

## / Descriptions

TO-251      N      MOS      N-CHANNEL MOSFET in a TO-251 Plastic Package.

## / Features

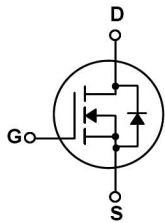
Low gate charge, low crss, fast switching, HF Product.

## / Applications

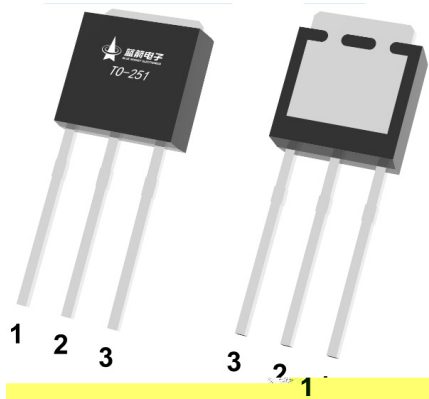
DC/DC

These devices are well suited for high efficiency switching DC/DC converters and switch mode power supplies.

## / Equivalent Circuit



## / Pinning



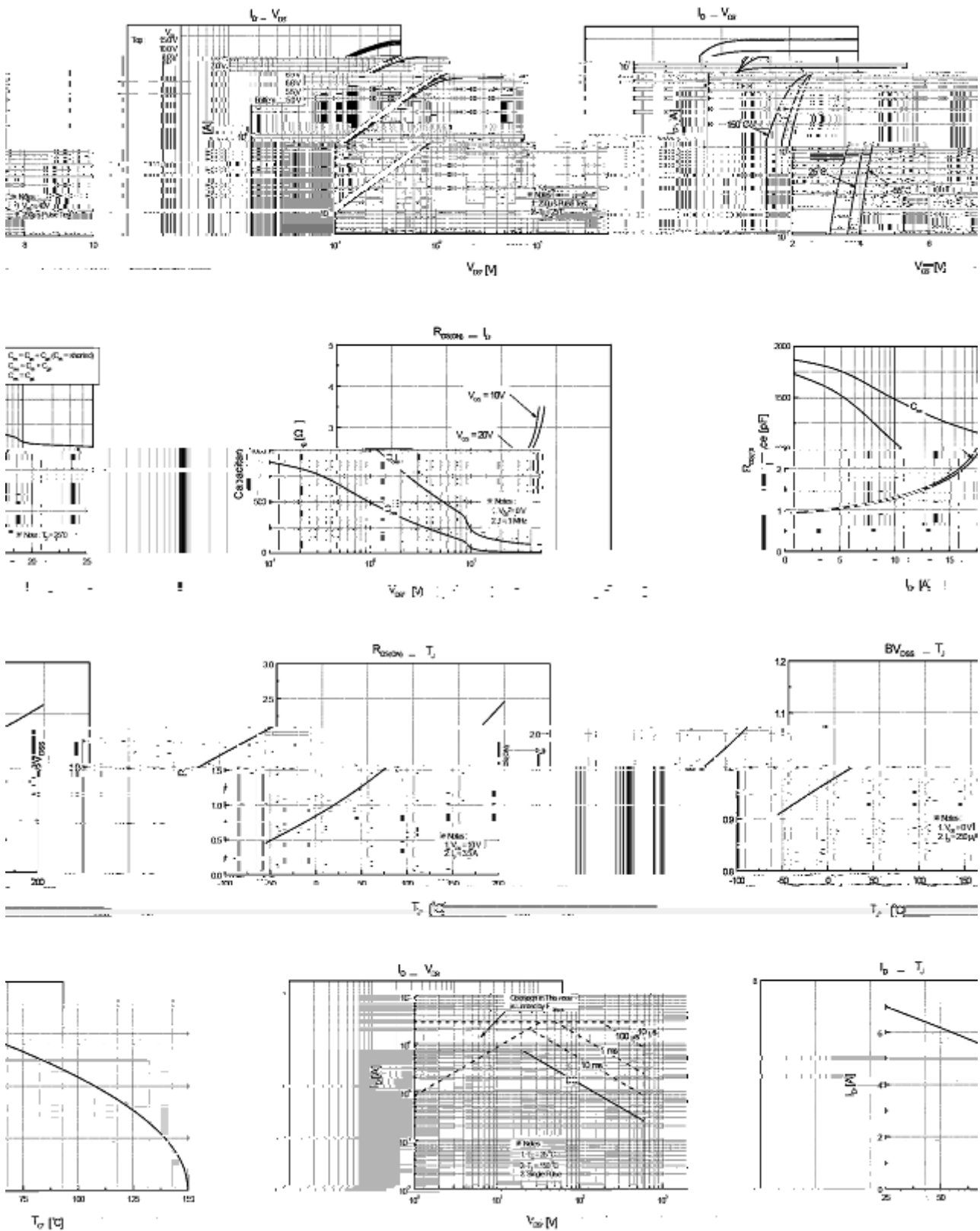
PIN1   G      PIN 2   D      PIN 3   S

## / Marking

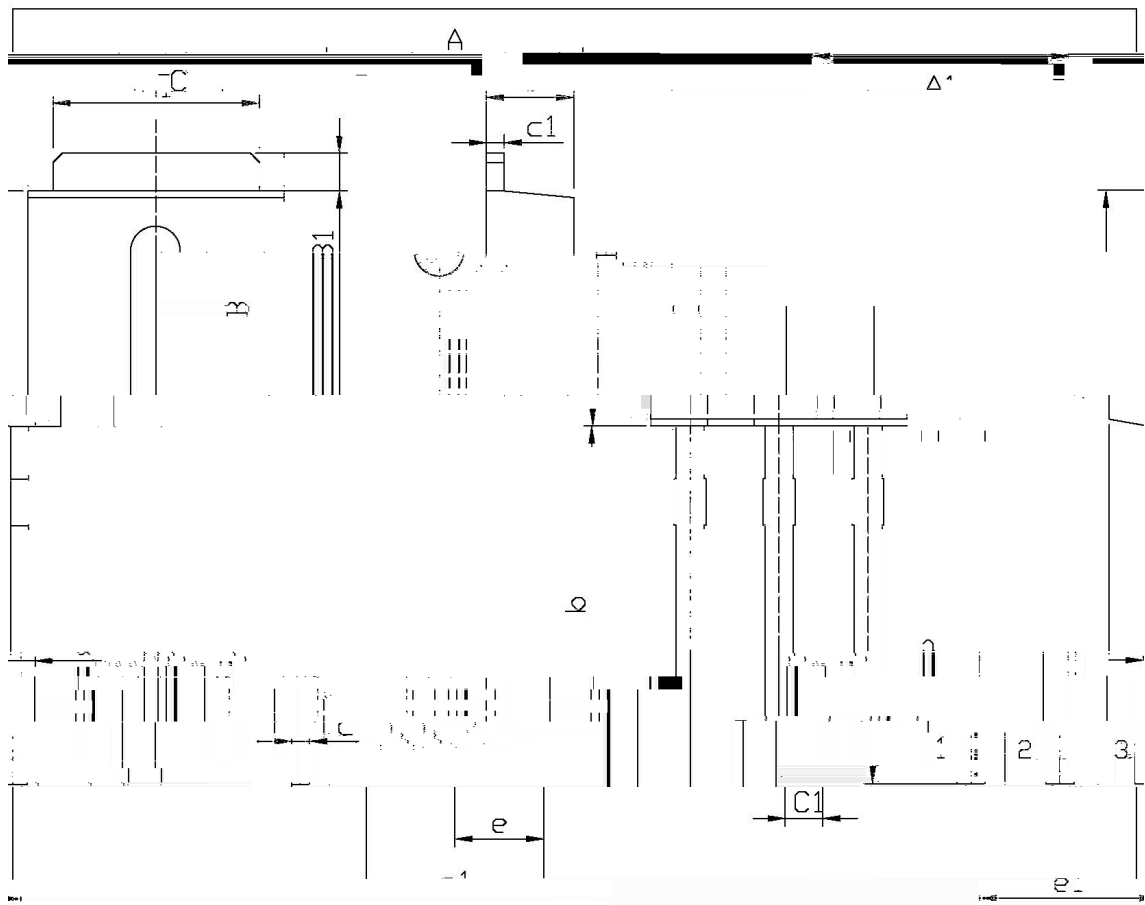
See Marking Instructions.

| Parameter                      | Symbol                       | Rating   | Unit |
|--------------------------------|------------------------------|----------|------|
| Drain-Source Voltage           | $V_{DS}$                     | 650      | V    |
| Drain Current                  | $I_D(T_C=25^\circ\text{C})$  | 7.0      | A    |
| Drain Current                  | $I_D(T_C=100^\circ\text{C})$ | 4.4      | A    |
| Drain Current - Pulsed         | $I_{DM}$                     | 28       | A    |
| Gate-Source Voltage            | $V_{GS}$                     | $\pm 30$ | V    |
| Single Pulsed Avalanche Energy | $E_{AS}$                     | 230      | mJ   |
| Repetitive Avalanche Energy    | $E_{AR}$                     | 14.7     | mJ   |
| Avalanche Current              | $I$                          |          |      |

