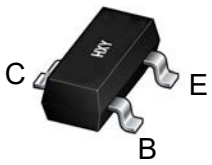
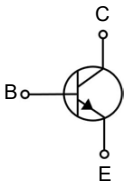
Features

- Collector Current: I_C=0.1A
- Power Dissipation of 200mw



SOT-23



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BFS17NTA	SOT-23	R25	3000

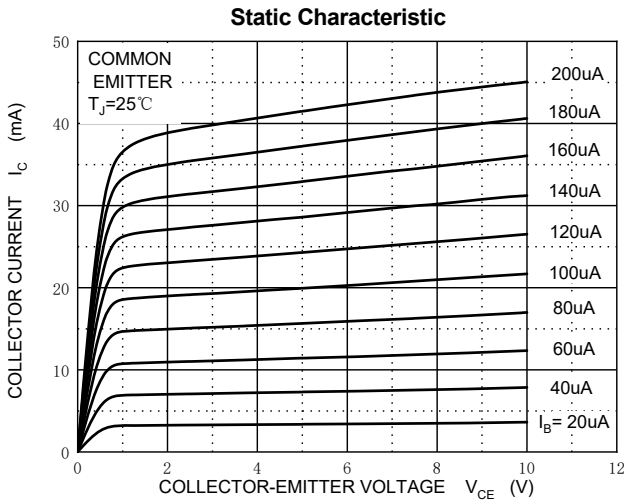
Maximum Ratings (Ta=25°C unless otherwise noted)

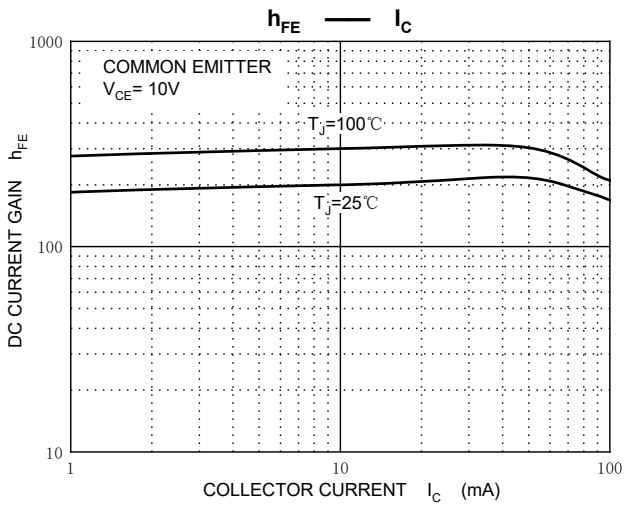
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	20	V
Collector-Emitter Voltage	V_{CEO}	12	V
Emitter-Base Voltage	V_{EBO}	3	V
Collector Current	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Thermal Resistance From Junction To Ambient	$R_{\Theta JA}$	625	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55～+150	°C

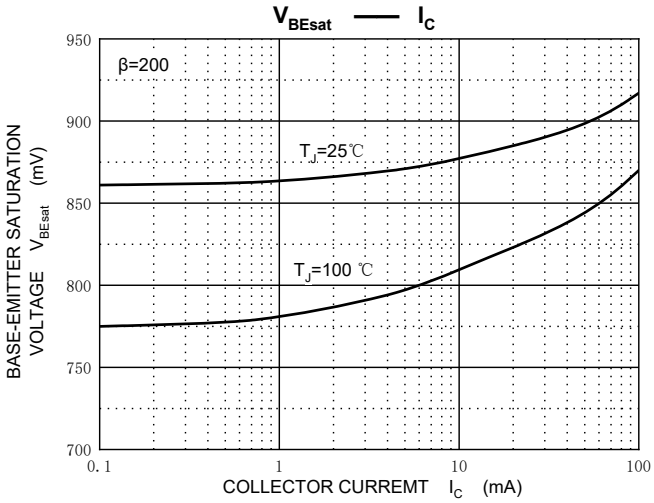
Electrical Characteristics(Ta=25°C unless otherwise specified)

