BCW68 TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-23-3

FEATURES

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

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

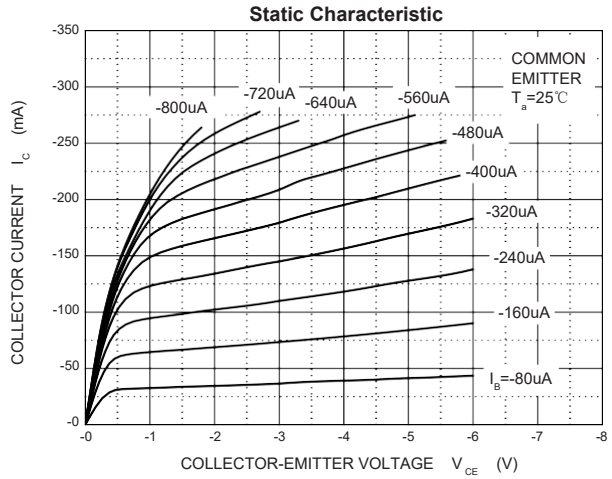
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-800	mA
P_C	Collector Power Dissipation	330	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	379	℃/W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55～+150	℃

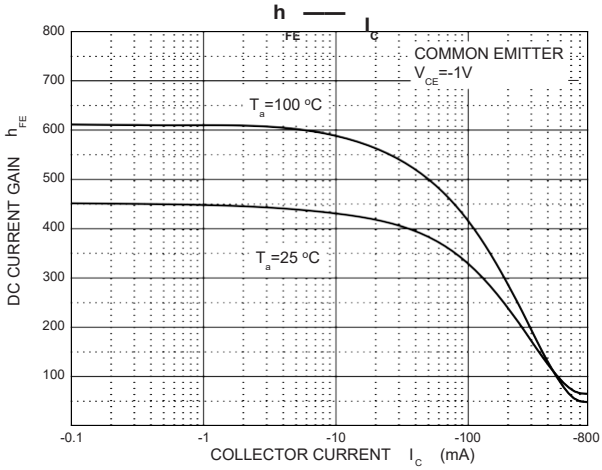
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

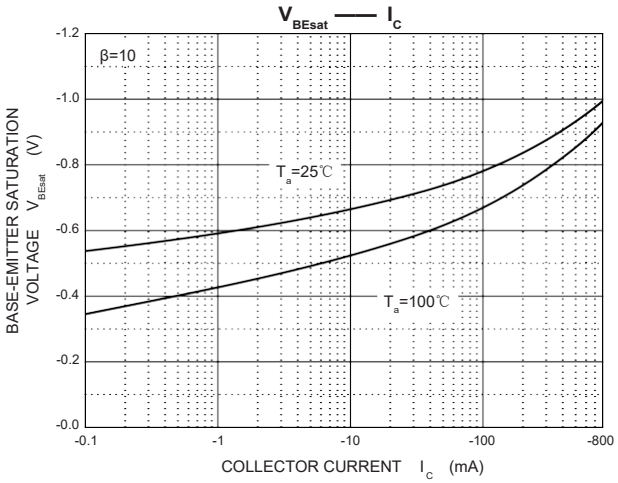
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=- 10 μ A, I_E=0		-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= -10mA, I_B=0		-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10 μ A, I_C=0		-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-45 V, I_E=0				-0.02	μ A
Collector cut-off current	I_{EBO}	V_{EB}=-4 V, I_C=0				-0.02	μ A
DC current gain	h_{FE1}	V_{CE}=-10V, I_C=-0. 1mA	F G H	35 50 80			
	h_{FE2}	V_{CE}=-1V, I_C=- 10mA	 GF H	75 120 180			
	h_{FE3}	V_{CE}=-1V, I_C=- 100mA	F G H	100 160 250		250 400 630	
	h_{FE4}	V_{CE}=-2V, I_C=- 500mA	 GF H	35 60 100			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-100mA, I_B=-10mA				-0.3	V
		I_C=-500mA, I_B=-50mA				-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-100mA, I_B=-10mA				-1.25	V
		I_C=-500mA, I_B=-50mA				-2	V
Transition frequency	f_T	V_{CE}= -5V,I_C=-50mA,f=20MHz			200		MHz
Output capacitance	C_{ob}	V_{CB}= -10V,I_E=0,f=1MHz			6		pF
Input capacitance	C_{ib}	V_{EB}= -0.5V,I_E=0,f=1MHz			60		pF

