KTC4075 (NPN)

FEATURES

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

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

Maximum Ratings (Ta=25 ℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	0.15	A
Collector Power dissipation	P_C	0.1	W
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55to +150	℃

ELECTRICAL CHARACTERISTICS (@ Ta=25 ℃ unless otherwise specified)

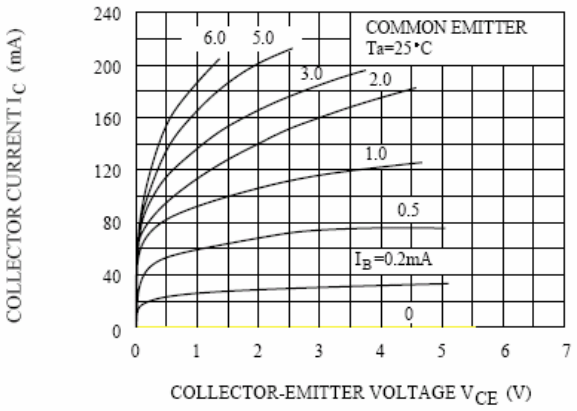
Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C = 100μA, I_E=0	60		V
Collector-emitter breakdown voltage	V_{CEO}	I_C = 1mA, I_B=0	50		V
Emitter-base breakdown voltage	V_{EBO}	I_E= 100μA, I_C=0	5		V
Collector cut-off current	I_{CBO}	V_{CB}=60V, I_E=0		0.1	μA
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_{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=10KΩ		10	dB

CLASSIFICATION OF h_{FE}

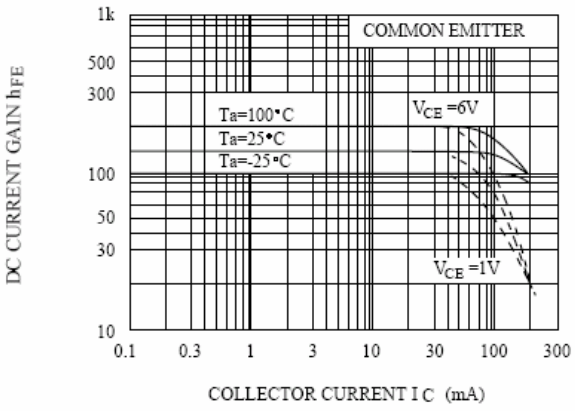
Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LGR	LBL

KTC4075 Typical Characteristics

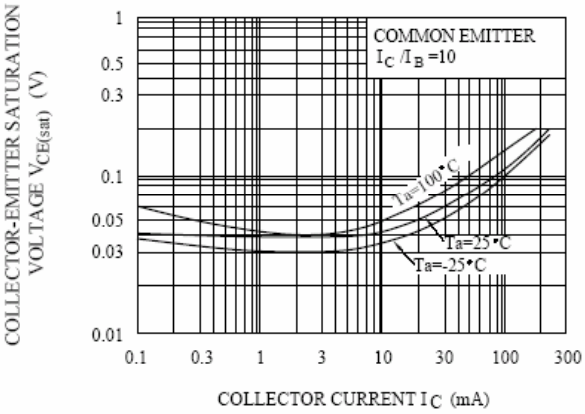
I_C - V_{CE}



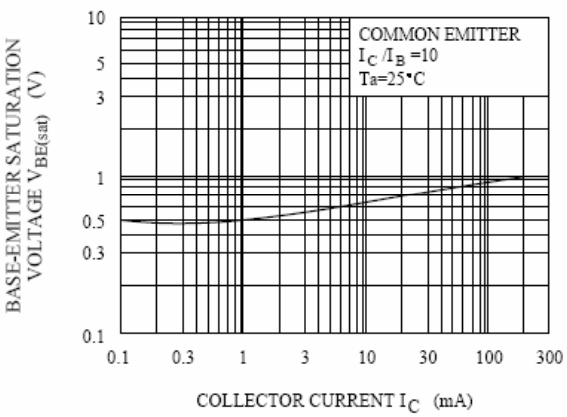
h_{FE} - I_C



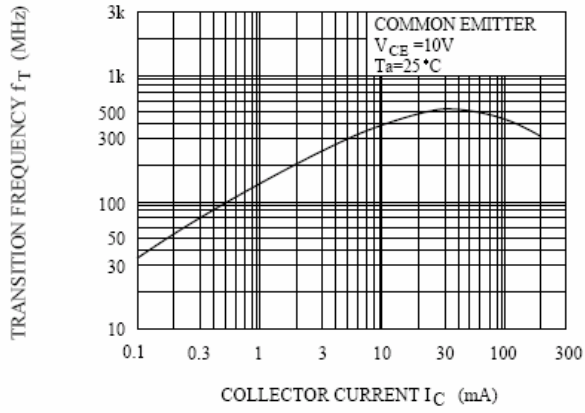
$V_{CE(sat)}$ - I_C



$V_{BE(sat)}$ - I_C



f_T - I_C



I_B - V_{BE}