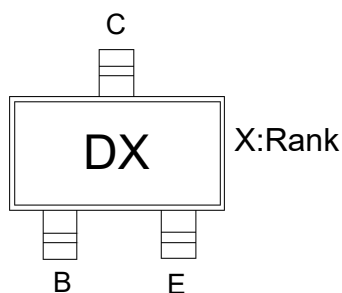
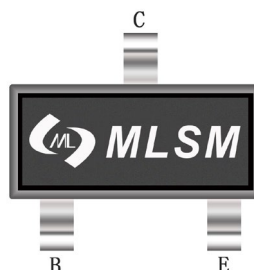


Features

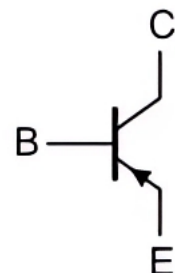
Complementary to BCW66, BCW68 is subdivided into three groups F, G and H according to its DC current gain.



Marking and pin assignment



SOT-23 top view



Schematic diagram



Halogen-Free

Maximum Ratings (Ta=25°C 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	A
P_C	Collector Power Dissipation	330	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	379	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

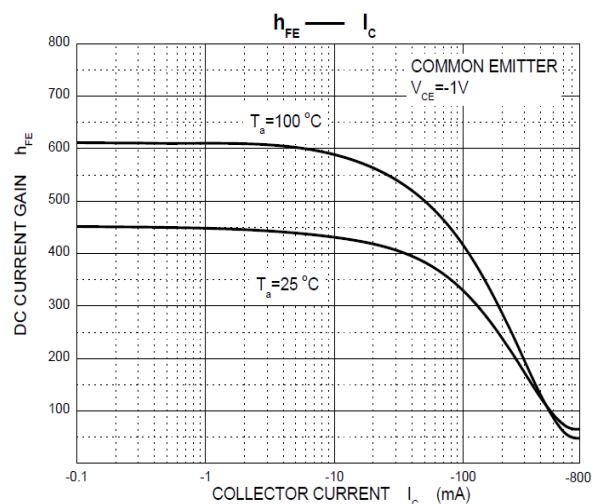
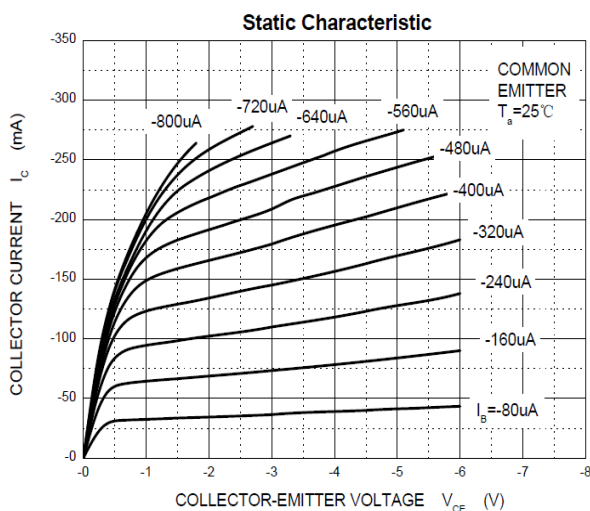
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BCW68	SOT-23	DF/DG/DH	3,000	45,000	180,000	7" reel

