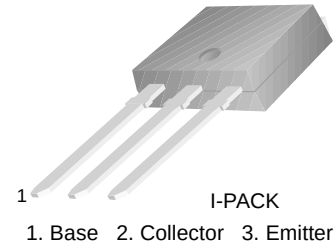


# KSA1241

KSA1241

## Power Amplifier Applications

- Low Collector-Emitter Saturation Voltage
- Complement to KSC3076



## PNP Epitaxial Silicon Transistor

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

| Symbol    | Parameter                                        | Ratings    | Units            |
|-----------|--------------------------------------------------|------------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                           | - 55       | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                        | - 50       | V                |
| $V_{EBO}$ | Emitter-Base Voltage                             | - 5        | V                |
| $I_B$     | Base Current                                     | - 1        | A                |
| $I_C$     | Collector Current                                | - 2        | A                |
| $P_C$     | Collector Dissipation ( $T_a=25^\circ\text{C}$ ) | 1          | W                |
| $P_C$     | Collector Dissipation ( $T_C=25^\circ\text{C}$ ) | 10         | 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

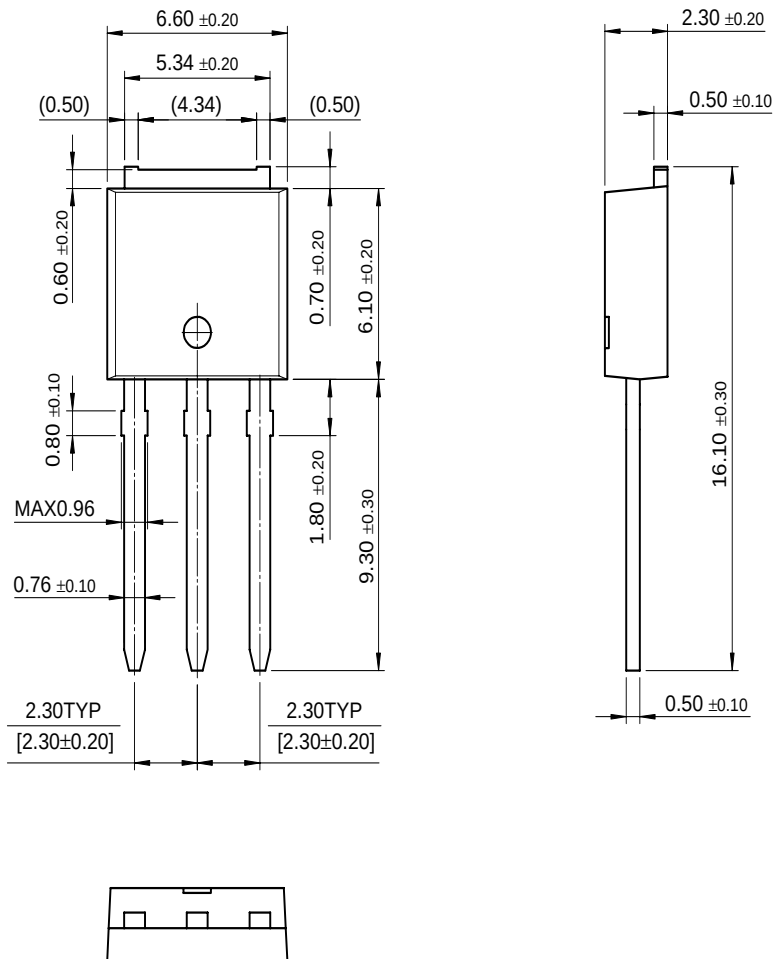
| Symbol                 | Parameter                            | Test Condition                                                                         | Min.     | Typ. | Max.  | Units         |
|------------------------|--------------------------------------|----------------------------------------------------------------------------------------|----------|------|-------|---------------|
| $BV_{CEO}$             | Collector-Emitter Breakdown Voltage  | $I_C = -10\text{mA}, I_B = 0$                                                          | - 50     |      |       | V             |
| $I_{CBO}$              | Collector Cut-off Current            | $V_{CB} = -50\text{V}, I_E = 0$                                                        |          |      | - 1   | $\mu\text{A}$ |
| $I_{EBO}$              | Emitter Cut-off Current              | $V_{EB} = -5\text{V}, I_C = 0$                                                         |          |      | - 1   | $\mu\text{A}$ |
| $h_{FE1}$<br>$h_{FE2}$ | DC Current Gain                      | $V_{CE} = -2\text{V}, I_C = -0.5\text{A}$<br>$V_{CE} = -2\text{V}, I_C = -1.5\text{A}$ | 70<br>40 |      | 240   |               |
| $V_{CE(sat)}$          | Collector-Emitter Saturation Voltage | $I_C = -1\text{A}, I_B = -0.05\text{A}$                                                |          |      | - 0.5 | V             |
| $V_{BE(sat)}$          | Base-Emitter Saturation Voltage      | $I_C = -1\text{A}, I_B = -0.05\text{A}$                                                |          |      | - 1.2 | V             |
| $f_T$                  | Current Gain Bandwidth Product       | $V_{CE} = -2\text{V}, I_C = -0.5\text{A}$                                              |          | 100  |       | MHz           |
| $C_{ob}$               | Output Capacitance                   | $V_{CB} = -10\text{V}, f = 1\text{MHz}$                                                |          | 40   |       | pF            |
| $t_{ON}$               | Turn ON Time                         | $V_{CC} = -30, I_C = -1\text{A}$                                                       |          | 0.1  |       | $\mu\text{s}$ |
| $t_{STG}$              | Storage Time                         | $I_{B1} = -I_{B2} = -0.05\text{A}$                                                     |          | 1    |       | $\mu\text{s}$ |
| $t_F$                  | Fall Time                            | $R_L = 30\Omega$                                                                       |          | 0.1  |       | $\mu\text{s}$ |

## $h_{FE}$ Classification

| Classification | O        | Y         |
|----------------|----------|-----------|
| $h_{FE1}$      | 70 ~ 140 | 120 ~ 240 |

# Package Dimensions

## I-PAK



Dimensions in Millimeters

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