

**Silicon PNP Power Transistor**

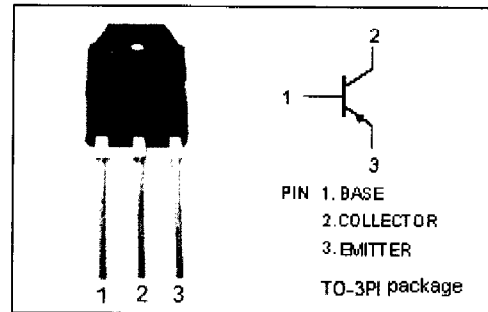
**2SA1940**

**DESCRIPTION**

- Low Collector Saturation Voltage-  
 :  $V_{CE(sat)} = -2.0V(\text{Min}) @ I_C = -6A$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SC5197

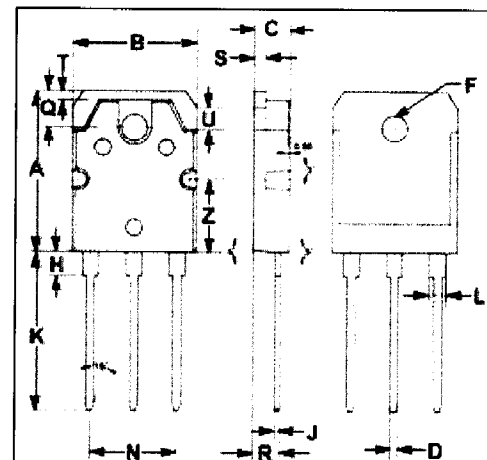
**APPLICATIONS**

- Power amplifier applications
- Recommend for 55W high fidelity audio frequency amplifier output stage applications



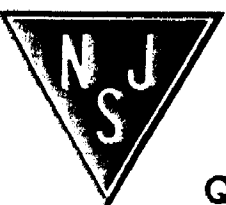
**ABSOLUTE MAXIMUM RATINGS( $T_a=25^\circ\text{C}$ )**

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-8	A
$I_B$	Base Current-Continuous	-0.8	A
$P_C$	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	80	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.50	15.70
C	4.40	4.60
D	0.90	1.10
F	3.20	3.40
H	2.90	3.10
J	0.50	0.70
K	19.90	20.10
L	1.90	2.10
N	10.80	11.00
Q	4.40	4.60
R	3.30	3.35
S	1.40	1.60
T	1.00	1.20
U	2.10	2.30
Z	8.90	9.10

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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	$I_C = -50\text{mA}$ ; $I_B = 0$	-120			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -6\text{A}$ ; $I_B = -0.6\text{A}$			-2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -4\text{A}$ ; $V_{CE} = -5\text{V}$			-1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -120\text{V}$ ; $I_E = 0$			-5	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}$ ; $I_C = 0$			-5	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -1\text{A}$ ; $V_{CE} = -5\text{V}$	55		160	
$h_{FE-2}$	DC Current Gain	$I_C = -4\text{A}$ ; $V_{CE} = -5\text{V}$	35			
$C_{OB}$	Output Capacitance	$I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f_{test} = 1.0\text{MHz}$		260		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