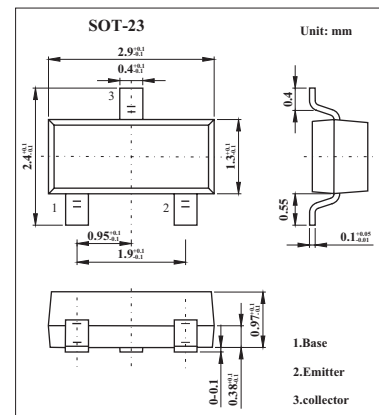


NPN General Purpose Transistors

BCW60C

■ Features

- NPN epitaxial silicon transistor.



■ Absolute Maximum Ratings Ta = 25°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	°C

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=2\text{mA}, I_B=0$	32			
Emitter-base breakdown voltage	BV_{EBO}	$I_E=1\mu\text{A}, I_C=0$	5			
Collector cut-off current	I_{CES}	$V_{CE}=32\text{V}, V_{BE}=0$			20	nA
Emitter cutoff current	I_{EBO}	$I_C = 0; V_{EB} = 4\text{V}$			20	nA
DC Current Gain	BCW60B	$V_{CE}=5\text{V}, I_C=10\mu\text{A}$	20			
	BCW60C		40			
	BCW60D		100			
	BCW60A		120		220	
	BCW60B	$V_{CE}=5\text{V}, I_C=2\text{mA}$	180		310	
	BCW60C		250		460	
	BCW60D		380		630	
	BCW60A		60			
	BCW60B	$V_{CE}=1\text{V}, I_C=50\text{mA}$	70			
	BCW60C		90			
	BCW60D		10			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50\text{ mA}; I_B = 1.25\text{ mA}$			0.55	V
		$I_C = 10\text{ mA}; I_B = 0.25\text{ mA}$			0.35	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50\text{ mA}; I_B = 1.25\text{ mA}$	0.7		1.05	V
		$I_C = 10\text{ mA}; I_B = 0.25\text{ mA}$	0.6		0.85	V
Base to emitter voltage	$V_{BE(on)}$	$I_C = 2\text{ mA}; V_{CE} = 5\text{ V}$	0.55		0.75	V
Collector capacitance	C_{ob}	$I_E = i_e = 0; V_{CB} = 10\text{ V}; f = 1\text{ MHz}$			4.5	pF
Transition frequency	f_T	$I_C = 10\text{ mA}; V_{CE} = 5\text{ V}; f = 100\text{ MHz}$	125			MHz
Noise figure	NF	$I_C = 0.2\text{ mA}; V_{CE} = 5\text{ V}; R_G = 2\text{ k}\Omega; f = 1\text{ kHz}$			6	dB
Turn On Time	t_{on}	$I_C=10\text{mA}, I_{B1}=1\text{mA}$			150	ns
Turn Off Time	t_{off}	$V_{BB}=3.6\text{V}, I_{B2}=1\text{mA}$ $R_1=R_2=5\text{K}\Omega, R_L=990\Omega$			800	ns

■ Marking

TYPE	BCW60A	BCW60B	BCW60C	BCW60D
Marking	AA	AB	AC	AD