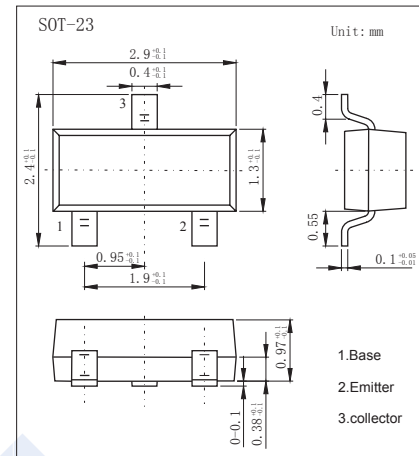


NPN Transistors

2SC5050

■ Features

- Collector Current Capability $I_C=50\text{mA}$
- Collector Emitter Voltage $V_{CEO}=8\text{V}$

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	15	V
Collector - Emitter Voltage	V_{CEO}	8	
Emitter - Base Voltage	V_{EBO}	1.5	
Collector Current - Continuous	I_C	50	mA
Collector Power Dissipation	P_C	150	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = 100\text{ }\mu\text{A}$, $I_E = 0$	15			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1\text{ mA}$, $I_B = 0$	8			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100\text{ }\mu\text{A}$, $I_C = 0$	1.5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 12\text{ V}$, $I_E = 0$			10	μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE} = 8\text{ V}$, $I_B = 0$			1	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = 1.5\text{ V}$, $I_C = 0$			10	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$			0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 50\text{ mA}$, $I_B = 5\text{ mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 5\text{ V}$, $I_C = 20\text{ mA}$	50		250	
Forward transfer gain	$ S_{21e} ^2$	$V_{CE} = 5\text{ V}$, $I_C = 20\text{ mA}$, $f = 1\text{ GHz}$		13.5		dB
Power gain	PG	$V_{CE} = 5\text{ V}$, $I_C = 20\text{ mA}$, $f = 0.9\text{ GHz}$	11			
Noise figure	NF	$V_{CE} = 5\text{ V}$, $I_C = 5\text{ mA}$, $f = 0.9\text{ GHz}$			2	
Collector output capacitance	C_{ob}	$V_{CB} = 5\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$			1.1	pF
Transition frequency	f_T	$V_{CE} = 5\text{ V}$, $I_C = 20\text{ mA}$	8			GHz

■ Marking

Marking	YZ*
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