DESCRIPTION

The PBSS5350Z is available in SOT-223 package.

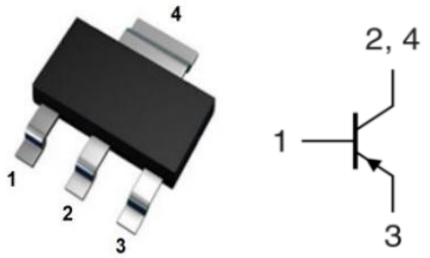
FEATURE

- Low collector-to-emitter saturation voltage.
- Fast switching speed.
- Large current capacity and wide ASO.

ORDERING INFORMATION

Package Type	Part Number
SOT-223	PBSS5350Z
Note	SPQ: 2,500pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



PIN#	DESCRIPTION
1	BASE
2	COLLECTOR
3	EMITTER
4	COLLECTOR

ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise noted.

V_{CEO}, Collector–Emitter Voltage	-50V
V_{CBO}, Collector–Base Voltage	-60V
V_{EBO}, Emitter–Base Voltage	-6V
I_C, Collector Current — Continuous	-3A
I_{CP}, Collector Current — Pulse	-6A
P_D, Total Device Dissipation,FR−4 Board (Note 1) @ TA = 25℃	833mW
$R_{\theta JA}$, Thermal Resistance, Junction–to–Ambient(Note 1)	150℃/W
T_J, Junction Temperature Range	-55℃~+150℃
T_{STG}, Storage Temperature Range	-55℃~+150℃

1.30.0mm×25.0mm×1.6mm(FR4), Copper foil thickness 35μm

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Collector–Emitter Breakdown Voltage	$V_{BR(CEO)}$	I_C =-1mA,I_B =0	-50	-	-	V
Collector–Base Breakdown Voltage	$V_{BR(CBO)}$	I_C =-100μA,I_E =0	-60	-	-	V
Emitter–Base Breakdown Voltage	$V_{BR(EBO)}$	I_E =-100 μA, I_C =0	-6	-	-	V
Collector Cutoff Current	I_{CBO}	V_{CB}=-40V, I_E=0	-	-	-1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=-4V, I_C=0	-	-	-1	μA
Collector Cutoff Current	I_{CEO}	V_{CE}=-50V, I_B=0	-	-	-10	μA
DC Current Gain	h_{FE}	I_C =-100mA, V_{CE}=-2V	200	-	400	
		I_C =-3A, V_{CE}=-2V	35	-	-	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-2A, I_B=-100mA	-	-0.35	-0.7	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=-2A, I_B=-100mA	-	-0.94	-1.2	V
Current-Gain-Bandwidth Product	f_T	V_{CE}=-10V, I_C =-50mA	-	150	-	MHz
Collector Output Capacitance	cob	V_{CB}=-10V, f=1MHz	-	39	-	pF

