PRODUCT DATA SHEET

To learn more about JGSEMI, please visit our website at

Datasheet Resources Samples

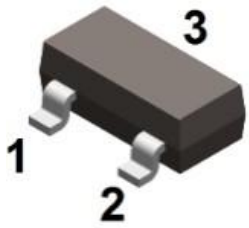
Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

FMMT560TA

PNP Silicon Epitaxial Planar Transistor

Features

- High saturation voltage
- Excellent hFE linearity



SOT-23

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	$R_{\theta JA}$	212	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	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°C unless otherwise specified)

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

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

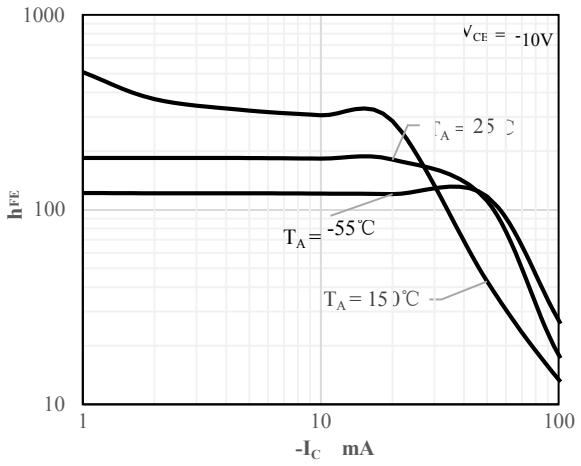


Fig 1 h_{FE} vs. I_C

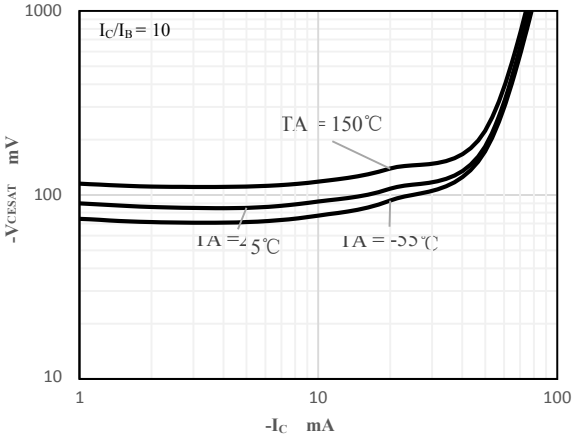


Fig 2 $V_{CE(sat)}$ vs. I_C

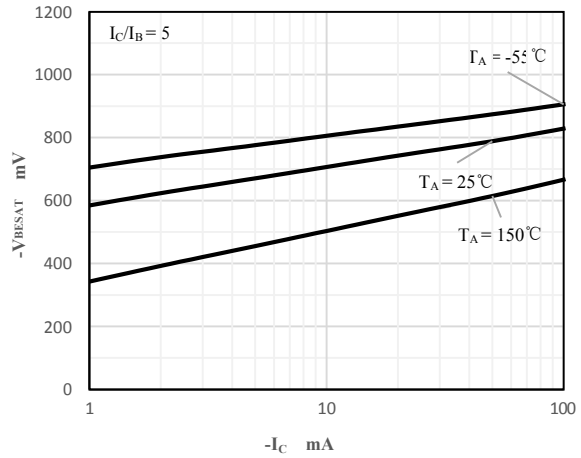


Fig 3 $V_{BE(sat)}$ vs. I_C

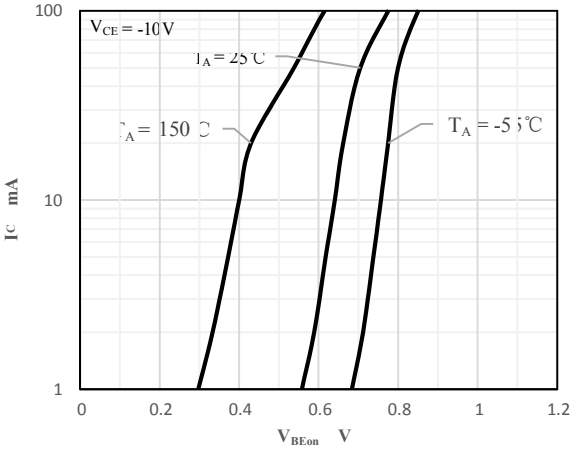
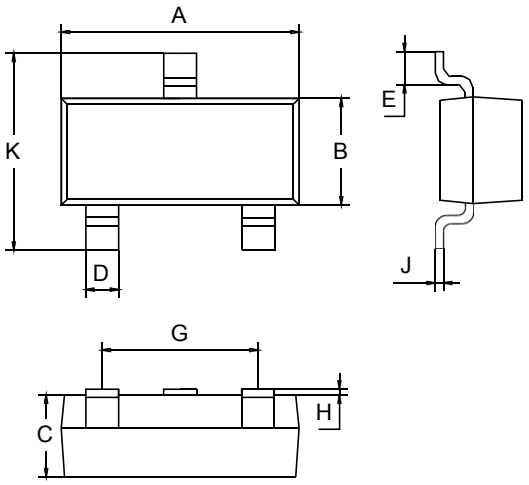


Fig 4 $V_{BE(ON)}$ vs. I_C

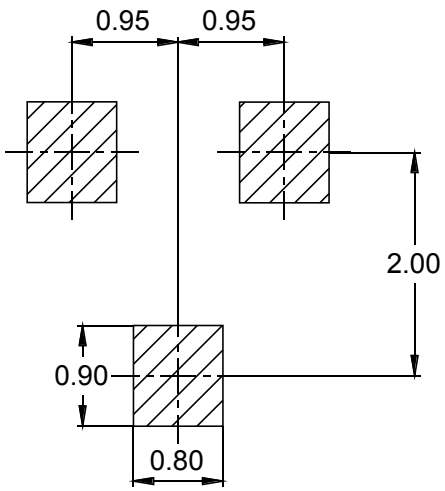
Package Outline Dimensions (Unit: mm)



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



Attention

1, Any and all JGSEMI products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, orother applic ations whose failure can be reasonably expected to result in serious physical or material damage. Consult with your JGSEMI representative nearest you before using any JGSEMI products described or contained herein in such applicati ons.

2,JGSEMI assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all JGSEMI products described or contained herein.

3, Specifications of any and all JGSEMI products described or contained herein stipulate the performance, characteri stics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To ver ify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate an d test devices mounted in the customer's products or equipment.

4,In the event that any or all JGSEMI products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported wit hout obtaining the export license from the authorities concerned in accordance with the above law.

6, Any and all information described or contained herein are subject to change without notice due to product technology improvement,etc. When designing equipment, refer to the "Delivery Specification" for the JGSEMI produ ct that you Intend to use.