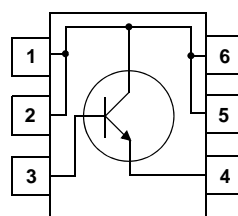
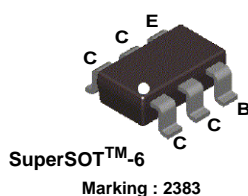


FMBS2383

NPN Epitaxial Silicon Transistor

Features

- Power Amplifier
- Collector-Emitter Voltage : $V_{CEO}=160V$
- Current Gain Bandwidth Product : $f_T=120MHz$



Absolute Maximum Ratings $T_a = 25^\circ C$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-------------------|---|-------------|--------------|
| V_{CBO} | Collector-Base Voltage | 160 | V |
| V_{CEO} | Collector-Emitter Voltage | 160 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 800 | mA |
| I_B | Base Current | 160 | mA |
| P_D | Power Dissipation | 630 | mW |
| $R_{\theta JA}^*$ | Thermal Resistance, Junction to Ambient | 200 | $^\circ C/W$ |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^\circ C$ |

* note1) : Minimum land pattern size

Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|--------------------------------------|-----------------------------------|------|------|------|-------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C = 10\mu A, I_B = 0$ | 160 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = 10mA, I_B = 0$ | 160 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = 1mA, I_C = 0$ | 5 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB} = 120V, I_E = 0$ | | | 100 | nA |
| I_{EBO} | Emitter Cut-off Current | $V_{BE} = 5V, I_C = 0$ | | | 100 | nA |
| h_{FE} | DC Current Gain | $V_{CE} = 5V, I_C = 100mA$ | 80 | | 160 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = 500mA, I_B = 50mA$ | | | 1.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE} = 5V, I_C = 500mA$ | | | 1.0 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = 5V, I_C = 100mA$ | | 120 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = 10V, I_E = 0, f = 1MHz$ | | | 30 | pF |