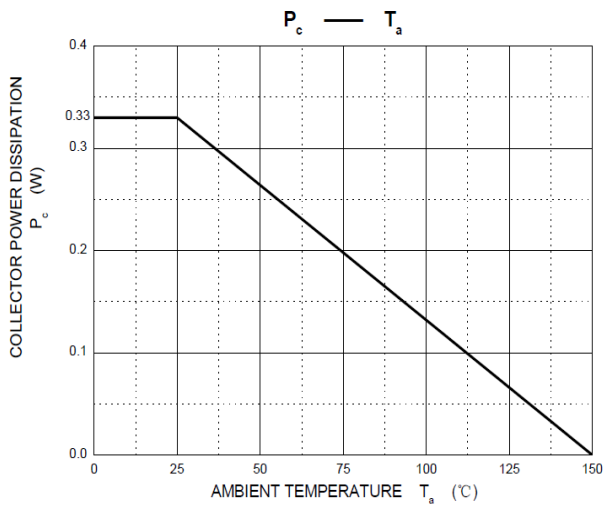
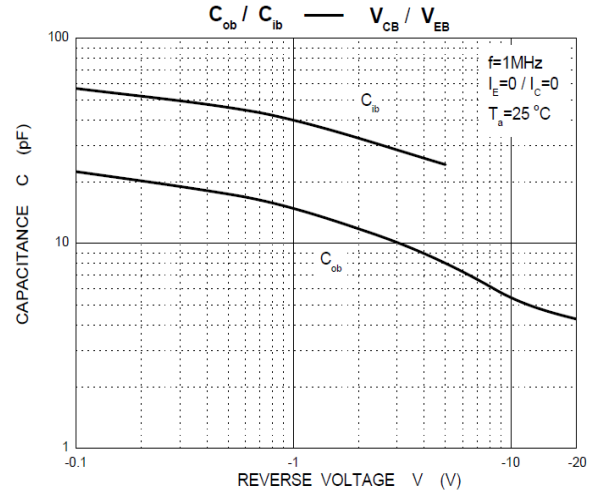
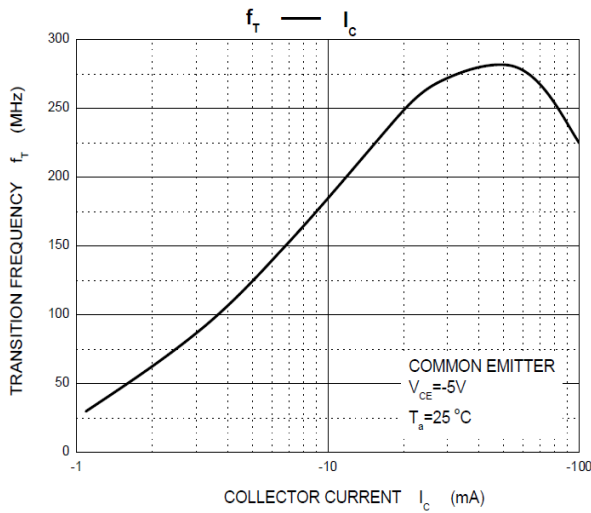
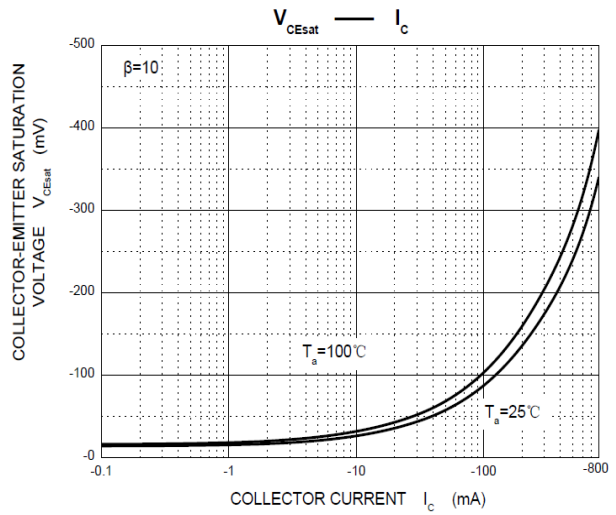
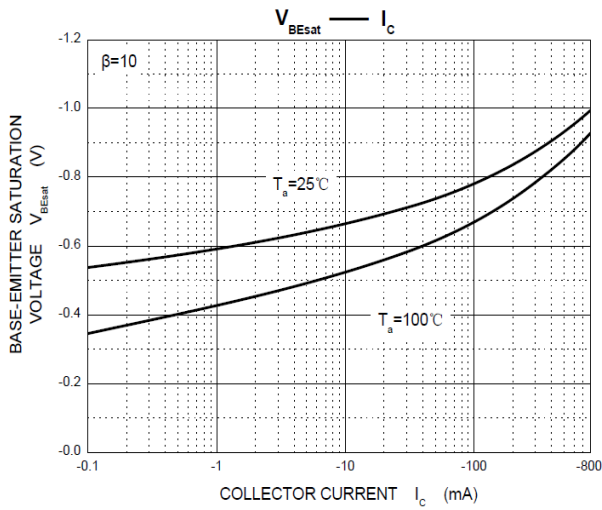
Classification of hFE

