



**CHENMKO ENTERPRISE CO.,LTD**

**CHT5401ZPT**

**SURFACE MOUNT  
PNP SILICON Transistor**

VOLTAGE 150 Volts CURRENT 0.5 Ampere

*Lead free devices*

**APPLICATION**

- \* Telephony and professional communication equipment.
- \* Other switching applications.

**FEATURE**

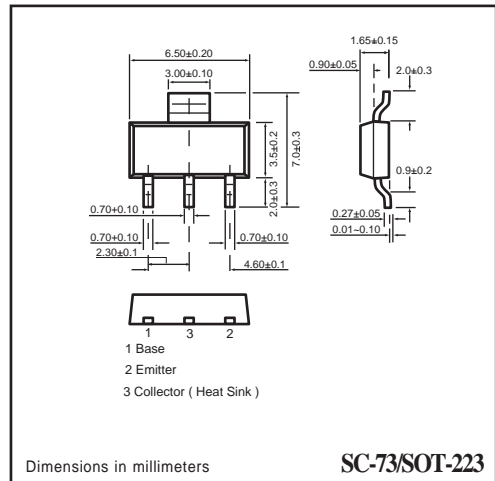
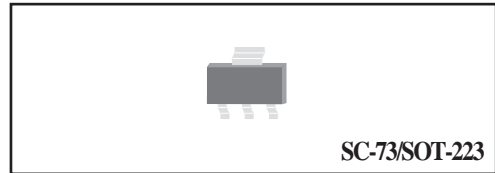
- \* Small flat package. ( SC-73/SOT-223 )
- \* Suitable for high packing density.

**CONSTRUCTION**

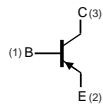
\*PNP SILICON Transistor

**MARKING**

\* ZFP



**CIRCUIT**



**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CBO</sub>	collector-base voltage	open emitter	-	-160	V
V <sub>CEO</sub>	collector-emitter voltage	open base	-	-150	V
V <sub>EBO</sub>	emitter-base voltage	open collector	-	-5.0	V
I <sub>c</sub>	collector current (DC)		-	-500	mA
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C; note 1	-	2.0	W
T <sub>stg</sub>	storage temperature		-65	+150	°C
T <sub>j</sub>	junction temperature		-	150	°C
T <sub>amb</sub>	operating ambient temperature		-65	+150	°C

**Note**

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

## RATING CHARACTERISTIC CURVES ( CHT5401ZPT )

### 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	$V_{CB} = -100\text{ V}$	–	-50	nA
$I_{EBO}$	emitter cut-off current	$V_{EB} = 3.0\text{ V}$	–	-50	nA
$h_{FE}$	DC current gain	$I_C = -1.0\text{ mA}; V_{CE} = -5\text{ V}$ $I_C = -10\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = -50\text{ mA}; V_{CE} = 5\text{ V}$	50 60 50	– 240 –	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = -10\text{ mA}; I_B = -1.0\text{ mA}$	–	-0.2	V
		$I_C = -50\text{ mA}; I_B = -5.0\text{ mA}$	–	-0.5	V
$V_{BEsat}$	base-emitter saturation voltage	$I_C = -10\text{ mA}; I_B = -1.0\text{ mA}$	–	-1.0	V
		$I_C = -50\text{ mA}; I_B = -5.0\text{ mA}$	–	-1.0	V
$C_{ob}$	collector capacitance	$I_E = I_e = 0; V_{CB} = -10\text{ V}; f = 1\text{ MHz}$	–	6.0	pF
$h_{fe}$		$V_{CE} = -10\text{ V}; I_C = -1.0\text{ mA}; f = 1.0\text{ KHz}$	40	200	
$f_T$	transition frequency	$I_C = -50\text{ mA}; V_{CE} = 10\text{ V}; f = 1.0\text{ MHz}$	100	300	MHz
F	noise figure	$I_C = 200\text{ }\mu\text{A}; V_{CE} = 5\text{ V}; R_S = 10\text{ }\Omega; f = 10\text{ Hz to }15.7\text{ KHz}$	–	8.0	dB