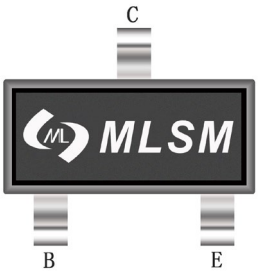
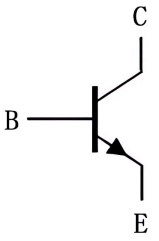
Features

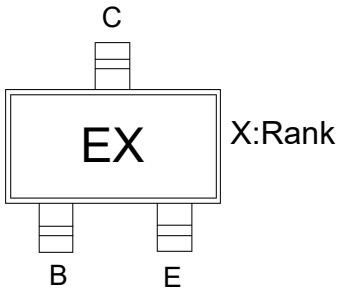
• Complementary to BCW68
• BCW66 is subdivided into three groups F,G and H according to DC current gain



SOT-23 top view



Schematic diagram



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	75	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	200	W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	°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
BCW66	SOT-23	EF/EG/EH	3,000	45,000	180,000	7"reel

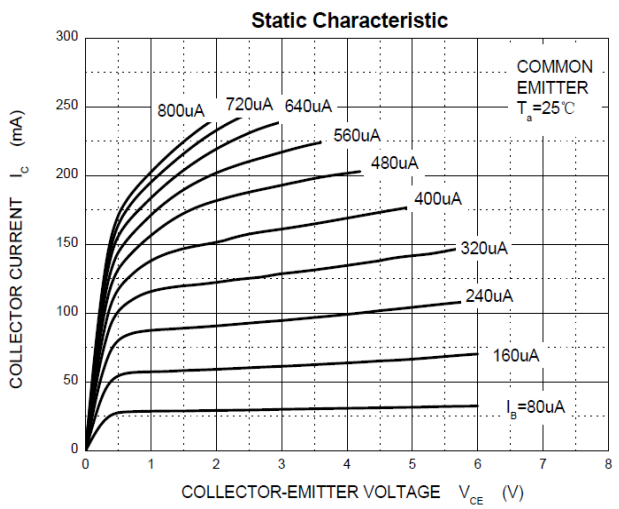
Classification of hFE

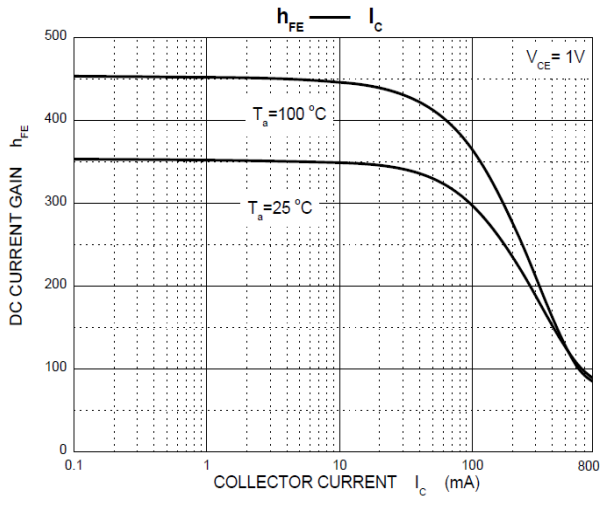
Rank	F	G	H
Marking	EF	EG	EH
Range	100-250	160-400	250-630

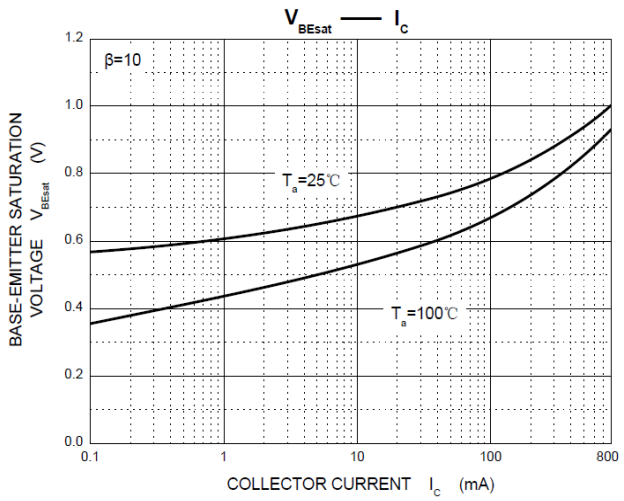
Electrical Characteristics (Ta=25℃ unless otherwise specified)

