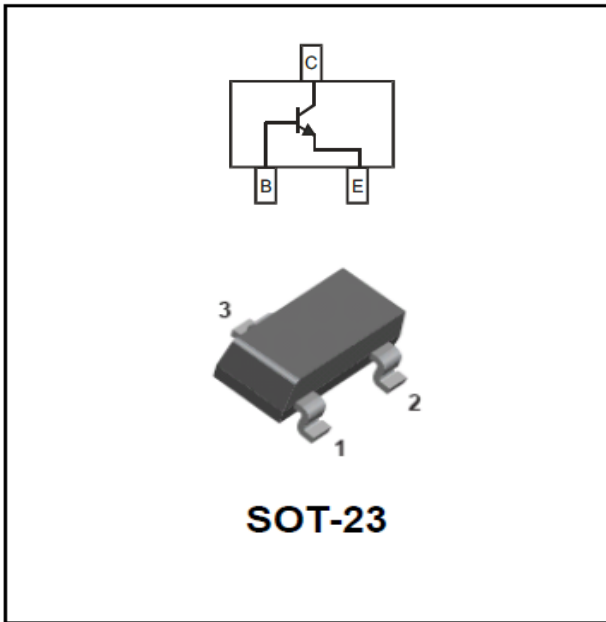


## NPN General Purpose Amplifier



### Features

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

S8050-L	J3Y • L
S8050-H	J3Y

### ■ Maximum Ratings (Ta=25°C 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
Operation Junction Temperature	$T_j$	°C		150
Storage Temperature	$T_{stg}$	°C		-55 to +150

### ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{CBO}$	V	$I_C=100\mu A, I_E=0$	40		
Collector-emitter breakdown voltage	$V_{CEO^*}$	V	$I_C=100\mu A, I_B=0$	25		
Emitter-base breakdown voltage	$V_{EBO}$	V	$I_E=100\mu A, I_C=0$	5		
Collector-Emitter cut-off current	$I_{CEX}$	nA	$V_{CE}=20V, V_{BE}=3V$			100
Collector-base cut-off current	$I_{CBO}$	nA	$V_{CB}=40V, I_E=0$			100
Emitter-base cut-off current	$I_{EBO}$	nA	$V_{EB}=5V, I_C=0$			100
DC current gain	$h_{FE(1)}$		$V_{CE}=1V, I_C=50mA$	120		350
	$h_{FE(2)}$		$V_{CE}=1V, I_C=500mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=500mA, I_B=50mA$			0.6
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=500mA, I_B=50mA$			1.2
Transition frequency	$f_T$	MHz	$V_{CE}=6V, I_C=20mA, f=30MHz$	150		



