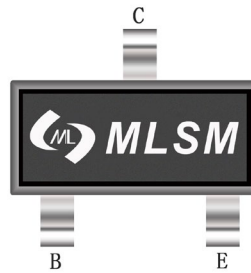
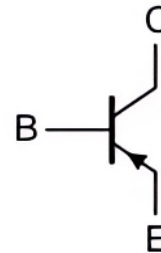


Features

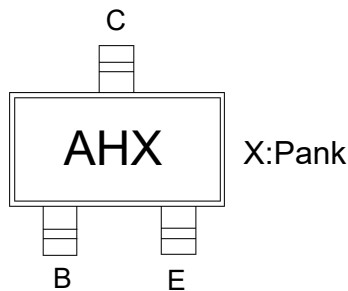
- Low $V_{CE(sat)}$. $V_{CE(sat)} < -0.5V (I_C / I_B = -0.5A / -50mA)$
- $I_C = -0.8A$.
- Complements the 2SD1781.



SOT-23 top view



Schematic diagram



Marking and pin assignment



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-32	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.8	mA
P_C	Collector Power Dissipation	200	mW
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

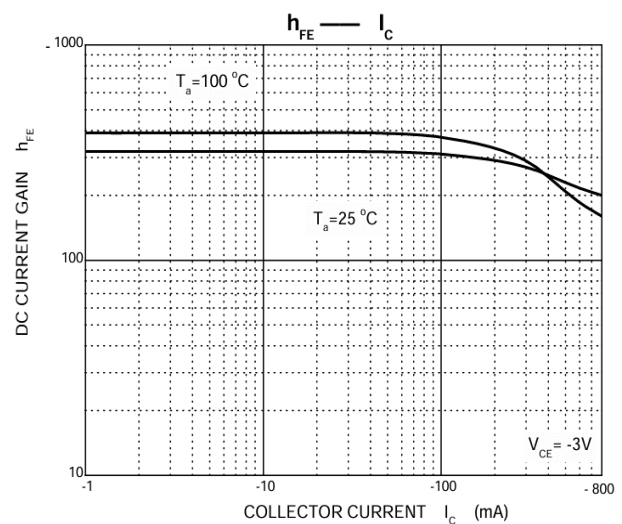
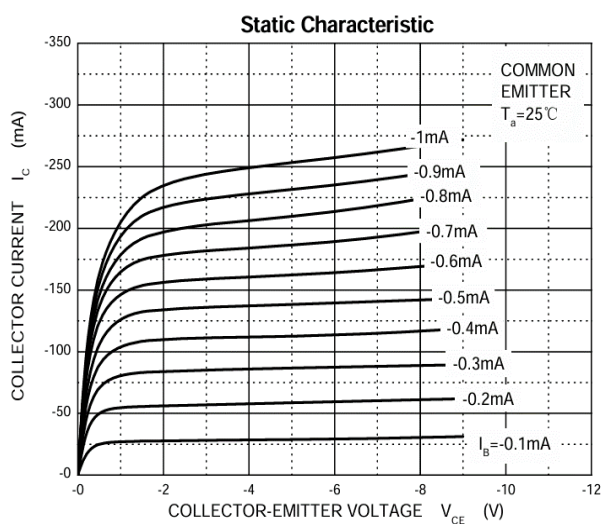
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SB1197	SOT-23	AHP/AHQ/AHR	3,000	45,000	180,000	7"reel

