

## SOT-89 Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

### FEATURES

- Low  $V_{CE(sat)}$
- **Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"

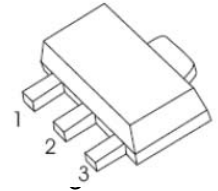
### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-32	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Continuous Collector Current	-1	A
$I_{CP}^*$	Pulsed Collector Current	Á2	A
$P_C$	Collector Power Dissipation	500	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

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### SOT-89

1. BASE
2. COLLECTOR
3. EMITTER



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-50\mu\text{A}, I_E=0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-50\mu\text{A}, I_C=0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-20\text{V}, I_E=0$			-0.5	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-4\text{V}, I_C=0$			-0.5	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=-3\text{V}, I_C=-100\text{mA}$	82		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}, I_B=-50\text{mA}$		-0.2	-0.5	V
Transition frequency	$f_T$	$V_{CE}=-5\text{V}, I_C=-50\text{mA}, f=30\text{MHz}$		150		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$		20	30	pF

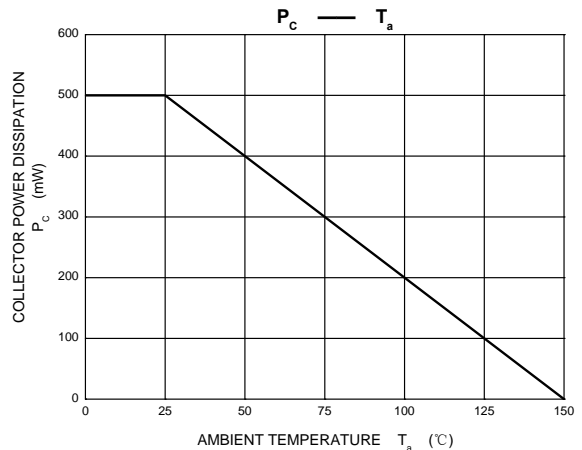
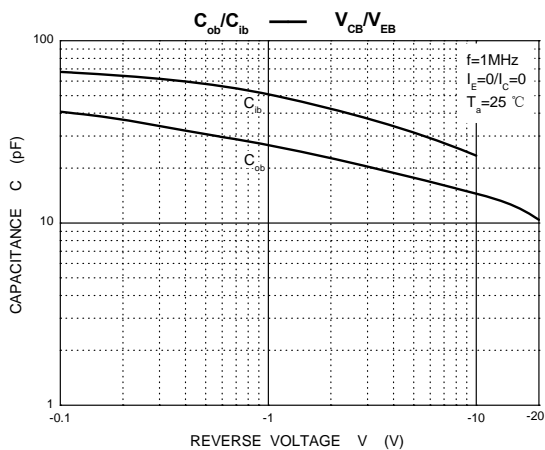
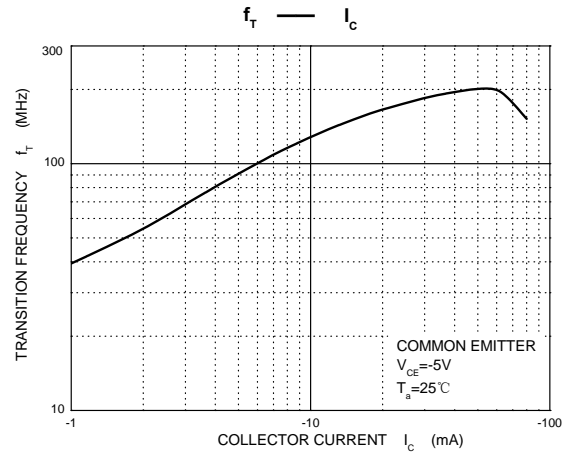
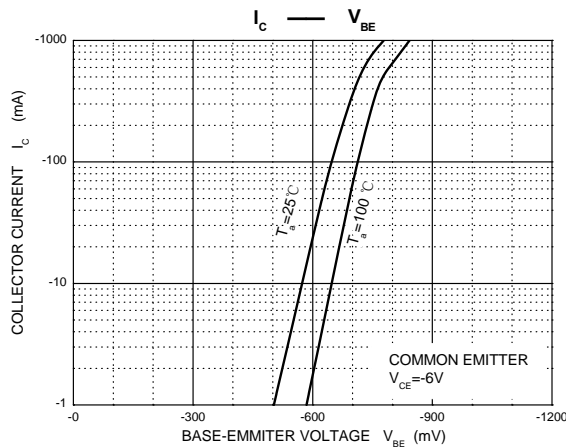
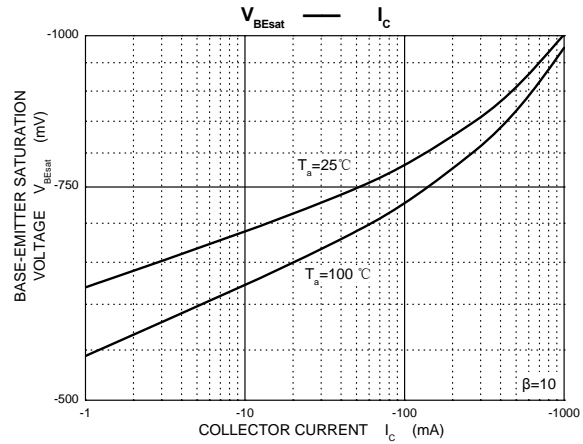
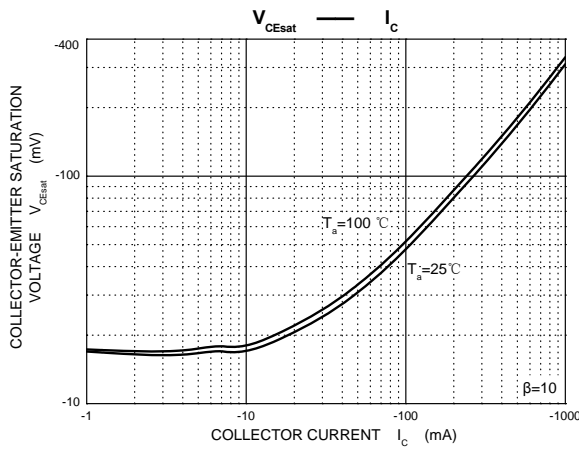
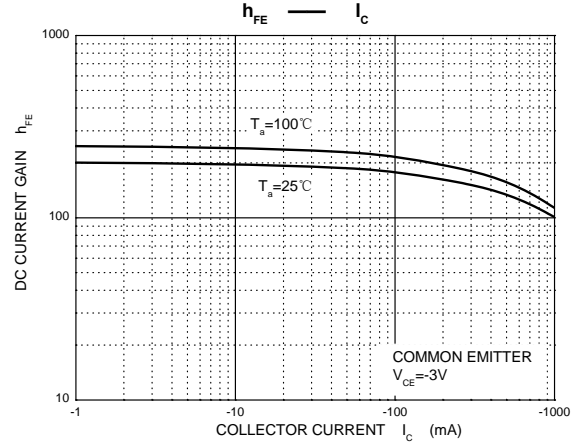
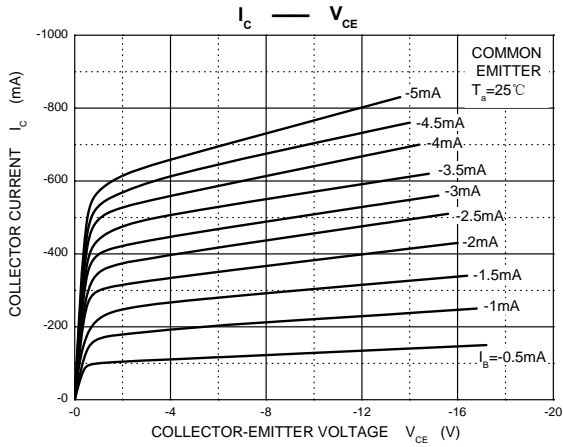
### CLASSIFICATION OF $h_{FE}$

