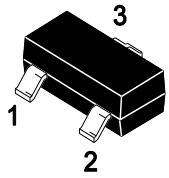
Low Frequency Transistor
PNP Silicon

2SB1197K Series
S-2SB1197K Series

FEATURE

- High current capacity in compact package.
  I_C = −0.8A.
- Epitaxial planar type.
- NPN complement: 2SD1781K
- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.



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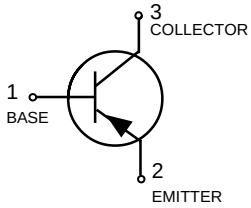
DEVICE MARKING AND ORDERING INFORMATION

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



MAXIMUM RATINGS(Ta=25°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	Tj	150	°C
Storage temperature	Tstg	–55 to 150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	–40	–	–	V	I_C= –50μA
Collector-emitter breakdown voltage	BV_{CEO}	–32	–	–	V	I_C= –1mA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E= –50μA
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	Cob	–	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

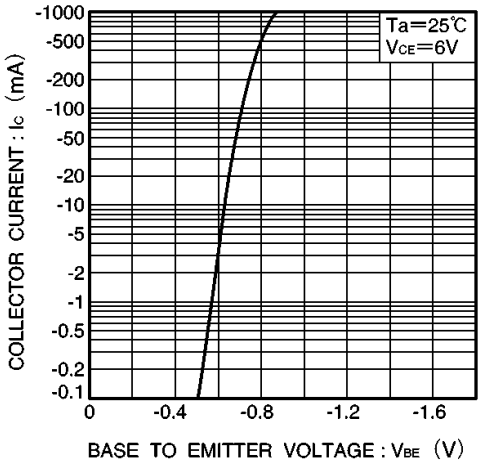


Fig.1 Grounded emitter propagation characteristics

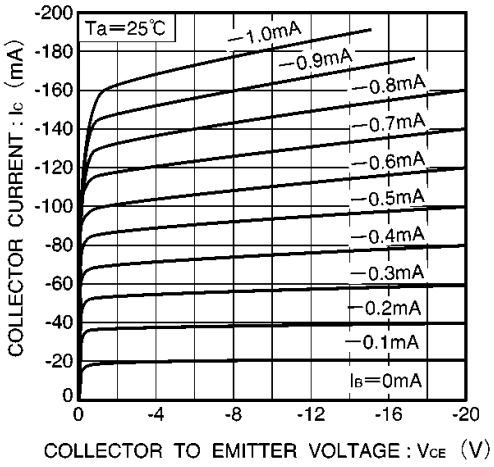


Fig.2 Grounded emitter output characteristics (Ⅰ)

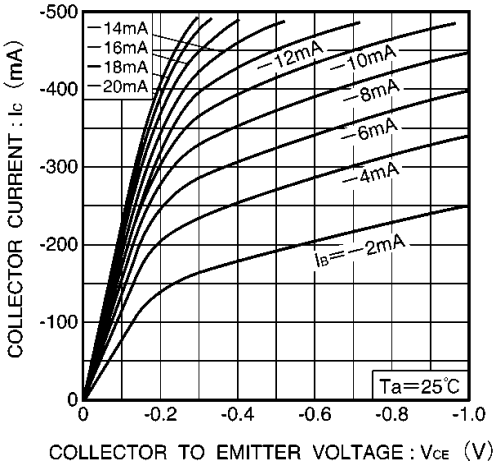


Fig.3 Grounded emitter output characteristics (Ⅱ)

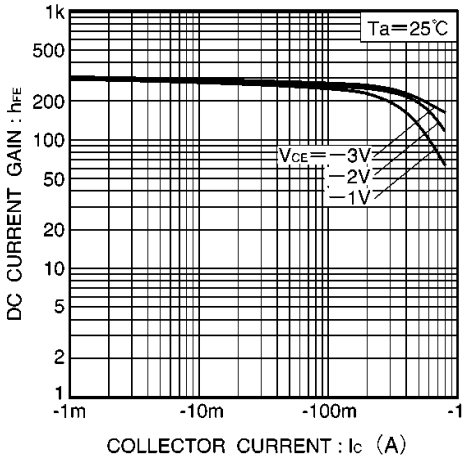


Fig.4 DC current gain vs. collector current

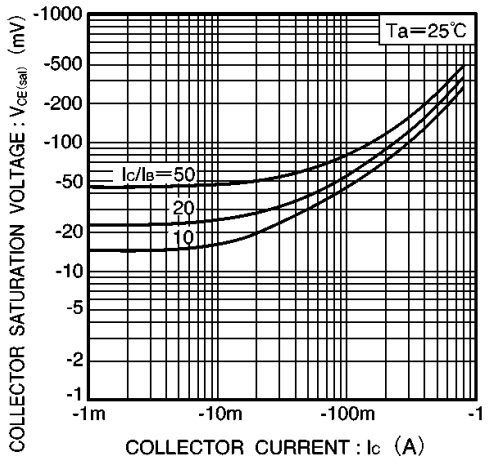


Fig.5 Collector-emitter saturation voltage vs. collector current

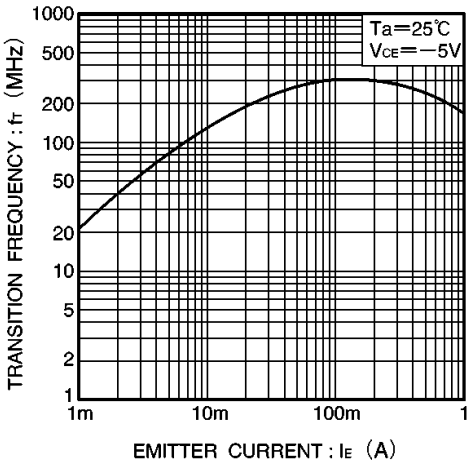


Fig.6 Gain bandwidth product vs. emitter current

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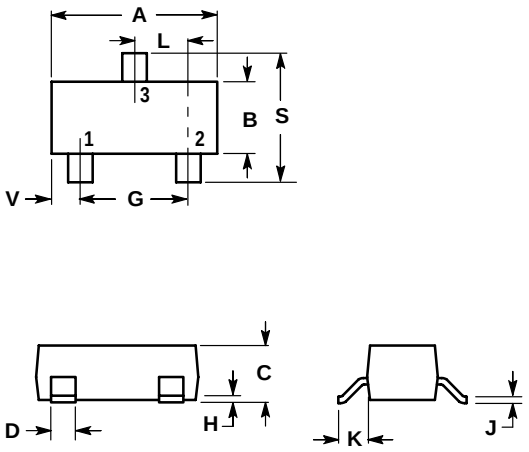

NOTES:

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