Typical Performance Characteristics

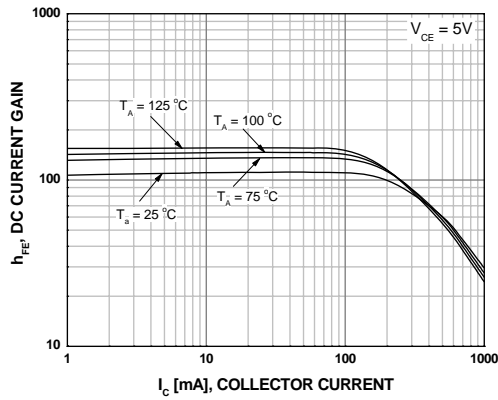


Figure 1. DC Current Gain

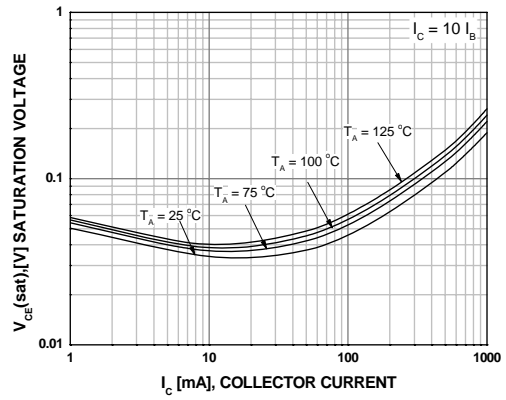


Figure 2. Collector-Emitter Saturation Voltage

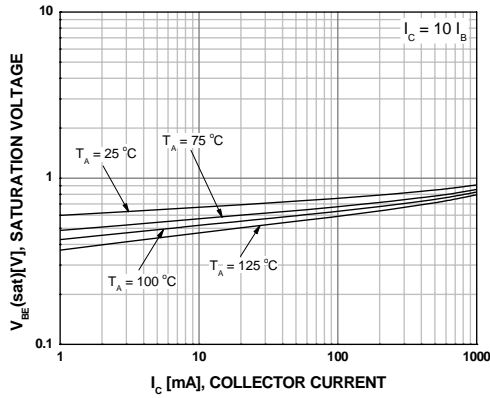


Figure 3. Base-Emitter Saturation Voltage

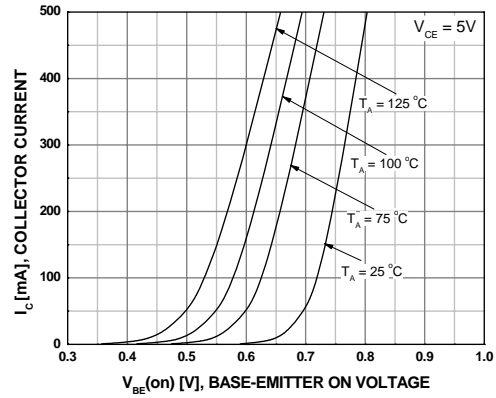


Figure 4. Base-Emitter On Voltage

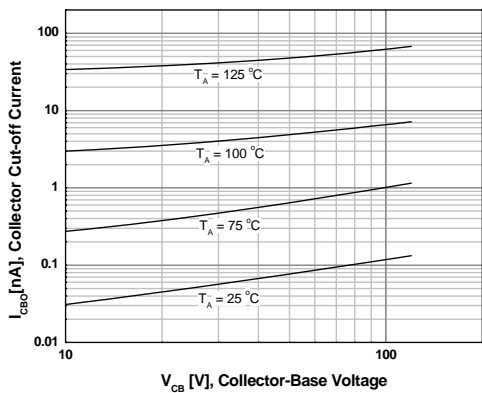


Figure 5. Collector-Base Cutoff Current

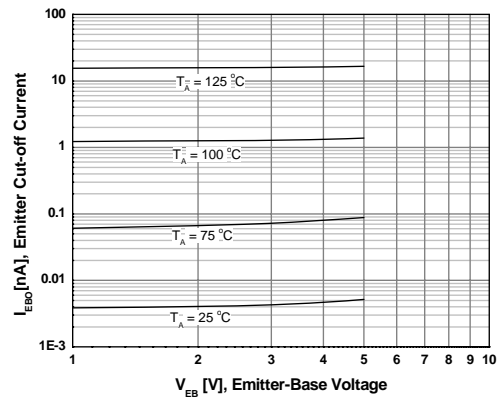


Figure 6. Emitter-Base Cutoff Current

Typical Performance Characteristics (Continued)