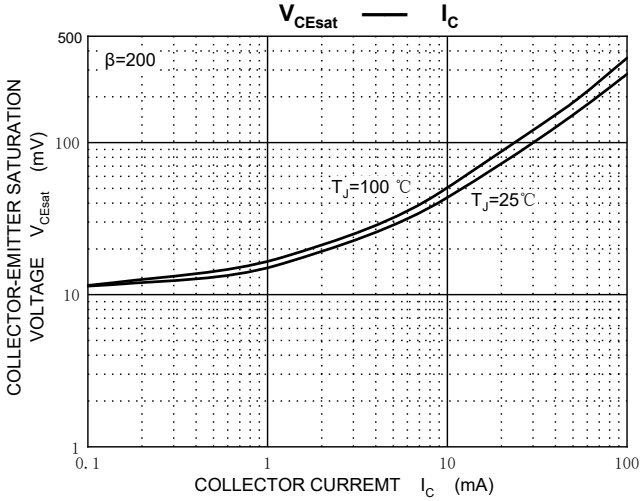
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA, I_E=0	20			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA, I_B=0	12			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA, I_C=0	3			V
Collector cut-off current	I_{CBO}	V_{CB}=10V, I_E=0			1	uA
Emitter cut-off current	I_{EBO}	V_{EB}=1V, I_C=0			1	uA
DC current gain	$h_{FE(1)}$	V_{CE}=10V, I_C=20mA	125		250	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA, I_B=5mA			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=50mA, I_B=5mA			1.15	V
Transition frequency	f_T	V_{CE}=10V,I_C=20mA		7		GHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		0.8	1	pF
Noise Figure	N_F	V_{CB}=10V, I_C=7mA, f=1GHz		1.65	2	dB

