



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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

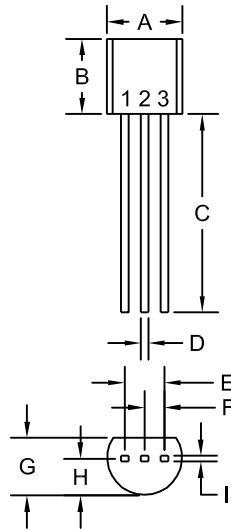
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CBO}$	$V_{CB}=\text{Rated } V_{CB0}$		100	nA
$I_{CES}$	$V_{CE}=60\text{V}$		100	nA
$BV_{CEO}$	$I_C=1.0\text{mA}$ (MPSA05, 55)	60		V
$BV_{CEO}$	$I_C=1.0\text{mA}$ (MPSA06, 56)	80		V
$BV_{EBO}$	$I_E=100\mu\text{A}$	4.0		V
$V_{CE(\text{SAT})}$	$I_C=100\text{mA},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

MPSA05 MPSA06 NPN  
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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	

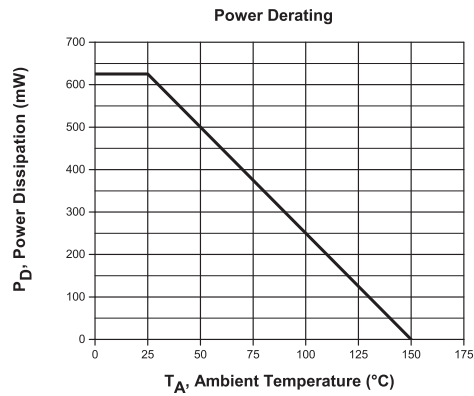
TO-92 (REV: R1)

LEAD CODE:

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

MARKING:  
 FULL PART NUMBER

TYPICAL ELECTRICAL CHARACTERISTICS



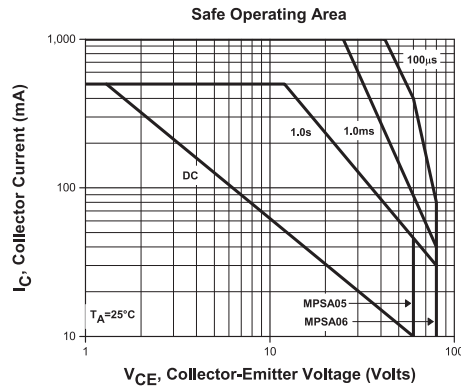
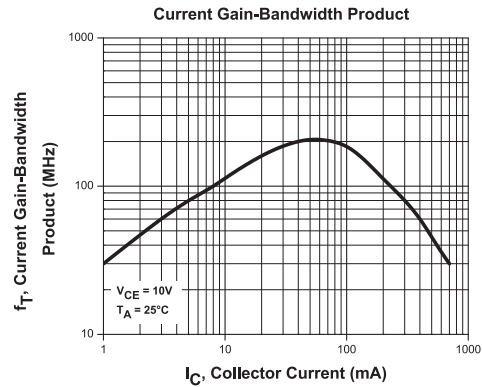
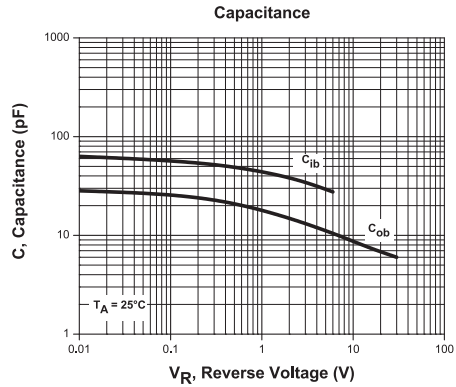
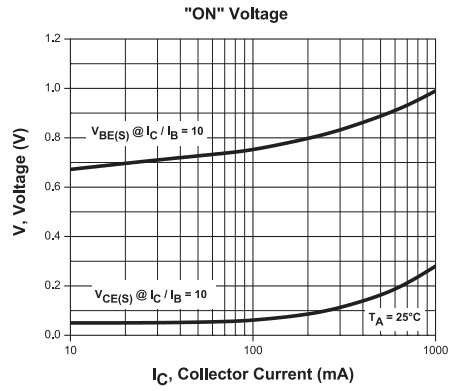
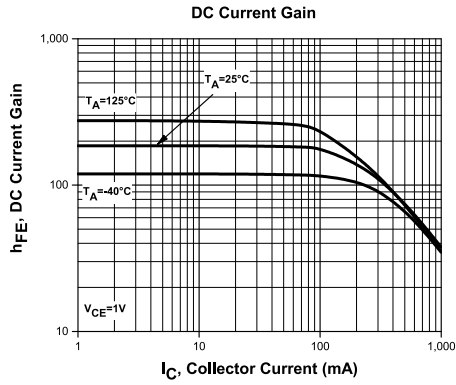
R8 (7-December 2015)

