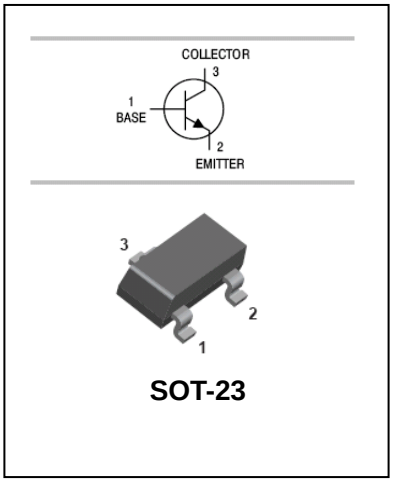
NPN Silicon Epitaxial Planar Transistor **KTC3875**

FEATURES

Lead-free

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



SOT-23

APPLICATIONS

- General purpose application, switching application.

ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25℃ 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	-55~150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

NPN Silicon Epitaxial Planar Transistor **KTC3875**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,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=100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
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=10KΩ		1.0	10	dB

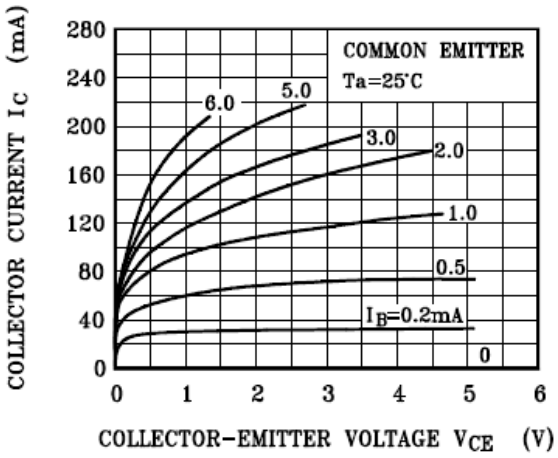
CLASSIFICATION OF h_{FE}

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

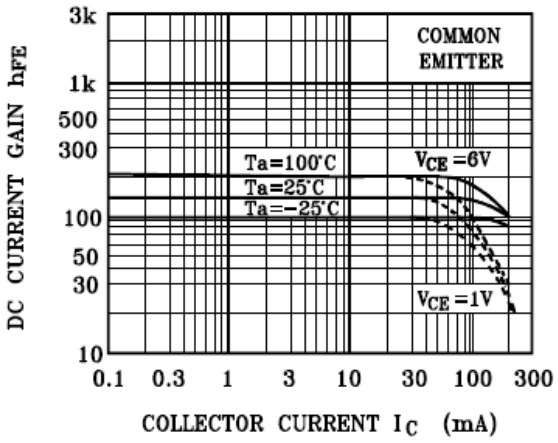
NPN Silicon Epitaxial Planar Transistor **KTC3875**

