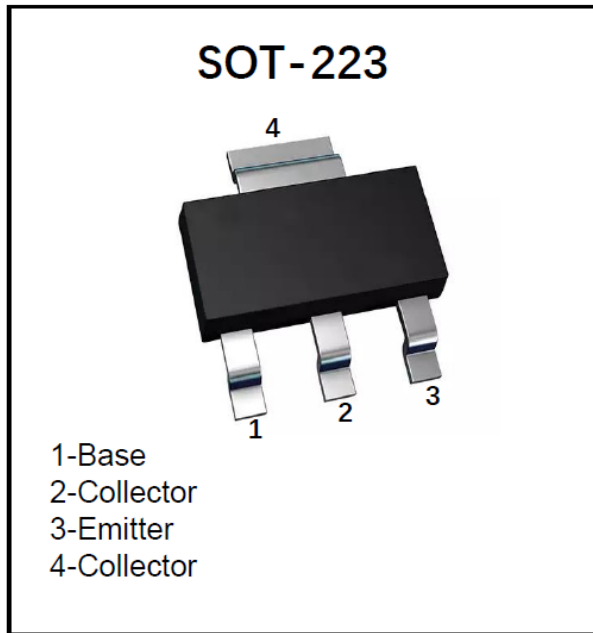


PNP Low VCEsat Transistor



Features

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

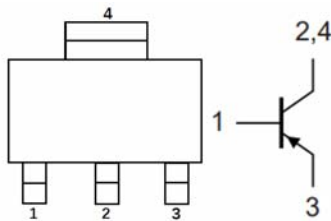
Application

- 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:** PB5350

■Equivalent circuit



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

Item	Symbol	Unit	Value
Minimum Collector-Emitter Voltage	V_{CEO}	V	-50
Minimum Collector-Base Voltage	V_{CBO}	V	-60
Minimum Emitter-Base Voltage	V_{EBO}	V	-6
Collector Current	I_C	A	-3
Power Dissipation	P_D	W	0.65
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	°C/W	192
Junction Temperature	T_j	°C	-55 to +150
Storage Temperature	T_{stg}	°C	-55 to +150

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

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	V_{CBO}	V	$I_C = -100\mu A, I_E = 0$	-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	$I_C = -0.5A, I_B = -50mA$	-	-	-100
			$I_C = -1A, I_B = -50mA$	-	-	-180
			$I_C = -2A, I_B = -200mA$	-	-	-300
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = -2A, I_B = -200mA$	-	-	-1.2
Collector-emitter saturation resistance	$R_{CE(sat)}$	mΩ	$I_C = -2A, I_B = -200mA$	-	-	150
Base-emitter turn-on voltage	V_{BEon}	V	$V_{CE} = -2V, I_C = -1A$	-	-	-1.1
Output Capacitance	Cob	pF	$V_{CB} = -10V, I_E = 0, f = 1MHz$	-	30	-

■Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PBSS5350ZQ	F2	Approximate 0.11	2500	5000	25000	13" reel

■ Characteristics (Typical)

