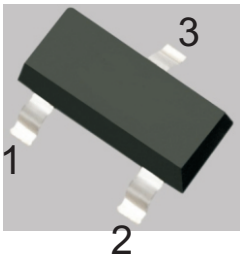
SS8050

NPN TRANSISTOR

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

FEATURES
- Complimentary to SS8550

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

TYPICAL CHARACTERICS

Fig.1 Static characteristics

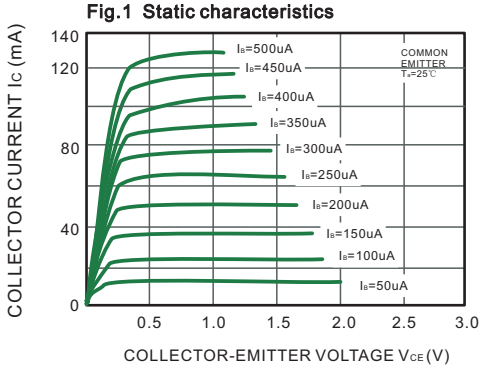


Fig.2 Pc—— Ta

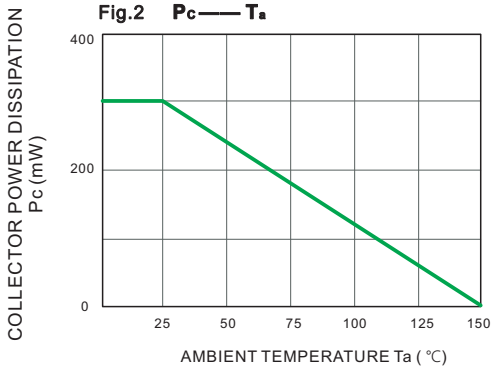


Fig.3 Cob / Cib —— VCB / VEB

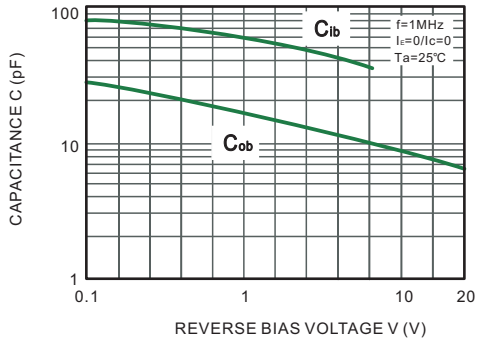


Fig.4 VCEsat —— Ic

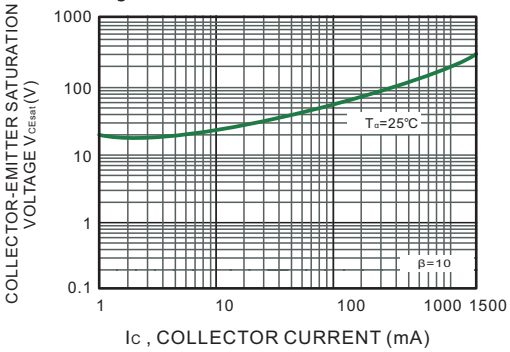


Fig.5 hFE--Ic

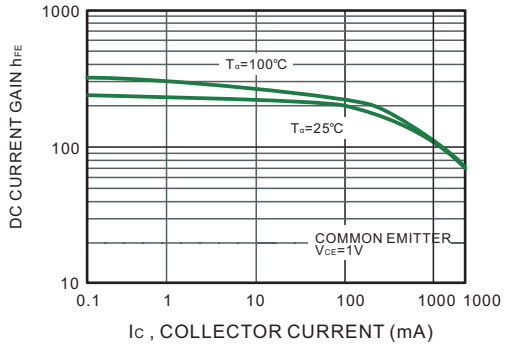


Fig.6 VBEsat —— Ic

