



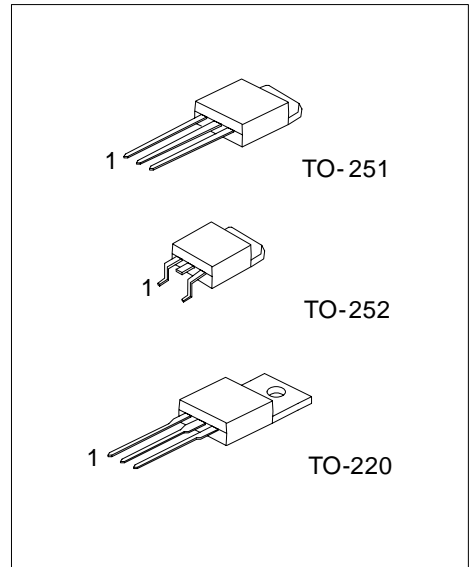
# MJE3055T

## NPN SILICON TRANSISTOR

### HIGH VOLTAGE TRANSISTOR

■ DESCRIPTION

The UTC **MJE3055T** is designed for general purpose of amplifier and switching applications.



\*Pb-free plating product number:MJE3055TL

■ ORDERING INFORMATION

| Order Number   |                   | Package | Pin Assignment |   |   | Packing   |
|----------------|-------------------|---------|----------------|---|---|-----------|
| Normal         | Lead Free Plating |         | 1              | 2 | 3 |           |
| MJE3055T-TA3-T | MJE3055TL-TA3-T   | TO-220  | B              | C | E | Tube      |
| MJE3055T-TM3-T | MJE3055TL-TM3-T   | TO-251  | B              | C | E | Tube      |
| MJE3055T-TN3-R | MJE3055TL-TN3-R   | TO-252  | B              | C | E | Tape Reel |
| MJE3055T-TN3-T | MJE3055TL-TN3-T   | TO-252  | B              | C | E | Tube      |

|   |   |
|---|---|
| <p>MJE3055TL-TA3-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Plating</p> | <p>(1) R: Tape Reel, T: Tube</p> <p>(2) TA3: TO-220, TM3: TO-251, TN3: TO-252</p> <p>(3) L: Lead Free Plating, Blank: Pb/Sn</p> |
|---|---|

■ ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub>=25 )

(Operating temperature range applies unless otherwise specified)

| PARAMETER                 | SYMBOL           | RATINGS    | UNIT |
|---------------------------|------------------|------------|------|
| Collector-Base Voltage    | V <sub>CBO</sub> | 70         | V    |
| Collector-Emitter Voltage | V <sub>CEO</sub> | 60         | V    |
| Emitter-Base Voltage      | V <sub>EBO</sub> | 5          | V    |
| Total Power Dissipation   | TO-220           | 75         | W    |
|                           | TO-251/TO-252    | 20         | W    |
| Collector Current         | I <sub>C</sub>   | 10         | A    |
| Base Current              | I <sub>B</sub>   | 6          | A    |
| Junction Temperature      | T <sub>J</sub>   | 150        |      |
| Storage Temperature       | T <sub>STG</sub> | -55 ~ +150 |      |

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25 , unless otherwise specified)

| PARAMETER                            | SYMBOL                | TEST CONDITIONS                                    | MIN | TYP | MAX | UNIT |
|--------------------------------------|-----------------------|--|-----|-----|-----|------|
| Collector-Emitter Breakdown Voltage  | BV <sub>CEO</sub>     | I <sub>C</sub> =200mA                              | 60  |     |     | V    |
| Collector-Base Breakdown Voltage     | BV <sub>CBO</sub>     | I <sub>C</sub> =10mA                               | 70  |     |     | V    |
| Emitter-Base Breakdown Voltage       | BV <sub>EBO</sub>     | I <sub>E</sub> =10mA                               | 5   |     |     | V    |
| Collector Cut-off Current            | I <sub>CBO</sub>      | V <sub>CB</sub> =70V                               |     |     | 1   | mA   |
|                                      | I <sub>CEO</sub>      | V <sub>CE</sub> =30V                               |     |     | 700 | μA   |
|                                      | I <sub>CEX</sub>      | V <sub>CE</sub> =70V, V <sub>EB(OFF)</sub> =1.5V   |     |     | 1   | mA   |
| Emitter Cut-off Current              | I <sub>EBO</sub>      | V <sub>EB</sub> =5V                                |     |     | 5   | mA   |
| Collector-Emitter Saturation Voltage | V <sub>CE(SAT)1</sub> | I <sub>C</sub> =4A, I <sub>B</sub> =0.4A           |     |     | 1.1 | V    |
|                                      | V <sub>CE(SAT)2</sub> | I <sub>C</sub> =10A, I <sub>B</sub> =3.3A          |     |     | 8   | V    |
| Base-Emitter on Voltage              | V <sub>BE(ON)</sub>   | V <sub>CE</sub> =4V, I <sub>C</sub> =4A            |     |     | 1.8 | V    |
| DC Current Gain                      | h <sub>FE1</sub>      | I <sub>C</sub> =4A, V <sub>CE</sub> =4V            | 20  |     | 100 |      |
|                                      | h <sub>FE2</sub>      | I <sub>C</sub> =4A, V <sub>CE</sub> =10V           | 5   |     |     |      |
| Current Gain Bandwidth Product       | f <sub>T</sub>        | V <sub>CE</sub> =10V, I <sub>C</sub> =0.5A, f=1MHz | 2   |     |     | MHZ  |

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