

## Silicon NPN Power Transistors

## MJW16206

## DESCRIPTION

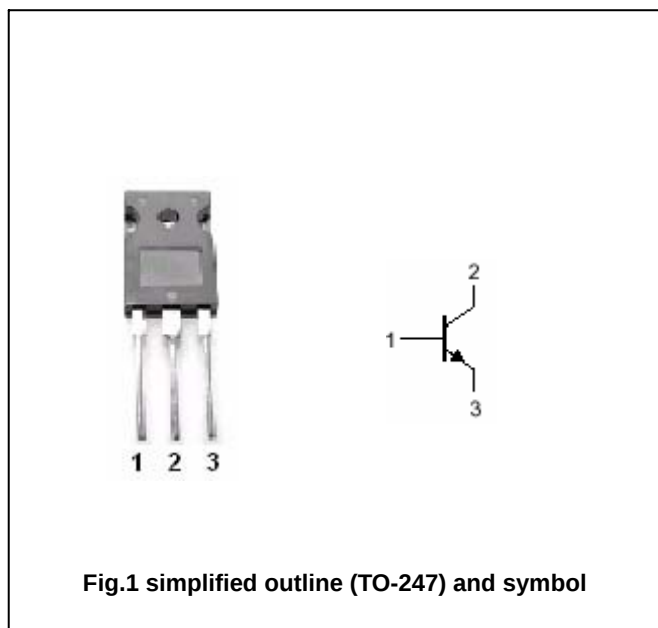
- With TO-247 package
- High voltage ,high speed
- Low collector saturation voltage

## APPLICATIONS

- Designed for use in horizontal deflection circuits for high and every high resolution, monochrome and color CRT monitors

## PINNING

| PIN | DESCRIPTION                          |
|-----|--------------------------------------|
| 1   | Base                                 |
| 2   | Collector;connected to mounting base |
| 3   | Emitter                              |

Absolute maximum ratings( $T_c=25^\circ\text{C}$ )

| SYMBOL    | PARAMETER                 | CONDITIONS            | VALUE     | UNIT |
|-----------|---------------------------|-----------------------|-----------|------|
| $V_{CBO}$ | Collector-base voltage    | Open emitter          | 1200      | V    |
| $V_{CEO}$ | Collector-emitter voltage | Open base             | 500       | V    |
| $V_{EBO}$ | Emitter-base voltage      | Open collector        | 8         | V    |
| $I_C$     | Collector current         |                       | 12        | A    |
| $I_{CM}$  | Collector current-peak    |                       | 15        | A    |
| $I_B$     | Base current              |                       | 5.0       | A    |
| $I_{BM}$  | Base current-peak         |                       | 10        | A    |
| $P_D$     | Total power dissipation   | $T_C=25$<br>$T_C=100$ | 150<br>39 | W    |
| $T_j$     | Junction temperature      |                       | 150       |      |
| $T_{stg}$ | Storage temperature       |                       | -55~150   |      |

## THERMAL CHARACTERISTICS

| SYMBOL        | PARAMETER                           | VALUE | UNIT |
|---------------|-------------------------------------|-------|------|
| $R_{th\ j-C}$ | Thermal resistance junction to case | 0.67  | /W   |

## Silicon NPN Power Transistors

## MJW16206

## CHARACTERISTICS

Tj=25 unless otherwise specified

| SYMBOL         | PARAMETER                            | CONDITIONS                                          | MIN | TYP. | MAX       | UNIT    |
|----------------|--------------------------------------|-----------------------------------------------------|-----|------|-----------|---------|
| $V_{CEQ(SUS)}$ | Collector-emitter sustaining voltage | $I_C=10mA; I_B=0$                                   | 500 |      |           | V       |
| $V_{(BR)EBO}$  | Emitter-base breakdown voltage       | $I_E=1.0mA; I_C=0$                                  | 8   |      |           | V       |
| $V_{CEsat-1}$  | Collector-emitter saturation voltage | $I_C=3A; I_B=0.4A$                                  |     |      | 1.0       | V       |
| $V_{CEsat-2}$  | Collector-emitter saturation voltage | $I_C=6.5A; I_B=1.5A$                                |     |      | 1.0       | V       |
| $V_{BEsat}$    | Base-emitter saturation voltage      | $I_C=6.5A; I_B=1.5A$                                |     |      | 1.5       | V       |
| $I_{CES}$      | Collector cut-off current            | $V_{CE}=1200V, V_{BE}=0$<br>$V_{CE}=850V, V_{BE}=0$ |     |      | 250<br>25 | $\mu A$ |
| $I_{EBO}$      | Emitter cut-off current              | $V_{EB}=8V; I_C=0$                                  |     |      | 25        | $\mu A$ |
| $h_{FE-1}$     | DC current gain                      | $I_C=1A; V_{CE}=5V$                                 |     | 24   |           |         |
| $h_{FE-2}$     | DC current gain                      | $I_C=10A; V_{CE}=5V$                                | 5   |      | 13        |         |
| $h_{FE-3}$     | DC current gain                      | $I_C=12A; V_{CE}=5V$                                | 3   |      |           |         |
| $f_T$          | Transition frequency                 | $I_C=0.5A; V_{CE}=10V; f=1.0MHz$                    |     | 3.0  |           | MHz     |
| $C_{OB}$       | Collector outoput capacitance        | $I_E=0; f=100kHz; V_{CB}=10V$                       |     |      | 350       | pF      |

## Silicon NPN Power Transistors

**MJW16206**

## PACKAGE OUTLINE

