

## Epitaxial Planar NPN Transistor

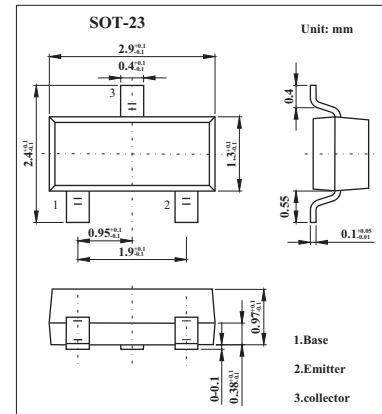
## KTC3875

## ■ Features

- Excellent hFE Linearity

$$h_{FE}(0.1\text{mA})/h_{FE}(2\text{mA})=0.95(\text{Typ.}).$$

- Low Noise : NF=1dB(Typ.), 10dB(Max.).



## ■ Absolute Maximum Ratings Ta = 25°C

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

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector Cut-off Current	I <sub>CB0</sub>	V <sub>CB</sub> =60V, I <sub>E</sub> =0			0.1	μA
Emitter Cut-off Current	I <sub>EB0</sub>	V <sub>EB</sub> =5V, I <sub>c</sub> =0			0.1	μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =6V, I <sub>c</sub> =2mA	70			
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>c</sub> =100mA, I <sub>B</sub> =10mA		0.1	0.25	V
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>c</sub> =1mA	80		700	MHz
Collector Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		2.0	3.5	pF
Noise Figure	NF	V <sub>CE</sub> =6V, I <sub>c</sub> =0.1mA, f=1kHz, R <sub>g</sub> =10KΩ		1.0	10	dB

## ■ hFE Classification

Marking	ALO	ALY	ALG	ALL
Rank	O	Y	GR	L
hFE	70~140	120~240	200~400	350~700