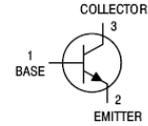


### Features

- Low saturation
- Complement to FMMT591

HF



### Mechanical Data

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
FMMT491	SOT-23	3000 pcs / Tape & Reel	491

### Maximum Ratings (@ T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V <sub>CB0</sub>	80	V
Collector-Emitter Breakdown Voltage	V <sub>CEO</sub>	60	V
Emitter-Base Breakdown Voltage	V <sub>EB0</sub>	5	V
Collector Current (Continuous)	I <sub>C</sub>	1	A
Collector Current (Peak)	I <sub>CM</sub>	2	A

### Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation <sup>*1</sup>	P <sub>D</sub>	0.5	W
Thermal Resistance Junction-to-Air <sup>*2</sup>	R <sub>θJA</sub>	348	°C/W
Thermal Resistance Junction-to-Case <sup>*2</sup>	R <sub>θJC</sub>	171	°C/W
Thermal Resistance Junction-to-Lead <sup>*2</sup>	R <sub>θJL</sub>	122	°C/W
Junction Temperature	T <sub>J</sub>	-55 ~ +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 ~ +150	°C

Notes:

1. For a device mounted with the collector lead on 15mm x 15mm 1oz copper that is on a single-sided 1.6mm FR4 PCB; device is measured under still air conditions whilst operating in a steady-state
2. The data tested by surface mounted on a 15mm \* 15mm \* 1mm FR4-epoxy P.C.B

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_E = 0$	80	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	60	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	5	-	-	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = 60\text{V}, I_E = 0$	-	-	0.1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$	-	-	0.1	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 1\text{mA}$	100	-	-	-
		$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	100	-	300	-
		$V_{CE} = 5\text{V}, I_C = 1\text{A}$	80	-	-	-
		$V_{CE} = 5\text{V}, I_C = 2\text{A}$	30	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 0.5\text{A}, I_B = 0.05\text{A}$	-	-	0.25	V
		$I_C = 1\text{A}, I_B = 0.1\text{A}$	-	-	0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 1\text{A}, I_B = 0.1\text{A}$	-	-	1.1	V
Base-emitter On Voltage	$V_{BE(on)}$	$I_C = 1\text{A}, V_{CE} = 5\text{V}$	-	-	1.0	V
Output Capacity	$C_{ob}$	$V_{CB} = 10\text{V}, f = 1\text{MHz}$	-	-	10	pF
Current-Gain—Bandwidth Product	$f_T$	$I_C = 0.05\text{A}, V_{CE} = 10\text{V}$ $f = 100\text{MHz}$	150	-	-	MHz

