KTD1304 (NPN)

FEATURES

- High emitter-base voltage
- low on resistance

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

Marking: MAX

Maximum Ratings (Ta=25 ℃ unless otherwise noted)

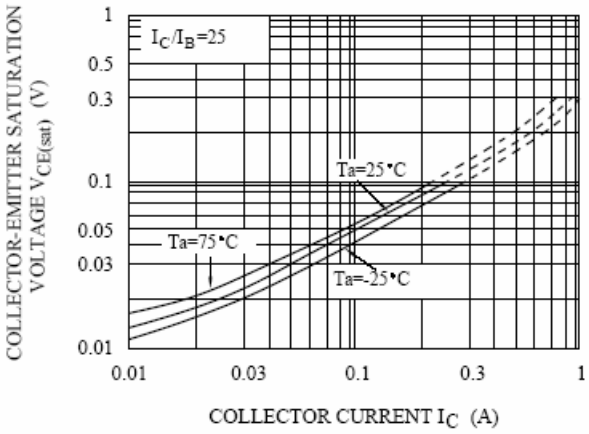
Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	25	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	12	V
Collector Current -Continuous	I_C	300	mA
Collector Power dissipation	P_C	0.2	W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{stg}	-55to +150	℃

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

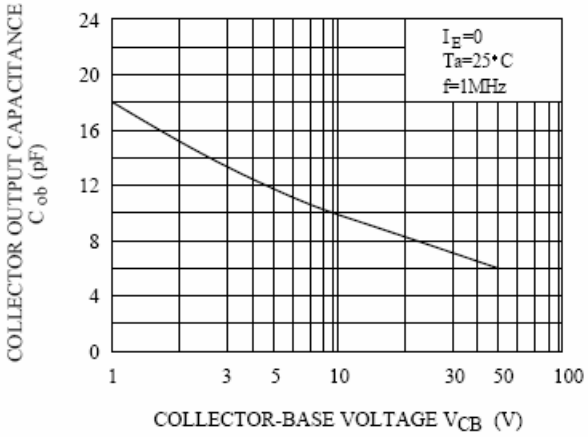
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C=100μA, I_E=0	25			V
Collector-emitter breakdown voltage	V_{CEO}	I_C=1mA, I_B=0	20			V
Emitter-base breakdown voltage	V_{EBO}	I_E=100μA, I_C=0	12			V
Collector cut-off current	I_{CBO}	V_{CB}=25 V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=12V, I_C=0			0.1	μA
DC current gain	h_{FE}(FOR)	V_{CE}=2V, I_C=4 mA	200		1000	
	h_{FE}(REV)	V_{CE}= 2V, I_C= 4mA	20			
Collector-emitter saturation voltage	V_{CE}(sat)	I_C= 100mA, I_B=10 mA			0.25	V
Base-emitter saturation voltage	V_{BE}(sat)	I_C= 100mA, I_B=10mA			1	V
Transition frequency	f_T	V_{CE}=10V, I_C= 1mA f=100MHz		60		MHz
output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz		10		pF
On resistance	$R_{(on)}$	V_{in}=0.3V,I_B=1mA,f=1KHz		0.6		Ω

KTD1304 Typical Characteristics

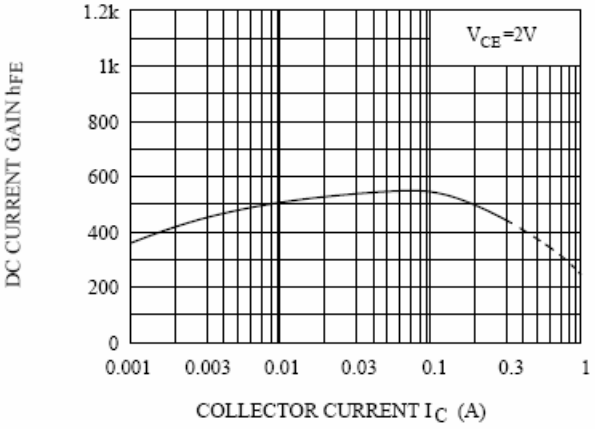
$V_{CE(sat)}$ - I_C



C_{ob} - V_{CB}



h_{FE} - I_C



R_{on} - I_B