

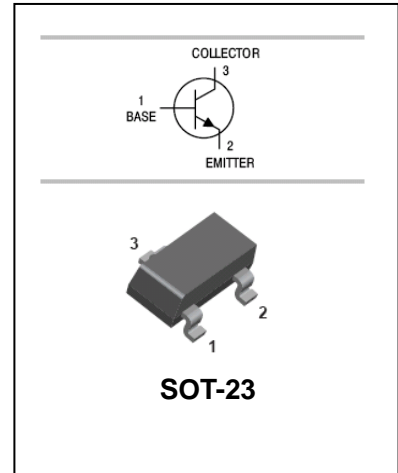


## NPN Silicon Epitaxial Planar Transistor

## KTC3875

### FEATURES

- Complementary To KTA1504.
- Excellent  $H_{FE}$  Linearity.
- Low noise.



### APPLICATIONS

- General purpose application, switching application.

### ORDERING INFORMATION

Type No.	Marking	Package Code
KTC3875	ALO/ALY/ALG/ALL	SOT-23

### MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	60	V
$V_{CEO}$	Collector-Emitter Voltage	50	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	150	mA
$I_B$	Base Current	30	mA
$P_C$	Collector Power Dissipation	150	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55 to +150	$^\circ\text{C}$



**NPN Silicon Epitaxial Planar Transistor**

**KTC3875**

**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=2mA$	70		700	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$		0.1	0.25	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=1mA$	80			MHZ
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		2.0	3.5	pF
Noise figure	NF	$V_{CE}=6V, I_C=0.1mA,$ $F=1KHz, R_g=10K\Omega$		1.0	10	dB

**CLASSIFICATION OF  $h_{FE}$**

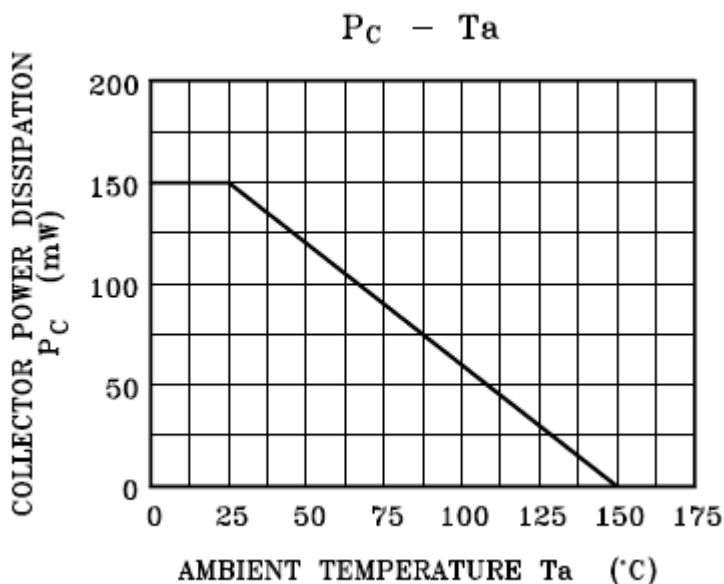
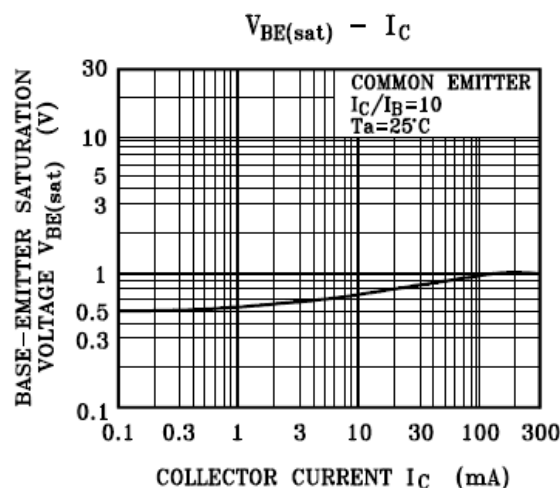
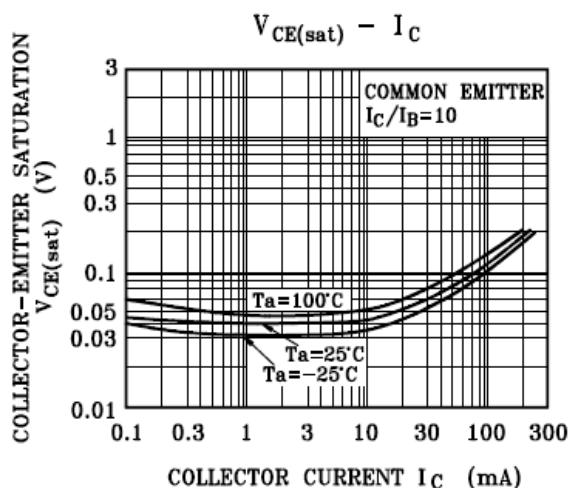
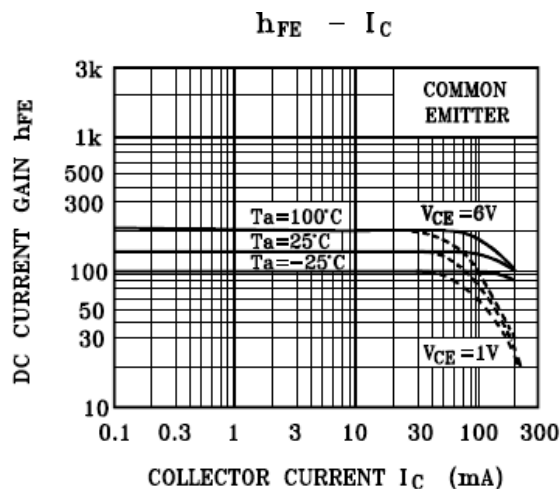
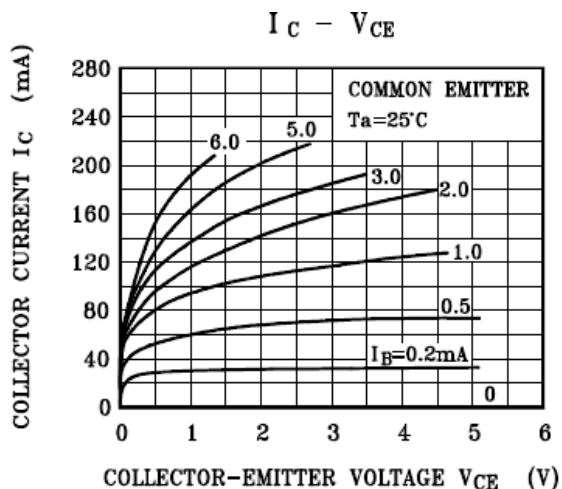
Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	ALO	ALY	ALG	ALL



