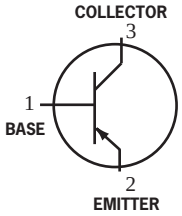
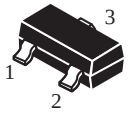
WEITRON

2SB1386

Epitaxial Planar Transistor
PNP Silicon

Pb Lead(Pb)-Free





SOT-23

MAXIMUM RATINGS (Ta=25℃)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	-20	Vdc
Collector-Base Voltage	V_{CBO}	-30	Vdc
Emitter-Base Voltage	V_{EBO}	-6.0	Vdc
Collector Current-Continuous	I_C		mAdc

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Total Device Dissipation FR-5 Board(1) T_A =25℃	P_D	150	mW
Derate above 25℃		0.5	mW/℃
Thermal Resistance, Junction Ambient	$R_{\theta JA}$	833	℃/W
Junction and Storage, Temperature	T_J, Tstg	-55 to +150	℃

Device Marking

2SB1386=

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage(I_C =-1 mAdc, I_B=0)	$V_{(BR)CEO}$	-20	-	Vdc
Collector-Base Breakdown Voltage(I_C =-50 uAdc, I_E=0)	$V_{(BR)CBO}$	-30	-	Vdc
Emitter-Base Breakdown Voltage(I_E =-50 uAdc, I_C =0)	$V_{(BR)EBO}$	-6.0	-	Vdc
Collector Cufoff Current(V_{CB}=-20Vdc, I_E=0)	I_{CBO}	-	-0.5	uAdc
Emitter Cufoff Current(V_{EB} =-5Vdc, I_C=0)	I_{EBO}	-	-0.5	uAdc

1. FR-5=1.0×0.75×0.062 in

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (Countinued)

Characteristics	Symbol	Min	TYP	Max	Unit
ON CHARACTERISTICS					
DC Current Gain (I_C = -0.5 Adc, V_{CE} = -2.0 Vdc)	hFE	82	-	390	-
Transition Frequency (I_E = 50 mAdc, V_{CE} = -6.0 Vdc, f=30MHz)	fT	-	120	-	Vdc
Output Capacitance (I_E = 0 Adc, V_{CB} = -20 Vdc, f=1MHz)	Cob	-	60	-	pF

