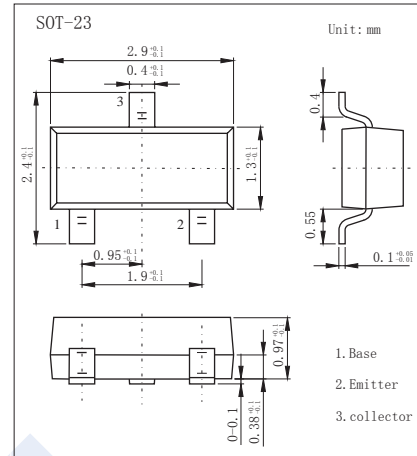


NPN Transistors

2KD3003

■ Features

- For general AF applications
- Low collector-emitter saturation voltage
- Complementary types: 2KB4003 (PNP)



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	50	V
Collector - Emitter Voltage	V_{CE0}	45	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	0.5	A
Collector Power Dissipation	P_C	0.3	W
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_{CB0}	$I_C = 100 \mu\text{A}$, $I_E = 0$	50			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 10 \text{ mA}$, $I_B = 0$	45			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 45 \text{ V}$, $I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 4 \text{ V}$, $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}$			0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 \text{ mA}$, $I_B = 50 \text{ mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 1 \text{ V}$, $I_C = 500 \text{ mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1 \text{ V}$, $I_C = 100 \text{ mA}$	250		630	
	$h_{FE(2)}$	$V_{CE} = 1 \text{ V}$, $I_C = 500 \text{ mA}$	40			
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}$, $f = 1 \text{ MHz}$		10		pF
Transition frequency	f_T	$V_{CE} = 5 \text{ V}$, $I_C = 10 \text{ mA}$, $f = 100 \text{ MHz}$	100			MHz

■ Marking

Marking	0B
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2KD3003

Typical Characteristics

