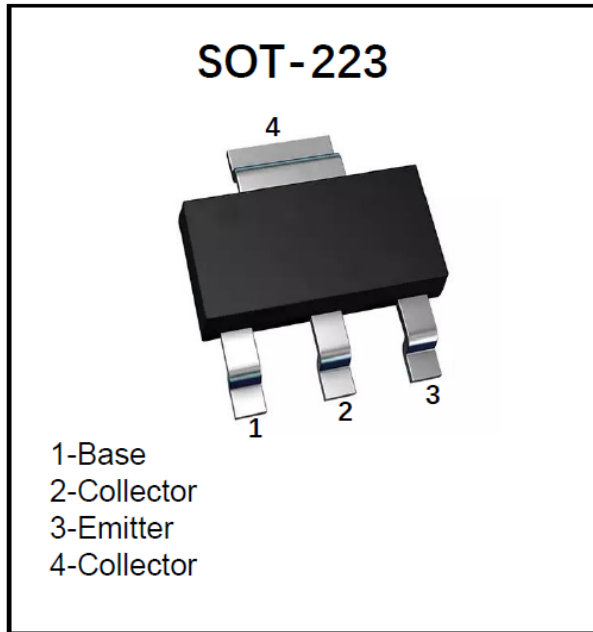


NPN Low VCEsat Transistor



Features

- Moisture Sensitivity Level 1
- Low collector-emitter saturation voltage
- Part no. with suffix "Q" means AEC-Q101 qualified

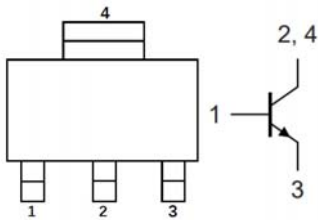
Application

- DC/DC converters; Supply line switching
- Battery charger; LED backlighting

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°C unless otherwise noted)

Item	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	50
Collector-Base Voltage	V_{CBO}	V	60
Emitter-Base Voltage	V_{EBO}	V	6
Collector Current	I_C	A	3
Power Dissipation	P_D	mW	650
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W	192
Operation Junction Temperature	T_J	°C	-55 to +150
Storage Temperature	T_{stg}	°C	-55 to +150



PBSS4350ZQ

RoHS
COMPLIANT

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

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C=100\mu A, I_E=0$	60		
Collector-emitter breakdown voltage	V_{CEO}	V	$I_C=10mA, I_B=0$	50		
Emitter-base breakdown voltage	V_{EBO}	V	$I_E=100\mu A, I_C=0$	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
Collector-emitter saturation resistance	$R_{CE(sat)}$	mΩ	$I_C=2A, I_B=200mA$			145
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C=2A, I_B=200mA$			1.2
Base-emitter turn on voltage	V_{BEon}	V	$V_{CE}=2V, I_C=1A$			1.1
Transition frequency	f_T	MHz	$V_{CE}=5V, I_C=100mA, f=100MHz$	100		

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PBSS4350ZQ	F2	Approximate 0.11	2500	5000	25000	13" reel

■ Characteristics (Typical)

