

**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 <sub>CEO</sub>	Collector-Emitter Voltage	80	V
V <sub>CBO</sub>	Collector-Base Voltage	80	V
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	V
I <sub>C</sub>	Collector Current Continuous	500	mA
P <sub>D</sub>	Total Device Dissipation @T <sub>A</sub> =25°C	625	mW
	Derate above 25°C	5.0	mW/°C
P <sub>D</sub>	Total Device Dissipation @T <sub>C</sub> =25°C	1.5	W
	Derate above 25°C	12	mW/°C
T <sub>J</sub>	Junction Temperature	-55 to +150	°C
T <sub>STG</sub>	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 <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage <sup>(1)</sup> (I <sub>C</sub> =1.0mA, I <sub>B</sub> =0)	MPSA55 MPSA56	60 80	Vdc
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage (I <sub>E</sub> =100µA, I <sub>C</sub> =0)		4.0	Vdc
I <sub>CES</sub>	Collector Cutoff Current (V <sub>CE</sub> =60Vdc, I <sub>B</sub> =0)		0.1	µAdc
I <sub>CBO</sub>	Collector Cutoff Current (V <sub>CB</sub> =60Vdc, I <sub>E</sub> =0) (V <sub>CB</sub> =80Vdc, I <sub>E</sub> =0)	MPSA55 MPSA56	0.1 0.1	µAdc

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

h <sub>FE(1)</sub>	DC Current Gain (I <sub>C</sub> =10mA, V <sub>CE</sub> =1.0Vdc)	100		
h <sub>FE(2)</sub>	DC Current Gain (I <sub>C</sub> =100mA, V <sub>CE</sub> =1.0Vdc)	100		
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =100mA, I <sub>B</sub> =10mA)		0.25	Vdc
V <sub>BE(on)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =100mA, V <sub>CE</sub> =1.0Vdc)		1.2	Vdc

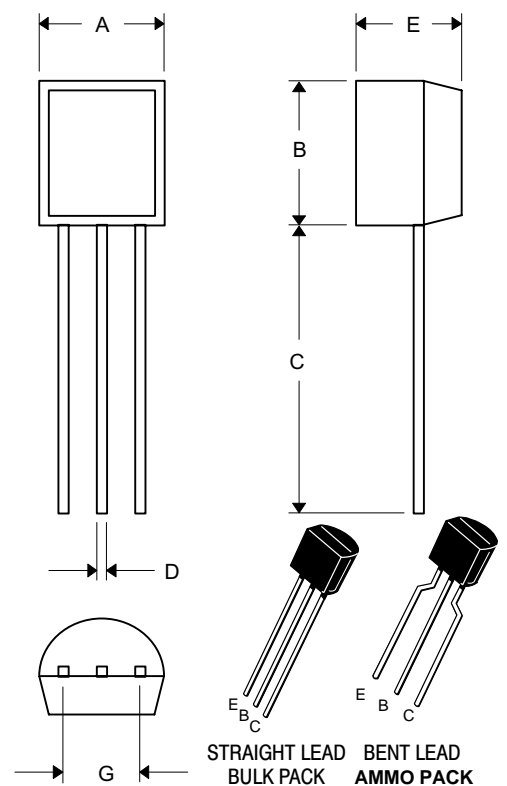
**SMALL-SIGNAL CHARACTERISTICS**

f <sub>T</sub>	Current-Gain – Bandwidth Product <sup>(3)</sup> (I <sub>C</sub> =100mA, V <sub>CE</sub> =1.0Vdc, f=100MHz)	MPSA55 MPSA56	50	MHz
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1. Pulse Test: Pulse Width<300us, Duty Cycle<2.0%
2. f<sub>T</sub> is defined as the frequency at which |h<sub>fe</sub>| extrapolates to unity.