**NPN Silicon Epitaxial Planar Transistor**

**KTC3875**

TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



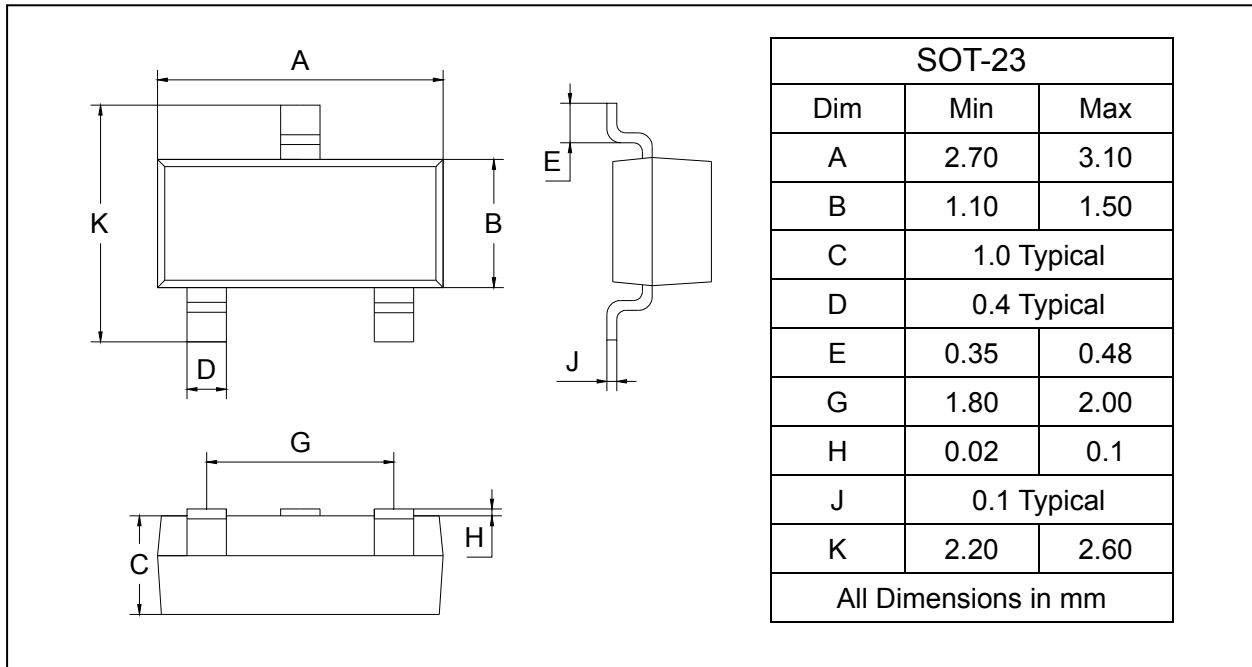
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**KTC3875**

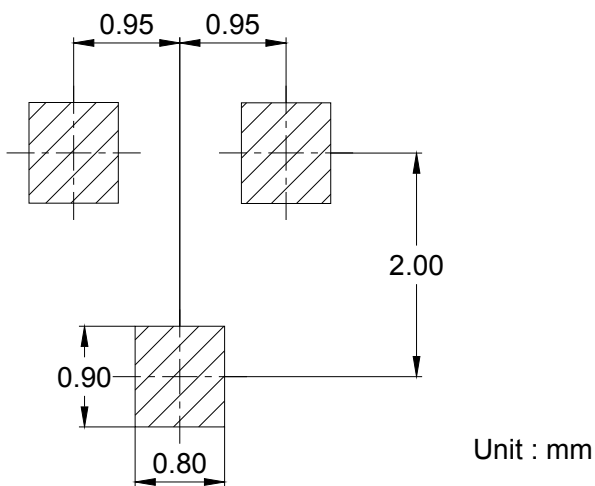
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-23



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

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