

### **KSA1241**

## **Power Amplifier Applications**

- Low Collector-Emitter Saturation Voltage
- Complement to KSC3076



## **PNP Epitaxial Silicon Transistor**

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

| Symbol           | Parameter                                    | Ratings    | Units |
|------------------|--|------------|-------|
| $V_{CBO}$        | Collector-Base Voltage                       | - 55       | V     |
| $V_{CEO}$        | Collector-Emitter Voltage                    | - 50       | V     |
| V <sub>EBO</sub> | Emitter-Base Voltage                         | - 5        | V     |
| I <sub>B</sub>   | Base Current                                 | - 1        | Α     |
| I <sub>C</sub>   | Collector Current                            | - 2        | Α     |
| P <sub>C</sub>   | Collector Dissipation (T <sub>a</sub> =25°C) | 1          | W     |
| P <sub>C</sub>   | Collector Dissipation (T <sub>C</sub> =25°C) | 10         | W     |
| TJ               | Junction Temperature                         | 150        | °C    |
| T <sub>STG</sub> | Storage Temperature                          | - 55 ~ 150 | °C    |

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

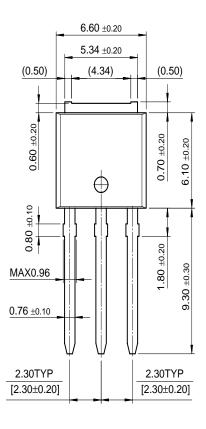
| Symbol                | Parameter                            | Test Condition                    | Min. | Тур. | Max.  | Units |
|-----------------------|--------------------------------------|-----------------------------------|------|------|-------|-------|
| BV <sub>CEO</sub>     | Collector-Emitter Breakdown Voltage  | $I_C = -10 \text{mA}, I_B = 0$    | - 50 |      |       | V     |
| I <sub>CBO</sub>      | Collector Cut-off Current            | $V_{CB} = -50V, I_{E} = 0$        |      |      | - 1   | μΑ    |
| I <sub>EBO</sub>      | Emitter Cut-off Current              | $V_{EB} = -5V, I_{C} = 0$         |      |      | - 1   | μΑ    |
| h <sub>FE1</sub>      | DC Current Gain                      | $V_{CE} = -2V, I_{C} = -0.5A$     | 70   |      | 240   |       |
| $h_{FE2}$             |                                      | $V_{CE} = -2V, I_{C} = -1.5A$     | 40   |      |       |       |
| V <sub>CE</sub> (sat) | Collector-Emitter Saturation Voltage | $I_C = -1A, I_B = -0.05A$         |      |      | - 0.5 | V     |
| V <sub>BE</sub> (sat) | Base-Emitter Saturation Voltage      | $I_C = -1A, I_B = -0.05A$         |      |      | - 1.2 | V     |
| f <sub>T</sub>        | Current Gain Bandwidth Product       | $V_{CE} = -2V, I_{C} = -0.5A$     |      | 100  |       | MHz   |
| C <sub>ob</sub>       | Output Capacitance                   | V <sub>CB</sub> = - 10V, f = 1MHz |      | 40   |       | pF    |
| t <sub>ON</sub>       | Turn ON Time                         | $V_{CC} = -30, I_{C} = -1A$       |      | 0.1  |       | μs    |
| t <sub>STG</sub>      | Storage Time                         | $I_{B1} = -I_{B2} = -0.05A$       |      | 1    |       | μs    |
| t <sub>F</sub>        | Fall Time                            | $R_L = 30\Omega$                  |      | 0.1  |       | μs    |

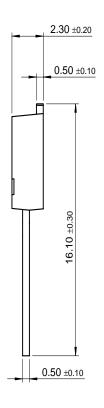
## **h**<sub>FE</sub> Classification

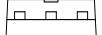
| Classification   | 0        | Y         |  |
|------------------|----------|-----------|--|
| h <sub>FE1</sub> | 70 ~ 140 | 120 ~ 240 |  |

# **Package Demensions**

# I-PAK







Dimensions in Millimeters

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|--------------------------|---------------------------|---|
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