

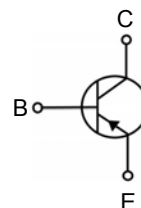
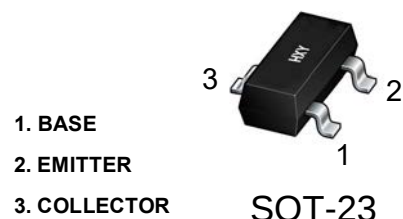


Features

- Ideally suited for automatic insertion
- For switching and AF amplifier applications

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BCW33	SOT-23	1G	3000



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

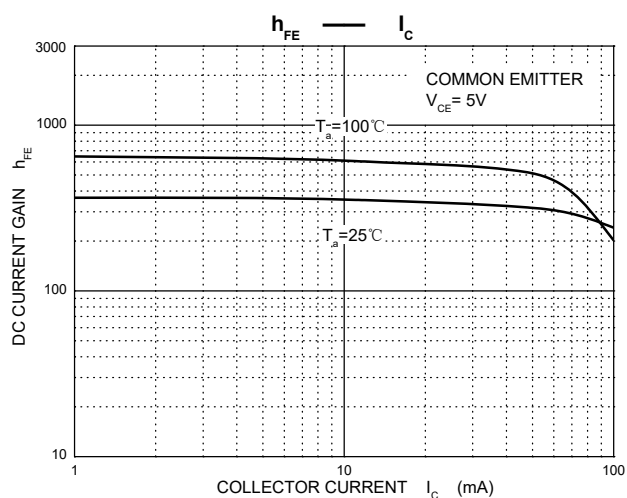
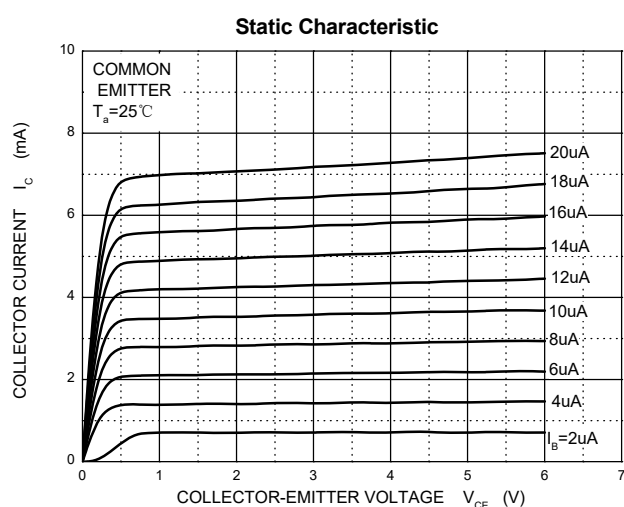
Symbol	Parameter	Limit	Unit
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	100	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55~+150	°C