Fig.1 - Static characteristic

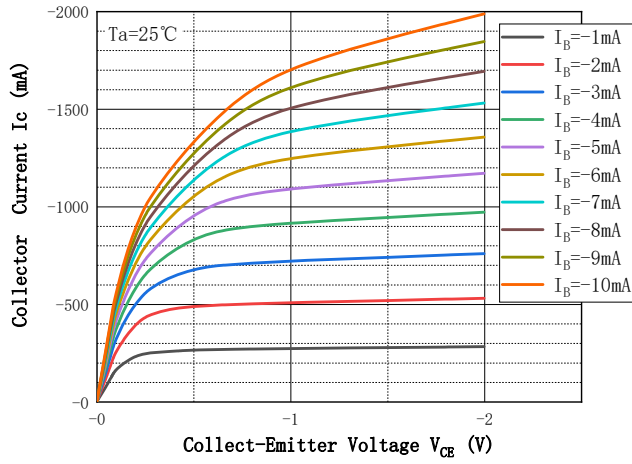


Fig.2 - DC Current Gain

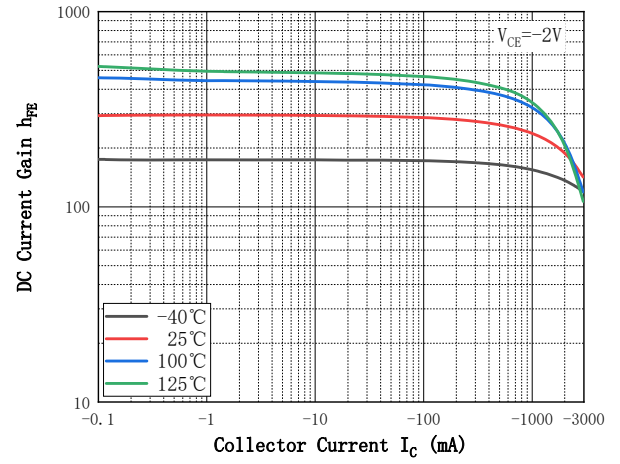


Fig.3 - Collect-Emmitter Saturation Voltage

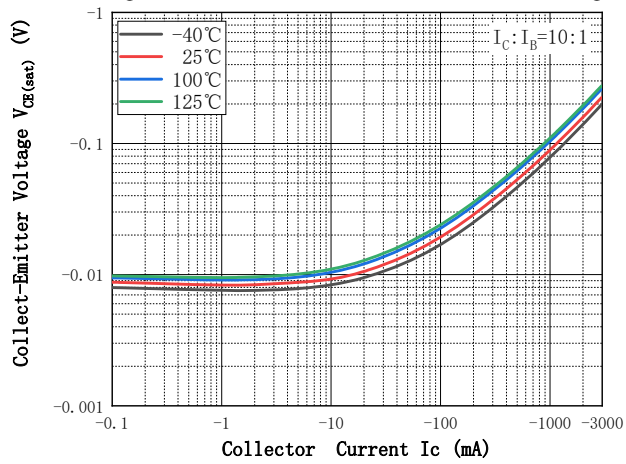


Fig.4 - Collect-Emmitter Saturation Voltage

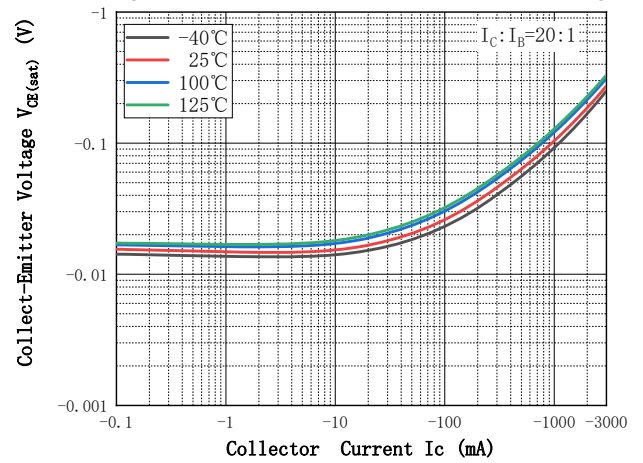


Fig.5 - Base-Emmitter Voltage

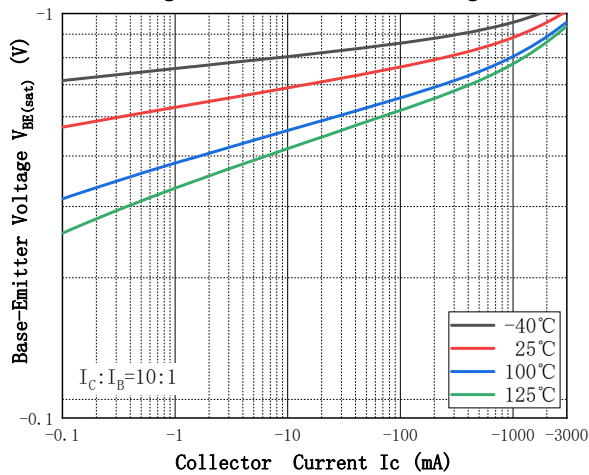


Fig.6 - Base-Emmitter Voltage

