

# BRI65R380C

Rev.F Apr.-2022



DATA SHEET

| D | 2015-11   |   |  |  |  |
|---|-----------|---|--|--|--|
| E | 2022-4-22 | 1 |  |  |  |

AOS-AOD380A60

F 2022.4.21 ALL

**/ Descriptions**

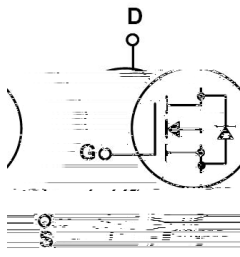
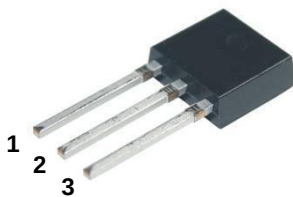
TO-251          N          650V

N-CHANNEL 650V Super-Junction Power MOSFET in a TO-251 Plastic Package.

**/ Features** $R_{DS(on)}$            $C_{rss}$ Low  $R_{DS(on)}$ , low gate charge, low  $C_{rss}$ , fast switching, HF Product.**/ Applications**

DC/DC

Suited for low voltage applications such as automotive, DC/DC Converters, and high efficiency switching for power management in portable and battery operated products.

**/ Equivalent Circuit****/ Pinning**

PIN1   G

PIN 2   D

PIN 3   S

**/ Marking**

See Marking Instructions.

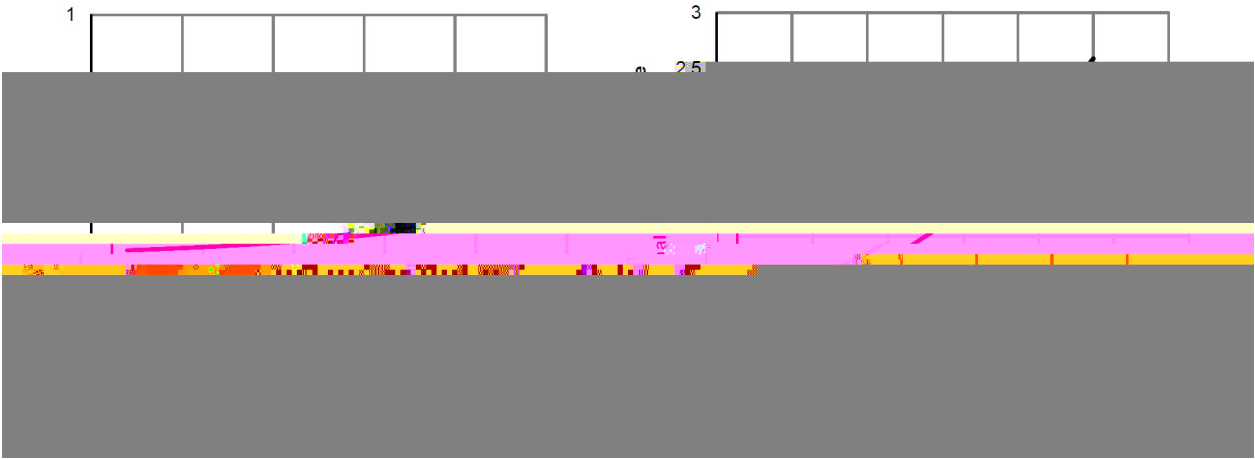
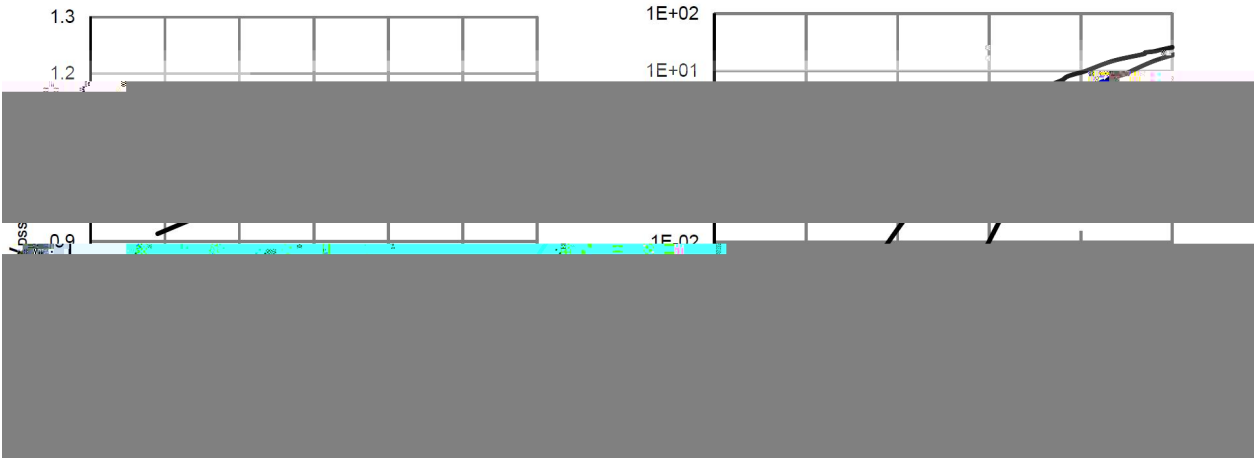