## Classification Of HFE

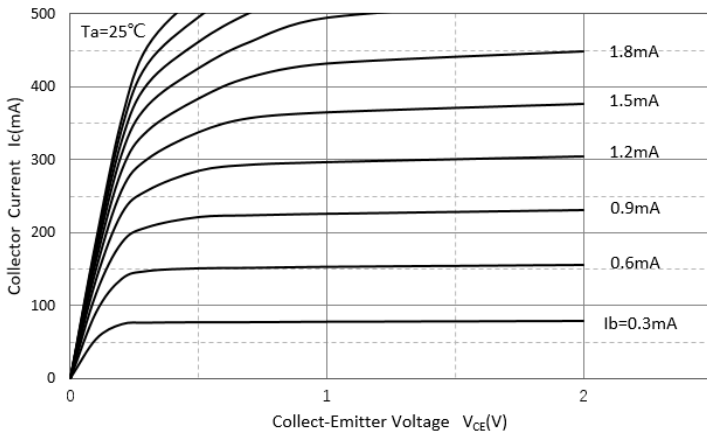
Rank	L	H
Range	120-200	200-350

## Ordering Information (Example)

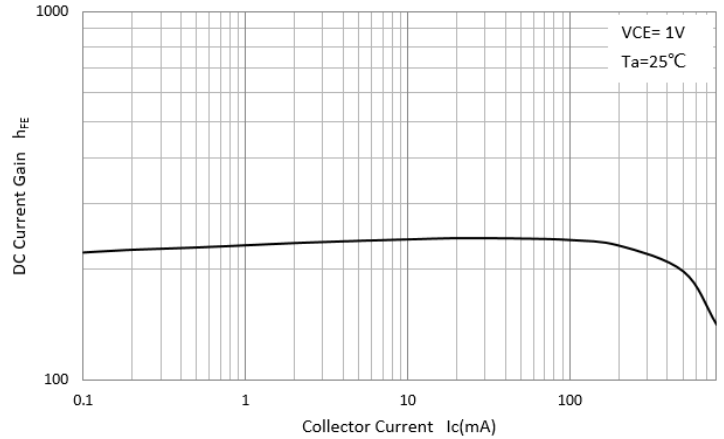
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
S8050	F2	Approximate 0.008	3000	30000	120000	7" reel