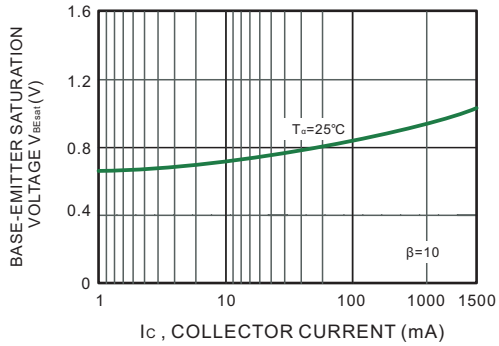


Fig.7 Ic —— VBE

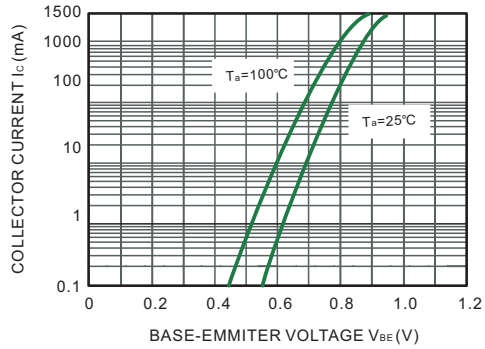
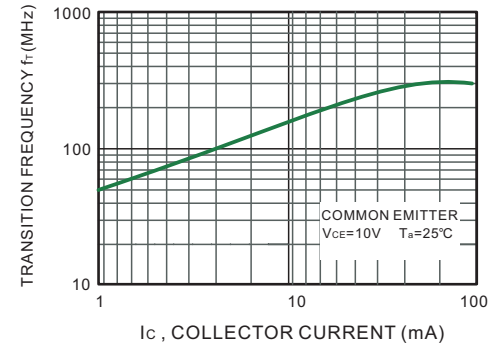
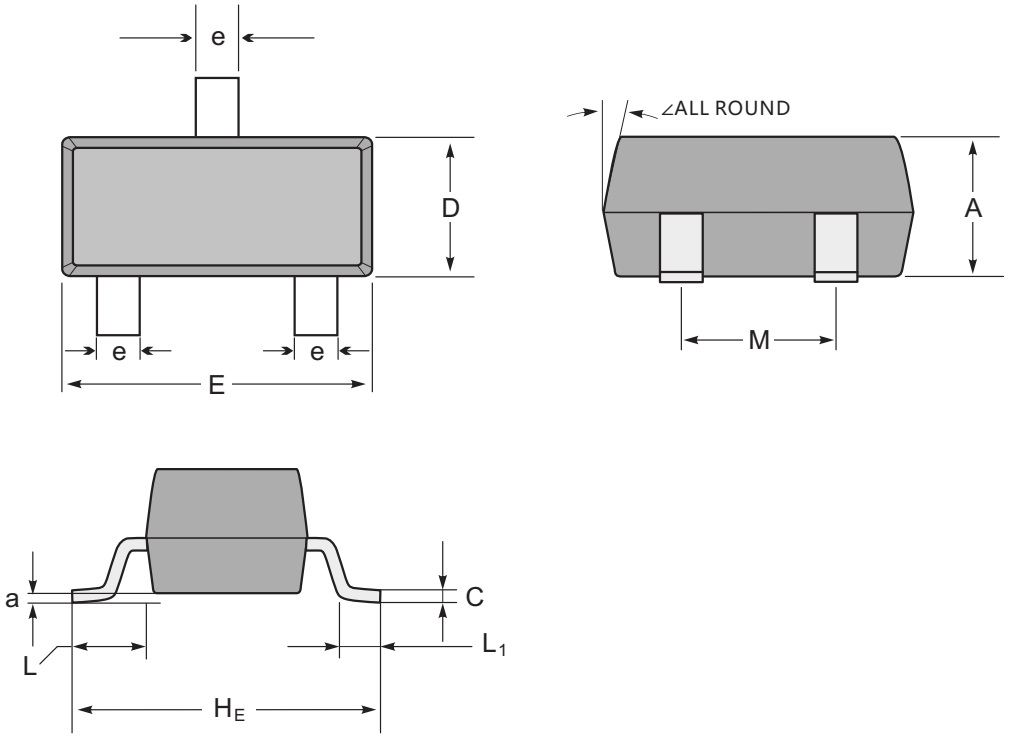


Fig.8 fT ——Ic



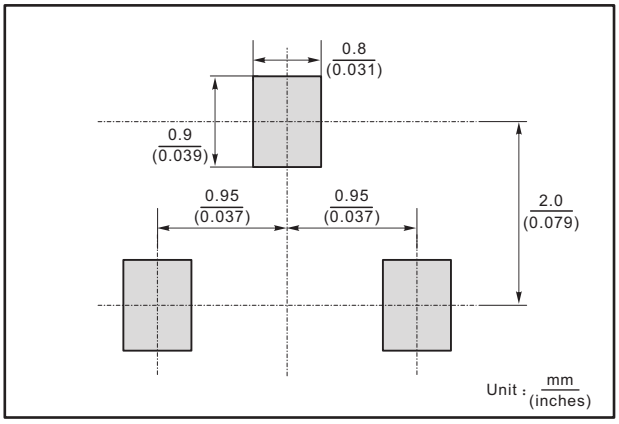
SOT-23 Package Outline Dimensions



SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a	∠
mm	max	1.1	0.20	1.4	3.0	2.6	0.6	1.95	0.55 (ref)	0.36 (ref)	0.15	12°
	min	0.9	0.08	1.2	2.8	2.2	0.35	1.7			0.0	
mil	max	43	7.9	55	118	102	24	77	22 (ref)	14 (ref)	6	
	min	35	3.1	47	110	87	13	67			0.0	

The recommended mounting pad size



Marking

Type number	Marking code
SS8050	Y1