DIGITRON™ Semiconductors

High-reliability discrete products
and engineering services since 1977

# 2N5954-2N5956

## PNP SILICON HIGH POWER TRANSISTORS

**FEATURES**

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

**MAXIMUM RATINGS**

| Ratings | Symbol | 2N5954 | 2N5955 | 2N5956 | Unit |
|---|---|---|---|---|---|
| **Collector-Emitter Voltage** | $V_{CEO}$ | -80 | -60 | -40 | Vdc |
| **Collector-Base Voltage** | $V_{CBO}$ | -90 | -70 | -50 | Vdc |
| **Emitter-Base Voltage** | $V_{EBO}$ | -5.0 | | | Vdc |
| **Collector Current** | $I_C$ | -6.0 | | | Adc |
| **Base Current** | $I_B$ | -2.0 | | | |
| **Total Power Dissipation** $T_C$ = 25°C | $P_D$ | 40 | | | W |
| **Junction Temperature** | $T_J$ | 150 | | | °C |
| **Storage Junction Temperature Range** | $T_{stg}$ | -65 to +200 | | | °C |
| **Maximum Thermal Resistance Junction to Case** | $R_{\theta JC}$ | 4.3 | | | °C/W |

**ELECTRICAL CHARACTERSITICS** ($T_A$ = 25°C unless otherwise specified)

| Characteristics | | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|---|
| **OFF CHARACTERISTICS** | | | | | |
| **Collector-Emitter Sustaining Voltage**<br>$I_C$ = 10mA, $I_B$ = 0 | 2N5954<br>2N5955<br>2N5956 | $V_{CEO(sus)}$ | -80<br>-60<br>-40 | -<br>-<br>- | Vdc |
| **Collector-Emitter Saturation Voltage**<br>$I_C$ = -2Adc, $I_B$ = -0.2 Adc<br>$I_C$ = -2.5Adc, $I_B$ = -0.25 Adc<br>$I_C$ = -3Adc, $I_B$ = -0.3 Adc | <br>2N5954<br>2N5955<br>2N5956 | $V_{CE(sat)}$ | <br>-<br>-<br>- | <br>-<br>-1.0<br>- | Vdc |
| **Base Emitter On Voltage**<br>$I_C$ = -2Adc, $V_{CE}$ = -4V<br>$I_C$ = -2.5Adc, $V_{CE}$ = -4V<br>$I_C$ = -3Adc, $V_{CE}$ = -4V | <br>2N5954<br>2N5955<br>2N5956 | $V_{BE(on)}$ | <br>-<br>-<br>- | <br>-2.0<br>-2.0<br>-2.0 | Vdc |
| **Base Emitter On Voltage**<br>$I_C$ = -6Adc, $V_{CE}$ = -4V | | $V_{BE(on)}$ | - | -3.0 | Vdc |
| **Collector Cutoff Current**<br>$V_{CE}$ = -65Vdc, $I_B$ = 0<br>$V_{CE}$ = -45Vdc, $I_B$ = 0<br>$V_{CE}$ = -25Vdc, $I_B$ = 0 | <br>2N5954<br>2N5955<br>2N5956 | $I_{CEO}$ | <br>-<br>-<br>- | <br>-1.0<br>-1.0<br>-1.0 | mAdc |
| **Collector Cutoff Current**<br>$V_{CE}$ = Rated $V_{CEO}$, $V_{BE(off)}$ = 1.5V<br>$V_{CE}$ = Rated $V_{CEO}$, $V_{BE(off)}$ = 1.5V, $T_C$ = 125°C | | $I_{CEV}$ | <br>- | <br>-0.1<br>-2.0 | mAdc |
| **Emitter Cutoff Current**<br>$V_{EB}$ = -5Vdc, $I_C$ = 0 | | $I_{EBO}$ | - | -0.1 | mAdc |

DIGITRON Semiconductors

High-reliability discrete products
and engineering services since 1977

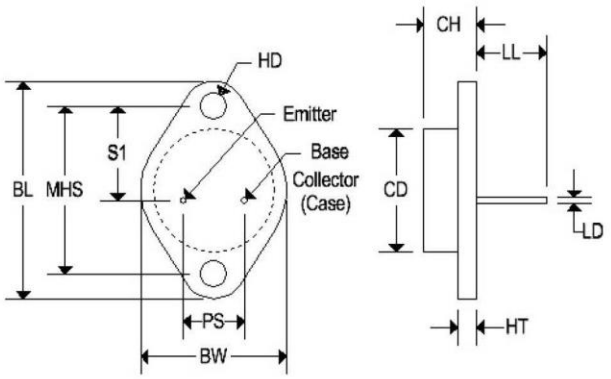
# 2N5954-2N5956

## PNP SILICON HIGH POWER TRANSISTORS

| Characteristics | | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|---|
| **DC Current Gain** | | | | | |
| $I_C$ = -2Adc, $V_{CE}$ = -4.0 Vdc | 2N5954 | | - | - | |
| $I_C$ = -2.5Adc, $V_{CE}$ = -4.0 Vdc | 2N5955 | $h_{FE}$ | 20 | 100 | - |
| $I_C$ = -3Adc, $V_{CE}$ = -4.0 Vdc | 2N5956 | | - | - | |
| $I_C$ = -6Adc, $V_{CE}$ = -4.0 Vdc | All devices | | 5 | - | |
| **Transition Frequency** | | $f_T$ | | | MHz |
| $I_C$ = 1Adc, $V_{CE}$ = -4Vdc, f = 1MHz | | | 5 | - | |

**MECHANICAL CHARACTERISTICS**

| | |
|---|---|
| **Case** | TO-66 |
| **Marking** | Alpha-numeric |
| **Polarity** | See below |




| Dim | TO-66 | | | |
|---|---|---|---|---|
| | Inches | | Millimeters | |
| | Min | Max | Min | Max |
| BL | 1.205 | 1.280 | 30.60 | 32.50 |
| CD | 0.445 | 0.557 | 11.303 | 14.148 |
| CH | 0.257 | 0.284 | 6.540 | 7.220 |
| LL | 0.374 | 0.413 | 9.500 | 10.50 |
| BW | 0.680 | 0.727 | 17.26 | 18.46 |
| LD | 0.030 | 0.036 | 0.760 | 0.920 |
| HT | 0.054 | 0.065 | 1.380 | 1.650 |
| MHS | 0.951 | 0.976 | 24.16 | 24.78 |
| S1 | 0.545 | 0.614 | 13.84 | 15.60 |
| HD | 0.131 | 0.154 | 3.320 | 3.920 |
| PS | 0.191 | 0.210 | 4.860 | 5.340 |