

BRRB551VQ-30

Rev.A Jun.-2025

/ Descriptions

SOD-323

Schottky Diode in a SOD-323 Plastic Package.

/ Features

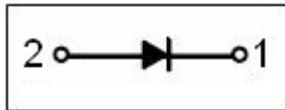
AEC-Q101

Low forward voltage drop, Fast Switching Time, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

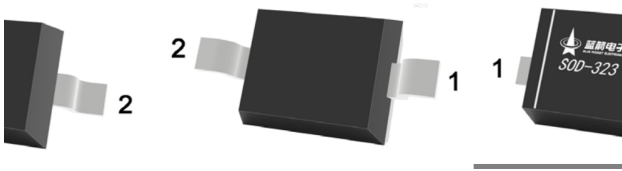
/ Applications

General purpose.

/ Equivalent Circuit



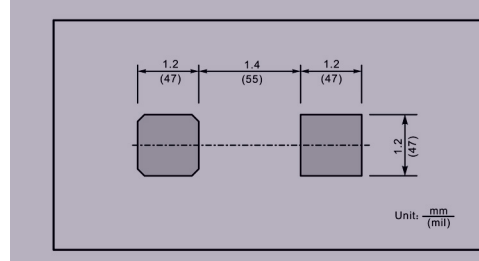
/ Pinning



PIN1:Cathode

PIN2:Anode

The recommended mounting pad size



/ Marking

| | |
|---------|--------------|
| Model | BRRB551VQ-30 |
| Marking | 551Q |

/ Absolute Maximum Ratings(Ta=25)

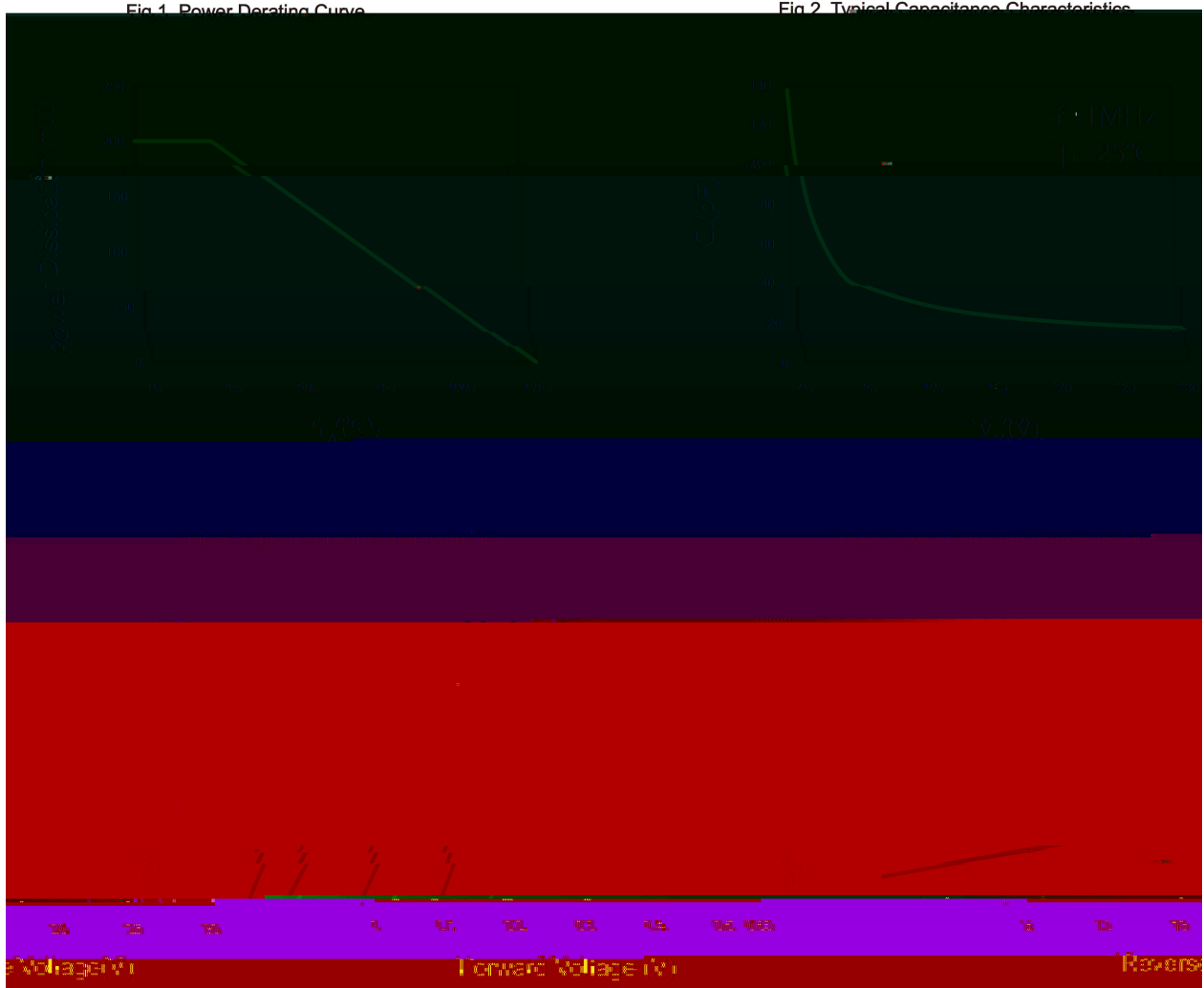
| Parameter | Symbol | Rating | Unit |
|--|-----------------|------------|------|
| Peak Reverse Voltage | V_{RM} | 30 | V |
| Forward Continuous Current | I_F | 0.5 | A |
| Non-Repetitive Peak Forward Surge Current @t = 8.3ms | I_{FSM} | 15 | A |
| Power dissipation | P_D | 200 | mW |
| Thermal Resistance, Junction to Ambient Air (NOTE 1) | $R_{\theta JA}$ | 500 | K/W |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature | T_{stg} | -55 ~ +150 | °C |

