

Silicon PNP Power Transistor

2SB1604

DESCRIPTION

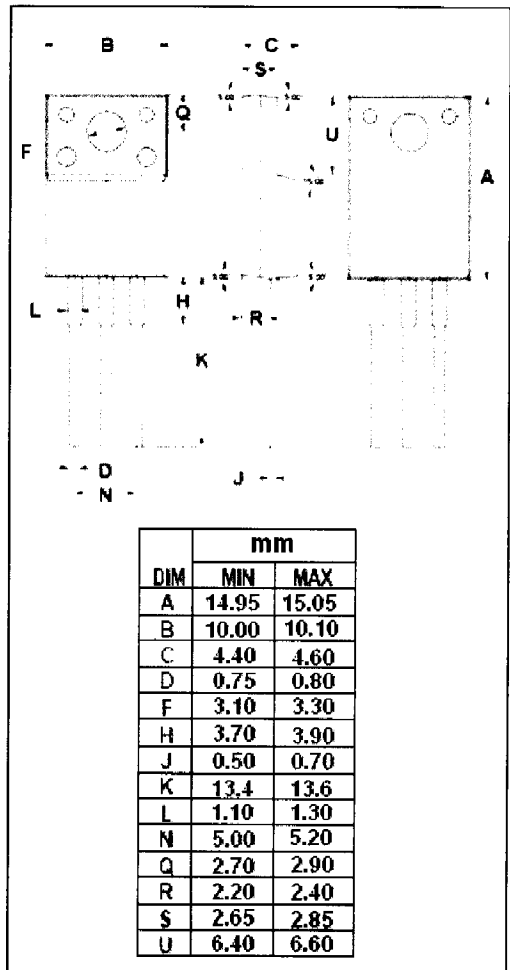
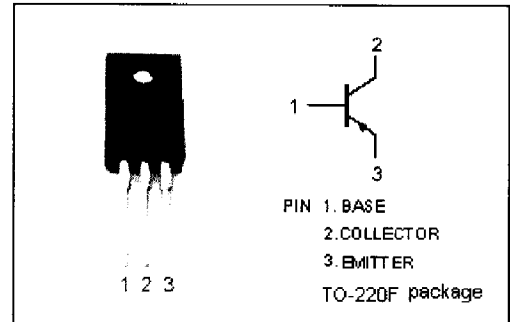
- High-speed Switching
- Low Collector to Emitter Saturation Voltage
 : $V_{CE(sat)} = -0.6V(\text{Max.}) @ I_C = -10A$
- Full-pack Package With Outstanding Insulation,
 Which Can Be Installed to The Heat Sink With One Screw

APPLICATIONS

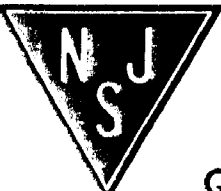
- Designed for low-voltage switching and general purpose applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-20	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-10	A
I_{CM}	Collector Current-Peak	-20	A
P_C	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	2	W
	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	40	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

2SB1604

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	$I_C = -10\text{mA}$; $I_B = 0$	-20			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -10\text{A}$; $I_B = -0.33\text{A}$			-0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -10\text{A}$; $I_B = -0.33\text{A}$			-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -40\text{V}$; $I_E = 0$			-50	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -5\text{V}$; $I_C = 0$			-50	μA
h_{FE-1}	DC Current Gain	$I_C = -0.1\text{A}$; $V_{CE} = -2\text{V}$	45			
h_{FE-2}	DC Current Gain	$I_C = -3\text{A}$; $V_{CE} = -2\text{V}$	90		260	
f_T	Current-Gain—Bandwidth Product	$I_E = 0.5\text{A}$; $V_{CE} = -10\text{V}$; $f = 10\text{MHz}$		30		MHz

Switching Times

t_{on}	Turn-on Time	$I_C = -3\text{A}$; $I_{B1} = -I_{B2} = -0.1\text{A}$		0.1		μs
t_{stg}	Storage Time			0.5		μs
t_f	Fall Time			0.1		μs

◆ h_{FE-2} Classifications

Q	P
90-180	130-260