



### SOT-89 Plastic-Encapsulate Transistors

TRANSISTOR (PNP)

#### FEATURES

- Low saturation voltage
- Excellent DC current gain characteristics
- **Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"

#### MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

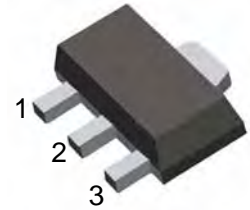
Symbol	Parameter	Value	Units
V <sub>CB0</sub>	Collector-Base Voltage	-50	V
V <sub>CE0</sub>	Collector-Emitter Voltage	-50	V
V <sub>EBO</sub>	Emitter-Base Voltage	-6	V
I <sub>C</sub>	Collector Current -Continuous	-2	A
P <sub>C</sub>	Collector Power dissipation	500	mW
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55-150	°C

#### SOT-89

1. BASE

2. COLLECTOR

3. EMITTER



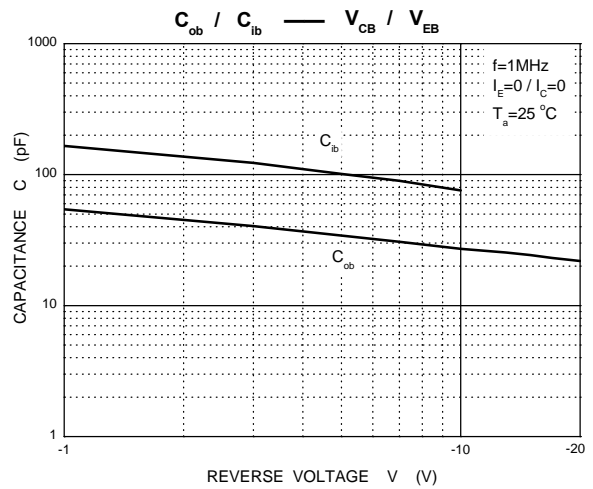
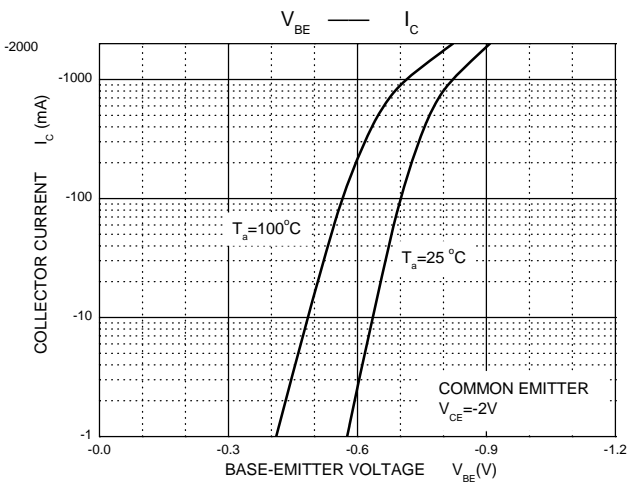
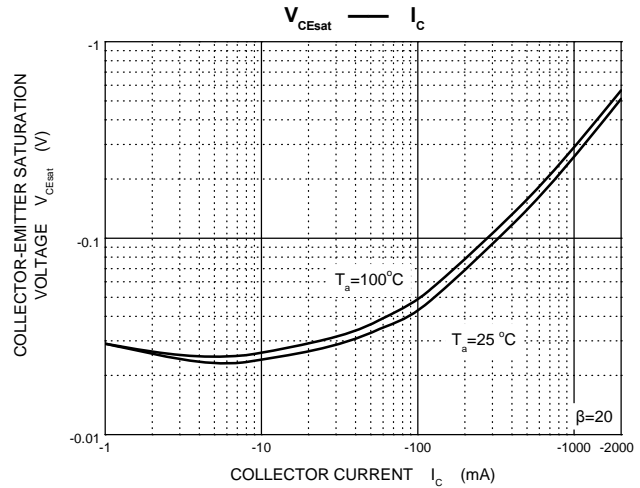
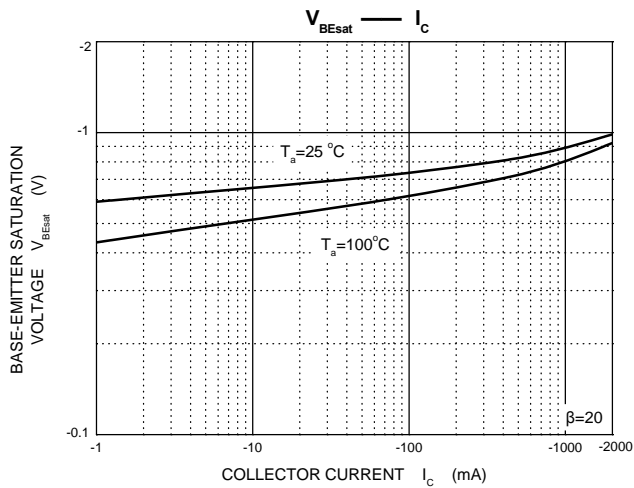
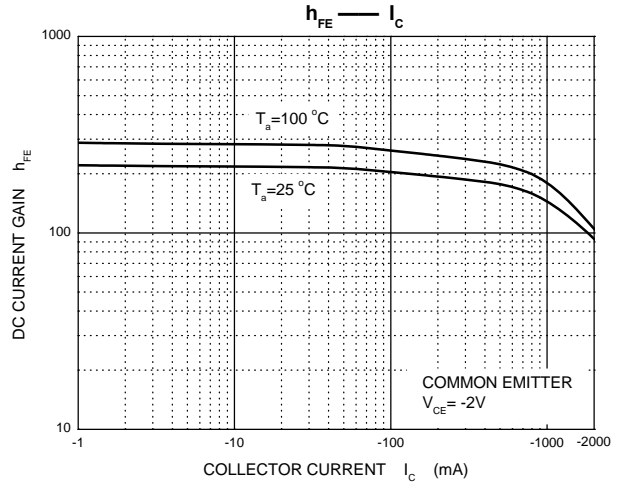
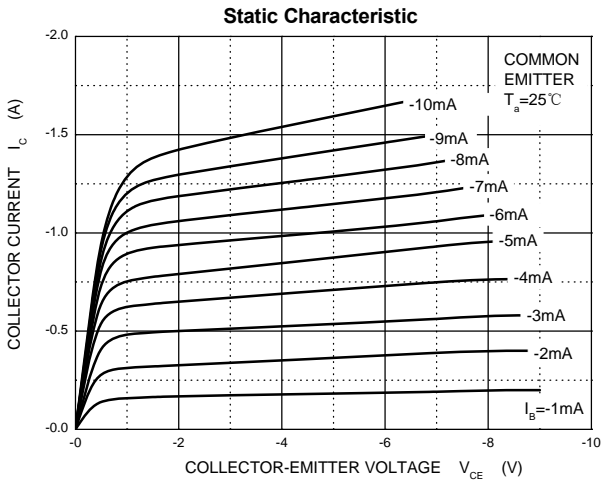
#### ELECTRICAL CHARACTERISTICS (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-50μA, I <sub>E</sub> =0	-50			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-50			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-50μA, I <sub>C</sub> =0	-6			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-50V, I <sub>E</sub> =0			-0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-5V, I <sub>C</sub> =0			-0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-500mA	82		270	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-1A, I <sub>B</sub> =-50mA			-0.35	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-0.5A, f=100MHz		200		MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		36		pF

