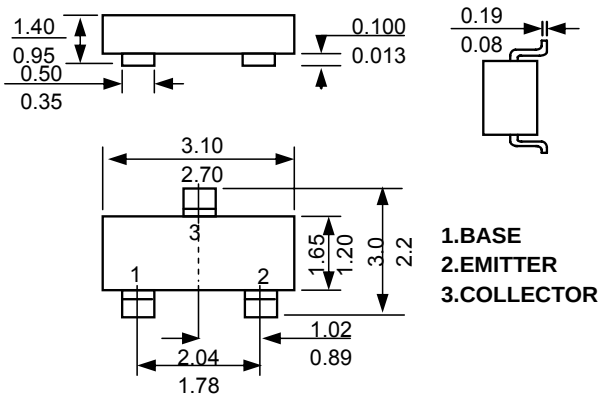
SS8050

NPN Transistors

FEATURES

- Complimentary to SS8550

SOT-23



Dimensions in millimeters

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Value	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	1.5	A
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	417	℃/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	℃

CLASSIFICATION OF h_{FE1}

Rank	L	H	J
Range	120-200	200-350	300-400

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C = 100uA, I_E = 0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C = 0.1 mA, I_B = 0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E = 100uA, I_C = 0	5			V
Collector cut-off current	I_{CBO}	V_{CB} = 40V, I_E = 0			0.1	uA
Collector cut-off current	I_{CEO}	V_{CE} = 20V, I_E=0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB} = 5V, I_C =0			0.1	uA
DC current gain	h_{FE1}	V_{CE} = 1V, I_C = 100mA	120		400	
	h_{FE2}	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
Transition frequency	f_T	V_{CE} = 10V, I_C = 50mA, f=30MHz	100			MHz

RATING AND CHARACTERISTIC CURVES (SS8050)

