

## PNP Silicon Epitaxial Planar Transistor

## FMMT591

### FEATURES

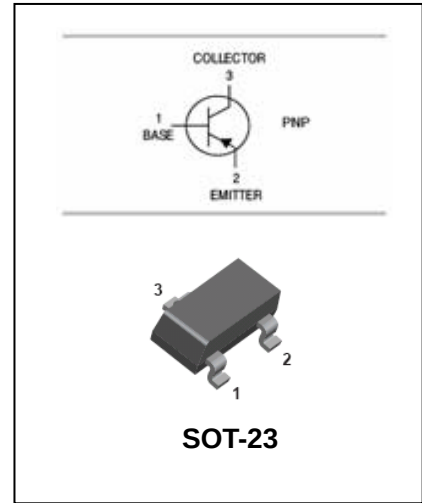
- High saturation voltage.
- Complementary To FMMT491.
- Excellent  $H_{FE}$  Linearity.



### APPLICATIONS

- Switching application.

### ORDERING INFORMATION



| Type No. | Marking | Package Code |
|----------|---------|--------------|
| FMMT591  | 591     | SOT-23       |

### MAXIMUM RATING @ $T_a=25^{\circ}\text{C}$ unless otherwise specified

| Symbol         | Parameter                        | Value   | Units              |
|----------------|----------------------------------|---------|--------------------|
| $V_{CBO}$      | Collector-Base Voltage           | -80     | V                  |
| $V_{CEO}$      | Collector-Emitter Voltage        | -60     | V                  |
| $V_{EBO}$      | Emitter-Base Voltage             | -5      | V                  |
| $I_C$          | Collector Current -Continuous    | -1000   | mA                 |
| $P_C$          | Collector Dissipation            | 500     | mW                 |
| $T_j, T_{stg}$ | Junction and Storage Temperature | -55~150 | $^{\circ}\text{C}$ |

