



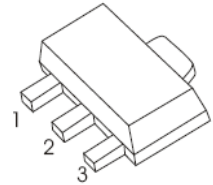
TRANSISTOR (PNP)

### FEATURES

- Power Transistor
- High Voltage and Current
- Low Collector-emitter saturation voltage
- **Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"

### SOT-89

1. BASE
2. COLLECTOR
3. EMITTER



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

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector-Base Voltage	-80	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-80	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-1	A
P <sub>C</sub>	Collector Power Dissipation	500	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	250	°C/W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

### ELECTRICAL CHARACTERISTICS (T<sub>a</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	-80			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-80			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-50μA, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-60V, I <sub>E</sub> =0			-1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4V, I <sub>C</sub> =0			-1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =-3V, I <sub>C</sub> =-0.1A	82		390	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-0.4	V
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		25		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA, f=30MHz		100		MHz

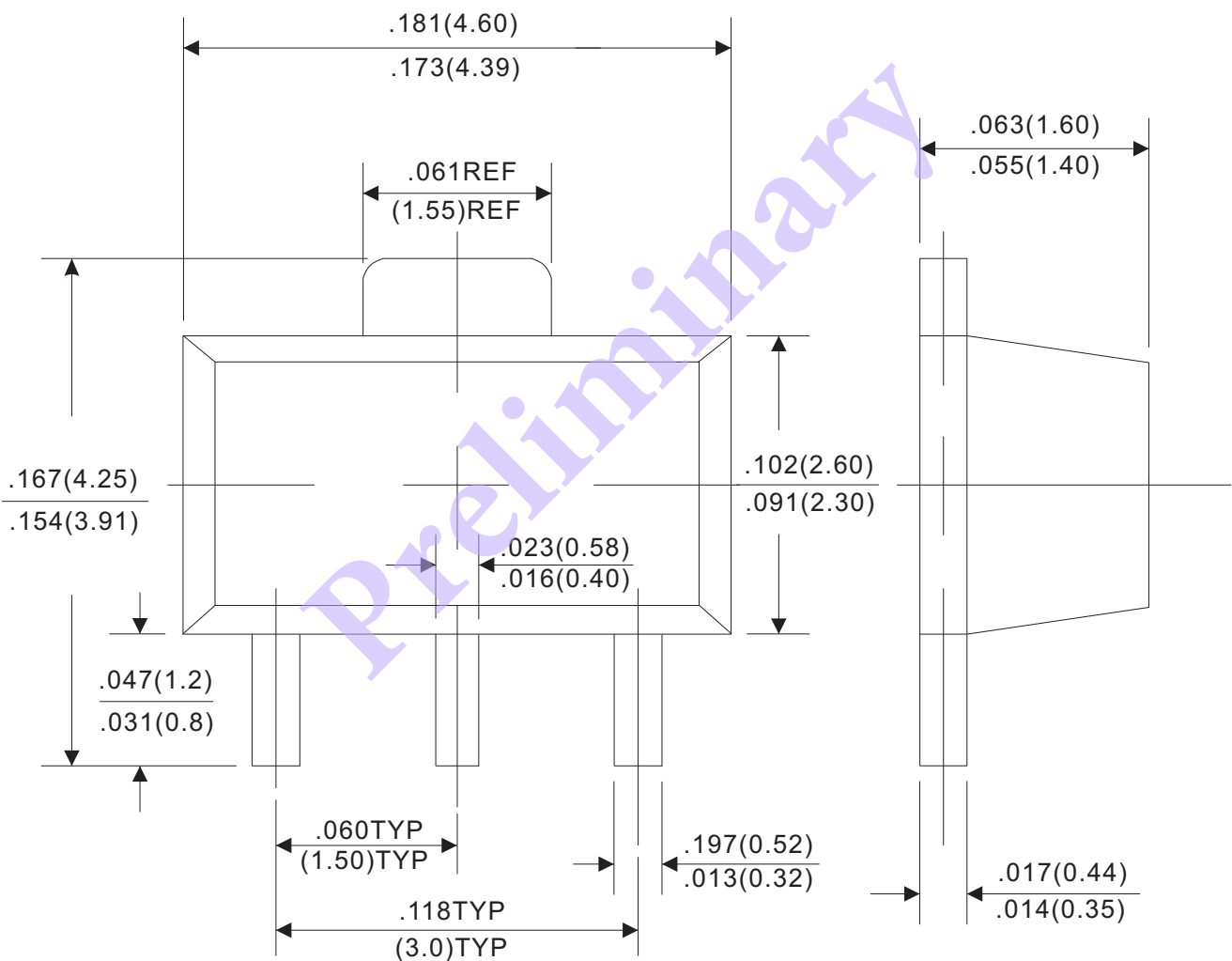
### CLASSIFICATION OF h<sub>FE</sub>

RANK	P	Q	R
RANGE	82 - 180	120 - 270	180 - 390
MARKING	ZL		



# Outline Drawing

# SOT-89



Dimensions in inches and (millimeters)