



**CHENMKO ENTERPRISE CO.,LTD**

*Halogens free devices*

**SURFACE MOUNT  
General Purpose Transistor**

VOLTAGE 40 Volts CURRENT 600 mAmpere

**CHT4403WGP**

**APPLICATION**

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

**FEATURE**

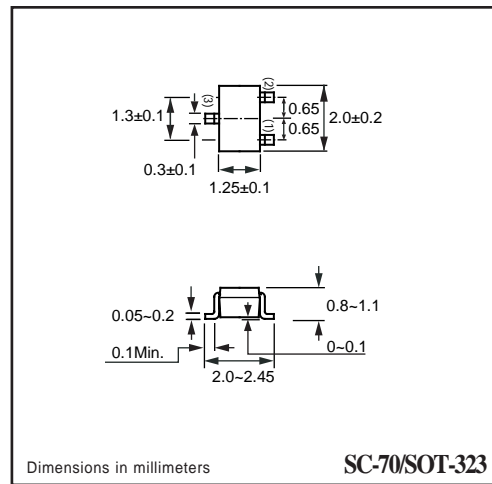
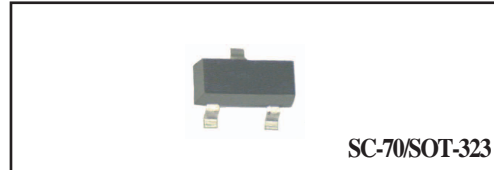
- \* Small surface mounting type. (SC-70/SOT-323)
- \* High current gain.
- \* Low collector-emitter saturation.
- \* High saturation current capability.

**CONSTRUCTION**

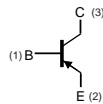
- \* PNP transistors in one package.

**MARKING**

- \* UB



**CIRCUIT**



**LIMITING VALUES**

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

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CB0</sub>	collector-base voltage	open emitter	-	-40	V
V <sub>CEO</sub>	collector-emitter voltage	open base	-	-40	V
V <sub>EBO</sub>	emitter-base voltage	open collector	-	-5	V
I <sub>C</sub>	collector current (DC)		-	-600	mA
P <sub>tot</sub>	total power dissipation	T <sub>amb</sub> ≤ 25 °C; note 2	-	200	mW
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**

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

## RATING CHARACTERISTIC CURVES ( CHT4403WGP )

### 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	$\mu\text{S}$
$f_T$	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 ( CHT4403WGP )

TR1 CHT4403 Typical Characteristics