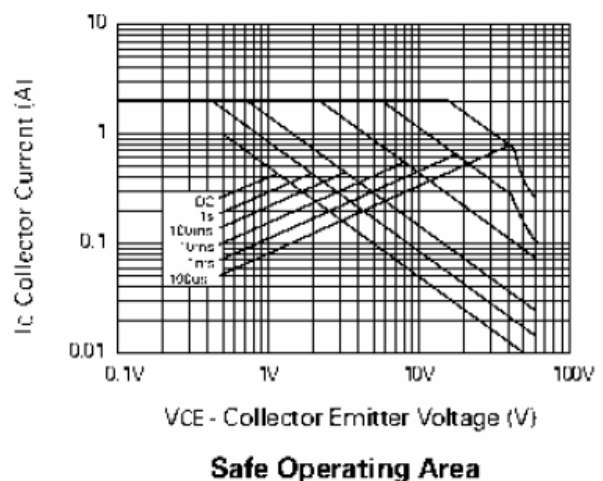
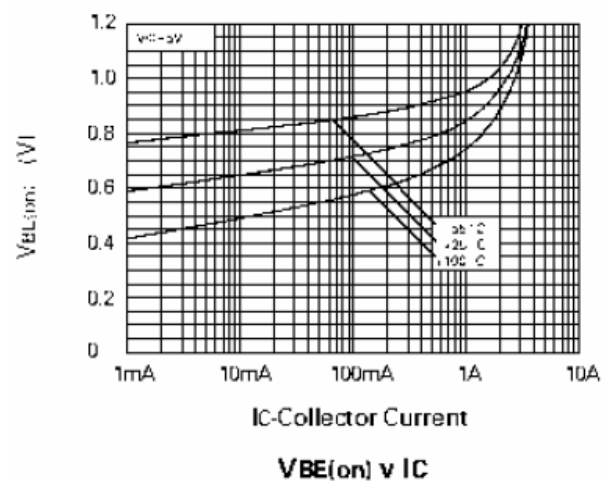
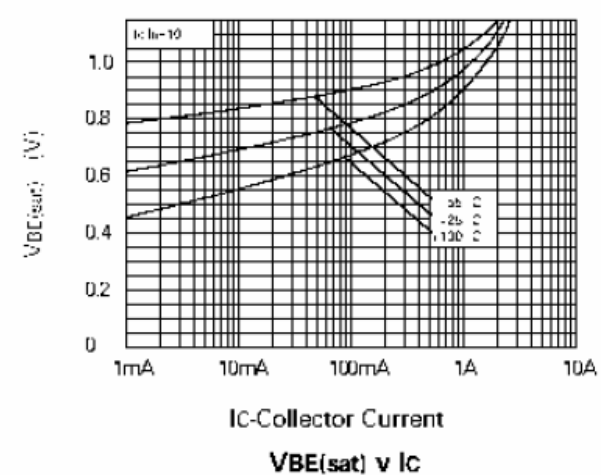
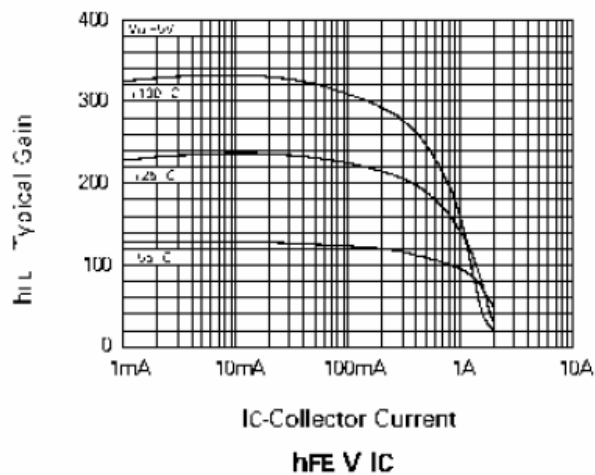
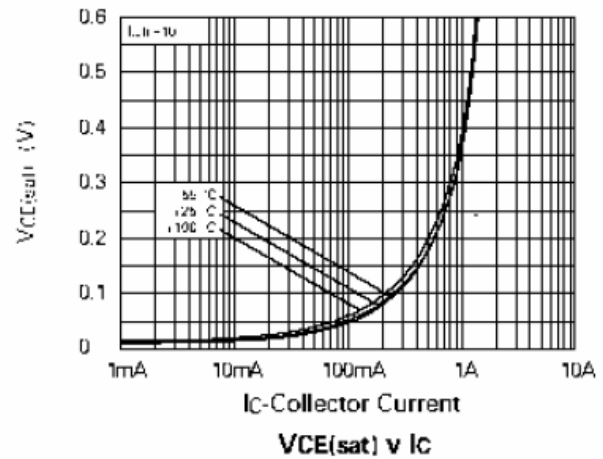
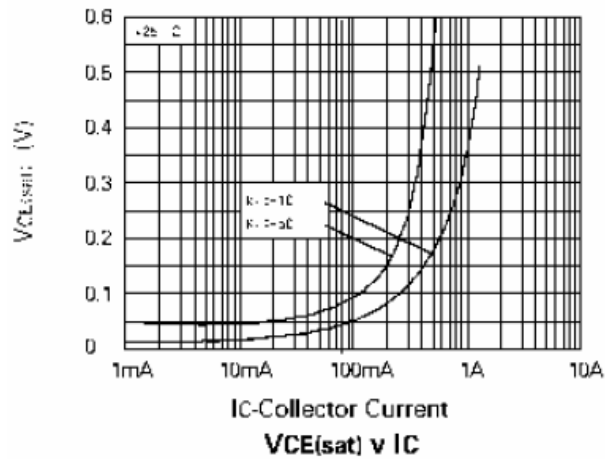
**PNP Silicon Epitaxial Planar Transistor****FMMT591****ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified**

| Parameter                            | Symbol        | Test conditions                                  | MIN | TYP | MAX          | UNIT    |
|--------------------------------------|---------------|--------------------------------------------------|-----|-----|--------------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C=-100\mu A, I_E=0$                           | -80 |     |              | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C=-10mA, I_B=0$                               | -60 |     |              | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E=-100\mu A, I_C=0$                           | -5  |     |              | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=-60V, I_E=0$                             |     |     | -0.1         | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=-4V, I_C=0$                              |     |     | -0.1         | $\mu A$ |
| DC current gain                      | $h_{FE}$      | $V_{CE}=-5V, I_C=-1mA$                           | 100 |     | 300          |         |
|                                      |               | $V_{CE}=-5V, I_C=-500mA$                         | 100 |     |              |         |
|                                      |               | $V_{CE}=-5V, I_C=-1A$                            | 80  |     |              |         |
|                                      |               | $V_{CE}=-5V, I_C=-2A$                            | 15  |     |              |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-500mA, I_B=-50mA$<br>$I_C=-1A, I_B=-100mA$ |     |     | -0.3<br>-0.6 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C=-1A, I_B=-100mA$                            |     |     | -1.2         | V       |
| Base-emitter voltage                 | $V_{BE}$      | $V_{CE}=-5V, I_C=-1A$                            |     |     | -1           | V       |
| Transition frequency                 | $f_T$         | $V_{CE}=-10V, I_C=-50mA$<br>$f=100MHz$           | 150 |     |              | MHz     |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=-10V, I_E=0, f=1MHz$                     |     |     | 10           | pF      |