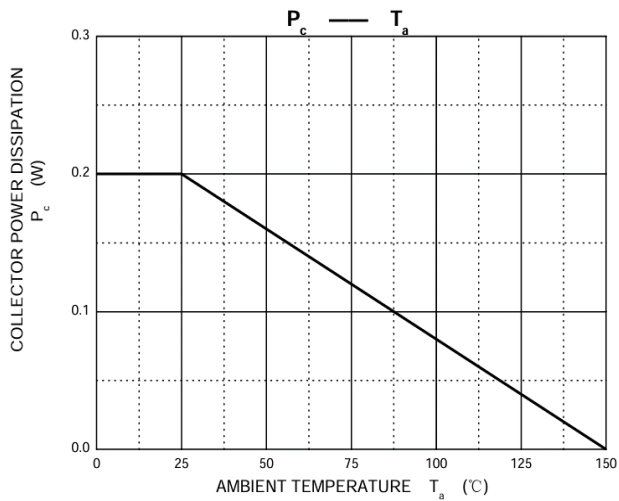
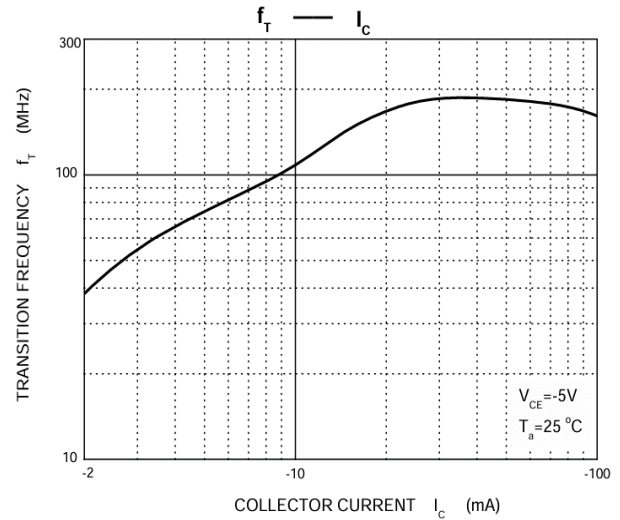
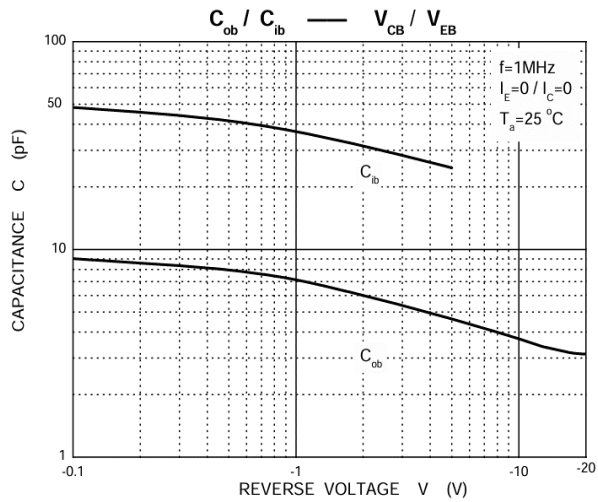
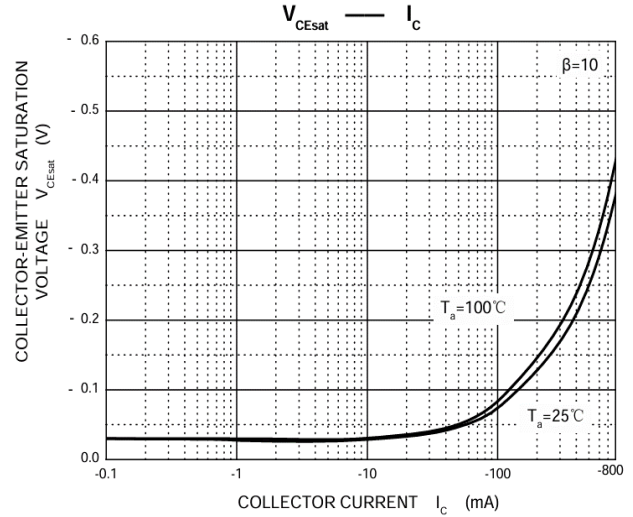
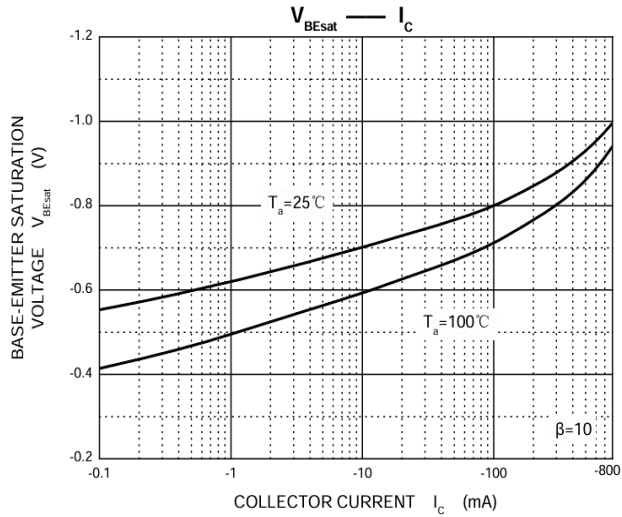
Electrical Characteristics (Ta=25°C unless otherwise specified)

