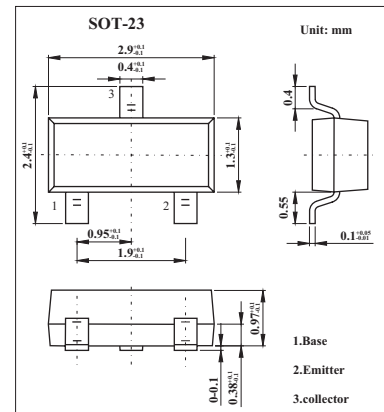


## Small Signal Transistor

## FMMT5087

## ■ Features

- Small signal transistor.

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

| Parameter                               | Symbol         | Rating      | Unit             |
|-----------------------------------------|----------------|-------------|------------------|
| Collector-base voltage                  | $V_{CB0}$      | -50         | V                |
| Collector-emitter voltage               | $V_{CE0}$      | -50         | V                |
| Emitter-base voltage                    | $V_{EB0}$      | -3          | V                |
| Collector current                       | $I_C$          | -100        | mA               |
| Power dissipation                       | $P_{tot}$      | 330         | mW               |
| Operating and storage temperature range | $T_j, T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

| Parameter                            | Symbol        | Testconditions                                                                                                         | Min | Typ | Max        | Unit                |
|--------------------------------------|---------------|------------------------------------------------------------------------------------------------------------------------|-----|-----|------------|---------------------|
| Collector cutoff current             | $I_{CBO}$     | $V_{CB}=-10\text{V}, I_E=0$<br>$V_{CB}=-35\text{V}, I_E=0$                                                             |     |     | -10<br>-50 | nA<br>$\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=-3\text{V}, I_C=0$                                                                                             |     |     | -50        | nA                  |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=-10\text{mA}, I_B=-1\text{mA}$                                                                                    |     |     | -300       | mV                  |
| Base-emitter on voltage              | $V_{BE(on)}$  | $I_C=-1\text{mA}, V_{CE}=-5\text{V}$                                                                                   |     |     | -850       | mV                  |
| DC current gain                      | $h_{FE}$      | $I_C=-100\text{mA}, V_{CE}=-5\text{V}$                                                                                 | 250 |     | 800        |                     |
| Current-gain-bandwidth product       | $f_T$         | $I_C=-500\text{mA}, V_{CE}=-5\text{V}, f=20\text{MHz}$                                                                 | 40  |     |            | MHz                 |
| Small signal current transfer        | $h_{fe}$      | $I_C=-1\text{mA}, V_{CE}=-5\text{V}, f=1\text{KHz}$                                                                    | 250 |     | 900        |                     |
| Noise figure                         | NF            | $I_C=200\mu\text{A}, V_{CE}=-5\text{V}, R_g=2\text{K}\Omega$<br>$f=30\text{Hz to } 15\text{KHz at } 2\text{dB points}$ |     |     | 2          | dB                  |
| Output capacitance                   | $C_{obo}$     | $V_{CB}=-5\text{V}, f=140\text{MHz}, I_E=0$                                                                            |     |     | 4          | pF                  |

## ■ Marking

|         |    |
|---------|----|
| Marking | 2m |
|---------|----|