CHENMKO ENTERPRISE CO.,LTD

CHT5551PT

Lead free devices

SURFACE MOUNT
NPN SILICON Transistor

VOLTAGE 160 Volts CURRENT 0.6 Ampere

APPLICATION

* Telephony and proferssional communction equipment.
* Other switching applications.

FEATURE

* Small flat package. (SOT-23)
* Suitable for high packing density.

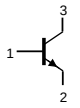
CONSTRUCTION

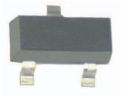
*NPN SILICON Transistor

CONSTRUCTION

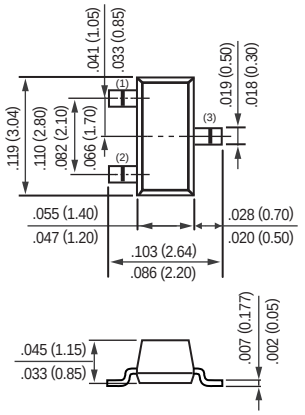
FT

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	–	180	V
V_{CEO}	collector-emitter voltage	open base	–	160	V
V_{EBO}	emitter-base voltage	open collector	–	6.0	V
I_C	collector current (DC)		–	600	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	350	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 CURVES (CHT5551PT)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	417	°C//W

Note

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

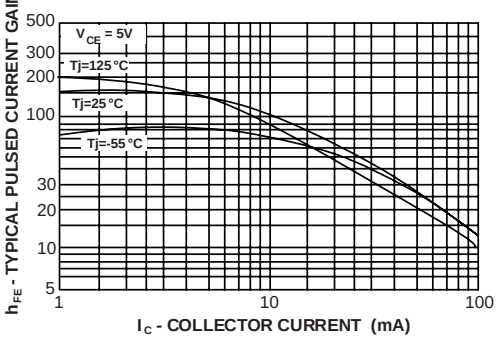
CHARACTERISTICS

T_{amb} = 25 °C unless otherwise speciÞed.

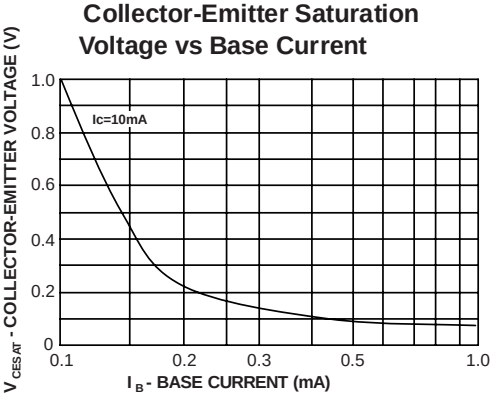
SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
I_{CBO}	collector cut-off current	V_{CB} = 120 V	–	50	nA
I_{CBO}	collector cut-off current	V_{CB} = 120 V,T_A=100°C	–	50	uA
I_{EBO}	emitter cut-off current	V_{EB}=4.0V	–	50	nA
h_{FE}	DC current gain	I_C = 1.0 mA; V_{CE} = 5V I_C = 10mA; V_{CE} = 5V I_C = 50 mA; V_{CE} =5V	80 80 30	– 250 –	
V_{CEsat}	collector-emitter saturation voltage	I_C = 10 mA; I_B = 1.0 mA	–	0.15	V
		I_C =50 mA; I_B = 5.0 mA	–	0.2	V
V_{BEsat}	base-emitter saturation voltage	I_C =10mA; I_B =1.0mA	–	1.0	V
		I_C =50 mA; I_B = 5.0 mA	–	1.0	V
C_{ob}	collector capacitance	I_E = i_e = 0; V_{CB} = 1 0 V; f = 1 MHz	–	6.0	pF
hfe		V_{CE}=10V,I_C=1.0mA,f=1.0KHz	50	200	
f_T	transition frequency	I_C = 10 mA; V_{CE} = 1 0 V; f = 1.0 MHz	100	300	MHz
F	noise Þgure	I_C = 200 mA; V_{CE}= 5 V; R_S = 1 0 Ω; f =10Hz to 15.7KHz	–	8.0	dB

RATING CHARACTERISTIC CURVES (CHT5551PT)

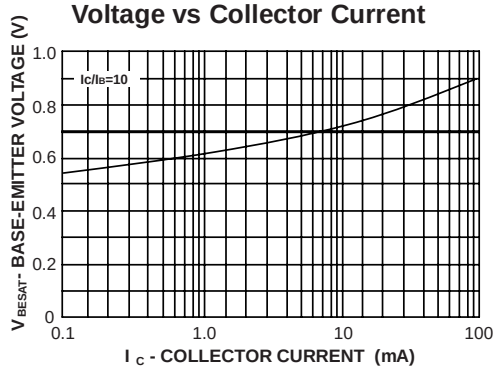
Typical Pulsed Current Gain vs Collector Current



Collector-Emitter Saturation Voltage vs Base Current



Base-Emitter Saturation Voltage vs Collector Current



Collector-Emitter Saturation Voltage vs Collector Current

