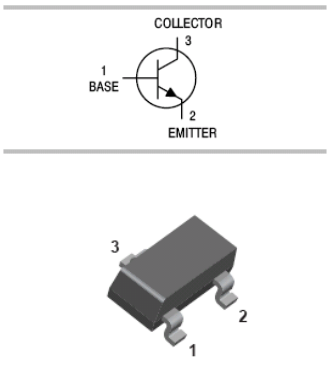
NPN Silicon Epitaxial Planar Transistor **KTC4075**

FEATURES

- High and excellent DC current gain.
- Complementary to KTA2014.
- Small package.
- RoHS compliant with Halogen-free

HF



SOT-23

APPLICATIONS

- General purpose application.
- Switching application.

ORDERING INFORMATION

Type No.	Marking	Package Code
KTC4075-O	LO	SOT-23
KTC4075-Y	LY	SOT-23
KTC4075-GR	LGR	SOT-23
KTC4075-BL	LBL	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	100	mW
T_j, T_{stg}	Junction and Storage Temperature	-55 to +150	℃

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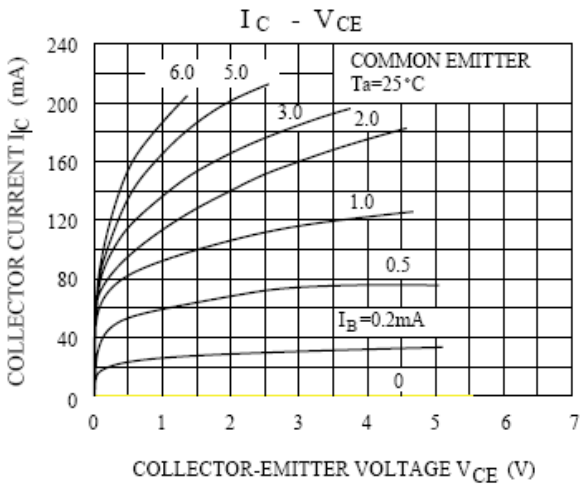
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

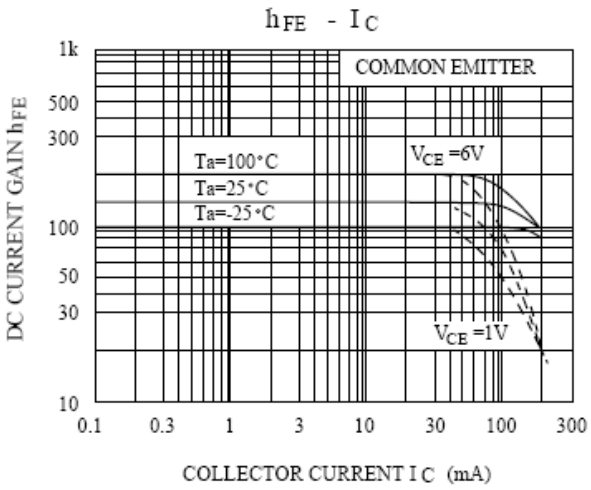
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA,I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			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,Rg=10kΩ		1.0	10	dB

CLASSIFICATION OF h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LGR	LBL

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified





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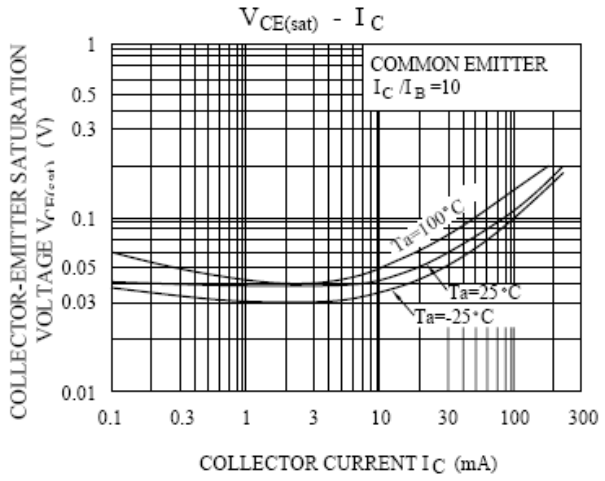