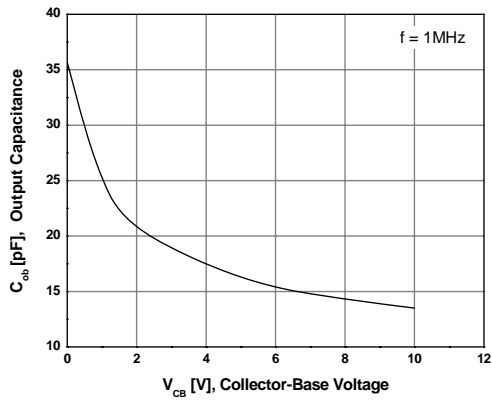


Figure 7. Output Capacitance

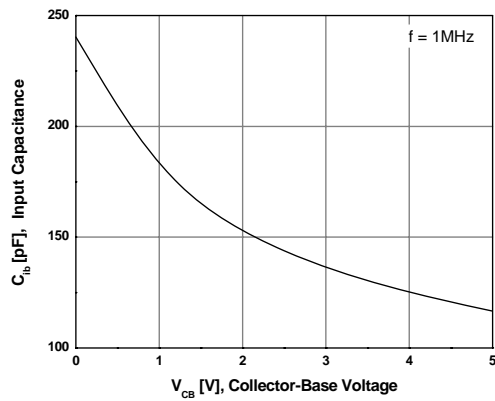


Figure 8. Input Capacitance

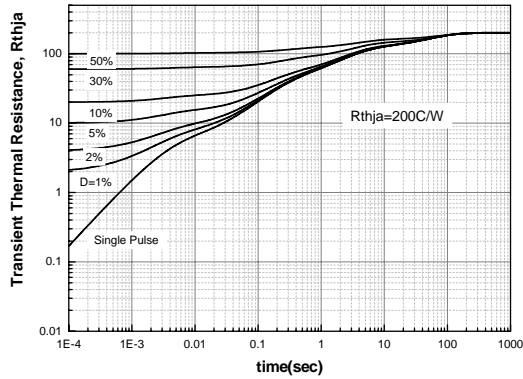
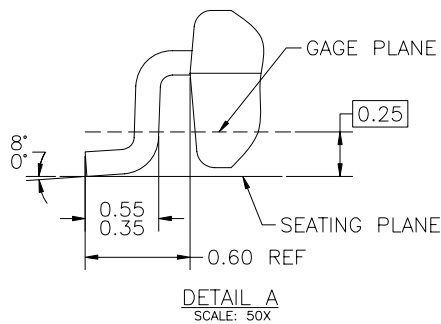
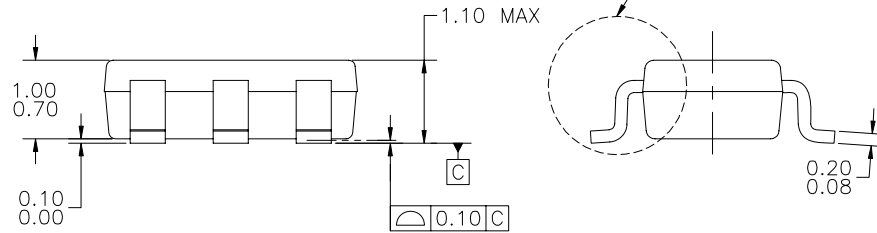
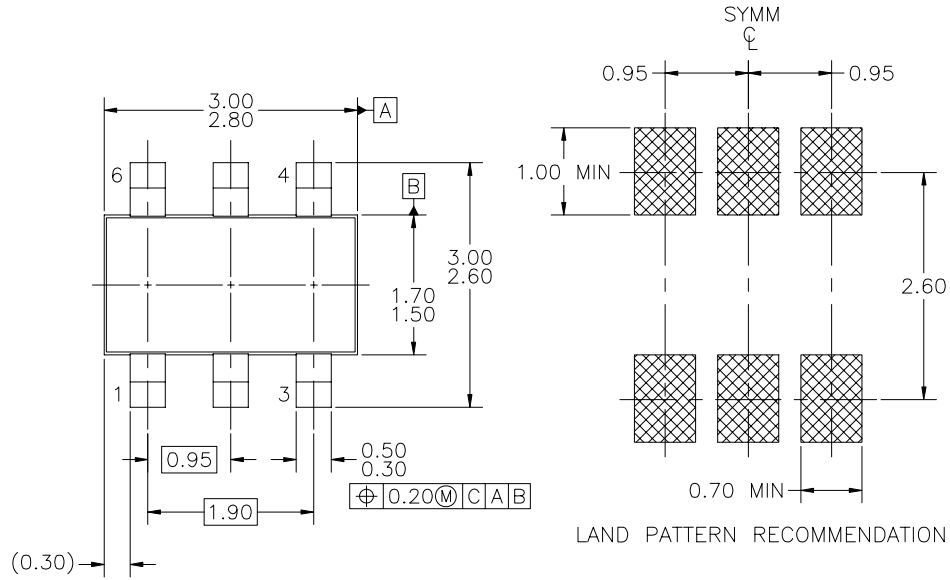


Figure 9. Transient Thermal Resistance

Physical Dimensions

SuperSOT™-6








- NOTES: UNLESS OTHERWISE SPECIFIED
- A) THIS PACKAGE CONFORMS TO JEDEC MO-193, VAR. AA, ISSUE C, DATED JANUARY 2000.
 - B) ALL DIMENSIONS ARE IN MILLIMETERS.

Dimensions in Millimeters



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Rev. 153