Classification of h_{FE}

Rank	P	Y	G
Range	82-180	120-270	180-390
Marking			

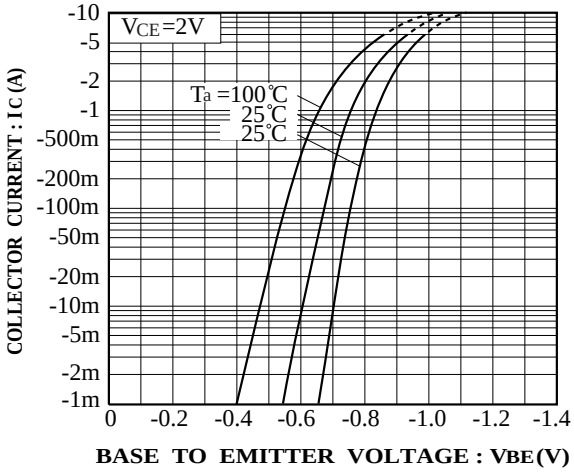


FIG.1 Grounded Emitter Propagation Characteristics

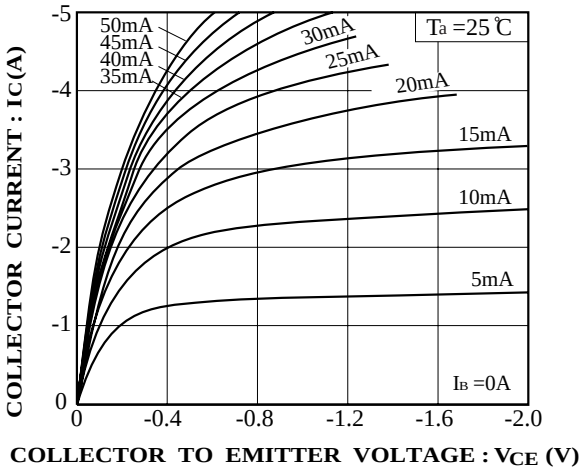


FIG.2 Grounded Emitter Output Characteristics

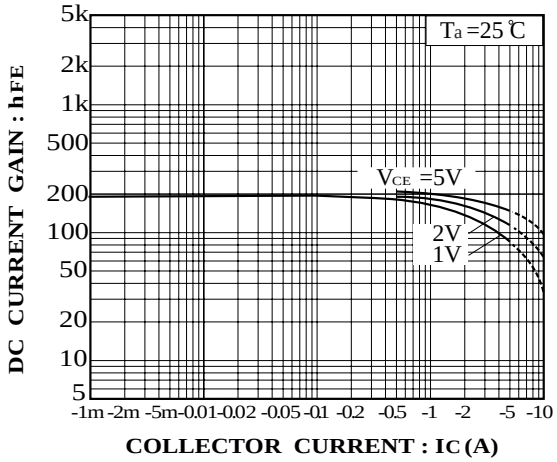


FIG.3 DC Current Gain vs. Collector Current

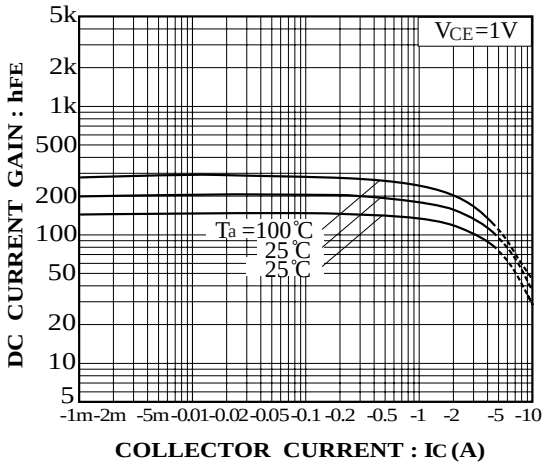


FIG.4 DC Current Gain vs. Collector Current

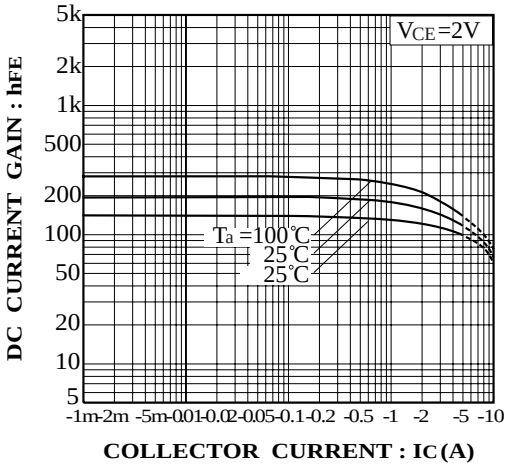


