



## PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



**Datasheet**



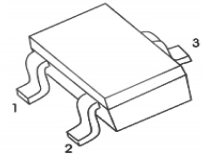
**Resources**



**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).

SOT - 523

**FEATURES**
**Collector current:  $I_C=0.5A$** 


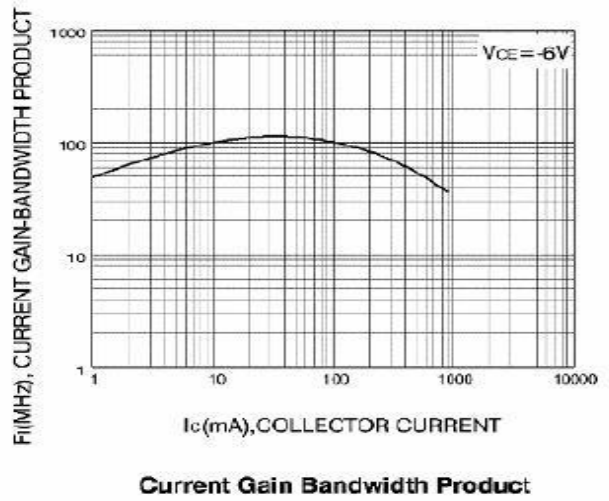
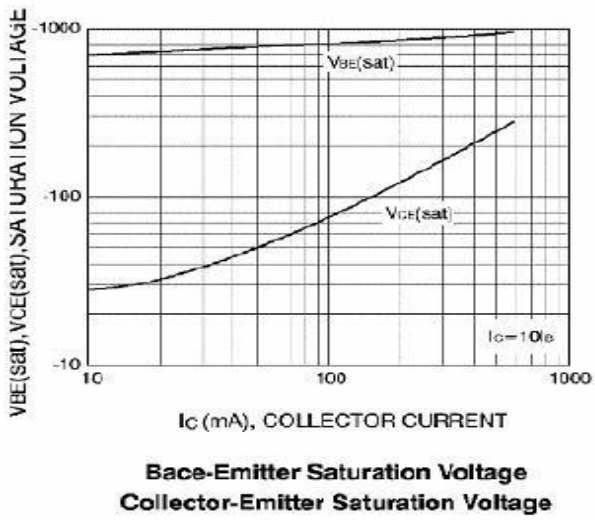
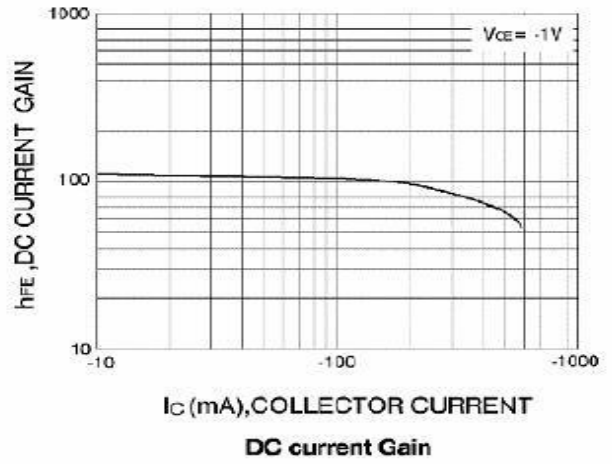
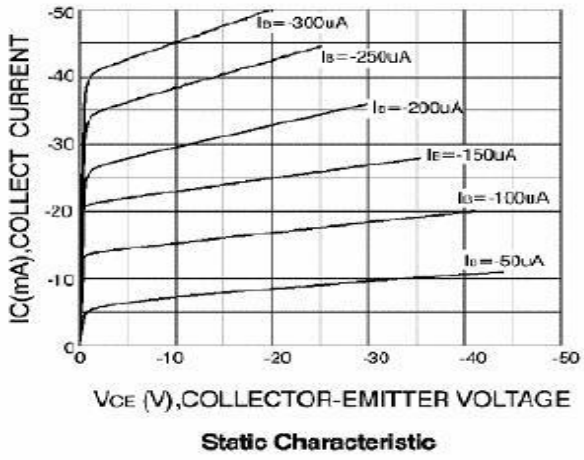
1. BASE
2. EMITTER
3. COLLECTOR

**MAXIMUM RATINGS ( $T_A=25^{\circ}C$  unless otherwise noted)**

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-40	V
$V_{CEO}$	Collector-Emitter Voltage	-25	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-0.5	A
$P_C$	Collector Power Dissipation	0.3	W
$T_j$	Junction Temperature	125	$^{\circ}C$
$T_{stg}$	Storage Temperature	-55-150	$^{\circ}C$

**ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$  unless otherwise specified)**

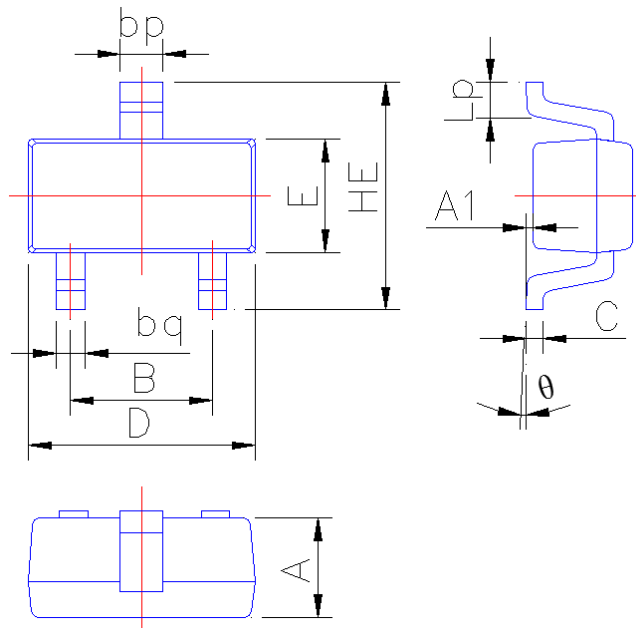
Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E=0$	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B=0$	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu A, I_C=0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40V, I_E=0$		-0.1	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -20V, I_B=0$		-0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -3V, I_C=0$		-0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1V, I_C = -50mA$	200	350	
	$h_{FE(2)}$	$V_{CE} = -1V, I_C = -500mA$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$		-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$		-1.2	V
Transition frequency	$f_T$	$V_{CE} = -6V, I_C = -20mA$ $f = 30MHz$	150		MHz



**PACKAGE OUTLINE**

Plastic surface mounted package; 3 leads

SOT-523



Symbol	Dimension in Millimeters	
	Min	Max
A	0.60	0.80
A1	0.010	0.100
B	0.95	1.05
bp	0.26	0.40
bq	0.16	0.30
C	0.09	0.15
D	1.50	1.70
E	0.70	0.85
HE	1.45	1.75
Lp	0.16	0.36
$\theta$	0°	5°

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