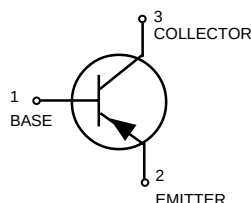
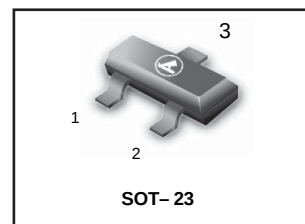


# General Purpose Transistors

PNP Silicon



**L2SA1037AK\*LT1**



## MAXIMUM RATINGS

| Rating                         | Symbol    | Value      | Unit             |
|--------------------------------|-----------|------------|------------------|
| Collector-Emitter Voltage      | $V_{CEO}$ | -50        | V                |
| Collector-Base Voltage         | $V_{CBO}$ | -60        | V                |
| Emitter-Base Voltage           | $V_{EBO}$ | -6.0       | V                |
| Collector Current — Continuous | $I_C$     | -150       | mA <sub>dc</sub> |
| Collector power dissipation    | $P_C$     | 0.2        | W                |
| Junction temperature           | $T_j$     | 150        | °C               |
| Storage temperature            | $T_{stg}$ | -55 ~ +150 | °C               |

## DEVICE MARKING

L2SA1037AKQLT1 =FQ L2SA1037AKSLT1 =G3F L2SA1037AKRLT1 =FR

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

| Characteristic                                                                          | Symbol        | Min  | Typ | Max   | Unit          |
|-----------------------------------------------------------------------------------------|---------------|------|-----|-------|---------------|
| Collector-Emitter Breakdown Voltage<br>( $I_C = -1\text{ mA}$ )                         | $V_{(BR)CEO}$ | - 50 | —   | —     | V             |
| Emitter-Base Breakdown Voltage<br>( $I_E = -50\text{ }\mu\text{A}$ )                    | $V_{(BR)EBO}$ | - 6  | —   | —     | V             |
| Collector-Base Breakdown Voltage<br>( $I_C = -50\text{ }\mu\text{A}$ )                  | $V_{(BR)CBO}$ | - 60 | —   | —     | V             |
| Collector Cutoff Current<br>( $V_{CB} = -60\text{ V}$ )                                 | $I_{CBO}$     | —    | —   | - 0.1 | $\mu\text{A}$ |
| Emitter cutoff current<br>( $V_{EB} = -6\text{ V}$ )                                    | $I_{EBO}$     | —    | —   | - 0.1 | $\mu\text{A}$ |
| Collector-emitter saturation voltage<br>( $I_C / I_B = -50\text{ mA} / -5\text{ mA}$ )  | $V_{CE(sat)}$ | —    | —   | -0.5  | V             |
| DC current transfer ratio<br>( $V_{CE} = -6\text{ V}, I_C = -1\text{ mA}$ )             | $h_{FE}$      | 120  | —   | 560   | —             |
| Transition frequency<br>( $V_{CE} = -12\text{ V}, I_E = 2\text{ mA}, f=30\text{ MHz}$ ) | $f_T$         | —    | 140 | —     | MHz           |
| Output capacitance<br>( $V_{CB} = -12\text{ V}, I_E = 0\text{ A}, f=1\text{ MHz}$ )     | $C_{ob}$      | —    | 4.0 | 5.0   | pF            |

$h_{FE}$  values are classified as follows:

| *        | Q       | R       | S       |
|----------|---------|---------|---------|
| $h_{FE}$ | 120~270 | 180~390 | 270~560 |

## L2SA1037AK\*LT1

Fig.1 Grounded emitter propagation characteristics

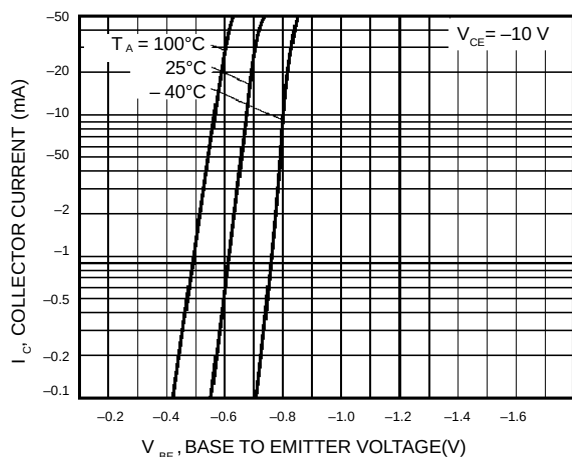


Fig.2 Grounded emitter output characteristics(I)

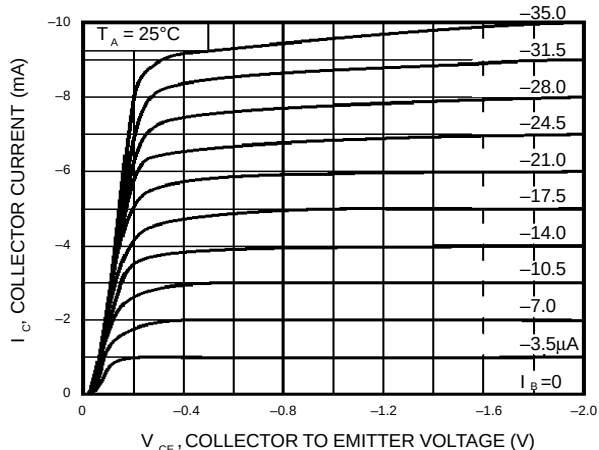


Fig.3 Grounded emitter output characteristics(II)

