

### PNP Silicon

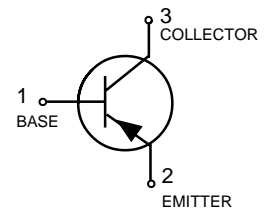
#### FEATURE

- 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.  
**Pb-Free package is available**  
RoHS product for packing code suffix "G"  
Halogen free product for packing code suffix "H"



#### DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
2SB1197KQLT1	AHQ	3000/Tape&Reel
2SB1197KRLT1	AHR	3000/Tape&Reel



#### MAXIMUM RATINGS(Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	-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	°C
Storage temperature	$T_{stg}$	-55 to 150	°C

#### ELECTRICAL CHARACTERISTICS(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CB0}$	-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	$\mu A$	$V_{CB} = -20V$
Emitter cutoff current	$I_{EBO}$	-	-	-0.5	$\mu A$	$V_{EB} = -4V$
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

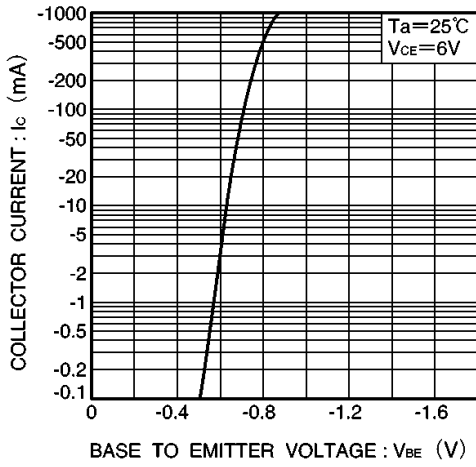


Fig.1 Grounded emitter propagation characteristics

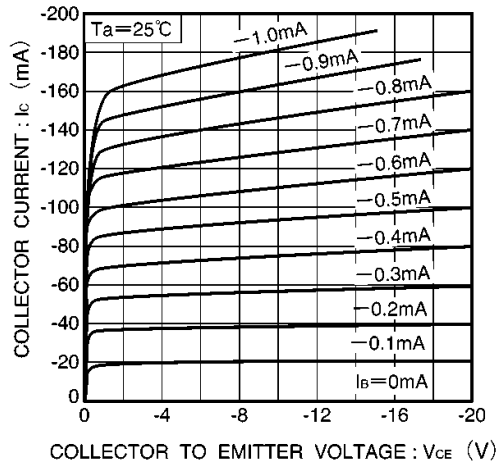


Fig.2 Grounded emitter output characteristics ( I )

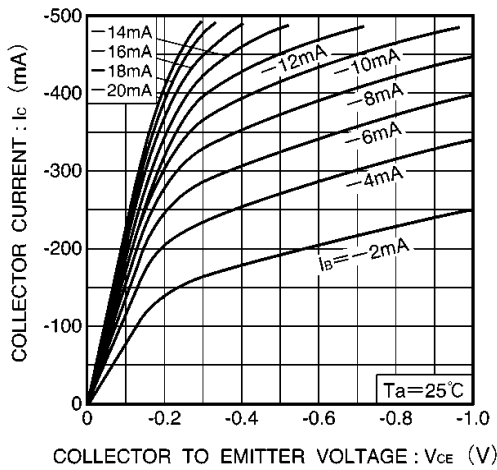


Fig.3 Grounded emitter output characteristics ( II )

