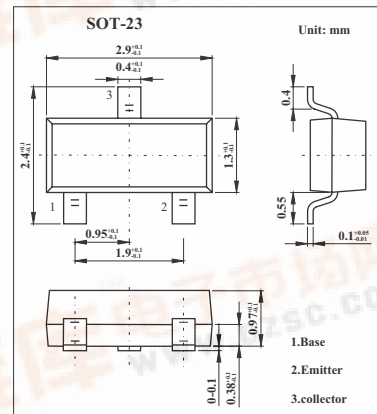


SMD Type Transistors

NPN General Purpose Transistors
BCW60A/B/C/D

■ 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

BCW60A/B/C/D

■ Electrical Characteristics Ta = 25°C

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

■ Marking

TYPE	BCW60A	BCW60B	BCW60C	BCW60D
Marking	AA	AB	AC	AD