FIG.5 DC Current Gain vs. Collector Current

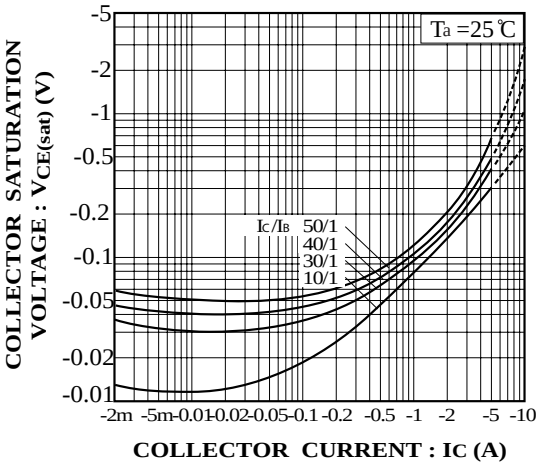


FIG.6 Collector-Emitter Saturation Voltage vs. Collector Current

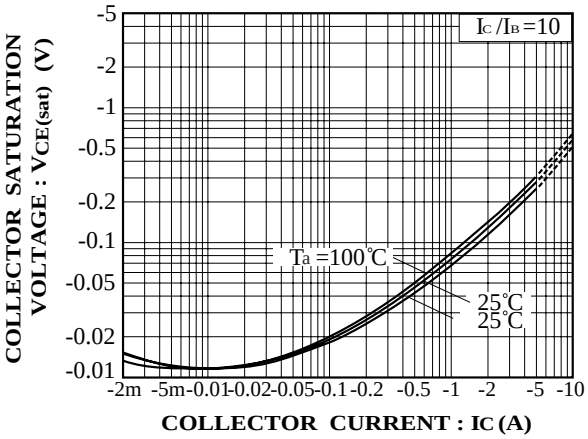


FIG.7 Collector-Emitter Saturation Voltage vs. Collector Current

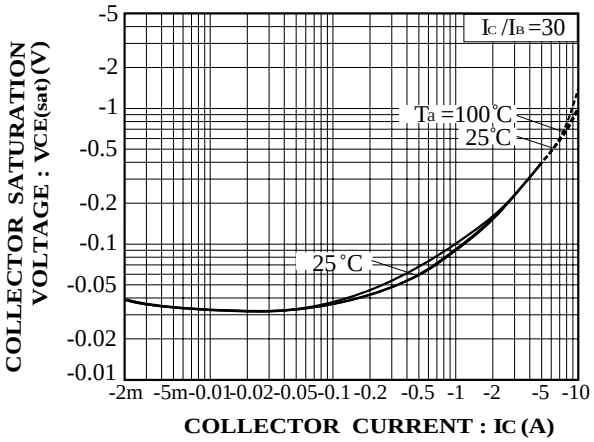


FIG.8 Collector-Emitter Saturation Voltage vs. Collector Current

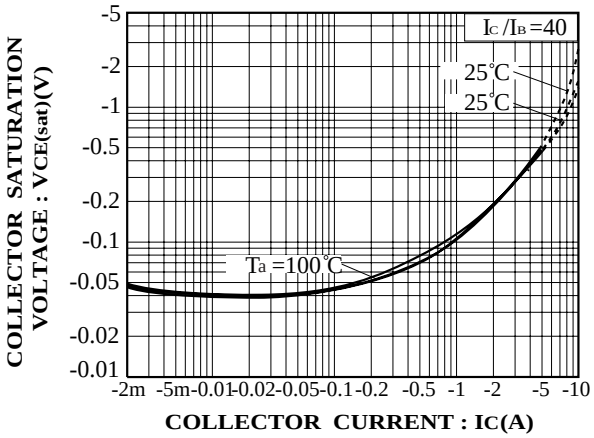


FIG.9 Collector-Emitter Saturation Voltage vs. Collector Current

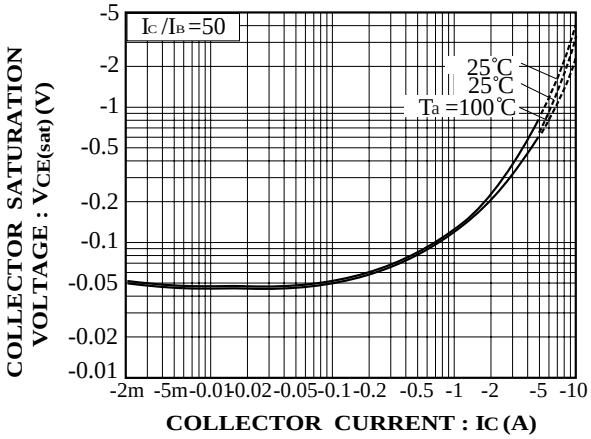


