

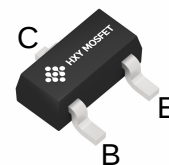


## Features

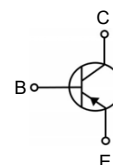
Low equivalent on-resistance

## Package Marking and Ordering Information

| Product ID | Pack   | Marking | Qty(PCS) |
|------------|--------|---------|----------|
| FMMT718TC  | SOT-23 | 718     | 3000     |



**SOT-23**



## Maximum Ratings (Ta=25°C unless otherwise noted)

| Symbol          | Parameter                                        | Value    | Unit |
|-----------------|--------------------------------------------------|----------|------|
| $V_{CBO}$       | Collector-Base Voltage                           | -20      | V    |
| $V_{CEO}$       | Collector-Emitter Voltage                        | -20      | V    |
| $V_{EBO}$       | Emitter-Base Voltage                             | -7       | V    |
| $I_C$           | Collector Current                                | -1.5     | A    |
| $I_B$           | Base Current                                     | -0.5     | A    |
| $P_C$           | Collector Power Dissipation                      | 350      | mW   |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient      | 500      | °C/W |
| $T_J, T_{stg}$  | Operation Junction And Storage Temperature Range | -55~+150 | °C   |

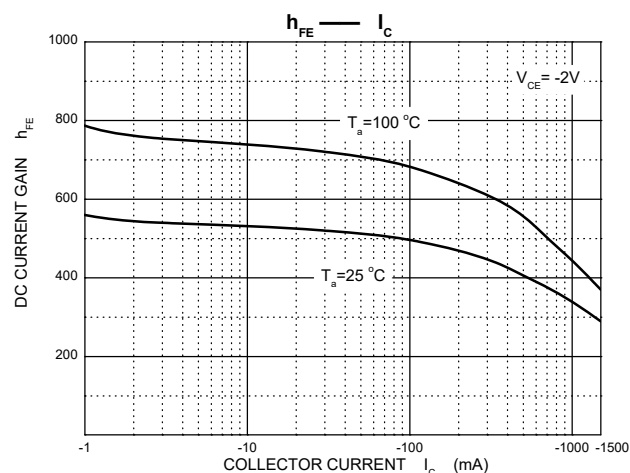
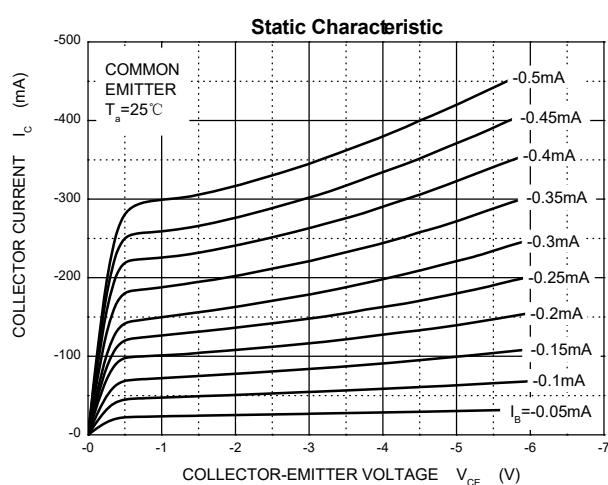


