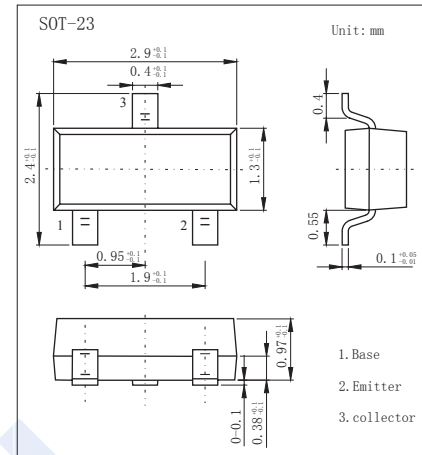


NPN Transistors

KTC3875

■ Features

- High h_{FE}
- Low noise
- Complementary to KTA1504

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	50	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	150	mA
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}	$I_C = 100 \mu\text{A}, I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 \text{ mA}, I_B = 0$	50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 60 \text{ V}, I_E = 0$			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	
DC current gain	h_{FE}	$V_{CE} = 6 \text{ V}, I_C = 2 \text{ mA}$	70		700	
Noise figure	NF	$V_{CE} = 6 \text{ V}, I_C = 0.1 \text{ mA}, R_g = 10 \text{ k}\Omega, f = 1 \text{ KHz}$		1	10	dB
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$			3.5	pF
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 1 \text{ mA}$	80			MHz

■ Classification of h_{FE}

Type	KTC3875-O	KTC3875-Y	KTC3875-G	KTC3875-L
Range	70-140	120-240	200-400	350-700
Marking	ALO	ALY	ALG	ALL

NPN Transistors

KTC3875

■ Typical Characteristics

