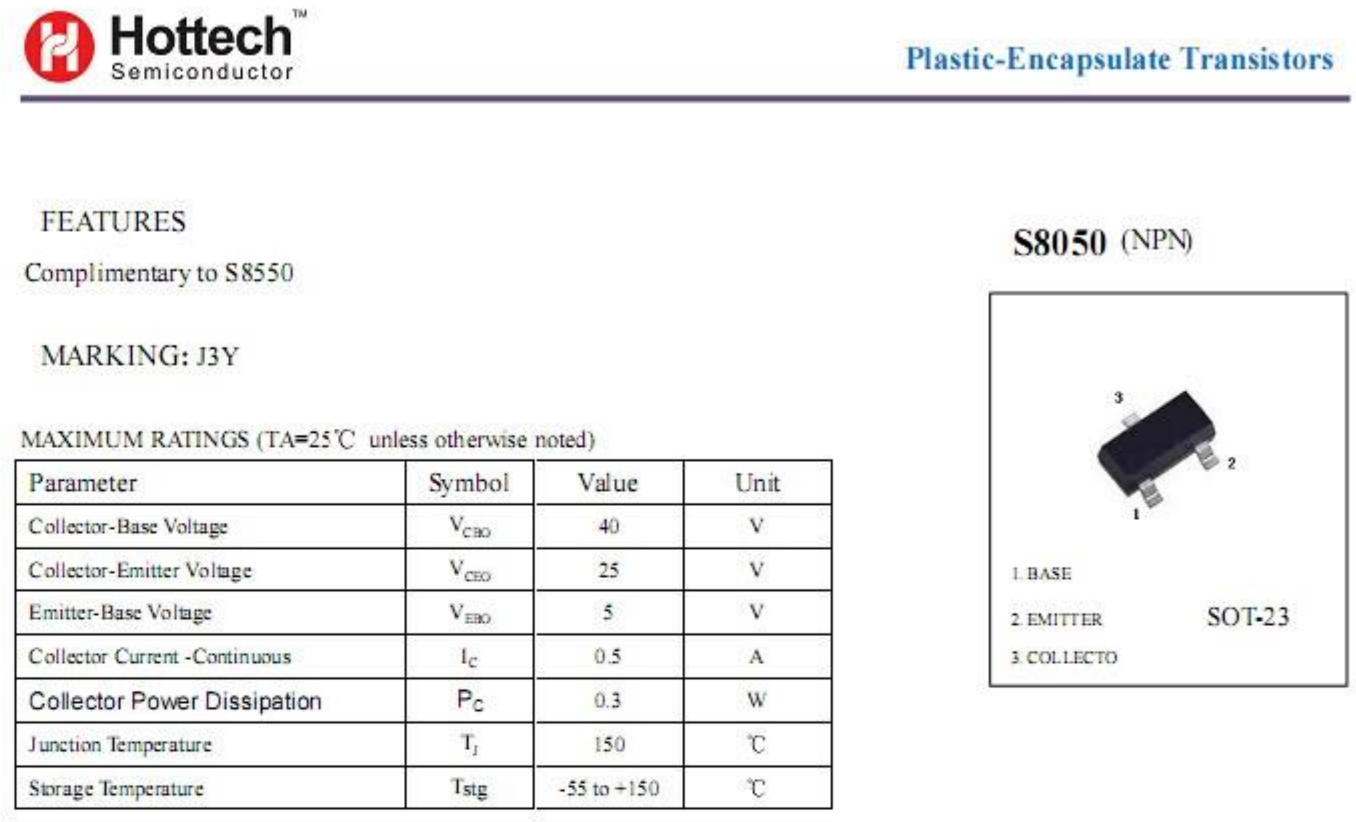
Product Description



Hottech™ Semiconductor

Plastic-Encapsulate Transistors

FEATURES

Complimentary to S8550

MARKING: J3Y

S8050 (NPN)

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

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	0.5	A
Collector Power Dissipation	P_C	0.3	W
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	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=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_{CB}=20V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			0.1	μA
DC current gain	HFE(1)	V_{CE}=1V, I_C= 50mA	120		350	
	HFE(2)	V_{CE}=1V, I_C= 500mA	50			
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

CLASSIFICATION OF h_{FE}

Rank	L	H	
Range	120-200	200-350	

S8050 Typical Characteristics

FIG.1 - Current Gain & Collector Current

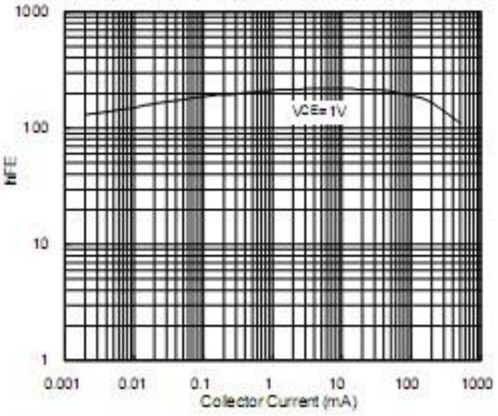


FIG.2 - Saturation Voltage & Collector Current

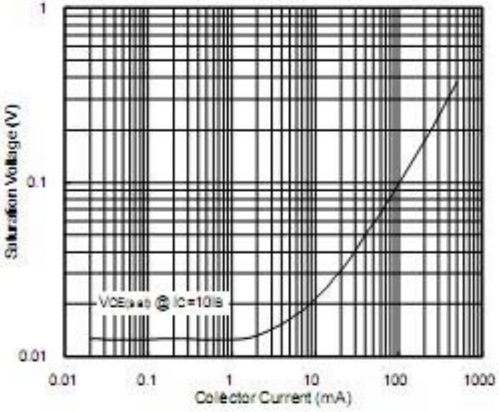


FIG.3 - On Voltage & Collector Current

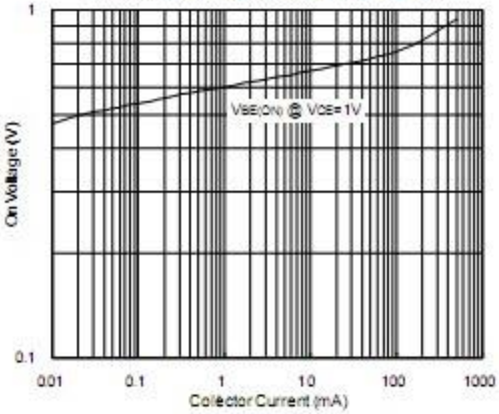


FIG.4 - Cutoff Frequency & Collector Current