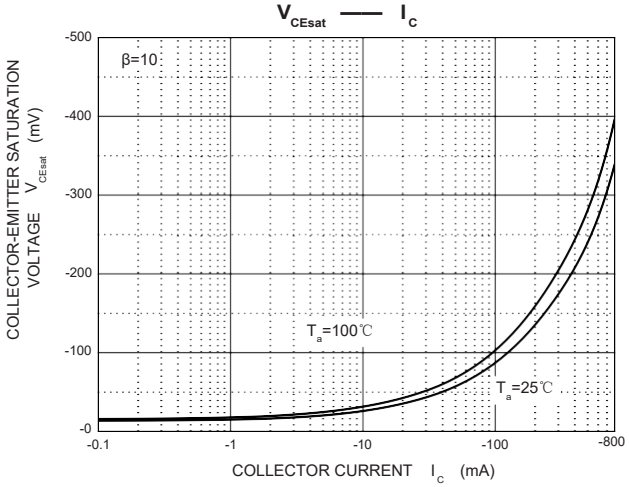
MARKING

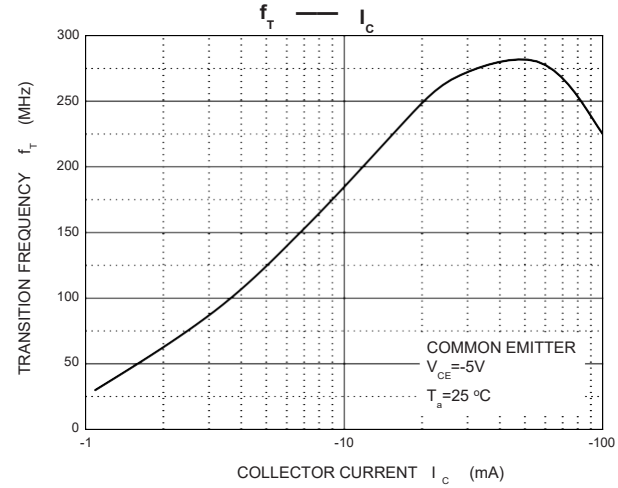
Rank	F	G	H
Range	100-250	160-400	250-630
Marking	DF	DG	DH

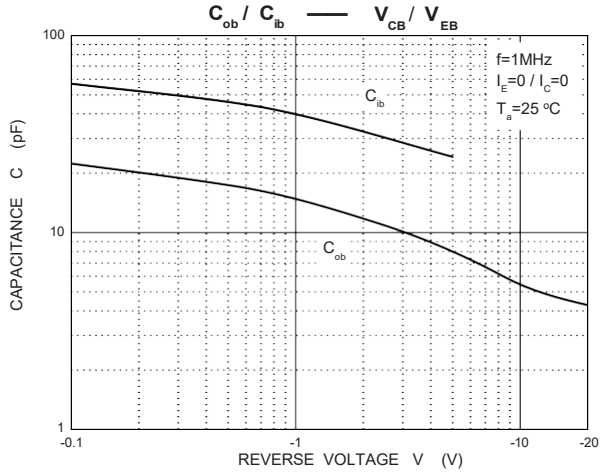

Static Characteristic
COMMON EMITTER
Ta=25℃
-800uA
-720uA
-640uA
-560uA
-480uA
-400uA
-320uA
-240uA
-160uA
IB=-80uA
COLLECTOR CURRENT IC (mA)
COLLECTOR-EMITTER VOLTAGE VCE (V)

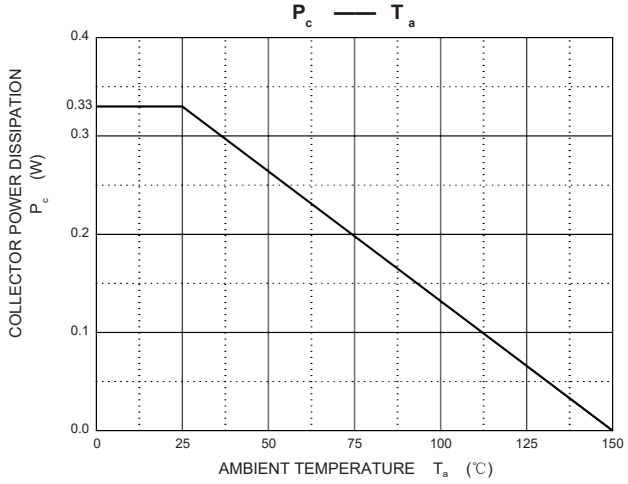

hFE — IC
COMMON EMITTER
VCE=-1V
Ta=100 °C
Ta=25 °C
DC CURRENT GAIN hFE
COLLECTOR CURRENT IC (mA)


VBEsat — IC
β=10
Ta=25℃
Ta=100℃
BASE-EMITTER SATURATION VOLTAGE VBEsat (V)
COLLECTOR CURRENT IC (mA)


VCEsat — IC
β=10
Ta=100℃
Ta=25℃
COLLECTOR-EMITTER SATURATION VOLTAGE VCEsat (mV)
COLLECTOR CURRENT IC (mA)


fT — IC
COMMON EMITTER
VCE=-5V
Ta=25 °C
TRANSITION FREQUENCY fT (MHz)
COLLECTOR CURRENT IC (mA)


Cob / Cib — VCB / VEB
f=1MHz
IE=0 / IC=0
Ta=25 °C
Cib
Cob
CAPACITANCE C (pF)
REVERSE VOLTAGE V (V)


Pc — Ta
COLLECTOR POWER DISSIPATION Pc (W)
AMBIENT TEMPERATURE Ta (℃)