



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

SURFACE MOUNT
NPN General Purpose Transistor -
VOLTAGE 60 Volts CURRENT 0.5 Ampere

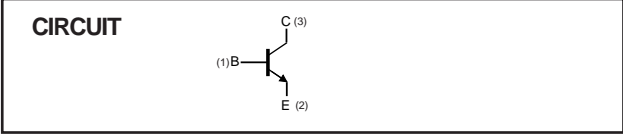
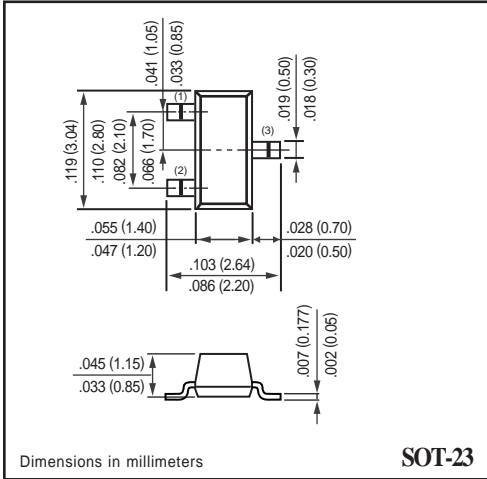
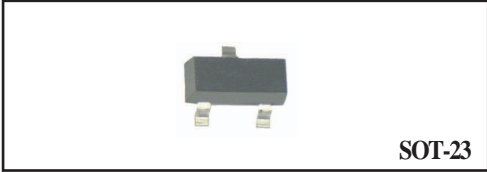
CHT05GP

APPLICATION
 * General purpose applications.

FEATURE
 * Small surface mounting type. (SOT-23)
 * Low current (Max.=500mA).
 * Suitable for high packing density.
 * Low voltage (Max.=60V) .
 * High saturation current capability.

CONSTRUCTION
 * NPN General Purpose Transistor

MARKING
 * T05



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	-	60	V
V _{CE0}	collector-emitter voltage	open base	-	60	V
V _{EB0}	emitter-base voltage	open collector	-	6	V
I _C	collector current DC		-	500	mA
I _{CM}	peak collector current		-	500	mA
I _{BM}	peak base current		-	100	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	-	350	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 (CHT05GP)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	357	K/W

Note

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

CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	$I_E = 0; V_{CB} = 60\text{ V}$	–	0.1	μA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = 4\text{ V}$	–	0.1	μA
h_{FE}	DC current gain	$V_{CE} = 1.0\text{ V}$; note 1 $I_C = 10\text{ mA}$ $I_C = 100\text{ mA}$	100 100	– –	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 100\text{ mA}; I_B = 10\text{ mA}$	–	0.25	V
V_{BEon}	base-emitter voltage	$I_C = 100\text{ mA}; V_{CE} = 1.0\text{ V}$	–	1.2	V
C_{cb}	collector-base capacitance	$I_E = i_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$	–	10	pF
f_T	transition frequency	$I_C = 100\text{ mA}; V_{CE} = 1.0\text{ V}; f = 100\text{ MHz}$	80	–	MHz

Note

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