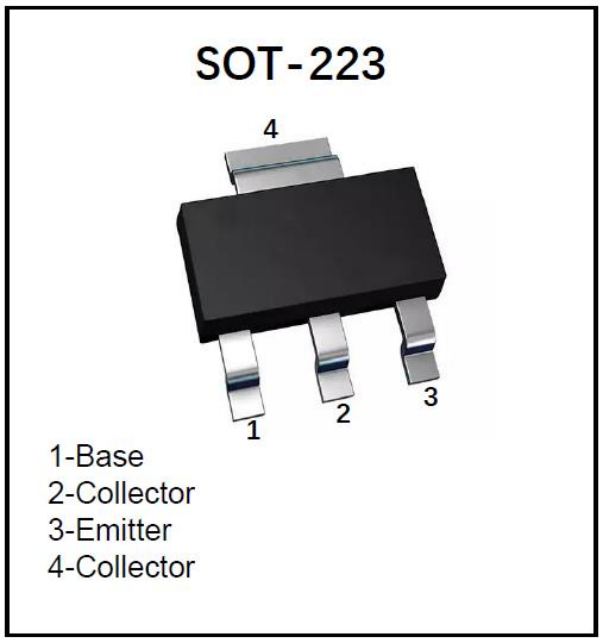
NPN Transistor



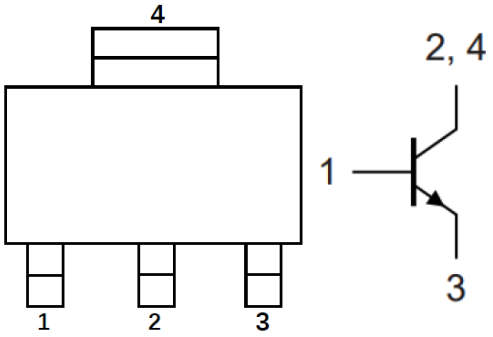
Features

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

Mechanical Data

- **Package**: SOT-223
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking**: PB4350

■Equivalent circuit



■Maximum Ratings (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	V_{CEO}	V	I_C=10mA, I_B=0	50
Collector-Base Voltage	V_{CBO}	V	I_C=100uA, I_E=0	60
Emitter-Base Voltage	V_{EBO}	V	I_E=100uA, I_C=0	6
Collector Current	I_C	A		3
Power Dissipation	P_D	W		0.5
Operation Junction Temperature	T_j	℃		-55 to +150
Storage Temperature	T_{stg}	℃		-55 to +150

■Electrical Characteristics (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	I_C=100uA,I_E=0	60		
Collector-emitter breakdown voltage	V_{CEO}	V	I_C =10mA,I_B=0	50		
Emitter-base breakdown voltage	V_{EBO}	V	I_E=100μA,I_C=0	6		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=50V, 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}=2V,I_C=0.5A	200		
	h_{FE} 2		V_{CE}=2V,I_C=1A	200		
	h_{FE} 3		V_{CE}=2V,I_C=2A	100		
Collector-emitter saturation voltage	$V_{CE(sat)}$	mV	I_C=0.5A,I_B=50mA			90
			I_C=1A,I_B=50mA			170
			I_C=2A,I_B=200mA			290
Base-emitter saturation voltage	$V_{BE(sat)}$	V	I_C=2A,I_B=200mA			1.2
Collector-emitter saturation resistance	$R_{CE(sat)}$	mΩ	I_C=2A,I_B=200mA			145
Base-emitter turn on voltage	$V_{BE\ on}$	V	V_{CE}=2V I_C=1A			1.1
Output Capacitance	Cob	pF	V_{CB}=10V, I_E=0, f=1MHz		30	

