



CHENMKO ENTERPRISE CO.,LTD

CHTA29XPT

**SURFACE MOUNT
NPN Darlington Transistor**

VOLTAGE 40 Volts CURRENT 0.5 Ampere

Lead free devices

APPLICATION

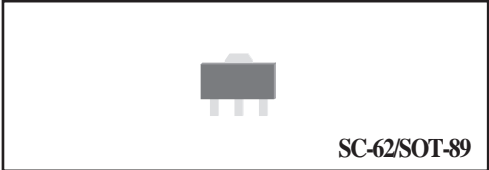
* Preamplifier input applications.

FEATURE

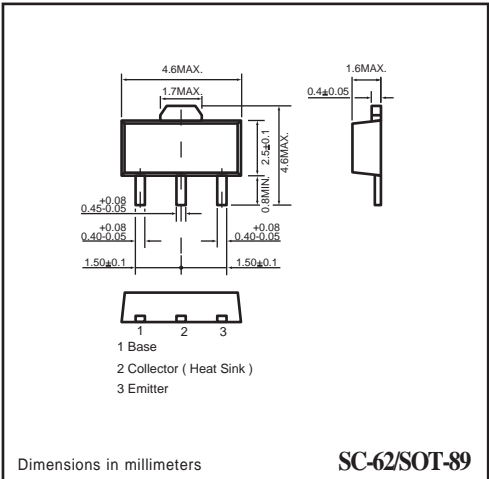
* High current , Ic=500mA
* High DC current gain , hFE>20000

MARKING

* T29



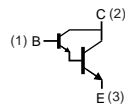
SC-62/SOT-89



Dimensions in millimeters

SC-62/SOT-89

CIRCUIT



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} ≤ 25 °C; note 1	—	1300	mW
T _{stg}	storage temperature		-65	+150	°C
T _j	junction temperature		—	150	°C
T _{amb}	operating ambient temperature		-65	+150	°C

Note

2007-06

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

RATING CHARACTERISTIC CURVES (CHTA29XPT)

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