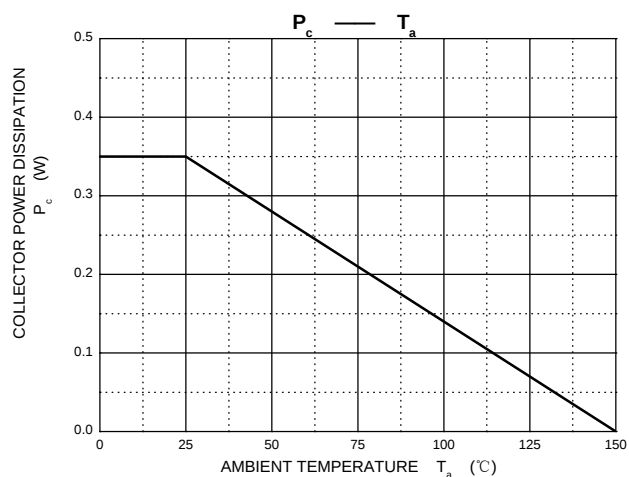
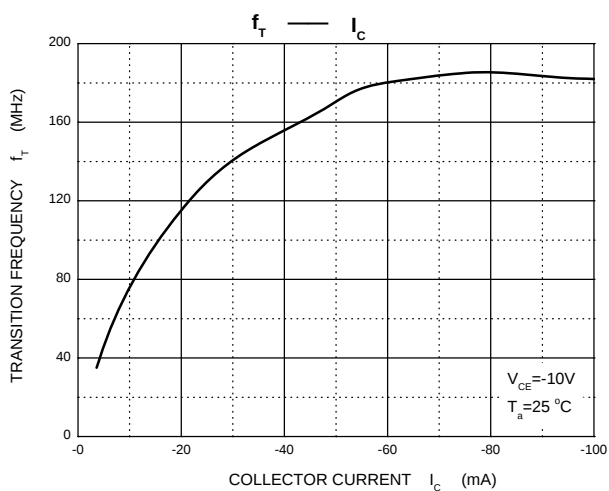
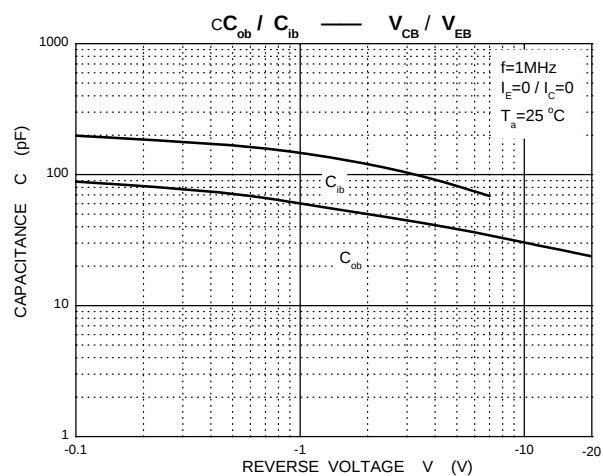
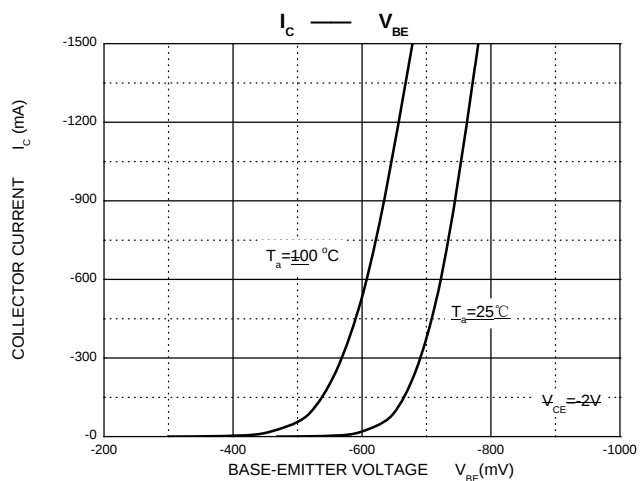
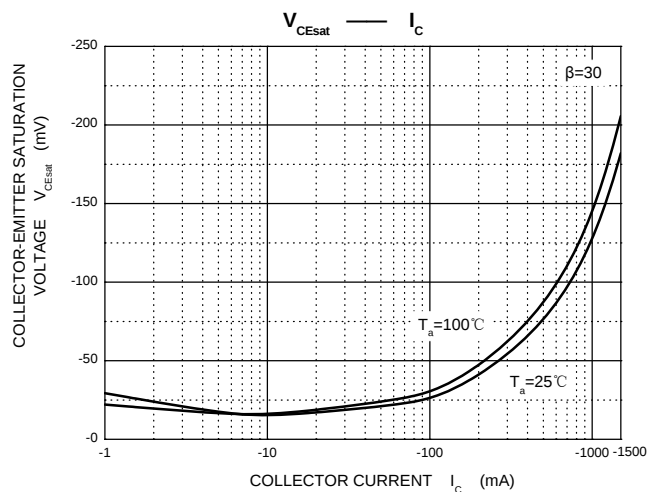
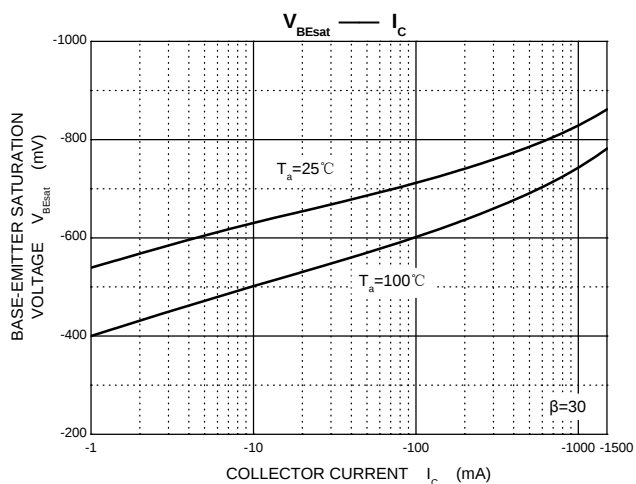
### Electrical Characteristics (Ta=25°C unless otherwise noted)

