



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

SMALL FLAT
PNP Medium Power Transistor

VOLTAGE 20 Volts CURRENT 1 Ampere

CHP69PT

APPLICATION

- * General purpose switching and amplification
- * Audio power amplifier

FEATURE

- * Small flat package. (SC-73/SOT-223)
- * Low saturation voltage $V_{CE(sat)} = -0.5V(\text{max.})(I_C = -1A)$
- * High speed switching time: $t_{stg} = 1.0\mu\text{Sec}(\text{typ.})$
- * $P_C = 1.35W$ (mounted on printed-circuit board).
- * High saturation current capability.

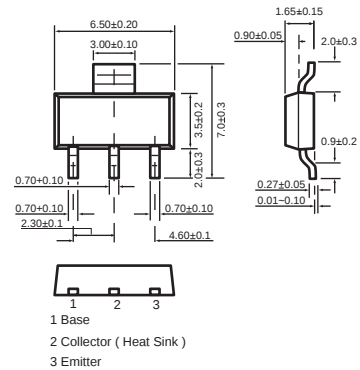
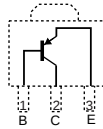
CONSTRUCTION

- * PNP Switching Transistor



SC-73/SOT-223

CIRCUIT



Dimensions in millimeters

SC-73/SOT-223

MAXIMUM RATINGS (At $T_A = 25^\circ\text{C}$ unless otherwise noted)

RATINGS	CONDITION	SYMBOL	MIN.	MAX.	UNITS
Collector - Base Voltage	Open Emitter	V_{CB0}	-	-32	Volts
Collector - Emitter Voltage	Open Base	V_{CE0}	-	-20	Volts
Emitter - Base Voltage	Open Collector	V_{EB0}	-	-5	Volts
Collector Current DC		I_C	-	-1	Amps
Peak Collector Current		I_{CM}	-	-2	Amps
Peak Base Current		I_{BM}	-	-0.2	Amps
Total Power Dissipation	$T_A \leq 25^\circ\text{C}$; Note 1	P_{TOT}	-	1.35	W
Storage Temperature		T_{STG}	-65	+150	$^\circ\text{C}$
Junction Temperature		T_J	-	+150	$^\circ\text{C}$
Operating Ambient Temperature		T_{AMB}	-65	+150	$^\circ\text{C}$

Note

1. Transistor mounted on printed-circuit board, Mounting pad for collector 10 mm².
2. Measured at Pulse Width 300 μs , Duty Cycle 2%.

RATING CHARACTERISTIC CURVES (CHP69PT)

THEMAL CHARACTERISTICS

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Thermal Resistance 1	Note 1	R θ J-A	-	90	-	°C/W
Thermal Resistance 2	Note 1	R θ J-S	-	10	-	°C/W

Note :

1. Transistor mounted on printed-circuit board, Mounting pad for collector 10 mm².

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

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector Cut-off Current	I _E =0; V _{CB} =-25V	I _{CBO}	-	-	-100	nA
	I _E =0; V _{CB} =-25V; T _J =150°C		-	-	-10	uA
Emitter Cut-off Current	I _C =0; V _{EB} =-5V	I _{CEO}	-	-	-100	nA
DC Current Gain	I _C =-5mA; V _{CE} =-10V	h _{FE}	50	-	-	
	I _C =-500mA; V _{CE} =-1.0V		85	-	375	
	I _C =-1.0A; V _{CE} =-1.0V		60	-	-	
DC Current Gain CHP69-16 CHP69-25	I _C =-500mA; V _{CE} =-1.0V	h _{FE}	100	-	250	
			160	-	375	
DC Current Gain CHP69-16/IN	I _C =-10mA; V _{CE} =-1.8V	h _{FE}	140	- -	230	
Collector-Emitter Saturation Voltage	I _C =-1.0A; I _B =-100mA	V _{CEsat}	-	-	-500	mVolts
Base-Emitter Saturatio Voltage	I _C =-5mA; V _{CE} =-10V I _C =-1.0A; V _{CE} =-1.0V	V _{BEsat}	-	-620	-	mVolts
			-	-	-1.0	Volts
Collector Capacitance	I _E =I _E =0; V _{CB} =-5.0V; f=1MHz	C _C	-	48	-	pF
Transition Frequency	I _C =-10mA; V _{CE} =-5V; f=100MHz	f _T	40	-	-	MHz
DC Current Gain Ratio of The Complementary pairs	I _I C _I =0.5A; I _V CE _I =1.0V	h _{FE1} / h _{FE2}	-	-	1.6	

Note :

1. Pulse test: t_p ≤ 300uSec; δ ≤ 0.02.

RATING CHARACTERISTIC CURVES (CHP69PT)

Typical Electrical Characteristics

Figure 1. Typical DC Current Gain

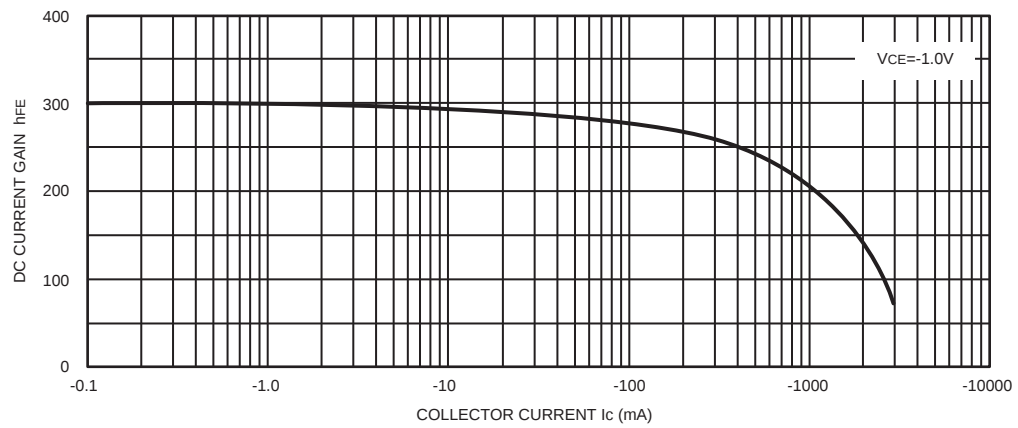


Figure 2. Typical DC Current Gain