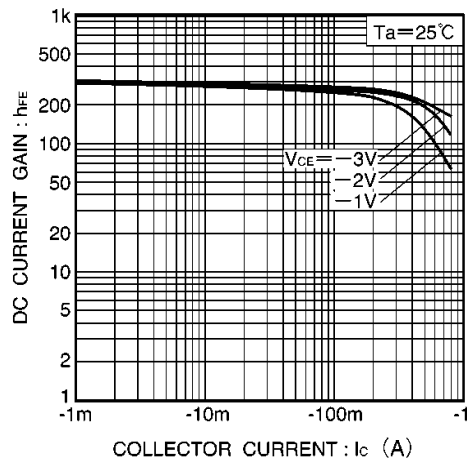


Fig.4 DC current gain vs. collector current

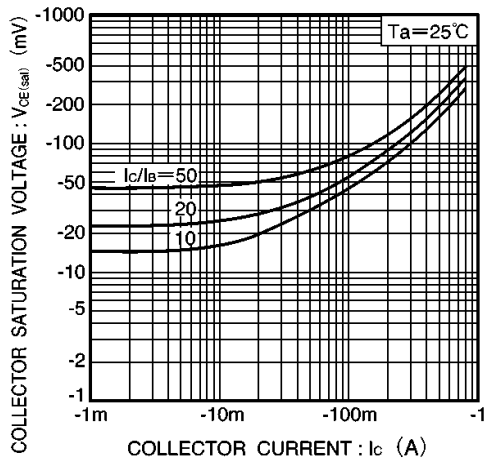


Fig.5 Collector-emitter saturation voltage vs. collector current

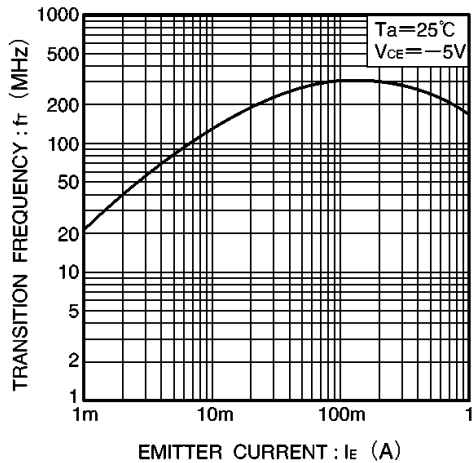
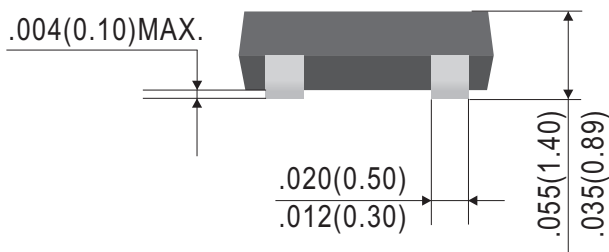
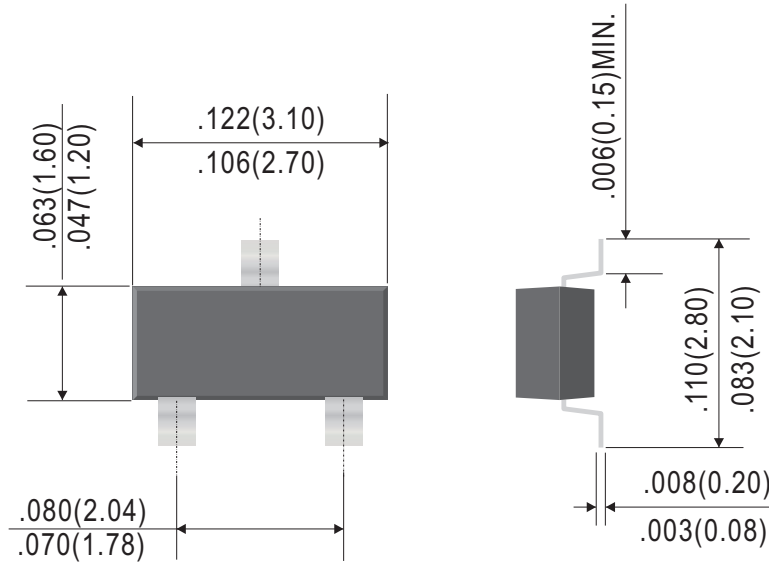


Fig.6 Gain bandwidth product vs. emitter current

**SOT-23**



Dimensions in inches and (millimeters)

