

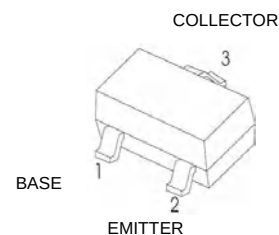


BCW66 TRANSISTOR (NPN)

FEATURES

Complementary to BCW68

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



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

SOT-23

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	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

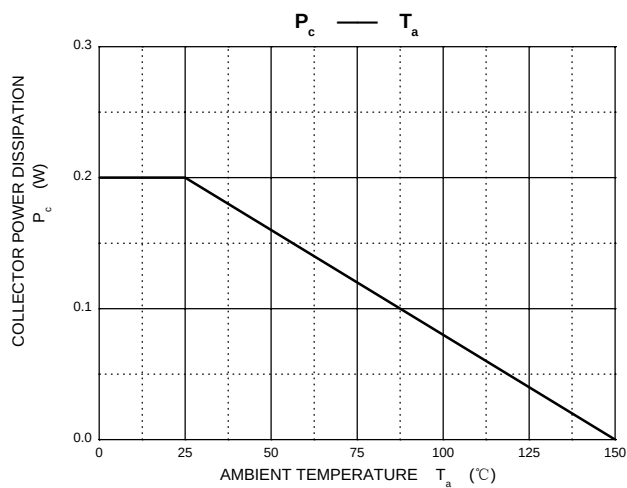
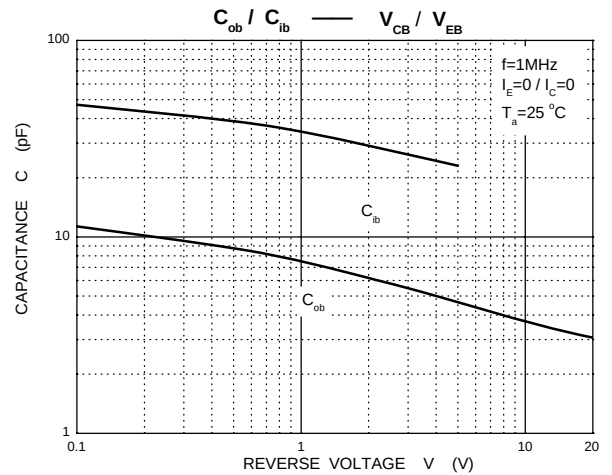
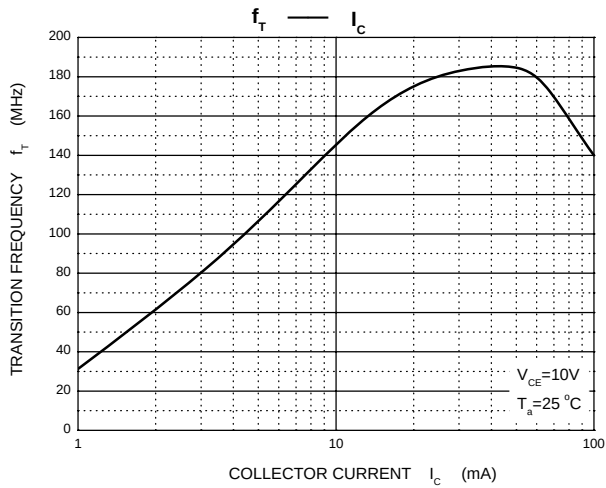
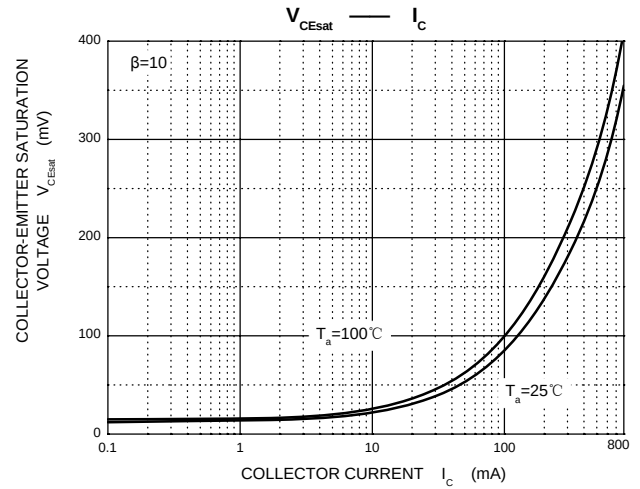
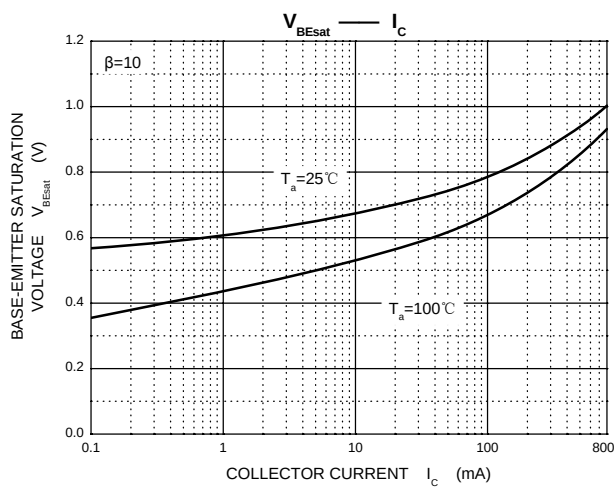
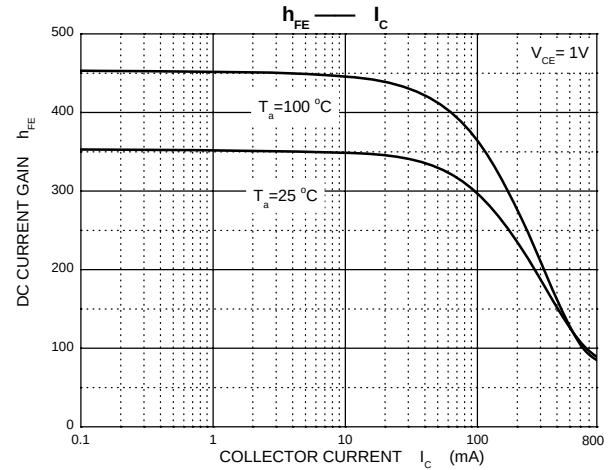
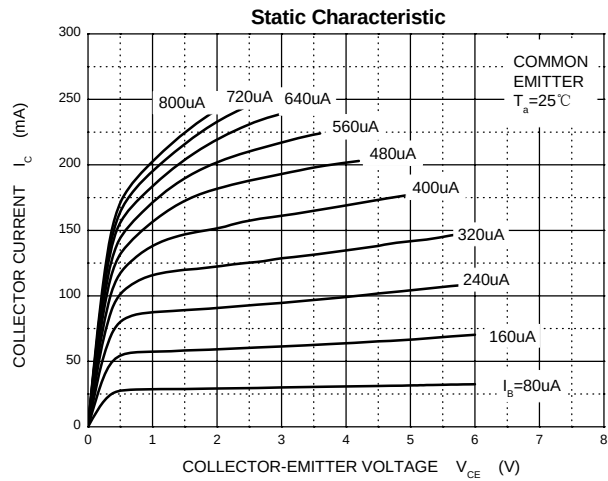
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=45\text{V}, I_E=0$			0.02	μA
Collector cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.02	μA
DC current gain	h_{FE1}	$V_{CE}=10\text{V}, I_C=0.1\text{mA}$	F G H	35 50 80		
	h_{FE2}	$V_{CE}=1\text{V}, I_C=10\text{mA}$	F G H	75 110 180		
	h_{FE3}	$V_{CE}=1\text{V}, I_C=100\text{mA}$	F G H	100 160 250		250 400 630
	h_{FE4}	$V_{CE}=2\text{V}, I_C=500\text{mA}$	F G H	35 60 100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}, I_B=10\text{mA}$			0.3	V
		$I_C=500\text{mA}, I_B=50\text{mA}$			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			2	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	100			MHz
Output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			12	pF
Input capacitance	C_{ib}	$V_{EB}=0.5\text{V}, I_E=0, f=1\text{MHz}$			80	pF
Noise figure	NF	$V_{CE}=5\text{V}, I_C=0.2\text{mA}, f=1\text{KHz}, R_S=1\text{K}\Omega, BW=200\text{Hz}$			10	dB