#### CLASSIFICATION OF h<sub>FE</sub>

Rank	P	Q
Range	82-180	120-270
Marking	AGP	AGQ

**Typical Characteristics**



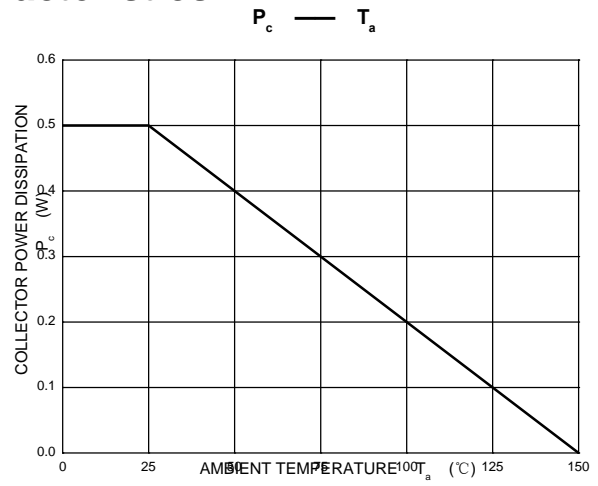
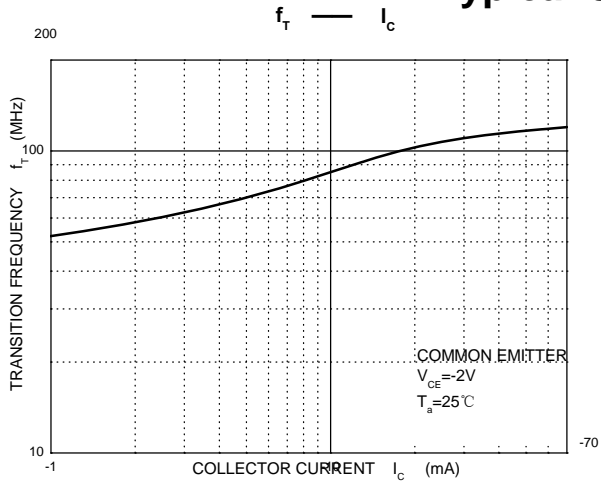
$f_T \text{ — } I_c$