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

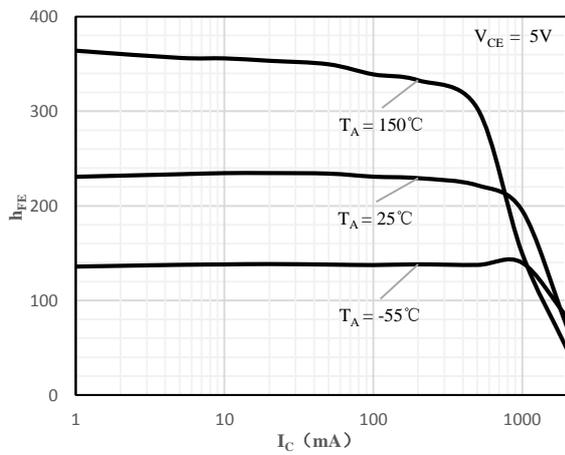


Fig 1  $h_{FE}$  vs.  $I_C$

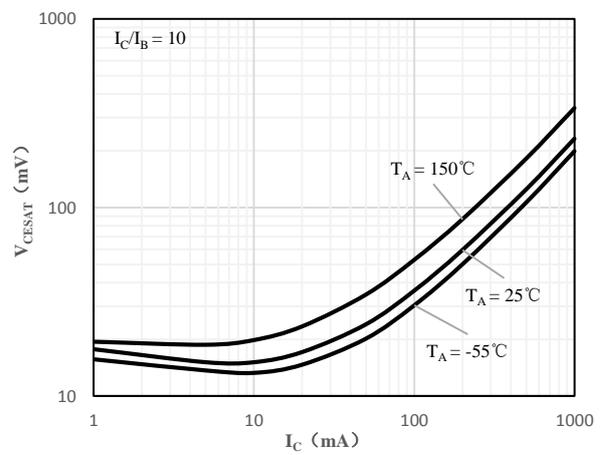


Fig 2  $V_{CE(sat)}$  vs.  $I_C$

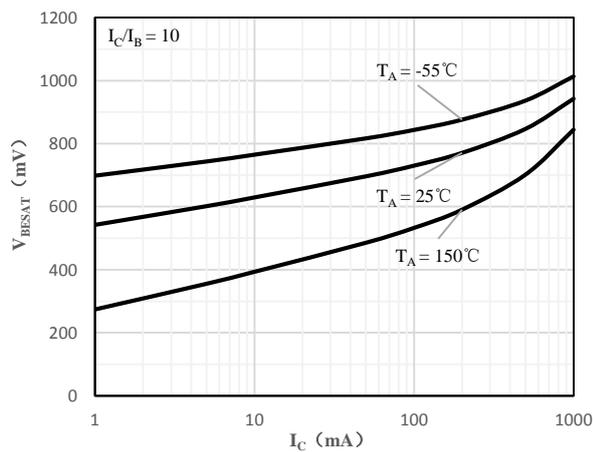


Fig 3  $V_{BE(sat)}$  vs.  $I_C$

