

**Silicon PNP Power Transistor**

**2SA1170**

**DESCRIPTION**

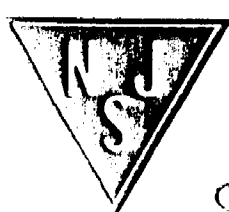
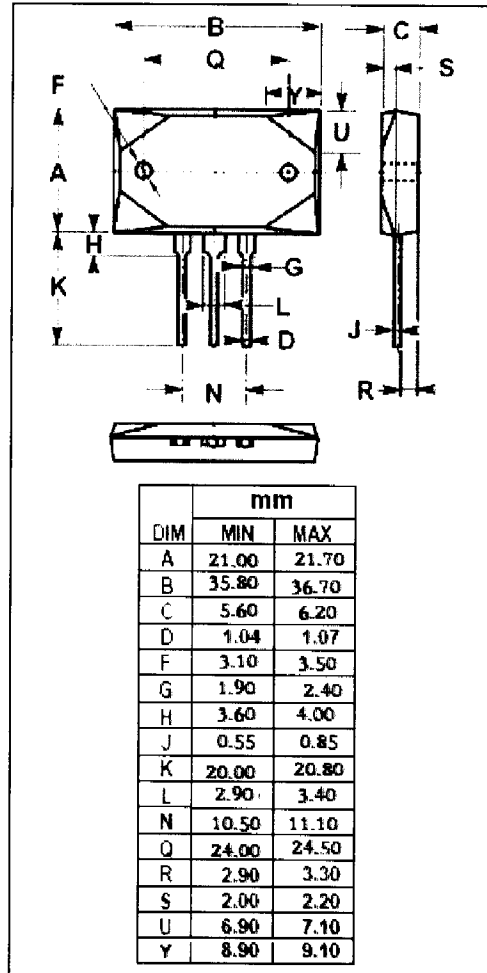
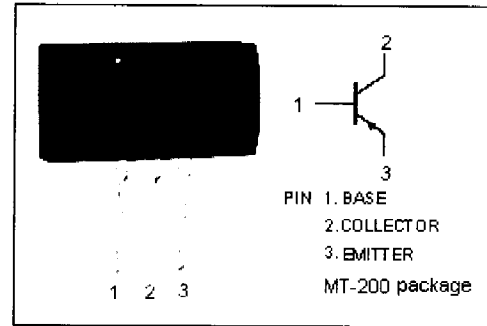
- Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -200V(\text{Min})$
- High Power Dissipation
- Complement to Type 2SC2774

**APPLICATIONS**

- Designed for power amplifier and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-200	V
$V_{CEO}$	Collector-Emitter Voltage	-200	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_c$	Collector Current-Continuous	-17	A
$P_c$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	200	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

# Silicon PNP Power Transistor

# 2SA1170

## 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	$I_C = -50\text{mA}; I_B = 0$	-200			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}; I_C = 0$	-6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}; I_B = -1\text{A}$			-2.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -200\text{V}; I_E = 0$			-100	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -6\text{V}; I_C = 0$			-100	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = -8\text{A}; V_{CE} = -4\text{V}$	20			
$C_{OB}$	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f_{test} = 1.0\text{MHz}$		500		pF
$f_T$	Current-Gain—Bandwidth Product	$I_E = 1\text{A}; V_{CE} = -12\text{V}$		20		MHz

### Switching Times

$t_r$	Rise Time	$I_C = -10\text{A}, R_L = 4\Omega,$ $I_{B1} = -I_{B2} = -1\text{A}, V_{CC} = -40\text{V}$		0.6		$\mu\text{s}$
$t_{stg}$	Storage Time			0.9		$\mu\text{s}$
$t_f$	Fall Time			0.2		$\mu\text{s}$