

Rev.A Sep.-2022

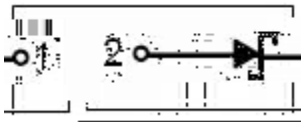
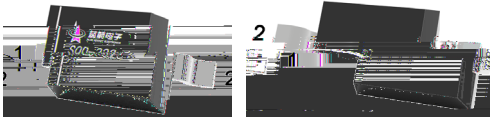
SOD-323

Schottky Diode in a SOD-323 Plastic Package.

AEC-Q101

Low positive pressure drop, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

General purpose, Meet the stringent requirements of automotive applications.



PIN1:Cathode

PIN2:Anode

|         |            |            |            |
|---------|------------|------------|------------|
| Model   | BRB5817WSQ | BRB5818WSQ | BRB5819WSQ |
| Marking | Q SJ       | Q SK       | Q SL       |

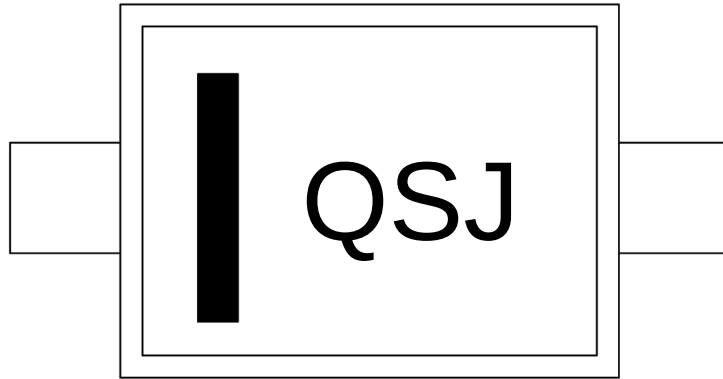
Rev.A Sep.-2022

| Parameter                                                                                | Symbol                          | Rating     |            |            | Unit |
|------------------------------------------------------------------------------------------|---------------------------------|------------|------------|------------|------|
|                                                                                          |                                 | BRB5817WSQ | BRB5818WSQ | BRB5819WSQ |      |
| Peak Repetitive Reverse Voltage ,<br>Working Peak Reverse Voltage,<br>DC Reverse Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20         | 30         | 40         | V    |
| RMS Reverse Voltage                                                                      | $V_{R\ RMS}$                    | 14         | 21         | 28         | V    |
| Average Rectified Forward Current                                                        | $I_F$                           | 1          |            |            | A    |
| Non-Repetitive Peak Forward Surge Current                                                | $I_{FSM}$                       | 25         |            |            | A    |
| Power Dissipation                                                                        | $P_d$                           | 200        |            |            | mW   |
| Typical Thermal Resistance<br>Junction to Ambient                                        | $R_{\theta JA}$                 | 500        |            |            | /W   |
| Junction and Storage Temperature Range                                                   | $T_J, T_{stg}$                  | -65 to 125 |            |            |      |

| Parameter                     | Symbol     | Test Conditions            |            | Rating |       | Unit |
|-------------------------------|------------|----------------------------|------------|--------|-------|------|
|                               |            |                            |            | MIN    | MAX   |      |
| Reverse breakdown voltage     | $V_{(BR)}$ | $I_R=1mA$                  | BRB5817WSQ | 20     |       | V    |
|                               |            |                            | BRB5818WSQ | 30     |       |      |
|                               |            |                            | BRB5819WSQ | 40     |       |      |
| Peak Forward Voltage          | $V_{FM}$   | $I_F=0.1A$                 | BRB5817WSQ |        | 0.32  | V    |
|                               |            |                            | BRB5818WSQ |        | 0.35  |      |
|                               |            |                            | BRB5819WSQ |        | 0.4   |      |
|                               |            | $I_F=1A$                   | BRB5817WSQ |        | 0.45  |      |
|                               |            |                            | BRB5818WSQ |        | 0.55  |      |
|                               |            |                            | BRB5819WSQ |        | 0.60  |      |
|                               |            | $I_F=3A$<br>( $t<5\mu s$ ) | BRB5817WSQ |        | 0.75  |      |
|                               |            |                            | BRB5818WSQ |        | 0.875 |      |
|                               |            |                            | BRB5819WSQ |        | 0.90  |      |
| Instantaneous Reverse Current | $I_{RM}$   | $V_R=V_{RWM}$              |            | 1      |       | mA   |
| Junction Capacitance          | $C_J$      | $V_R=4V$ $f=1.0MHz$        |            | 120    |       | pF   |



Rev.A Sep.-2022



Q

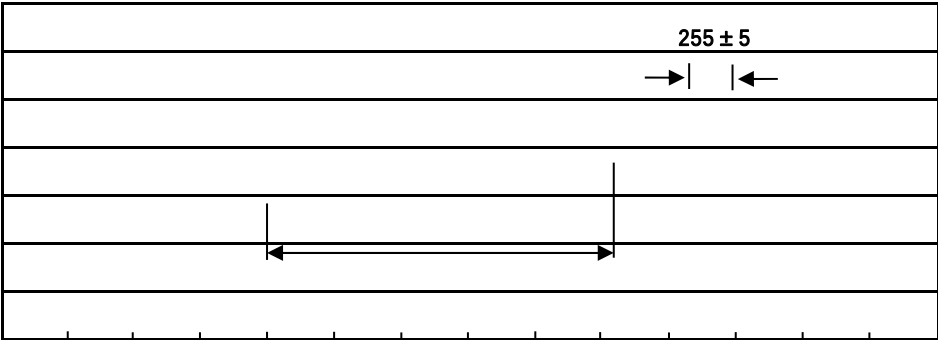
SJ

Note:

Q: Automobile halogen-free product Code

SJ: Product Type

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.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ 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   |
| SOD-323      | 3,000           | 10                   | 30,000               | 6                          | 180,000              | 7 ×8                              | 180×120×180 | 390×385×205 |