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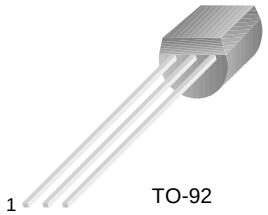
FAIRCHILD
SEMICONDUCTOR®

# 2N6518

## High Voltage Transistor

- Collector-Emitter Voltage: $V_{CEO}$= -250V
- Collector Dissipation: $P_C$ (max)=625mW
- Complement to 2N6515



TO-92

1. Emitter 2. Base 3. Collector

## PNP Epitaxial Silicon Transistor

### Absolute Maximum Ratings $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Value | Units |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | -250 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -250 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current | -500 | mA |
| $I_B$ | Base Current | -250 | mA |
| $P_C$ | Collector Power Dissipation | 625 | mW |
| | Derate above 25°C | 5 | mW/°C |
| $T_J$ | Junction Temperature | 150 | °C |
| $T_{STG}$ | Storage Temperature | -55 ~ 150 | °C |

• Refer to 2N6520 for graphs

### Electrical Characteristics $T_a$=25°C unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|---|---|---|---|---|---|
| $BV_{CBO}$ | * Collector-Base Breakdown Voltage | $I_C$= -100μA, $I_E$=0 | -250 | | V |
| $BV_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= -1mA, $I_B$=0 | -250 | | V |
| $BV_{EBO}$ | Emitter-Base Breakdown Voltage | $I_E$= -10μA, $I_C$=0 | -5 | | V |
| $I_{CBO}$ | Collector Cut-off Current | $V_{CB}$= -150V, $I_E$=0 | | -50 | nA |
| $I_{EBO}$ | Emitter Cut-off Current | $V_{EB}$= -4V, $I_C$=0 | | -50 | nA |
| $h_{FE}$ | * DC Current Gain | $V_{CE}$= -10V, $I_C$= -1mA<br>$V_{CE}$= -10V, $I_C$= -10mA<br>$V_{CE}$= -10V, $I_C$= -30mA<br>$V_{CE}$= -10V, $I_C$= -50mA<br>$V_{CE}$= -10V, $I_C$= -100mA | 35<br>50<br>50<br>45<br>25 | <br><br>300<br>220 | |
| $V_{CE}$ (sat) | Collector-Emitter Saturation Voltage | $I_C$= -10mA, $I_B$= -1mA<br>$I_C$= -20mA, $I_B$= -2mA<br>$I_C$= -30mA, $I_B$= -3mA<br>$I_C$= -50mA, $I_B$= -5mA | | -0.30<br>-0.35<br>-0.50<br>-1 | V<br>V<br>V<br>V |
| $V_{BE}$ (sat) | Base-Emitter Saturation Voltage | $I_C$= -10mA, $I_B$= -1mA<br>$I_C$= -20mA, $I_B$= -2mA<br>$I_C$= -30mA, $I_B$= -3mA | | -0.75<br>-0.85<br>-0.90 | V<br>V<br>V |
| $V_{BE}$ (on) | Base-Emitter On Voltage | $V_{CE}$= -10V, $I_C$= -100mA | | -2 | V |
| $f_T$ | * Current Gain Bandwidth Product | $V_{CE}$= -20V, $I_C$= -10mA, f=20MHz | 40 | 200 | MHz |
| $C_{ob}$ | Output Capacitance | $V_{CB}$= -20V, $I_E$=0, f=1MHz | | 6 | pF |
| $C_{EB}$ | Emitter-Base Capacitance | $V_{EB}$= -0.5V, $I_C$=0, f=1MHz | | 100 | pF |
| $t_{ON}$ | Turn On Time | $V_{BE}$ (off)= -2V, $V_{CC}$= -100V<br>$I_C$= -50mA, $I_{B1}$= -10mA | | 200 | ns |
| $t_{OFF}$ | Turn Off Time | $V_{CC}$= -100V, $I_C$= -50mA<br>$I_{B1}$=$I_{B2}$=10mA | | 3.5 | ns |

* Pulse Test: Pulse Width≤300μs, Duty Cycle≤2%

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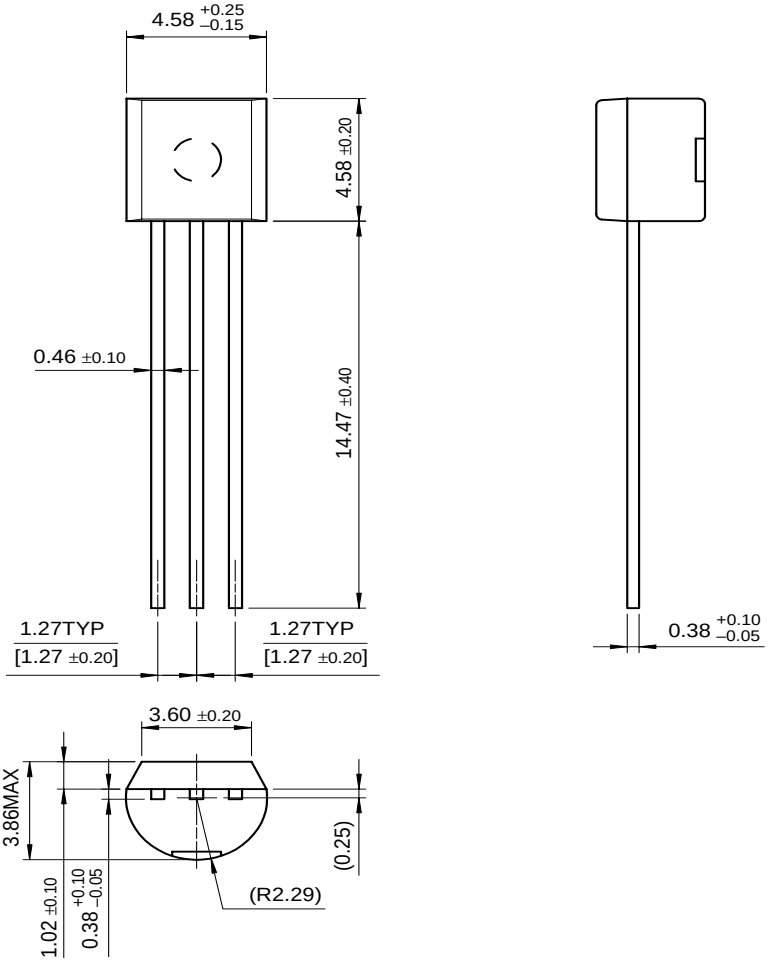
## Package Dimensions

TO-92




Dimensions in Millimeters

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