

## / Revised record

| A | 2021.04.18 | All | AOS-AONS32306        |  |  |
|---|------------|-----|----------------------|--|--|
| B | 2021.05.26 | 2   | PK632BA ID PD<br>Rth |  |  |
| C | 2021.09.01 | 1,5 | + ID-TJ              |  |  |
|   |            |     |                      |  |  |
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# BRCS030N03ZC

Rev.C Sep.-2022



PDFN5×6 N  
N-Channel MOSFET in a PDFN5×6 Plastic Package .

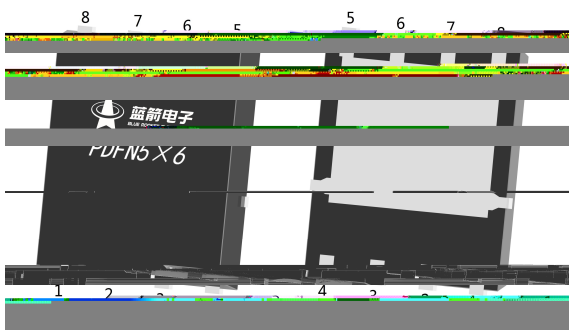
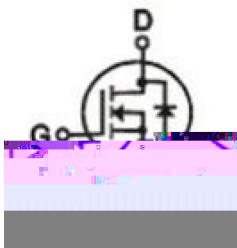
Low  $R_{DS(ON)}$  to minimize conductive loss;low Gate Charge for fast switching;Low Thermal resistance;HF Product.

MB/NB/UMPC/VGA

Buck

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Battery Management,High Frequency Point-of-Load Synchronous Buck Converter for MB/NB/UMPC/VGA,Networking DC-DC Power System,Load Switch.



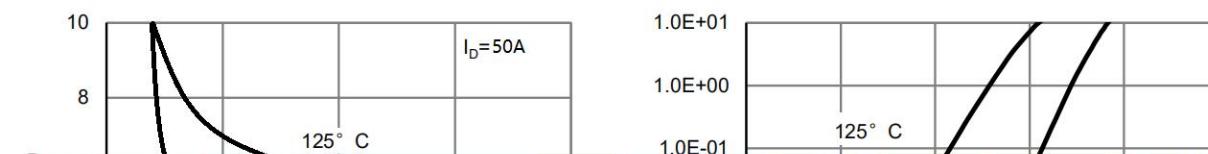
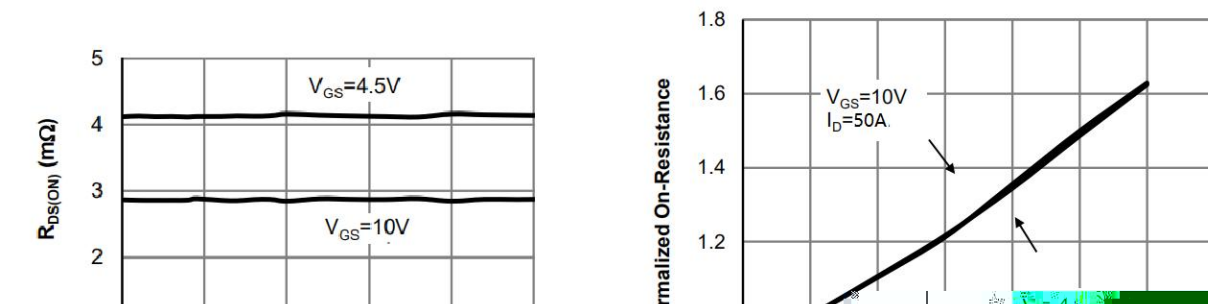
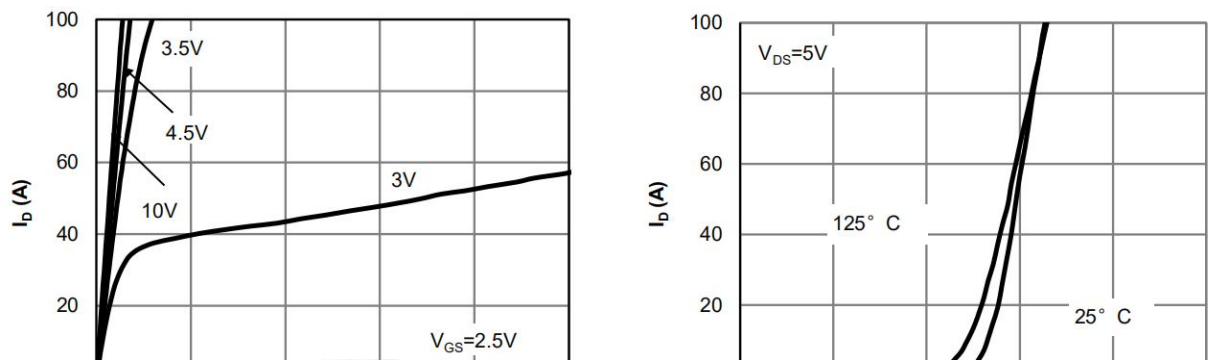
PIN1、2、3: S      PIN4: G      PIN5、6、7、8: D

