



CHENMKO ENTERPRISE CO.,LTD

**SURFACE MOUNT
NPN Silicon Transistor**

VOLTAGE 25Volts CURRENT 0.5 Ampere

CHT9013GP

Halogens free devices

APPLICATION

- * Telephony and professional communication equipment.
- * Other switching applications.

FEATURE

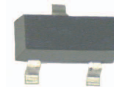
- * Surface mount package. (SOT-23)
- * Suitable for high packing density.

CONSTRUCTION

*NPN Silicon Transistor

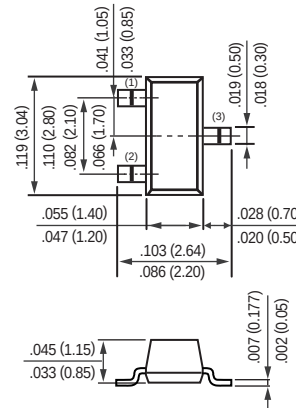
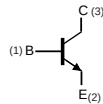
MARKING

- * HFE(L):J3
- * HFE(H):J2
- * HFE(J):J1



SOT-23

CIRCUIT



Dimensions in millimeters

SOT-23

LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CB0}	collector-base voltage	open emitter	—	40	V
V _{CEO}	collector-emitter voltage	open base	—	25	V
V _{EB0}	emitter-base voltage	open collector	—	5	V
I _C	collector current (DC)		—	500	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	—	300	mW
T _{stg}	storage temperature		–55	+150	°C
T _j	junction temperature		—	150	°C
T _{amb}	operating ambient temperature		–55	+150	°C

Note

1. Transistor mounted on an FR4 printed-circuit board.

RATING CHARACTERISTIC CURVES (CHT9013GP)

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$V_{CB} = 40V, I_E = 0$	–	0.1	μA
I_{CEO}	collector cut-off current	$V_{CE} = 20V, I_B = 0$	–	0.1	μA
I_{EBO}	emitter cut-off current	$V_{EB} = 5V, I_C = 0$	–	0.1	μA
h_{FE}	DC current gain	$I_C = 50\text{ mA}; V_{CE} = 1V$ $I_C = 500\text{ mA}; V_{CE} = 1V$	120 40	400 –	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	–	0.6	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	–	1.2	V
f_T	transition frequency	$I_C = 20\text{ mA}; V_{CE} = 6\text{ V};$ $f = 30\text{ MHz}$	150	–	MHz

Note :

1. Pulse test: $t_p \leq 300\mu\text{Sec}$; $\delta \leq 0.02$.
2. h_{FE} : Classification L: 120 to 200, H: 200 to 350, J: 300 to 400

RATING CHARACTERISTIC CURVES (CHT9013GP)

Typical Electrical Characteristics

FIG. 1 - Static Characteristic

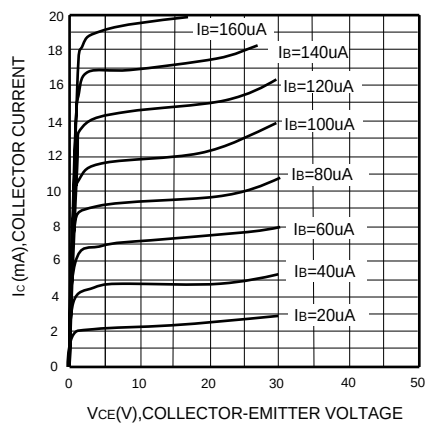


FIG. 2 - DC collector current

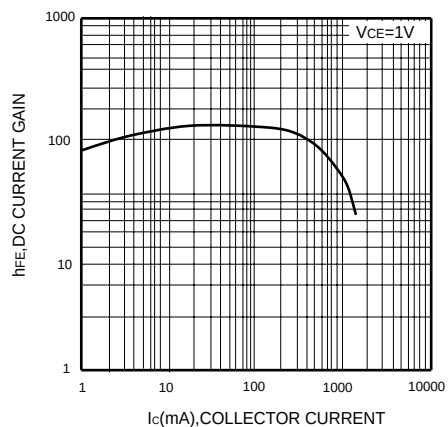


FIG. 3 - Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

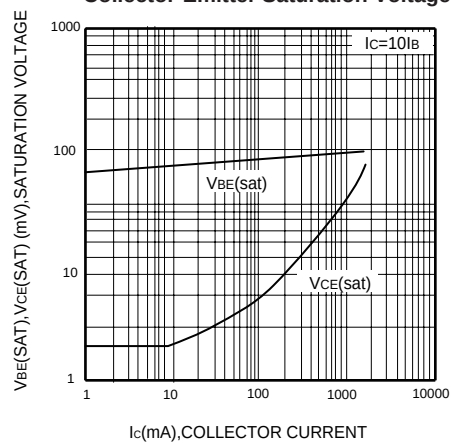


FIG. 4 - Current Gain Bandwidth Product

