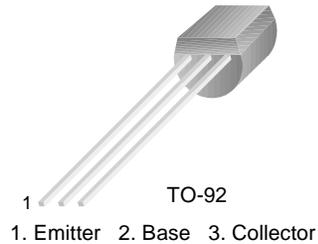


KSP75/76/77

Darlington Transistor

- Collector-Emitter Voltage: V_{CES} = KSP75: 40V
KSP76: 50V
KSP77: 60V
- Collector Power Dissipation: P_C (max)=625mW



PNP Epitaxial Silicon Darlington Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|---------|------------------|
| V_{CES} | Collector-Base Voltage | | |
| | : KSP75 | -40 | V |
| | : KSP76 | -50 | V |
| | : KSP77 | -60 | V |
| V_{EBO} | Emitter-Base Voltage | -10 | V |
| I_C | Collector Current | -500 | mA |
| P_C | Collector Power Dissipation | 625 | mW |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -55~150 | $^\circ\text{C}$ |

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|---------------|--------------------------------------|--|------|------|-------|
| BV_{CEO} | Collector-Base Breakdown Voltage | $I_C = -100\mu\text{A}, I_B = 0$ | | | |
| | : KSP75 | | -40 | | V |
| | : KSP76 | | -50 | | V |
| | : KSP77 | | -60 | | V |
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = -100\mu\text{A}, I_E = 0$ | | | |
| | : KSP75 | | -40 | | V |
| | : KSP76 | | -50 | | V |
| | : KSP77 | | -60 | | V |
| I_{CBO} | Collector Cut-off Current | | | | nA |
| | : KSP75 | $V_{CE} = -30\text{V}, I_E = 0$ | | -100 | nA |
| | : KSP76 | $V_{CE} = -40\text{V}, I_E = 0$ | | -100 | nA |
| | : KSP77 | $V_{CE} = -50\text{V}, I_E = 0$ | | -100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{CE} = -10\text{V}, I_B = 0$ | | -100 | nA |
| I_{CES} | Collector Cut-off Current | | | | nA |
| | : KSP75 | $V_{CE} = -30\text{V}, I_E = 0$ | | -500 | nA |
| | : KSP76 | $V_{CE} = -40\text{V}, I_E = 0$ | | -500 | nA |
| | : KSP77 | $V_{CE} = -50\text{V}, I_E = 0$ | | -500 | nA |
| h_{FE} | DC Current Gain | $V_{CE} = -5\text{V}, I_C = -10\text{mA}$ | 10K | | |
| | | $V_{CE} = -5\text{V}, I_C = -100\text{mA}$ | 10K | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -100\text{mA}, I_B = -0.1\text{mA}$ | | -1.5 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE} = -5\text{V}, I_C = -100\text{mA}$ | | 2 | V |

