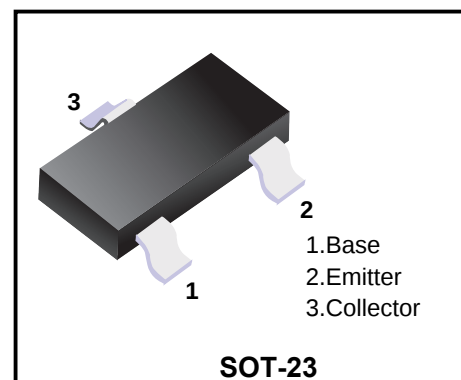


NPN Transistors

Features

- High h_{FE}
- Low noise
- Complementary to KTA1504



Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	50	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	150	mA
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	-55 to 150	

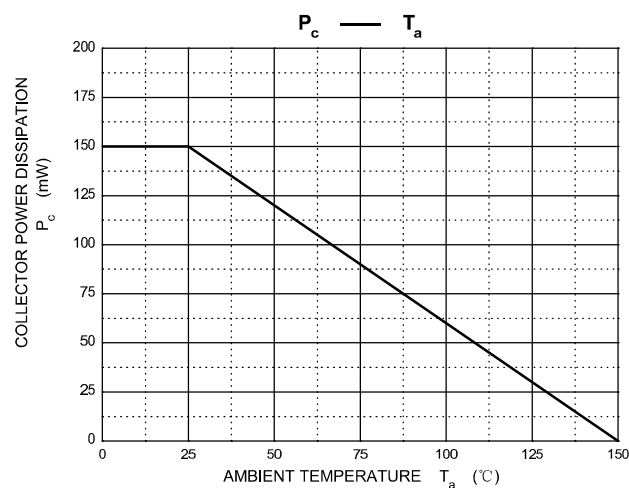
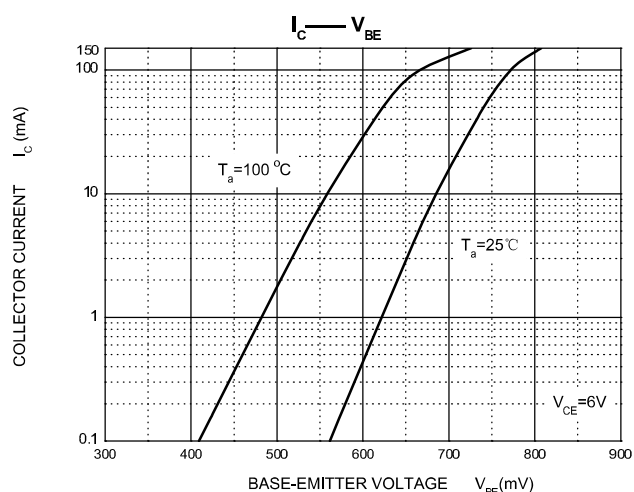
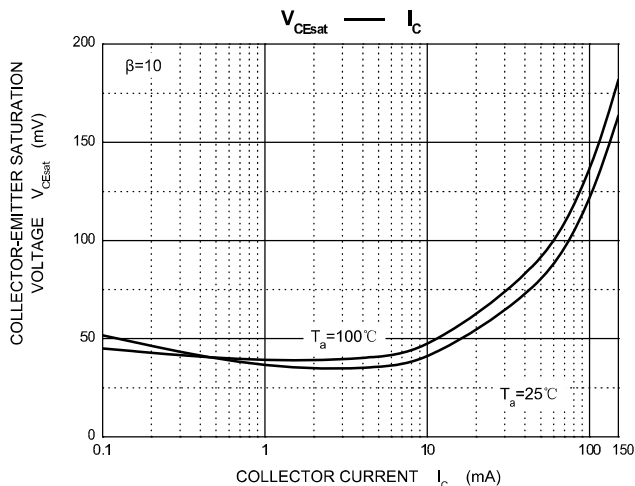
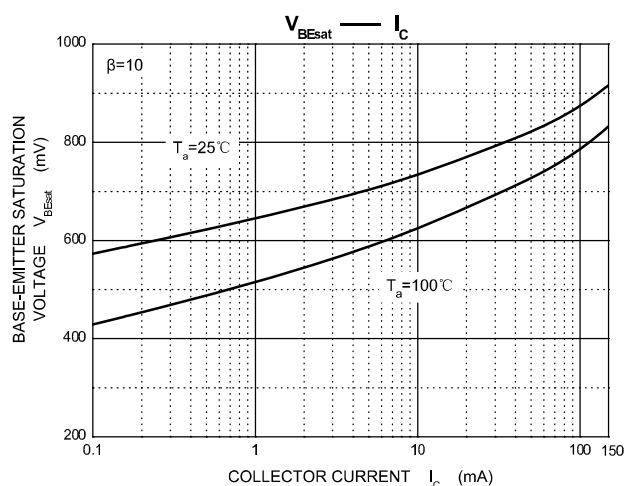
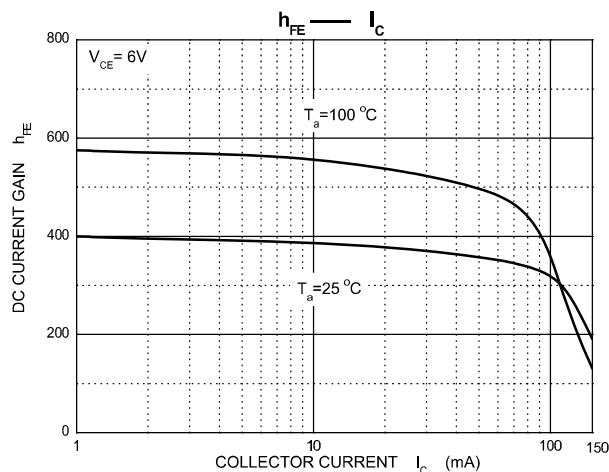
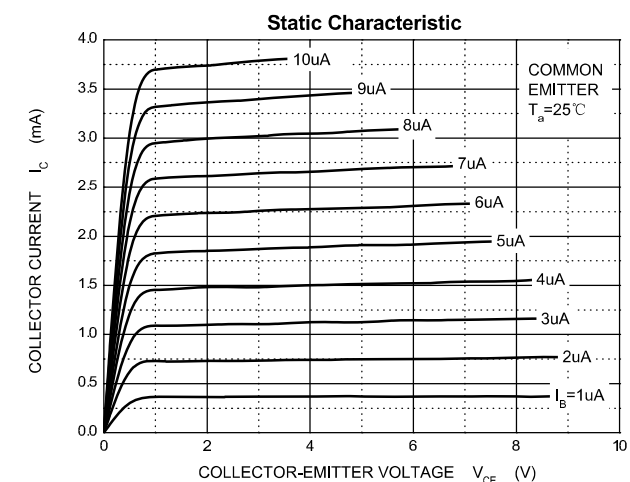
Electrical Characteristics (Ta=25°C unless otherwise specified.)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = 100 \mu A, I_E = 0$	60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = 1 mA, I_B = 0$	50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = 100 \mu A, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 60 V, I_E = 0$			100	nA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5 V, I_C = 0$			100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 mA, I_B = 10 mA$			0.25	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 mA, I_B = 10 mA$			1	
DC current gain	h_{FE}	$V_{CE} = 6 V, I_C = 2 mA$	70		700	
Noise figure	NF	$V_{CE} = 6 V, I_C = 0.1 mA, R_g = 10 k\Omega, f = 1 KHz$		1	10	dB
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, I_E = 0, f = 1 MHz$			3.5	pF
Transition frequency	f_T	$V_{CE} = 10 V, I_C = 1 mA$	80			MHz

h_{FE} Classification

Type	KTC3875-O	KTC3875-Y	KTC3875-G	KTC3875-L
Range	70-140	120-240	200-400	350-700
Marking	ALO	ALY	ALG	ALL

Typical Characteristics



Ordering information

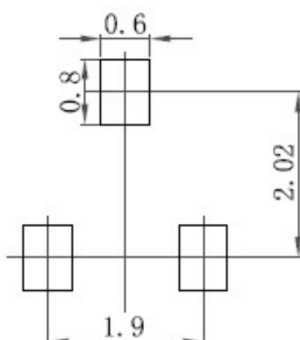
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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