



DESCRIPTION

The FMMT491 are available in SOT-23 package

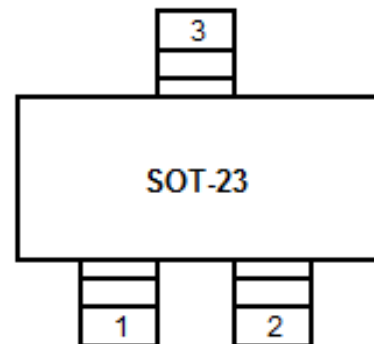
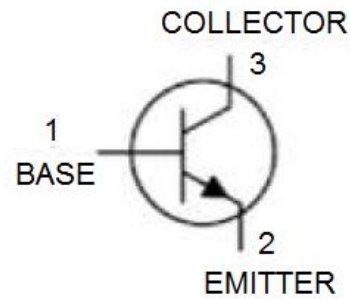
FEATURES

- Low Saturation
- Complementary to FMMT591
- Excellent h_{FE} Linearity
- Available in SOT-23 package

ORDERING INFORMATION

| Package Type | Part Number |
|--|-------------------|
| SOT-23 | FMMT491 |
| Note | SPQ:3,000pcs/Reel |
| AiT provides all RoHS Compliant Products | |

PIN DESCRIPTION





ABSOLUTE MAXIMUM RATINGS

| | |
|--|--------------|
| V _{CBO} , Collector-Base Voltage | 80V |
| V _{CEO} , Collector-Emitter Voltage | 60V |
| V _{EBO} , Emitter-Base Voltage | 5V |
| I _C , Collector Current-Continuous | 1000mA |
| P _C , Collector Dissipation | 500mW |
| T _J , T _{STG} , Junction and Storage Temperature | -55°C ~150°C |

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A=25°C, unless otherwise specified

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|--------------------------------------|----------------------|--|------|------|-------------|------|
| Collector-Base Breakdown Voltage | V _{(BR)CBO} | I _C =100μA, 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 =100μA, I _C =0 | 5 | - | - | V |
| Collector Cut-off Current | I _{CBO} | V _{CB} =60V, I _E =0 | - | - | 0.1 | μA |
| Emitter Cut-off Current | I _{EBO} | V _{EB} =4V, I _C =0 | - | - | 0.1 | μA |
| DC Current Gain | h _{FE} | V _{CE} =5V, I _C =1mA | 100 | - | - | |
| | | V _{CE} =5V, I _C =500mA | 100 | - | 300 | |
| | | V _{CE} =5V, I _C =1A | 80 | - | - | |
| | | V _{CE} =5V, I _C =2A | 30 | - | - | |
| Collector-Emitter Saturation Voltage | V _{CE(sat)} | I _C =500mA, I _B =50mA I _C =1A, I _B =100mA | - | - | 0.25 0.5 | V |
| Base-Emitter Saturation Voltage | V _{BE(sat)} | I _C =1A, I _B =100mA | - | - | 1.1 | 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 | - | - | 10 | pF |



TYPICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$, unless otherwise specified