| Parameter                              |                     | Symbol                      | Rating     | Unit               |
|----------------------------------------|---------------------|-----------------------------|------------|--------------------|
| Drain-Source Voltage                   |                     | $V_{DS}$                    | 30         | V                  |
| Continuous Drain Current               |                     | $I_D$                       | 56         | A                  |
| Pulsed Drain Current                   |                     | $I_{DM}$                    | 168        | A                  |
| Gate-Source Voltage                    |                     | $V_{GS}$                    | $\pm 20$   | V                  |
| Power Dissipation                      |                     | $P_D(T_c=25^\circ\text{C})$ | 33         | W                  |
| Avalanche energy(L=0.5mH)              |                     | $E_{AS}$                    | 72         | mJ                 |
| Avalanche Current(L=0.5mH)             |                     | $I_{AS}$                    | 36         | A                  |
| Junction and Storage Temperature Range |                     | $T_j, T_{stg}$              | -55 to 150 | $^\circ\text{C}$   |
| Maximum Junction-to-Ambient            | $t \leq 10\text{s}$ | $R_{\theta JA}$             | 30         | $^\circ\text{C/W}$ |
|                                        | Steady-State        |                             | 54         |                    |
| Maximum Junction-to-Case               | Steady-State        | $R_{\theta JC}$             | 3.8        |                    |

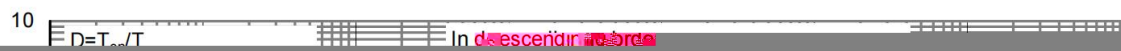
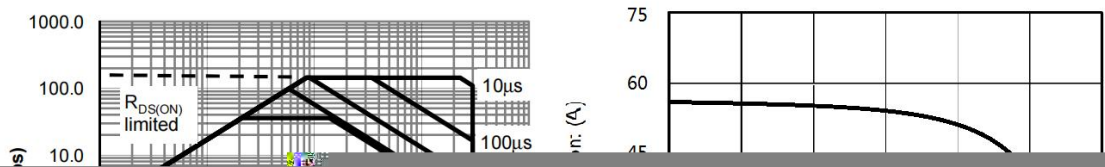
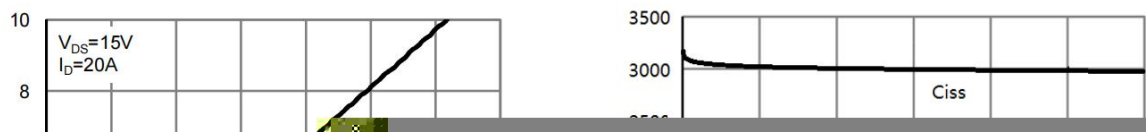
| Parameter                      | Symbol     | Test Conditions                        | Min | Typ | Max | Unit |
|--------------------------------|------------|----------------------------------------|-----|-----|-----|------|
| Drain-Source Breakdown Voltage | $BV_{DSS}$ | $I_D=250\mu\text{A}, V_{GS}=0\text{V}$ | 30  | 31  |     | V    |

| Parameter          | Symbol      | Test Conditions                    | Min | Typ                                 | Max | Unit |
|--------------------|-------------|------------------------------------|-----|-------------------------------------|-----|------|
| Turn-On Delay Time | $t_{d(on)}$ |                                    |     | 9                                   |     |      |
| Turn-On Rise Time  | $t_r$       | $V_{GS}=10V$<br>$R_L=0.75\ \Omega$ |     | $V_{DS}=15V$<br>$R_{GEN}=3\ \Omega$ |     | ns   |

