

**/ Descriptions**

TO-252                  N

N-CHANNEL MOSFET in a TO-252 Plastic Package.

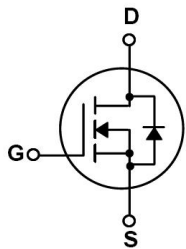
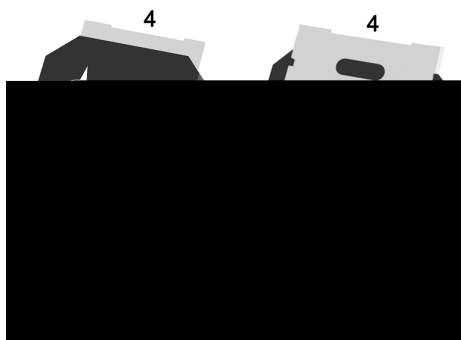
**/ Features** $R_{DS(on)}$                    $C_{rss}$                   AEC-Q101

Low  $R_{DS(on)}$ , low gate charge, low  $C_{rss}$ , fast switching, Qualified to AEC-Q101 Standards for High Reliability, 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, Meet the stringent requirements of automotive applications.

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

PIN1   G

PIN 2   D

PIN 3   S

PIN 4   D

**/ Marking**

See Marking Instructions.

| Parameter              | Symbol                      | Rating | Unit |
|------------------------|-----------------------------|--------|------|
| Drain-Source Voltage   | $V_{DS}$                    | 40     | V    |
| Drain Current          | $I_D(T_c=25^\circ\text{C})$ | 164    | A    |
| Drain Current - Pulsed | $I_{DM}$                    |        |      |

/ Electrical Characteristics(Ta=25 )

| Parameter           | Symbol              | Test Conditions                                                                                | Min | Typ | Max | Unit |
|---------------------|---------------------|------------------------------------------------------------------------------------------------|-----|-----|-----|------|
| Turn-On Delay Time  | t <sub>d(on)</sub>  | V <sub>GS</sub> =10V    V <sub>DS</sub> =20V<br>R <sub>L</sub> =1 Ω      R <sub>GEN</sub> =3 Ω |     | 11  |     | ns   |
| Turn-On Rise Time   | t <sub>r</sub>      |                                                                                                |     | 11  |     |      |
| Turn-Off Delay Time | t <sub>d(off)</sub> |                                                                                                |     | 40  |     |      |
| Turn-Off Fall Time  | t <sub>f</sub>      |                                                                                                |     | 10  |     |      |