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

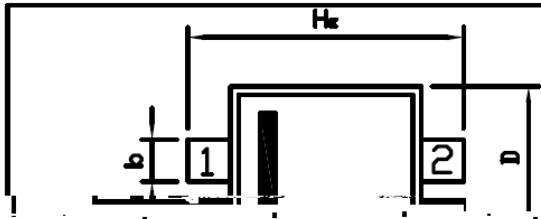
/ Electrical Characteristics(Ta=25)

| Parameter | Symbol | Test Conditions | Rating | Unit |
|---|----------|--|---------|---------|
| DC Reverse Voltage | V_R | $I_R=100\mu A$ | 20 | V |
| Maximum Instantaneous Forward Voltage | V_F | $I_F=1.0mA$ | 0.37 | V |
| | | $I_F=500mA$ | 0.47 | |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | $V_R=20V$ | 100 | μA |
| Typical Junction Capacitance | C_T | $V_R=4V$ f=1MHz | 50(Typ) | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=1mA$ $I_{rr}=1mA$ $R_L=100\Omega$ | 30 | nS |

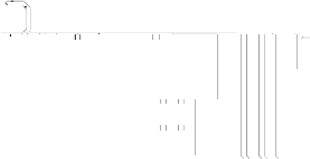
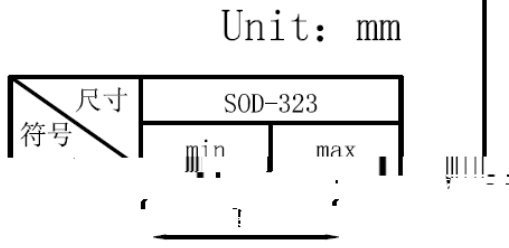
/ Electrical Characteristic Curve



/ Package Dimensions

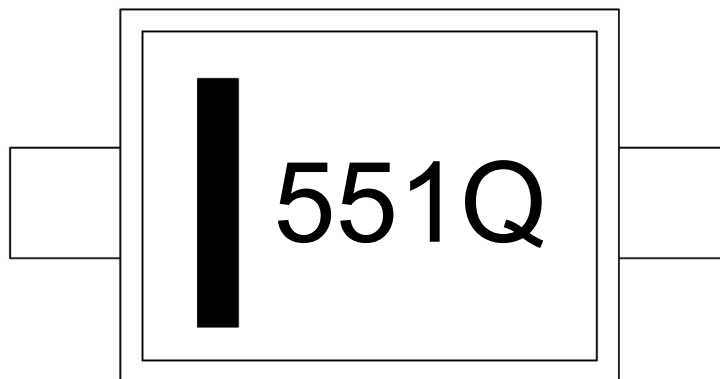


| | | |
|----|------|------|
| A | 0.80 | 1.15 |
| AI | 0.00 | 0.20 |
| b | 0.25 | 0.40 |
| C | 0.08 | 0.18 |
| D | 1.20 | 1.40 |
| E | 1.40 | 1.80 |
| H | 2.50 | 2.80 |
| L | 0.20 | 0.45 |



PIN: 1, 2, 3
SOD-323

/ Marking Instructions



551

Q

Note:

551 Product Type Code

Q: Automobile halogen-free product Code

() / 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 ³) | | |
|--------------|-----------------|----------------------|----------------------|----------------------------|----------------------|-----------------------------------|-------------|-------------|
| | Units/Reel / | Reels/Inner Box / | Units/Inner Box / | Inner Boxes/Outer Box / | Units/Outer Box / | Reel | Inner Box | Outer Box |
| SOD-323 | 3,000 | 10 | 30,000 | 6 | 180,000 | 7" ×8 | 180×120×180 | 390×385×205 |