



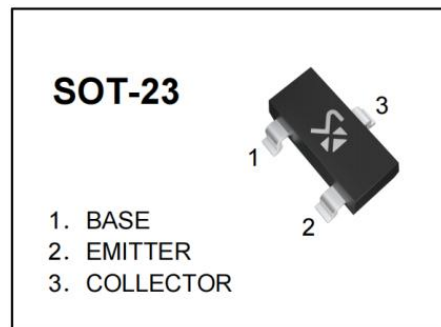
BCW66F-G-H

NPN Transistor

Features

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

Marking



Rank	F	G	H
Marking	EF	EG	EH

Maximum Ratings($T_A=25^{\circ}\text{C}$, unless otherwise noted.)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	75	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	I_{C}	800	mA
Collector Power Dissipation	P_{C}	200	MW
Junction Temperature	T_{J}	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance form Junction to Ambient	$R_{\theta\text{JA}}$	625	$^{\circ}\text{C}/\text{W}$

Electrical Characteristics($T_A=25^{\circ}\text{C}$, unless otherwise noted.)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(\text{BR})\text{CBO}}$	$I_{\text{C}}=10\mu\text{A}, I_{\text{E}}=0$	75			V
Collector-emitter breakdown voltage	$V_{(\text{BR})\text{CEO}}$	$I_{\text{C}}=10\text{mA}, I_{\text{B}}=0$	45			V
Emitter-base breakdown voltage	$V_{(\text{BR})\text{EBO}}$	$I_{\text{E}}=10\mu\text{A}, I_{\text{C}}=0$	5			V



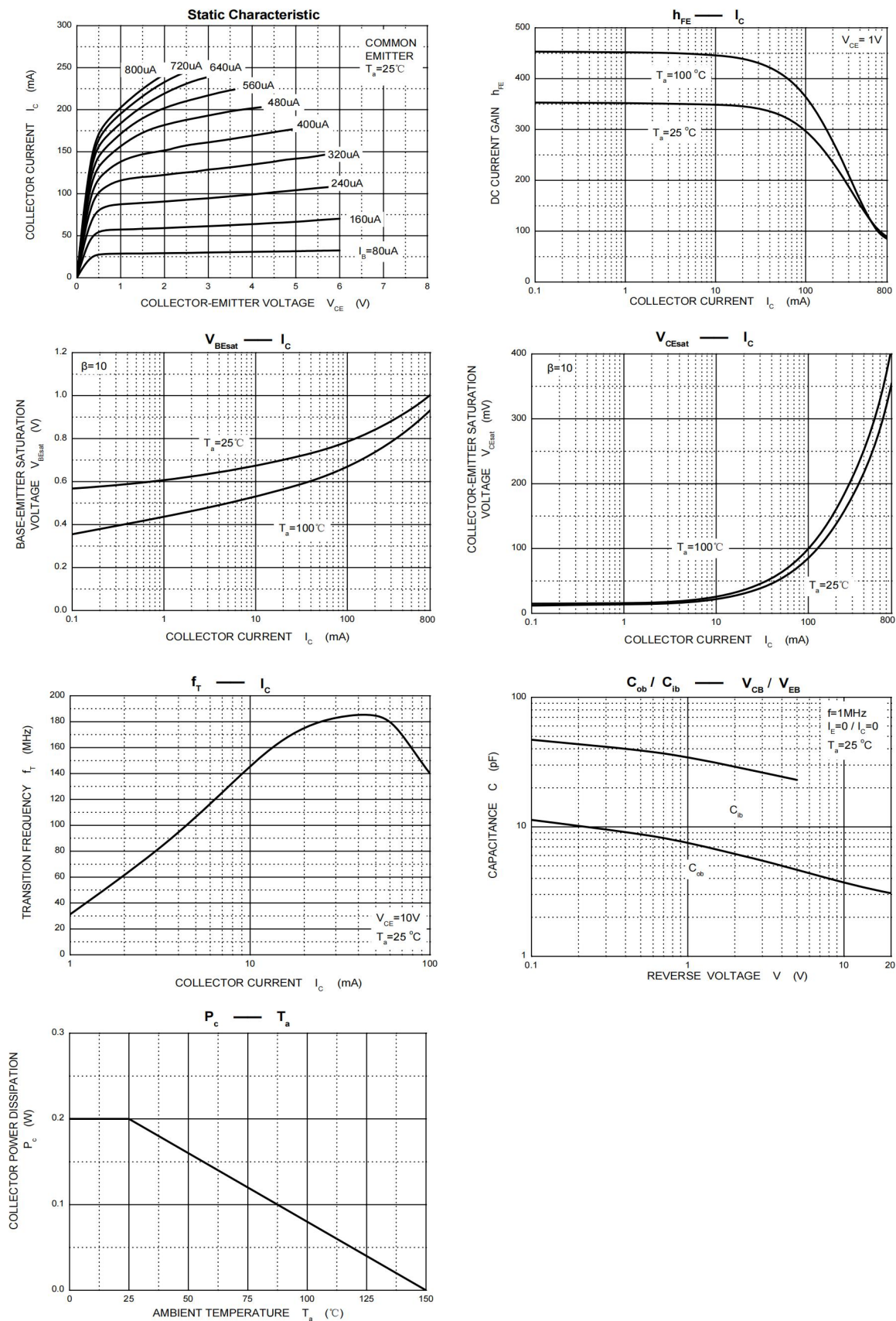
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Collector cut-off current	I_{CBO}	$V_{CB}=45V, I_E=0$			0.02	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			0.02	μA
DC current gain	h_{FE1}	$V_{CE}=10V, I_C=0.1mA$	F	35		
			G	50		
			H	80		
	h_{FE2}	$V_{CE}=1V, I_C=10mA$	F	75		
			G	110		
			H	180		
	h_{FE3}	$V_{CE}=1V, I_C=100mA$	F	100		250
			G	160		400
			H	250		630
	h_{FE4}	$V_{CE}=2V, I_C=500mA$	F	35		
			G	60		
			H	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	$V_{CE}=5V, I_C=0.2mA, f=1KHz,$ $R_S=1K\Omega, BW=200Hz$			10	dB