**PNP Silicon  
Amplifier Transistor**

**TO-92**



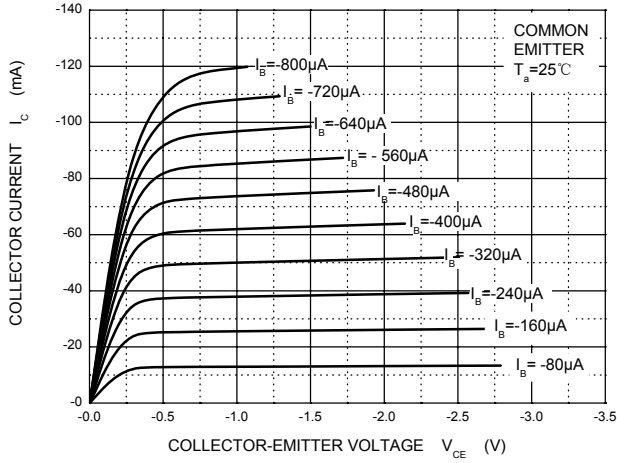
**DIMENSIONS**

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

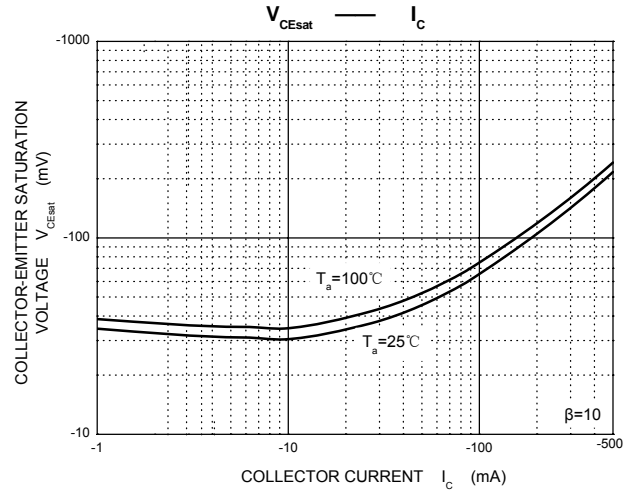
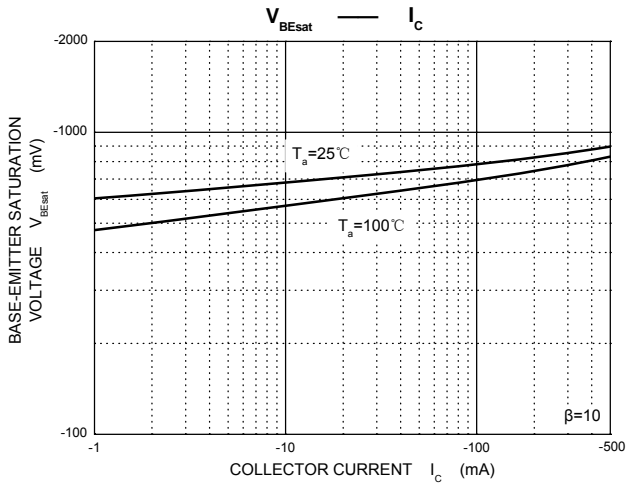
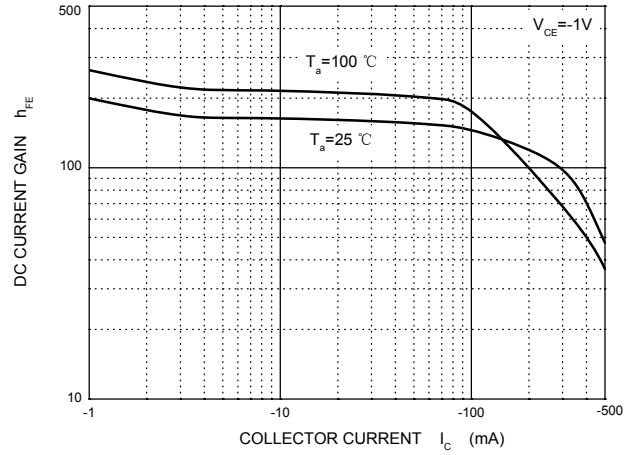
\* For ammo packing detailed specification, click here to visit our website of product packaging for details.

