



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT
Dual Silicon Transistor**

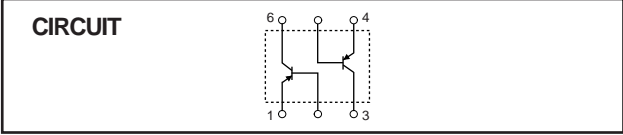
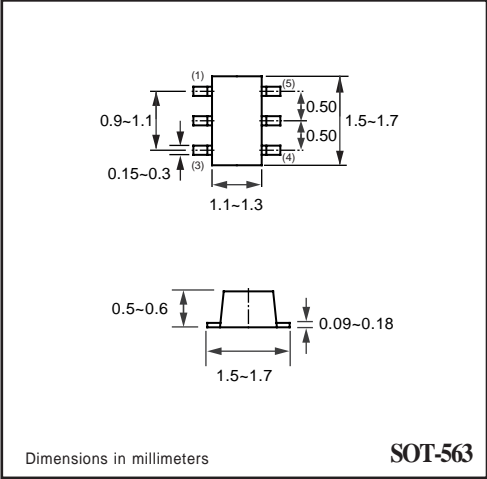
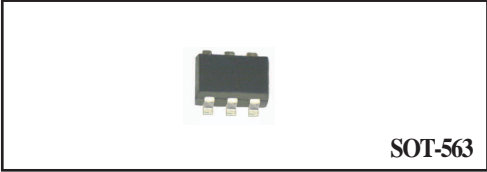
VOLTAGE 12 Volts CURRENT 0.5 Ampere

CHEMT18GP

APPLICATION
* Small Signal Amplifier .

FEATURE
* Small surface mounting type. (SOT-563)
* Low saturation voltage $V_{CE(sat)} = -0.25V(\text{max.})(I_c = 200mA)$
* Low cob. $C_{ob} = 6.5pF(\text{Typ.})$
* $P_c = 150mW$ (Total), 120mW per element must not be exceeded.
* High saturation current capability.
* Two the 2SA2018 in one package.
* PNP Silicon Transistor

MARKING
* T8



2SA2018 LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

| SYMBOL | PARAMETER | CONDITIONS | MIN. | MAX. | UNIT |
|-----------|---------------------------|------------|------|-------|------|
| V_{CBO} | Collector-base voltage | | - | -15 | V |
| V_{CEO} | Collector-emitter voltage | | - | -12 | V |
| V_{EBO} | Emitter-base voltage | | - | -6 | V |
| I_C | DC Output current | | - | -500 | mA |
| I_{CP} | | NOTE.1 | - | -1000 | |
| P_c | power dissipation | NOTE.2 | - | 150 | mW |
| T_{STG} | Storage temperature | | -55 | +150 | °C |
| T_J | Junction temperature | | - | 150 | °C |

Note

1. Single Pulse $P_w = 1ms$
2. 120mW per element must not be exceeded
Each terminal mounted on a recommended land.

RATING CHARACTERISTIC CURVES (CHEMT18GP)

2SA2018 CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

| SYMBOL | PARAMETER | CONDITIONS | MIN. | TYP. | MAX. | UNIT |
|---------------|--------------------------------------|---|------|------|------|------|
| BV_{CEO} | Collector-emitter breakdown voltage | $I_c = -1\text{mA}$ | -12 | – | – | V |
| BV_{CBO} | Collector-base breakdown voltage | $I_c = -10\mu\text{A}$ | -15 | – | – | V |
| BV_{EBO} | Emitter-base breakdown voltage | $I_E = -10\mu\text{A}$ | -6 | – | – | V |
| I_{CBO} | Collector cut-off current | $V_{CB} = -15\text{V}$ | – | – | -100 | nA |
| I_{EBO} | Emitter cut-off current | $V_{EB} = -6\text{V}$ | – | – | -100 | nA |
| h_{FE} | DC current gain | $V_{CE} = -2\text{V}, I_c = -10\text{mA}$ | 270 | – | 680 | – |
| $V_{CE(sat)}$ | Collector-emitter saturation voltage | $I_c = -200\text{mA}, I_B = -10\text{mA}$ | – | -100 | -250 | mV |
| C_{ob} | Collector output capacitance | $V_{CB} = -10\text{V}, I_E = 0\text{mA}, f = 1\text{MHz}$ | – | 6.5 | – | pF |
| f_T | Transition frequency | $V_{CE} = -2\text{V}, I_E = 10\text{mA}, f = 100\text{MHz}$ | – | 260 | – | MHz |

