

2N4141

NPN SMALL SIGNAL GENERAL PURPOSE AMPLIFIER AND SWITCH

Maximum Voltages and Current

| | | |
|------------------|---------------------------------------|--------|
| V _{CB0} | Collector to Base Voltage | 60 V |
| V _{CE0} | Collector to Emitter Voltage (Note 4) | 30 V |
| V _{EB0} | Emitter to Base Voltage | 5.0 V |
| I _C | Collector Current | 800 mA |

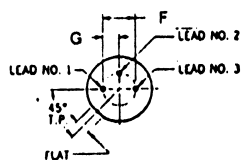
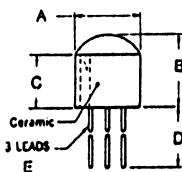
ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

| SYMBOL | CHARACTERISTIC | MIN. MAX. | | UNITS | TEST CONDITIONS |
|------------------------|--|-----------|------|-------|--|
| | | MIN. | MAX. | | |
| h _{FE} | DC Current Gain (Note 5) | 40 | 120 | | I _C = 150 mA, V _{CE} = 10 V |
| | | 20 | | | I _C = 150 mA, V _{CE} = 1.0 V |
| | | 35 | | | I _C = 10 mA, V _{CE} = 10 V |
| | | 25 | | | I _C = 1.0 mA, V _{CE} = 10 V |
| | | 20 | | | I _C = 0.1 mA, V _{CE} = 10 V |
| | | 20 | | | I _C = 500 mA, V _{CE} = 10 V |
| V _{CE (sat)} | Collector to Emitter Saturation Voltage (Note 5) | | 0.4 | V | I _C = 150 mA, I _B = 15 mA |
| V _{BE (sat)} | Base to Emitter Saturation Voltage (Note 5) | | 1.6 | V | I _C = 500 mA, I _B = 50 mA |
| | | | 1.3 | V | I _C = 150 mA, I _B = 15 mA |
| I _{CB0} | Collector Cutoff Current | | 2.6 | V | I _C = 500 mA, I _B = 50 mA |
| | | | 10 | nA | I _E = 0, V _{CB} = 50 V |
| I _{EB0} | Emitter Cutoff Current | | 10 | μA | I _E = 0, V _{CB} = 50 V, T _A = 150°C |
| | | | 10 | nA | I _C = 0, V _{EB} = 3.0 V |
| BV _{CB0} | Collector to Base Breakdown Voltage | 60 | | V | I _C = 10 μA, I _E = 0 |
| V _{CE0 (sus)} | Collector to Emitter Sustaining Voltage (Note 5) | 30 | | V | I _C = 10 mA (pulsed), I _B = 0 |
| BV _{EB0} | Emitter to Base Breakdown Voltage | 5.0 | | V | I _E = 10 μA, I _C = 0 |

4. Rating refers to a high current point where collector to emitter voltage is lowest.
5. Pulse Conditions: length = 300 μs; duty cycle <2%.

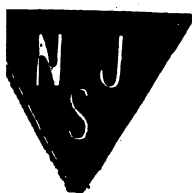
PHYSICAL DIMENSIONS

TO-106



- NOTES: See table for dimensions in inches and millimeters
Leads 4 and 8 omitted
Internal lead No. 3 length is 110 mils
Lead No. 3 club head length is 85 mils
Leads 1 and 2 are gold-plated nickel
Lead No. 3 is gold-plated copper alloy
Packaged weight is 0.31 grams

| DIM. | INCHES | | | MILLIMETERS | | |
|------|--------|------|------|-------------|------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | .192 | | .222 | 4.88 | | 5.64 |
| B | | | .240 | | | 5.90 |
| C | .100 | | .120 | 2.54 | | 3.05 |
| D | .500 | | | 12.40 | | |
| E | .016 | | .019 | 0.406 | | 0.483 |
| F | | .100 | | | 2.54 | |
| G | | .050 | | | 1.27 | |



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