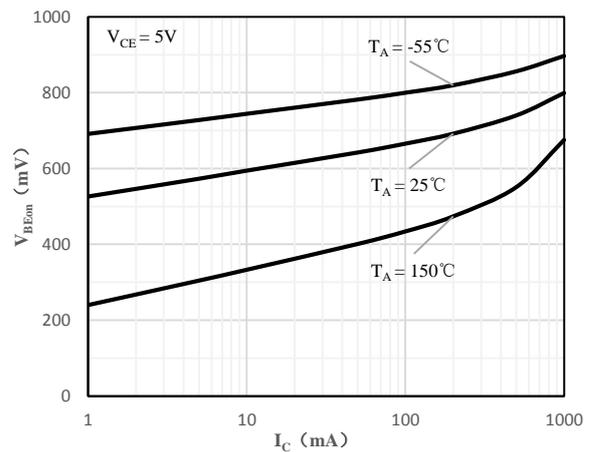
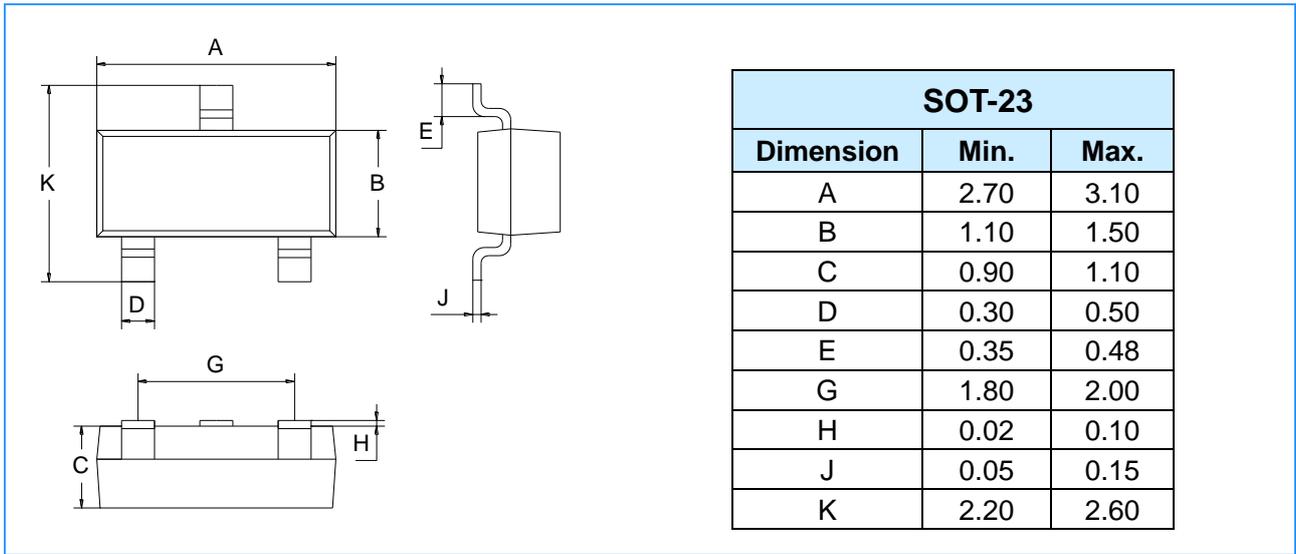
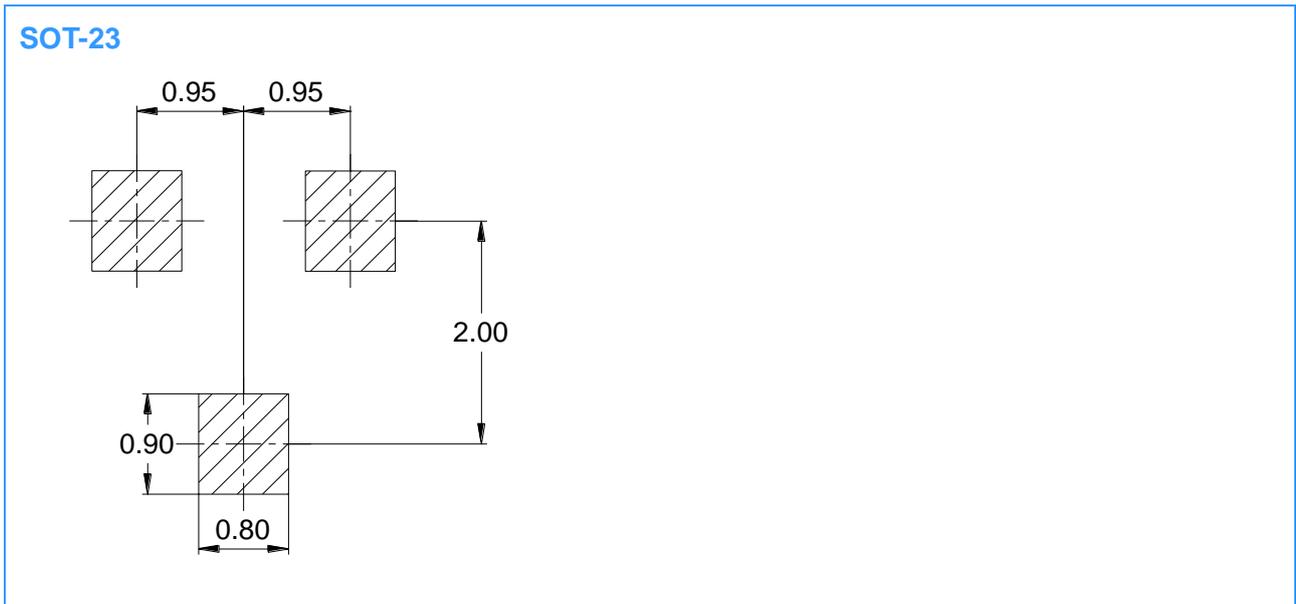


Fig 4  $V_{BE(ON)}$  vs.  $I_C$

**Package Outline Dimensions** (Unit: mm)



**Package Outline Dimensions** (Unit: mm)



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