



## PRODUCT DATA SHEET



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**Datasheet**



**Resources**

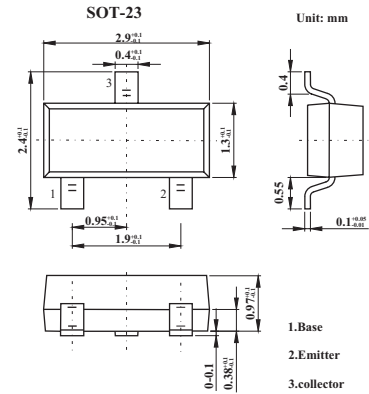


**Samples**

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](http://www.jg-semi.cn). Please email any questions regarding the system integration to [JINGAO\\_questions@jgsemi.com](mailto:JINGAO_questions@jgsemi.com).

### ■ Features

- hFE up to 5k at Ic= 500mA
- Fast switching
- Low VCE(sat) at High Ic



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	120	V
Collector-emitter voltage	V <sub>CEO</sub>	100	V
Emitter-base voltage	V <sub>EBO</sub>	10	V
Collector current	I <sub>C</sub>	500	mA
Peak collector current	I <sub>CM</sub>	2	A
Power dissipation	P <sub>tot</sub>	500	mW
Operating and storage temperature range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150	°C

**■ Electrical Characteristics Ta = 25°C**

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> =10μA	120	300		V
Collector-emitter breakdown voltage *	V <sub>(BR)CEO</sub>	I <sub>C</sub> =10mA	100	130		V
Emitter-base breakdown voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> =10μA	10	10		V
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> =100V, I <sub>E</sub> =0		0.02	10	nA
Collector cutoff current	I <sub>CES</sub>	V <sub>CE</sub> =100V, I <sub>E</sub> =0			10	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =8V			100	nA
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =5mA I <sub>C</sub> =100mA, I <sub>B</sub> =0.1mA		0.9 0.78	1.0 0.9	V
Base-emitter saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> =500mA, I <sub>B</sub> =5mA		1.7	1.9	V
Base-emitter voltage *	V <sub>BE(ON)</sub>	I <sub>C</sub> =500mA, V <sub>CE</sub> =5V		1.5	1.8	V
DC current gain *	h <sub>FE</sub>	I <sub>C</sub> =100mA, V <sub>CE</sub> =5V	15K			
		I <sub>C</sub> =500mA, V <sub>CE</sub> =5V	5K			
Output capacitance	C <sub>obo</sub>	V <sub>CB</sub> =10V, f=100MHz		6		pF
Switching times	t <sub>on</sub>	I <sub>C</sub> =100μA, V <sub>S</sub> =10V		0.7		μs
	t <sub>off</sub>	I <sub>B</sub> =0.1mA		2.5		μs

\* Pulse test: t<sub>p</sub> = 300 μs; d ≤ 0.02.

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