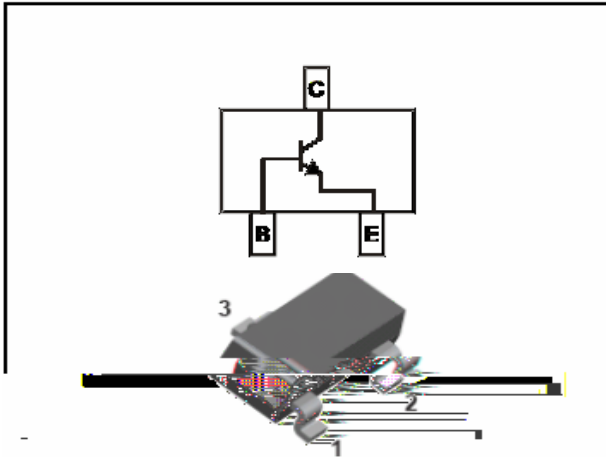


NPN Transistor



SOT-23

Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- Marking: J3

Maximum Ratings (Ta=25 unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	V_{CBO}	V		40
Collector-Emitter Voltage	V_{CEO}	V		25
Emitter-Base Voltage	V_{EBO}	V		5
Collector Current	I_C	mA		500
Collector Power Dissipation	P_C	mW		300

Item

	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C=0.1mA, I_E=0$	40		
Collector-emitter breakdown voltage	V_{CEO}					
Emitter-base breakdown voltage	V_{EBO}	V	$I_E=0.1mA, I_C=0$	5		
Collector-Base cut-off current	I_{CBO}	uA	$V_{CB}=40V, I_E=0$			0.1
Collector-Emitter cut-off current	I_{CEO}	uA	Y 0.1			
		uA	$V_{EB}=5V, I_C=0$			0.1
DC current gain	$h_{FE A1 A}$	V	$V_{CE}=1V, I_C=50mA$	120		400
	$h_{FE A2 A}$	V	$V_{CE}=1V, I_C=500mA$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=500mA, I_B=50mA$			0.6
Base-emitter saturation voltage	$V_{BE(sat)}$					



CLASSIFICATION OF HFE (1)

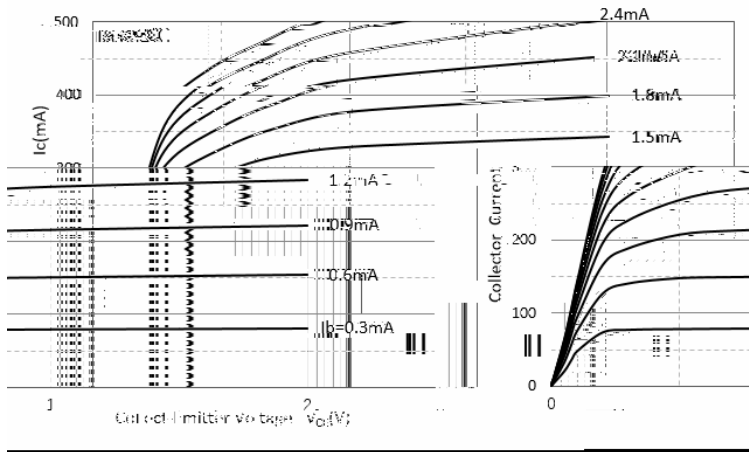
RANK	L	H	J
RANGE	120-200	200-350	300-400

Ordering Information (Example)

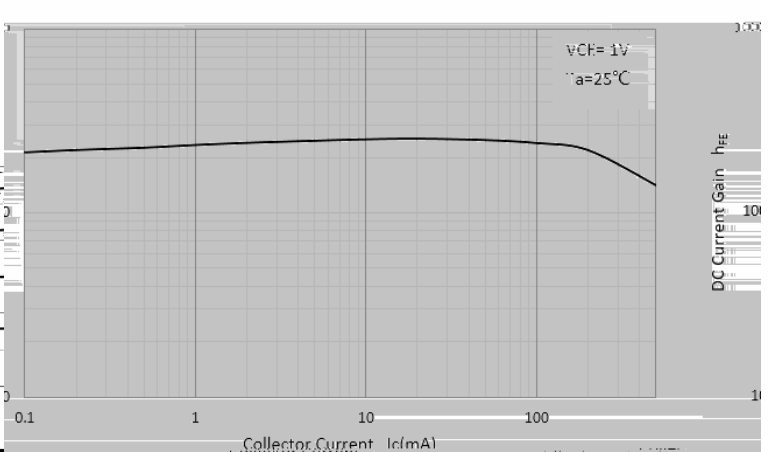
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S9013	F2	Approximate 0.008	3000	30000	120000	7" reel

Characteristics (Typical)

