

**isc Silicon PNP Power Transistor**
**2SA1166**
**DESCRIPTION**

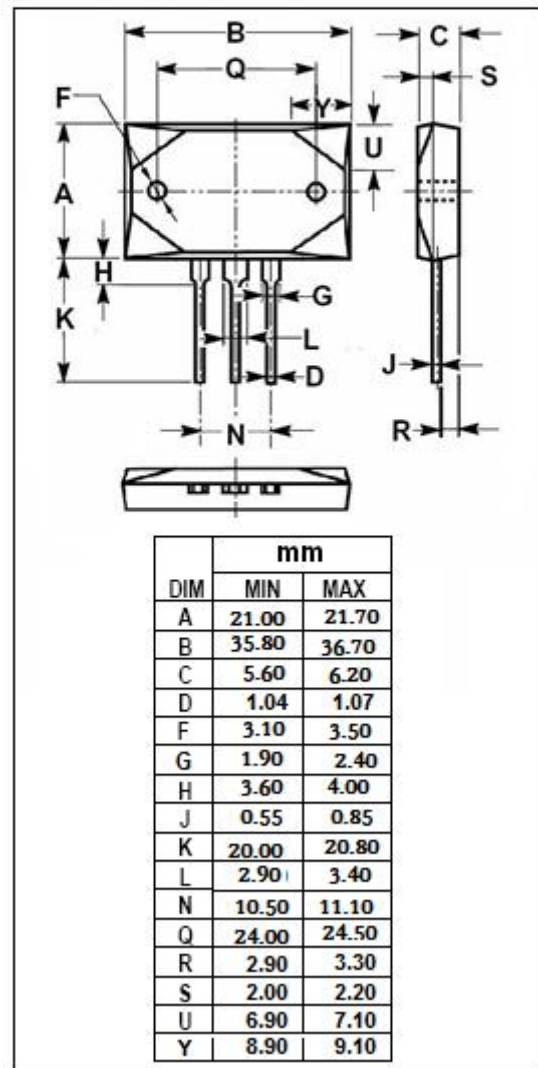
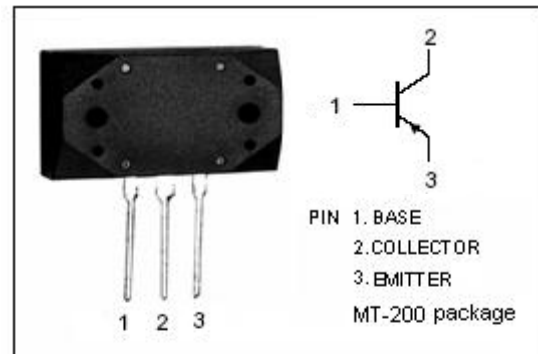
- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -150V(\text{Min})$
- Good Linearity of  $h_{FE}$
- High Power Dissipation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Power amplifier applications
- Recommended for 100W high-fidelity audio frequency amplifier output stage

**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-15	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	150	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



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**ELECTRICAL CHARACTERISTICS**

 T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =-25mA; I <sub>B</sub> =0	-160			V
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> =-1mA; I <sub>E</sub> =0	-160			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =-1mA; I <sub>C</sub> =0	-5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -5A; I <sub>B</sub> = -0.5A			-2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -5A; I <sub>B</sub> = -0.5A			-2.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -150V; I <sub>E</sub> = 0			-10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-10	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -2A; V <sub>CE</sub> = -5V	55		160	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V; f <sub>test</sub> = 1.0MHZ		320		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -1A; V <sub>CE</sub> = -10V		60		MHZ

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