



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT

NPN Multi-Chip General Purpose Amplifier

VOLTAGE 45 Volts CURRENT 0.5 Ampere

CHT817GP

APPLICATION

- * AF input stages and driver applicationon equipment.
- * Other general purpose applications.

FEATURE

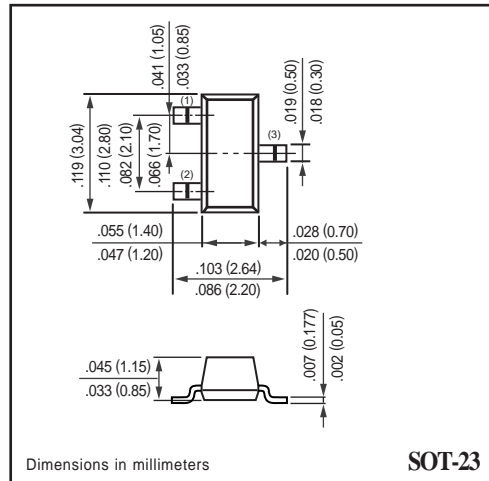
- * Small surface mounting type. (SOT-23)
- * High current gain.
- * Suitable for high packing density.
- * Low collector-emitter saturation.
- * High saturation current capability.

MARKING

- * HFE(Q):LT
- * HFE(R):IT
- * HFE(S):MT



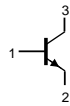
SOT-23



Dimensions in millimeters

SOT-23

CIRCUIT



LIMITING VALUES

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _{CBO}	collector-base voltage	open emitter	—	50	V
V _{CEO}	collector-emitter voltage	open base	—	45	V
V _{CES}	collector-base voltage	open emitter	—	5	V
V _{EBO}	emitter-base voltage	open collector	—	5	V
I _C	collector current (DC)		—	500	mA
I _{CM}	peak collector current		—	1000	mA
I _{BM}	peak base current		—	200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	—	330	mW
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		—	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

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

RATING CHARACTERISTIC (CHT817GP)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-s}$	thermal resistance from junction to ambient	note 1	105	K/W

Note

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

CHARACTERISTICS

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

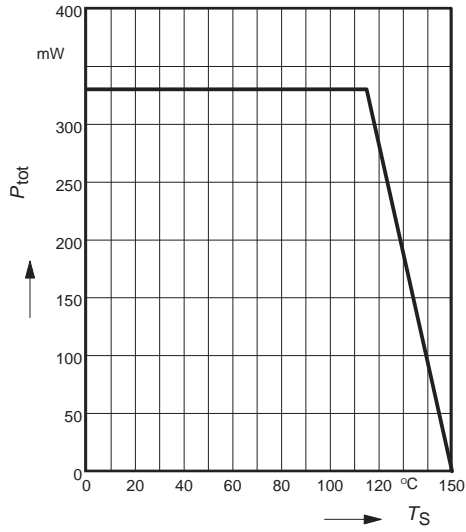
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = 25\text{ V}$	–	100	nA
		$I_C = 0; V_{CB} = 25\text{ V}; T_A = 150\text{ °C}$	–	50	uA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 4\text{ V}$	–	100	nA
h_{FE}	DC current gain	$I_C = 100\text{ mA}; V_{CE} = 1.0\text{ V};$ note 1	100	600	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 500\text{ mA}; I_B = 50\text{ mA}$	–	700	mV
V_{BEsat}	base-emitter saturation voltage	$I_C = 500\text{ mA}; I_B = 50\text{ mA}$		1.2	V
C_c	collector capacitance	$I_E = i_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$	–	6.0	pF
f_T	transition frequency	$I_C = 50\text{ mA}; V_{CE} = 5\text{ V};$ $f = 100\text{ MHz}$	170	–	MHz

Note

1. Pulse test: $t_p \leq 300\text{ }\mu\text{s}; \delta \leq 0.02.$
2. h_{FE} : Classification Q: 100 to 250, R: 160 to 400, S: 250 to 600

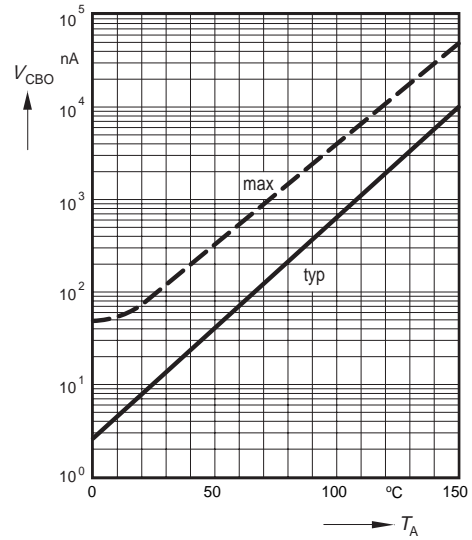
RATING CHARACTERISTIC CURVES (CHT817GP)