Note

1. Pulse test: $t_p \leq 300\mu\text{s}$; $\delta \leq 0.02$.

RATING CHARACTERISTIC CURVES (CHEMT18GP)

2SA2018 Typical Electrical Characteristics

Fig.1 Ground emitter propagation characteristics

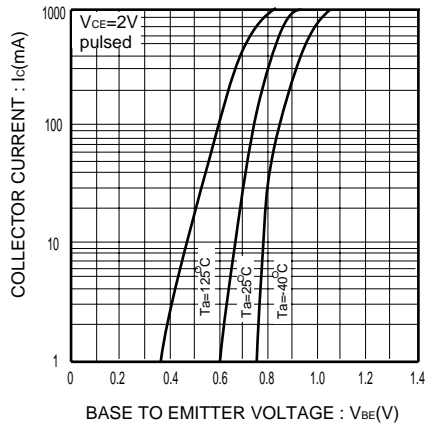


Fig.2 DC current gain vs. collector current

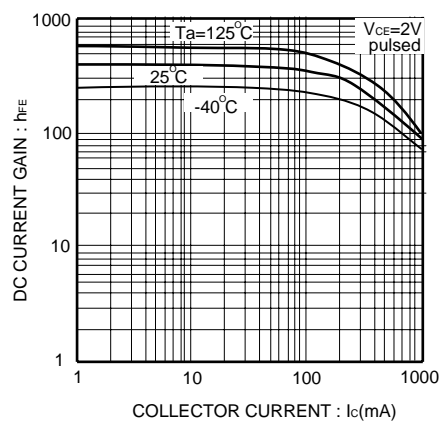


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

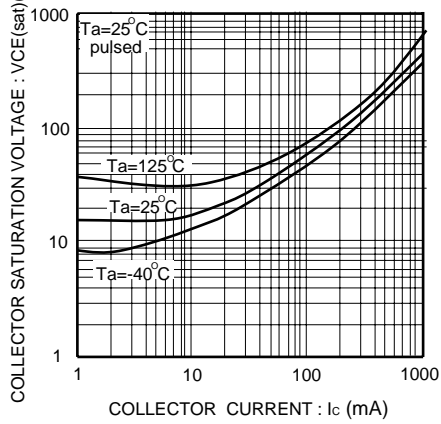
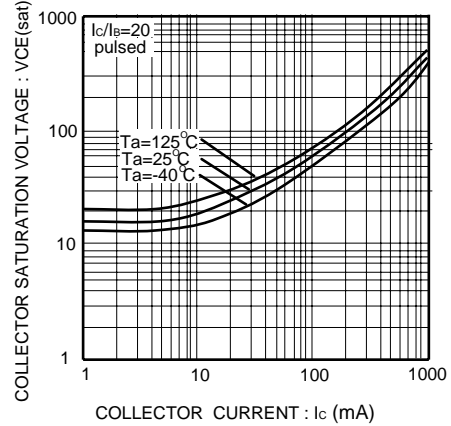


Fig.4 Collector-emitter saturation voltage vs. collector current (II)



RATING CHARACTERISTIC CURVES (CHEMT18GP)

2SA2018 Typical Electrical Characteristics

Fig.5 Base-emitter saturation voltage vs. collector current

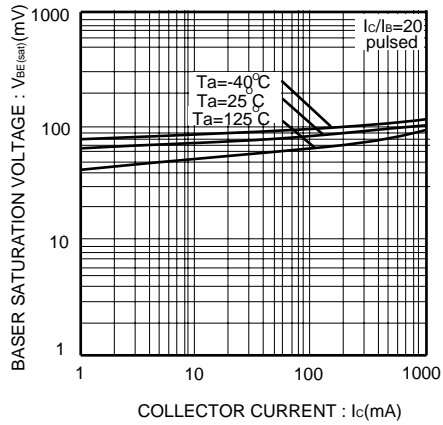


Fig.6 Gain bandwidth product vs. collector current

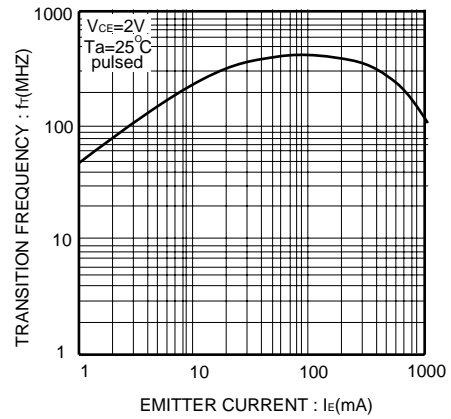


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

