



CHENMKO ENTERPRISE CO.,LTD

Halogens free devices

**SURFACE MOUNT
NPN Darlington Transistor**

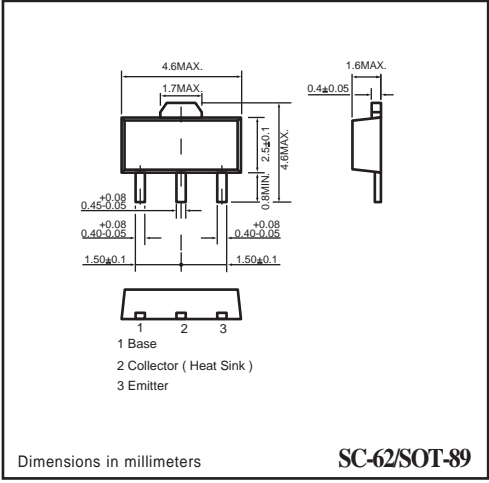
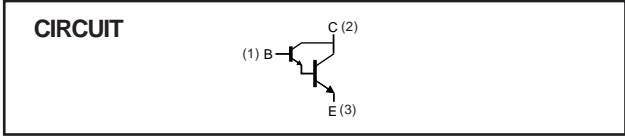
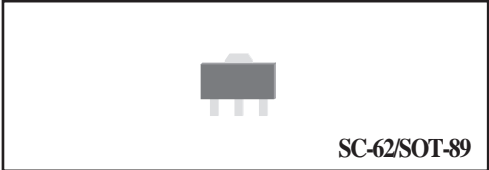
VOLTAGE 40 Volts CURRENT 0.5 Ampere

CHTA29XGP

APPLICATION
* Pre-amplifier input applications.

FEATURE
* High current , $I_C=500\text{mA}$
* High DC current gain , $h_{FE}>20000$

MARKING
* T29



LIMITING VALUES
In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CB0}	collector-base voltage	open emitter	-	40	V
V_{CE0}	collector-emitter voltage	open base	-	30	V
V_{EB0}	emitter-base voltage	open collector	-	10	V
I_C	collector current (DC)		-	500	mA
I_{CM}	peak collector current		-	1000	mA
I_{BM}	peak base current		-	200	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25\text{ }^\circ\text{C}$; note 1	-	1300	mW
T_{stg}	storage temperature		-65	+150	$^\circ\text{C}$
T_j	junction temperature		-	150	$^\circ\text{C}$
T_{amb}	operating ambient temperature		-65	+150	$^\circ\text{C}$

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

RATING CHARACTERISTIC CURVES (CHTA29XGP)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	104	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	$V_{CB} = 30\text{ V}$	–	100	nA
I_{EBO}	emitter cut-off current	$V_{EB} = 10\text{ V}$	–	100	nA
h_{FE}	DC current gain	$I_C = 1\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 100\text{ mA}; V_{CE} = 5\text{ V}$ $I_C = 500\text{ mA}; V_{CE} = 5\text{ V}$	4000 10000 20000 4000	– – – –	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C = 100\text{ mA}; I_B = 0.1\text{ mA}$	–	1.0	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C = 100\text{ mA}; I_B = 0.1\text{ mA}$	–	1.5	V
$V_{BE(ON)}$	base-emitter saturation voltage	$I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$	–	1.4	V
f_T	transition frequency	$I_C = 30\text{ mA}; V_{CE} = 5\text{ V};$ $f = 100\text{ MHz}$	220(typ)	–	MHz