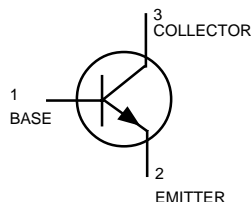
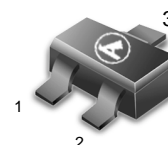


General Purpose Transistors

NPN Silicon



2SC2412K*LT1



CASE 318-07, STYLE 6
SOT-23 (TO-236AB)

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} | 7.0 | V |
| Collector Current — Continuous | I_C | 150 | mAdc |
| Collector power dissipation | P_C | 0.2 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | -55 ~ +150 | °C |

DEVICE MARKING

2SC2412K*LT1 =G1F

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

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|---------------|-----|-----|-----|---------------|
| Collector–Emitter Breakdown Voltage ($I_C = 1 \text{ mA}$) | $V_{(BR)CEO}$ | 50 | — | — | V |
| Emitter–Base Breakdown Voltage ($I_E = 50 \mu\text{A}$) | $V_{(BR)EBO}$ | 7 | — | — | V |
| Collector–Base Breakdown Voltage ($I_C = 50 \mu\text{A}$) | $V_{(BR)CBO}$ | 60 | — | — | V |
| Collector Cutoff Current ($V_{CB} = 60 \text{ V}$) | I_{CBO} | — | — | 0.1 | μA |
| Emitter cutoff current ($V_{EB} = 7 \text{ V}$) | I_{EBO} | — | — | 0.1 | μA |
| Collector-emitter saturation voltage ($I_C / I_B = 50 \text{ mA} / 5 \text{ mA}$) | $V_{CE(sat)}$ | — | — | 0.4 | V |
| DC current transfer ratio ($V_{CE} = 6 \text{ V}, I_C = 1 \text{ mA}$) | h_{FE} | 120 | — | 560 | — |
| Transition frequency ($V_{CE} = 12 \text{ V}, I_E = -2 \text{ mA}, f = 30 \text{ MHz}$) | f_T | — | 180 | — | MHz |
| Output capacitance ($V_{CB} = 12 \text{ V}, I_E = 0 \text{ A}, f = 1 \text{ MHz}$) | C_{ob} | — | 2.0 | 3.5 | pF |

h_{FE} values are classified as follows:

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

2SC2412K*LT1

Fig.1 Grounded emitter propagation characteristics

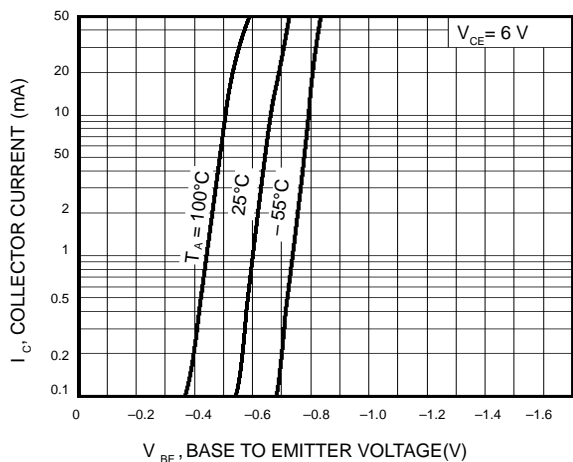


Fig.2 Grounded emitter output characteristics(I)

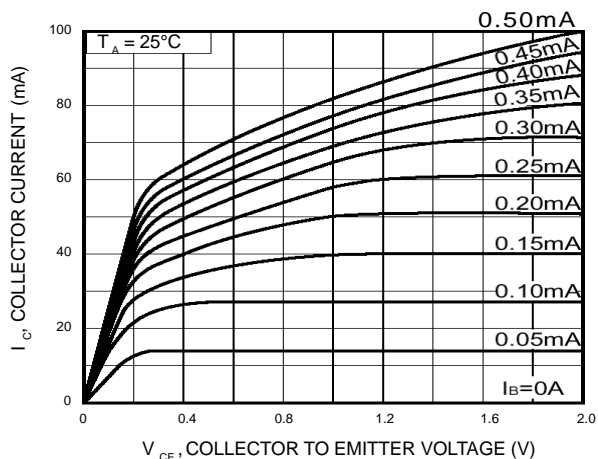


Fig.3 Grounded emitter output characteristics(II)