/ Electrical Characteristic Curve



/ Package Dimensions

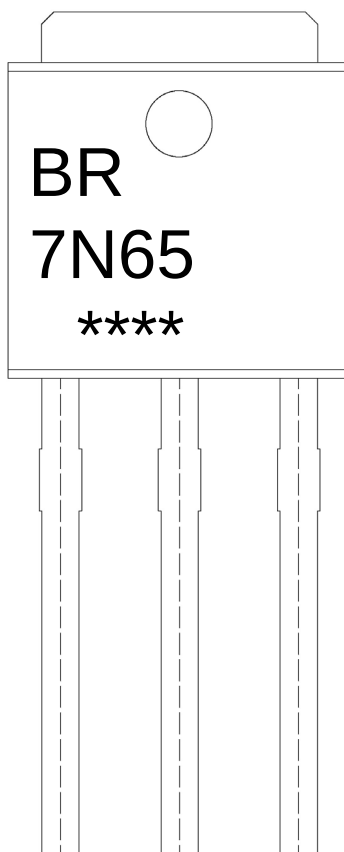


单位: mm

| Symbol | Dimensions in Millimeters |      | Symbol | Dimensions in Millimeters |      | Dimension in Millimeter |
|--------|---------------------------|------|--------|---------------------------|------|-------------------------|
|        | Min                       | Max  |        | Min                       | Max  |                         |
| A      | 6.45                      | 6.75 | A1     | 5.50                      | 6.00 | 6.50                    |
| B      | 5.95                      | 6.25 | b      | 9.00                      | 9.40 |                         |
| C      | 2.20                      | 2.40 | c      | 0.45                      | 0.55 |                         |
| C1     | 0.95                      | 1.15 | c1     | 0.45                      | 0.55 |                         |
| e      | 2.24                      | 2.34 | e1     | 4.43                      | 4.73 |                         |

TC-251

/ Marking Instructions



BR

7N65

\*\*\*\*

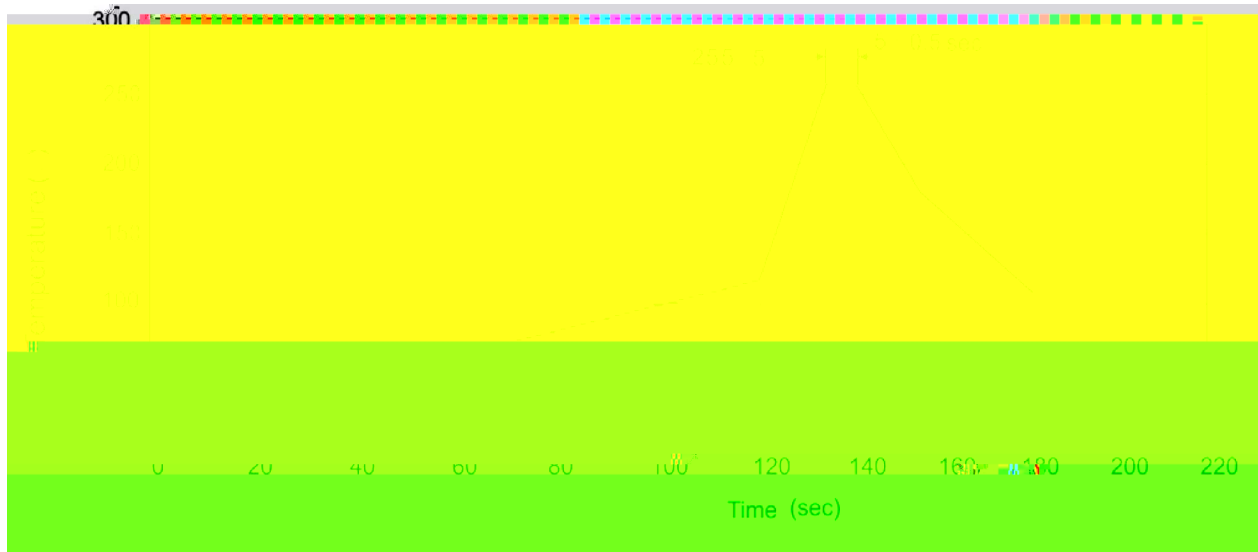
Note:

BR: Company Code

7N65: Product Type

\*\*\*\*: Lot No. Code, code change with Lot No

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |                                         |                                      |
|---|-------|-----|-----------|-----------------------------------------|--------------------------------------|
| 1 | 25    | 150 | 60        | 90sec;                                  | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | 255±5 |     | 5±0.5sec; | 2.Peak Temp.:255±5 , Duration:5±0.5sec. |                                      |
| 3 |       | 2   | 10        | /sec.                                   | 3. Cooling Speed: 2~10 /sec.         |

/ Resistance to Soldering Heat Test Conditions

270±5      10±1 sec.      Temp.:270±5℃      Time:10±1 sec

/ Packaging SPEC.

/ BULK

| Package Type | Units          |                     |                      |                            |                      | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|----------------|---------------------|----------------------|----------------------------|----------------------|-----------------------------------|-------------|-------------|
|              | Units/Bag<br>/ | Bags/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Bag                               | Inner Box   | Outer Box   |
| TO-251       | 1,000          | 10                  | 10,000               | 5                          | 50,000               | 135×190                           | 237×172×102 | 560×245×195 |

/ TUBE

| Package Type | Units           |                      |                      |                            |                      | Dimension (unit mm <sup>3</sup> ) |            |             |
|--------------|-----------------|----------------------|----------------------|----------------------------|----------------------|-----------------------------------|------------|-------------|
|              | Units/Tube<br>/ | Tubes/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Tube                              | Inner Box  | Outer Box   |
| TO-251/252   | 75              | 48                   | 3,600                | 5                          | 18,000               | 526×20.5×5.25                     | 555×164×50 | 575×290×180 |

/ Notices