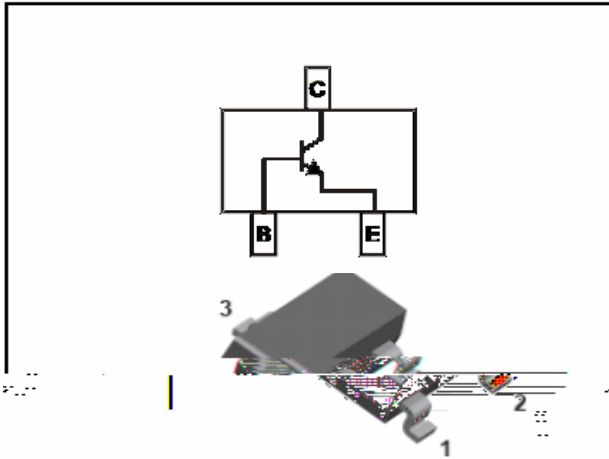


NPN Transistor



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

25

	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	$V_{CE}=1V, I_C=0$		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	$V_{BE(sat)}$					



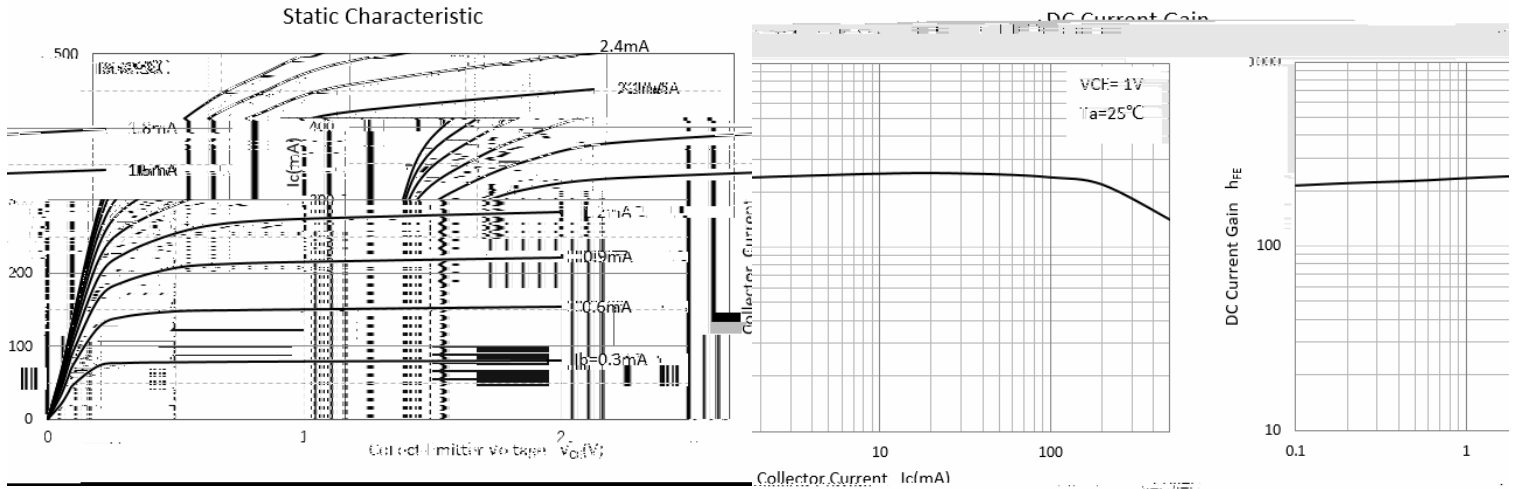
CLASSIFICATION OF HFE (1)

