

## SOT-23 Plastic-Encapsulate Transistors

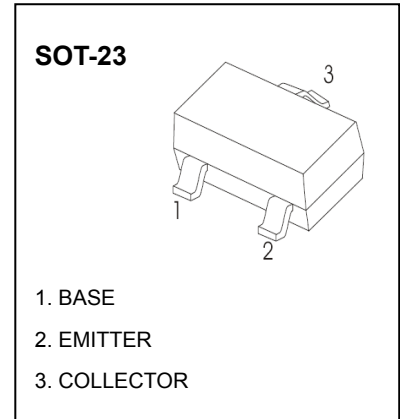
### KTC3880 TRANSISTOR (NPN)

#### FEATURES

- Small reverse transfer capacitance, low noise figure.
- High frequency low noise amplifier.

#### ■ Classification of hfe

Rank	R	O	Y
Range	40-80	70-140	100-200
Marking	AQR	AQO	AQY



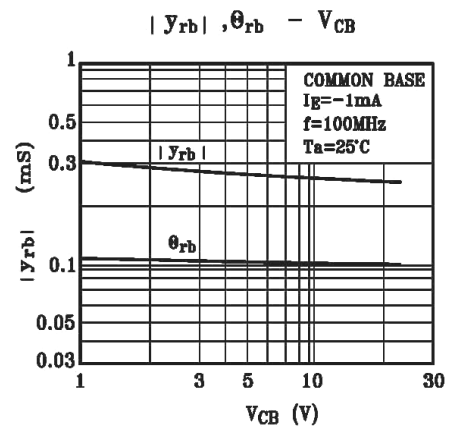
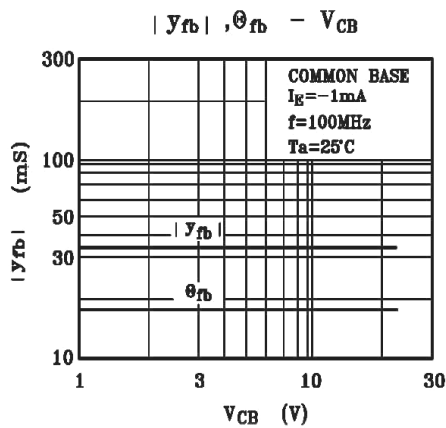
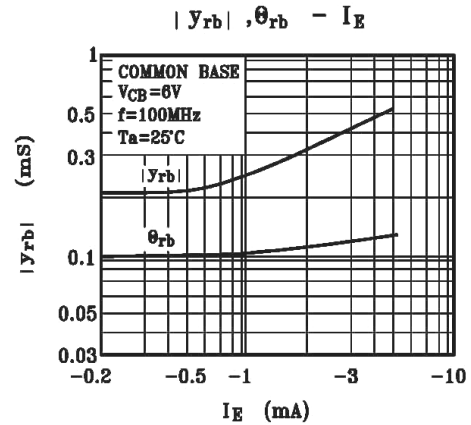
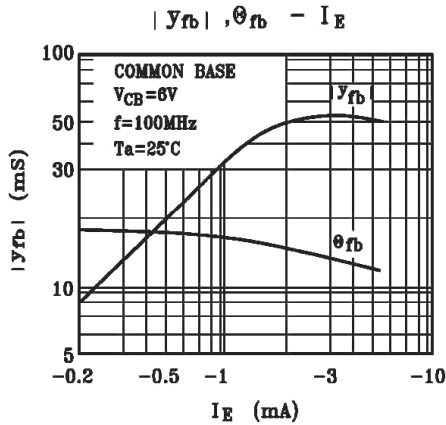
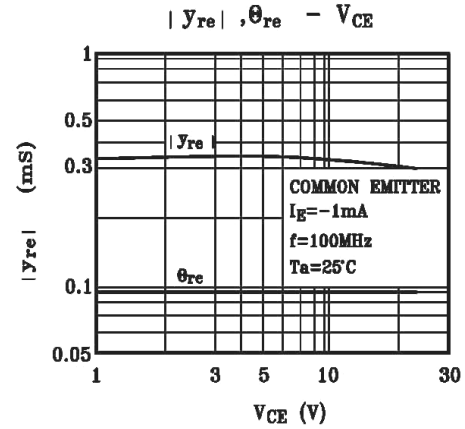
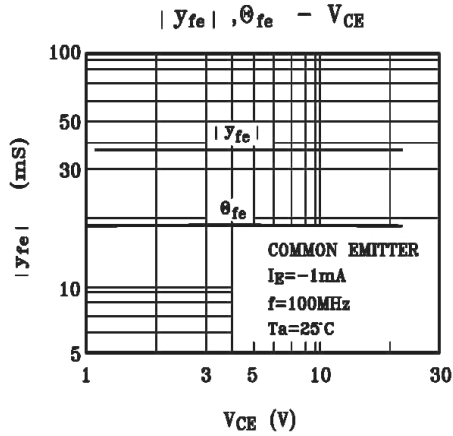
#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V <sub>CB0</sub>	40	V
Collector to Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter to Base Voltage	V <sub>EB0</sub>	4.0	V
Collector Current	I <sub>C</sub>	20	mA
Emitter Current	I <sub>E</sub>	-20	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>	-55~150	°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> =18V I <sub>E</sub> =0		0.5		μA
Emitter Cut-Off Current	I <sub>EB0</sub>	V <sub>EB</sub> =4.0V I <sub>C</sub> =0		0.5		μA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> =6.0V I <sub>C</sub> =1.0mA	40	200		
Reverse Transfer Capacitance	C <sub>re</sub>	V <sub>CE</sub> =6.0V f=1.0MHz		0.7		pF
Transition Frequency	f <sub>T</sub>	V <sub>CE</sub> =6.0V I <sub>C</sub> =1.0mA		550		MHz
Collector- Base Time Constant	C <sub>c.rbb</sub>	V <sub>CE</sub> =6.0V f=30MHz I <sub>E</sub> =1.0mA			30	pS
Noise Figure	NF	V <sub>CE</sub> =6.0V f=100MHz I <sub>C</sub> =0.1mA	2.5		5.0	dB
Power Gain	G <sub>pe</sub>	V <sub>CE</sub> =6.0V f=100MHz I <sub>C</sub> =0.1mA	15	18		dB