Rank	P	Q	R
Range	82-180	120-270	180-390
Marking	BAP	BAQ	BAR



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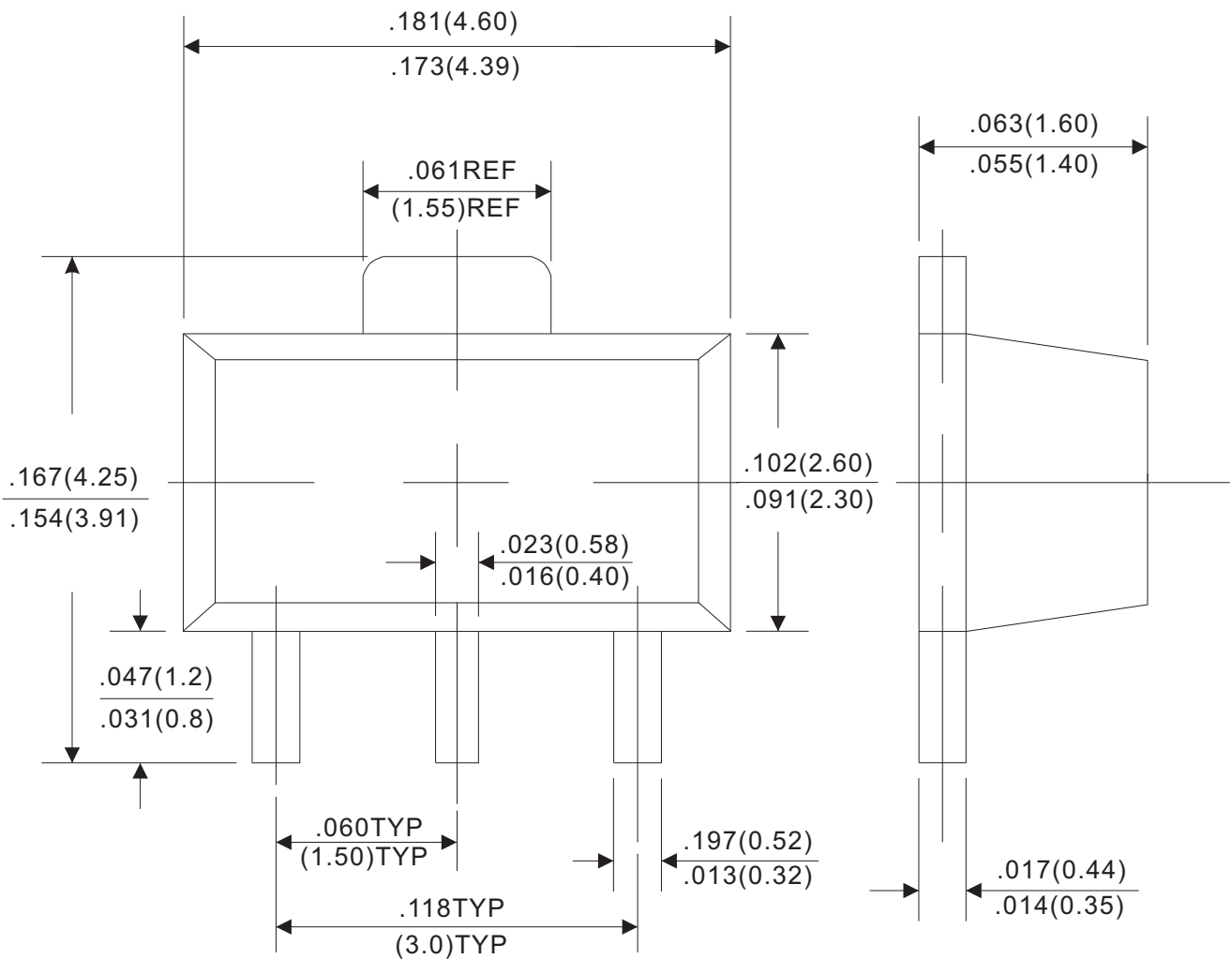
### Typical Characteristics





### Outline Drawing

### SOT-89



Dimensions in inches and (millimeters)