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

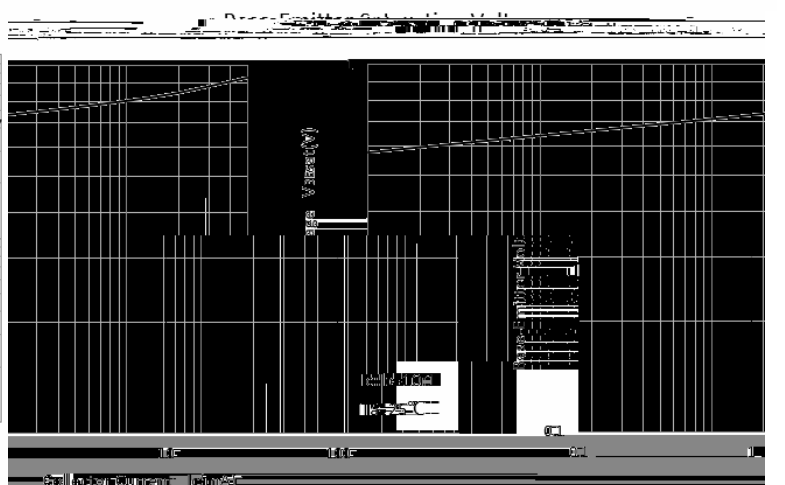
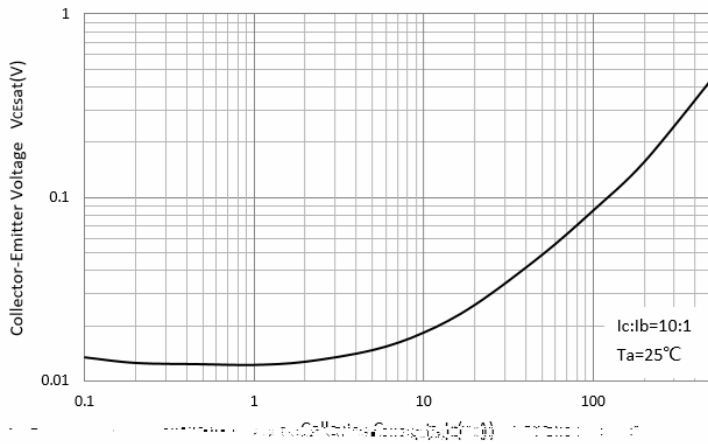
Ordering Information (Example)

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

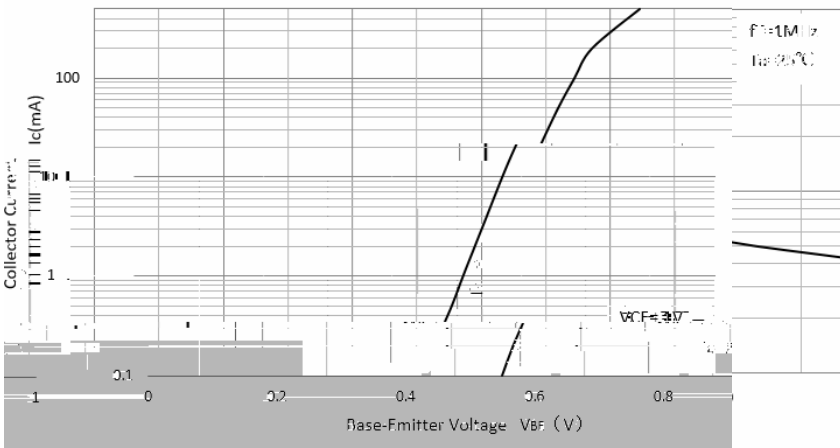
Characteristics (Typical)



