

KSA931

PNP EPITAXIAL SILICON TRANSISTOR

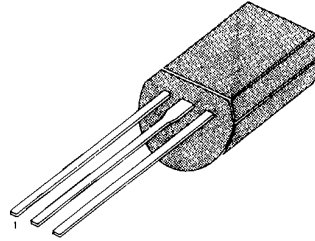
LOW FREQUENCY AMPLIFIER MEDIUM SPEED SWITCHING

- Complement to KSC2331
- Collector-Base Voltage $V_{CBO} = -80V$
- Collector Dissipation $P_C = 1W$

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|-----------|------------|------------|
| Collector-Base Voltage | V_{CBO} | -80 | V |
| Collector-Emitter Voltage | V_{CEO} | -60 | V |
| Emitter-Base Voltage | V_{EBO} | -8 | V |
| Collector Current | I_C | -700 | mA |
| Collector Dissipation | P_C | 1 | W |
| Junction Temperature | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{STG} | -55 ~ +150 | $^\circ C$ |

TO-92L



1. Emitter 2. Collector 3. Base

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$)

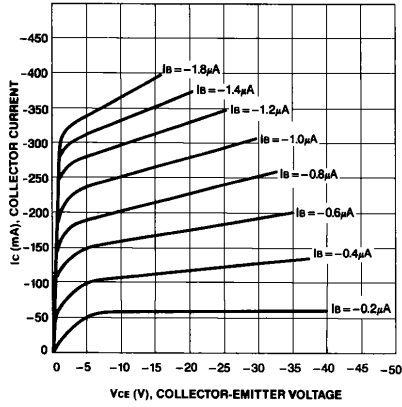
| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|------|------|---------|
| Collector-Base Breakdown Voltage | BV_{CBO} | $I_C = -100\mu A, I_E = 0$ | -80 | | | V |
| Collector-Emitter Breakdown Voltage | BV_{CEO} | $I_C = -10mA, I_B = 0$ | -60 | | | V |
| Emitter-Base Breakdown Voltage | BV_{EBO} | $I_E = -100\mu A, I_C = 0$ | -8 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB} = -60V, I_E = 0$ | | | -0.1 | μA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB} = -5V, I_C = 0$ | | | -0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = -2V, I_C = -50mA^*$ | 40 | | 240 | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = -500mA, I_B = -50mA^*$ | | -0.3 | -0.7 | V |
| Base-Emitter Saturation Voltage | $V_{BE(on)}$ | $I_C = -500mA, I_B = -50mA^*$ | | -0.9 | -1.2 | V |
| Output Capacitance | f_T | $V_{CE} = -10V, I_C = -50mA$ | | 100 | | MHz |
| | C_{OB} | $V_{CB} = -10V, I_E = 0$ $f = 1MHz$ | | 13 | | pF |

* Pulse Test: $PW_{350\mu s}$, Duty cycle $\leq 2\%$

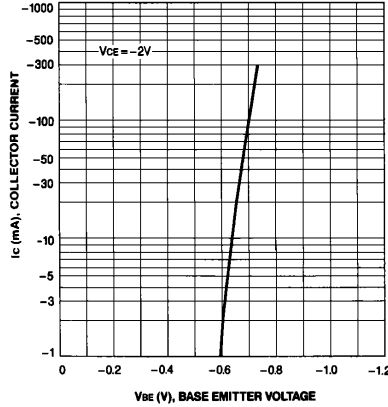
h_{FE} CLASSIFICATION

| Classification | R | O | Y |
|----------------|-------|--------|---------|
| h_{FE} | 40-80 | 70-140 | 120-240 |

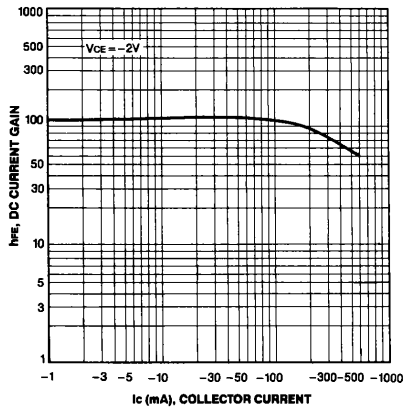
STATIC CHARACTERISTIC



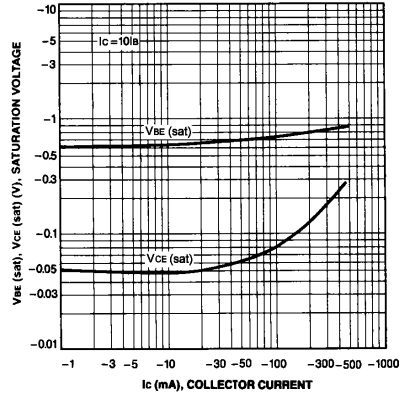
BASE-EMITTER ON VOLTAGE



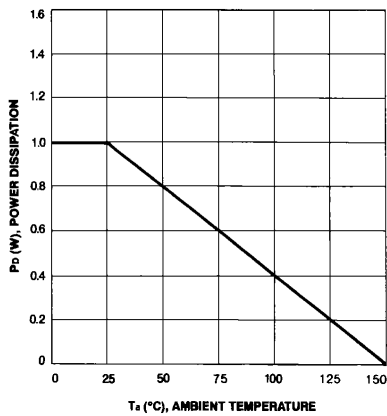
DC CURRENT GAIN



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



POWER DERATING



SAFE OPERATING AREA