**BRCS025N04DPQ**  
Rev.A Aug.-2024

# BRCS025N04DPQ

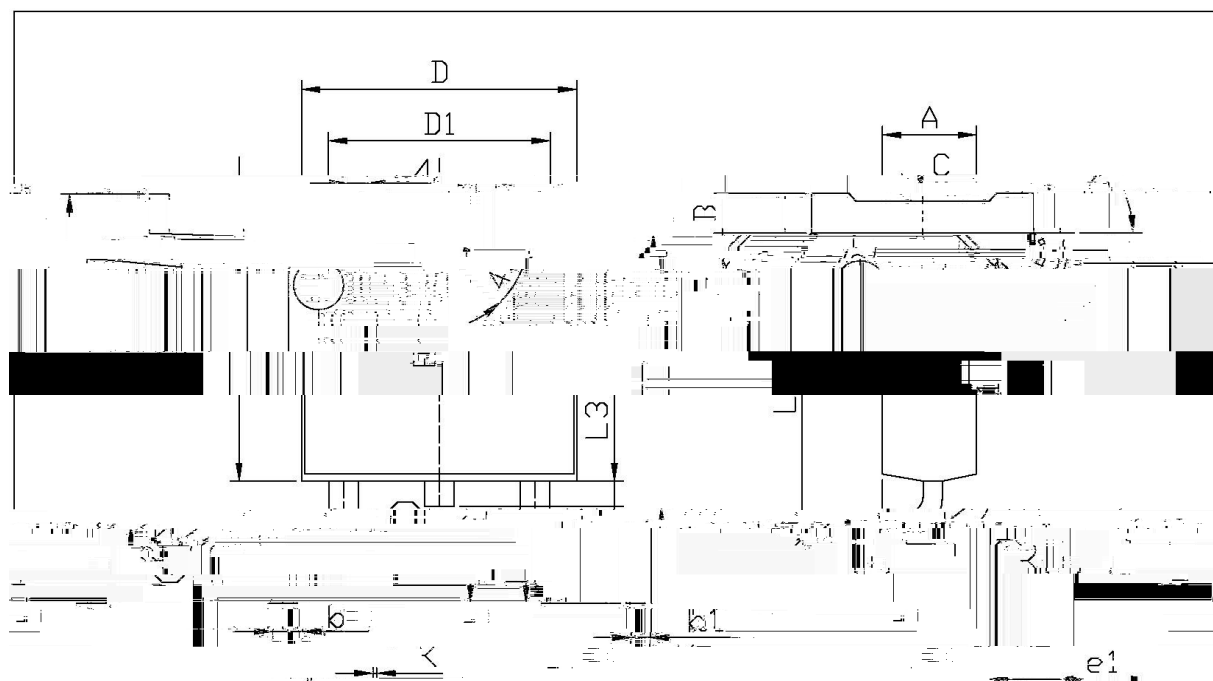
Rev.A Aug.-2024



**蓝箭电子**  
BLUE ROCKET ELECTRONICS

DATA SHEET

## / Package Dimensions



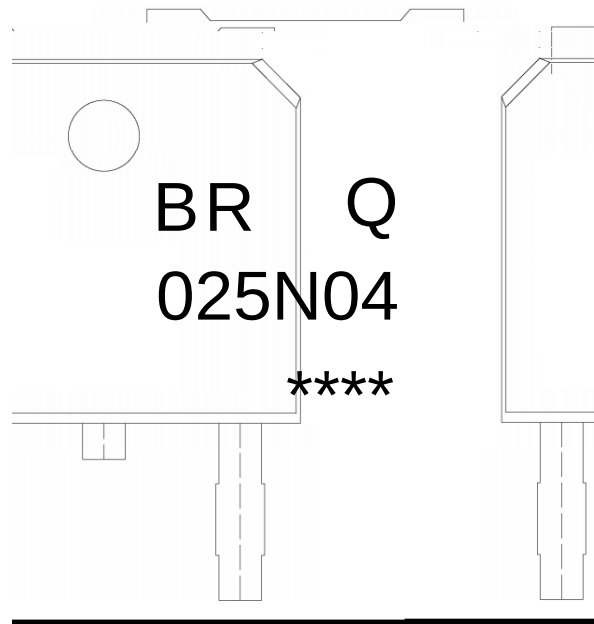
单位: mm

| Dimensions |      | Millimetre |      | Dimensions |      | In Millimetre |      |
|------------|------|------------|------|------------|------|---------------|------|
|            | Max. |            | Min. |            | Max. |               | Min. |
| 2-24       | 2.34 | B          | 0.95 | 1.25       | e    |               |      |
|            | 2.78 |            | 0.70 | 0.60       |      |               |      |
|            | 0.85 | 0.35       |      | 0.45       | 0.55 |               |      |
|            | 0.45 | 0.15       | 0.25 | 1.90       | 1.50 | 0.00          | 0.00 |
|            | 0.00 | 0.10       | D    | 5.10       | 5.50 | K             |      |

52

T0-25

## / Marking Instructions



BR

Q

025N04

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Note:

BR: Company Code

Q: Automobile halogen-free product Code

025N04: Product Type Code

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

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

|  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |

Note:

- 1

150 200

60 120sec;

1.Preheating:150~200 , Time:60~120sec.
- 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

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ Packaging SPEC.