

# MPSA06

## NPN Small Signal Transistor 625 mW

### Features

- Halogen free available upon request by adding suffix "-HF"
- NPN Silicon Epitaxial Planar Transistor for switching and amplifier applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- As complementary type, the PNP transistor is MPSA56
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)

### Mechanical Data

- Marking: MPSA06
- Weight: 0.18 grams (Approx.)

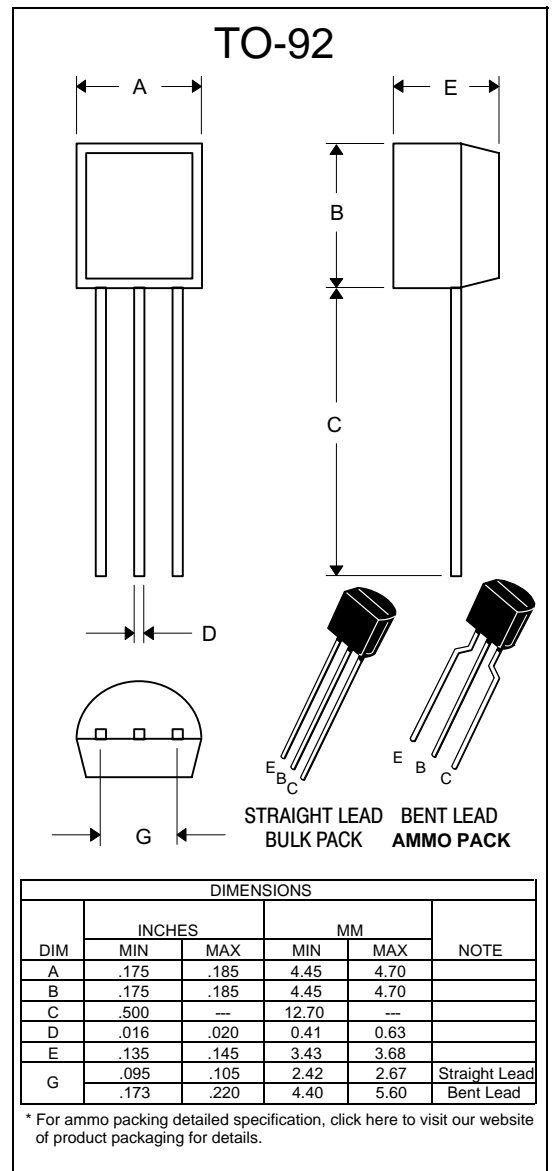
### Maximum Ratings @ 25°C Unless Otherwise Specified

Characteristic	Symbol	Value	Unit
Collector to Base Voltage	$V_{CBO}$	80	V
Collector to Emitter Voltage	$V_{CEO}$	80	V
Emitter to Base Voltage	$V_{EBO}$	4.0	V
Collector Current	$I_C$	500	mA
Total Power Dissipation @ $T_A=25^\circ\text{C}$	$P_{tot}$	625	mW
Total Power Dissipation @ $T_C=25^\circ\text{C}$	$P_{tot}$	1.5	W
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^\circ\text{C}$

