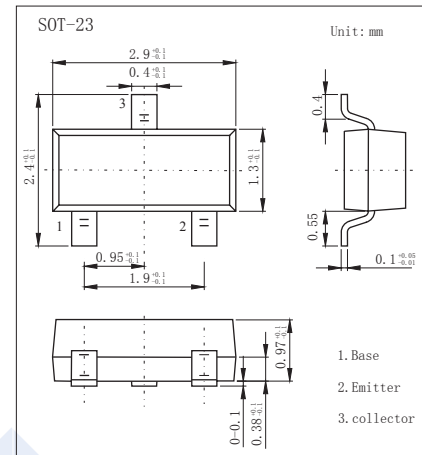


NPN Transistors

2SC3707

■ Features

- Collector Current Capability $I_c=10\text{mA}$
- Collector Emitter Voltage $V_{CE0}=7\text{V}$



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	10	V
Collector - Emitter Voltage	V_{CE0}	7	
Emitter - Base Voltage	V_{EB0}	2	
Collector Current - Continuous	I_c	10	mA
Collector Power Dissipation	P_c	50	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{sig}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_c = 100 \mu\text{A}, I_E = 0$	10			V
Collector- emitter breakdown voltage	V_{CE0}	$I_c = 1 \text{mA}, I_B = 0$	7			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_c = 0$	2			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 10\text{V}, I_E = 0$			1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 1.5\text{V}, I_c = 0$			1	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_c = 10 \text{mA}, I_B = 1\text{mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(\text{sat})}$	$I_c = 10 \text{mA}, I_B = 1\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 1\text{V}, I_c = 1\text{mA}$	50		150	
Noise figure	NF	$V_{CE} = 1\text{V}, I_c = 1\text{mA}, f = 0.8\text{GHz}$		3.5		dB
Maximum unilateral power gain	GUM	$V_{CE} = 1\text{V}, I_c = 1\text{mA}, f = 0.8\text{GHz}$		15		
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 1\text{V}, I_c = 1\text{mA}, f = 0.8\text{GHz}$		6		
Collector output capacitance	C_{ob}	$V_{CB} = 1\text{V}, I_E = 0, f = 1\text{MHz}$		0.4		pF
Transition frequency	f_T	$V_{CE} = 1\text{V}, I_c = 1\text{mA}, f = 0.8\text{GHz}$		4		GHz

■ Marking

Marking	2X
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Typical Characteristics

