



CHENMKO ENTERPRISE CO.,LTD

CHT5551SPT

**SURFACE MOUNT
NPN SILICON Transistor**

VOLTAGE 160 Volts CURRENT 0.2 Ampere

Lead free devices

APPLICATION

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

FEATURE

- * Small flat package. (SC-88/SOT-363)
- * Suitable for high packing density.

CONSTRUCTION

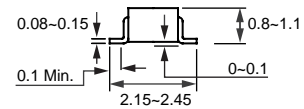
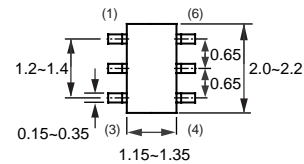
*NPN SILICON Transistor

MARKING

ES



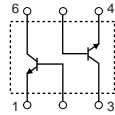
SC-88/SOT-363



Dimensions in millimeters

SC-88/SOT-363

CIRCUIT



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	-	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)		-	200	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 1	-	200	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 (CHT5551SPT)

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	$V_{CB} = 120\text{ V}$	–	50	nA
I_{CBO}	collector cut-off current	$V_{CB} = 120\text{ V}, T_A = 100^{\circ}\text{C}$	–	50	uA
I_{EBO}	emitter cut-off current	$V_{EB} = 4.0\text{ V}$	–	50	nA
h_{FE}	DC current gain	$I_C = 1.0\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 50\text{ mA}; V_{CE} = 5\text{ V}$	80 80 30	– 250 –	
V_{CEsat}	collector-emitter saturation voltage	$I_C = 10\text{ mA}; I_B = 1.0\text{ mA}$	–	0.15	V
		$I_C = 50\text{ mA}; I_B = 5.0\text{ mA}$	–	0.2	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}		$V_{CE} = 10\text{ V}, I_C = 1.0\text{ mA}, f = 1.0\text{ KHz}$	50	200	
f_T	transition frequency	$I_C = 10\text{ mA}; V_{CE} = 10\text{ V}; f = 1.0\text{ MHz}$	100	300	MHz
F	noise figure	$I_C = 200\text{ mA}; V_{CE} = 5\text{ V}; R_S = 10\text{ }\Omega; f = 10\text{ Hz to } 15.7\text{ KHz}$	–	8.0	dB