

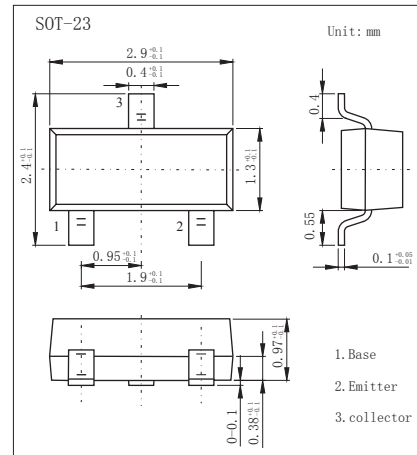


SOT-23 Plastic-Encapsulate Transistors

BCX19 NPN Transistors

■ Features

- Collector Current Capability $I_c=0.5A$
- Collector Emitter Voltage $V_{CE0}=45V$
- Low voltage



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	50	V
Collector - Emitter Voltage	V_{CEO}	45	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_c	500	mA
Collector Power Dissipation	P_c	225	mW
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_c = 100 \mu A, I_E = 0$	50			V
Collector- emitter breakdown voltage	V_{CEO}	$I_c = 1 mA, I_B = 0$	45			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_c = 0$	5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 50 V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_c = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_c = 500 mA, I_B = 50mA$			0.62	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_c = 500 mA, I_B = 50mA$			1.2	
Base-emitter voltage	$V_{BE(on)}$	$V_{CE} = 1V, I_c = 500mA$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1V, I_c = 100mA$	100		600	
	$h_{FE(2)}$	$V_{CE} = 1V, I_c = 300mA$	70			
	$h_{FE(3)}$	$V_{CE} = 1V, I_c = 500mA$	40			
Collector capacitance	C_c	$V_{CB} = 10V, I_E = I_c = 0, f = 1MHz$		5		pF
Transition frequency	f_T	$V_{CE} = 5V, I_c = 10mA, f = 100MHz$	100			MHz

■ Marking

Marking	U1
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Typical Characteristics