■ Thermal Characteristics

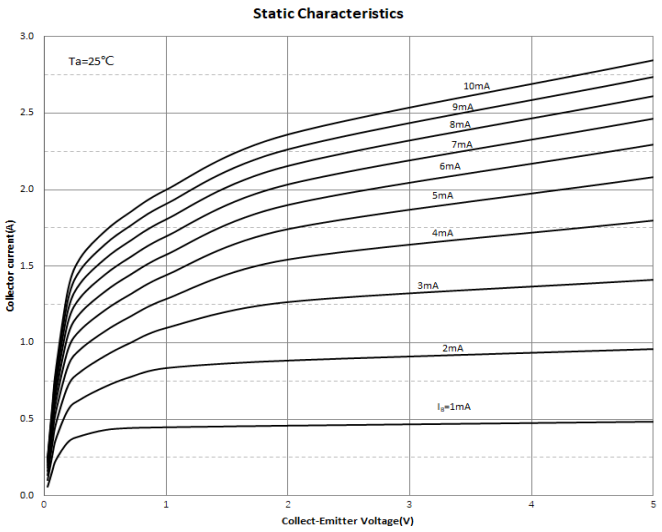
Parameter	Symbol	Unit	Value
Thermal resistance, junction to ambient	RθJA(1)	℃/W	250
Thermal resistance, junction to case	RθJC(1)	℃/W	100

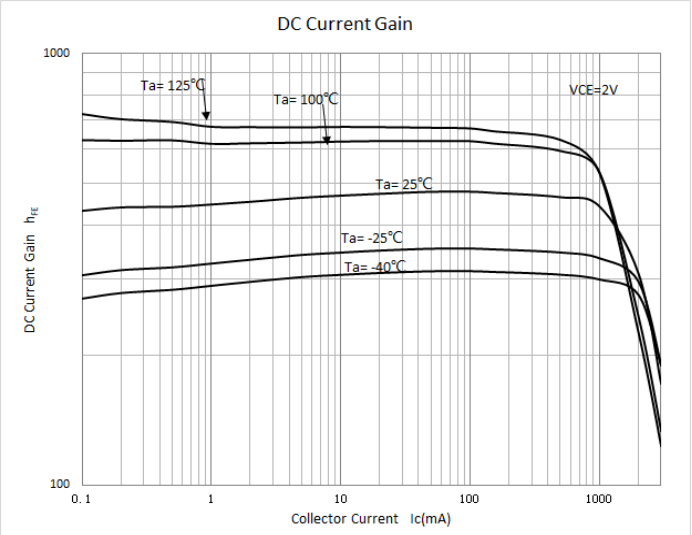
Note：The device is installed and tested on 25.4 * 25.4 * 1.5mm P.C.B.

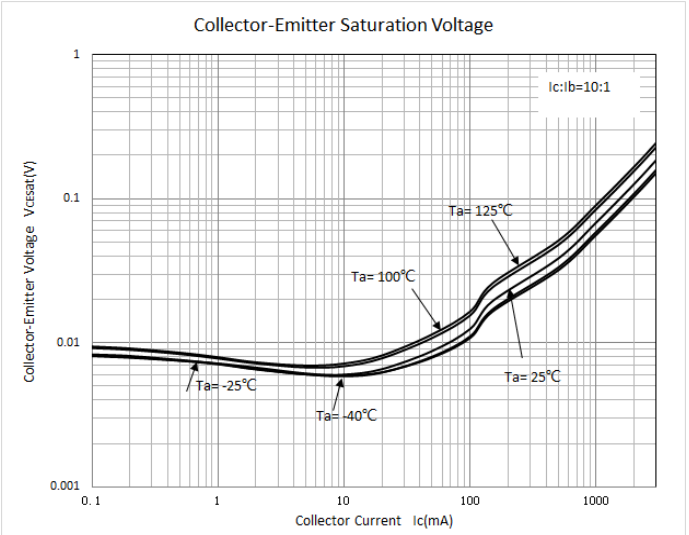
■Ordering Information (Example)

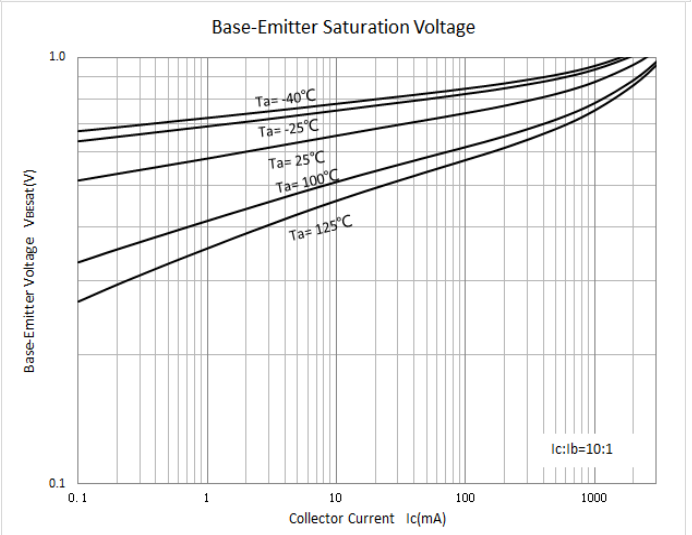
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PBSS4350Z	F2	Approximate 0.11	2500	5000	25000	13” reel