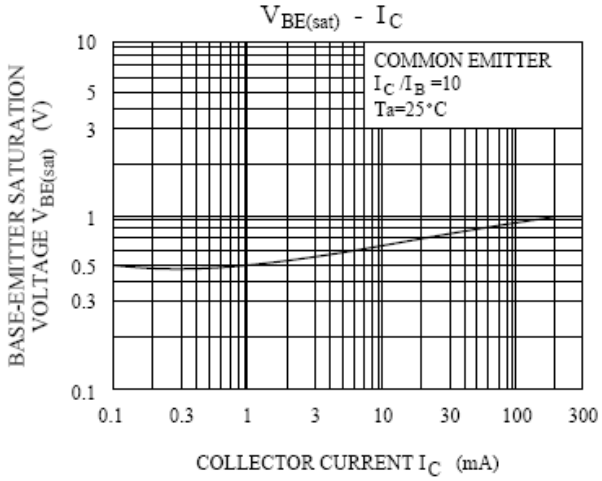

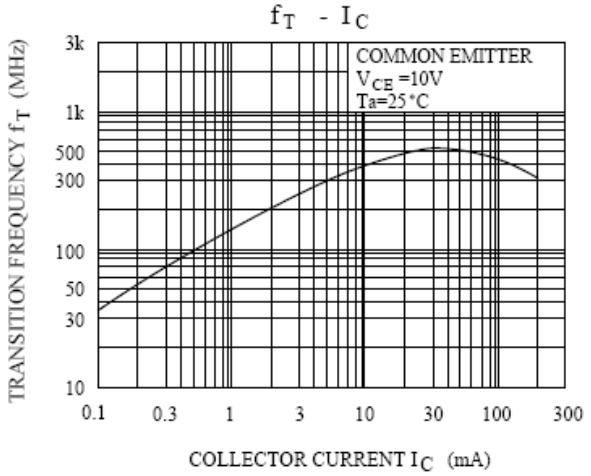

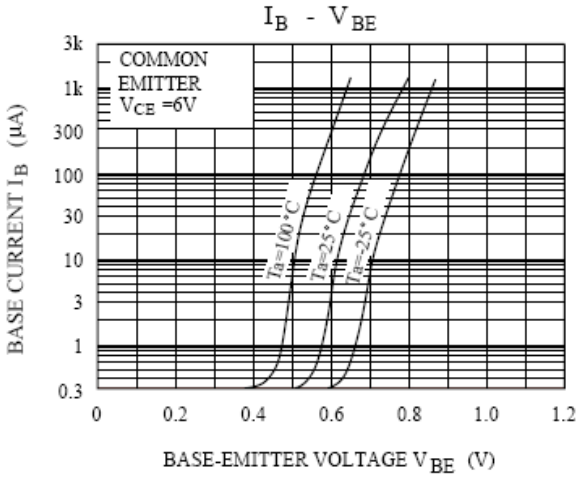

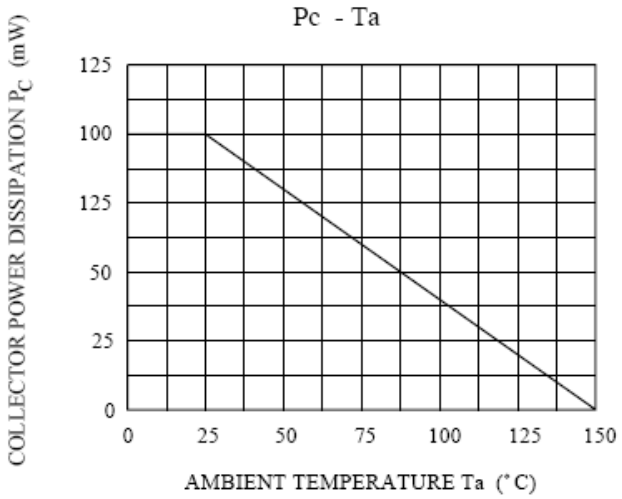

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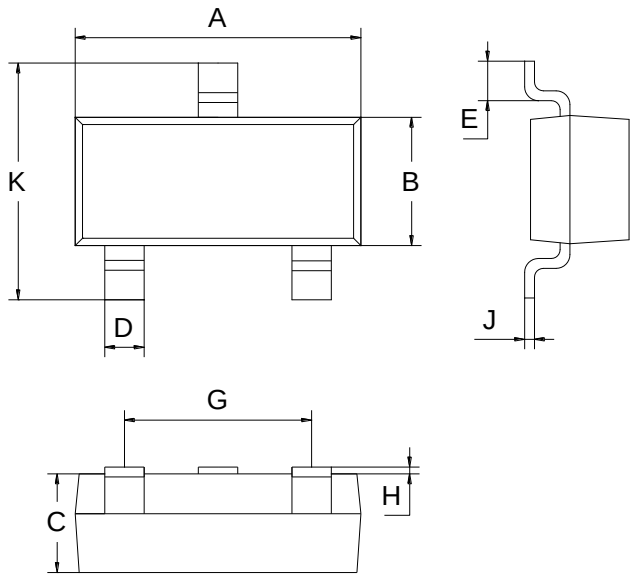
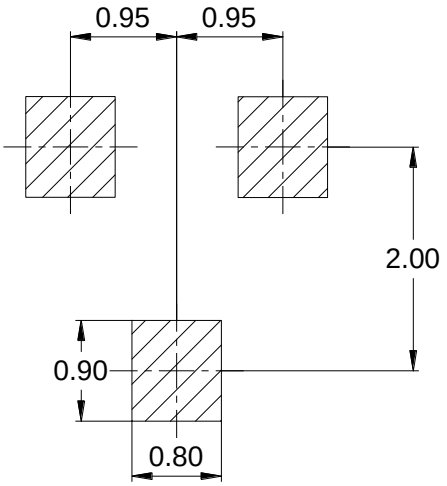
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
KTC4075	SOT-23	3000 pcs / Tape & Reel