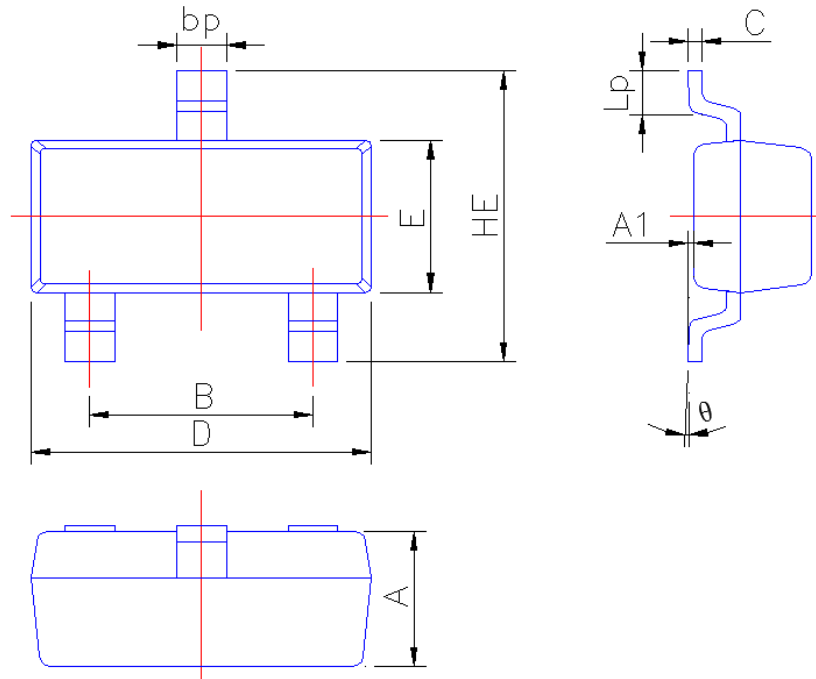
## Typical Characteristics



### PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.10
A1	0.013	0.100
B	1.80	2.00
bp	0.35	0.50
C	0.09	0.150
D	2.80	3.00
E	1.20	1.40
HE	2.20	2.80
Lp	0.20	0.50
θ	0°	5°