

**BR2SK3018WQ**

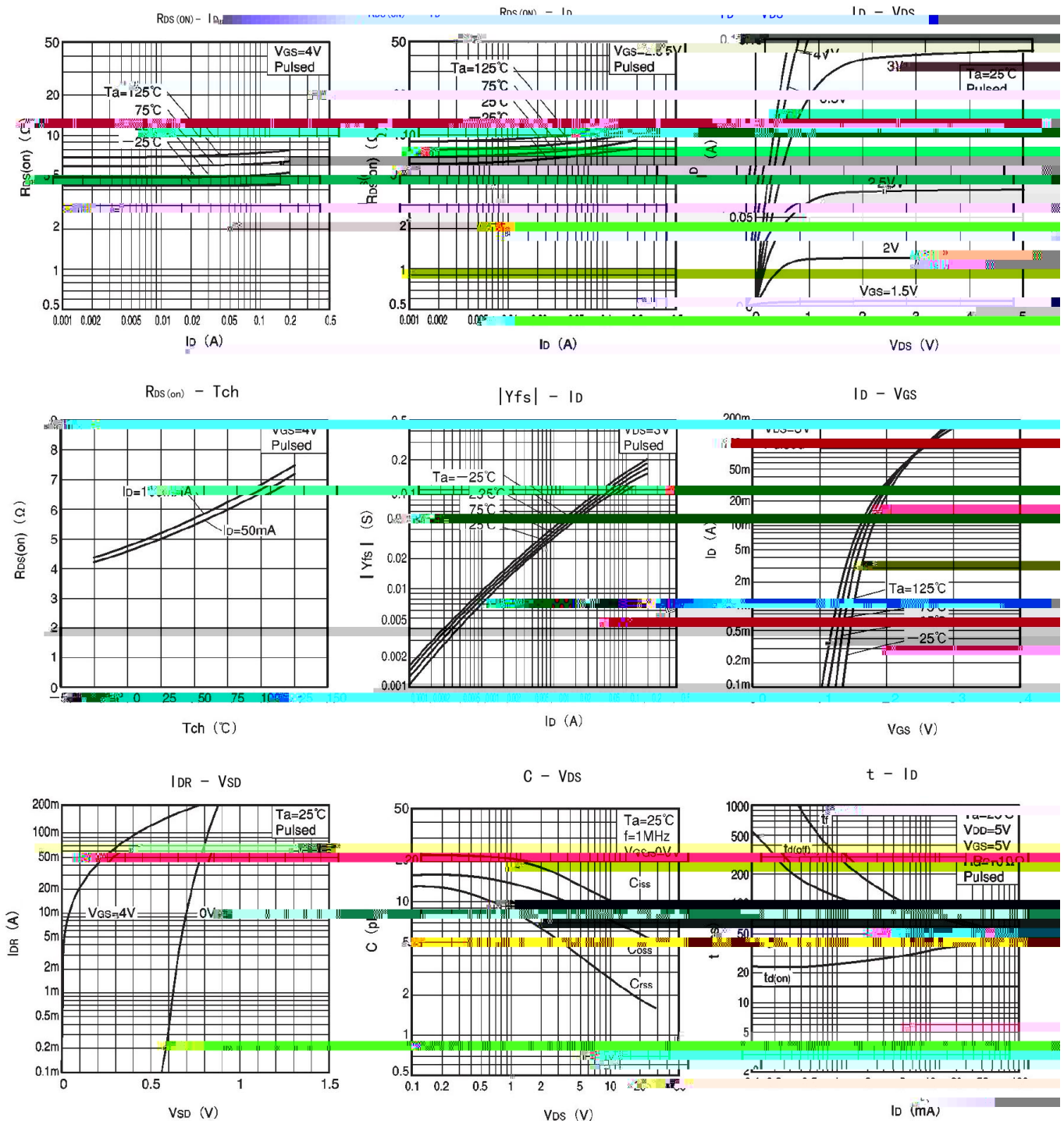
| Parameter                                          | Symbol         | Rating    | Unit |
|----------------------------------------------------|----------------|-----------|------|
| Drain-Source Voltage                               | $V_{DS}$       | 30        | V    |
| Gate-Source Voltage                                | $V_{GS}$       | $\pm 20$  | V    |
| Drain Current – Continuous                         | $I_D$          | 100       | mA   |
| Drain Current– Pulsed                              | $I_{DP}^{*1}$  | 200       | mA   |
| Reverse drain current–Continuous                   | $I_{DR}$       | 100       | mA   |
| Reverse drain current– Pulsed                      | $I_{DRP}^{*1}$ | 200       | mA   |
| Total power dissipation ( $T_c=25^\circ\text{C}$ ) | $P_D^{*2}$     | 200       | mW   |
| Channel Temperature                                | $T_{ch}$       | 150       | °C   |
| Storage Temperature Range                          | $T_{stg}$      | -55 ~ 150 | °C   |