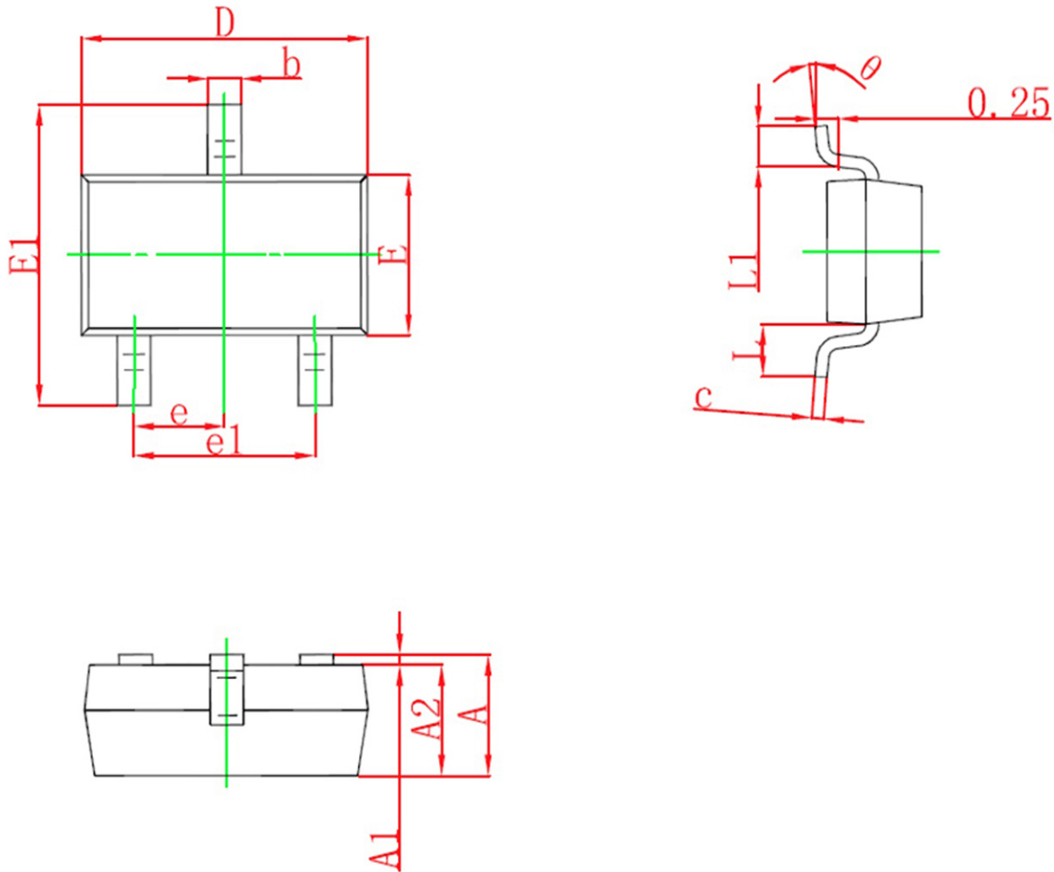
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -50\mu A, I_E = 0$	-40	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1mA, I_B = 0$	-32	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -50\mu A, I_C = 0$	-5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -20V, I_E = 0$	--	--	-0.5	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4V, I_C = 0$	--	--	-0.5	μA
H_{FE}	DC current gain	$V_{CE} = -3V, I_C = -100mA$	82	--	390	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -500A, I_B = -50mA$	--	--	-0.5	V
C_{ob}	Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$	--	12	30	pF
f_T	Transition frequency	$V_{CE} = -5V, I_C = -50mA, f = 100MHz$	50	200	--	MHz

Classification of h_{FE}

Rank	P	Q	R
Marking	AHP	AHQ	AHR
Range	82-180	120-270	180-390

Typical Operating Characteristics




SOT-23 Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°