

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 MPSA55	MPSA06 MPSA56	UNITS
V_{CBO}	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: ($T_A=25^{\circ}\text{C}$)

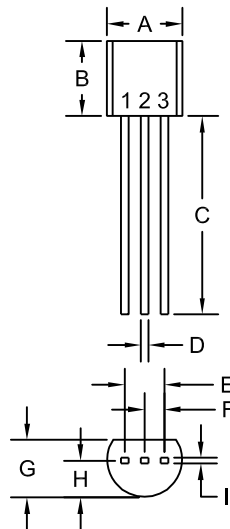
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=\text{Rated } V_{CBO}$		100	nA
I_{CES}	$V_{CE}=60\text{V}$		100	nA
BV_{CEO}	$I_C=1.0\text{mA}$ (MPSA05, 55)	60		V
BV_{CEO}	$I_C=1.0\text{mA}$ (MPSA06, 56)	80		V
BV_{EBO}	$I_E=100\mu\text{A}$	4.0		V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=10\text{mA}$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

DIMENSIONS				
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)

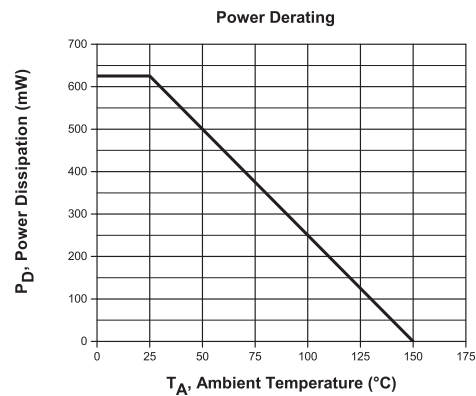
LEAD CODE:

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

MARKING:

FULL PART NUMBER

TYPICAL ELECTRICAL CHARACTERISTICS



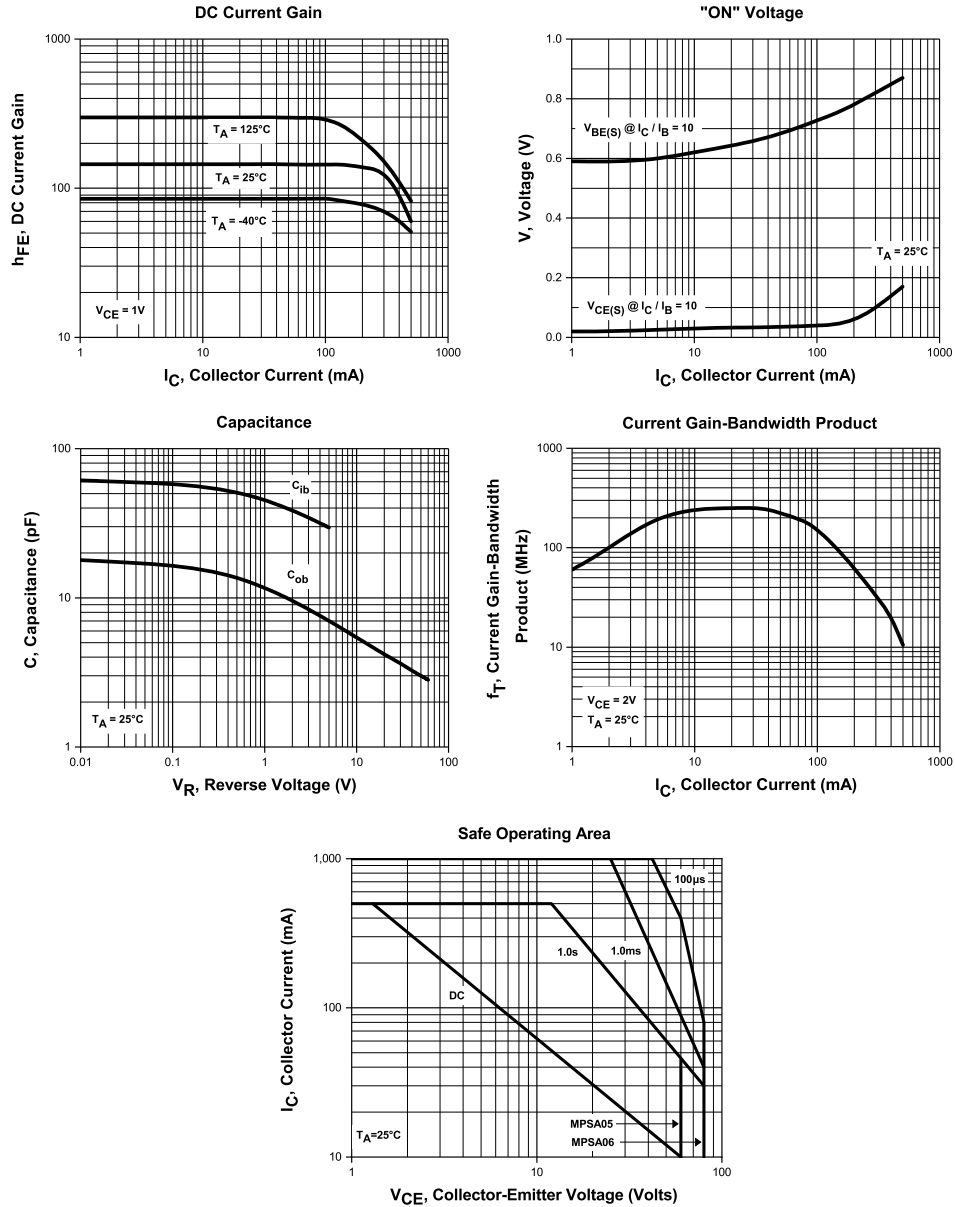
R9 (21-June 2019)