FIG.10 Collector-Emitter Saturation Voltage vs. Collector Current

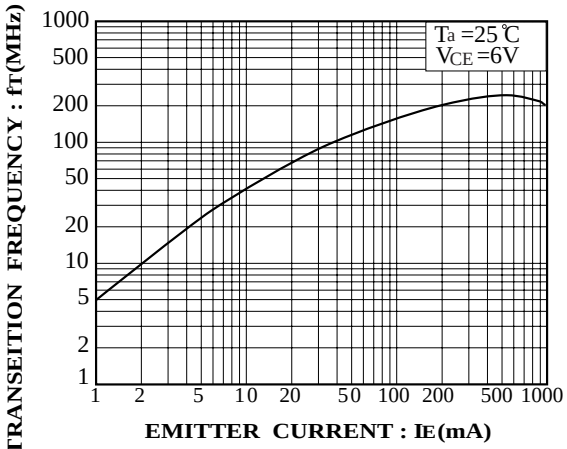


FIG.11 Gain Bandwidth Product vs. Emitter Current

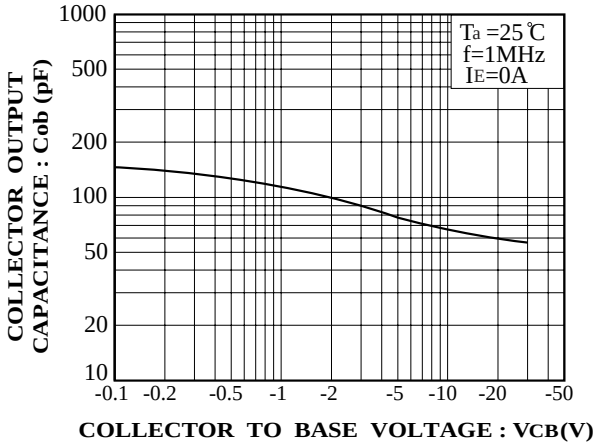


FIG.12 Collector Output Capacitance vs. Collector-Base Voltage

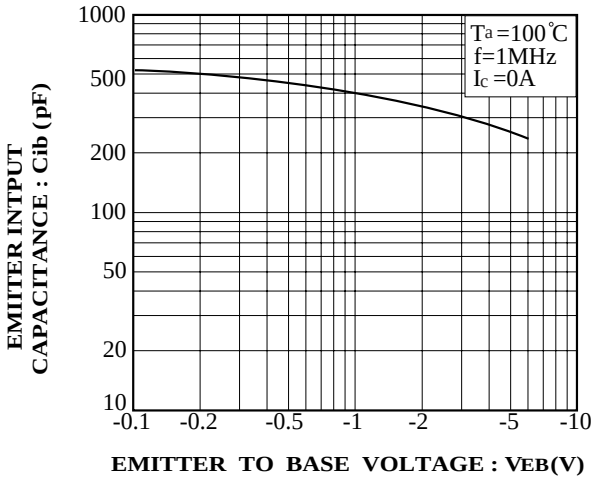
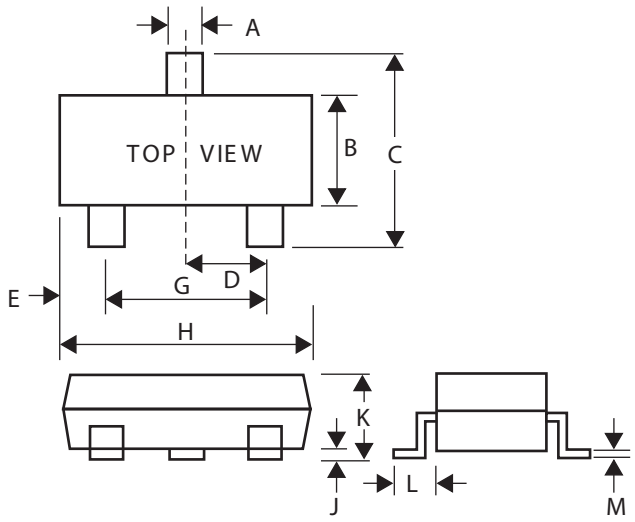


FIG.13 Emitter Input Capacitance vs. Emitter-Base Voltage

SOT-23 Package Outline Dimensions

Unit:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25