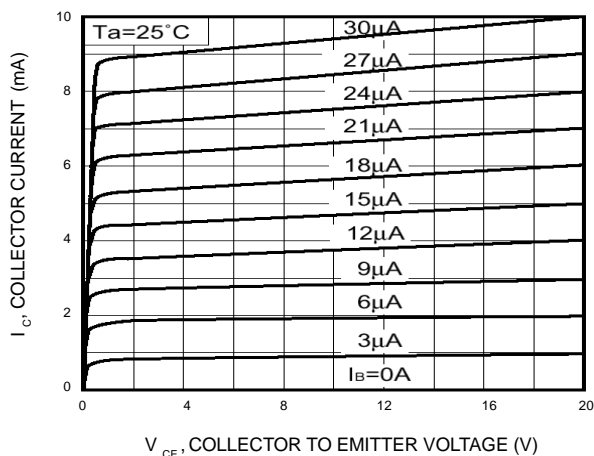


Fig.4 DC current gain vs. collector current (I)

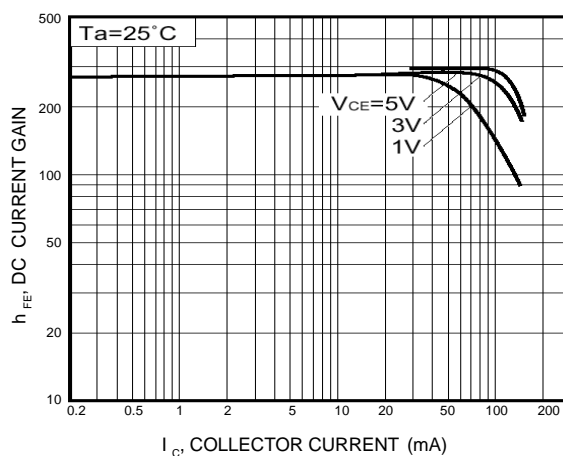


Fig.5 DC current gain vs. collector current (II)

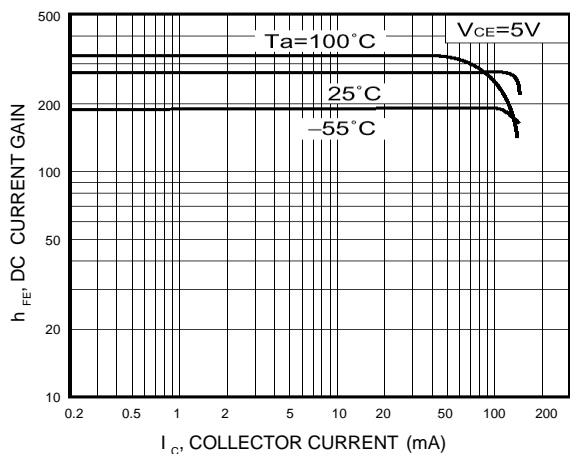
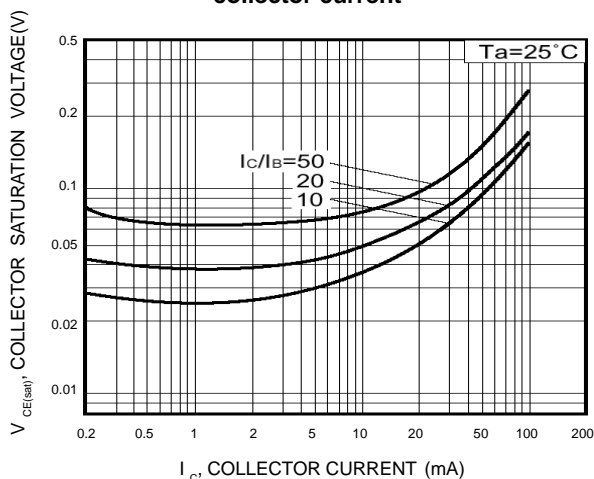