Figure 1. $V_{CE(sat)}$ vs. I_c

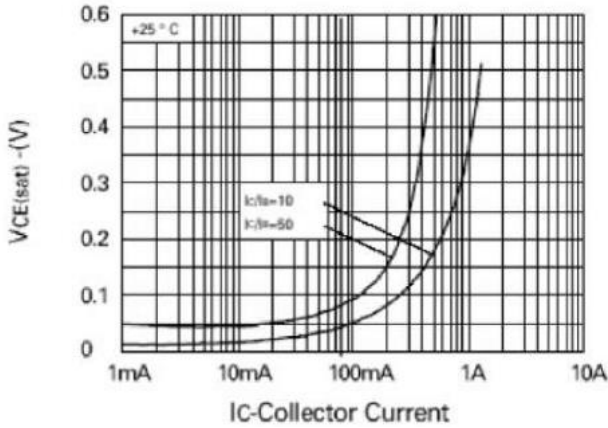


Figure 2. $V_{CE(sat)}$ vs. I_c

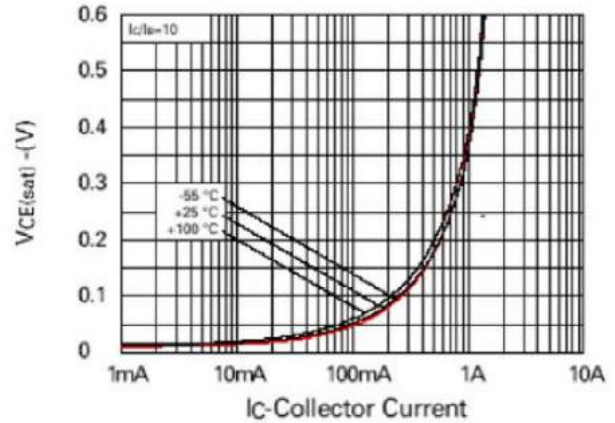


Figure 3. h_{FE} vs. I_c

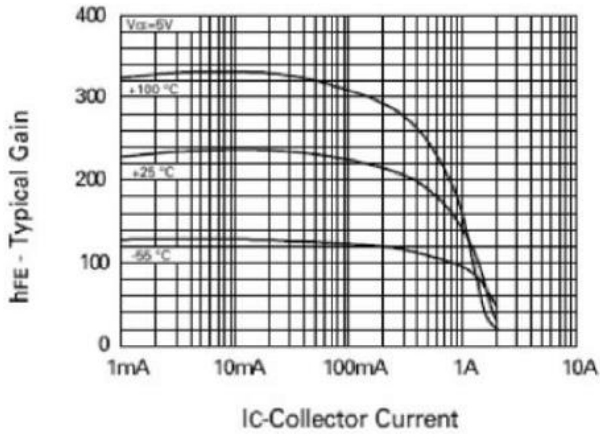


Figure 4. $V_{BE(sat)}$ vs. I_c

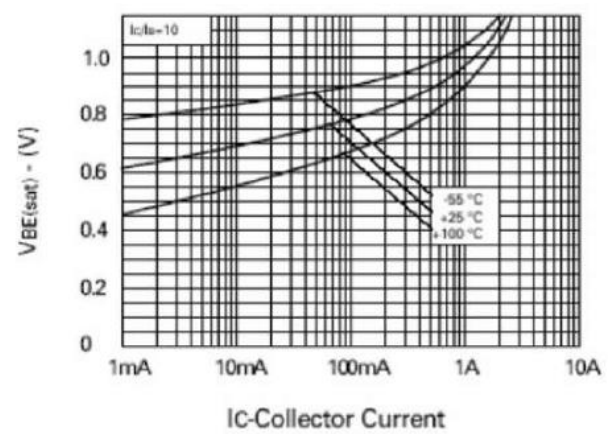


Figure 5. $V_{BE(on)}$ vs. I_c

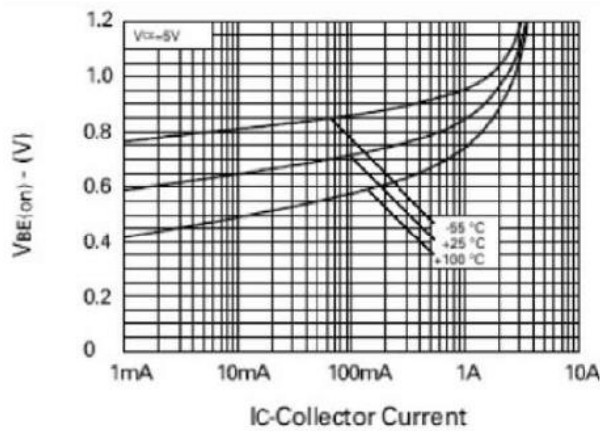
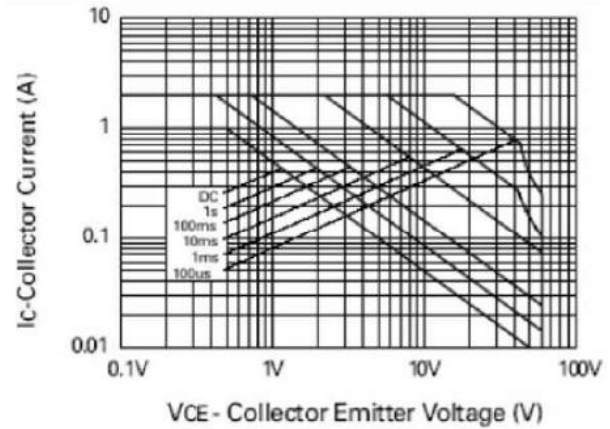