MPSA05 MPSA06 NPN  
 MPSA55 MPSA56 PNP



COMPLEMENTARY  
 SILICON TRANSISTORS

NPN TYPICAL ELECTRICAL CHARACTERISTICS



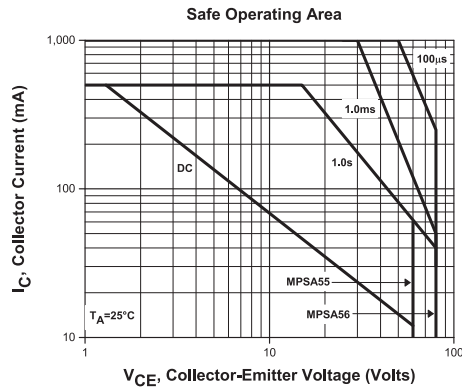
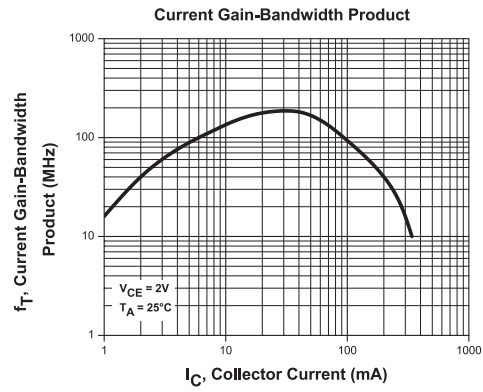
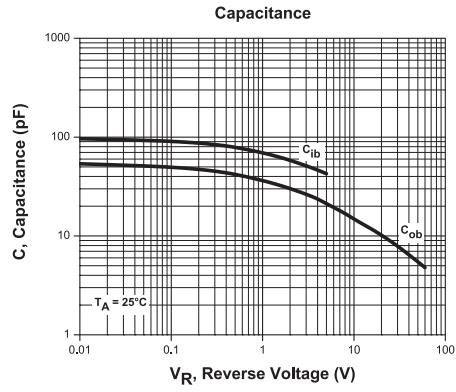
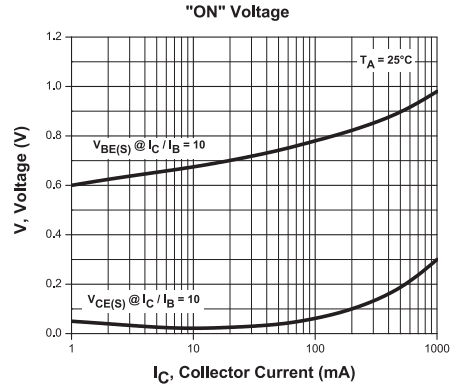
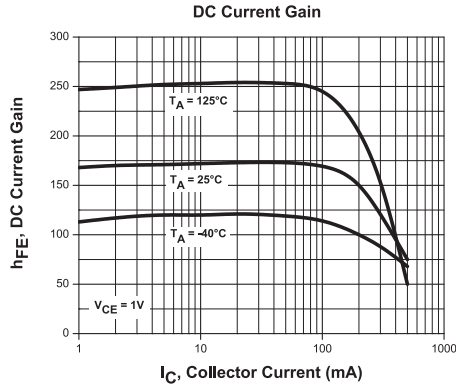
R8 (7-December 2015)

MPSA05 MPSA06 NPN  
MPSA55 MPSA56 PNP



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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