

Silicon PNP Power Transistor

2SA1943

DESCRIPTION

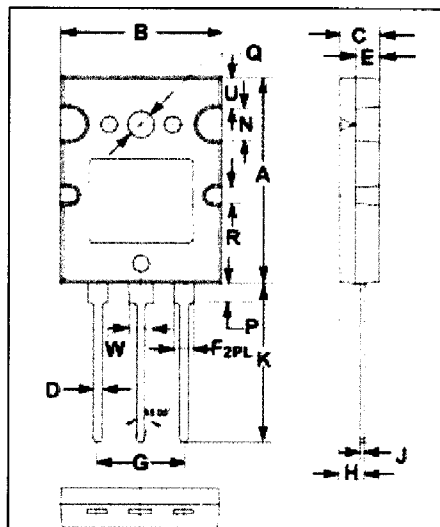
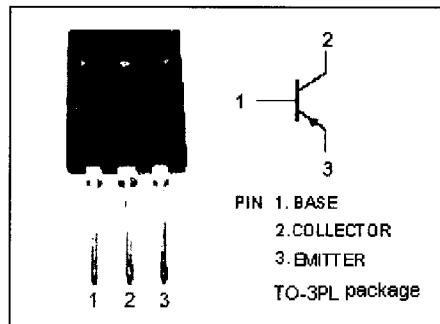
- High Current Capability
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO} = -230V(\text{Min})$
- Complement to Type 2SC5200

APPLICATIONS

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

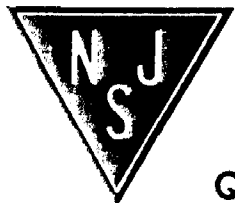
ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

| SYMBOL | PARAMETER | VALUE | UNIT |
|------------------|---|---------|------|
| V _{CBO} | Collector-Base Voltage | -230 | V |
| V _{CEO} | Collector-Emitter Voltage | -230 | V |
| V _{EBO} | Emitter-Base Voltage | -5 | V |
| I _C | Collector Current-Continuous | -15 | A |
| I _B | Base Current-Continuous | -1.5 | A |
| P _C | Collector Power Dissipation @ T _C =25°C | 150 | W |
| T _J | Junction Temperature | 150 | °C |
| T _{stg} | Storage Temperature Range | -55~150 | °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 | 0.50 | 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 |

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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 | $I_C = -50\text{mA}; I_B = 0$ | -230 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -8.0\text{A}; I_B = -0.8\text{A}$ | | | -3.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -7\text{A}; V_{CE} = -5\text{V}$ | | | -1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -230\text{V}; I_E = 0$ | | | -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 | $I_C = -7\text{A}; V_{CE} = -5\text{V}$ | 35 | | | |
| C_{OB} | Output Capacitance | $I_E = 0; V_{CB} = -10\text{V}; f = 1.0\text{MHz}$ | | 360 | | pF |
| f_T | Current-Gain—Bandwidth Product | $I_C = -1\text{A}; V_{CE} = -5\text{V}$ | | 30 | | MHz |

◆ h_{FE-1} Classifications

R:55-95

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| R55 | R60 | R65 | R70 | R75 | R80 | R85 | R90 |
| 55-60 | 60-65 | 65-70 | 70-75 | 75-80 | 80-85 | 85-90 | 90-95 |

O:95-160

| | | | | | | |
|--------|---------|---------|---------|---------|---------|---------|
| O95 | O100 | O105 | O110 | O115 | O120 | O125 |
| 95-100 | 100-105 | 105-110 | 110-115 | 115-120 | 120-125 | 125-130 |

| | | | | | |
|---------|---------|---------|---------|---------|---------|
| O130 | O135 | O140 | O145 | O150 | O155 |
| 130-135 | 135-140 | 140-145 | 145-150 | 150-155 | 155-160 |