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Typical Characteristics



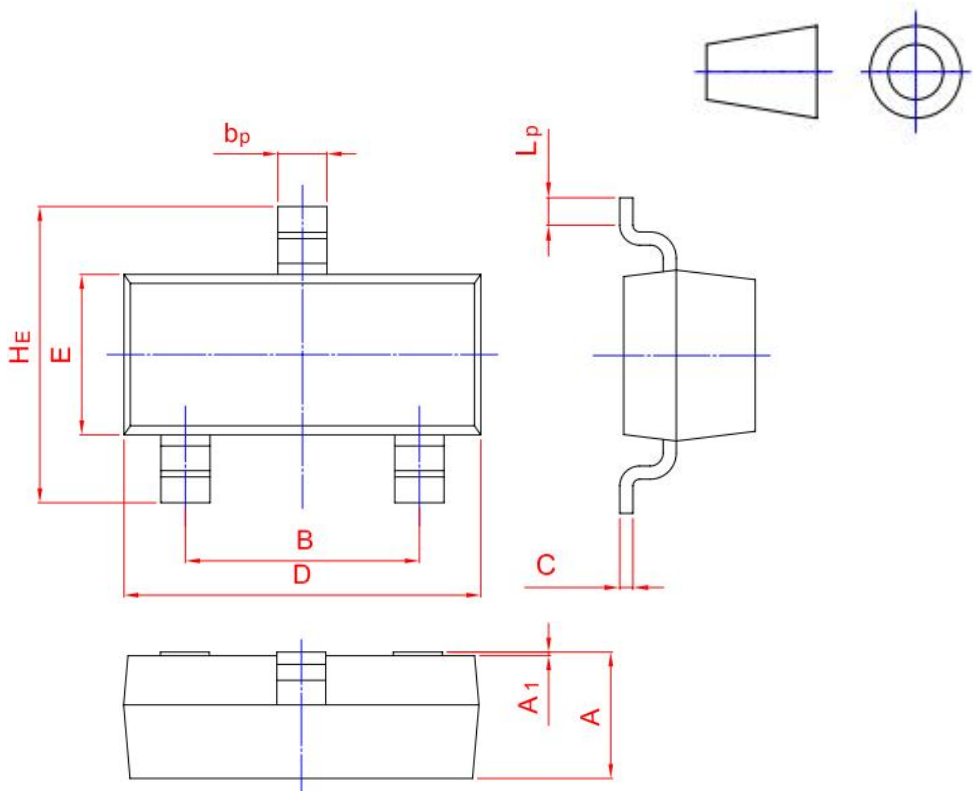


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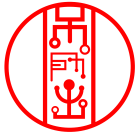
Package Information

SOT-23

Dimensions in mm



Unit	A	B	bp	C	D	E	HE	A ₁	L _p
mm	1.40	2.04	0.50	0.19	3.10	1.65	2.64	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20



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