

## / Descriptions

SOT-23

Silicon Diode in a SOT-23 Plastic Package.

## / Features

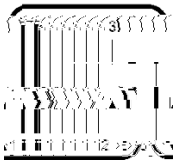
AEC-Q101

Small signal diode, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

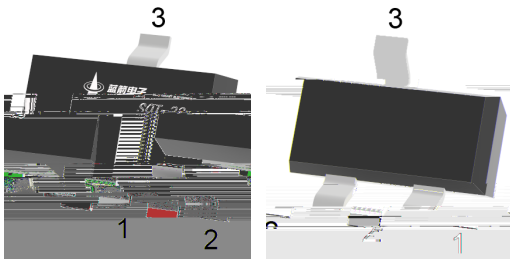
## / Applications

High Conductance Ultra Fast Diode, Meet the stringent requirements of automotive applications.

## / Equivalent Circuit



## / Pinning



PIN: See Equivalent Circuit.

/ **Marking**

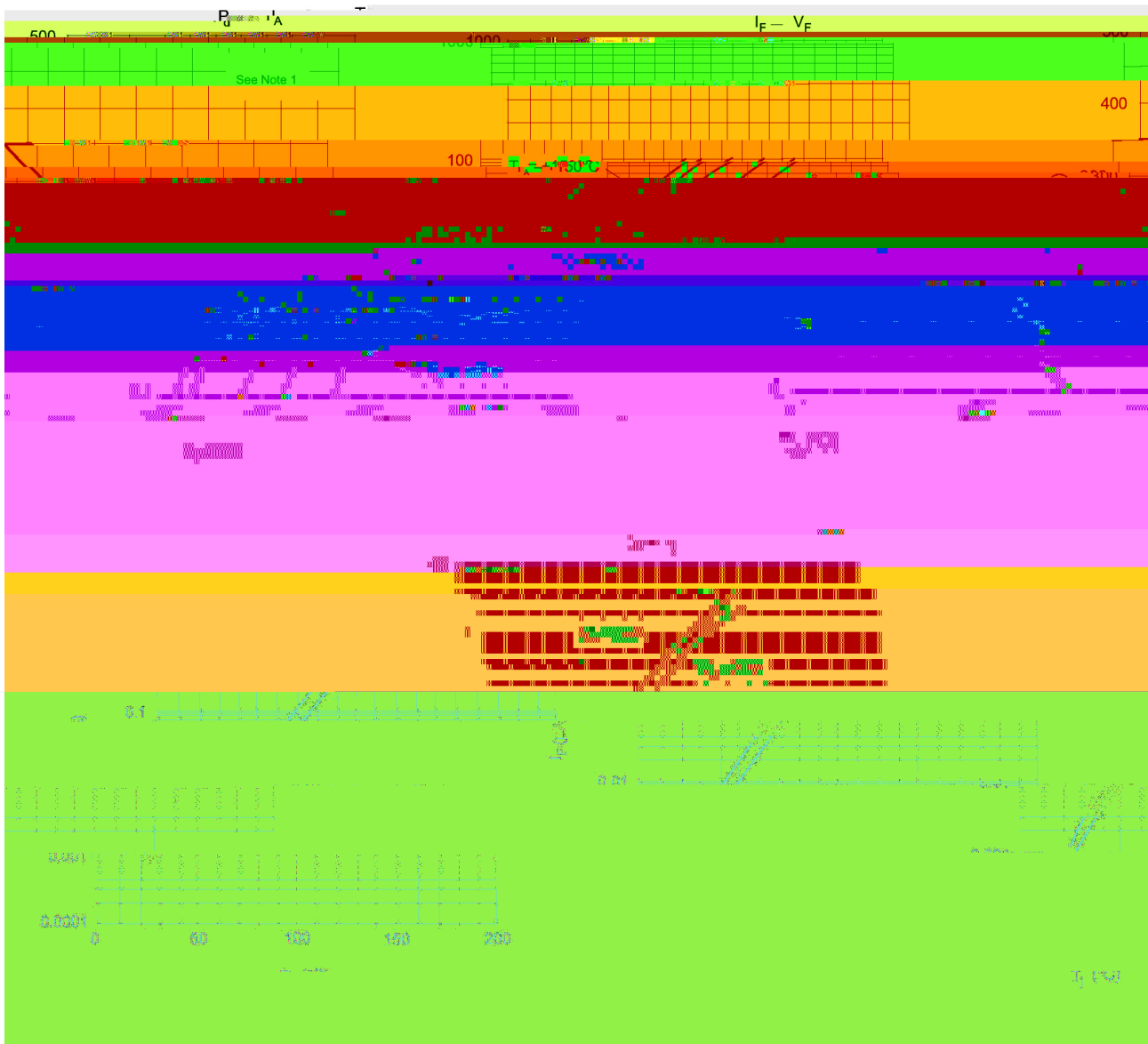
|         |     |
|---------|-----|
| Marking | QA4 |
|---------|-----|

| Parameter                                 | Symbol                                 | Rating  | Unit |
|-------------------------------------------|----------------------------------------|---------|------|
| Maximum Repetitive Reverse Voltage        | $V_{RRM}$                              | 75      | V    |
| Breakdown Voltage                         | $V_R$                                  | 70      | V    |
| Average Rectified Forward Current         | $I_{F(AV)}$                            | 200     | mA   |
| Non-repetitive Peak Forward Surge Current | $I_{FSM(1)}(\text{pulse width}=1.0S)$  | 1.0     | A    |
|                                           | $I_{FSM(2)}(\text{pulse width}=1.0mS)$ | 2.0     | A    |
| Power Dissipation                         | $P_D$                                  | 350     | mW   |
| Thermal Resistance, Junction to Ambient   | $R_{\theta JA}$                        | 357     | /W   |
| Junction Temperature                      | $T_j$                                  | 150     |      |
| Storage Temperature Range                 | $T_{stg}$                              | -55 150 |      |

