

TRANSISTOR (PNP)

## FEATURES

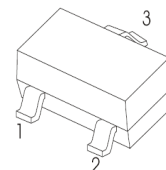
Complementary to BCW66, BCW68 is subdivided into three groups F, G and H according to its DC current gain.

## MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	-60	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current	-800	mA
P <sub>C</sub>	Collector Power Dissipation	330	mW
R <sub>ΘJA</sub>	Thermal Resistance From Junction To Ambient	379	°C/W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55~+150	°C

## SOT-23

1. BASE
2. EMITTER
3. COLLECTOR



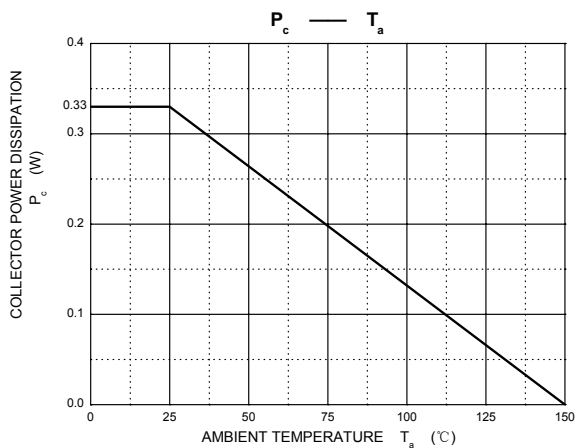
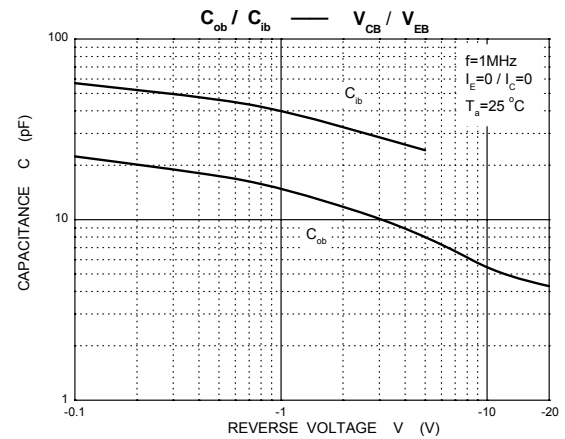
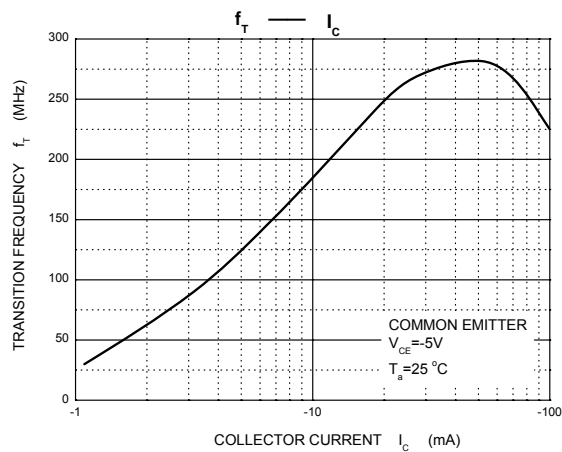
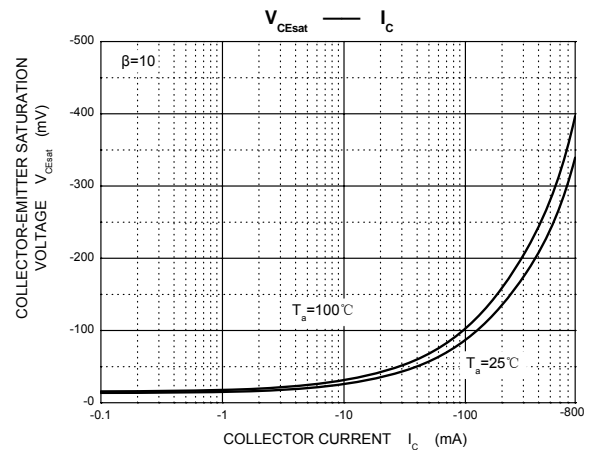
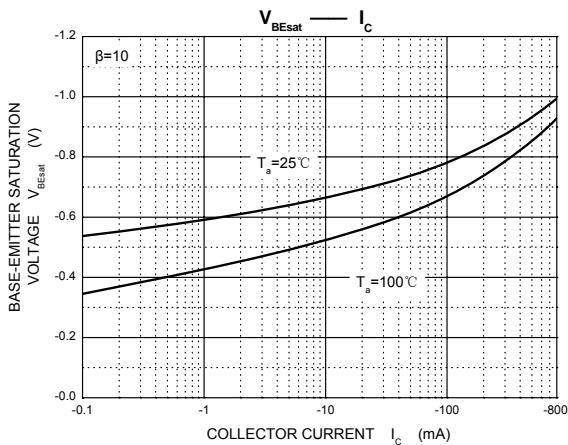
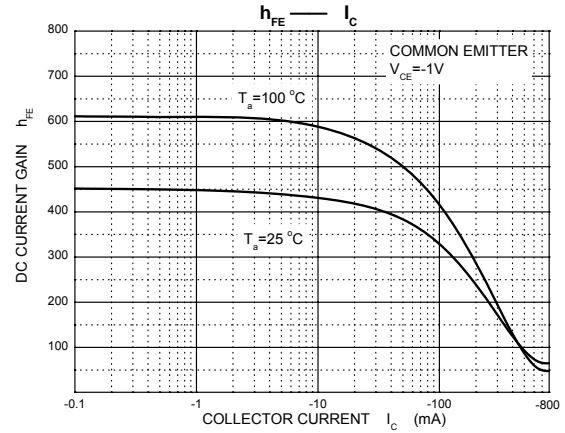
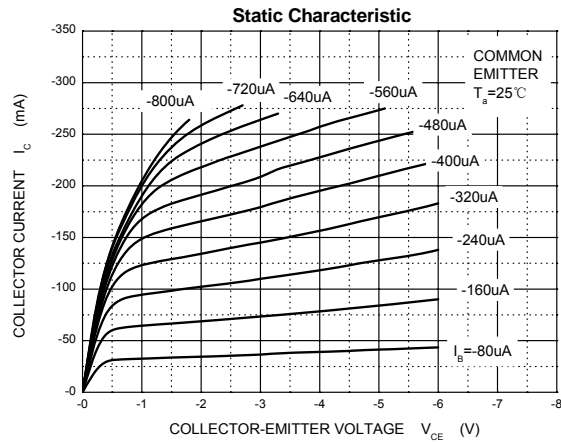
## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =-10 μA, I <sub>E</sub> =0	-60			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> =-10mA, I <sub>B</sub> =0	-45			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =-10 μA, I <sub>C</sub> =0	-5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =-45 V, I <sub>E</sub> =0			-0.02	μA
Collector cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =-4 V, I <sub>C</sub> =0			-0.02	μA
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> =-10V, I <sub>C</sub> =-0.1mA	F G H	35 50 80		
		V <sub>CE</sub> =-1V, I <sub>C</sub> =-10mA	F G H	75 120 180		
		V <sub>CE</sub> =-1V, I <sub>C</sub> =-100mA	F G H	100 160 250	250 400 630	
		V <sub>CE</sub> =-2V, I <sub>C</sub> =-500mA	F G H	35 60 100		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA			-0.3	V
		I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-0.7	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA			-1.25	V
		I <sub>C</sub> =-500mA, I <sub>B</sub> =-50mA			-2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-50mA, f=20MHz		200		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		6		pF
Input capacitance	C <sub>ib</sub>	V <sub>EB</sub> =-0.5V, I <sub>E</sub> =0, f=1MHz		60		pF