| Parameter                            | Symbol             | Test conditions                                     | Min | Typ | Max  | Unit    |
|--------------------------------------|--------------------|-----------------------------------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$      | $I_C = -100\mu A, I_E = 0$                          | -20 |     |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$      | $I_C = -10mA, I_B = 0$                              | -20 |     |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$      | $I_E = -100\mu A, I_C = 0$                          | -7  |     |      | V       |
| Collector cut-off current            | $I_{CBO}$          | $V_{CB} = -15V, I_E = 0$                            |     |     | -0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CES}$          | $V_{CE} = -15V, V_{BE} = 0$                         |     |     | -0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$          | $V_{EB} = -4V, I_C = 0$                             |     |     | -0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}^*$      | $V_{CE} = -2V, I_C = -10mA$                         | 300 |     |      |         |
|                                      | $h_{FE(2)}^*$      | $V_{CE} = -2V, I_C = -100mA$                        | 300 | 600 |      |         |
|                                      | $h_{FE(3)}^*$      | $V_{CE} = -2V, I_C = -2A$                           | 150 |     |      |         |
|                                      | $h_{FE(4)}^*$      | $V_{CE} = -2V, I_C = -4A$                           | 35  |     |      |         |
| Collector-emitter saturation voltage | $V_{CE(sat)(1)}^*$ | $I_C = -0.1A, I_B = -10mA$                          |     |     | -40  | mV      |
|                                      | $V_{CE(sat)(2)}^*$ | $I_C = -1A, I_B = -20mA$                            |     |     | -200 | mV      |
|                                      | $V_{CE(sat)(3)}^*$ | $I_C = -1.5A, I_B = -50mA$                          |     |     | -220 | mV      |
| Base-emitter saturation voltage      | $V_{BE(sat)}^*$    | $I_C = -1.5A, I_B = -50mA$                          |     |     | -1   | V       |
| Base-emitter voltage                 | $V_{BE(on)}^*$     | $V_{CE} = -2V, I_C = -2A$                           |     |     | -1   | V       |
| Transition frequency                 | $f_T$              | $V_{CE} = -10V, I_C = -50mA, f = 100MHz$            | 150 |     |      | MHz     |
| Collector output capacitance         | $C_{ob}$           | $V_{CB} = -10V, f = 1MHz$                           |     |     | 30   | pF      |
| Turn-on Time                         | $t_{(on)}$         | $V_{CC} = -10V, I_C = -1A, I_{B1} = I_{B2} = -20mA$ |     | 40  |      | ns      |
| Turn-off Time                        | $t_{(off)}$        |                                                     |     | 670 |      | ns      |

\*Measured under pulse conditions . Pulse width =300 $\mu$ s. Duty cycle $\leq$ 2%.

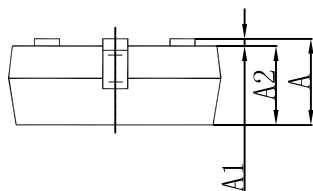
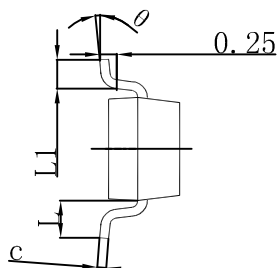
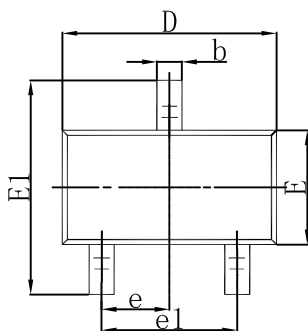
### Typical Characteristics







## SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |



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