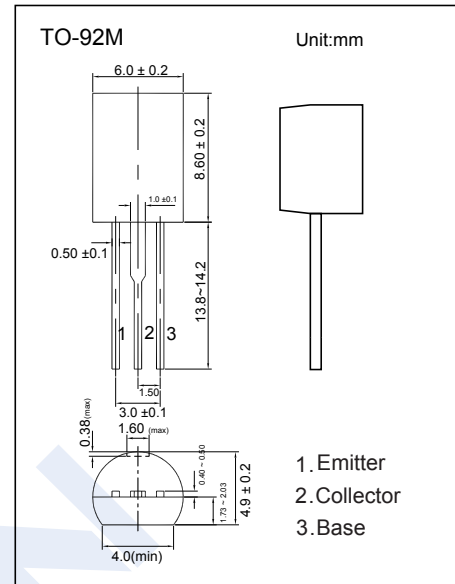


NPN Transistors

KTC1020

■ Features

- Excellent hFE Linearity
- 1 Watt Amplifier Application
- Complementary to KTA1021

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	35	V
Collector - Emitter Voltage	V_{CE0}	30	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	500	mA
Base Current	I_B	100	
Collector Power Dissipation	P_C	400	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_{CB0}	$I_C = 100 \mu\text{A}$, $I_E = 0$	35			V
Collector-emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}$, $I_B = 0$	30			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}$, $I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 35 \text{ V}$, $I_E = 0$			100	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5 \text{ V}$, $I_C = 0$			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	$V_{BE(sat)}$	$I_C = 100 \text{ mA}$, $I_B = 10 \text{ mA}$			1.2	
Base - emitter voltage	V_{BE}	$V_{CE} = 1 \text{ V}$, $I_C = 100 \text{ mA}$			1	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1 \text{ V}$, $I_C = 100 \text{ mA}$	100		240	
	$h_{FE(2)}$	$V_{CE} = 6 \text{ V}$, $I_C = 400 \text{ mA}$	25			
Collector output capacitance	C_{ob}	$V_{CB} = 6 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		7		pF
Transition frequency	f_T	$V_{CE} = 6 \text{ V}$, $I_C = 20 \text{ mA}$		300		MHz

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KTC1020

■ Typical Characteristics