Fig.1 - Static characteristic

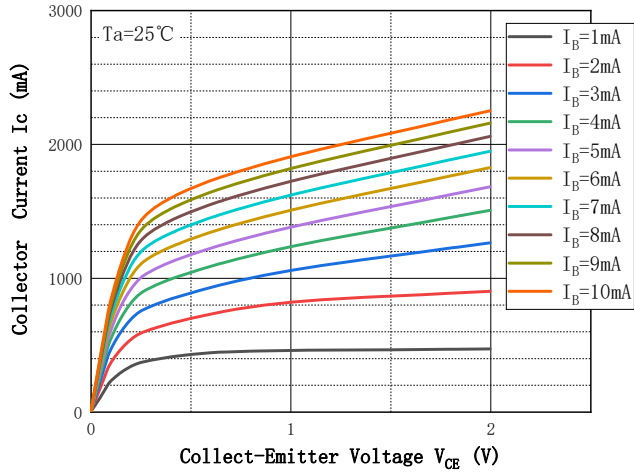


Fig.2 - DC Current Gain

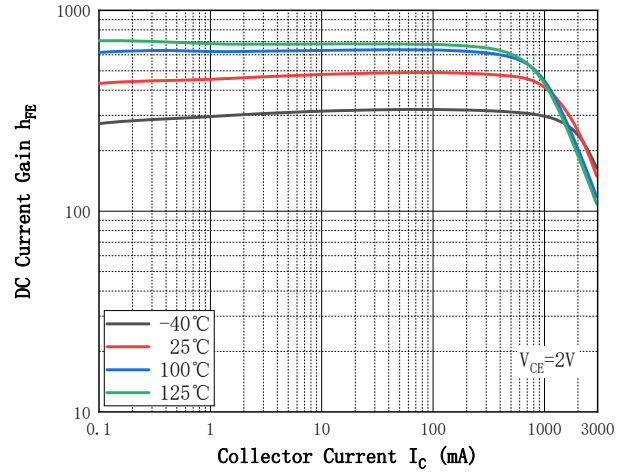


Fig.3 - Collect-Emittor Saturation Voltage

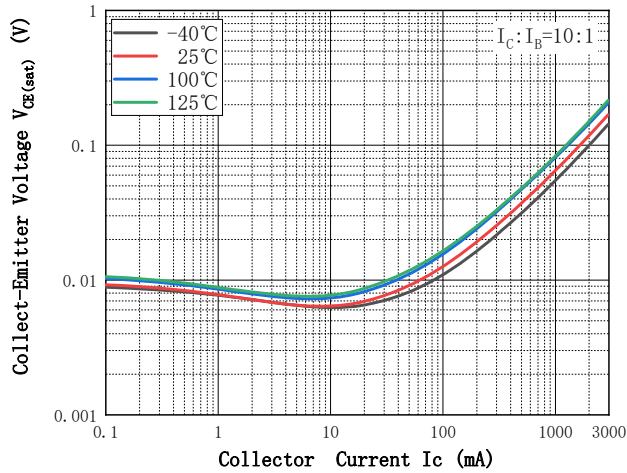


Fig.4 - Collect-Emittor Saturation Voltage

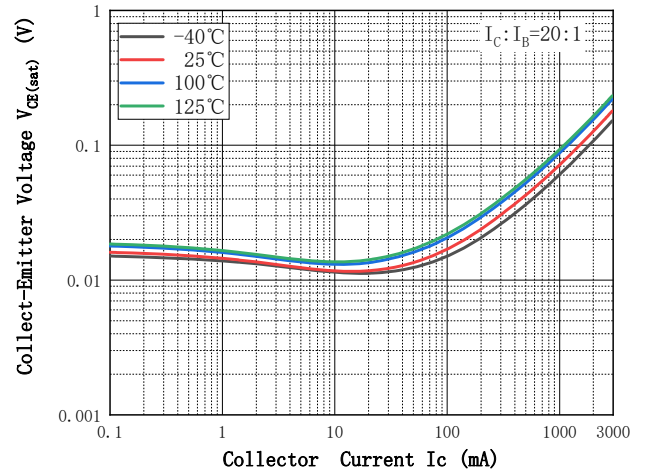


Fig.5 - Base-Emittor Voltage

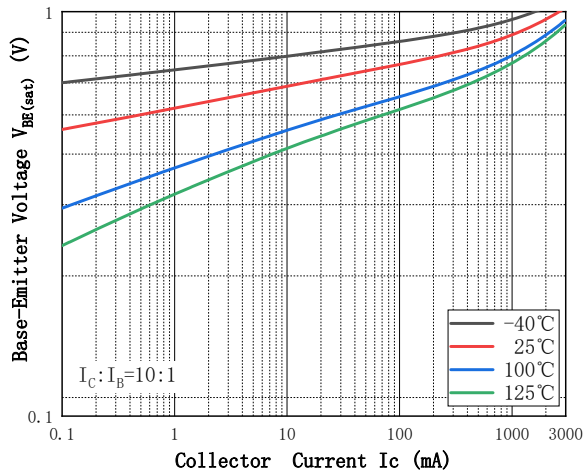


Fig.6 - Base-Emittor Voltage

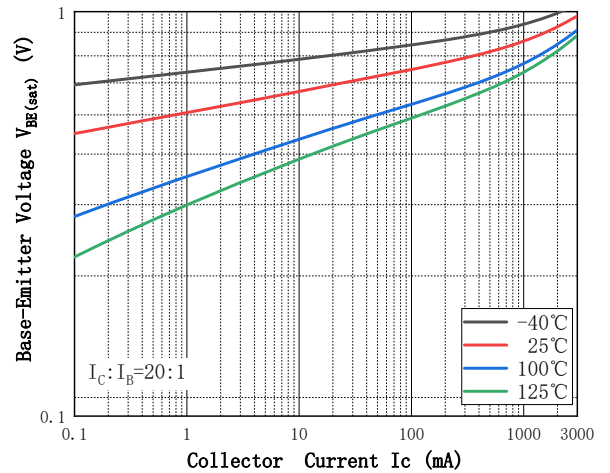


Fig.7 - Base-Emitter On Voltage