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NPN TYPICAL ELECTRICAL CHARACTERISTICS



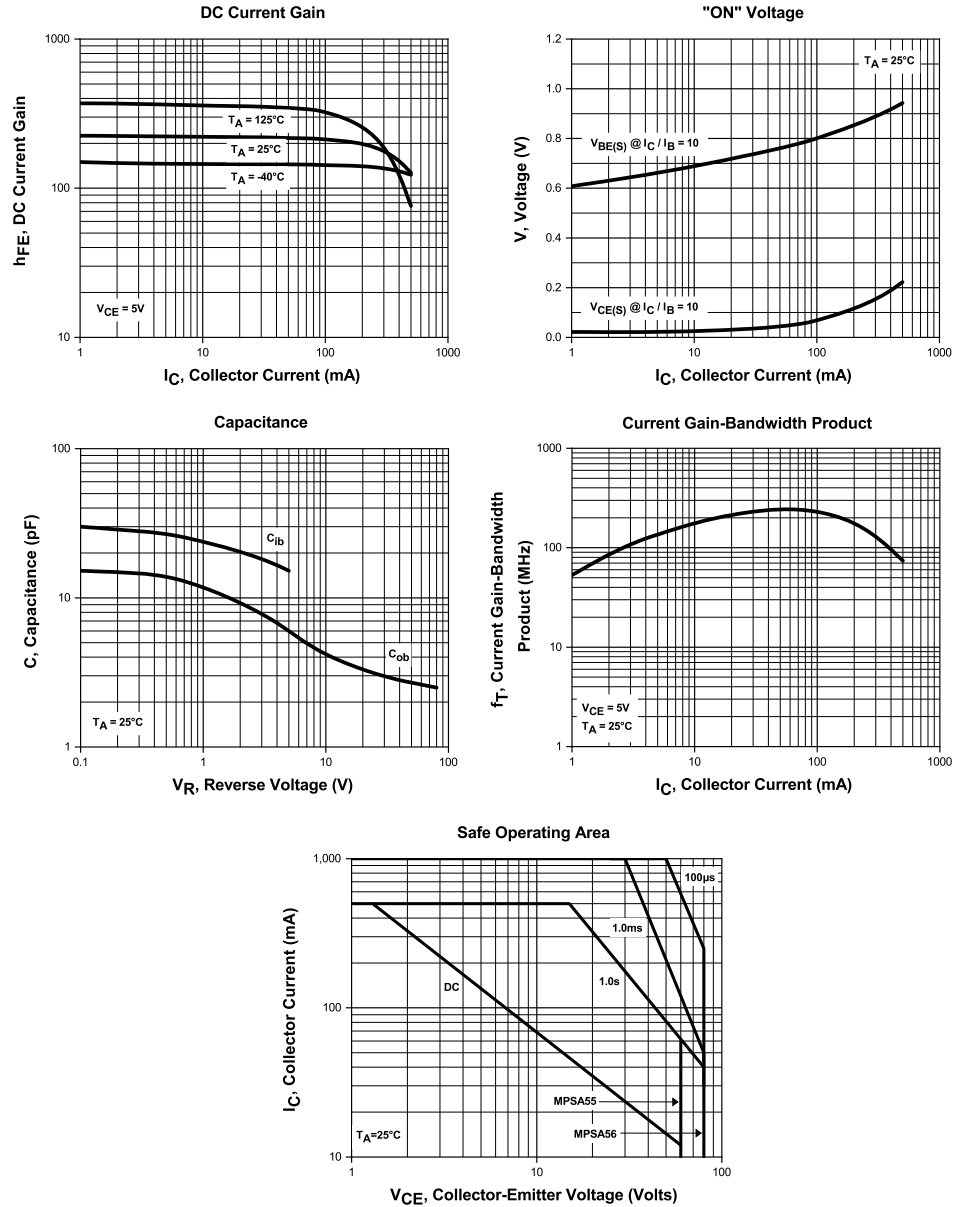
R9 (21-June 2019)

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SILICON TRANSISTORS



PNP TYPICAL ELECTRICAL CHARACTERISTICS



R9 (21-June 2019)

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).

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