CHENMKO ENTERPRISE CO.,LTD

CHT589PT

Lead free devices

SURFACE MOUNT
PNP Silicon Transistor

VOLTAGE 30 Volts CURRENT 1 Ampere

APPLICATION

* Telephony and proferssional communction 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.

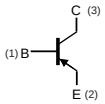
CONSTRUCTION

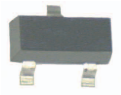
* PNP Silicon Transistor

MARKINTG

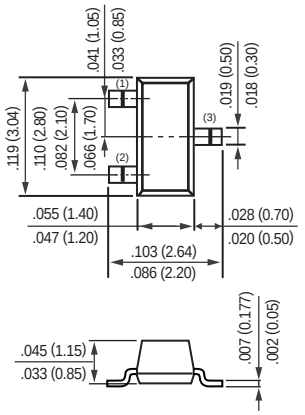
589

CIRCUIT





SOT-23



Dimensions in inches and (millimeters)

SOT-23

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	-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	$T_{amb} \leq 25$ °C; note 1	–	500	mW
T_{stg}	storage temperature		–55	+150	°C
T_j	junction temperature		–	+150	℃
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
$R_{th\ j\text{-}a}$	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 °C unless otherwise speciÞed.

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

Note

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