## Characteristics (Typical)

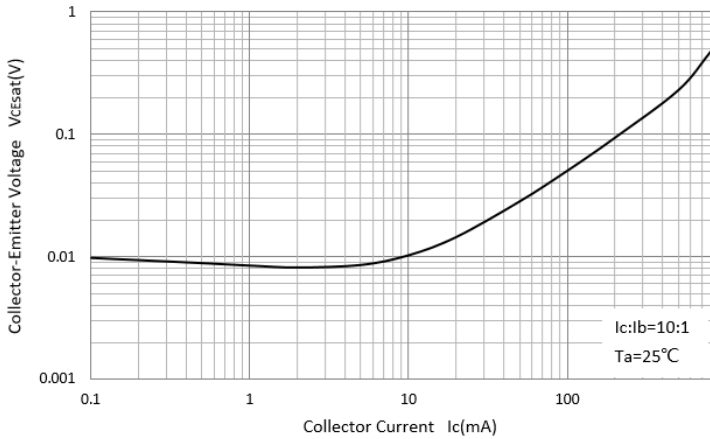
Static Characteristic



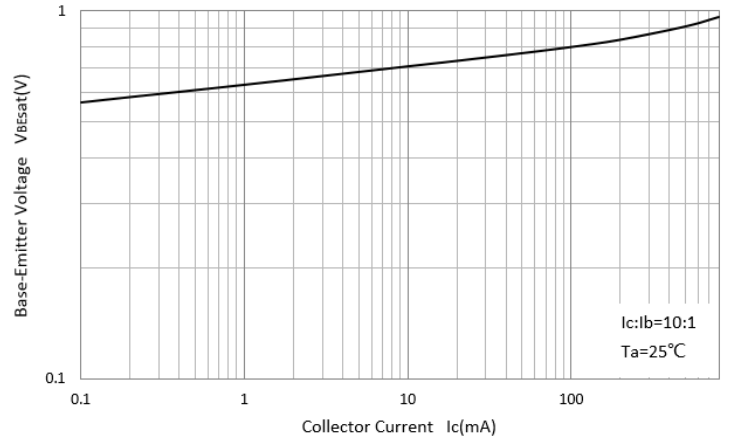
DC Current Gain



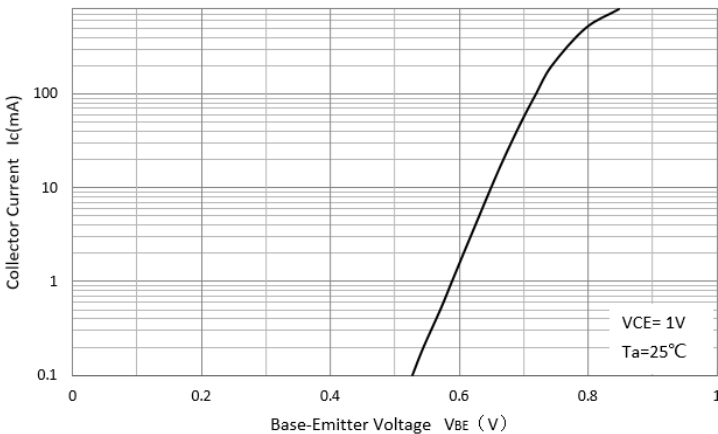
Collector-Emitter Saturation Voltage



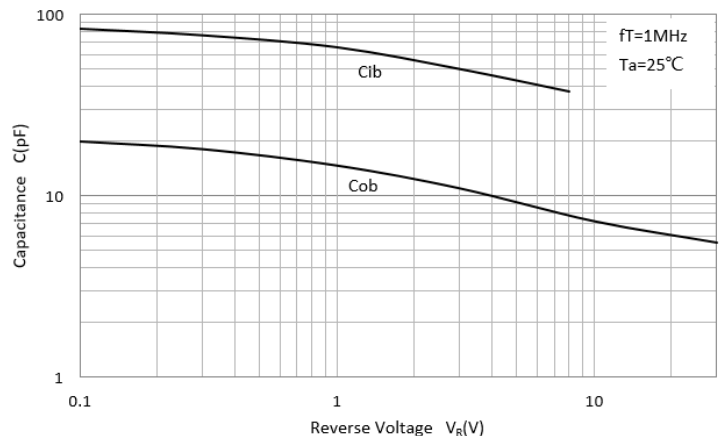
Base-Emitter Saturation Voltage



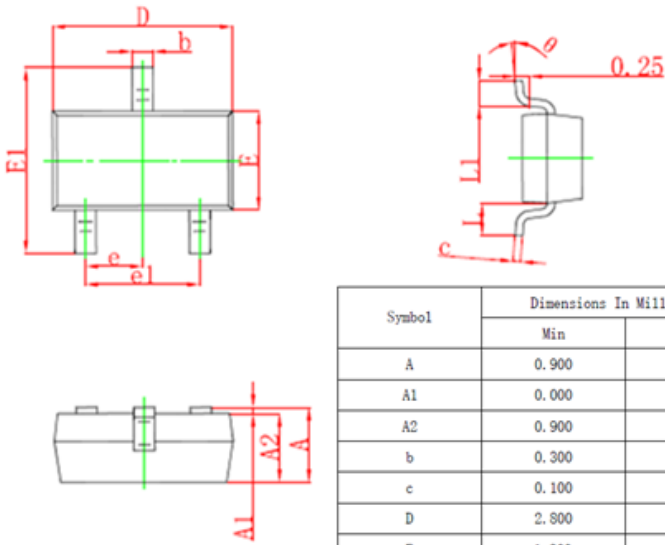
Base-Emitter On Voltage



Cob/Cib-V<sub>CB</sub>/V<sub>EB</sub>

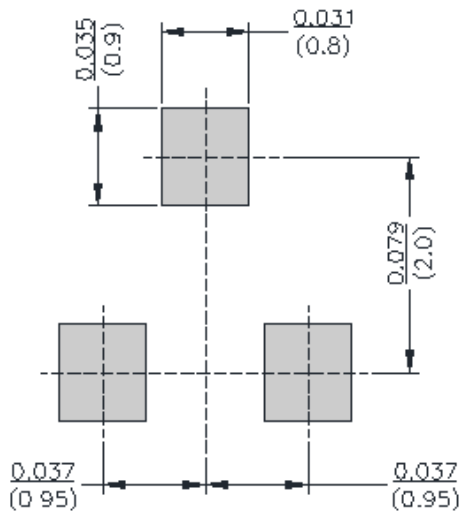


## ■SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
ø	0°	8°	0°	8°

## ■SOT-23 Soldering Footprint





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