



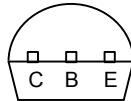
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# MPSA55 MPSA56

## Features

- Capable of 1.5Watts of Power Dissipation.
- Collector-current 500mA
- Collector-base Voltage 80V
- Operating and storage junction temperature range: -55°C to +150°C

Pin Configuration  
Bottom View



## PNP Silicon Amplifier Transistor

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CE0}$	Collector-Emitter Voltage	80	V
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Collector Current Continuous	500	mA
$P_D$	Total Device Dissipation @ $T_A=25^\circ\text{C}$ Derate above 25°C	625 5.0	mW mW/°C
$P_D$	Total Device Dissipation @ $T_A=25^\circ\text{C}$ Derate above 25°C	1.5 12	W mW/°C
$T_J$	Junction Temperature	-55 to +150	°C
$T_{STG}$	Storage Temperature	-55 to +150	°C

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Max	Units
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### OFF CHARACTERISTICS

$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage <sup>(1)</sup> ( $I_C=1.0\text{mA}$ , $I_B=0$ )	MPSA55 MPSA56	60 80	Vdc
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage ( $I_E=100\mu\text{A}$ , $I_C=0$ )		4.0	Vdc
$I_{CES}$	Collector Cutoff Current ( $V_{CE}=60\text{Vdc}$ , $I_B=0$ )		0.1	$\mu\text{A}$
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=60\text{Vdc}$ , $I_E=0$ ) ( $V_{CB}=80\text{Vdc}$ , $I_E=0$ )	MPSA55 MPSA56	0.1 0.1	$\mu\text{A}$

### ON CHARACTERISTICS<sup>(1)</sup>

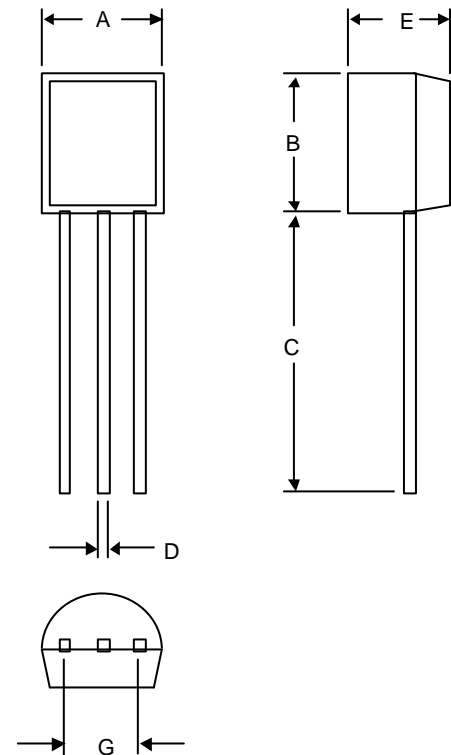
$h_{FE(1)}$	DC Current Gain ( $I_C=10\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ )		100	
$h_{FE(2)}$	DC Current Gain ( $I_C=100\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ )		100	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage ( $I_C=100\text{mA}$ , $I_B=10\text{mA}$ )		0.25	Vdc
$V_{BE(on)}$	Base-Emitter Saturation Voltage ( $I_C=100\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ )		1.2	Vdc

### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Current Gain – Bandwidth Product <sup>(3)</sup> ( $I_C=100\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ , $f=100\text{MHz}$ )	MPSA55 MPSA56	50	MHz
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1. Pulse Test: Pulse Width<300 $\mu\text{s}$ , Duty Cycle<2.0%
2.  $f_T$  is defined as the frequency at which  $|h_{fe}|$  extrapolates to unity.

## TO-92



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	