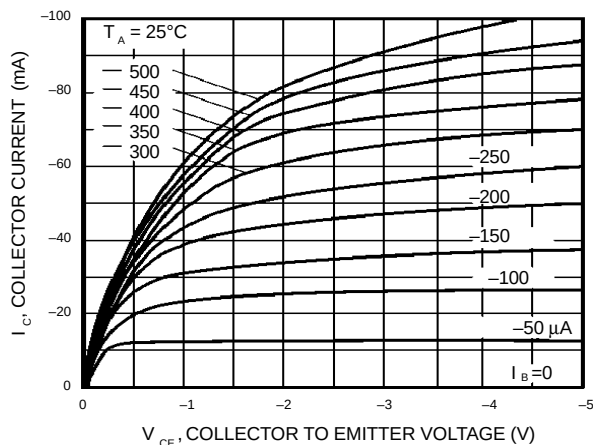


Fig.4 DC current gain vs. collector current (I)

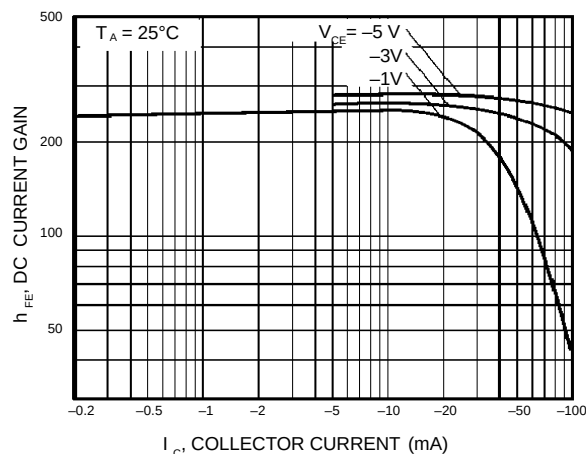


Fig.5 DC current gain vs. collector current (II)

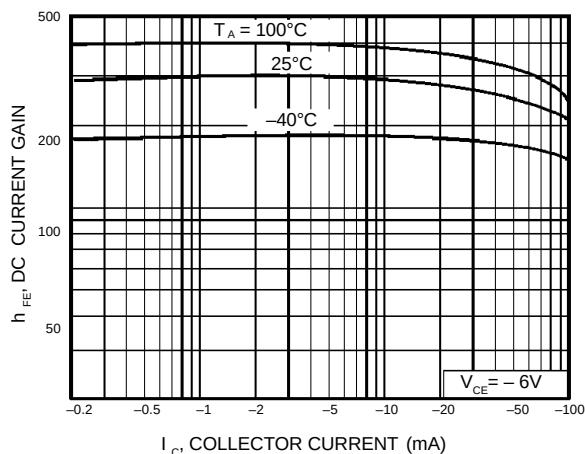
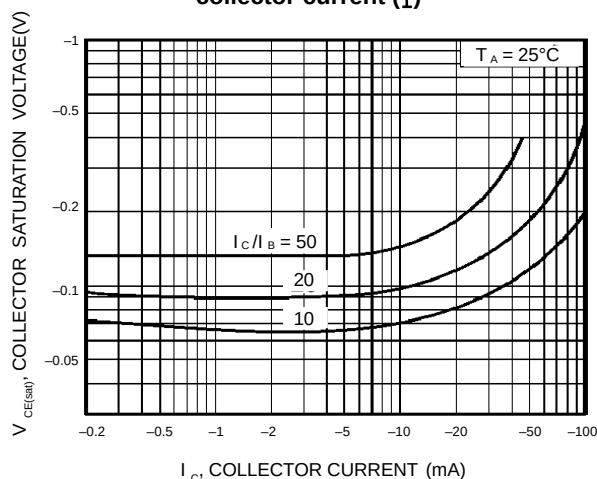
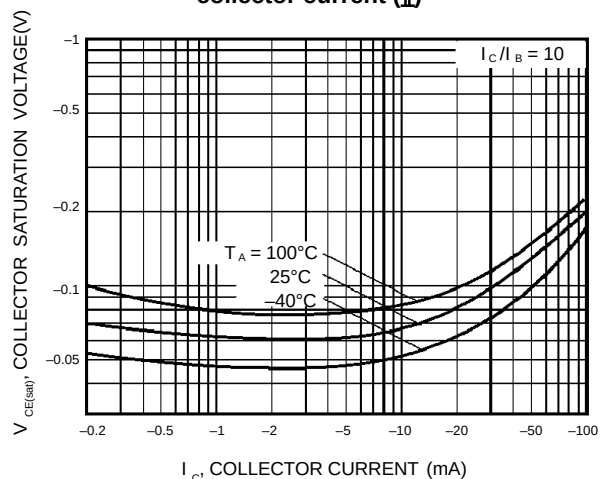


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

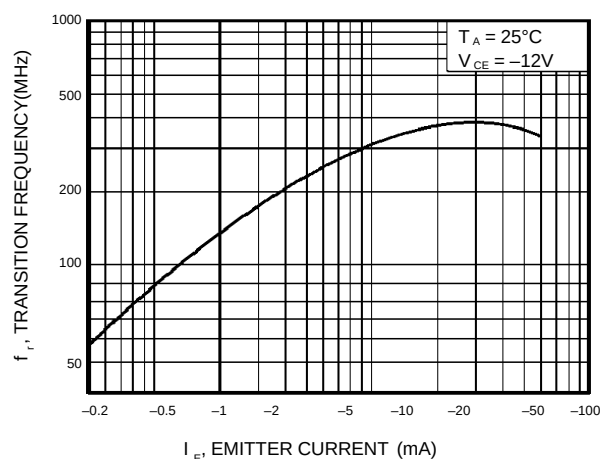


# L2SA1037AK\*LT1

**Fig.7 Collector-emitter saturation voltage vs. collector current (II)**



**Fig.8 Gain bandwidth product vs. emitter current**



**Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage**

