



CHENMKO ENTERPRISE CO.,LTD

SURFACE MOUNT

General Purpose Transistor

VOLTAGE 40 Volts CURRENT 600 mAmpere

CHT4403PT

Lead free devices

APPLICATION

- * AF input stages and driver applicationon equipment.
- * Other general purpose applications.

FEATURE

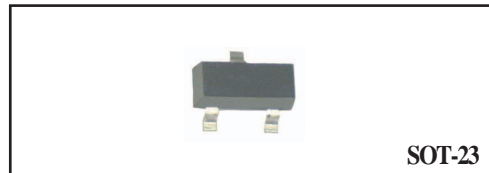
- * Small surface mounting type. (SOT-23)
- * High current gain.
- * Low collector-emitter saturation.
- * High saturation current capability.

CONSTRUCTION

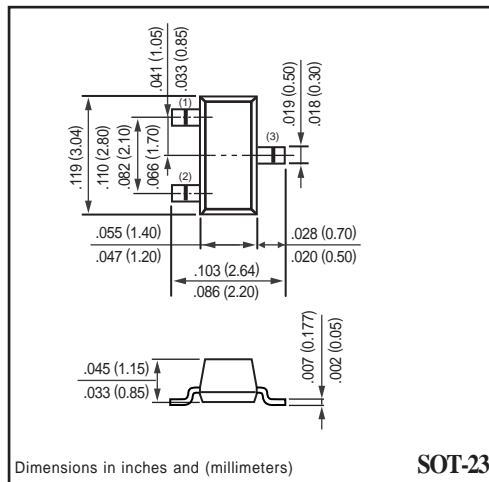
- * PNP transistors in one package.

MARKING

- * 2F-

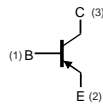


SOT-23



SOT-23

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	-	-40	V
V _{CEO}	collector-emitter voltage	open base	-	-40	V
V _{EBO}	emitter-base voltage	open collector	-	-5	V
I _C	collector current (DC)		-	-600	mA
P _{tot}	total power dissipation	T _{amb} ≤ 25 °C; note 2	-	350	mW
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		-	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

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

2004-11

RATING CHARACTERISTIC CURVES (CHT4403PT)

CHARACTERISTICS

$T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	collector-base breakdown voltage	$I_C = -100\mu\text{A}$; $I_E = 0\text{A}$	-40	-	V
$V_{(BR)CEO}$	collector-emitter breakdown voltage	$I_C = -1\text{mA}$; $I_B = 0\text{A}$	-40	-	V
$V_{(BR)EBO}$	emitter-base breakdown voltage	$I_E = -100\mu\text{A}$; $I_C = 0\text{A}$	-6	-	V
I_{CEX}	collector cut-off current	$V_{EB(OFF)} = -0.4\text{V}$; $V_{CE} = -35\text{V}$	-	-100	nA
I_{BL}	base cut-off current	$V_{EB(OFF)} = -0.4\text{V}$; $V_{CE} = -35\text{V}$	-	-100	nA
h_{FE}	DC current gain	$I_C = -100\mu\text{A}$; $V_{CE} = -1\text{V}$	30	-	
		$I_C = -1\text{mA}$; $V_{CE} = -1\text{V}$	60	-	
		$I_C = -10\text{mA}$; $V_{CE} = -1\text{V}$	100	-	
		$I_C = -150\text{mA}$; $V_{CE} = -2\text{V}$	100	300	
		$I_C = -500\text{mA}$; $V_{CE} = -2\text{V}$	20	-	
V_{CEsat}	collector-emitter saturation	$I_C = -150\text{mA}$; $I_B = -15\text{mA}$	-	-400	mV
		$I_C = -500\text{mA}$; $I_B = -50\text{mA}$	-	-750	mV
V_{BEsat}	base-emitter saturation voltage	$I_C = -150\text{mA}$; $I_B = -15\text{mA}$	-750	-950	mV
		$I_C = -500\text{mA}$; $I_B = -50\text{mA}$	-	-1300	mV
C_{cb}	output capacitance	$V_{CB} = -10\text{V}$; $f = 1.0\text{MHz}$; $I_E = 0$	-	8.5	pF
C_{eb}	input capacitance	$V_{EB} = -0.5\text{V}$; $f = 1.0\text{MHz}$; $I_C = 0$	-	30	pF
h_{ie}	input impedance	$V_{CE} = -10\text{V}$; $f = 1.0\text{KHz}$; $I_C = -1.0\text{mA}$	1.5	15	$\text{K}\Omega$
h_{re}	voltage feedback ratio		0.1	8.0	$\times 10^{-4}$
h_{fe}	small signal current gain		60	500	
h_{oe}	output impedance		1.0	100	μS
f_T	transition frequency		$I_C = -20\text{mA}$; $V_{CE} = -10\text{V}$ $f = 100\text{MHz}$	200	-
t_d	delay time	$V_{CC} = -30\text{V}$; $I_C = -150\text{mA}$	-	15	nS
t_r	rise time	$V_{BE(off)} = -2.0\text{V}$; $I_{B1} = -15\text{mA}$	-	20	nS
t_s	storage time	$V_{CC} = -30\text{V}$; $I_C = -150\text{mA}$	-	225	nS
t_f	fall time	$I_{B1} = I_{B2} = -15\text{mA}$	-	30	nS

RATING CHARACTERISTIC CURVES (CHT4403PT)

TR1 CHT4403 Typical Characteristics

