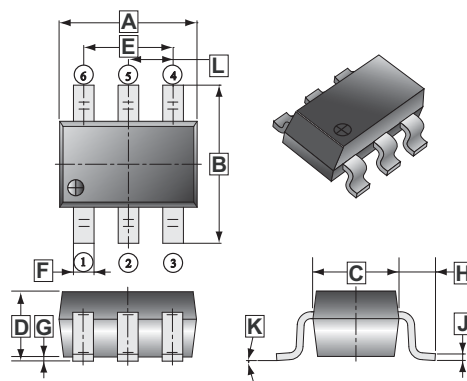


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

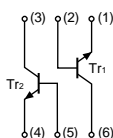
FEATURES

- Two 2SC2412K chips in a package.
- Mounting possible with SOT-363 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.

SOT-363



EQUIVALENT CIRCUIT



MARKING : X1

| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 2.00 | 2.20 | G | 0.100 REF. | |
| B | 2.15 | 2.45 | H | 0.525 REF. | |
| C | 1.15 | 1.35 | J | 0.08 | 0.15 |
| D | 0.90 | 1.10 | K | 8° | |
| E | 1.20 | 1.40 | L | 0.650 TYP. | |
| F | 0.15 | 0.35 | | | |

ABSOLUTE MAXIMUM RATINGS at Ta = 25°C

| Parameter | Symbol | Value | Unit |
|--------------------------------|----------------|----------------|------|
| Collector-base voltage | $V_{(BR)CBO}$ | 60 | V |
| Collector-emitter voltage | $V_{(BR)CEO}$ | 50 | V |
| Emitter-base voltage | $V_{(BR)EBO}$ | 7 | V |
| Collector current | I_C | 150 | mA |
| Collector Power dissipation | P_C | 150 | mW |
| Junction & Storage temperature | T_J, T_{STG} | 150, -55 ~ 150 | °C |

ABSOLUTE MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS at Ta = 25°C

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|--------------------------------------|---------------|------|------|------|---------|---------------------------------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | 60 | - | - | V | $I_C = 50\mu A, I_E = 0$ |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | 50 | - | - | | $I_C = 1mA, I_B = 0$ |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | 7 | - | - | V | $I_E = 50\mu A, I_C = 0$ |
| Collector cut-off current | I_{CBO} | - | - | 0.1 | μA | $V_{CB} = 60V, I_E = 0$ |
| Emitter cut-off current | I_{EBO} | - | - | 0.1 | μA | $V_{EB} = 7V, I_C = 0$ |
| DC current gain | h_{FE} | 120 | - | 560 | | $V_{CE} = 6V, I_C = 1mA$ |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | - | - | 0.4 | V | $I_C = 50mA, I_B = 5mA$ |
| Transition frequency | f_T | - | 180 | - | MHz | $V_{CE} = 12V, I_C = 2mA, f = 100MHz$ |
| Collector output capacitance | C_{ob} | - | 2.0 | 3.5 | pF | $V_{CB} = 12V, I_E = 0, f = 1MHz$ |

CHARACTERISTICS CURVE

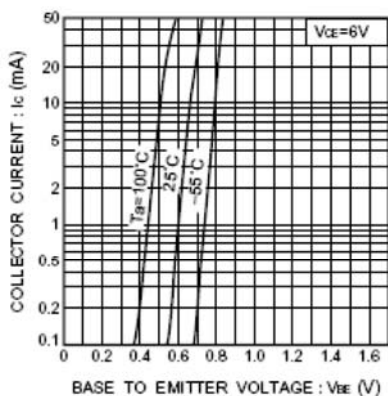


Fig.1 Grounded emitter propagation characteristics

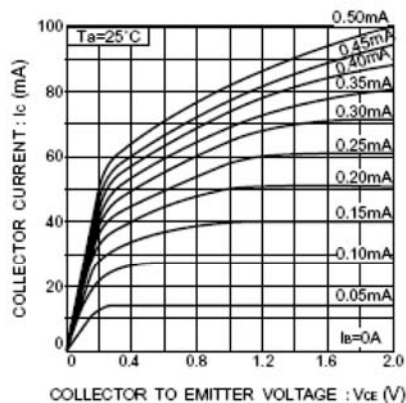


Fig.2 Grounded emitter output characteristics (I)

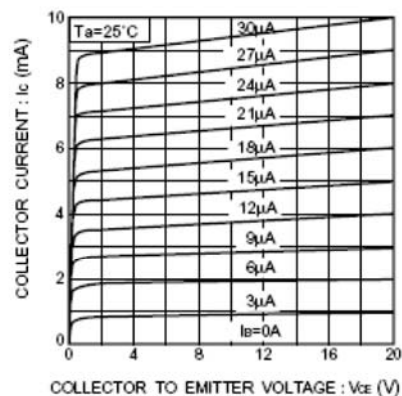


Fig.3 Grounded emitter output characteristics (II)

