

NPN Transistors

KTD1304 (KTD1304S)

■ Features

- High Emitter-Base Voltage : $V_{EBO} = 12V(\text{Min})$
- High Reverse h_{FE}
- Low on Resistance

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

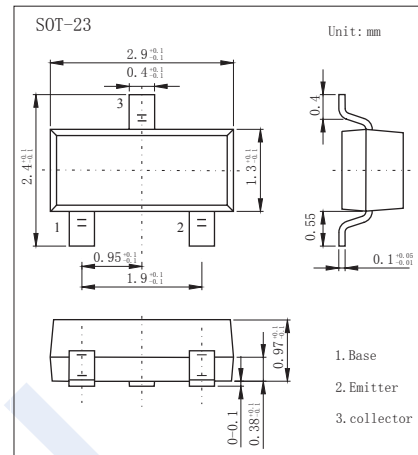
Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	25	V
Collector - Emitter Voltage	V_{CEO}	20	
Emitter - Base Voltage	V_{EBO}	12	
Collector Current - Continuous	I_C	300	mA
Base Current	I_B	30	
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature 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}	$I_C = 100 \mu\text{A}, I_E = 0$	25			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = 1 \text{ mA}, I_B = 0$	20			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu\text{A}, I_C = 0$	12			
Collector-base cut-off current	I_{CBO}	$V_{CB} = 25 \text{ V}, I_E = 0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = 12 \text{ V}, I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 \text{ mA}, I_B = 10 \text{ mA}$			1	
DC current gain	$h_{FE(1)}$	$V_{CE} = 2 \text{ V}, I_C = 4 \text{ mA (FOR)}$	200		800	
	$h_{FE(2)}$	$V_{CE} = 2 \text{ V}, I_C = 4 \text{ mA (REV)}$	20			
On resistance	R_{on}	$I_B = 1 \text{ mA}, V_{in} = 0.3 \text{ V}, f = 1 \text{ KHz}$		0.6		Ω
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		10		pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 1 \text{ mA}$		60		MHz

■ Marking

Marking	J3Y
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■ Typical Characteristics

