PRODUCT DATA SHEET

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Datasheet Resources Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

PBSS306NZ

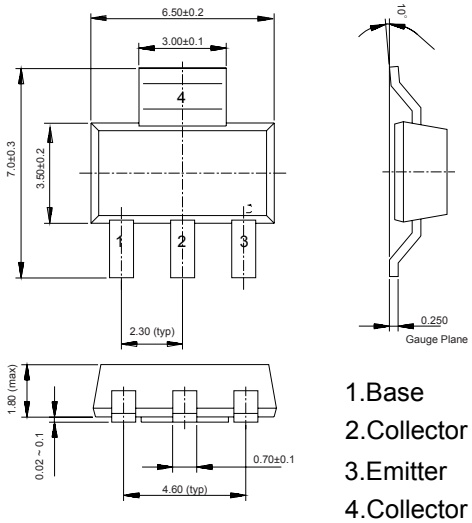
NPN Transistors

■ Features

- ● Collector Current Capability IC=6A
- ● Collector Emitter Voltage VCEO=100V

SOT-223

Unit:mm



1.Base
2.Collector
3.Emitter
4.Collector

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	200	V
Collector - Emitter Voltage	V_{CEO}	100	
Emitter - Base Voltage	V_{EBO}	6	
Collector Current - Continuous	I_C	6	A
Collector Current - Pulse	I_{CP}	10	
Collector Power Dissipation	P_C	3	W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA， I_E= 0	200			V
Collector-emitter breakdown voltage	V_{CER}	I_C=1mA, RB ≤1kΩ	200			
Collector- emitter breakdown voltage	V_{CEO}	I_C= 10 mA， I_B= 0	100			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100μA， I_C= 0	6			
Collector-base cut-off current	I_{CBO}	V_{CB}= 200 V , I_E= 0			0.1	uA
		V_{CB}= 200 V , I_E= 0 , Ta = 100℃			1	
Collector- emitter cut-off current RB ≤1kΩ	I_{CER}	V_{CB}= 200 V , I_E= 0			0.1	
		V_{CB}= 200 V , I_E= 0 , Ta = 100℃			1	
Emitter cut-off current	I_{EBO}	V_{EB}= 6V , I_C=0			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=0.1 A, I_B=5mA (Note.1)			50	mV
		I_C=1 A, I_B=50mA (Note.1)			100	
		I_C=2 A, I_B=50mA (Note.1)			170	
		I_C=6 A, I_B=300mA (Note.1)			375	
Base - emitter saturation voltage	$V_{BE(sat)}$	I_C=6 A, I_B=300mA (Note.1)			1.2	V
Base-Emitter Turn On Voltage	$V_{BE(on)}$	V_{CE}= 6V, I_C= 1A (Note.1)			1.15	
DC current gain (Note.1)	$h_{FE(1)}$	V_{CE}= 1V, I_C= 10mA	100		300	
	$h_{FE(2)}$	V_{CE}= 1V, I_C= 2A	100		300	
	$h_{FE(3)}$	V_{CE}= 1V, I_C= 5A	75			
	$h_{FE(4)}$	V_{CE}= 1V, I_C= 10A	25			
Switching Times	t_{on}	I_C=1A, I_{B1}=100mA I_{B2}=100mA, V_{CC}=10V		45		ns
	t_{off}			1100		
Collector output capacitance	C_{ob}	V_{CB}= 10V, f=1MHz		45		pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 100mA,f=50MHz		130		MHz

Note.1: Pulse width=300us. Duty cycle ≤ 2%

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