



**SOT-23 Plastic-Encapsulate Transistors**

**BCW66** TRANSISTOR (NPN)

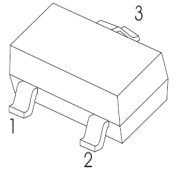
**FEATURES**

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

**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	75	V
V <sub>CEO</sub>	Collector-Emitter Voltage	45	V
V <sub>EBO</sub>	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current -Continuous	0.8	A
P <sub>C</sub>	Collector Power Dissipation	0.2	W
T <sub>j</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-55 ~ +150	°C

**SOT-23**



1. BASE
2. EMITTER
3. COLLECTOR

**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = 10 μ A, I <sub>E</sub> =0	75			V
Collector-emitter breakdown voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> =0	45			V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10 μ A, I <sub>C</sub> =0	5			V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =45 V, I <sub>E</sub> =0			0.02	μ A
Collector cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =4 V, I <sub>C</sub> =0			0.02	μ A
DC current gain	h <sub>FE1</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =0. 1mA	F	35		
			G	50		
	h <sub>FE2</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> = 10mA	F	75		
			G	110		
h <sub>FE3</sub>	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	F	100		250	
		G	160		400	
h <sub>FE4</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =500mA	F	35			
		G	60			
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA			0.3	V
		I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			0.7	V
Base-emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			2	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =20mA, f=100MHz	100			MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz			12	pF
Input capacitance	C <sub>ib</sub>	V <sub>EB</sub> =0.5V, I <sub>E</sub> =0, f=1MHz			80	pF
Noise figure	NF	V <sub>CE</sub> =5V, I <sub>C</sub> =0.2mA, f=1KHz, R <sub>S</sub> =1K Ω, BW=200Hz			10	dB

**MARKING**

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

# Typical Characteristics

# BCW66