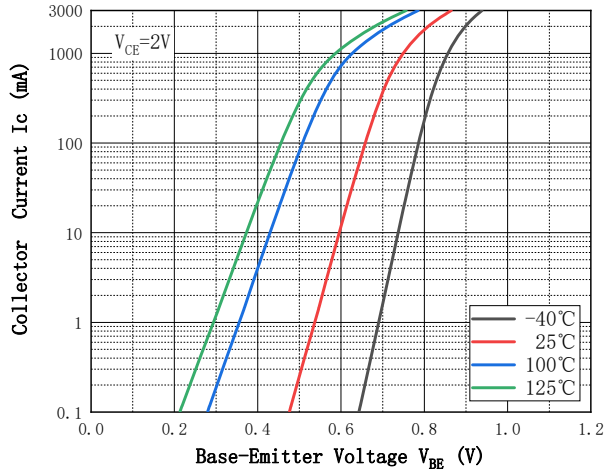
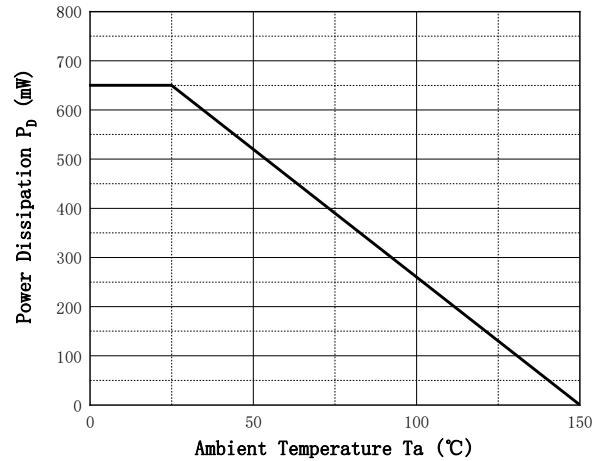
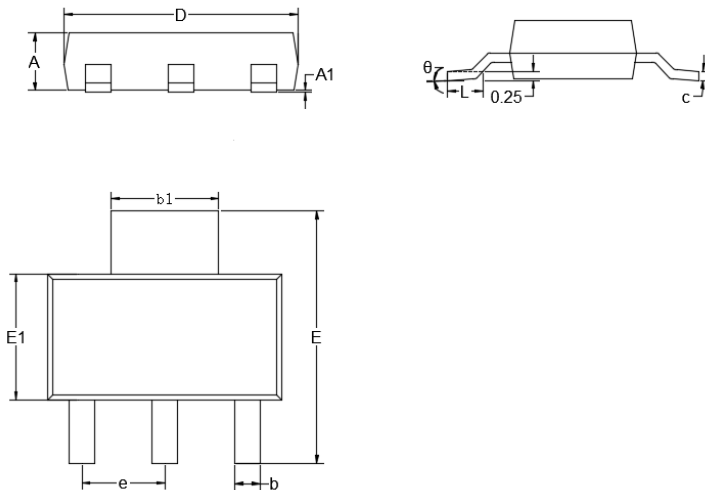


Fig.8 - Power Derating Curve

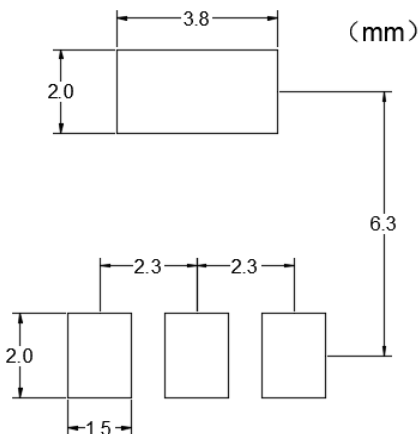


■SOT-223 Package Outline Dimensions



DIM	DIMENSIONS			
	INCHES		MM	
	MIN	MAX	MIN	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°

■SOT-223 Suggested Pad Layout



NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, life-saving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.