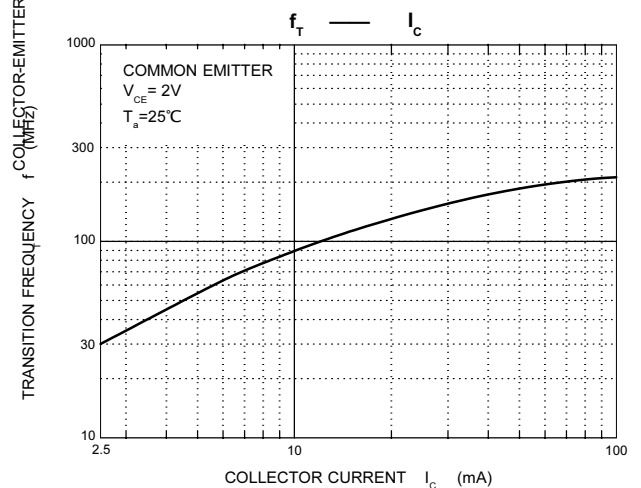
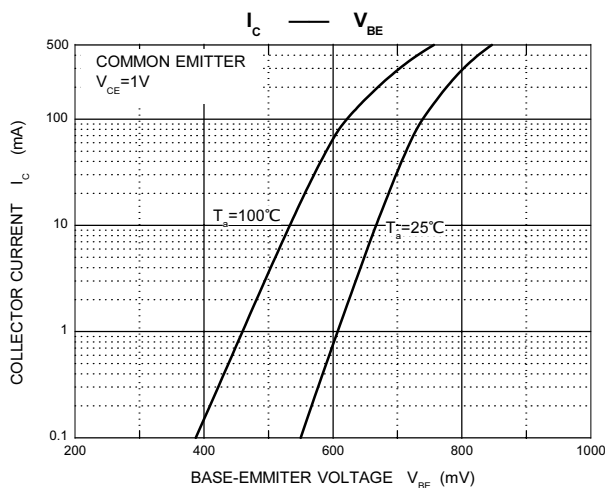
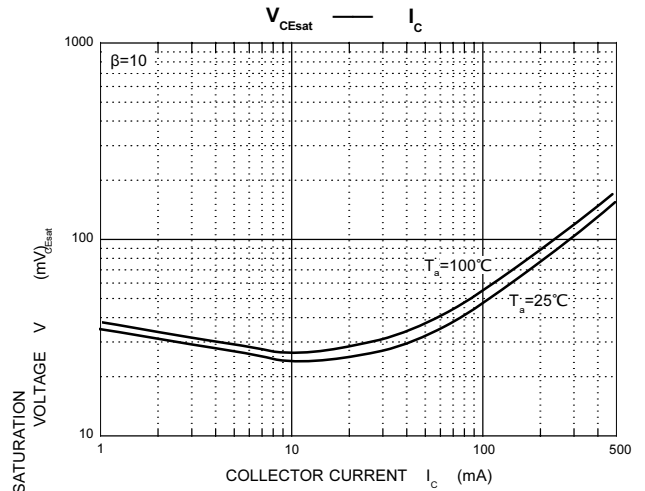
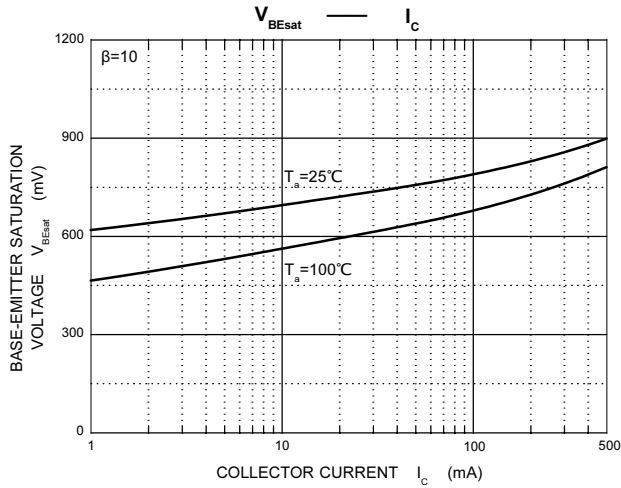
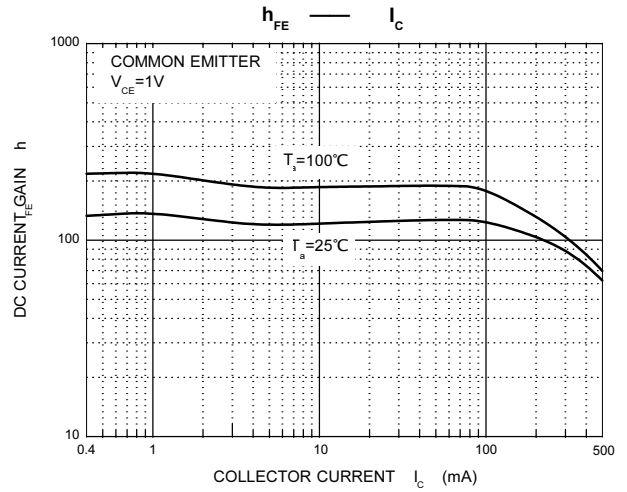
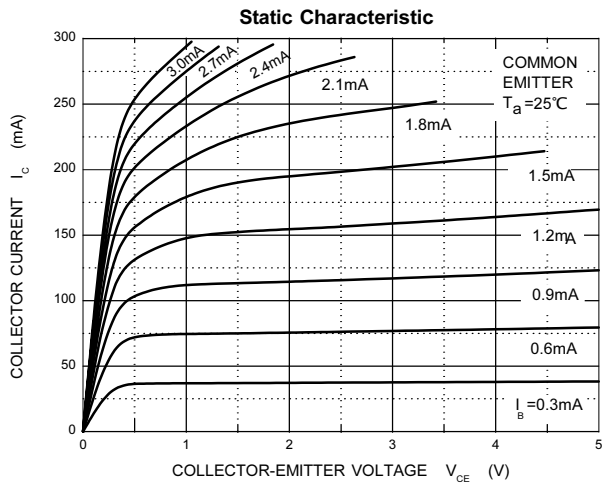
### Electrical Characteristics @ 25°C Unless Otherwise Specified