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

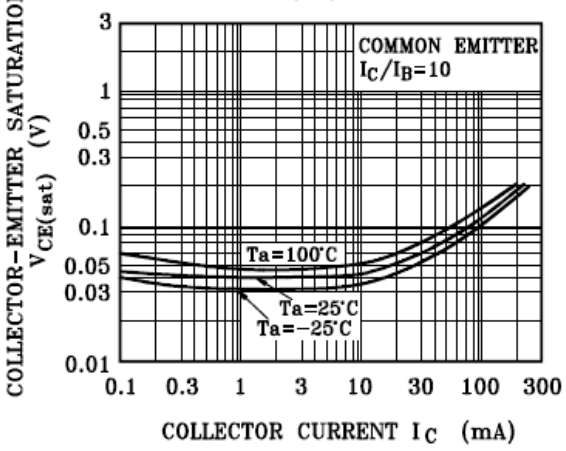
$I_C - V_{CE}$



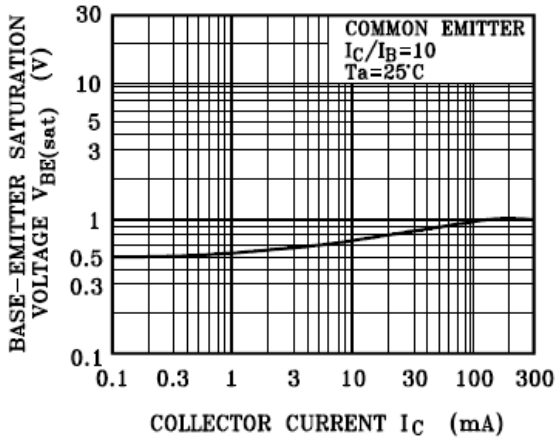
$h_{FE} - I_C$



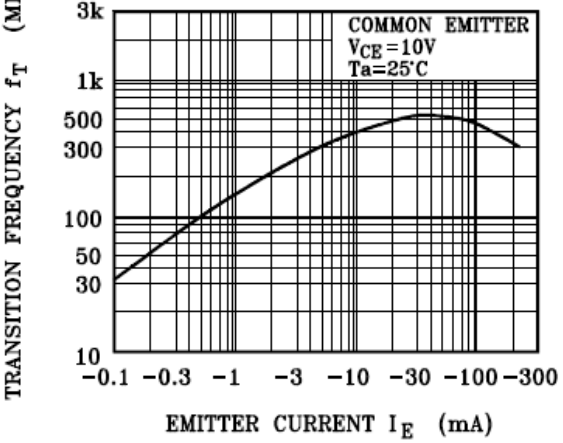
$V_{CE(sat)} - I_C$



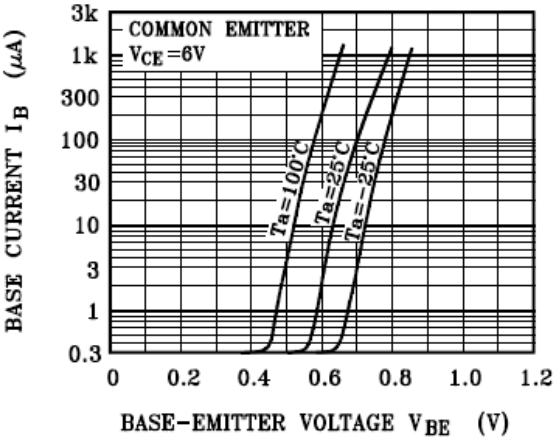
$V_{BE(sat)} - I_C$



$f_T - I_E$



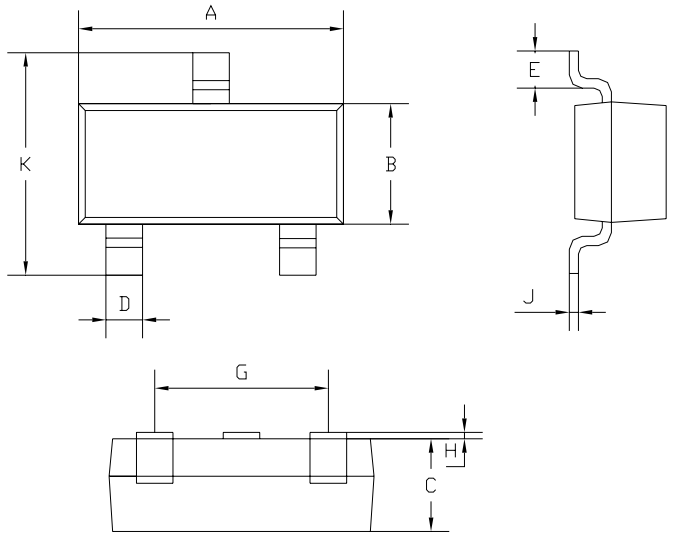
$I_B - V_{BE}$



NPN Silicon Epitaxial Planar Transistor **KTC3875**

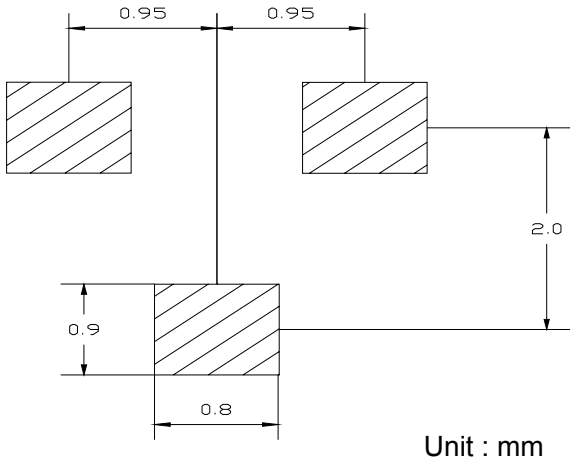
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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