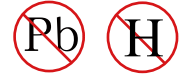




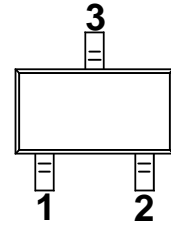
Low Frequency Transistor

PNP Silicon

**FEATURE**

- High current capacity in compact package.
 $I_C = -0.8A$.
- Epitaxial planar type.
- NPN complement: 2SD1781K
- Pb-Free Package is available.

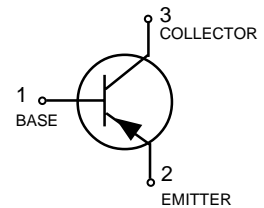
SOT-23 (TO-236AB)

**DEVICE MARKING AND ORDERING INFORMATION**

Device	Marking	Shipping
2SB1197KQ	AHQ	3000/Tape&Reel
2SB1197KR	AHR	3000/Tape&Reel

MAXIMUM RATINGS($T_a=25^\circ C$)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	-40	V
Collector-emitter voltage	V_{CEO}	-32	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-0.8	A
Collector power dissipation	P_C	0.2	W
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to 150	$^\circ C$

**ELECTRICAL CHARACTERISTICS**($T_a=25^\circ C$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	-40	-	-	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	-32	-	-	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EBO}	-5	-	-	V	$I_E = -50\mu A$
Collector cutoff current	I_{CBO}	-	-	-0.5	μA	$V_{CB} = -20V$
Emitter cutoff current	I_{EBO}	-	-	-0.5	μA	$V_{EB} = -4V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.5	V	$I_C/I_B = -0.5A / -50mA$
DC current transfer ratio	h_{FE}	120	-	390	-	$V_{CE} = -3V, I_C = -100mA$
Transition frequency	f_T	-	200	-	MHz	$V_{CE} = -5V, I_E = 50mA, f = 100MHz$
Output capacitance	C_{ob}	-	12	30	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

 h_{FE} values are classified as follows :

Item(*)	Q	R
h_{FE}	120~270	180~390

DEVICE CHARACTERISTICS

2SB1197KQ/R

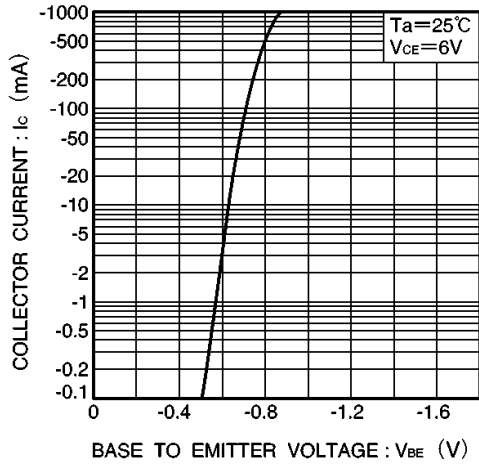


Fig.1 Grounded emitter propagation characteristics

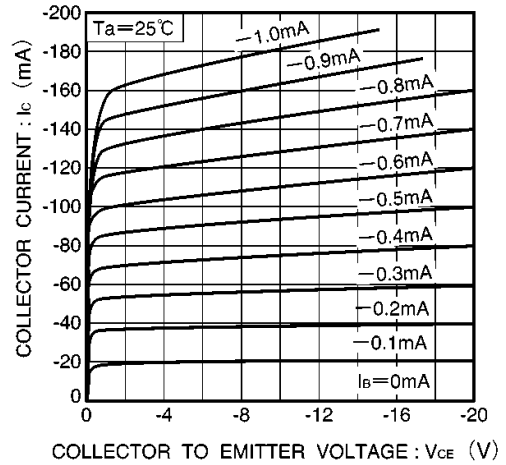


Fig.2 Grounded emitter output characteristics (I)

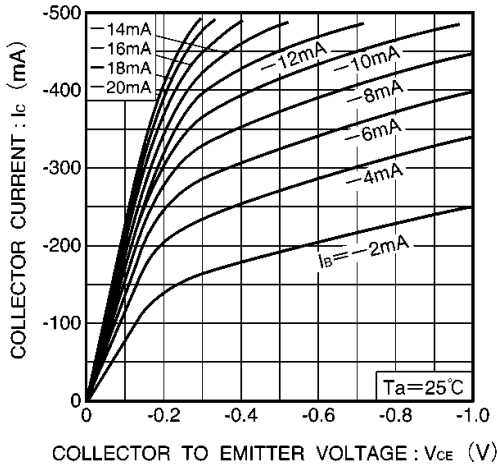


Fig.3 Grounded emitter output characteristics (II)

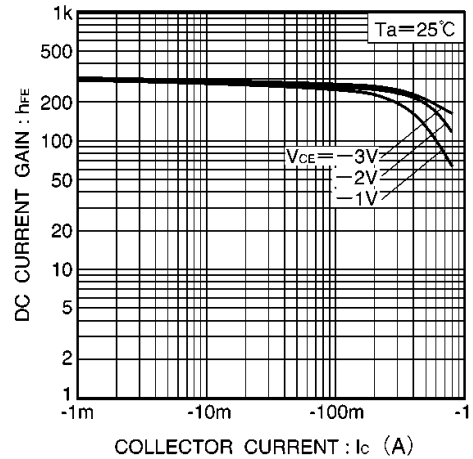


Fig.4 DC current gain vs. collector current

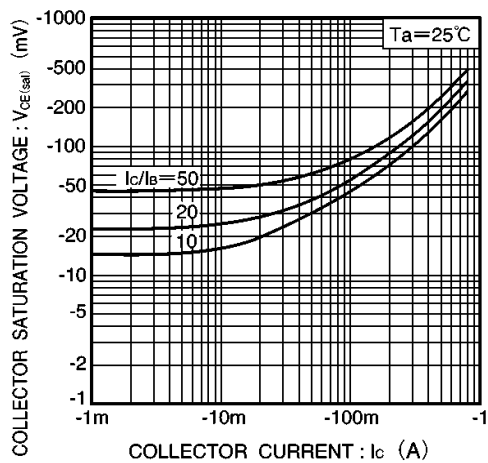


Fig.5 Collector-emitter saturation voltage vs. collector current

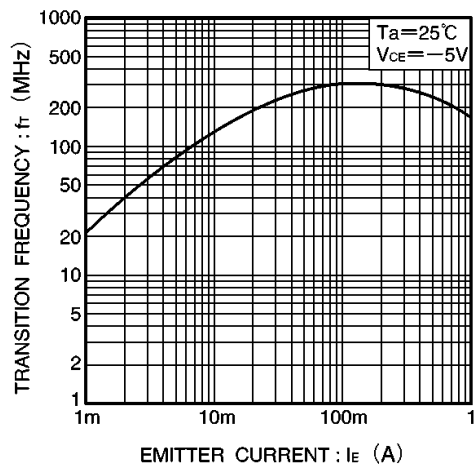


Fig.6 Gain bandwidth product vs. emitter current

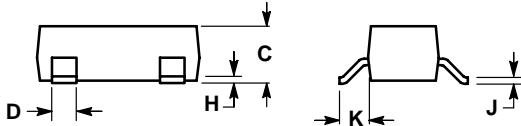
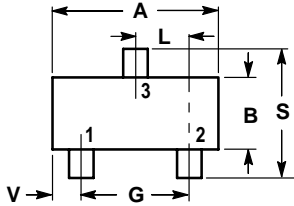
PACKAGE OUTLINE & DIMENSIONS

2SB1197KQ/R

SOT-23

NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