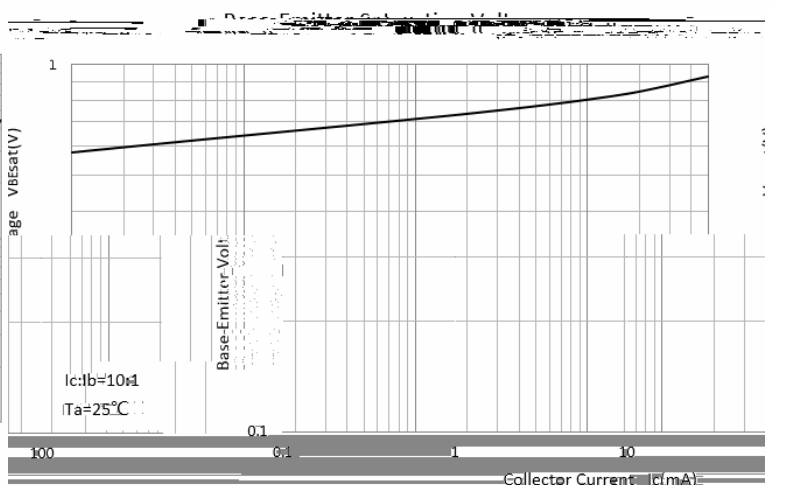
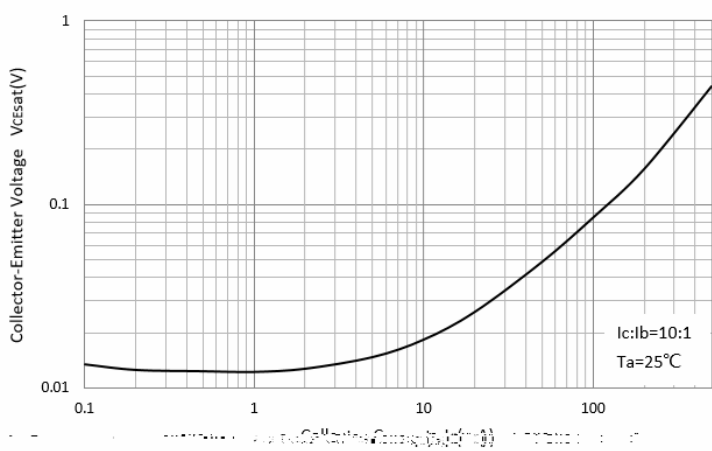
Static Characteristic



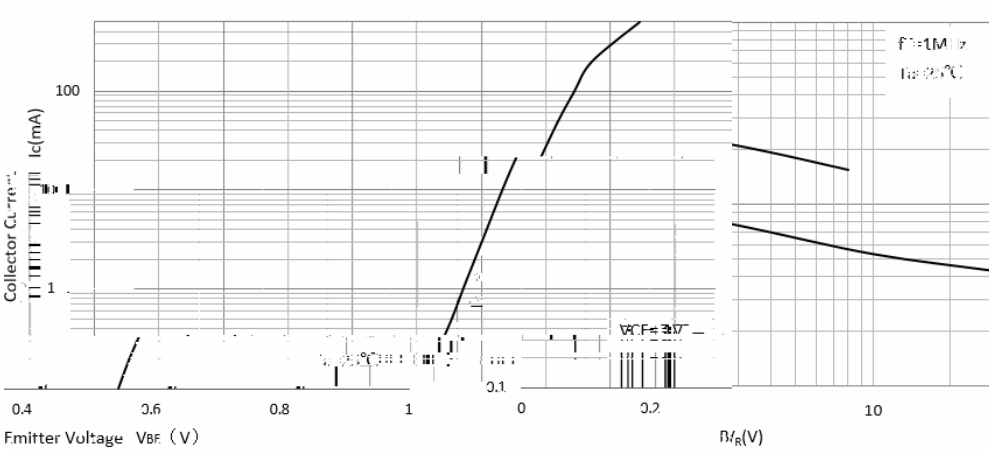
DC Current Gain



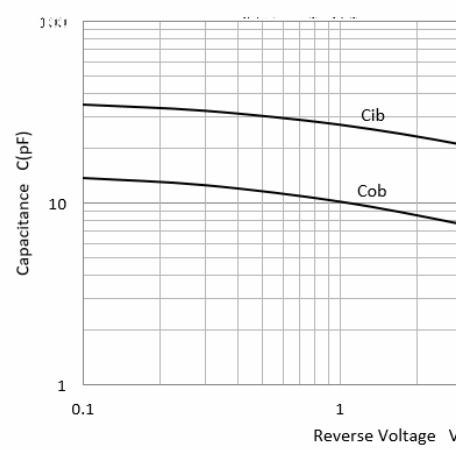
Collector-Emitter Saturation Voltage



Base-Emitter On Voltage



Cob/Cib vs Vce/Vbe



S9013