

MPSA05 MPSA06 NPN  
MPSA55 MPSA56 PNP

**COMPLEMENTARY  
SILICON TRANSISTORS**



**TO-92 CASE**



[www.centrasemi.com](http://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	$^\circ\text{C}$
$\theta_{JA}$		200	$^\circ\text{C/W}$
$\theta_{JC}$		83.3	$^\circ\text{C/W}$

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

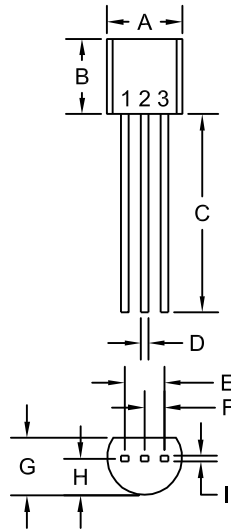
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=\text{Rated } V_{CB0}$		100	nA
$I_{CES}$	$V_{CE}=60\text{V}$		100	nA
$BV_{CEO}$	$I_C=1.0\text{mA}$ (MPSA05, 55)	60		V
$BV_{CEO}$	$I_C=1.0\text{mA}$ (MPSA06, 56)	80		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.0		V
$V_{CE(\text{SAT})}$	$I_C=100\text{mA},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



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)

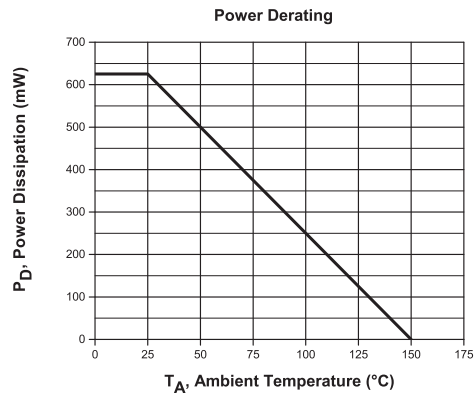
LEAD CODE:

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

MARKING:  
FULL PART NUMBER

R1

TYPICAL ELECTRICAL CHARACTERISTICS



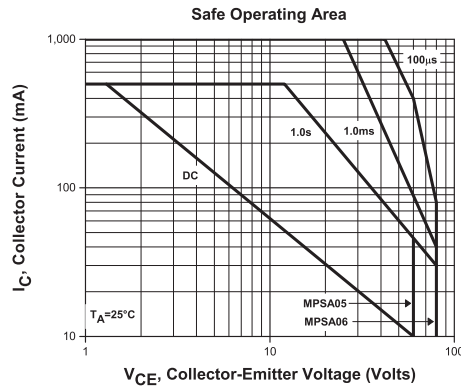
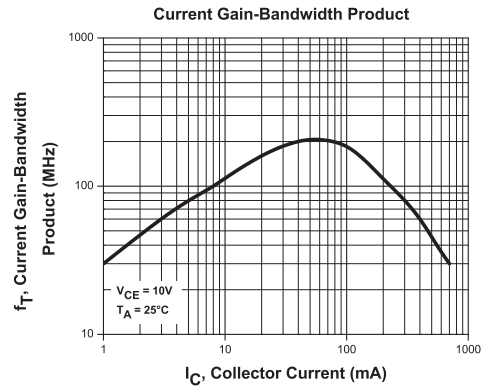
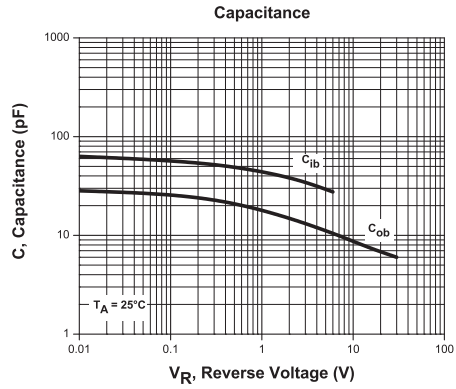
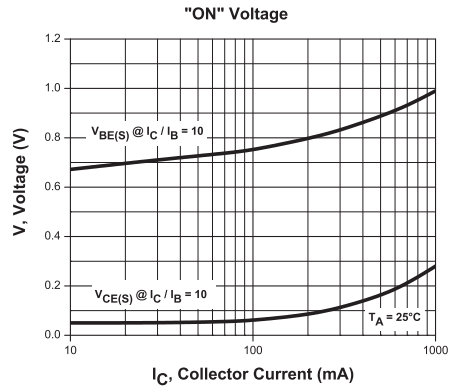
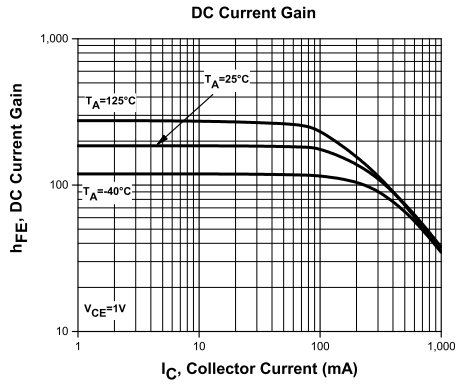
R8 (7-December 2015)

