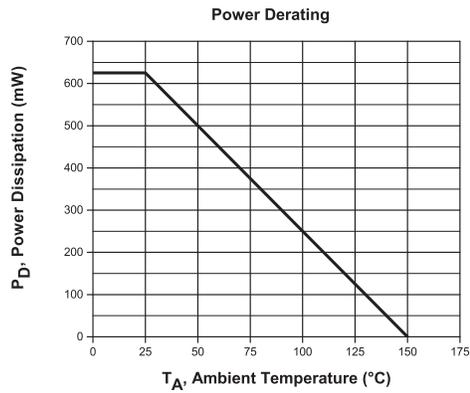
TO-92 (REV: R1)

LEAD CODE:

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

MARKING:
FULL PART NUMBER

TYPICAL ELECTRICAL CHARACTERISTICS



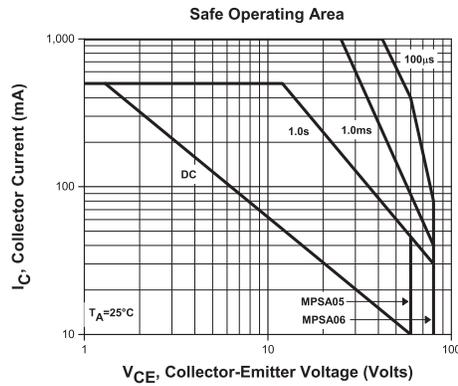
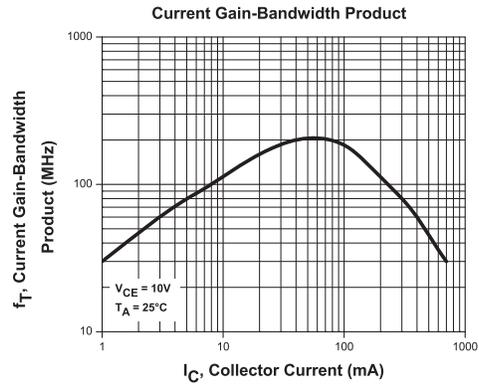
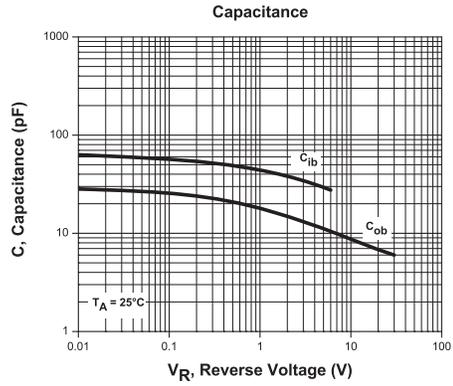
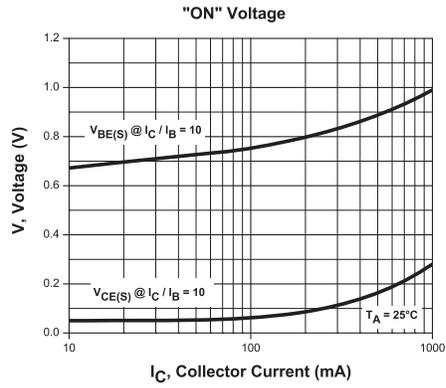
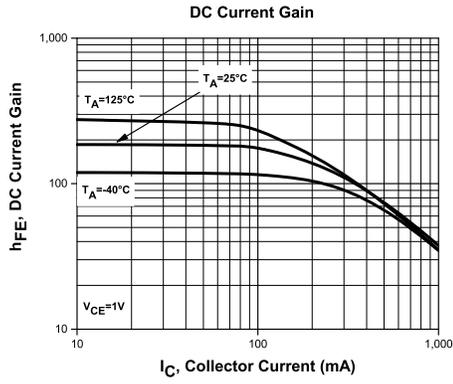
R7 (26-March 2015)

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NPN TYPICAL ELECTRICAL CHARACTERISTICS



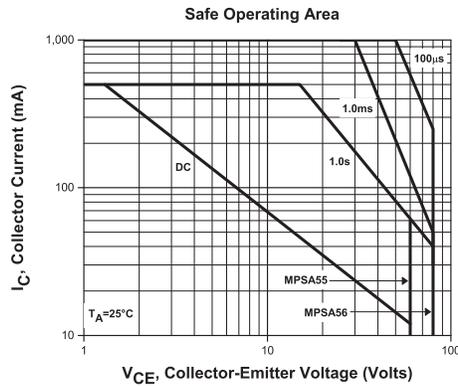
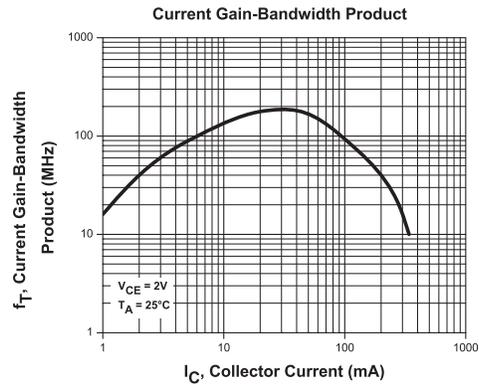
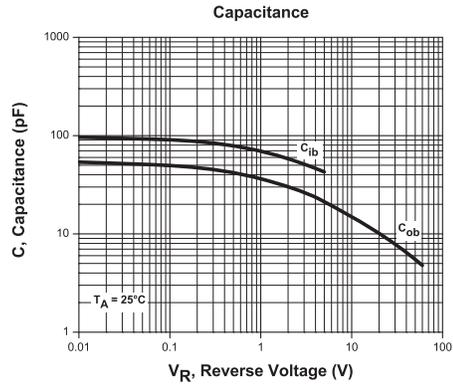
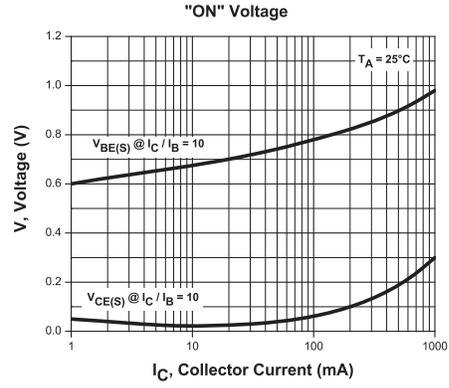
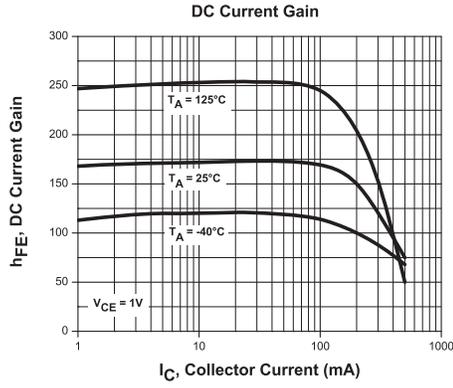
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PNP TYPICAL ELECTRICAL CHARACTERISTICS



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SERVICES

- Bonded Inventory
- Custom Electrical Screening
- Custom Electrical Characteristic Curves
- SPICE Models
- Custom Packaging
- Package Base Options
- Custom Device Development/ Multi Discrete Modules (MDM™)
- Bare Die Available for Hybrid Applications

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AMEYA360

Components Supply Platform

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