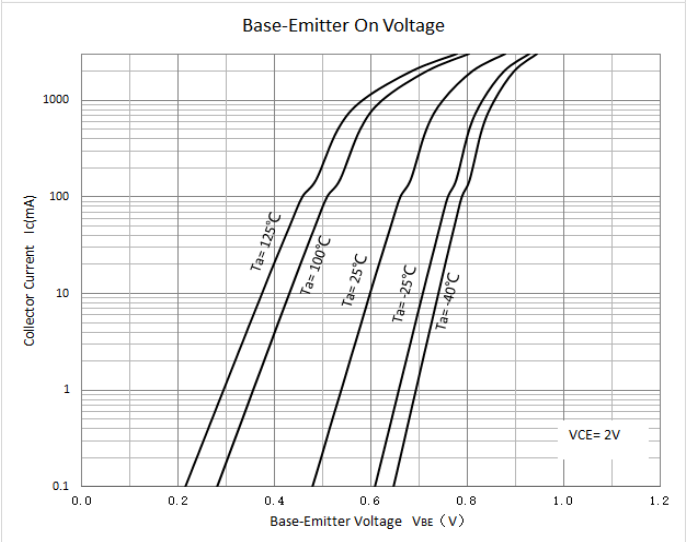
■Thermal Characteristics (Typical)

