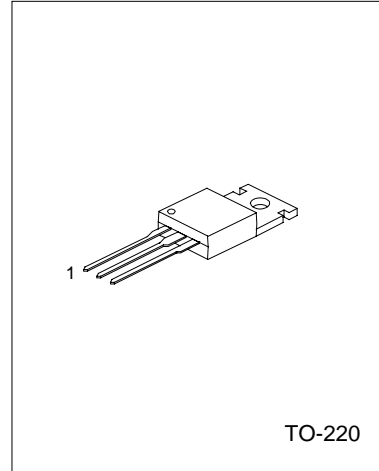


# UTC MJE3055T NPN EPITAXIAL SILICON TRANSISTOR

## HIGH VOLTAGE TRANSISTOR

### DESCRIPTION

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



TO-220

1:BASE 2: COLLECTOR 3: EMITTER

### ABSOLUTE MAXIMUM RATINGS ( Operating temperature range applies unless otherwise specified )

| PARAMETER                                     | SYMBOL           | RATING     | UNIT |
|---|------------------|------------|------|
| Collector-base voltage                        | V <sub>CB0</sub> | 70         | V    |
| Collector-emitter voltage                     | V <sub>CEO</sub> | 60         | V    |
| Emitter-base voltage                          | V <sub>EBO</sub> | 5          | V    |
| Total Power Dissipation(T <sub>a</sub> =25°C) | P <sub>c</sub>   | 75         | W    |
| Collector current                             | I <sub>c</sub>   | 10         | A    |
| Junction Temperature                          | T <sub>j</sub>   | 150        | °C   |
| Storage Temperature                           | T <sub>STG</sub> | -55 ~ +150 | °C   |
| Base Current                                  | I <sub>B</sub>   | 6          | A    |

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

| PARAMETER                            | SYMBOL                | TEST CONDITIONS                                    | MIN | TYP | MAX | UNIT |
|--------------------------------------|-----------------------|--|-----|-----|-----|------|
| Collector-emitter breakdown voltage  | V <sub>CEO</sub>      | I <sub>c</sub> =200mA                              | 60  |     |     | V    |
| Collector-Base Breakdown Voltage     | V <sub>CB0</sub>      | I <sub>c</sub> =10mA                               | 70  |     |     | V    |
| Emitter-Base Breakdown Voltage       | V <sub>EBO</sub>      | I <sub>E</sub> =10mA                               | 5   |     |     | V    |
| Collector cut-off current            | I <sub>CB0</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  |