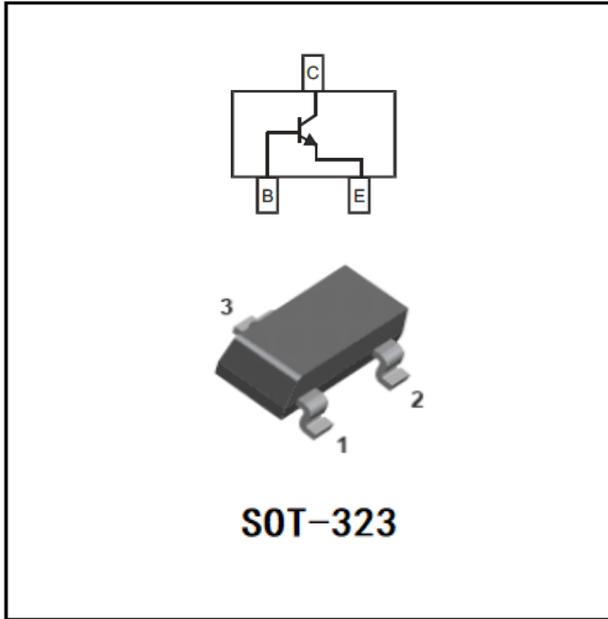


NPN General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix "HF"
- Moisture Sensitivity Level 1
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion

Mechanical Data

- **Package:** SOT-323
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:**

SS8050W-L	Y1·L
SS8050W-H	Y1

■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V		25
Minimum Collector-Base Voltage	V_{CBO}	V		40
Minimum Emitter-Base Voltage	V_{EBO}	V		5.0
Collector Current	I_C	A		1.5
Power Dissipation	P_D	mW		200
Operation Junction Temperature	T_j	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150



SS8050W-L THRU SS8050W-H

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

Item	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Voltage	V_{CE0}	V	$I_C=100\mu\text{A}$, $I_B=0$	25	
Collector-Base Voltage	V_{CB0}	V	$I_C=100\mu\text{A}$, $I_E=0$	40	
Emitter-Base Voltage	V_{EB0}	V	$I_E=100\mu\text{A}$, $I_C=0$	5	
Collector-Emitter cut-off current	I_{CEO}	nA	$V_{CE}=20\text{Vdc}$		100
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=40\text{Vdc}$		100
Emitter-Base cut-off current	I_{EB0}	nA	$V_{EB}=5.0\text{Vdc}$		100
DC Current Gain	$h_{FE(1)}$		$I_C=100\text{mA}$ $V_{CE}=1.0\text{Vdc}$	120	350
	$h_{FE(2)}$		$I_C=800\text{mA}$ $V_{CE}=1.0\text{Vdc}$	40	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	Vdc	$I_C=800\text{mA}$ $I_B=80\text{mA}$		0.5
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	Vdc	$I_C=800\text{mA}$ $I_B=80\text{mA}$		1.2

■Small-signal Characteristics

Item	Symbol	Unit	Conditions	Min	Max
Transition frequency	f_T	MHz	$I_C=50\text{mA}$, $V_{CE}=10\text{Vdc}$, $f=30\text{MHz}$	100	

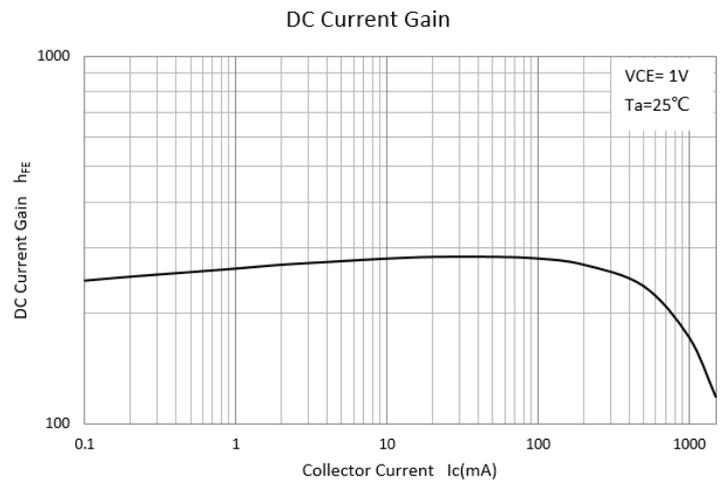
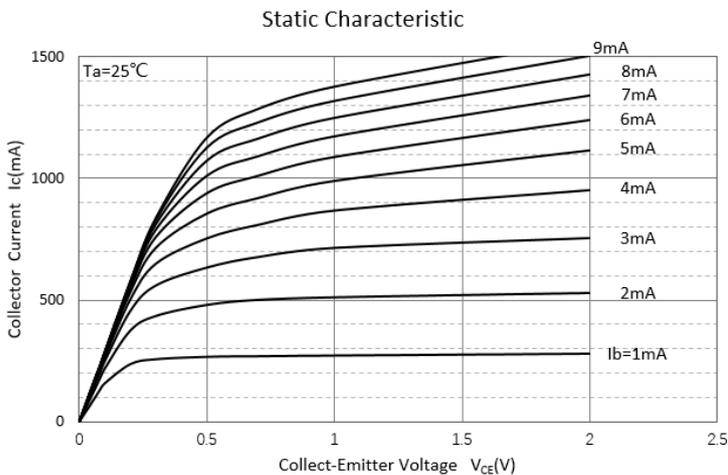
■CLASSIFICATION OF HFE

