

## / Descriptions

TO-220F      N      MOS      N-CHANNEL MOSFET in a TO-220F Plastic Package.

## / Features

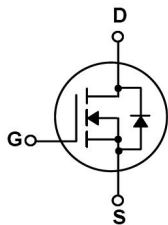
Low gate charge, low crss, fast switching.

## / Applications

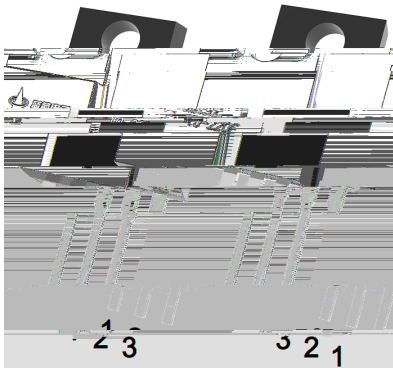
DC/DC

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                           | $I_D(T_C=25^\circ\text{C})$  | 4.0        | A    |
| Drain Current                           | $I_D(T_C=100^\circ\text{C})$ | 2.5        | A    |
| Drain Current - Pulsed                  | $I_{DM}$                     | 16         | A    |
| Gate-Source Voltage                     | $V_{GS}$                     | $\pm 30$   | V    |
| Single Pulsed Avalanche Energy          | $E_{AS}$                     | 240        | mJ   |
| Repetitive Avalanche Energy             | $E_{AR}$                     | 10         | mJ   |
| Avalanche Current                       | $I_{AR}$                     | 4.0        | A    |
| Power Dissipation                       | $P_D(T_C=25^\circ\text{C})$  | 33         | W    |
| Operating and Storage Temperature Range | $T_J, T_{STG}$               | -55 to 150 |      |

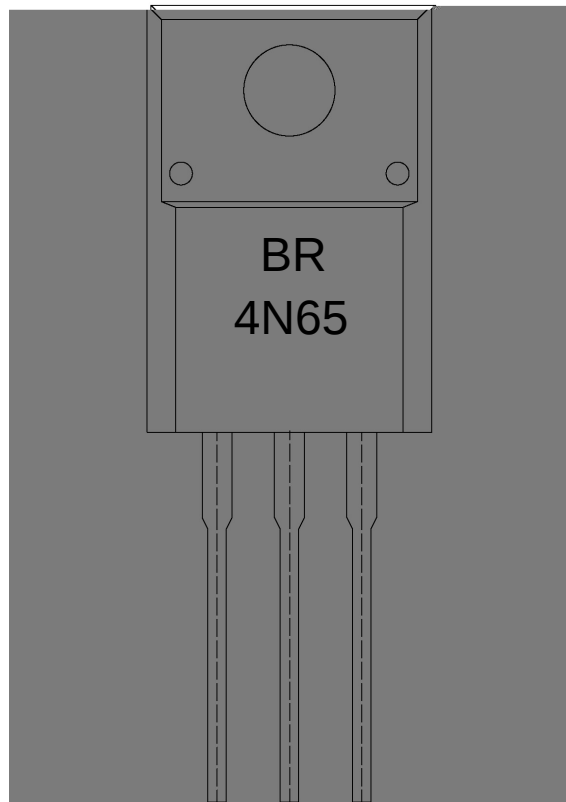
| Parameter                      | Symbol    | Test Conditions          | Min | Typ | Max | Unit |
|--------------------------------|-----------|--------------------------|-----|-----|-----|------|
| Drain-Source Breakdown Voltage | $BV_{DS}$ | $V_{GS}=0V$ $I_D=250\mu$ |     |     |     |      |



/ Package Dimensions



**/ Marking Instructions**



BR

4N65

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Note:

BR: Company Code

4N65: 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 | Diment.01603bd712 |
|--------------|-------|-------------------|