

**Silicon PNP Power Transistor**

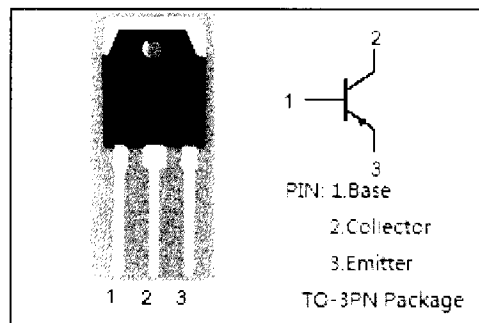
**2SA1105**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -120V(\text{Min})$
- Good Linearity of  $h_{FE}$
- High Power Dissipation

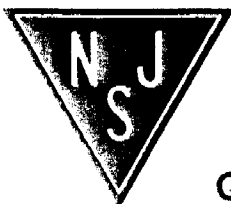
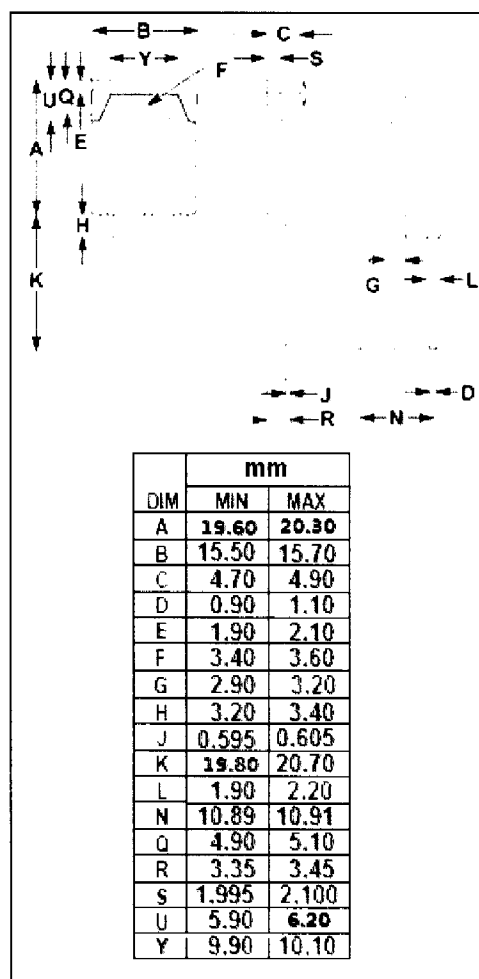
**APPLICATIONS**

- Designed for audio power amplifier applications



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-9	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	90	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



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## 2SA1105

### ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -50\text{mA}; I_B = 0$	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -5\text{A}; I_B = -0.5\text{A}$			-2.0	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -120\text{V}; I_E = 0$			-10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -6\text{V}; I_C = 0$			-10	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -3\text{A}; V_{CE} = -4\text{V}$	50		180	
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 1.0\text{MHz}$		400		pF
$f_T$	Current-Gain—Bandwidth Product	$I_E = 0.5\text{A}; V_{CE} = -12\text{V}$		20		MHz

#### ◆ $h_{FE}$ Classifications

O	P	Y
50-100	70-140	90-180