



TRANSISTOR (NPN)

FEATURES

- **Pb-Free package is available**
RoHS product for packing code suffix "G"
Halogen free product for packing code suffix "H"
- Small Flat Package
- High Speed Switching Time
- Low Collector-emitter saturation voltage
- **Moisture Sensitivity Level 1**

APPLICATIONS

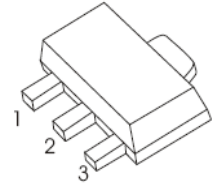
- Power Amplifier

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	50	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current	2	A
P _C	Collector Power Dissipation	500	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	250	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

SOT-89

1. BASE
2. COLLECTOR
3. EMITTER



ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	50			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	50			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =50V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =2V, I _C =0.5A	70		240	
	h _{FE(2)*}	V _{CE} =2V, I _C =2A	20			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =1A, I _B =50mA			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =1A, I _B =50mA			1.2	V
Transition frequency	f _T	V _{CE} =2V, I _C =0.5A, f=100MHz		120		MHz

CLASSIFICATION OF h_{FE(1)}

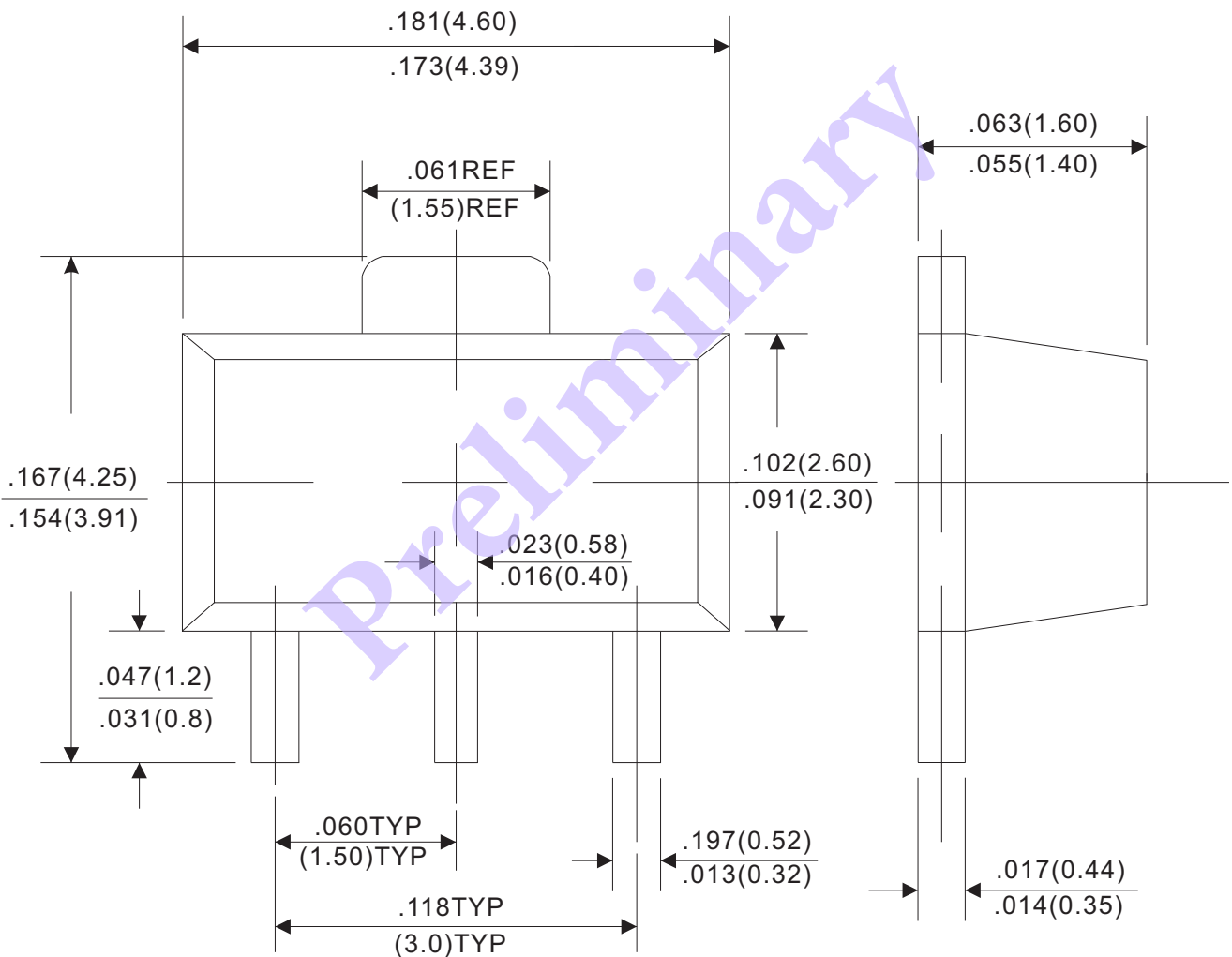
RANK	P	Q	Y
RANGE	82 - 180	120 - 270	180 - 390
MARKING	P1766	Q1766	Y1766

*Pulse test: pulse width ≤300μs, duty cycle ≤ 2.0%.



Outline Drawing

SOT-89



Dimensions in inches and (millimeters)



Ordering Information:

Device PN	Packing
2SC1766 x ⁽³⁾ -SOT89 ⁽¹⁾ G ⁽²⁾ -WS	Tape& Reel: 1 Kpcs/Reel

Note: (1) CASE:SOT-89

(2) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

(3) CLASSIFICATION OF hFE RANK

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