Fig.1 Static characteristics

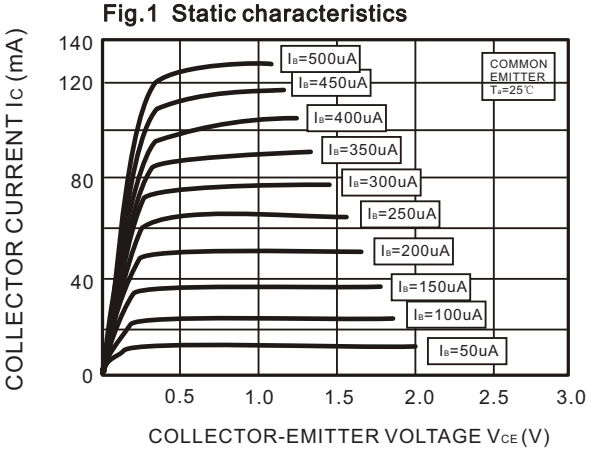


Fig.2 Pc —— Ta

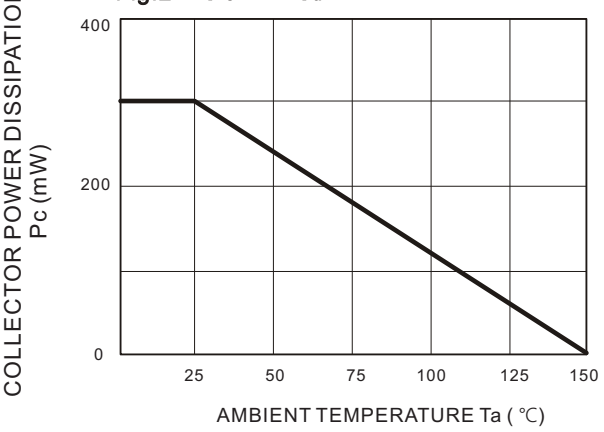


Fig.3 C_{ob} / C_{ib} —— V_{CB} / V_{EB}

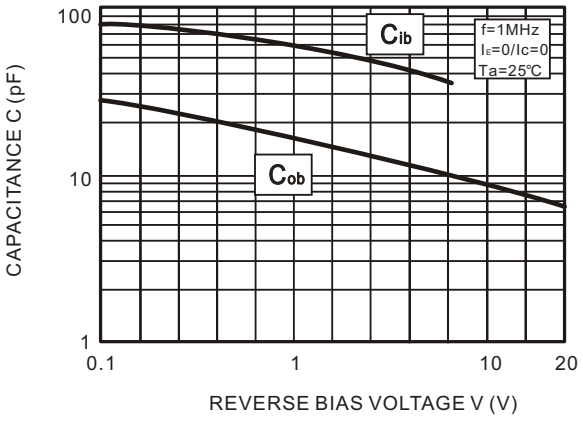


Fig.4 V_{CEsat} —— Ic

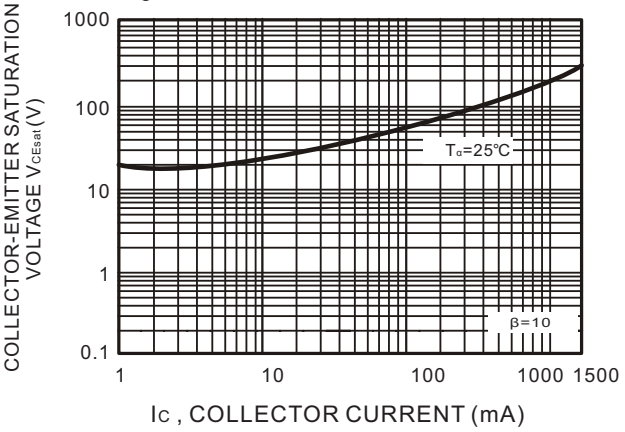


Fig.5 h_{FE}--Ic

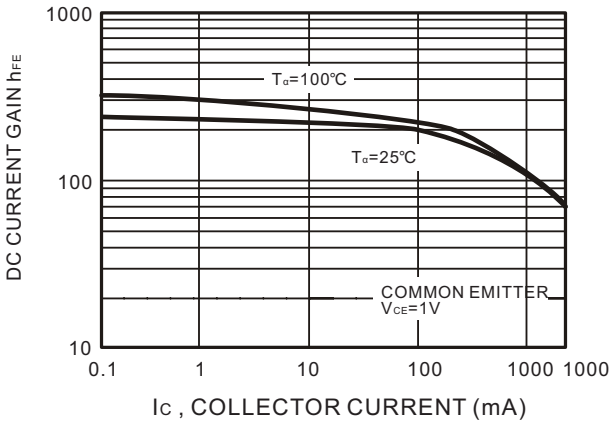


Fig.6 V_{BEsat} —— Ic

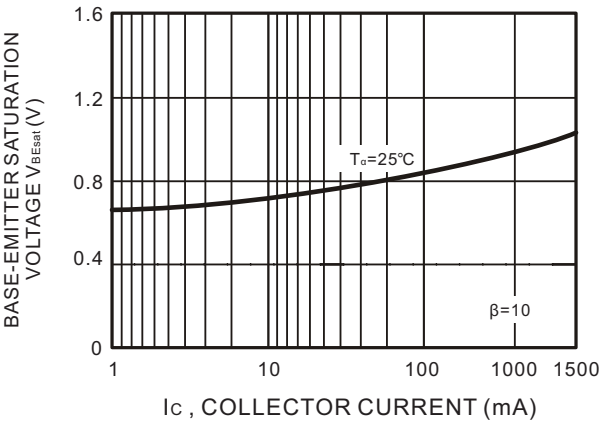


Fig.7 Ic —— V_{BE}

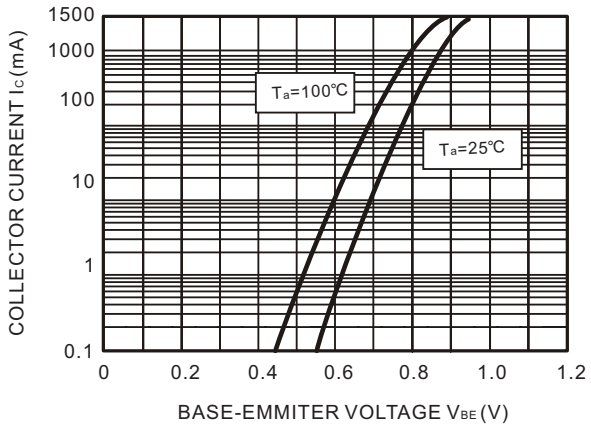


Fig.8 f_T ——Ic