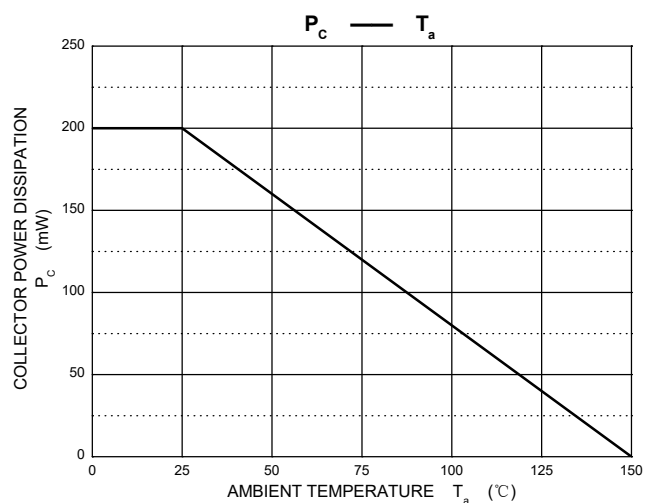
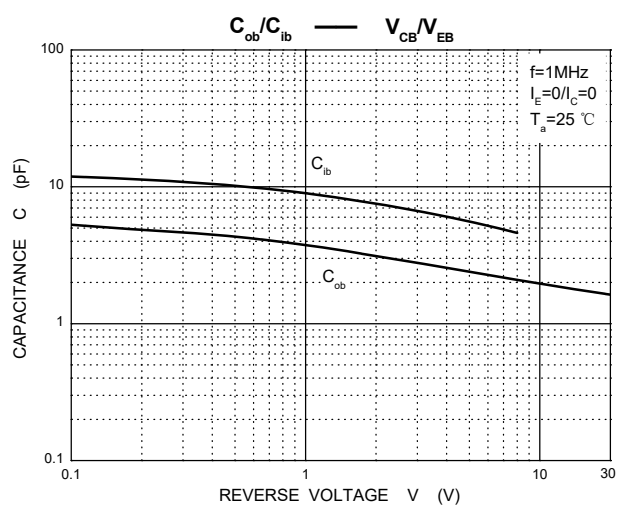
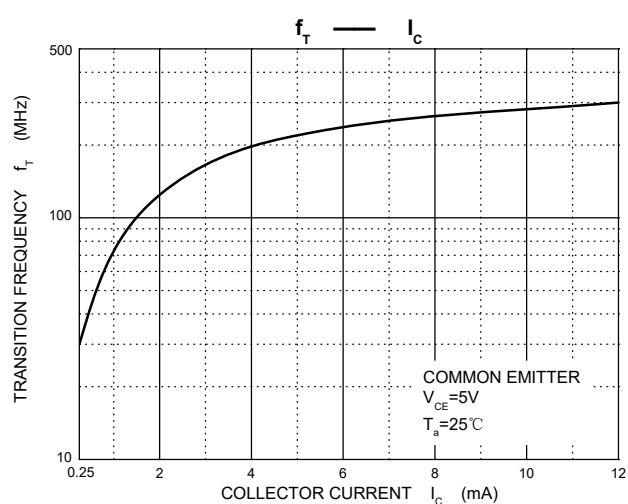
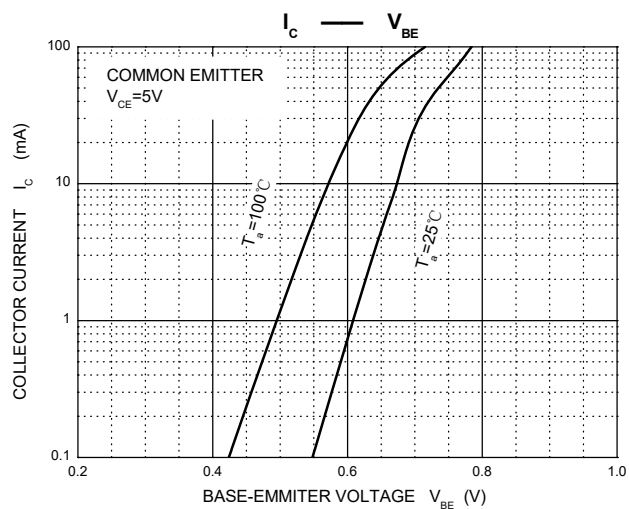
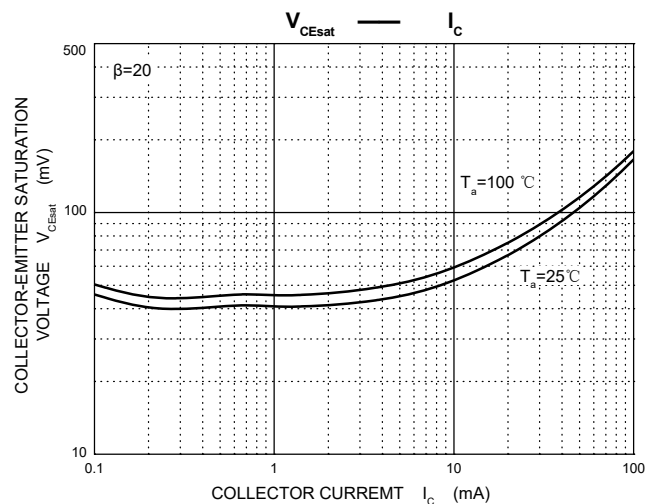
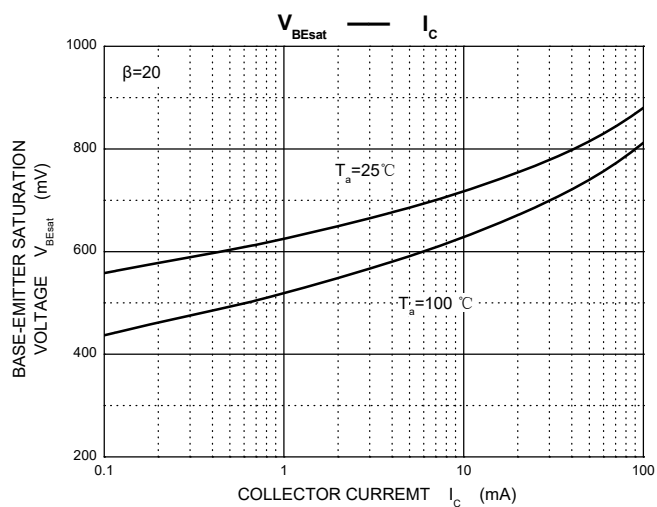


Electrcal Charcteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=10\mu A, I_E=0$	50		V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10mA, I_B=0$	45		V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10\mu A, I_C=0$	6		V
I_{CBO}	Collector cut-off current	$V_{CB}=50V, I_E=0$		100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V, I_C=0$		100	nA
h_{FE}	DC current gain	$V_{CE}=5V, I_C=2mA$	420	800	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100mA, I_B=5mA$		0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage			1.1	V
f_T	Transition frequency	$V_{CE}=5V, I_C=10mA, f=30MHz$	100		MHz
Cob	Collector output capacitance	$V_{CB}=10V, f=1MHz$		4.5	pF

Typical Characteristics







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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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