Typical Characteristics

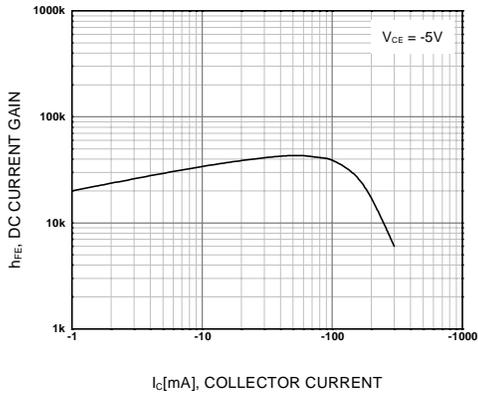


Figure 1. DC current Gain

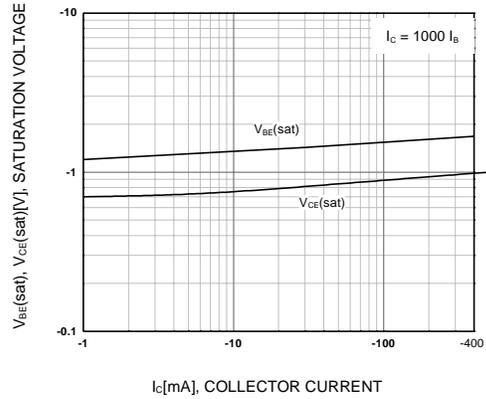


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

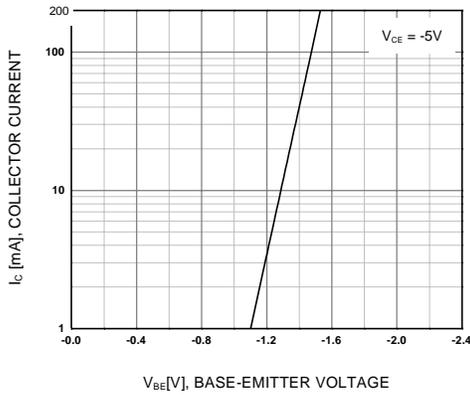


Figure 3. Base-Emitter On Voltage

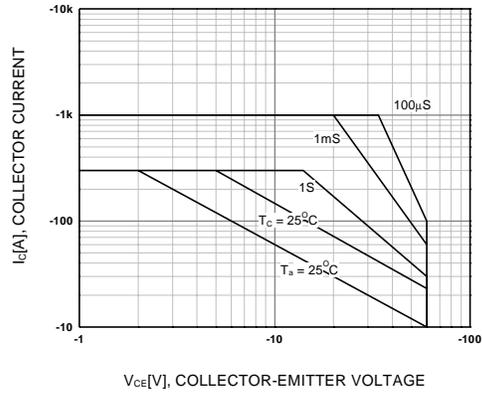
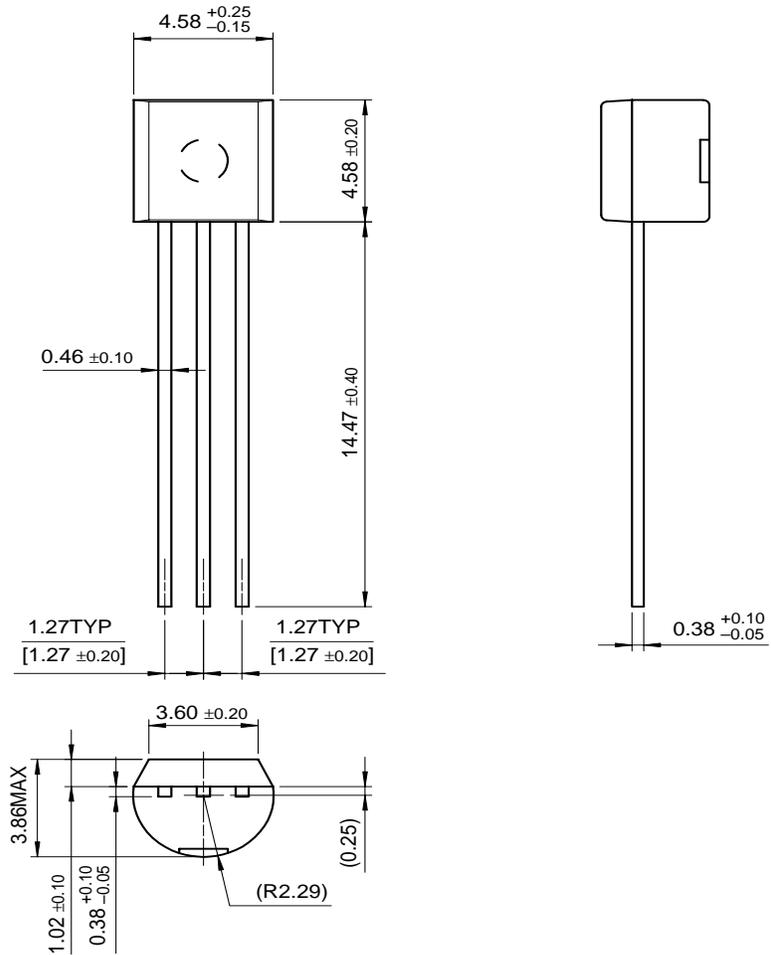


Figure 4. Safe Operating Area

Package Dimensions

KSP75/76/77

TO-92



Dimensions in Millimeters

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