ELECTRICAL CHARACTERISTICS CURVES

Fig 1. h_{FE} vs I_C

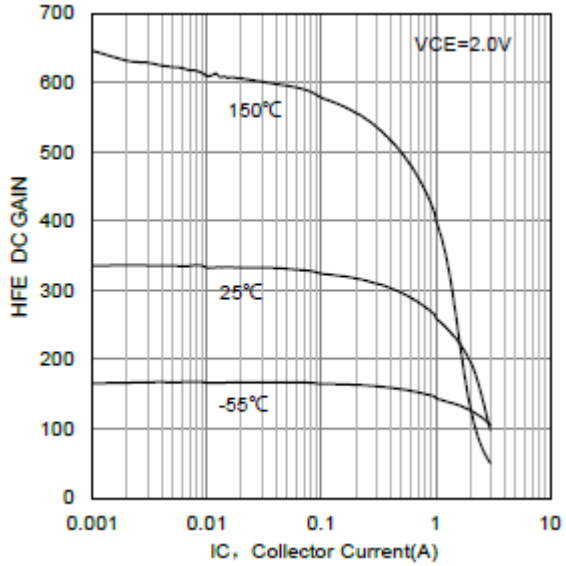


Fig 2. I_C vs V_{CE}

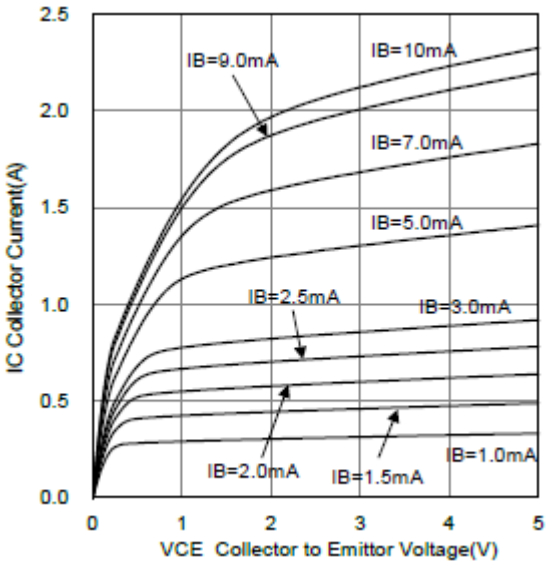


Fig 3. V_{CE} vs I_B

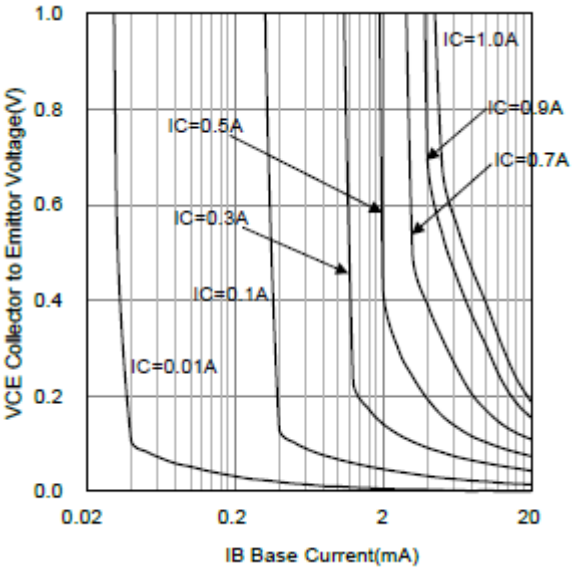


Fig 4. $V_{BE\ (on)}$ vs I_C

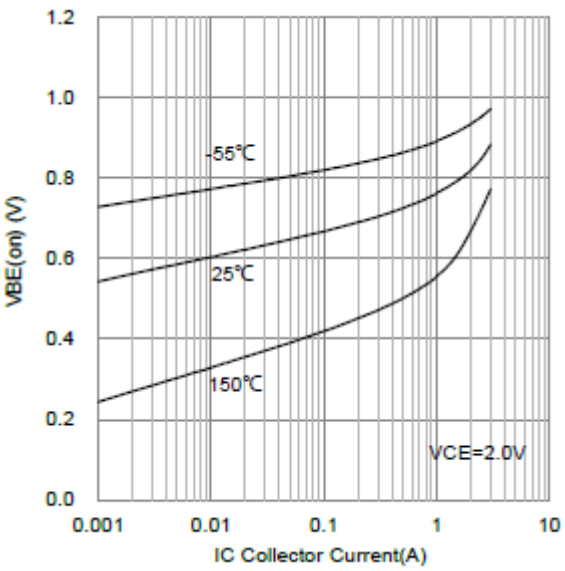


Fig 5. $V_{BE\ (sat)}$ vs I_C

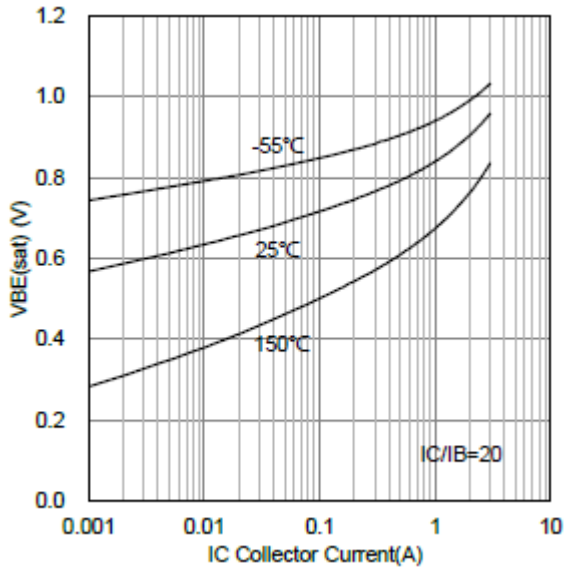


Fig 6. $V_{CE\ (sat)}$ vs I_C

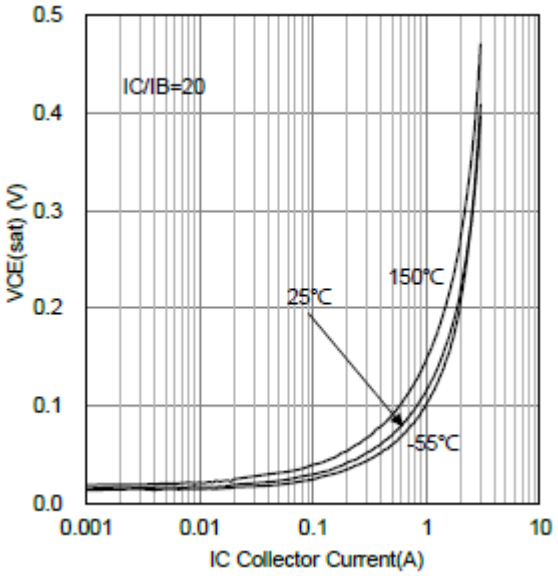
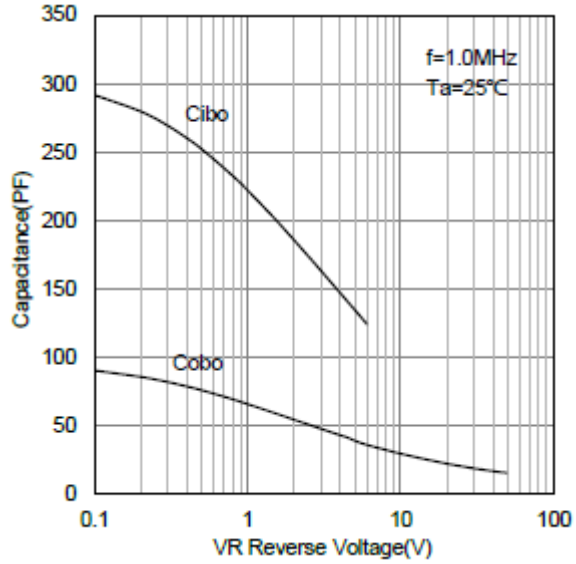