## PNP Silicon Epitaxial Planar Transistor

**FMMT591**

TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



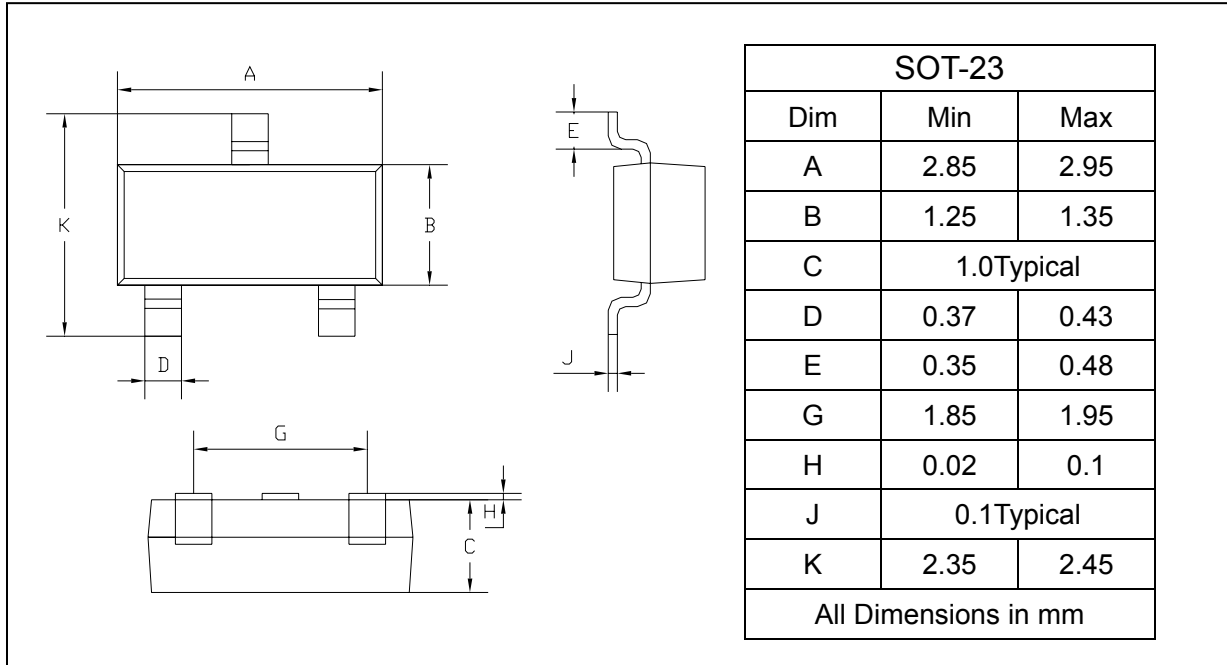
## PNP Silicon Epitaxial Planar Transistor

**FMMT591**

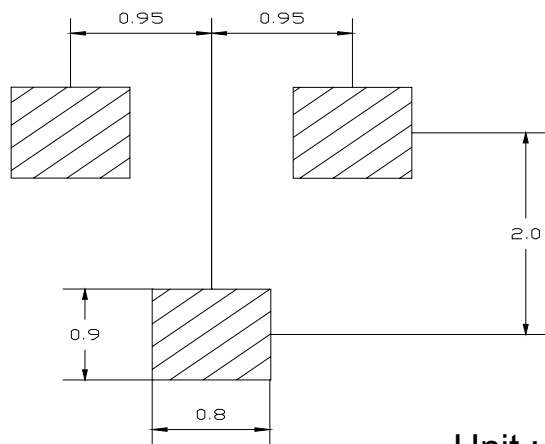
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



Unit : mm

### PACKAGE INFORMATION

| Device  | Package | Shipping       |
|---------|---------|----------------|
| FMMT591 | SOT-23  | 3000/Tape&Reel |