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

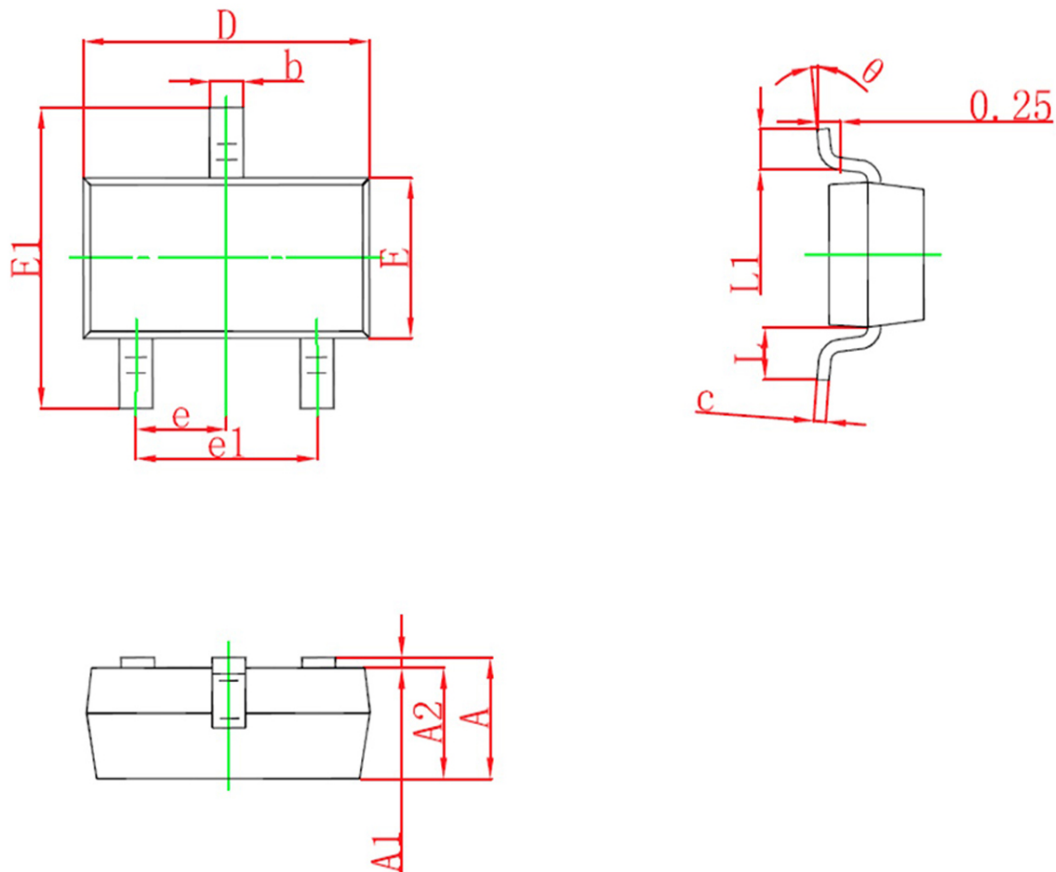
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -10\mu A, I_E = 0$	-60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -10mA, I_B = 0$	-45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -10\mu A, I_C = 0$	-5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB} = -45V, I_E = 0$	--	--	-0.02	μA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4V, I_C = 0$	--	--	-0.02	μA
$H_{FE(1)}$	DC current gain	$V_{CE} = -10V, I_C = -0.1mA$ F	35	--	--	
		G	50	--	--	
		H	80	--	--	
$H_{FE(2)}$	DC current gain	$V_{CE} = -1V, I_C = -10mA$ F	75	--	--	
		G	120	--	--	
		H	180	--	--	
$H_{FE(3)}$	DC current gain	$V_{CE} = -1V, I_C = -100mA$ F	100	--	250	
		G	160	--	400	
		H	250	--	630	
$H_{FE(4)}$	DC current gain	$V_{CE} = -2V, I_C = -500mA$ F	35	--	--	
		G	60	--	--	
		H	100	--	--	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -100mA, I_B = -10mA$	--	--	-0.3	V
		$I_C = -500mA, I_B = -50mA$	--	--	-0.7	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C = -100mA, I_B = -10mA$	--	--	-1.25	
		$I_C = -500mA, I_B = -50mA$	--	--	-2	V
f_T	Transition frequency	$V_{CE} = -5V, I_C = -50mA, f = 20MHz$	--	200	--	MHz
C_{ob}	Collector output capacitance	$V_{CB} = -10V, I_E = 0, f = 1MHz$	--	6	--	pF
C_{ib}	Input capacitance	$V_{EB} = -0.5V, I_E = 0, f = 1MHz$	--	60	--	pF

Typical Operating Characteristics




SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		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
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
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°