



CHENMKO ENTERPRISE CO.,LTD

Lead free devices

**SMALL FLAT
PNP Epitaxial Transistor**

VOLTAGE 20 Volts CURRENT 5 Amperes

2SB1386PPT

APPLICATION

* Power driver and Strobe Flash .

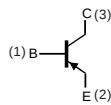
FEATURE

- * Small flat package. (DPAK)
- * Low saturation voltage $V_{CE(sat)} = -0.35V$ (Typ.) ($I_C/I_B = -4A/-0.1A$)
- * High saturation current capability.

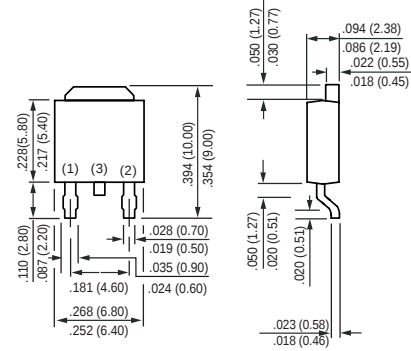
MARKING

- * hFE Classification P : P86
- Q : Q86
- R : R86

CIRCUIT



DPAK



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

Dimensions in inches and (millimeters)

DPAK

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

RATINGS	CONDITION	SYMBOL	2SB1386PPT	UNITS
Collector - Base Voltage	Open Emitter	V_{CBO}	-30	Volts
Collector - Emitter Voltage	Open Base	V_{CEO}	-20	Volts
Emitter - Base Voltage	Open Collector	V_{EBO}	-6	Volts
Collector Current DC		I_C	-5	Amps
Peak Collector Current		I_{CM}	-10	Amps
Total Power Dissipation	$T_A \leq 25^{\circ}C$; Note 1	P_{TOT}	1.0	W
Storage Temperature		T_{STG}	-55 to +150	$^{\circ}C$
Junction Temperature		T_J	+150	$^{\circ}C$
Operating Ambient Temperature		T_{AMB}	-55 to +150	$^{\circ}C$

Note

- 1. Transistor mounted on ceramic substrate by 40mmX40mmX0.7mm.

2007-05

RATING CHARACTERISTIC CURVES (2SB1386PPT)

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

PARAMETERS	CONDITION	SYMBOL	MIN.	TYPE	MAX.	UNITS
Collector-Base breakdown voltage	$I_C = -50\mu\text{A}$	BV_{CBO}	-30	-	-	Volts
Collector-Emitter breakdown voltage	$I_C = -1\text{mA}$	BV_{CEO}	-20	-	-	Volts
Emitter-Base breakdown voltage	$I_E = -50\mu\text{A}$	BV_{EBO}	-6	-	-	Volts
Collector Cut-off Current	$I_E = 0; V_{CB} = -20\text{V}$	I_{CBO}	-	-	-0.5	μA
Emitter Cut-off Current	$I_C = 0; V_{EB} = -5\text{V}$	I_{EBO}	-	-	-0.5	μA
DC Current Gain	$V_{CE} = -2\text{V}$; Note 1 $I_C = -0.5\text{A}$	h_{FE}	82	-	390	
Collector-Emitter Saturation Voltage	$I_C = -4\text{A}; I_E = -0.1\text{A}$	V_{CEsat}	-	-0.35	-1.0	Volts
Output Capacitance	$I_E = I_C = 0; V_{CB} = -20\text{V};$ $f = 1\text{MHz}$	C_C	-	60	-	pF
Transition Frequency	$I_E = -0.05\text{A}; V_{CE} = -6.0\text{V};$ $f = 100\text{MHz}$	f_T	-	120	-	MHz

Note :

1. $h_{FE}(2)$ Classification P: 82 to 180, Q: 120 to 270, R: 180 to 390.

RATING CHARACTERISTIC CURVES (2SB1386PPT)

Fig.1 Grounded emitter propagation characteristics

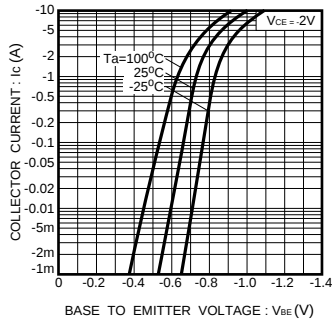


Fig.2 Grounded emitter output characteristics

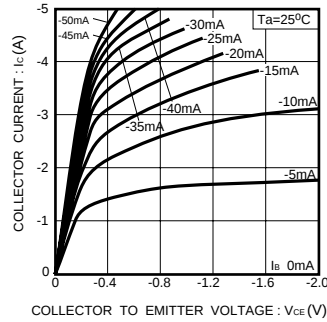


Fig.3 DC current gain vs. collector current (I)

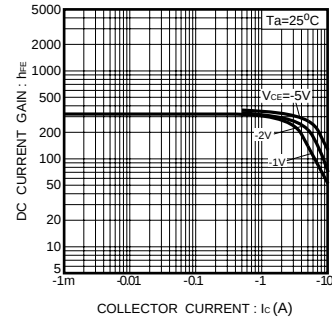


Fig.4 DC current gain vs. collector current (II)

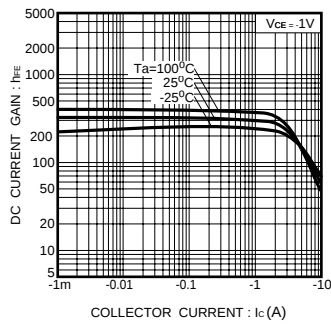


Fig.5 DC current gain vs. collector current (III)

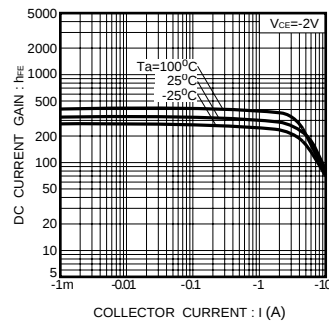


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

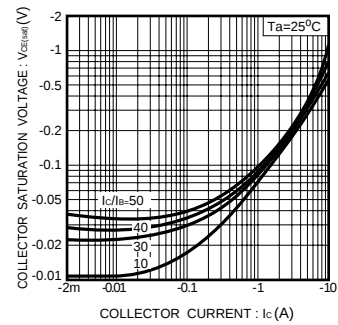


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

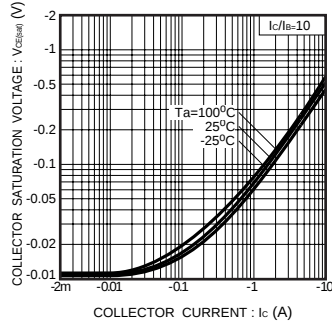


Fig.8 Collector-emitter saturation voltage vs. collector current (III)

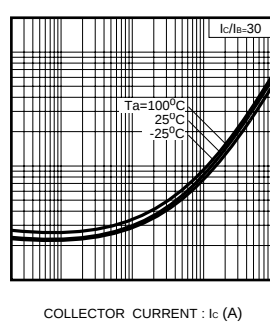


Fig.9 Collector-emitter saturation voltage vs. collector current (IV)

