CHENMKO ENTERPRISE CO.,LTD

2SB1197KPT

Lead free devices

SURFACE MOUNT
PNP Switching Transistor

VOLTAGE 32 Volts CURRENT 0.8 Ampere

APPLICATION

* Telephone and proferssional communction equipment.
* Other switching applications.

FEATURE

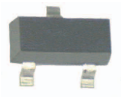
* Small surface mounting type. (SOT-23)
* Corrector peak current (Max.=1000mA).
* Suitable for high packing density.
* Low voltage (Max.=40V) .
* High saturation current capability.
* Voltage controlled small signal switch.

CONSTRUCTION

* PNP Switching Transistor

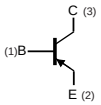
MARKING

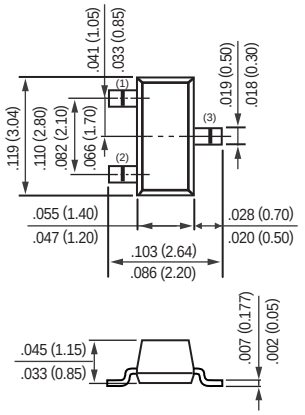
* PN @hFE as Q Grade
* RC @hFE as R Grade



SOT-23

CIRCUIT





Dimensions in inches and (millimeters)

SOT-23

LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_{CBO}	collector-base voltage	open emitter	–	-40	V
V_{CEO}	collector-emitter voltage	open base	–	-32	V
V_{EBO}	emitter-base voltage	open collector	–	-5	V
I_C	collector current DC		–	-0.8	A
I_{CM}	peak collector current		–	-1.0	A
I_{BM}	peak base current		–	-80	mA
P_{tot}	total power dissipation	$T_{amb} \leq 25$ °C; note 1	–	300	mW
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	150	°C
T_{amb}	operating ambient temperature		–65	+150	°C

Note

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

RATING CHARACTERISTIC CURVES (2SB1197KPT)

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	note 1	500	K/W

Note

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

CHARACTERISTICS

T_{amb} = 25 °C unless otherwise speciÞed.

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
BV_{CBO}	collector-base breakdown voltage	I_E = 0; I_C =-50 uA	-40	–	V
BV_{CEO}	collector-emitter breakdown voltage	I_B = 0; I_C =-1 mA	-32	–	V
BV_{EBO}	emitter-base breakdown voltage	I_C = 0; I_E =-50 uA	-5	–	V
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = - 20 V	–	-500	nA
I_{EBO}	emitter cut-off current	I_C = 0; V_{EB} = - 4 V	–	-500	nA
h_{FE}	DC current gain	V_{CE} = -3V; note 1 I_C = -100 mA	120	390	
V_{CEsat}	collector-emitter saturation voltage	I_C = -500 mA, I_B=-50 mA	–	-500	mV
C_c	collector capacitance	I_E = i_e = 0; V_{CB} =-10 V ; f = 1 MHz	12Typ.	30	pF
f_T	transition frequency	I_C = 10 mA; V_{CE} = - 20 V ; f = 100 MHz	50	200Typ.	MHz

Note

1. Pulse test: $t_p \leq 300\ \mu s$; $\delta \leq 0.02$.
2. hFE: Q Gade: 120~270
   R Gade: 180~390

RATING CHARACTERISTIC CURVES (2SB1197KPT)