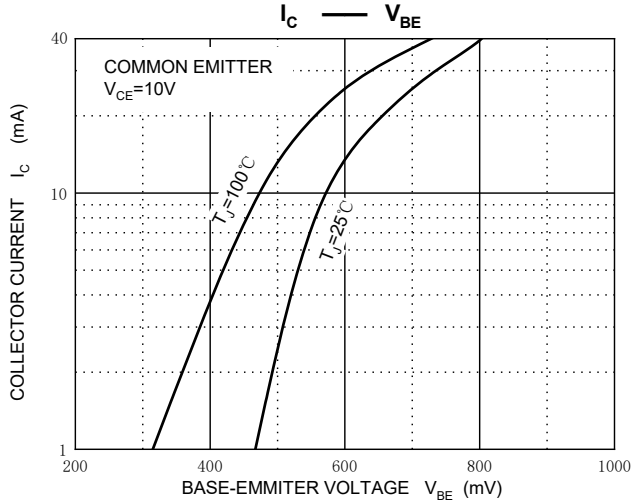
Typical Characteristics

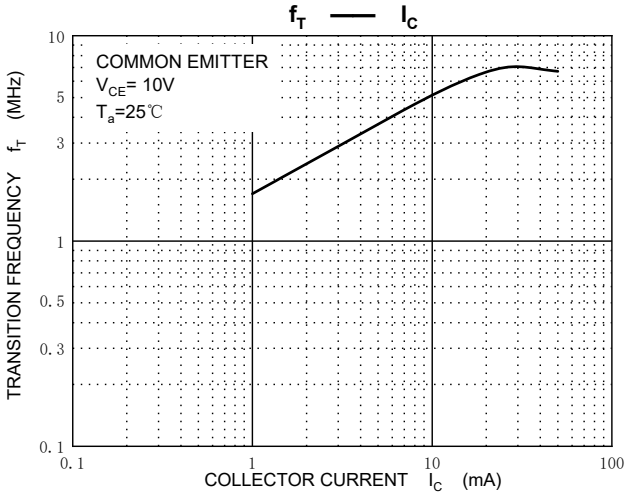


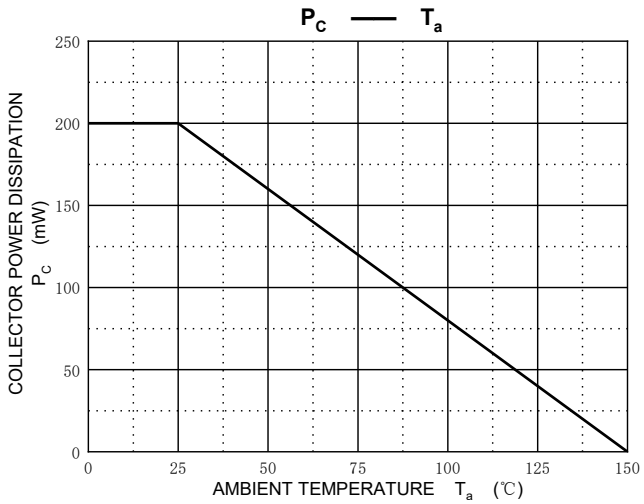



V_{BEsat} — I_C
β=200
T_J=25℃
T_J=100 ℃
BASE-EMITTER SATURATION VOLTAGE V_{BEsat} (mV)
950
900
850
800
750
700
0.1
1
10
100
COLLECTOR CURREMT I_C (mA)

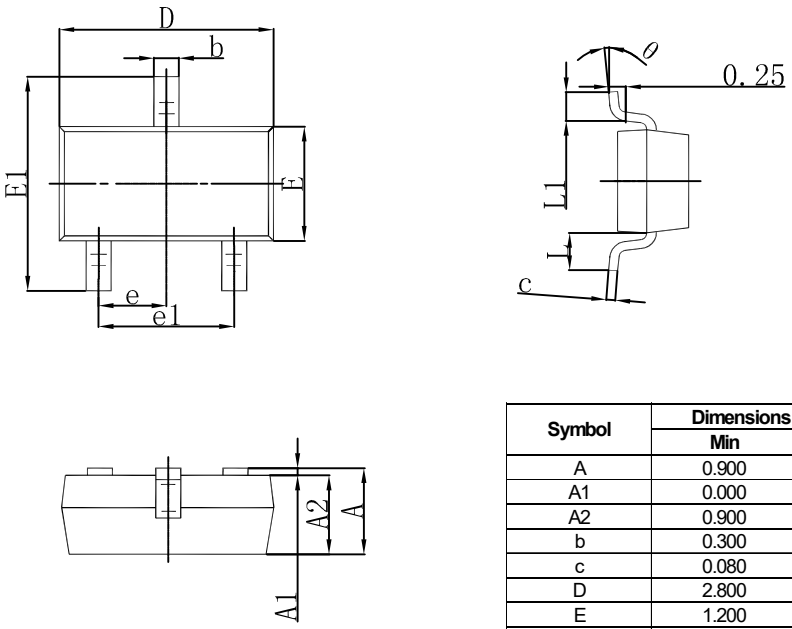

V_{CEsat} — I_C
β=200
T_J=100 ℃
T_J=25℃
COLLECTOR-EMITTER SATURATION VOLTAGE V_{CEsat} (mV)
500
100
10
1
0.1
1
10
100
COLLECTOR CURREMT I_C (mA)


I_C — V_{BE}
COMMON EMITTER
V_{CE}=10V
T_J=100℃
T_J=25℃
COLLECTOR CURRENT I_C (mA)
40
10
1
200
400
600
800
1000
BASE-EMMITER VOLTAGE V_{BE} (mV)


f_T — I_C
COMMON EMITTER
V_{CE}= 10V
T_a=25℃
TRANSITION FREQUENCY f_T (MHz)
10
5
3
1
0.5
0.3
0.1
0.1
1
10
100
COLLECTOR CURRENT I_C (mA)

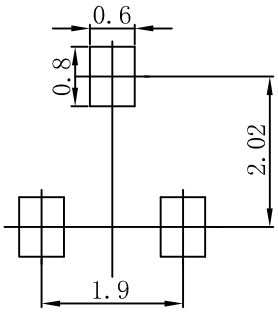

P_C — T_a
COLLECTOR POWER DISSIPATION P_C (mW)
250
200
150
100
50
0
0
25
50
75
100
125
150
AMBIENT TEMPERATURE T_a (℃)

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
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°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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