| Parameter                      | Symbol                        | Rating   | Unit |
|--------------------------------|-------------------------------|----------|------|
| Drain-Source Voltage           | $V_{DSS}$                     | 650      | V    |
| Drain Current                  | $I_D(T_c=25^{\circ}\text{C})$ | 11       | A    |
| Drain Current - Pulsed         | $I_{DM}$                      | 44       | A    |
| Gate-Source Voltage            | $V_{GS}$                      | $\pm 30$ | V    |
| Single Pulsed Avalanche Energy | $E_{AS}$                      | 277      | mJ   |
| Avalanche Current              | $I_{AS}$                      | 8        | A    |

## / Electrical Characteristics(Ta=25 )

| Parameter                        | Symbol   | Test Conditions                          | Min | Typ | Max | Unit |
|----------------------------------|----------|------------------------------------------|-----|-----|-----|------|
| Continuous Diode Forward Current | $I_S$    |                                          |     |     | 11  | A    |
| Total Gate Charge                | $Q_g$    | $V_{DS}=480V$ $I_D=5.5A$<br>$V_{GS}=10V$ |     | 18  |     | nC   |
| Gate-Source Charge               | $Q_{gs}$ |                                          |     | 7   |     | nC   |
| Gate-Drain Charge                | $Q_{gd}$ |                                          |     | 4.5 |     | nC   |

/ Electrical Characteristic Curve

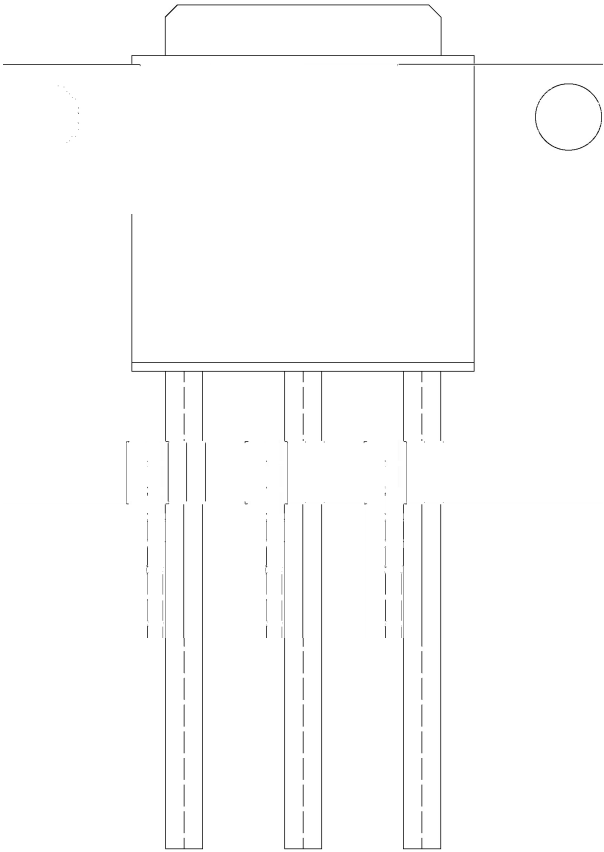


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Note:

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

## / Resistance to Soldering Heat Test Conditions

270±5°C      10±1 sec.      Temp.:270±5      Time:10±1 sec

## / Packaging SPEC.

/ BULK

| Package Type<br>封装形式 | Units 包装数量     |                     |                      |                            |                      | Dimension 包装尺寸 (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 袋                                   | Inner Box 盒 | Outer Box 箱 |
| TO-251               | 1,000          | 10                  | 10,000               | 5                          | 50,000               | 135×190                                 | 237×172×102 | 560×245×195 |

/ TUBE

| Package Type<br>封装形式 | Units 包装数量      |                      |                      |                            |                      | Dimension 包装尺寸 (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 套管                                 | Inner Box 盒 | Outer Box 箱 |
| TO-251/252           | 75              | 48                   | 3,600                | 5                          | 18,000               | 526×20.5×5.25                           | 555×164×50  | 575×290×180 |

## / Notices