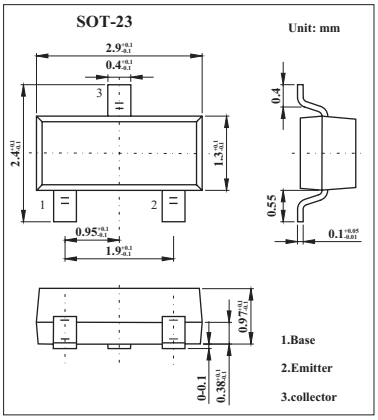
# Switching Transistors

# FMMT4126




## ■ Features

- Switching transistors.

## ■ Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-base voltage | $V_{CBO}$ | -25 | V |
| Collector-emitter voltage | $V_{CEO}$ | -25 | V |
| Emitter-base voltage | $V_{EBO}$ | -4 | V |
| Collector current | $I_C$ | -200 | mA |
| Power dissipation | $P_{tot}$ | 330 | mW |
| Operating and storage temperature range | $T_j$,$T_{stg}$ | -55 to +150 | ℃ |

# FMMT4126

## ■ Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C$=-10□A, | -25 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C$=-1mA, | -25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E$=-10□A, | -4 | | | V |
| Collector cutoff current | $I_{CBO}$ | $V_{CE}$=-20V | | | -50 | nA |
| Emitter cut-off current | $I_{EBO}$ | $V_{EB}$=-3V | | | -50 | nA |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C$=-50mA, $I_B$=-5mA | | | -0.4 | V |
| Base-emitter saturation voltage * | $V_{BE(sat)}$ | $I_C$=-50mA, $I_B$=-5mA | | | -0.95 | V |
| DC current gain * | $h_{FE}$ | $I_C$=-2mA, $V_{CE}$=-1V | 120 | | 360 | |
| Current-gain-bandwidth product | $f_T$ | $I_C$=-10mA, $V_{CE}$=-20V f=100MHz | 250 | | | MHz |
| Output capacitance | $C_{obo}$ | $V_{CB}$=-5V, $I_E$=0, f=140KHz | | | 4.5 | pF |
| Input capacitance | $C_{ibo}$ | $V_{BE}$=-0.5V, $I_C$=0, f=140KHz | | | 10 | pF |
| Noise figure | NF | $V_{CE}$=-5V $I_C$=-200□A,$R_g$=-2K?<br>f=30Hz to 15KHz at -3dB points | | | 4 | dB |
| Small signal current transfer | $h_{fe}$ | $I_C$=-2mA, $V_{CE}$=-1V, f=1KHz | 120 | 180 | | |
| Delay time | $t_d$ | $V_{CC}$=-3V, $I_C$=-10mA,$I_{B1}$=-1mA<br>$V_{BE(off)}$=-0.5V | | | 25 | ns |
| Rise time | $t_r$ | | | | 18 | ns |
| Storage time | $t_s$ | $V_{CC}$=-3V, $I_C$=-10mA<br>$I_{B1}$= $I_{B2}$=-1mA | | | 140 | ns |
| Fall time | $t_f$ | | | | 15 | ns |

* Pulse test: tp ⩽ 300 μs; d ⩽ 0.02.

## ■ Marking

| Marking | ZE |
|---|---|