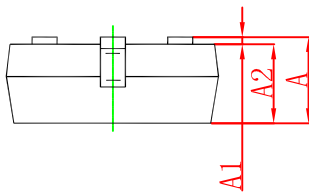
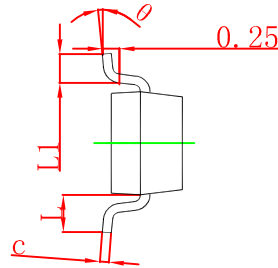
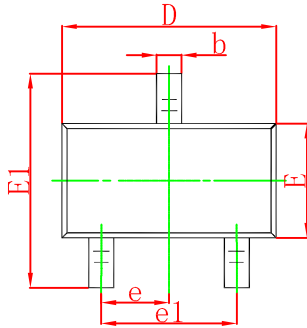
## MARKING

Rank	F	G	H
Range	100-250	160-400	250-630
Marking	DF	DG	DH

### Typical Characteristics

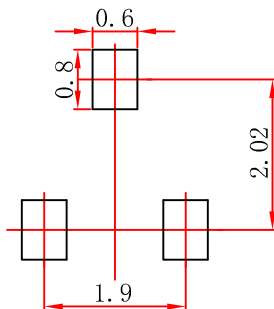


## SOT-23 Package Outline Dimensions



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
$\theta$	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.