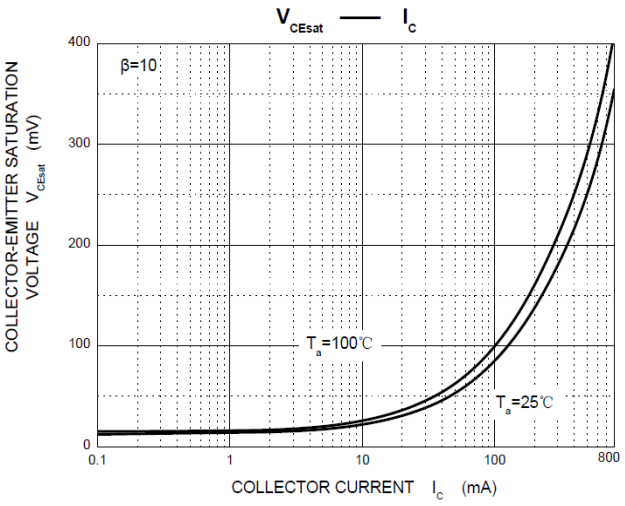
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=10μA,I_E=0	75	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=10mA, I_B=0	45	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10μA,I_C=0	5	--	--	V
I_{CBO}	Collector cut-off current	V_{CB}=45V , 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	110	--	--	
		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=500mA, I_B=-50mA	--	--	2	V
f_T	Transition frequency	V_{CE}=10V,I_C=20mA , f=100MHz	100	--		MHz
C_{ob}	Collector output capacitance	V_{CB}=10V,I_E=0, f=1MHz	--	--	12	pF
Cib	Input capacitance	V_{EB}=0.5V,I_E=0,f=1MHz	--	--	80	pF
NF	Noise figure	V_{CE}=5V,I_C=0.2mA,f=1KHz, Rs=1KΩ,BW=200Hz	--	--	10	dB

