CHENMKO ENTERPRISE CO.,LTD

CHTA14ZGP

Halogens free devices

SMALL FLAT
NPN Epitaxial Transistor

VOLTAGE 30 Volts CURRENT 1 Ampere

APPLICATION

* General purpose switching and amplification
* Audio power amplifier

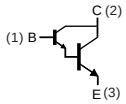
FEATURE

* Small flat package. (SC-73/SOT-223)
* Saturation voltage $V_{CE(sat)}$=1.5V(max.)(I_C/I_B=100mA/0.1mA)
* P_D= 2.0W (Power Dissipation).
* High saturation current capability.

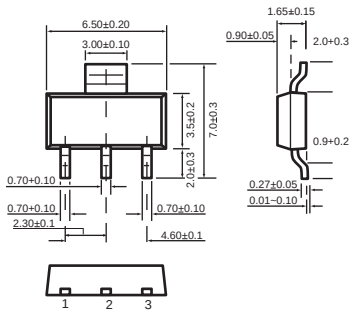
CONSTRUCTION

* NPN Switching Transistor

CIRCUIT



SC-73/SOT-223



1 Base
2 Collector (Heat Sink)
3 Emitter

Dimensions in millimeters

SC-73/SOT-223

MAXIMUM RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-	30	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-	30	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-	10	Volts
Collector Current DC		I_C	-	1	Amps
Thermal resistance	junction - case point	RθJ-C	-	62.5	°C/W
Total Power Dissipation	$T_A \leq 25^oC$; Note 1	P_{TOT}	-	2000	mW
Storage Temperature		T_{STG}	-55	+150	°C
Junction Temperature		T_J	-	+150	°C
Operating Ambient Temperature		T_{AMB}	-55	+150	°C

Note

1. Transistor mounted on ceramic substrate 50mmX50mmx0.8t.
2. Measured at Pulse Width 300 us, Duty Cycle 2%.

RATING CHARACTERISTIC CURVES (CHTA14ZGP)

CHARACTERISTICS (At T_A = 25°C unless otherwise noted)

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector Cut-off Current	I_E=0; V_{CB}=30V	I_{CBO}	-	-	0.1	uA
Emitter Cut-off Current	I_C=0; V_{EB}=10V	I_{CEO}	-	-	0.1	uA
DC Current Gain	V_{CE}=5V I_C=0.01A I_C=0.1A	h_{FE}	 10000 20000	 - -	 - -	
Collector-Emitter Saturation Voltage	I_C=100mA; I_B=0.1mA	V_{CEsat}	-	-	1.5	Volts
Base-Emitter oN Voltage	I_C=100mA; V_{CE}=5V	V_{BEon}	-	-	2.0	Volts
Collector Capacitance	I_E=ie=0; V_{CB}=10V; f=1MHz	C_C	-	4.0	-	pF
Transition Frequency	I_C=10mA; V_{CE}=5V; f=100MHz	f_T	125	-	-	MHz

RATING CHARACTERISTIC CURVES (CHTA14ZGP)

Typical Electrical Characteristics

Figure 1. C_C - Reverse V_{CB}

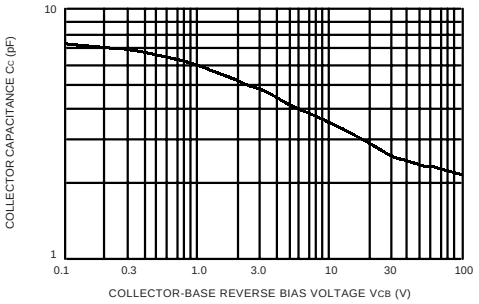


Figure 2. h_{FE} - I_C

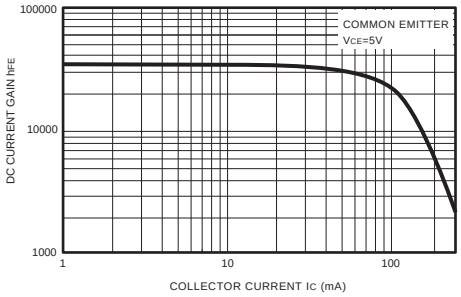


Figure 3. $V_{CE(sat)}$ - I_C

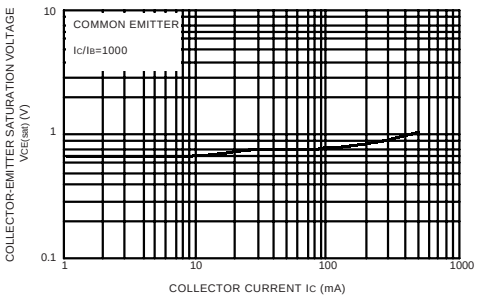
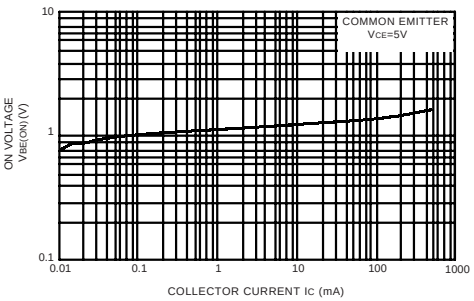



Figure 4. $V_{BE(on)}$ - I_C