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 SILICON TRANSISTORS

NPN TYPICAL ELECTRICAL CHARACTERISTICS



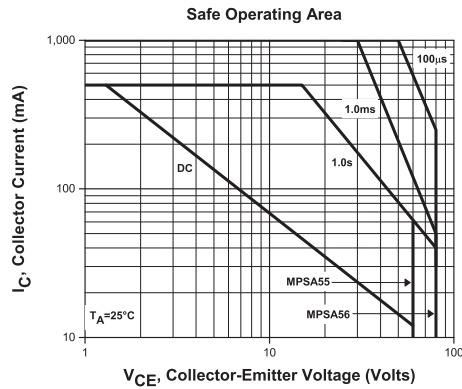
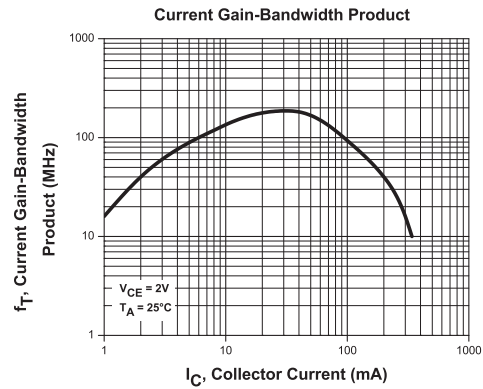
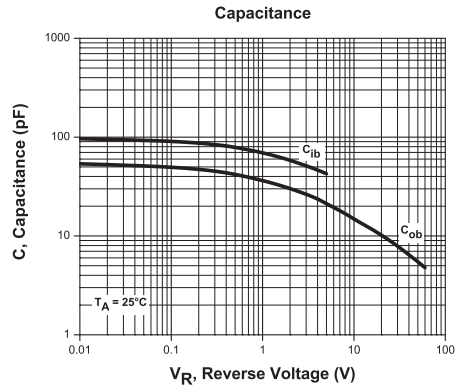
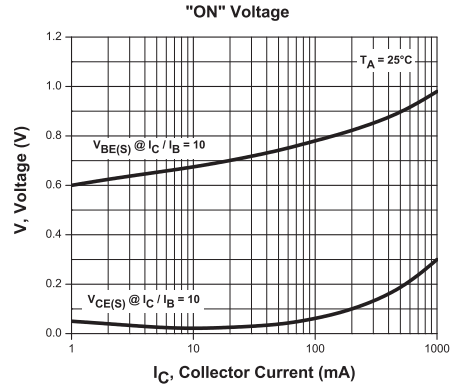
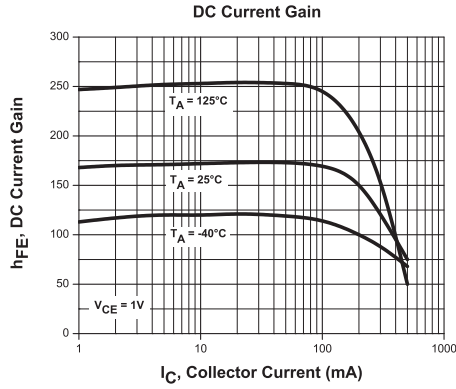
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COMPLEMENTARY  
SILICON TRANSISTORS

PNP TYPICAL ELECTRICAL CHARACTERISTICS



R8 (7-December 2015)

## 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

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