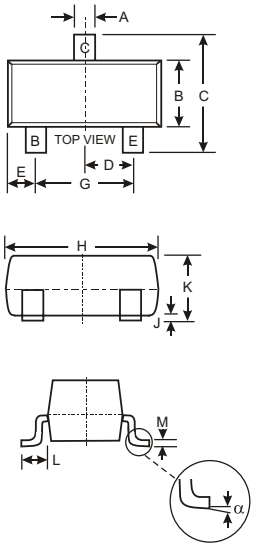
HAICHUANG SEMI

MMBTSB1197

PNP SILICON EPITAXIAL PLANAR TRANSISTOR

Features

- High current capacity in compact package.
- NPN complement:MMBTSD1781
- Pb-Free Package is available.



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings @ T_A = 25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-40	V
Collector Emitter Voltage	V_{CEO}	-25	V
Emitter Base Voltage	V_{EBO}	-6	V
Collector Current	I_C	-800	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{Stg}	- 55 to + 150	°C

Electrical Characteristics @ T_A = 25°C unless otherwise specified

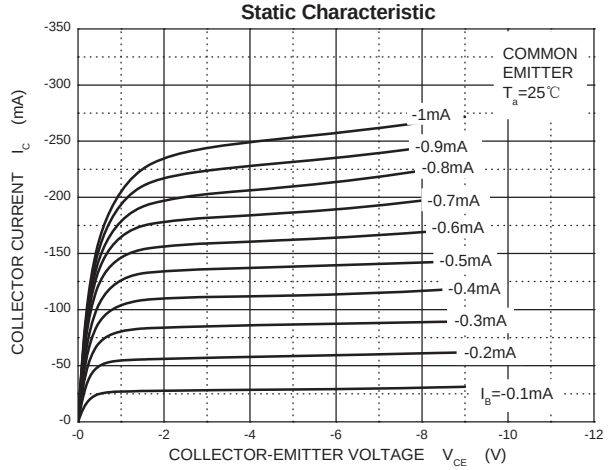
Parameter	Symbol	est conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C =-50μA, I_E=0	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = -1mA, I_B=0	-32			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E= -50μA, I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-20V,I_E=0			-0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}= -4V,I_C=0			-0.5	μA
DC current gain	h_{FE}	V_{CE}=-3V,I_C= -100mA	120		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500 mA, I_B= -50mA			-0.5	V
Transition frequency	f_T	V_{CE}=-5V, I_C= -50mA, f=100MHz	50	20		MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V,I_E=0,f=1MHz		12	30	pF

CLASSIFICATION OF h_{FE}

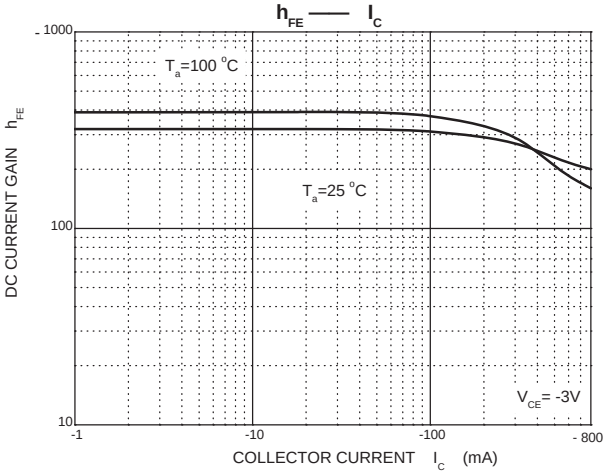
Rank	Q	R
Range	120-270	180-390
Marking	AHQ	AHR

