CHINA BASE INTERNATIONAL

SOT-23
BCW66

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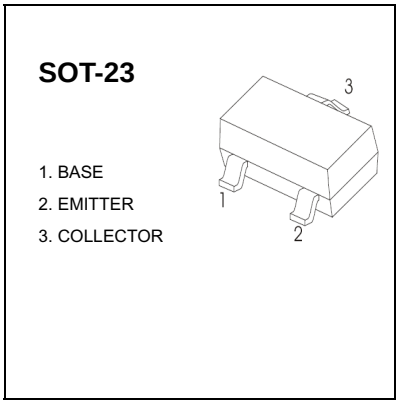
Plastic-Encapsulate Transistors

TRANSISTOR (NPN)



FEATURES

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

Marking : EF / EG/ EH

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

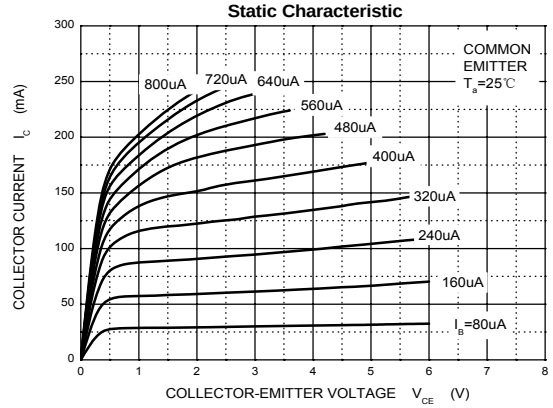
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	75	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	800	mA
P_C	Collector Power Dissipation	200	mW
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	625	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

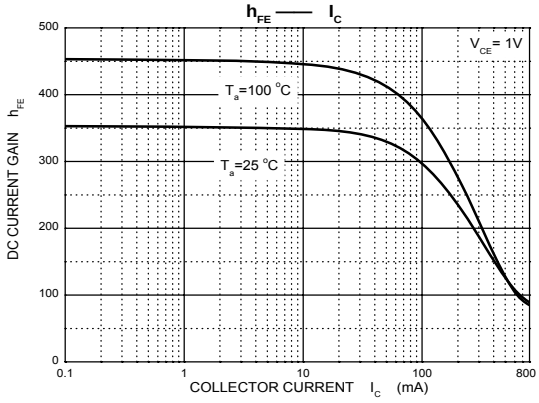
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 10 μ A, I_E=0		75			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 10mA, I_B=0		45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10 μ A, I_C=0		5			V
Collector cut-off current	I_{CBO}	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	F G H	75 110 180			
	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	F G 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=500mA, I_B=50mA				2	V
Transition frequency	f_T	V_{CE}=10V,I_C=20mA,f=100MHz		100			MHz
Output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz				12	pF
Input capacitance	C_{ib}	V_{EB}=0.5V,I_E=0,f=1MHz				80	pF
Noise figure	NF	V_{CE}=5V,I_C=0.2mA,f=1KHz, Rs=1KΩ,BW=200Hz				10	dB

Typical Characteristics

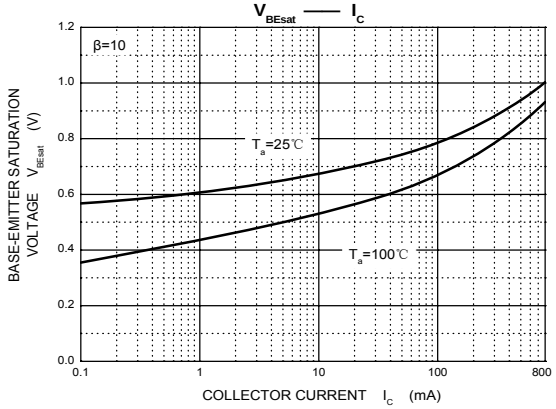
Static Characteristic



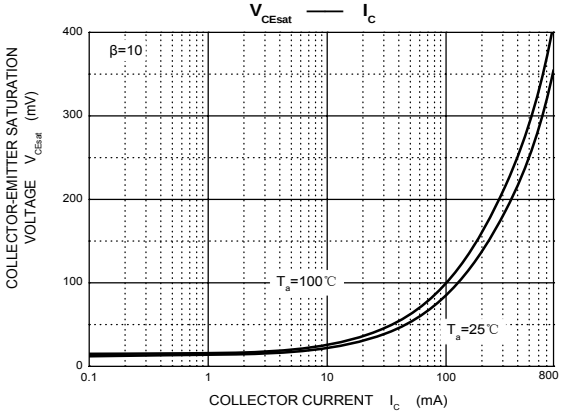
h_{FE} —— I_C



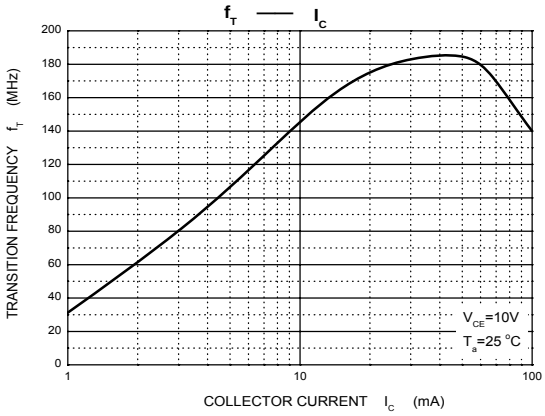
V_{BEsat} —— I_C



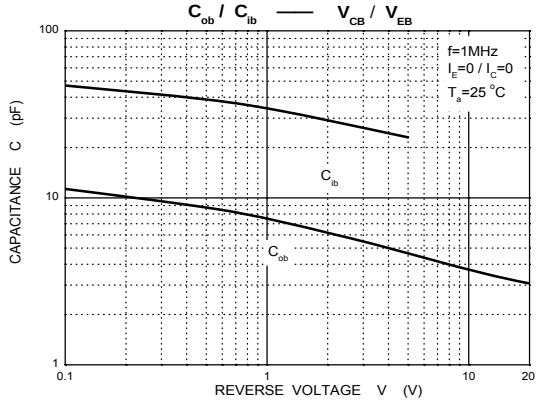
V_{CEsat} —— I_C



f_T —— I_C



C_{ob} / C_{ib} —— V_{CB} / V_{EB}



P_c —— T_a