Total power dissipation $P_{tot} = f(T_S)$

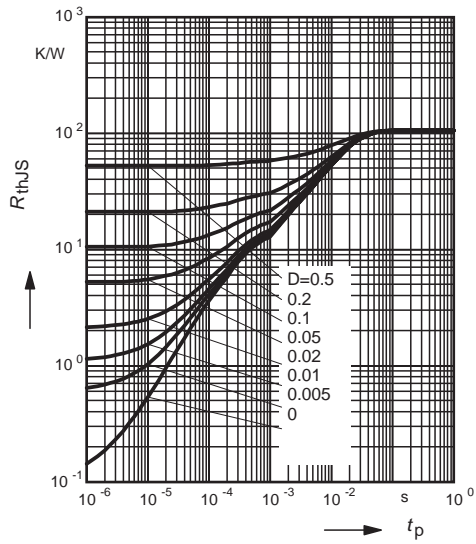


Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = 25V$

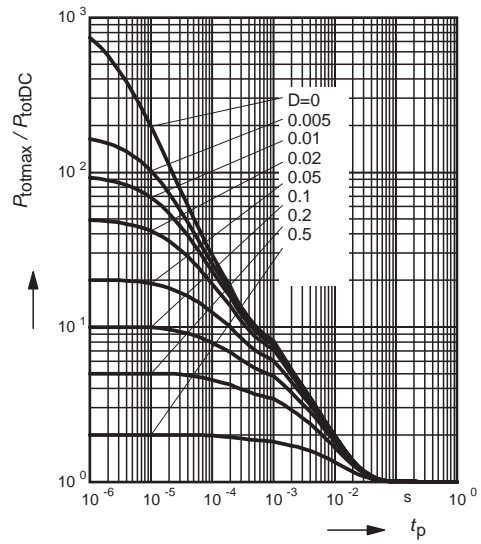


Permissible Pulse Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

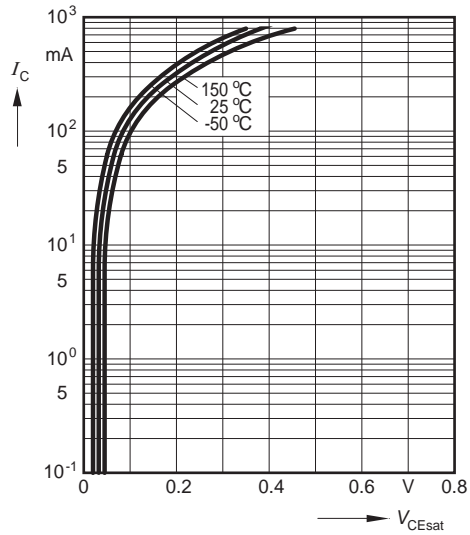
$P_{totmax} / P_{totDC} = f(t_p)$



RATING CHARACTERISTIC CURVES (CHT817GP)

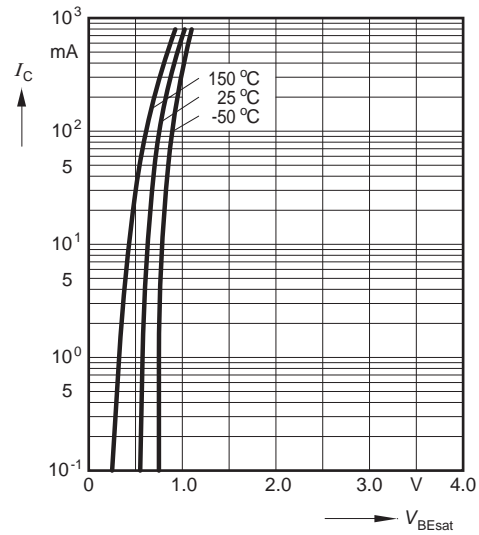
Collector-emitter saturation voltage

$$I_C = f(V_{CEsat}), h_{FE} = 10$$



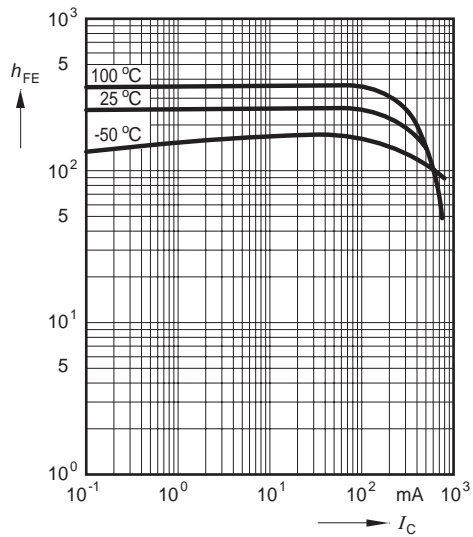
Base-emitter saturation voltage

$$I_C = f(V_{BEsat}), h_{FE} = 10$$



DC current gain $h_{FE} = f(I_C)$

$$V_{CE} = 5V$$



Transition frequency $f_T = f(I_C)$

$$V_{CE} = 5V$$