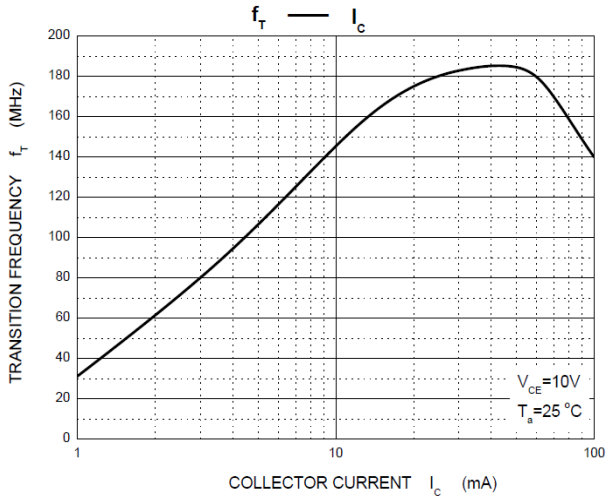
Typical Operating Characteristics

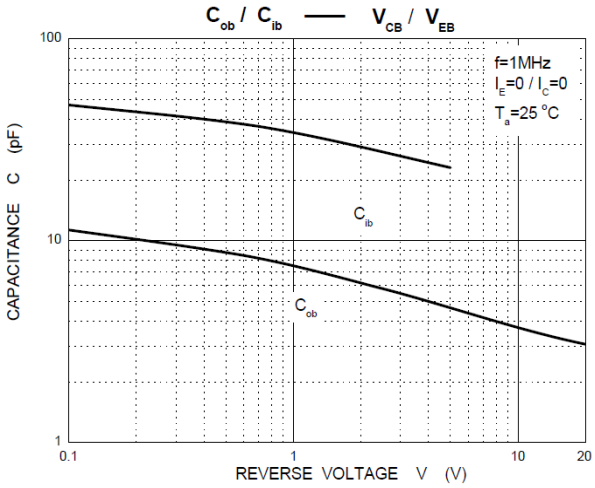


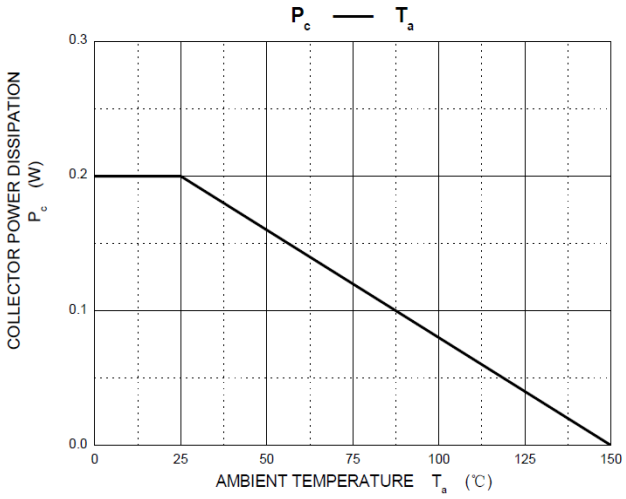




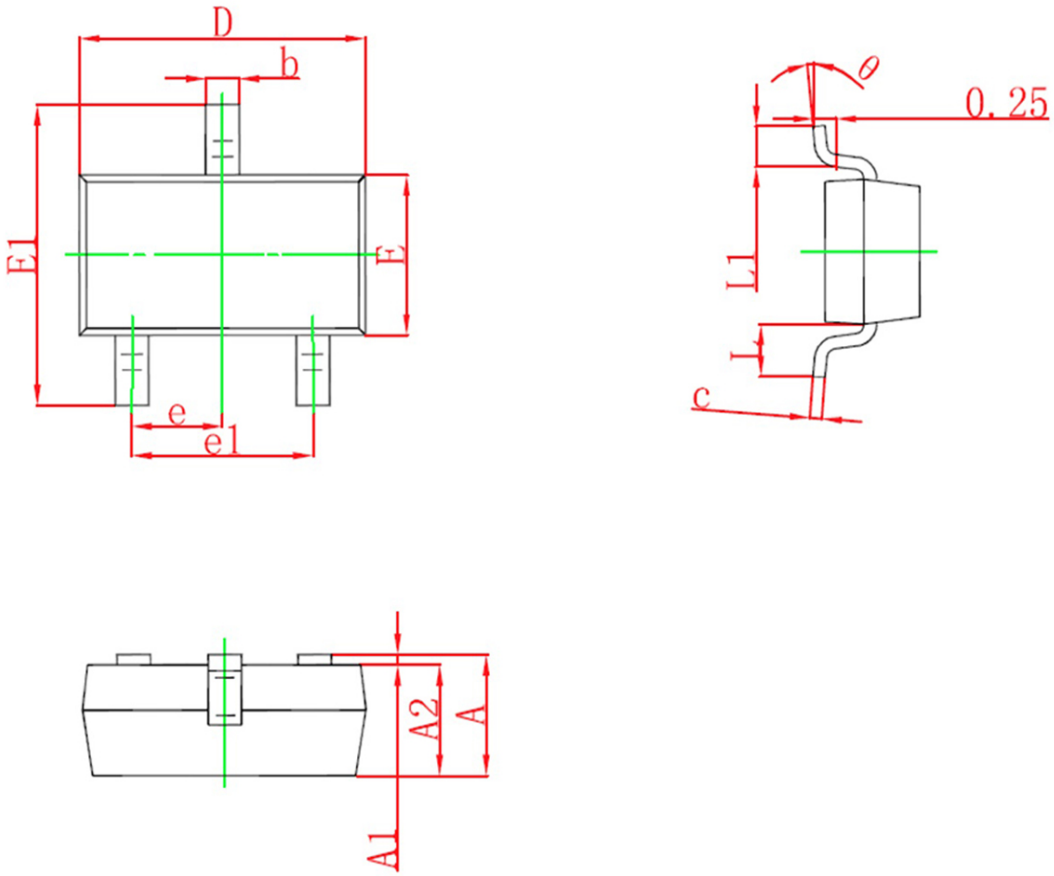








SOT-23 Package information



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°