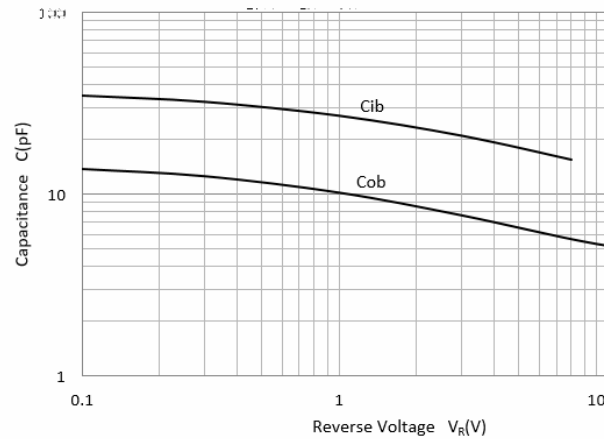
Collector-Emitter Saturation Voltage



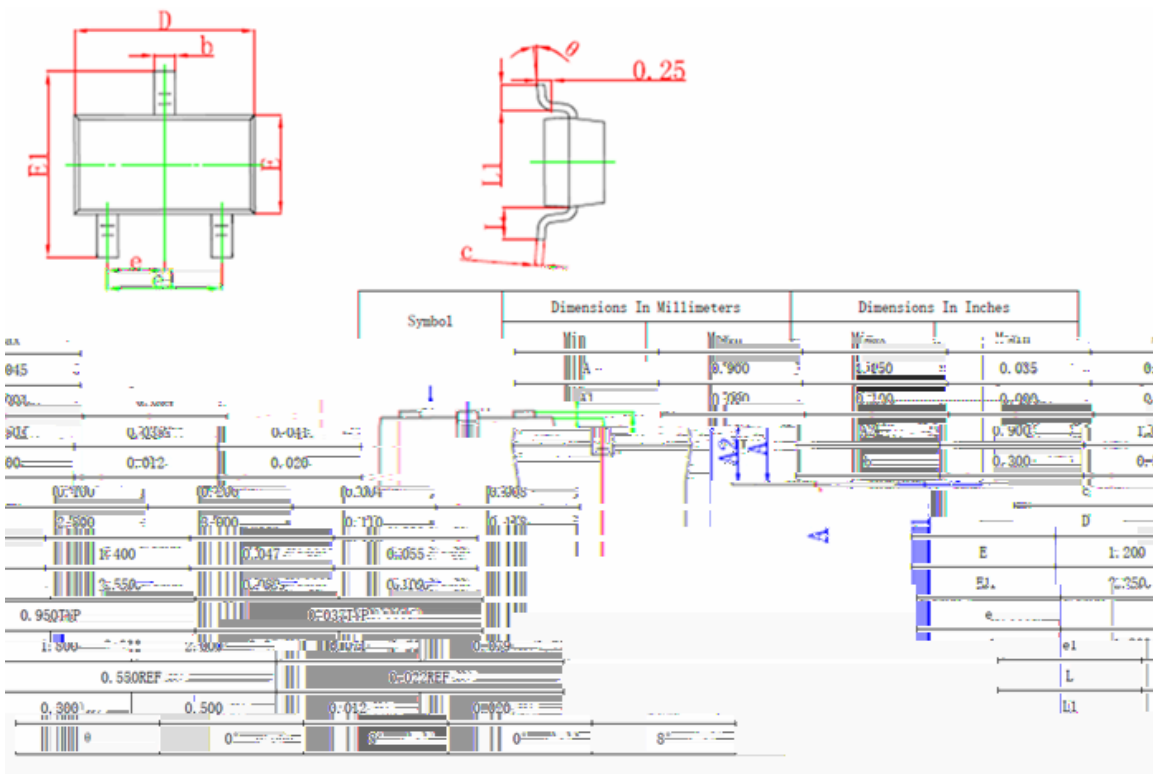
Base-Emitter On Voltage



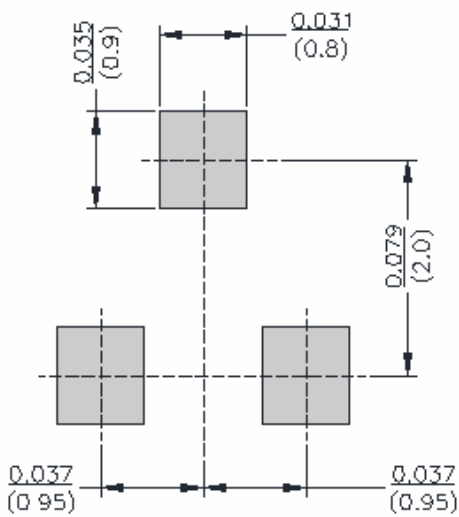
Cob/Cib-Vce/Vbe



SOT-23 Package Outline Dimensions



SOT-23 Soldering Footprint



S9013