# Typical Characteristics

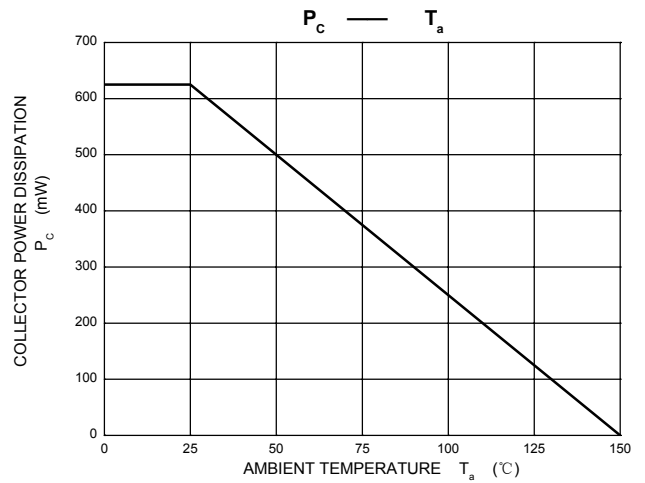
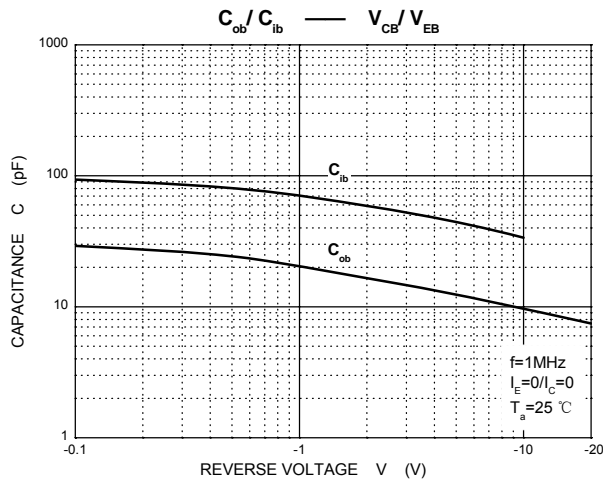
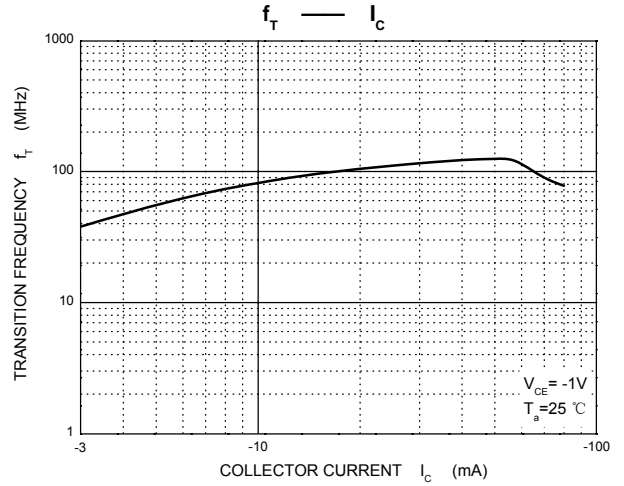
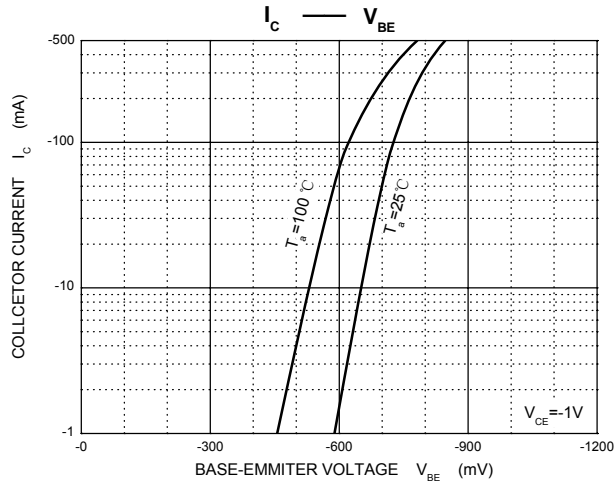
Static Characteristic



$h_{FE}$  —  $I_c$



# Typical Characteristics





Micro Commercial Components

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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