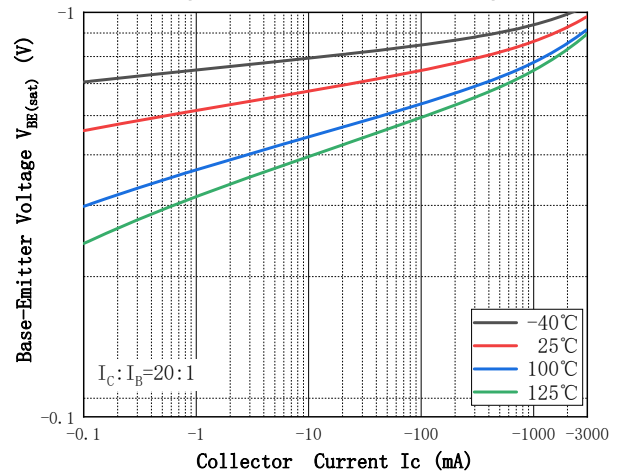


Fig.7 - Base-Emitter On Voltage

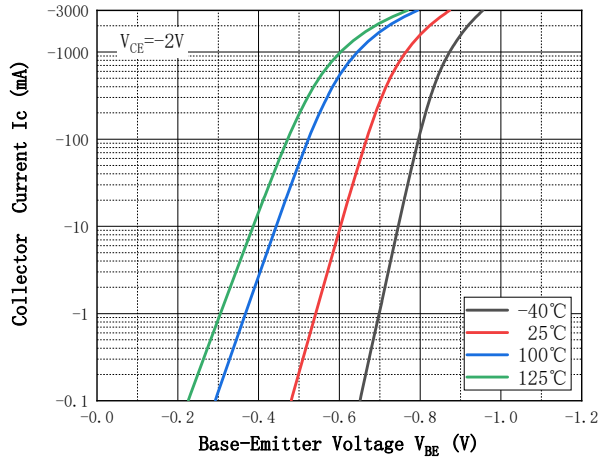
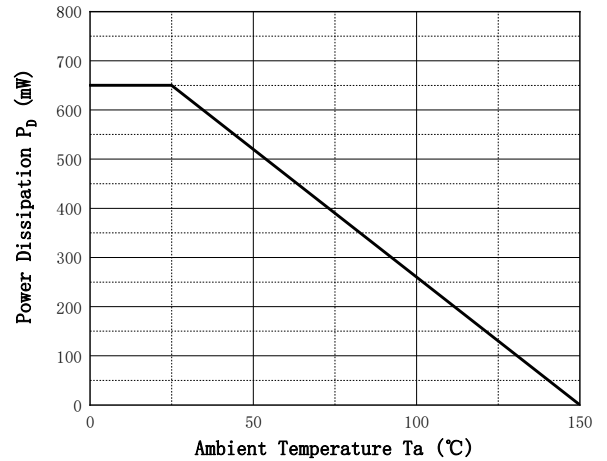
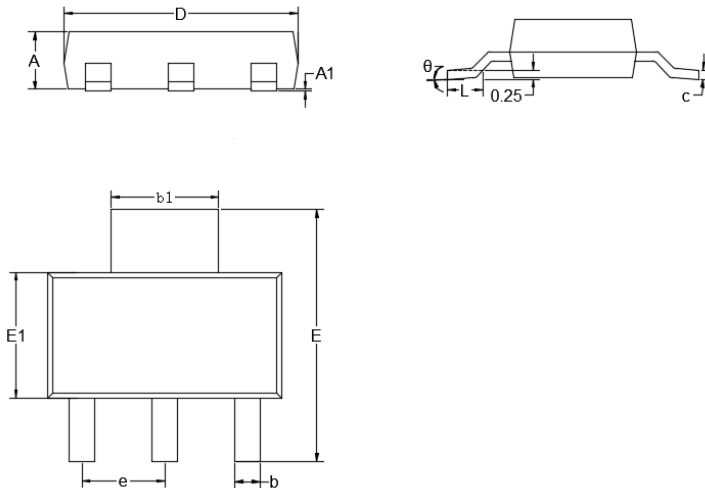


Fig.8 - Power Derating Curve

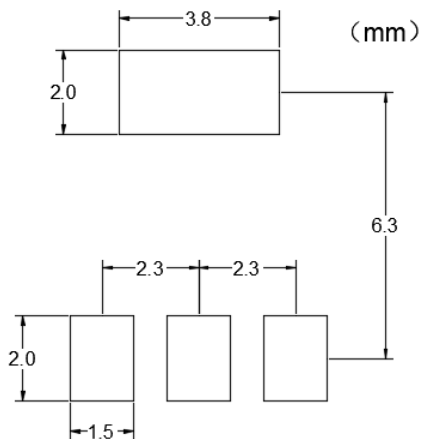


■SOT-223 Package Outline Dimensions



DIMENSIONS				
DIM	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





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