

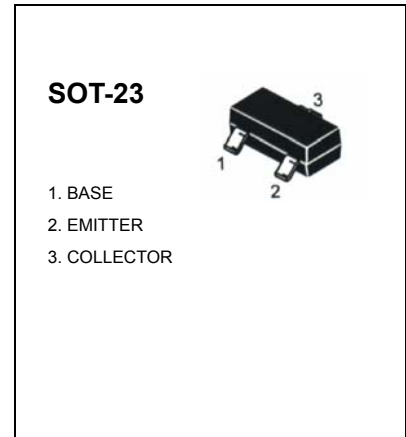


SOT-23 Plastic-Encapsulate Transistors

KTC4075 TRANSISTOR (NPN)

FEATURES

- Excellent h_{FE} linearity
- High h_{FE}
- Low Noise
- Complementary to KTA2014



MAXIMUM RATINGS($T_A=25^{\circ}C$ unless otherwise noted)

Symbol Para	meter	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
P_C	Collector Power Dissipation	100	mW
T_j	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-55-150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}C$ unless otherwise specified)

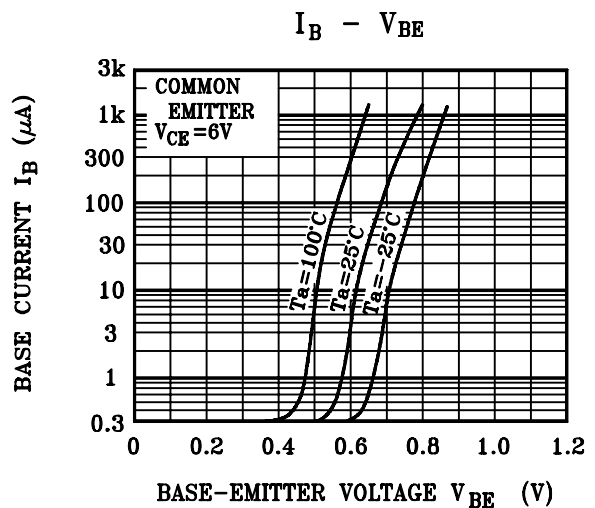
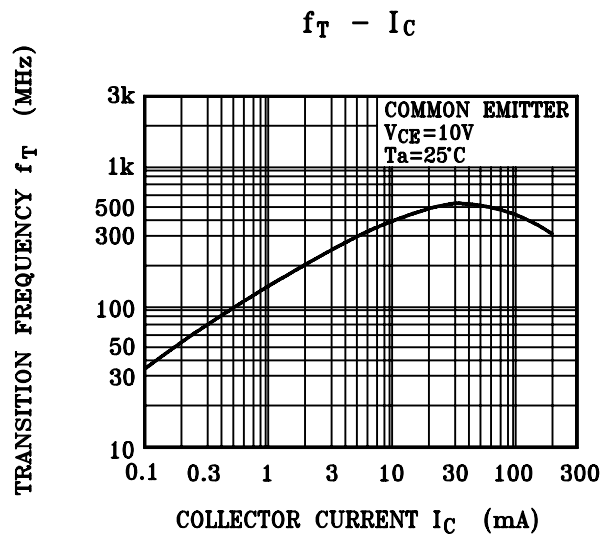
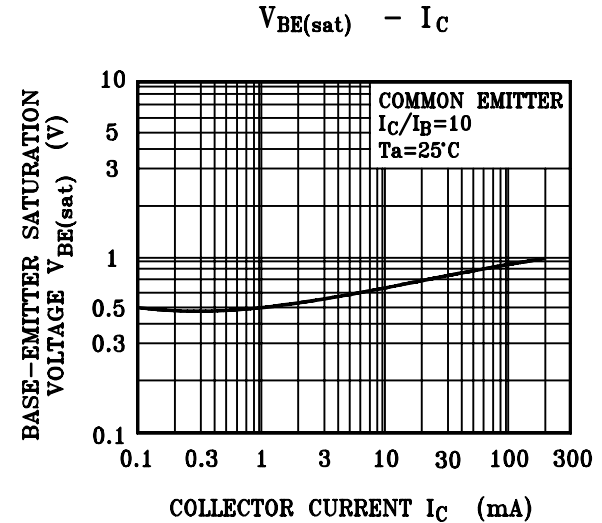
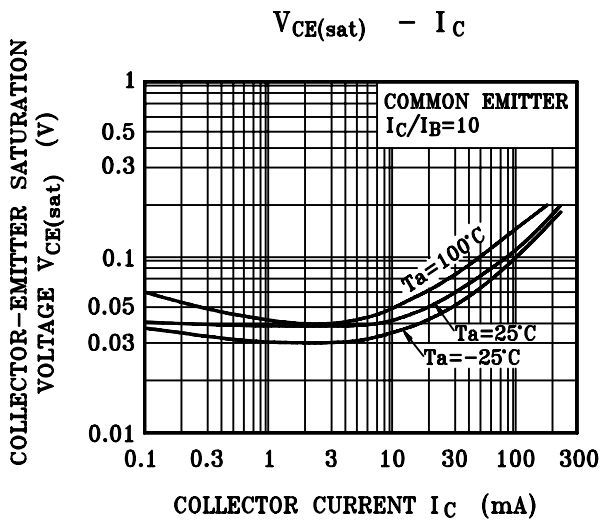