$P_c \text{ — } T_a$



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#### Typical Characteristics

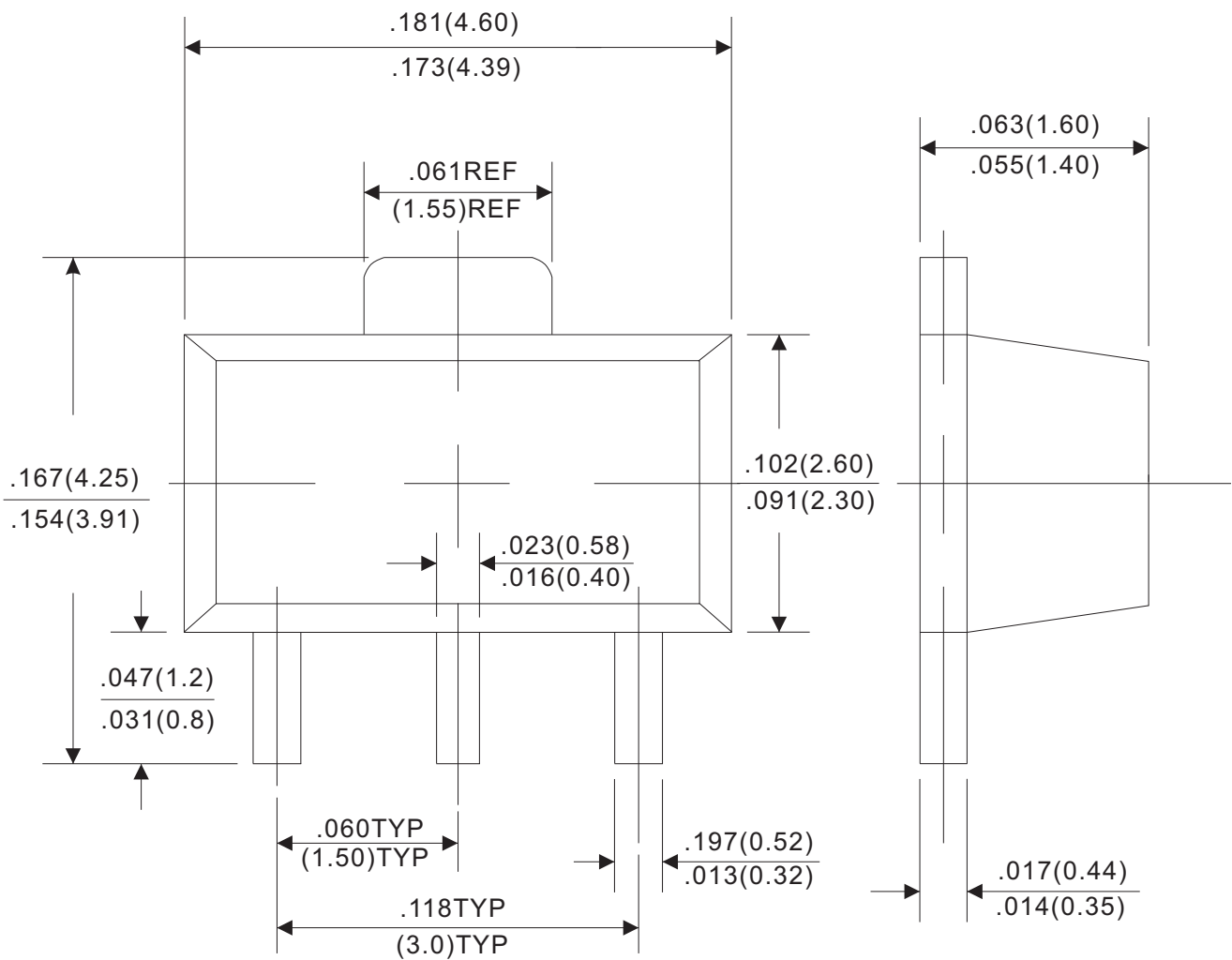




## SOT-89 Plastic-Encapsulate Transistors

### Outline Drawing

### SOT-89



Dimensions in inches and (millimeters)