

Silicon NPN Power Transistor

2SC5199

DESCRIPTION

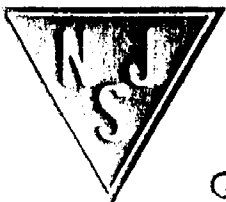
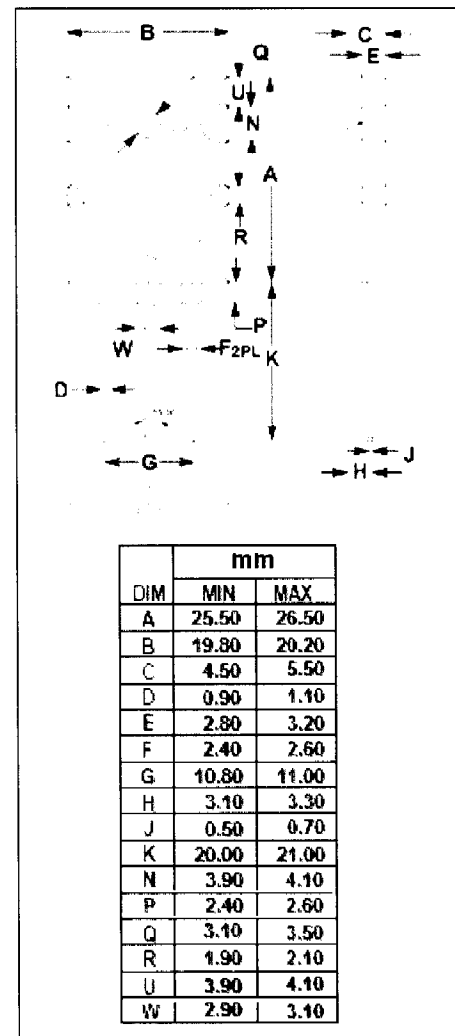
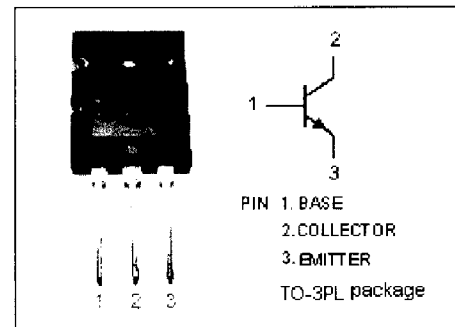
- High Current Capability
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage:
 $V_{(BR)CEO} = 160V(\text{Min})$
- Complement to Type 2SA1942

APPLICATIONS

- Power amplifier applications
- Recommend for 80W high fidelity audio frequency amplifier output stage applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	12	A
I_B	Base Current-Continuous	1.2	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	120	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 NPN Power Transistor

2SC5199

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	$I_C=50\text{mA}; I_B=0$	160			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=8.0\text{A}; I_B=0.8\text{A}$			2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=6\text{A}; V_{CE}=5\text{V}$			1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=160\text{V}; I_E=0$			5	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			5	μA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	55		160	
h_{FE-2}	DC Current Gain	$I_C=6\text{A}; V_{CE}=5\text{V}$	35			
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1.0\text{MHz}$		170		pF
f_T	Current-Gain—Bandwidth Product	$I_C=1\text{A}; V_{CE}=5\text{V}$		30		MHz

◆ h_{FE-1} Classifications

R	O
55-110	80-160