

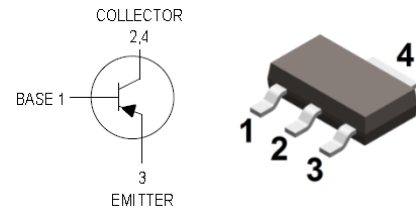


Features

- High saturation voltage
- Excellent h_{FE} linearity

Mechanical Data

- Case: SOT-223
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-223

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CB0}	-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 ($T_A = 25^\circ\text{C}$) *1	P_D	3.1	W
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	40	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	13	$^\circ\text{C}/\text{W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note 1: The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper



FM560R

PNP Silicon Epitaxial Planar Transistor



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

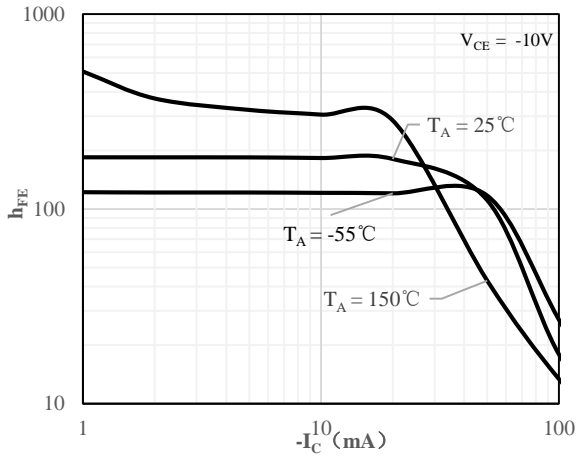


Fig 1 h_{FE} vs. I_C

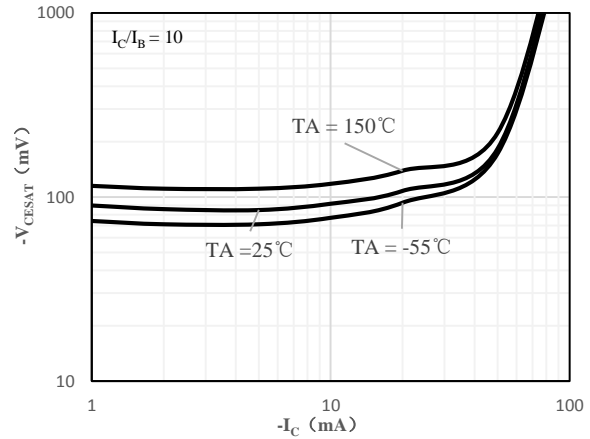


Fig 2 $V_{CE(sat)}$ vs. I_C

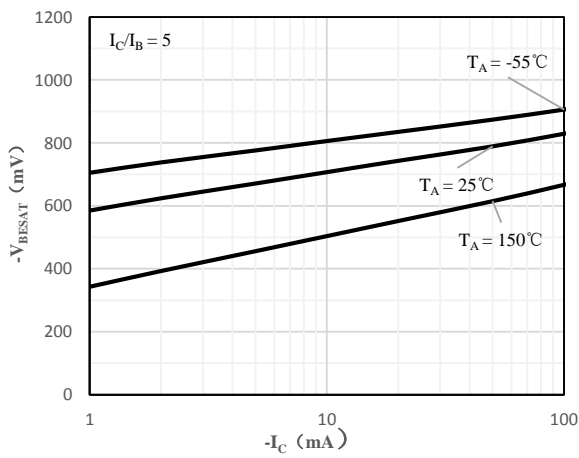


Fig 3 $V_{BE(sat)}$ vs. I_C

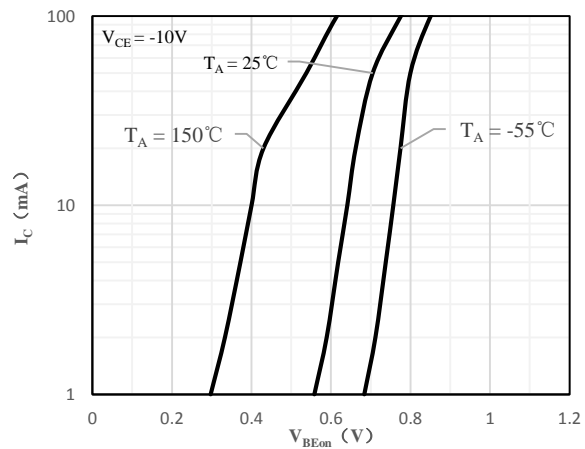
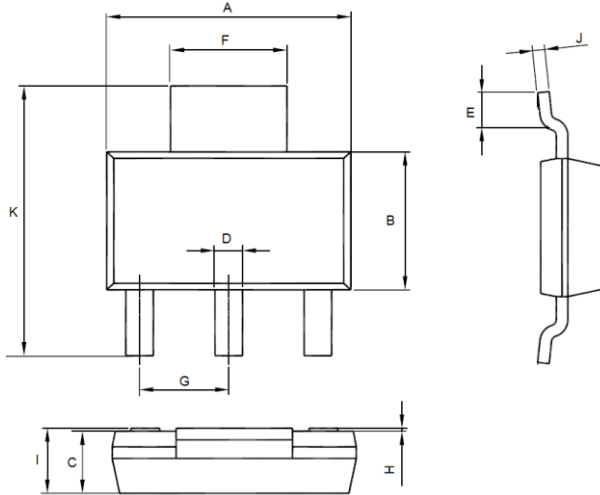


Fig 4 $V_{BE(ON)}$ vs. I_C



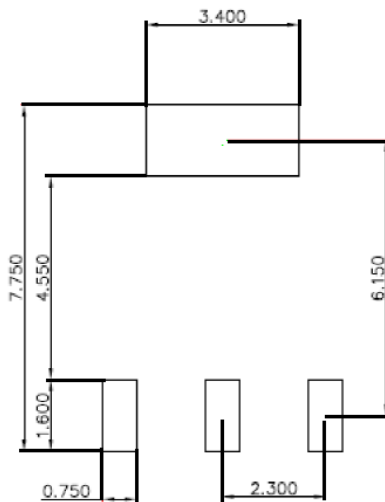
Package Outline Dimensions (Unit: mm)



SOT-223		
Dimension	Min.	Max.
A	6.10	6.50
B	3.30	3.70
C	1.50	1.70
D	0.66	0.82
E	0.90	1.15
F	2.90	3.10
G	2.20	2.40
H	0.02	0.10
I	1.52	1.80
J	0.20	0.40
K	6.70	7.30

Mounting Pad Layout (Unit: mm)

SOT-223



Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
FMMT560R	SOT-223	4000 pcs / Tape & Reel	560