Characteristic	Symbol	Min	Max	Unit	Test Cond.
Collector Cut-off Current	$I_{CBO}$		100	nA	$V_{CB}=80\text{V}, I_E=0$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$		0.25	V	$I_C=100\text{mA}, I_B=10\text{mA}$
DC Current Gain	$h_{FE}$	100	400		$V_{CE}=1\text{V}, I_C=10\text{mA}$ $V_{CE}=1\text{V}, I_C=100\text{mA}$
Gain Bandwidth Product	$f_T$	100		MHZ	$V_{CE}=2\text{V}, I_C=10\text{mA}, f=100\text{MHz}$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	80		V	$I_C=1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	4		V	$I_E=100\mu\text{A}, I_C=0$
Base-Emitter ON Voltage	$V_{BE(sat)}$		1.2	V	$I_C=100\text{mA}, I_B=10\text{mA}$

**Note:** Valid provided that leads are kept at ambient temperature.



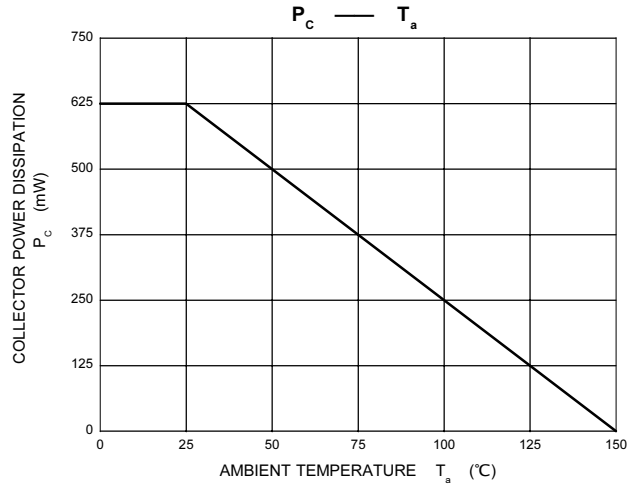
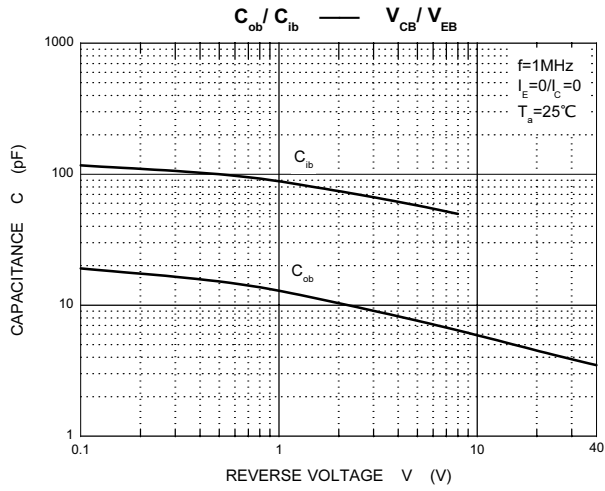
# Typical Characteristics



$C_{ob}/C_{ib}$  —  $V_{CB}/V_{EB}$

$P_C$  —  $T_a$

# Typical Characteristics





**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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