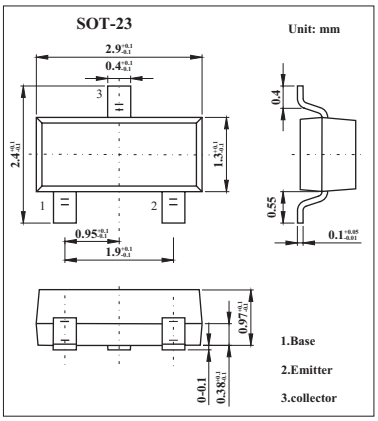
TY Semicondutor®

Product specification

KST9013



■ Features

- Excellent h_{FE} linearity
- Collector Current :I_C=0.5A

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	40	V
Collector - Emitter Voltage	V_{CEO}	25	V
Emitter - Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	500	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55 to 150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector - base breakdown voltage	V_{CBO}	I_C= 100μA, I_E=0	40			V
Collector - emitter breakdown voltage	V_{CEO}	I_C= 0.1mA, I_B=0	25			V
Emitter - base breakdown voltage	V_{EBO}	I_E=100μA, I_C=0	5			V
Collector cut - off current	I_{CBO}	V_{CB}=40 V , I_E=0			0.1	μA
Collector cut -off current	I_{CEO}	V_{CE}=20V , I_B=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}=1V, I_C= 50mA	120		400	
		V_{CE}=1V, I_C=500mA	40			
Collector - emitter saturation voltage	$V_{CE(sat)}$	I_C=500 mA, I_B= 50mA			0.6	V
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=500 mA, I_B= 50mA			1.2	V
Transition frequency	f_T	V_{CE}=6V, I_C= 20mA,f=30MHz	150			MHz

■ h_{FE} Classification

Marking	J3		
Rank	L	H	J
hFE	120 to 200	200 to 350	300 to 400

■ Typical Characteristics

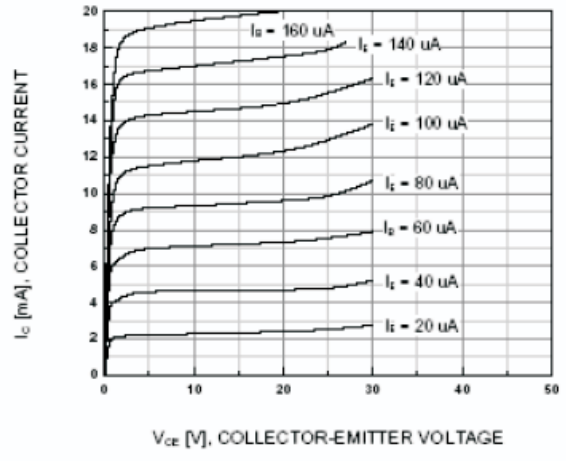


Fig.1 Static Characteristic

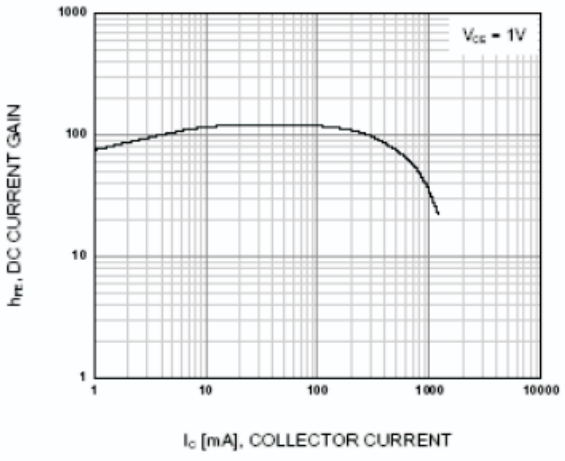


Fig.2 DC Current Gain

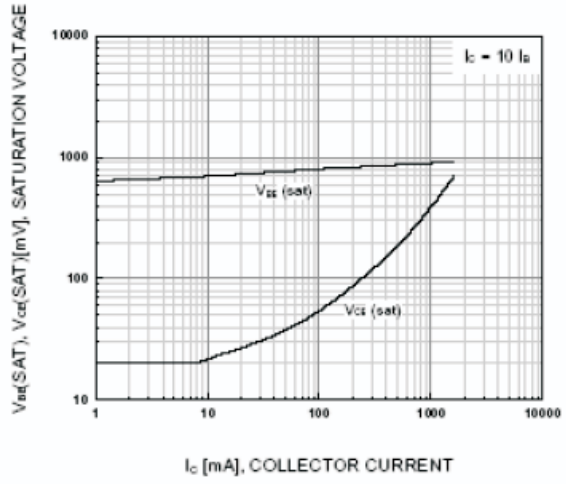


Fig.3 Base Emitter Saturation Voltage
Collector Emitter Saturation Voltage

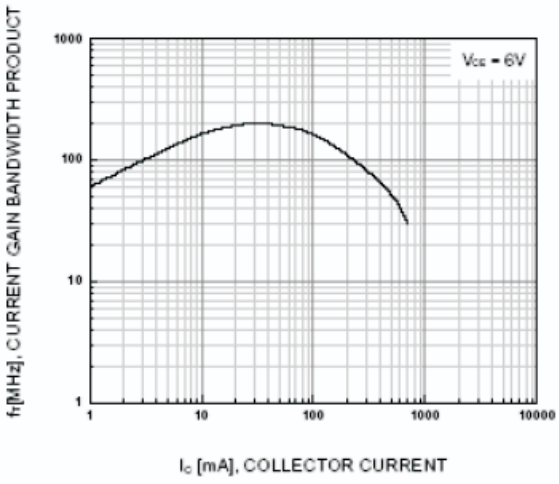


Fig.4 Current Gain Bandwidth Product