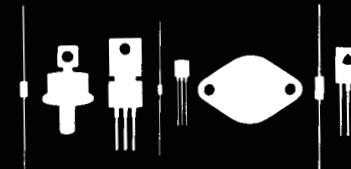


CENTRAL
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Central™
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 145 Adams Avenue
 Hauppauge, New York 11788



MM4000 THRU MM4003

PNP SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR MM4000 series types are silicon PNP transistors manufactured by the epitaxial planar process mounted in a hermetically sealed metal case designed for high current amplifier.

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

| | <u>SYMBOL</u> | <u>MM4000</u> | <u>MM4001</u> | <u>MM4002</u> | <u>MM4003</u> | <u>UNIT</u> |
|--|----------------|---------------|---------------|---------------|---------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 100 | 150 | 200 | 250 | V |
| Collector-Emitter Voltage | V_{CEO} | 100 | 150 | 200 | 250 | V |
| Emitter-Base Voltage | V_{EBO} | 4.0 | 4.0 | 4.0 | 4.0 | V |
| Collector Current | I_C | 500 | 500 | 500 | 500 | mA |
| Power Dissipation | P_D | 1.0 | 1.0 | 1.0 | 1.0 | W |
| Power Dissipation ($T_C=25^\circ\text{C}$) | P_D | 5.0 | 5.0 | 5.0 | 5.0 | W |
| Operating and Storage | | | | | | |
| Junction Temperature | T_J, T_{STG} | | -65 to +200 | | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 175 | 175 | 175 | 175 | $^\circ\text{C/W}$ |
| Thermal Resistnace | θ_{JC} | 35 | 35 | 35 | 35 | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

| <u>SYMBOL</u> | <u>TEST CONDITIONS</u> | <u>MM4000</u> | | <u>MM4001</u> | | <u>MM4002</u> | | <u>MM4003</u> | | <u>UNIT</u> |
|----------------------|---|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|
| | | <u>MIN</u> | <u>MAX</u> | <u>MIN</u> | <u>MAX</u> | <u>MIN</u> | <u>MAX</u> | <u>MIN</u> | <u>MAX</u> | |
| I_{CBO} | $V_{CB}=50\text{V}$ | | 1.0 | | - | | - | | - | μA |
| I_{CBO} | $V_{CB}=75\text{V}$ | | - | | 1.0 | | - | | - | μA |
| I_{CBO} | $V_{CB}=150\text{V}$ | | - | | - | | 5.0 | | 5.0 | μA |
| BV_{CBO} | $I_C=100\mu\text{A}$ | 100 | | 150 | | 200 | | 250 | | V |
| BV_{CEO} | $I_C=10\text{mA}$ | 100 | | 150 | | 200 | | 250 | | V |
| BV_{EBO} | $I_E=100\mu\text{A}$ | 4.0 | | 4.0 | | 4.0 | | 4.0 | | V |
| $V_{CE}(\text{SAT})$ | $I_C=10\text{mA}, I_B=1.0\text{mA}$ | | 0.6 | | 0.6 | | 5.0 | | 5.0 | V |
| hFE | $V_{CE}=10\text{V}, I_C=10\text{mA}$ | 20 | | 20 | | 20 | | 20 | | |
| C_{ob} | $V_{CB}=20\text{V}, I_E=0, f=100\text{kHz}$ | | 6.0 | | - | | - | | - | pF |
| C_{ob} | $V_{CB}=20\text{V}, I_E=0, f=100\text{kHz}$ | | - | | 10 | | - | | - | pF |
| C_{ob} | $V_{CB}=20\text{V}, I_E=0, f=100\text{kHz}$ | | - | | - | | 20 | | 20 | pF |