



PRODUCT DATA SHEET



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Datasheet



Resources



Samples

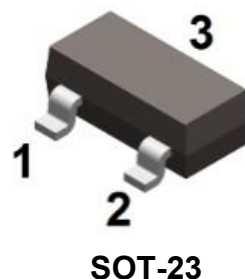
Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

Features

- High saturation voltage
- Excellent hFE linearity

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V _{CBO}	-500	V
Collector-Emitter Breakdown Voltage	V _{CEO}	-500	V
Emitter-Base Breakdown Voltage	V _{EBO}	-7	V
Collector Current (Continuous)	I _C	-0.15	A
Collector Current (Peak)	I _{CM}	-0.5	A

Thermal Characteristics

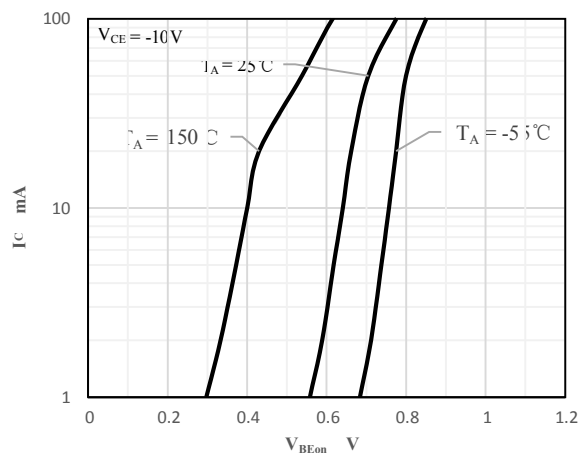
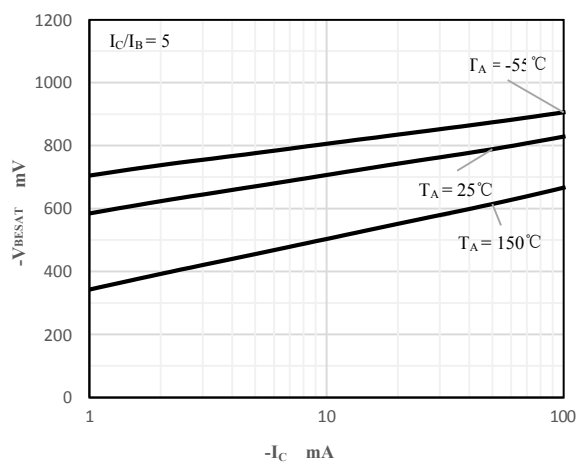
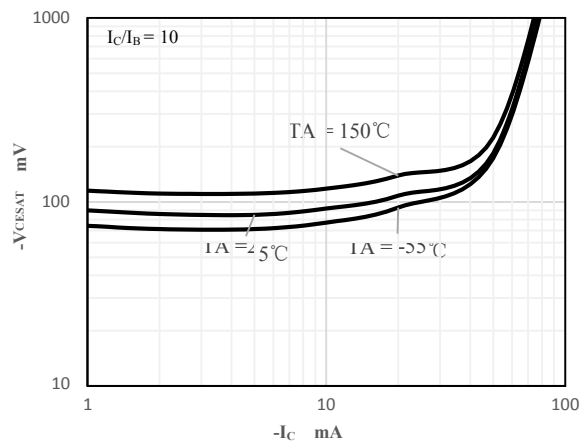
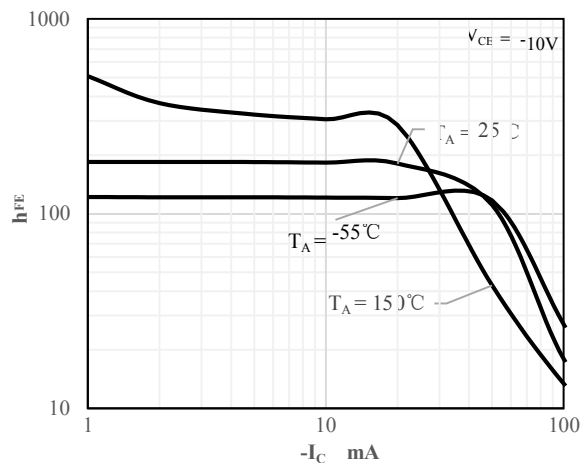
Parameter	Symbol	Value	Unit
Power Dissipation(T _A = 25°C)	P _D	500	mW
Thermal Resistance Junction-to-Air *1	R _{θJA}	212	°C/W
Thermal Resistance Junction-to-Case *1	R _{θJC}	110	°C/W
Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a minimum recommended FR-4 board

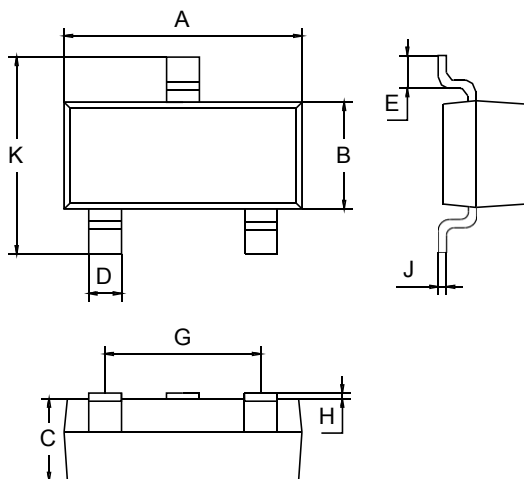
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$	-500	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}$, $I_B = 0$	-500	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}$, $I_C = 0$	-7	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -500\text{V}$, $I_E = 0$	-	-	-0.1	μA
Collector Cut-off Current	I_{CEX}	$V_{CE} = -500\text{V}$, $R_{BE} = 1\text{k}$	-	-	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$	-	-	-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -10\text{V}$, $I_C = -1\text{mA}$	100	-	300	-
		$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$	80	-	300	-
		$V_{CE} = -10\text{V}$, $I_C = -100\text{mA}$	-	15	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -20\text{mA}$, $I_B = -2\text{mA}$	-	-	-0.2	V
		$I_C = -50\text{mA}$, $I_B = -10\text{mA}$	-	-	-0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -50\text{mA}$, $I_B = -10\text{mA}$	-	-	-0.9	V
Base-emitter Voltage	$V_{BE(on)}$	$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$	-	-	-0.9	V
Transition Frequency	f_T	$I_C = -10\text{mA}$, $V_{CE} = -20\text{V}$ $f = 50\text{MHz}$	60	-	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = -20\text{V}$, $I_E = 0\text{A}$, $f = 1\text{MHz}$	-	-	8	pF

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)



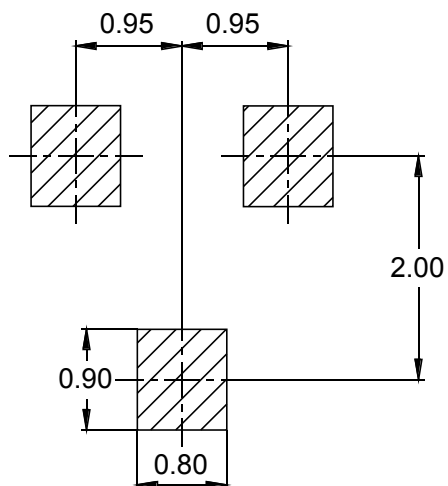
Package Outline Dimensions (Unit: mm)



SOT-23		
	Min.	Max.
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23



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