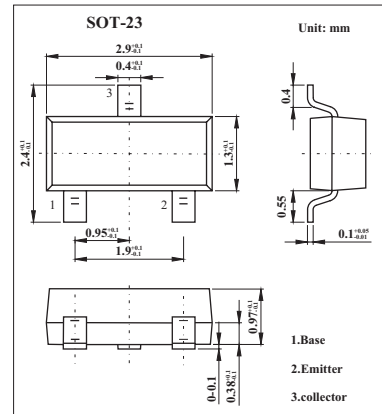


**NPN General Purpose Transistors**

**BCW60A/B/C/D**

■ Features

- NPN epitaxial silicon transistor.



■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	32	V
Collector-emitter voltage	$V_{CE0}$	32	V
Emitter-base voltage	$V_{EB0}$	5	V
Collector current	$I_C$	100	mA
Collector power dissipation	$P_c$	350	mW
Storage temperature	$T_{stg}$	150	$^\circ\text{C}$



炬芯微  
XUANXINWEI

BCW60A/B/C/D

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> =2mA, I <sub>B</sub> =0	32			
Emitter-base breakdown voltage	BV <sub>EBO</sub>	I <sub>E</sub> =1μA, I <sub>C</sub> =0	5			
Collector cut-off current	I <sub>CES</sub>	V <sub>CE</sub> =32V, V <sub>BE</sub> =0			20	nA
Emitter cutoff current	I <sub>EBO</sub>	I <sub>C</sub> = 0; V <sub>EB</sub> = 4 V			20	nA
DC Current Gain	BCW60B	V <sub>CE</sub> =5V, I <sub>C</sub> =10μA	20			
	BCW60C		40			
	BCW60D		100			
	BCW60A		120		220	
	BCW60B	V <sub>CE</sub> =5V, I <sub>C</sub> =2mA	180		310	
	BCW60C		250		460	
	BCW60D		380		630	
	BCW60A		60			
	BCW60B	V <sub>CE</sub> =1V, I <sub>C</sub> =50mA	70			
	BCW60C		90			
	BCW60D		10			
	BCW60A					
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 50 mA; I <sub>B</sub> = 1.25 mA			0.55	V
		I <sub>C</sub> = 10 mA; I <sub>B</sub> = 0.25 mA			0.35	V
Base to emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = 50 mA; I <sub>B</sub> = 1.25 mA	0.7		1.05	V
		I <sub>C</sub> = 10 mA; I <sub>B</sub> = 0.25 mA	0.6		0.85	V
Base to emitter voltage	V <sub>BE(on)</sub>	I <sub>C</sub> = 2 mA; V <sub>CE</sub> = 5 V	0.55		0.75	V
Collector capacitance	C <sub>ob</sub>	I <sub>E</sub> = i <sub>e</sub> = 0; V <sub>CB</sub> = 10 V; f = 1 MHz			4.5	pF
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 10 mA; V <sub>CE</sub> = 5 V; f = 100 MHz	125			MHz
Noise figure	NF	I <sub>C</sub> = 0.2 mA; V <sub>CE</sub> = 5 V; R <sub>G</sub> = 2 kΩ; f = 1 kHz			6	dB
Turn On Time	ton	I <sub>C</sub> =10mA, I <sub>B1</sub> =1mA			150	ns
Turn Off Time	toff	V <sub>BB</sub> =3.6V, I <sub>B2</sub> =1mA R <sub>1</sub> =R <sub>2</sub> =5K Ω, R <sub>L</sub> =990 Ω			800	ns

■ Marking

TYPE	BCW60A	BCW60B	BCW60C	BCW60D
Marking	AA	AB	AC	AD