

Silicon PNP Power Transistors

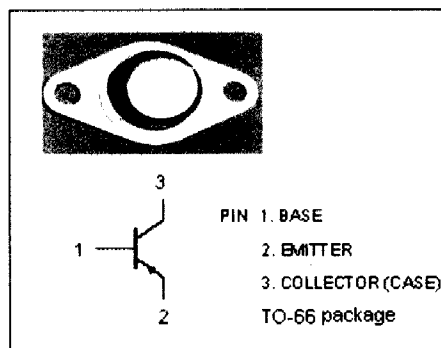
2SB502

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -80V(\text{Min})$
- High Power Dissipation-
: $P_C = 25W(\text{Max})@T_C = 25^\circ\text{C}$

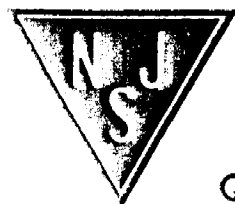
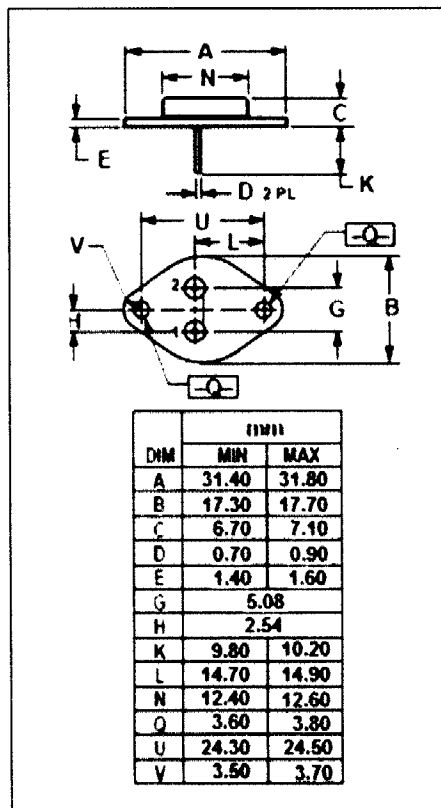
APPLICATIONS

- Designed for audio power amplifier and regulator applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-110	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-8	V
I_C	Collector Current-Continuous	-3	A
I_E	Emitter Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.5	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	25	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$



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 Transistors

2SB502

ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -0.1\text{A}; I_B = 0$	-80			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -2\text{mA}; I_E = 0$	-110			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -10\text{mA}; I_C = 0$	-8			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -3\text{A}; I_B = -0.3\text{A}$			-1.8	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -50\text{V}; I_E = 0$			-10	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -8\text{V}; I_C = 0$			-100	μA
h_{FE-1}	DC Current Gain	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}$	30		280	
h_{FE-2}	DC Current Gain	$I_C = -2.5\text{A}; V_{CE} = -5\text{V}$	15			
C_{OB}	Output Capacitance	$I_E = 0; V_{CB} = -10\text{V}; f = 1\text{MHz}$		200		pF

◆ h_{FE} Classifications

R	O	Y
30-70	50-140	100-280