TYPICAL TRANSIENT CHARACTERISTICS

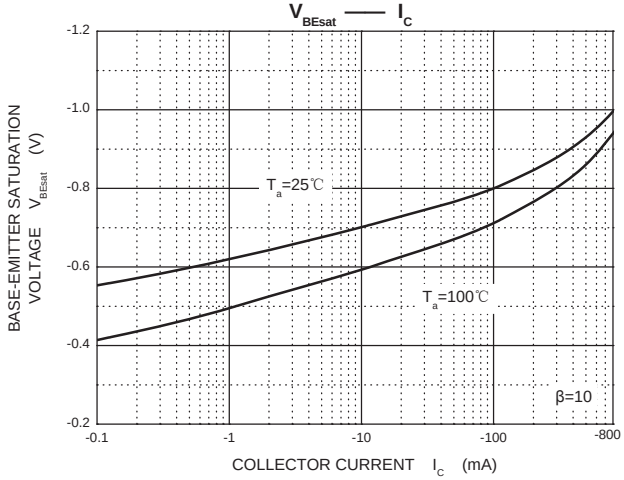
Static Characteristic



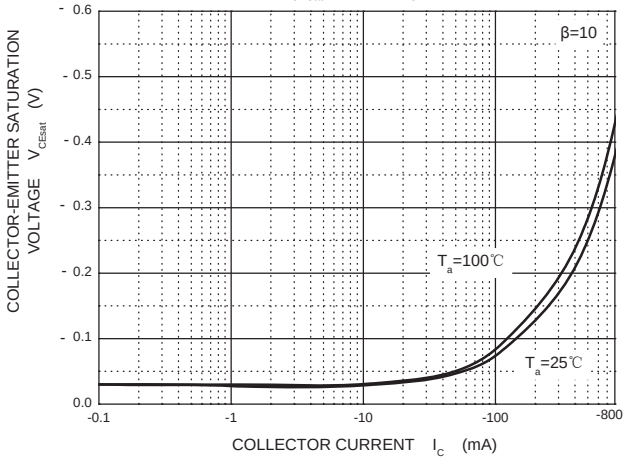
h_{FE} —— I_C



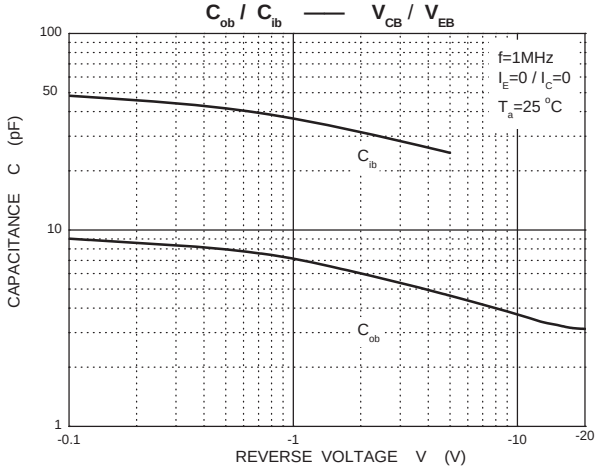
V_{BEsat} —— I_C



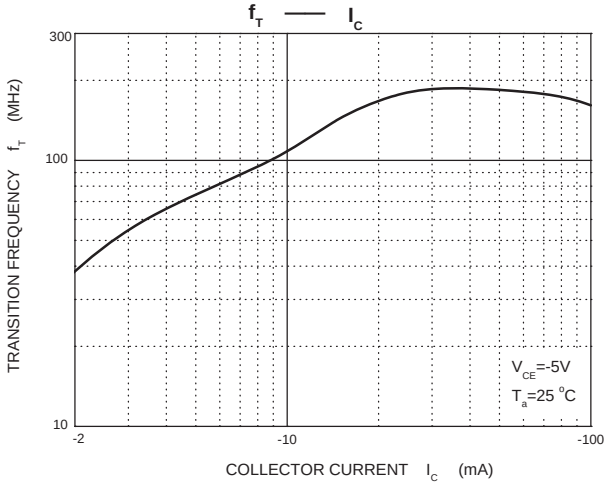
V_{CEsat} —— I_C



C_{ob} / C_{ib} —— V_{CB} / V_{EB}



f_T —— I_C



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