\*1: $P_w \leq 10\mu\text{s}$ , Duty cycle  $\leq 50\%$

\*2:With each pin mounted on the recommended lands

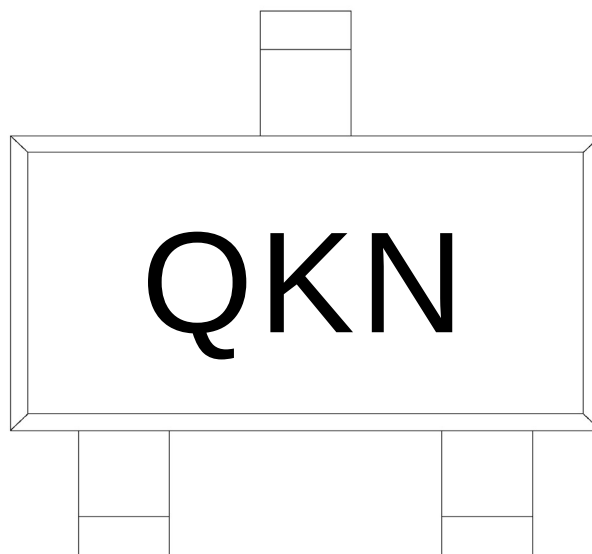
| Parameter                         | Symbol        | Test Conditions              | Min | Typ | Max     | Unit     |
|-----------------------------------|---------------|------------------------------|-----|-----|---------|----------|
| Drain–Source Breakdown Voltage    | $V_{(BR)DS}$  | $V_{GS}=0V$ $I_D=10\mu A$    | 30  |     |         | V        |
| Gate threshold voltage            | $V_{GS(th)}$  | $V_{DS}=3.0V$ $I_D=100\mu A$ | 0.8 |     | 1.5     | V        |
| Static Drain–Source On–Resistance | $R_{DS(on)1}$ | $V_{GS}=4.0V$ $I_D=10mA$     |     | 5.0 | 8.0     | $\Omega$ |
|                                   | $R_{DS(on)2}$ | $V_{GS}=2.5V$ $I_D=1.0mA$    |     | 7.0 | 13      | $\Omega$ |
| Zero Gate Voltage Drain Current   | $I_{DSS}$     | $V_{DS}=30V$ $V_{GS}=0V$     |     |     | 1.0     | $\mu A$  |
| Gate–Body Leakage.                | $I_{GSS}$     | $V_{GS}=\pm 20V$ $V_{DS}=0V$ |     |     | $\pm 1$ | $\mu A$  |
| Forward Transconductance          | $g_{FS}$      | $V_{DS}=3V$ $I_D$            |     |     |         |          |

# / Electrical Characteristic Curve



**BR2SK3018WQ**  
Rev.A Aug.-2022

**/ Marking Instructions**



Q

KN

Note:

Q:           Automobile halogen-free product Code

KN:          Package type

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

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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.

/ REEL

| Package Type | Units           |                      |                      |                            |                      | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|-----------------|----------------------|----------------------|----------------------------|----------------------|-----------------------------------|-------------|-------------|
|              | Units/Reel<br>/ | Reels/Inner Box<br>/ | Units/Inner Box<br>/ | Inner Boxes/Outer Box<br>/ | Units/Outer Box<br>/ | Reel                              | Inner Box   | Outer Box   |
| SOT-323      | 3,000           | 10                   | 30,000               | 6                          | 180,000              | 7 ×8                              | 180×120×180 | 390×385×205 |