

# MPSA55 MPSA56

## Features

- Halogen free available upon request by adding suffix "-HF"
- 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
- Marking:MPSA55,MPSA56
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

Symbol	Rating	Rating	Unit
$V_{CEO}$	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 $25^\circ\text{C}$	625 5.0	mW mW/ $^\circ\text{C}$
$P_D$	Total Device Dissipation @ $T_A=25^\circ\text{C}$ Derate above $25^\circ\text{C}$	1.5 12	W mW/ $^\circ\text{C}$
$T_J$	Junction Temperature	-55 to +150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 to +150	$^\circ\text{C}$

## 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 60 MPSA56 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	$\mu\text{Adc}$
$I_{CBO}$	Collector Cutoff Current ( $V_{CB}=60\text{Vdc}$ , $I_E=0$ ) ( $V_{CB}=80\text{Vdc}$ , $I_E=0$ )	MPSA55 0.1 MPSA56 0.1		$\mu\text{Adc}$

### 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

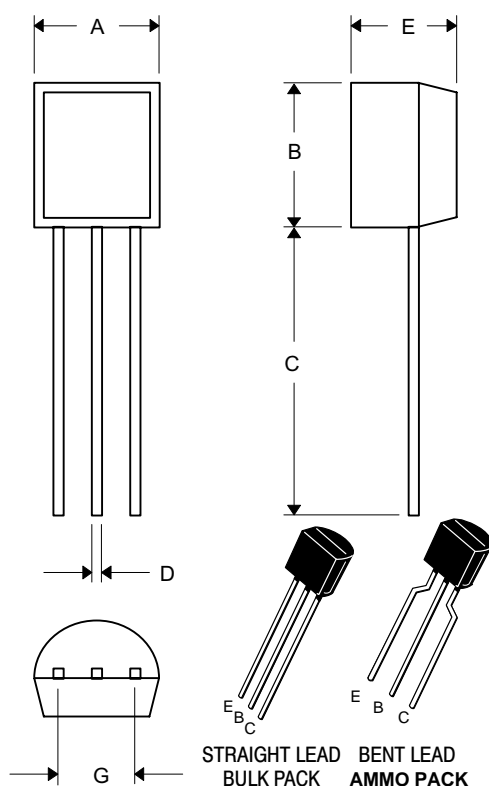
### SMALL-SIGNAL CHARACTERISTICS

$f_T$	Current-Gain – Bandwidth Product <sup>(3)</sup> ( $I_C=100\text{mA}$ , $V_{CE}=1.0\text{Vdc}$ , $f=100\text{MHz}$ )	MPSA55 50 MPSA56		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.

## PNP Silicon Amplifier Transistor

### TO-92



### DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.175	.185	4.45	4.70	
B	.175	.185	4.45	4.70	
C	.500	---	12.70	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	Straight Lead
	.173	.220	4.40	5.60	Bent Lead

\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

## Ordering Information :

Device	Packing
Part Number-AP	Ammo Packing: 20Kpcs/Carton
Part Number-BP	Bulk: 100Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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