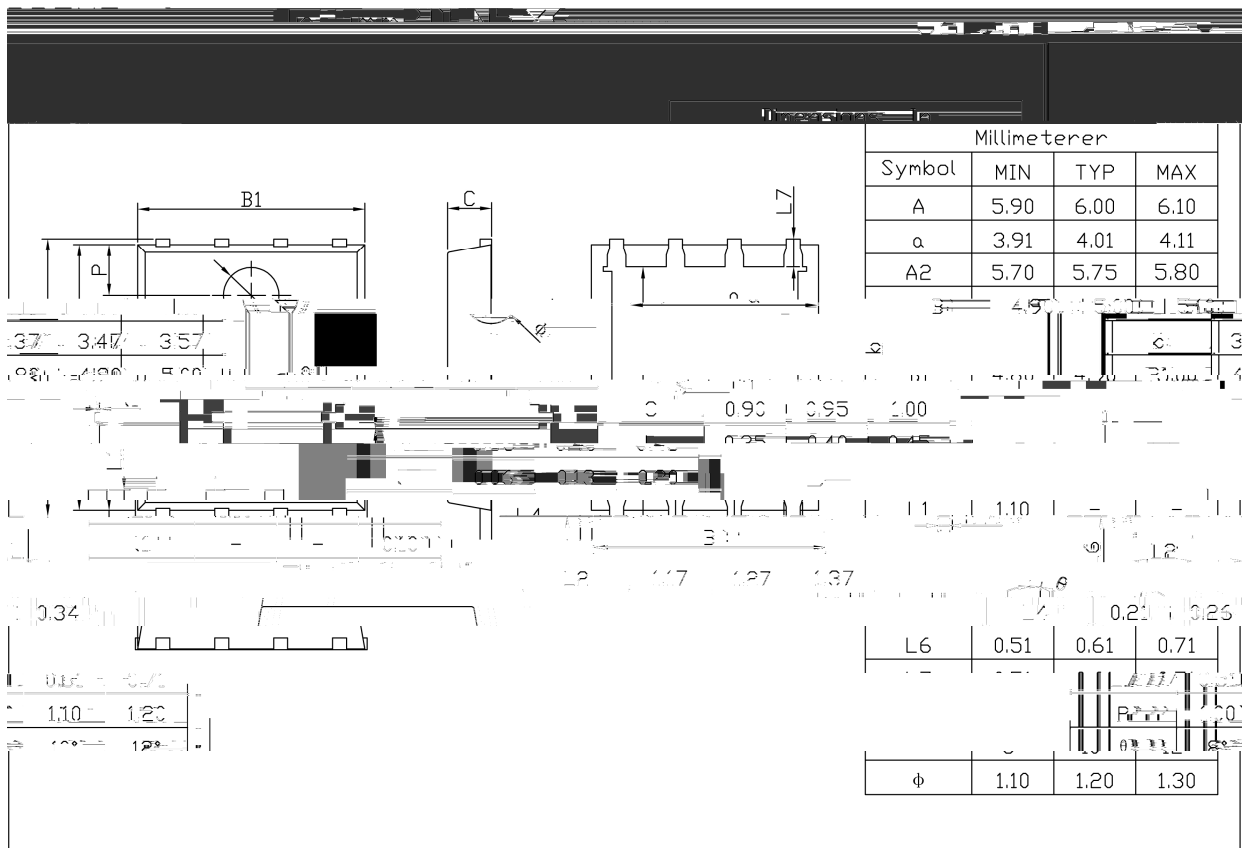
/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

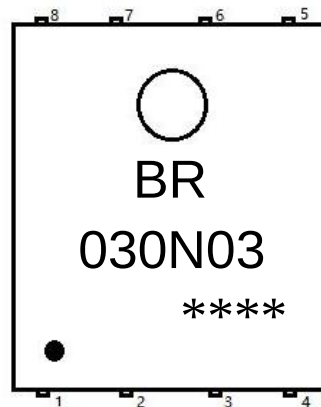


## / Package Dimensions



Rev.00 201812

**/ Marking Instructions**



BR

030N03

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Note

BR

Company Code

030N03

Product Type

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Lot No. Code, code change with Lot No



( ) / Temperature Profile for IR Reflow Soldering(Pb-Free)

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Note:

- 1 150 180 60 90sec;
- 2 245±

1.Preheating:150~180°C, Time:60~90sec.