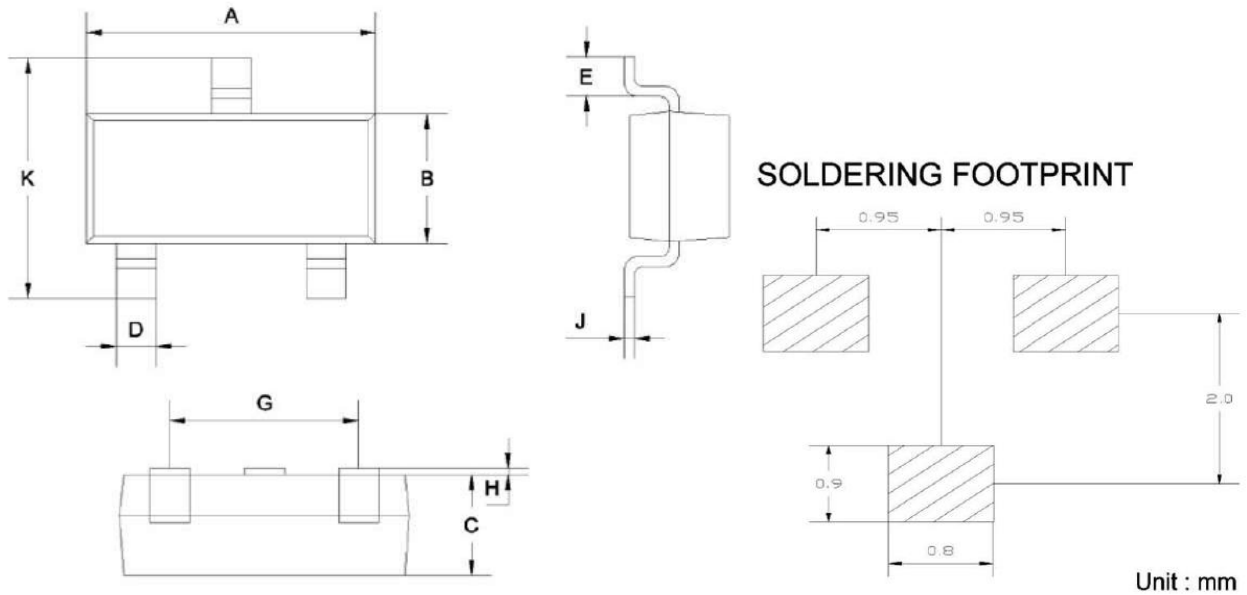
Figure 6. Safe Operating Area





PACKAGE INFORMATION

Dimension in SOT-23 (Unit: mm)



| Dim | Min | Max |
|-----|-------------|------|
| A | 2.85 | 2.95 |
| B | 1.25 | 1.35 |
| C | 1.0 Typical | |
| D | 0.37 | 0.43 |
| E | 0.35 | 0.48 |
| G | 1.85 | 1.95 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.35 | 2.45 |



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