Fig.6 Collector-emitter saturation voltage vs. collector current



2S2412K*LT1

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

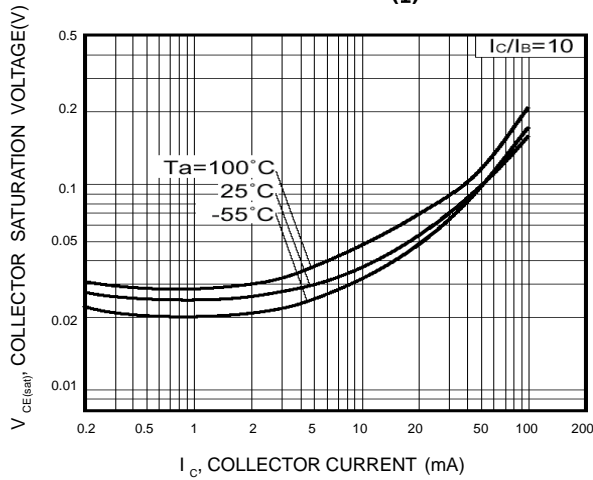


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

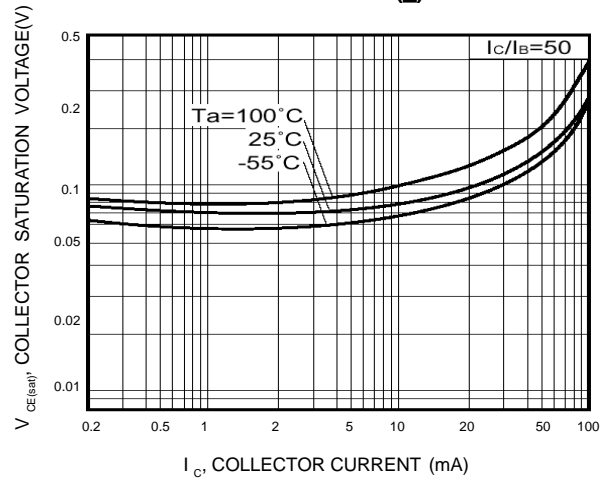


Fig.9 Gain bandwidth product vs. emitter current

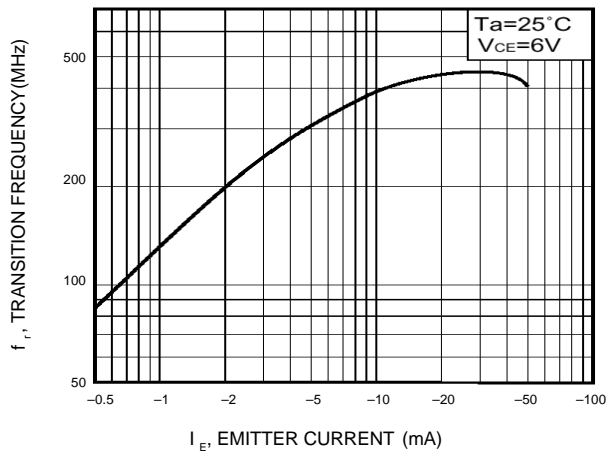


Fig.10 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

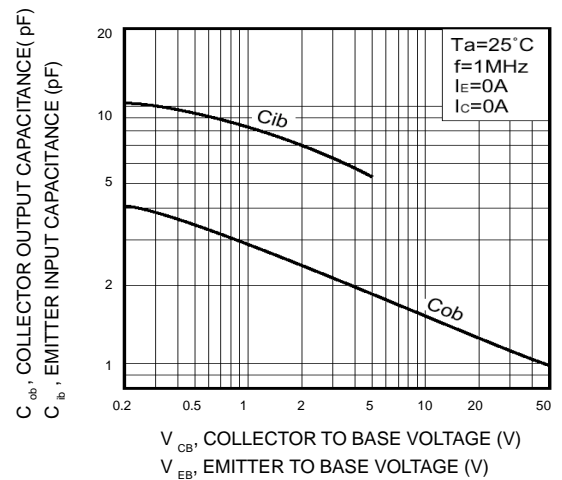
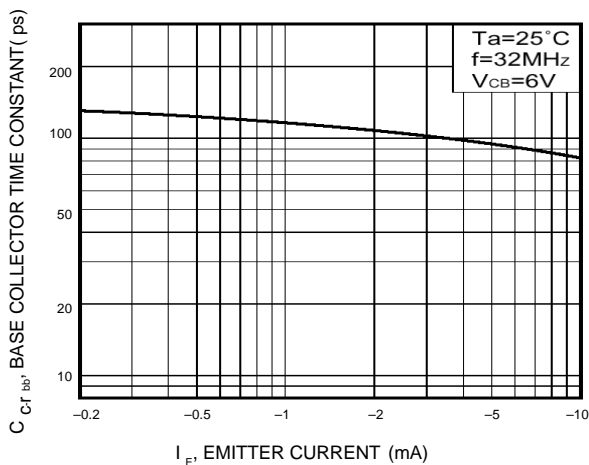


Fig.11 Base-collector time constant vs. emitter current





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