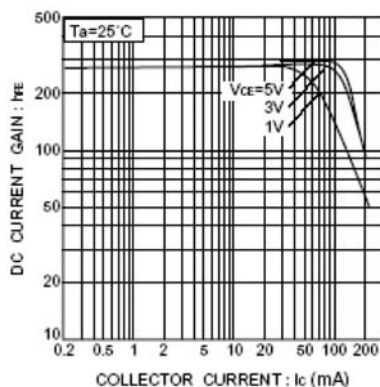


Fig.4 DC current gain vs. collector current (I)

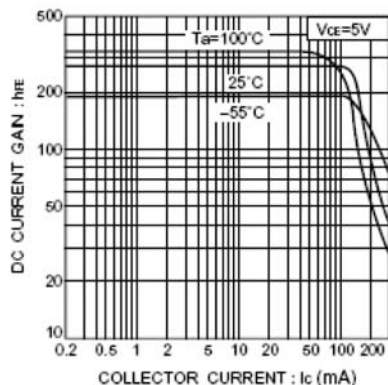


Fig.5 DC current gain vs. collector current (II)

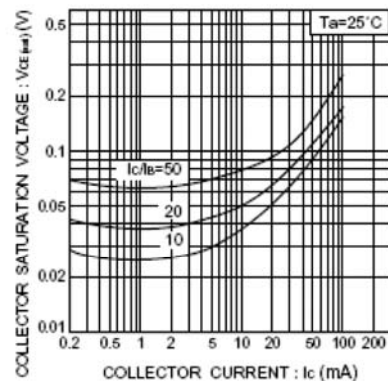


Fig.6 Collector-emitter saturation voltage vs. collector current

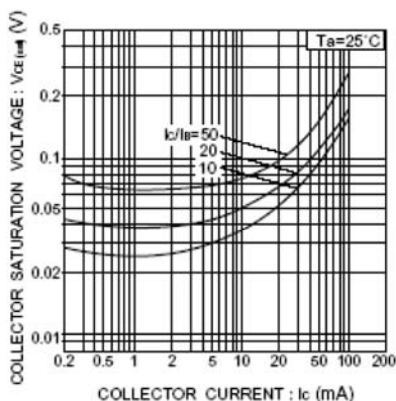


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

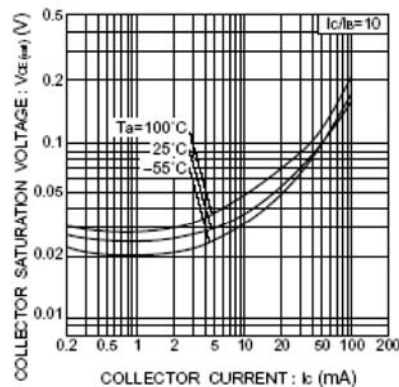


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

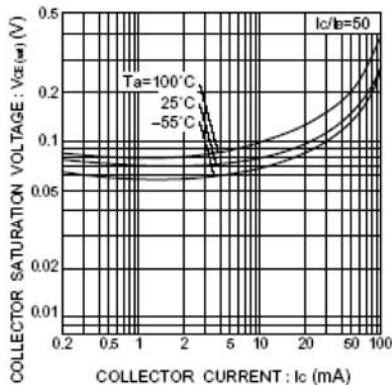


Fig.9 Collector-emitter saturation voltage vs. collector current (III)

CHARACTERISTICS CURVE

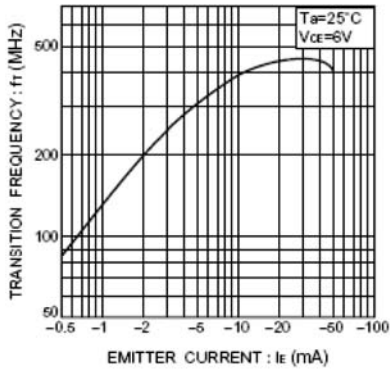


Fig.10 Gain bandwidth product vs. emitter current

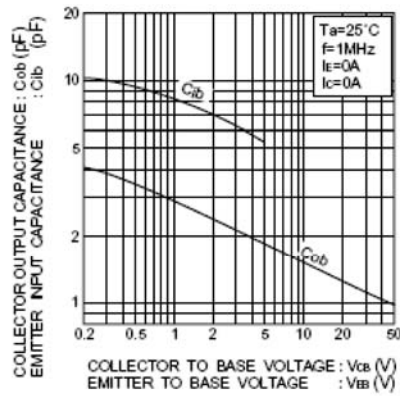


Fig.11 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

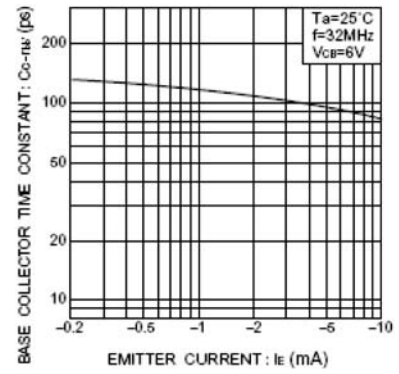


Fig.12 Base-collector time constant vs. emitter current