Fig.1 DC Current gain vs. collector current

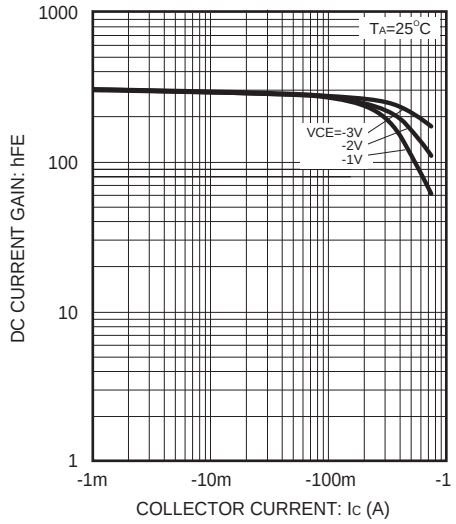


Fig.2 Collector-emittersaturation voltage vs. collector current

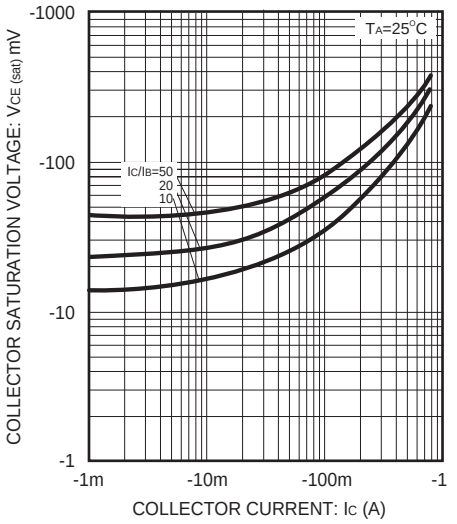


Fig.3 Gain bandwidthproduct vs. emitter current

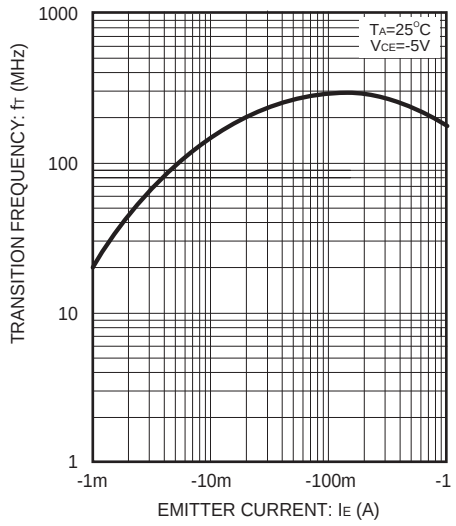
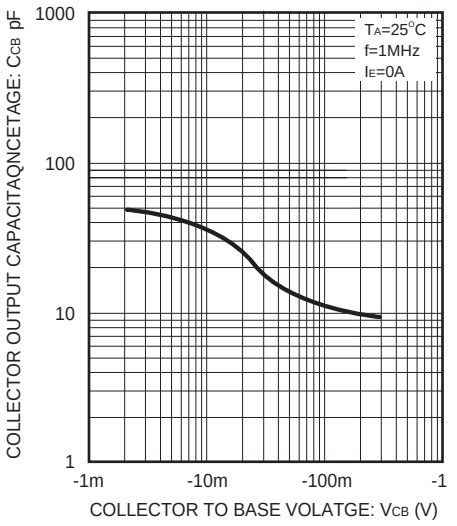


Fig.4 Collector output capacitance



RATING CHARACTERISTIC CURVES (2SB1197KPT)

Fig.5 Grounded emittterpropgation characteristics

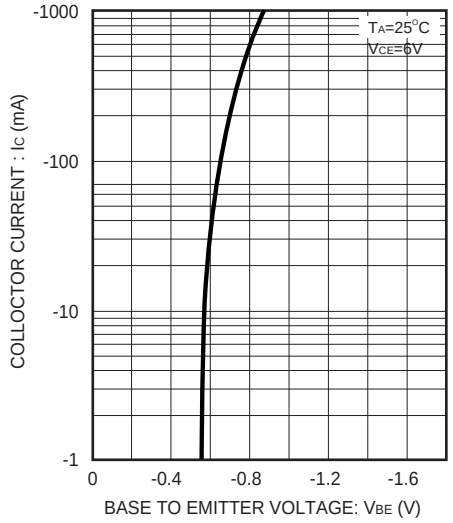


Fig.6 Grounded emitter output characteristics

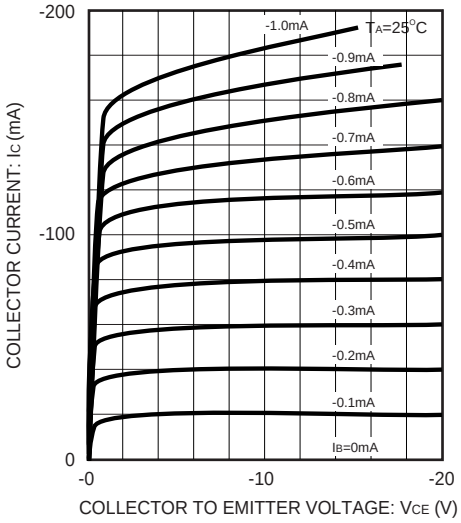


Fig.7 Grounded emitter output characteristics