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
SS8050W-L THRU SS8050W-H	F2	Approximate 0.005	3000	30000	120000	7" reel

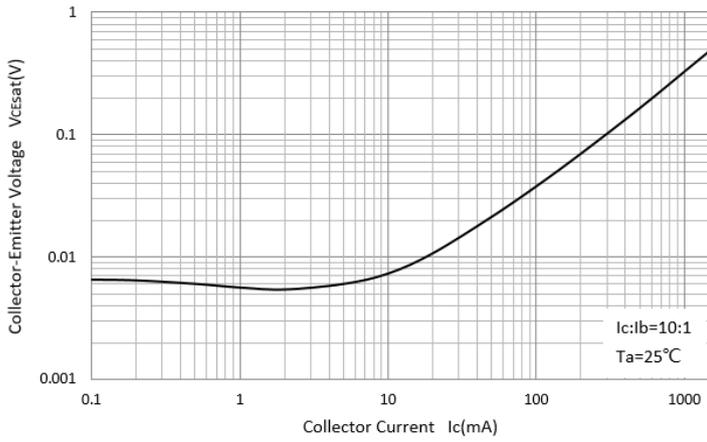
■Characteristics (Typical)



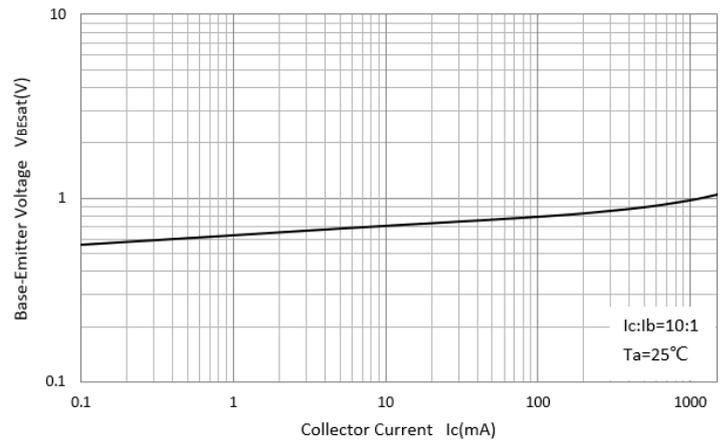


SS8050W-L THRU SS8050W-H

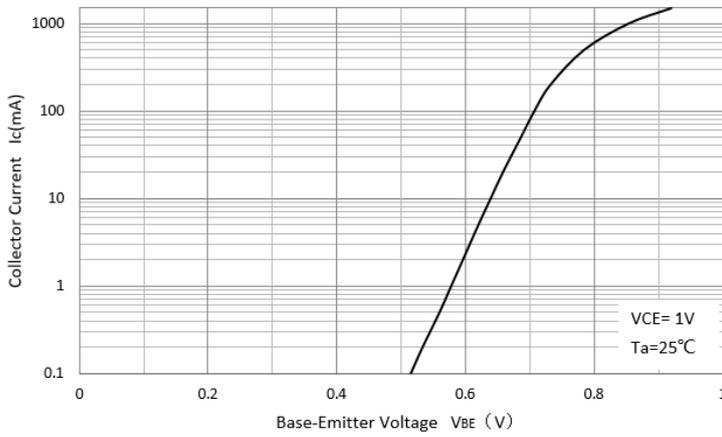
Collector-Emitter Saturation Voltage



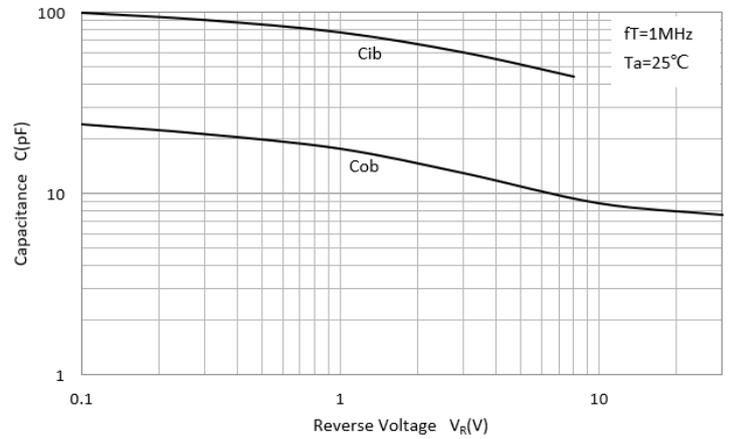
Base-Emitter Saturation Voltage



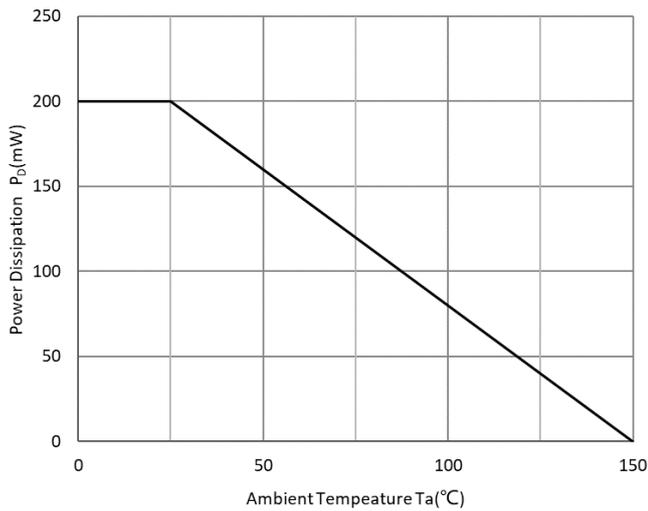
Base-Emitter On Voltage



Cob/Cib-V_{CB}/V_{EB}



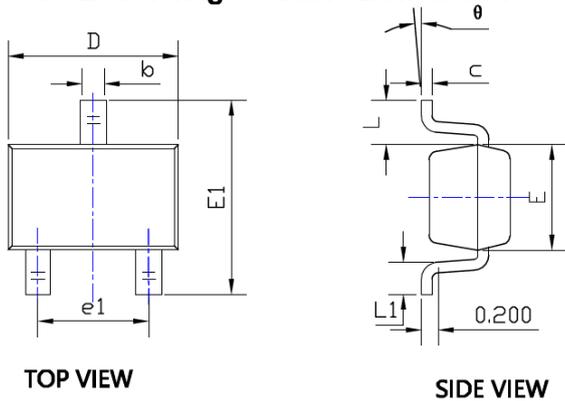
Power Derating Curve





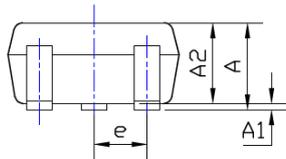
SS8050W-L THRU SS8050W-H

■SOT-323 Package Outline Dimensions



TOP VIEW

SIDE VIEW



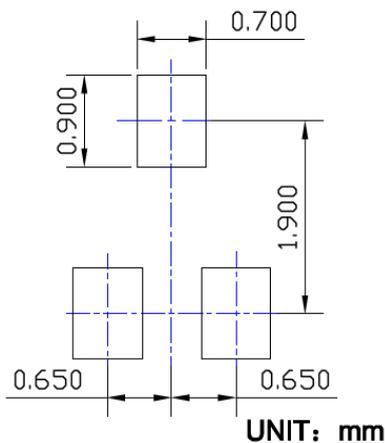
SIDE VIEW

SYMBOL	DIMENSIONS			
	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.043	0.900	1.100
A1	0.000	0.004	0.000	0.100
A2	0.035	0.039	0.900	1.000
b	0.006	0.016	0.150	0.400
c	0.004	0.010	0.100	0.250
D	0.071	0.087	1.800	2.200
E	0.045	0.053	1.150	1.350
E1	0.085	0.096	2.150	2.450
e	0.026 TYP		0.650 TYP	
e1	0.047	0.055	1.200	1.400
L	0.021 REF		0.525 REF	
L1	0.010	0.018	0.260	0.460
θ	0°	8°	0°	8°

Note:

- All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
- General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
- Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
- All dimensions shown are exclusive of burrs and gate residues.
Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
- Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
- Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[D和E是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
- Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]
- ★It is the key size.
[★ 标记为关键尺寸]

■SOT-323 Soldering Footprint





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