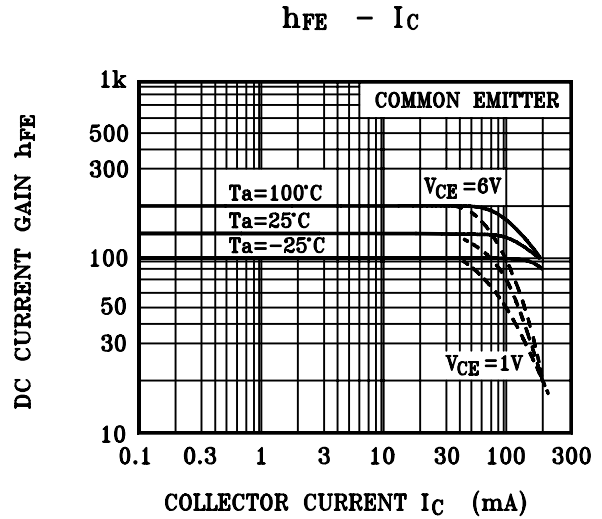
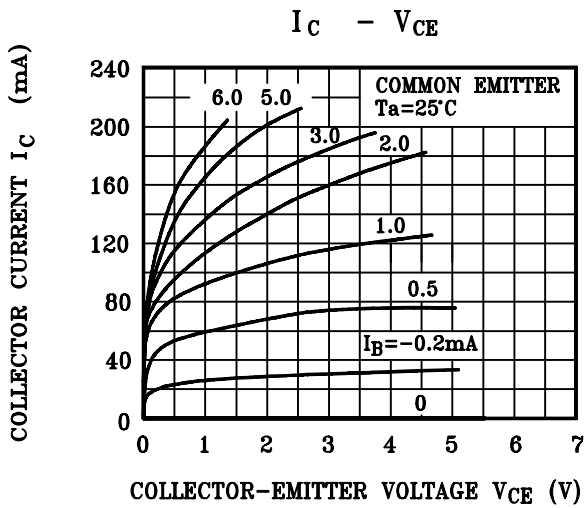
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E=0$	60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B=0$	50		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C=0$	5		V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$		0.1	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_{CEsat}	$I_C=100mA, I_B= 10mA$		0.25	V
Transition frequency	f_T	$V_{CE}=10V, I_C= 1mA$	80		MHz
Collector output capacitance	C_{ob}	$V_{CE}=10V, I_E=0, f=1MHz$		3.5	pF
Noise figure	NF	$V_{CE}=6V, I_E=0.1mA, f=1KHz, R_G=10K\Omega$		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

