

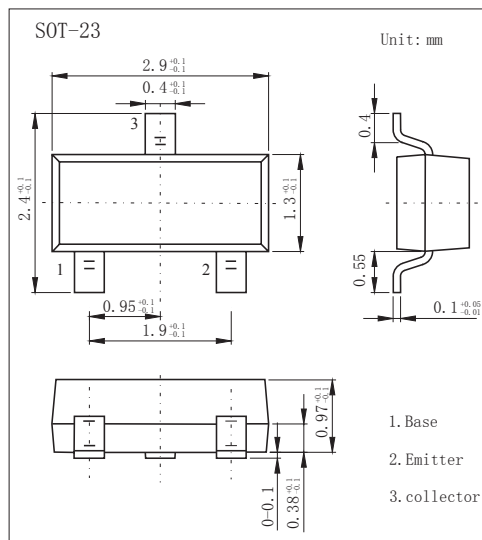
## SOT-23 Plastic-Encapsulate Transistors

### Features

- High hFE
- Low noise
- Complementary to KTA1504
- NPN Transistors

### MECHANICAL DATA

- Case style: SOT-23 molded plastic
- Mounting position: any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	60	V
Collector - Emitter Voltage	V <sub>CEO</sub>	50	
Emitter - Base Voltage	V <sub>EB0</sub>	5	
Collector Current - Continuous	I <sub>c</sub>	150	mA
Collector Power Dissipation	P <sub>c</sub>	150	mA
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

### PACKAGE INFORMATION

Device	Package	Shipping
KTC3875	SOT-23	3000/Tape&Reel

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = 100 μA, I <sub>E</sub> = 0	60			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>c</sub> = 1 mA, I <sub>B</sub> = 0	50			
Emitter - base breakdown voltage	V <sub>EB0</sub>	I <sub>E</sub> = 100 μA, I <sub>C</sub> = 0	5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = 60 V, I <sub>E</sub> = 0			100	nA
Emitter cut-off current	I <sub>EB0</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> =0			100	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100 mA, I <sub>B</sub> =10mA			0.25	V
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =100 mA, I <sub>B</sub> =10mA			1	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = 6V, I <sub>C</sub> = 2mA	70		700	
Noise figure	NF	V <sub>CE</sub> =6V, I <sub>C</sub> =0.1mA, R <sub>g</sub> =10kΩ, f=1KHZ		1	10	dB
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10V, I <sub>E</sub> = 0, f=1MHZ			3.5	pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 1mA	80			MHz

### Classification of h<sub>FE</sub>

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

# RATINGS AND CHARACTERISTIC CURVES

## Typical Characteristics