MARKING

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



Typical Characteristics

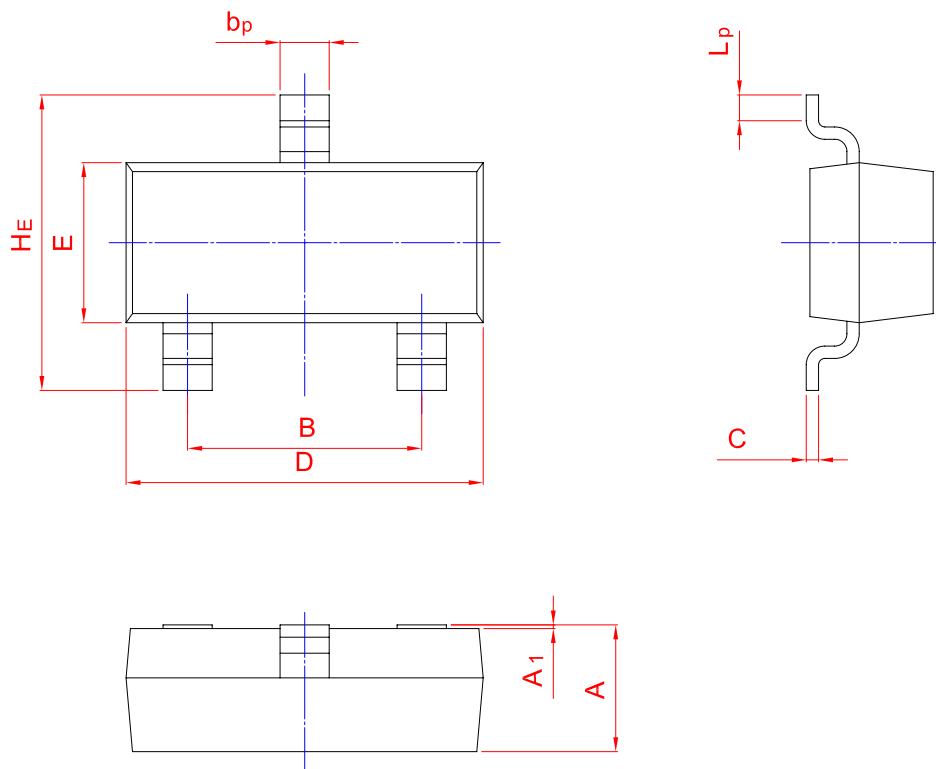
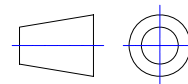




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20