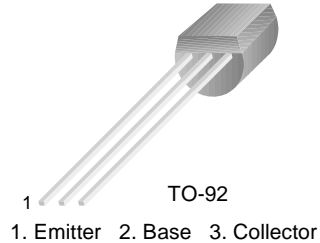


KSP25/26/27

Darlington Transistor

- Collector-Emitter Voltage: V_{CES} =KSP25: 40V
KSP26: 50V
KSP27: 60V
- Collector Power Dissipation: P_C (max) =625mW



NPN Epitaxial Silicon Darlington Transistor

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

| Symbol | Parameter | Value | Units |
|-----------|-----------------------------|---------|------------------|
| V_{CES} | Collector-Emitter Voltage | | |
| | : KSP25 | 40 | V |
| | : KSP26 | 50 | V |
| | : KSP27 | 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_{CES} | Collector-Emitter Breakdown Voltage | $I_C=100\mu\text{A}, I_E=0$ | | | |
| | : KSP25 | | 40 | | V |
| | : KSP26 | | 50 | | V |
| | : KSP27 | | 60 | | V |
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C=100\mu\text{A}, I_E=0$ | | | |
| | : KSP25 | | 40 | | V |
| | : KSP26 | | 50 | | V |
| | : KSP27 | | 60 | | V |
| I_{CBO} | Collector Cut-off Current | | | | |
| | : KSP25 | $V_{CE}=30\text{V}, I_E=0$ | | 100 | nA |
| | : KSP26 | $V_{CE}=40\text{V}, I_E=0$ | | 100 | nA |
| | : KSP27 | $V_{CE}=50\text{V}, I_E=0$ | | 100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=10\text{V}, I_B=0$ | | 100 | 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 | | |
| $V_{CE}(\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C=100\text{mA}, I_B=0.1\text{mA}$ | | 1.5 | V |
| $V_{BE}(\text{on})$ | * Base-Emitter On Voltage | $V_{CE}=5\text{V}, I_C=100\text{mA}$ | | 2 | V |

* Pulse Test: $PW \leq 300\mu\text{s}$, Duty Cycles $\leq 2\%$

Typical Characteristics

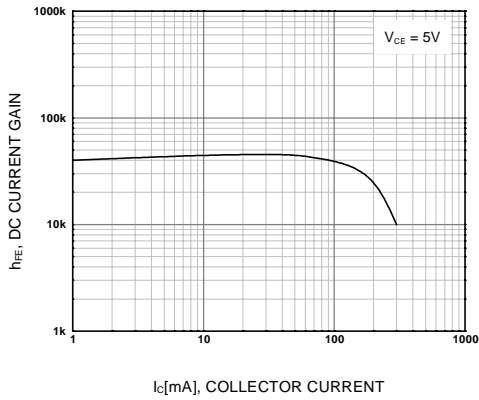


Figure 1. DC current Gain

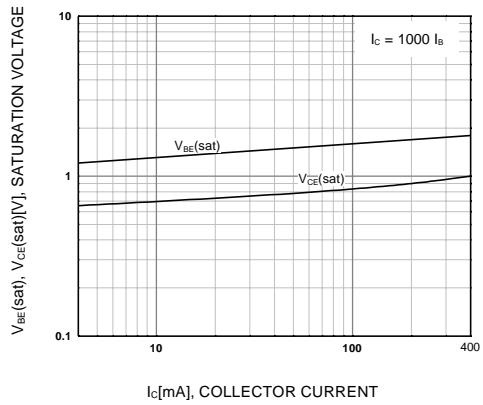


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

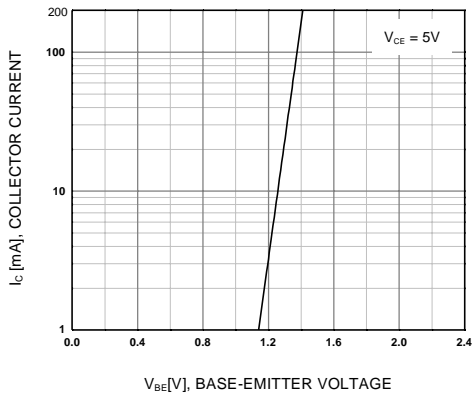


Figure 3. Base-Emitter On Voltage

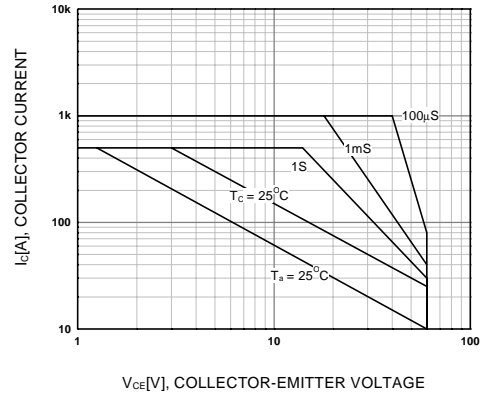
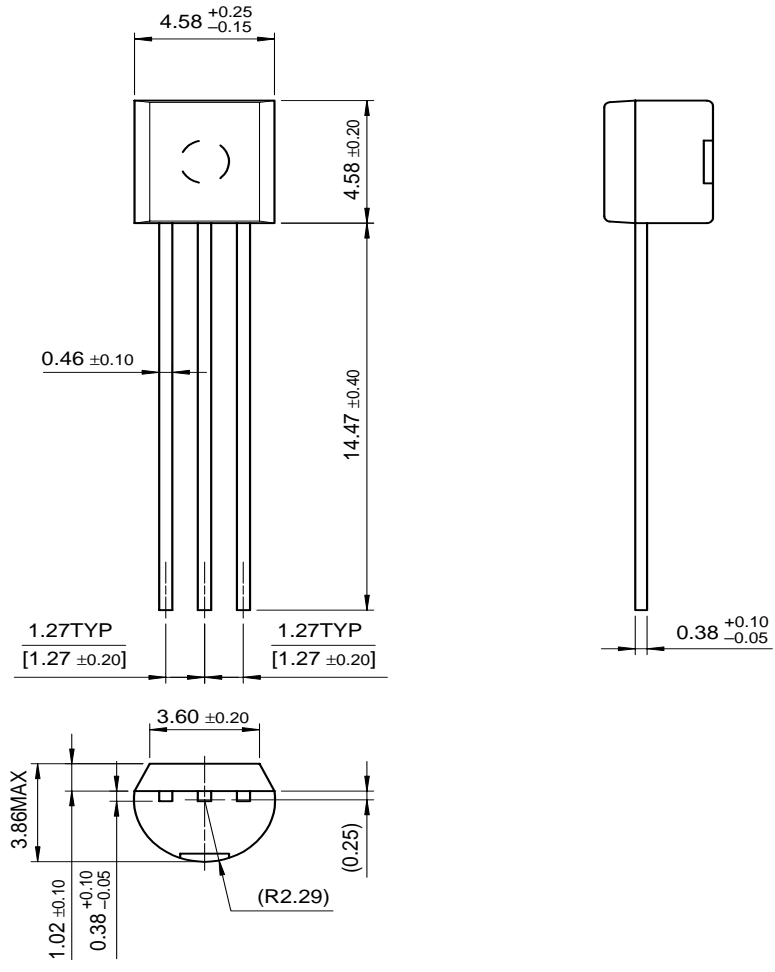


Figure 4. Safe Operating Area

Package Dimensions

KSP25/26/27

TO-92



Dimensions in Millimeters

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