



CHENMKO ENTERPRISE CO.,LTD

CHT5113PPT

SMALL FLAT NPN Epitaxial Transistor

VOLTAGE 60 Volts CURRENT 6 Amperes

Lead free devices

APPLICATION

* High current amplifier.

FEATURE

* Small flat package. (DPAK)
* Low saturation voltage $V_{CE(sat)}=0.55V(\text{Max.})(I_C/I_B=6A/0.3A)$

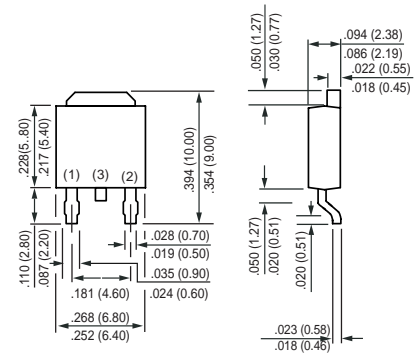
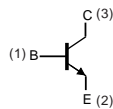
CONSTRUCTION

* NPN Silicon Transistor



DPAK

CIRCUIT



- 1 Base
- 2 Emitter
- 3 Collector (Heat Sink)

Dimensions in inches and (millimeters)

DPAK

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

RATINGS	CONDITION	SYMBOL	CHT5113PPT	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	150	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	60	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	6	Volts
Collector Current DC		I_C	6	Amps
Peak Collector Current		I_{CM}	20	Amps
Total Power Dissipation	$T_A \leq 25^\circ\text{C}$	P_{TOT}	1.0	W
Storage Temperature		T_{STG}	-55 to +150	$^\circ\text{C}$
Junction Temperature		T_J	+150	$^\circ\text{C}$
Operating Ambient Temperature		T_{AMB}	-55 to +150	$^\circ\text{C}$

RATING CHARACTERISTIC CURVES (CHT5113PPT)

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

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector-Base breakdown voltage	$I_C=100\mu\text{A}$	BV_{CB0}	150	170	-	Volts
Collector-Emitter breakdown voltage	$I_C=10\text{mA}$	BV_{CE0}	60	70	-	Volts
Emitter-Base breakdown voltage	$I_E=100\mu\text{A}$	BV_{EB0}	6	8	-	Volts
Collector Cut-off Current	$I_E=0; V_{CB}=120\text{V}$	I_{CBO}	-	-	50	nA
Emitter Cut-off Current	$I_C=0; V_{EB}=6\text{V}$	I_{EBO}	-	-	10	nA
DC Current Gain	$V_{CE}=1\text{V}; I_C=10\text{mA}$	h_{FE}	100	-	-	
	$V_{CE}=1\text{V}; I_C=2\text{A}$		120	200	300	
	$V_{CE}=1\text{V}; I_C=5\text{A}$		75	100	-	
	$V_{CE}=1\text{V}; I_C=10\text{A}$		-	30	-	
Collector-Emitter Saturation Voltage	$I_C=100\text{mA}; I_B=5\text{mA}$	V_{CEsat}	-	20	50	mVolts
	$I_C=1\text{A}; I_B=50\text{mA}$		-	80	120	
	$I_C=2\text{A}; I_B=100\text{mA}$		-	150	220	
	$I_C=6\text{A}; I_B=300\text{mA}$		-	400	550	
Base-Emitter Saturation Voltage	$I_C=6\text{A}; I_B=300\text{mA}$	V_{BEsat}	-	1.15	1.3	Volts
Base-Emitter On Voltage	$V_{CE}=1\text{V}; I_C=6\text{A}$	V_{BEon}	-	1.05	1.2	Volts
Collector Output Capacitance	$I_E=I_C=0; V_{CB}=10\text{V}; f=1\text{MHz}$	C_{ob}	-	50	-	pF
Transition Frequency	$I_E=-100\text{mA}; V_{CE}=10\text{V}$	f_T	-	150	-	MHz

RATING CHARACTERISTIC CURVES (CHT5113PPT)

Figure 1. Collector-Emitter Saturation Voltage vs Collector Current

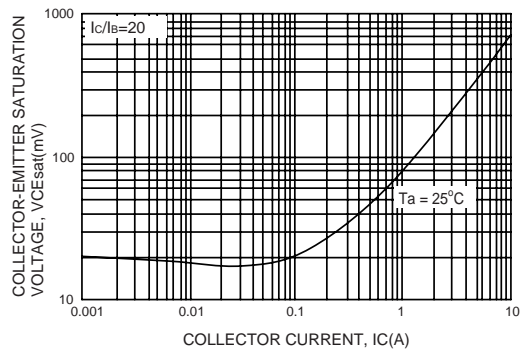


Figure 2. Base-Emitter Saturation Voltage vs Collector Current

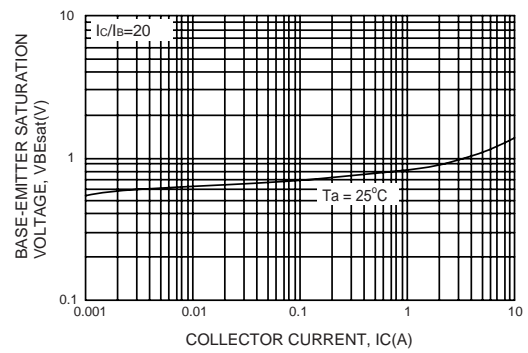


Figure 3. DC Current Gain

