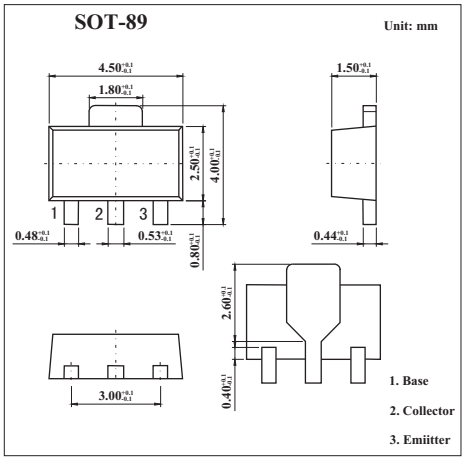
TY Semicondutor®

Product specification

H8050



■ Features

- Collector Power Dissipation: P_C=0.5W
- Collector Current: I_C=1.5A

■ 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	I_C	1.5	A
Collector power dissipation	P_C	0.5	W
Junction temperature	Tj	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= 100mA	85		400	
		V_{CE}= 1V, I_C= 800mA	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=800mA, I_B= 80mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=800mA, I_B=80mA			1.2	V
Base-emitter on voltage	$V_{BE(on)}$	I_C=1V,V_{CE}=10mA			1	V
Base-emitter positive favor voltage	V_{BEF}	I_B=1A			1.55	V
output capacitance	C_{ob}	V_{CB}=10V,I_E=0,f=1MHz			15	pF
Transition frequency	f_T	V_{CE}= 10V, I_C=50mA	100			MHz

■ h_{FE} Classification

Rank	B	C	D	D3
hFE	85 ～ 160	120～200	160～300	300～400

■ Typical Characteristics

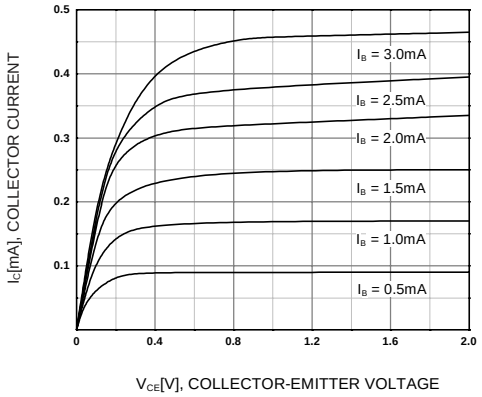


Figure 1. Static Characteristic

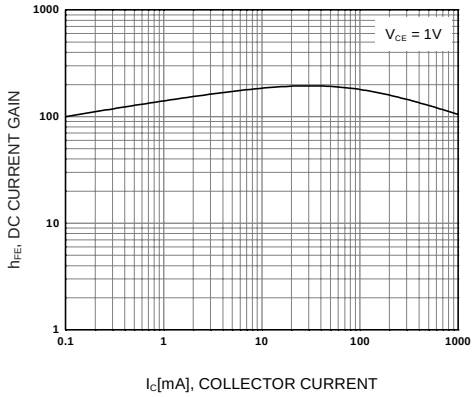


Figure 2. DC current Gain

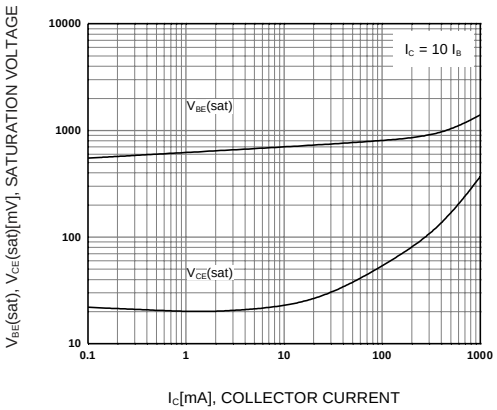


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

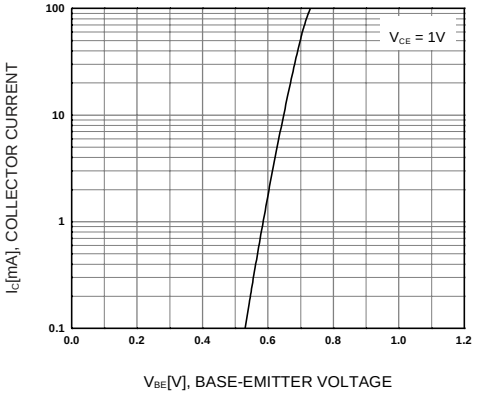


Figure 4. Base-Emitter On Voltage

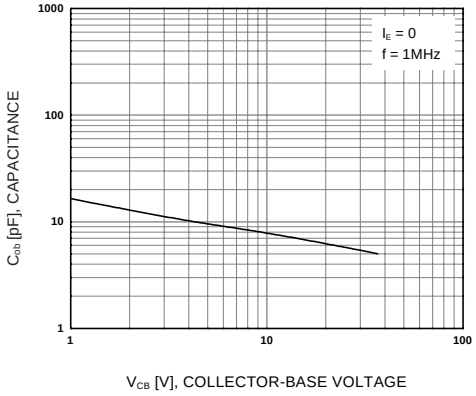


Figure 5. Collector Output Capacitance

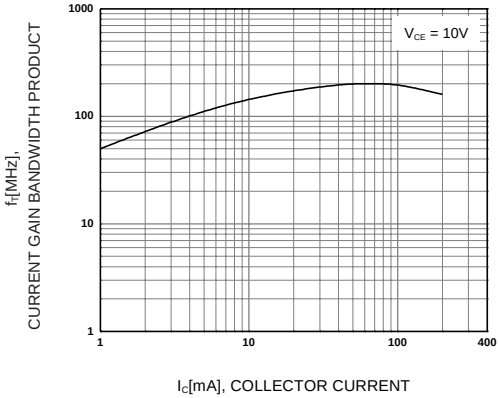


Figure 6. Current Gain Bandwidth Product