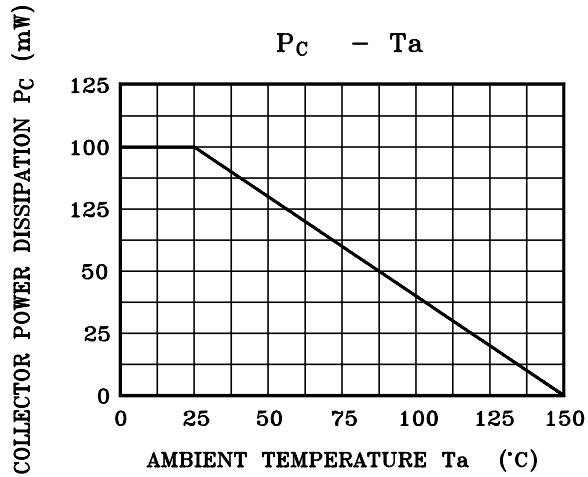
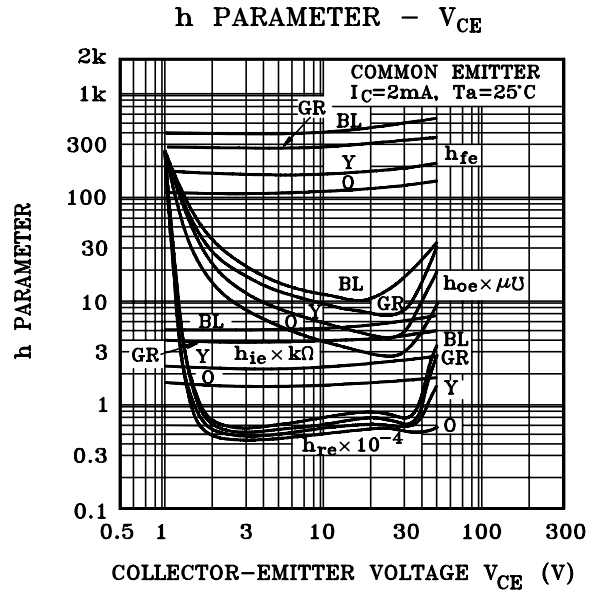
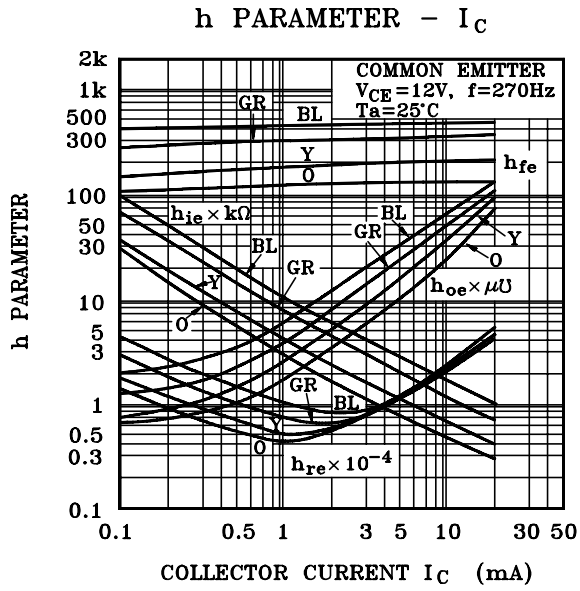
KTC4075 NPN Transistors

■ Typical Characteristics



KTC4075 NPN Transistors

Typical Characteristics

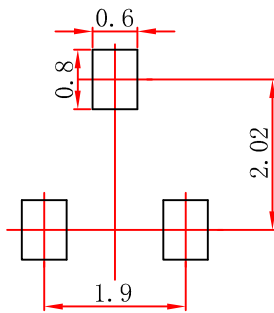


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.