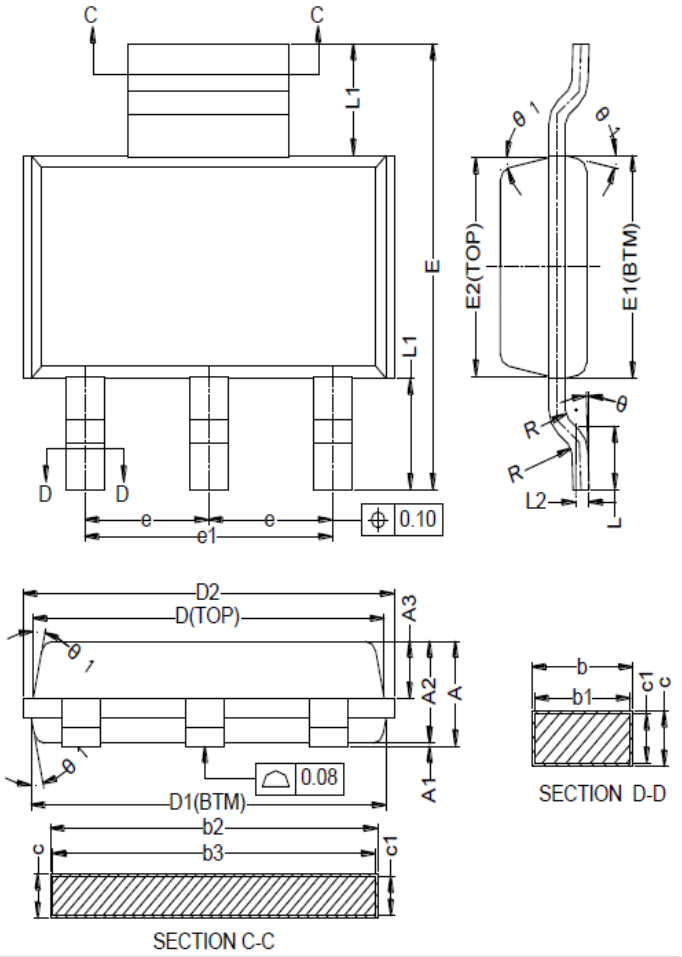


Fig 7. Capacitance



PACKAGE INFORMATION

Dimension in SOT-223 Package (Unit: mm)



Symbol	Min	Max	Symbol	Min	Max
A	-	1.80	E	6.80	7.20
A1	0.02	0.10	E1	3.40	3.60
A2	1.50	1.70	E2	3.33	3.53
A3	0.80	1.00	e	2.30BSC	
b	0.67	0.80	e1	4.60BSC	
b1	0.66	0.76	L	0.80	1.20
b2	2.96	3.09	L1	1.75REF	
b3	2.95	3.05	L2	0.25BSC	
c	0.30	0.35	R	0.10	-
c1	0.29	0.31	R1	0.10	-
D	6.48	6.58	θ	0°	8°
D1	6.55	6.65	θ1	10°	14°
D2	-	7.05			

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