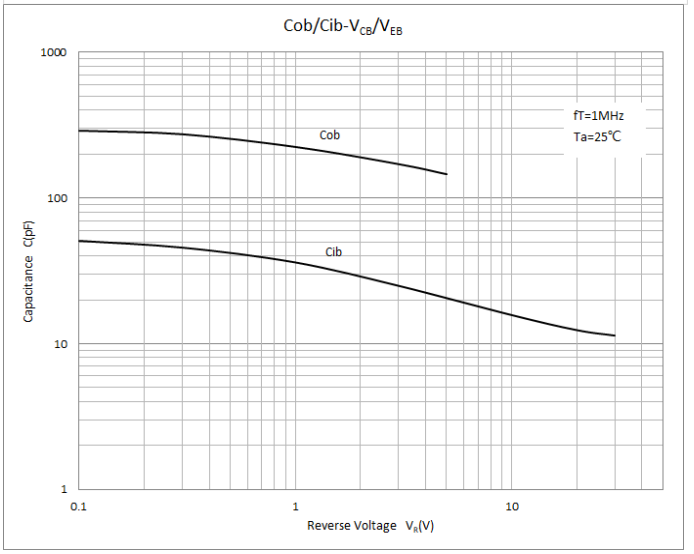


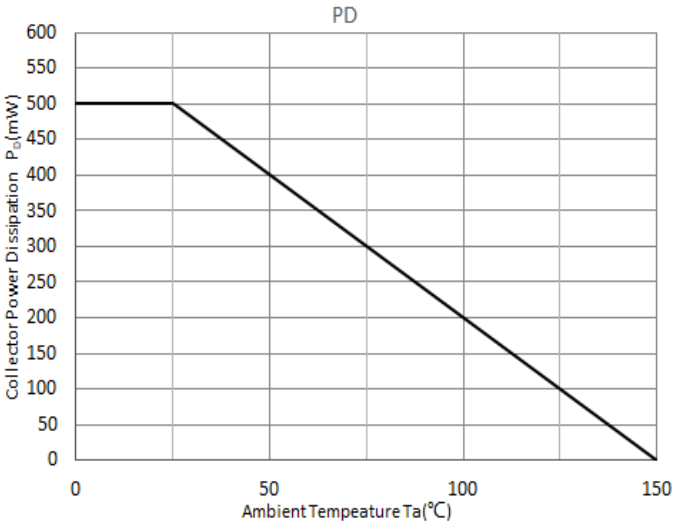


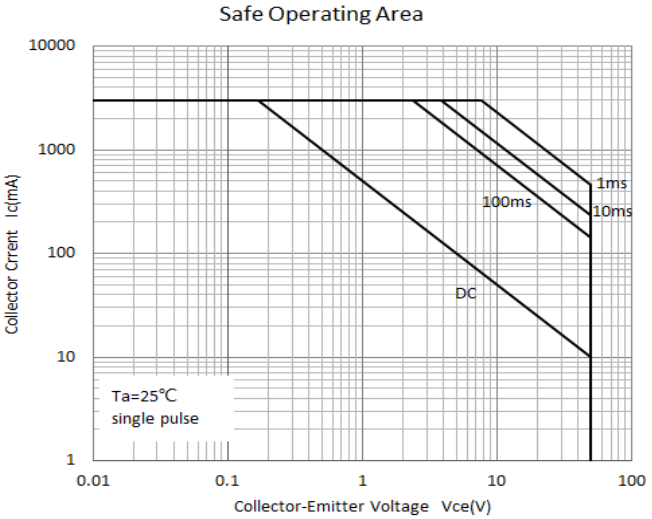




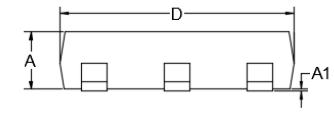


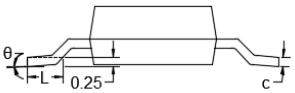


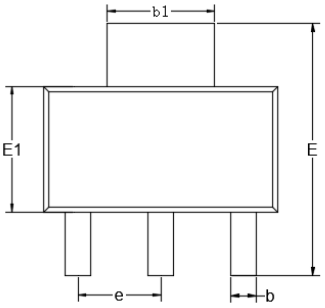

PD
600
550
500
450
400
350
300
250
200
150
100
50
0
Collector Power Dissipation P_D(mW)
0
50
100
150
Ambient Tempeature Ta(℃)


Safe Operating Area
10000
1000
100
10
1
Collector Crrent Ic(mA)
1ms
100ms
10ms
DC
Ta=25℃
single pulse
0.01
0.1
1
10
100
Collector-Emitter Voltage Vce(V)

■SOT223 Package Outline Dimensions

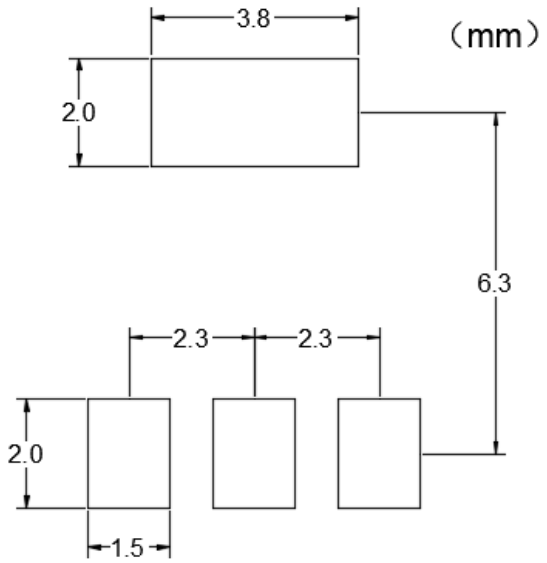






DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	0.0591	0.0670	1.5000	1.7000
A1	0.0008	0.0039	0.0200	0.1000
b	0.0259	0.0330	0.6600	0.8400
b1	0.1140	0.1220	2.9000	3.1000
c	0.0090	0.0138	0.2300	0.3500
D	0.2480	0.2640	6.3000	6.7000
E	0.2637	0.2874	6.7000	7.3000
E1	0.1290	0.1460	3.3000	3.7000
e	0.0866	0.0945	2.2000	2.4000
L	0.0295	0.0492	0.7500	1.2500
θ	0°	10°	0°	10°

■SOT223 Suggested Pad Layout



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