

New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Silicon NPN Power Transistor

2SC3281

DESCRIPTION

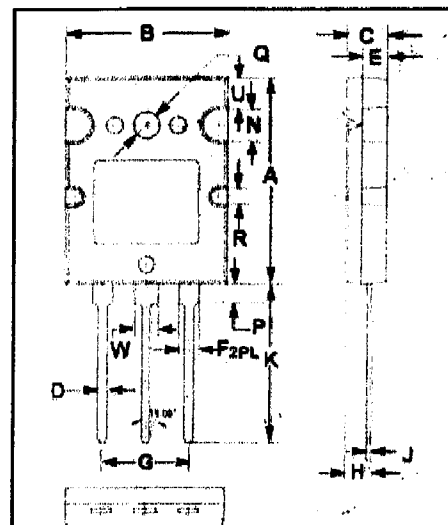
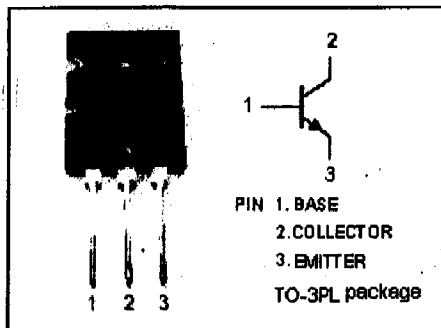
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 200V(\text{Min})$
- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 3.0V(\text{Max}) @ I_C = 10A, I_B = 1A$
- High Power Dissipation

APPLICATIONS

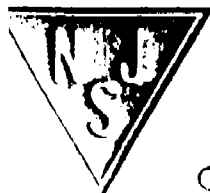
- Power amplifier applications
- Recommend for 100W high fidelity audio frequency amplifier output stage applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CB0}	Collector-Base Voltage	200	V
V_{CE0}	Collector-Emitter Voltage	200	V
V_{EB0}	Emitter-Base voltage	5	V
I_{C0}	Collector Current-Continuous	15	A
I_{B0}	Base Current-Continuous	1.5	A
P_{D0}	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	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.60	0.70
K	20.00	21.00
N	3.90	4.10
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.10
U	3.90	4.10
W	2.90	3.10



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 data-sheets are current before placing orders.

Quality Semi-Conductors

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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
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=1\text{A}$			3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=8\text{A}; V_{CE}=5\text{V}$			1.5	V
$I_{C(s)}$	Collector Cutoff Current	$V_{CE}=200\text{V}; I_E=0$			5.0	μA
$I_{E(s)}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5.0	μA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	55		160	
h_{FE2}	DC Current Gain	$I_C=8\text{A}; V_{CE}=5\text{V}$	35			
f	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$		30		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CE}=10\text{V}; f_{test}=1\text{MHz}$		270		pF

◆ h_{FE-1} Classifications

R	O
55-110	80-160