



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

**SURFACE MOUNT
PNP Silicon Transistor**

VOLTAGE 30 Volts CURRENT 1 Ampere

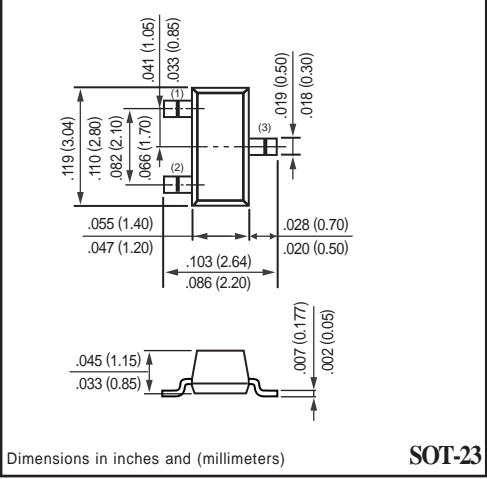
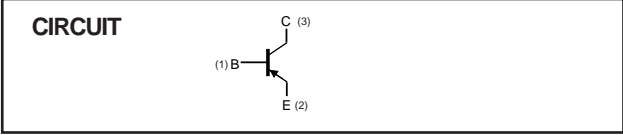
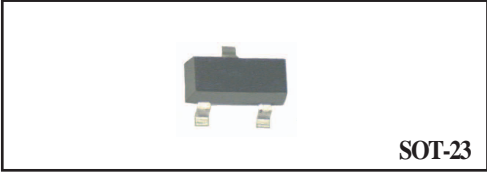
CHT589PT

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

FEATURE
 * Small surface mounting type. (SOT-23)
 * High current (Max.=200mA).
 * Suitable for high packing density.
 * High saturation current capability.
 * Voltage controlled small signal switch.

CONSTRUCTION
 * PNP Silicon Transistor

MARKING
 589



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	-50	-	V
V _{CEO}	collector-emitter voltage	open base	-30	-	V
V _{EBO}	emitter-base voltage	open collector	-5	-	V
I _C	collector current (DC)		-	-1	A
I _{CM}	peak collector current		-	-2	A
I _{BM}	peak base current		-	-200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	-	500	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 (CHT589PT)

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	$I_E = 0; V_{CB} = -30\text{ V}$	–	-100	nA
I_{EBO}	emitter cut-off current	$I_C = 0; V_{EB} = -4\text{ V}$	–	-100	nA
h_{FE}	DC current gain	$I_C = -1\text{ mA}; V_{CE} = -2\text{ V}$ $I_C = -500\text{ mA}; V_{CE} = -2\text{ V}$ $I_C = -1\text{ A}; V_{CE} = -2\text{ V}$ $I_C = -2\text{ A}; V_{CE} = -2\text{ V}$	100 100 80 40	– 300 – –	
V_{CEsat}	collector-emitter saturation voltage	$I_C = -0.5\text{ A}; I_B = -50\text{ mA}$	–	-0.25	V
		$I_C = -1\text{ A}; I_B = -100\text{ mA}$	–	-0.35	V
		$I_C = -2\text{ A}; I_B = -200\text{ mA}$	–	-0.65	V
V_{BEsat}	base-emitter saturation voltage	$I_C = -1\text{ A}; I_B = -100\text{ mA}$	–	-1.2	V
V_{BEon}	base-emitter turn-on voltage	$I_C = -1\text{ A}; V_{CE} = -2\text{ V}$	–	-1.1	V
C_{obo}	output capacitance	$V_{CB} = -10\text{ V}; f = 1\text{ MHz}$	–	15	pF
f_T	transition frequency	$I_C = -100\text{ mA}; V_{CE} = -5\text{ V};$ $f = 100\text{ MHz}$	100	–	MHz

Note

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