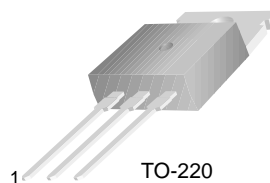


# KSE2955T

## General Purpose and Switching Applications

- DC Current Gain Specified to  $I_C = 10\text{ A}$
- High Current Gain Bandwidth Product :  $f_T = 2\text{MHz}$  (Min.)



TO-220  
1.Base 2.Collector 3.Emitter

## PNP Silicon Transistor

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

| Symbol    | Parameter  | Value      | Units            |
|-----------|--|------------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                           | - 70       | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                        | - 60       | V                |
| $V_{EBO}$ | Emitter-Base Voltage                             | - 5        | V                |
| $I_C$     | Collector Current                                | - 10       | A                |
| $I_B$     | Base Current                                     | - 6        | A                |
| $P_C$     | Collector Dissipation ( $T_C=25^\circ\text{C}$ ) | 75         | W                |
|           | Collector Dissipation ( $T_a=25^\circ\text{C}$ ) | 0.6        | W                |
| $T_J$     | Junction Temperature                             | 150        | $^\circ\text{C}$ |
| $T_{STG}$ | Storage Temperature                              | - 55 ~ 150 | $^\circ\text{C}$ |

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

| Symbol               | Parameter                              | Test Condition   | Min.    | Max. | Units         |
|----------------------|--|--|---------|------|---------------|
| $BV_{CEO}$           | Collector- Emitter Breakdown Voltage   | $I_C = - 200\text{mA}, I_B = 0$  | -60     |      | V             |
| $I_{CEO}$            | Collector Cut-off Current              | $V_{CE} = - 30\text{V}, I_B = 0$   |         | -700 | $\mu\text{A}$ |
| $I_{CEX1}$           | Collector Cut-off Current              | $V_{CE} = - 70\text{V}, V_{BE}(\text{off}) = 1.5\text{V}$                                |         | -1   | mA            |
| $I_{CEX2}$           | Collector Cut-off Current              | $V_{CE} = - 70\text{V}, V_{BE}(\text{off}) = 1.5\text{V}$<br>@ $T_C = 150^\circ\text{C}$ |         | -5   | mA            |
| $I_{EBO}$            | Emitter Cut-off Current                | $V_{EB} = - 5\text{V}, I_C = 0$  |         | -5   | mA            |
| $h_{FE}$             | * DC Current Gain                      | $V_{CE} = - 4\text{V}, I_C = - 4\text{A}$<br>$V_{CE} = - 4\text{V}, I_C = - 10\text{A}$  | 20<br>5 | 100  |               |
| $V_{CE}(\text{sat})$ | * Collector-Emitter Saturation Voltage | $I_C = - 4\text{A}, I_B = - 0.4\text{A}$   |         | -1.1 | V             |
|                      |  | $I_C = - 10\text{A}, I_B = - 3.3\text{A}$  |         | -8   | V             |
| $V_{BE}(\text{on})$  | * Base-Emitter On Voltage              | $V_{CE} = - 4\text{V}, I_C = - 4\text{A}$  |         | -1.8 | V             |
| $f_T$                | Current Gain Bandwidth Product         | $V_{CE} = - 10\text{V}, I_C = - 500\text{mA}$  | 2       |      | MHz           |

\* Pulse test:  $PW \leq 300\mu\text{s}$ , duty cycle  $\leq 2\%$  Pulse

# Typical Characteristic

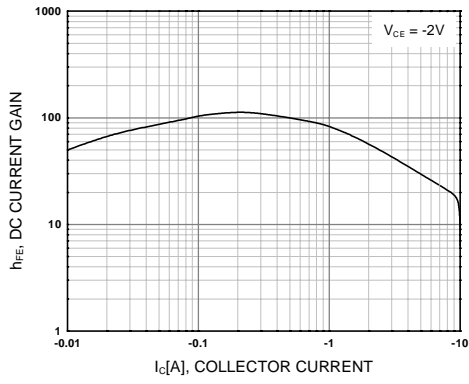


Figure 1. DC current Gain

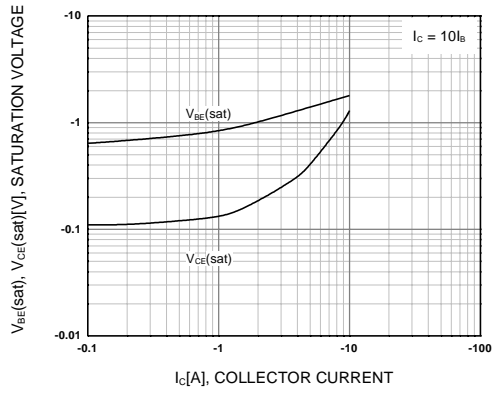


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

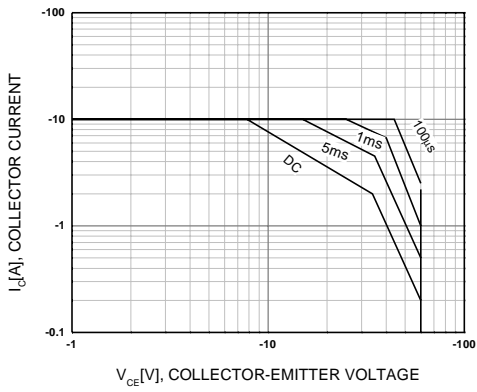


Figure 3. Safe Operating Area

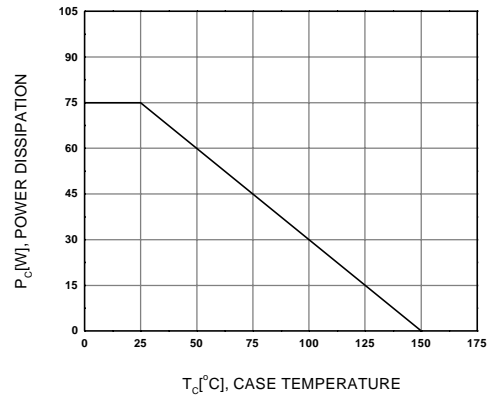


Figure 4. Power Derating

# Package Dimensions

KSE2955T

## TO-220



Dimensions in Millimeters

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|----------------------|---------------|-------------|
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| Bottomless™          | ISOPLANAR™    | SyncFET™    |
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| CROSSVOLT™           | POP™          | UHC™        |
| E <sup>2</sup> CMOS™ | PowerTrench®  | VCX™        |
| FACT™                | QFET™         |             |
| FACT Quiet Series™   | QS™           |             |
| FAST®                | Quiet Series™ |             |
| FASTr™               | SuperSOT™-3   |             |
| GTO™                 | SuperSOT™-6   |             |

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