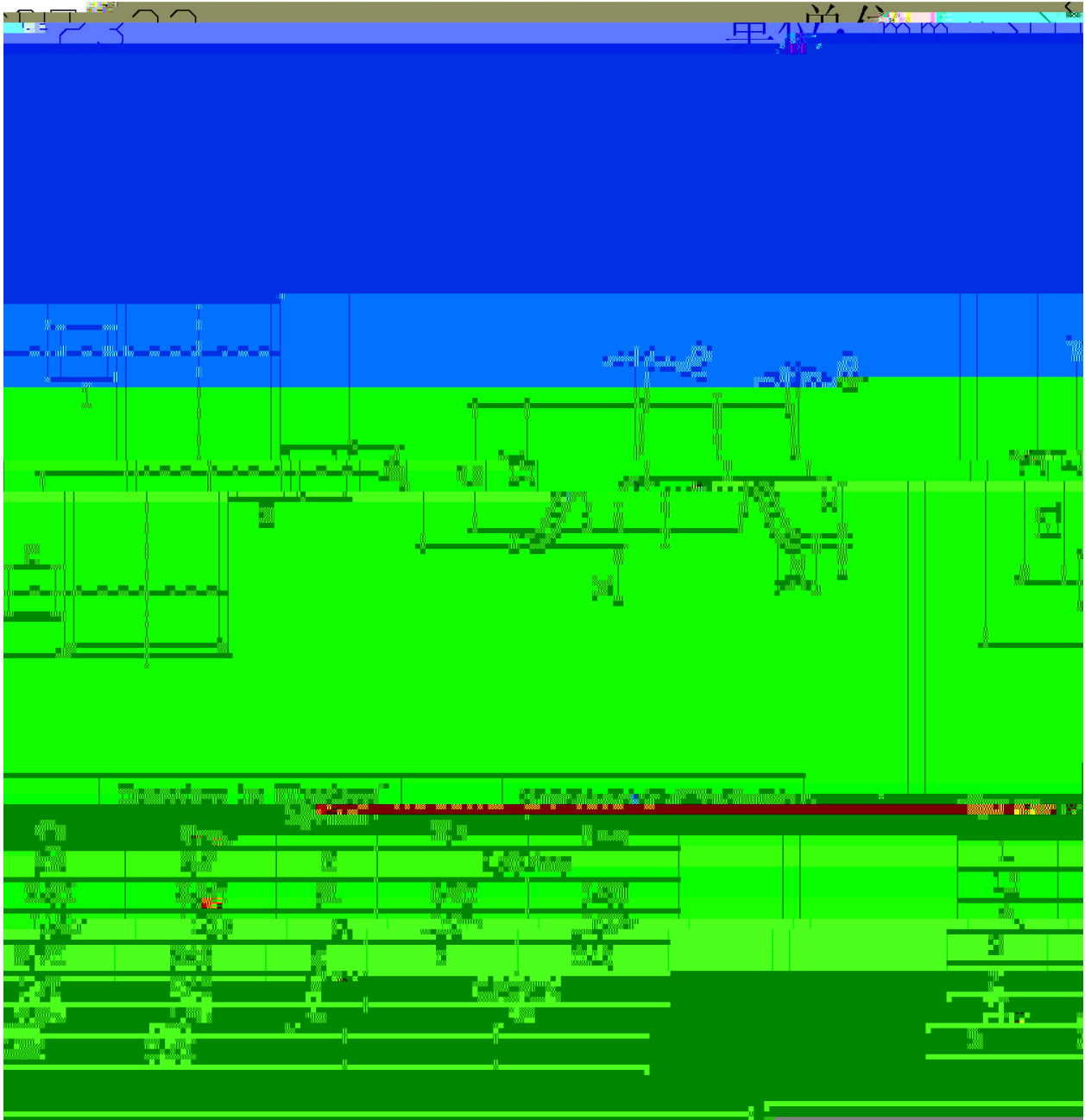
|

| Parameter         | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------|--------|-----------------|-----|-----|-----|------|
| Breakdown Voltage | $V_R$  | $I_R=100\mu A$  | 70  |     |     | V    |
| Forward Voltage   | $V_F$  | $I_F=1.0mA$     |     |     | 715 | mV   |
|                   |        | $I_F=10mA$      |     |     | 855 | mV   |

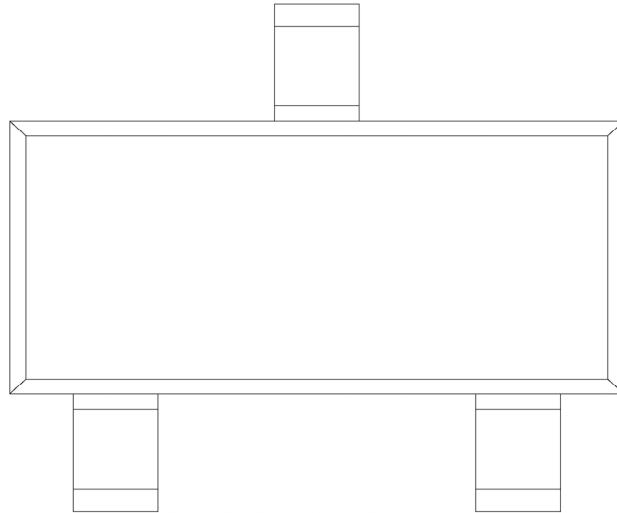
/ Electrical Characteristic Curve



/ Package Dimensions

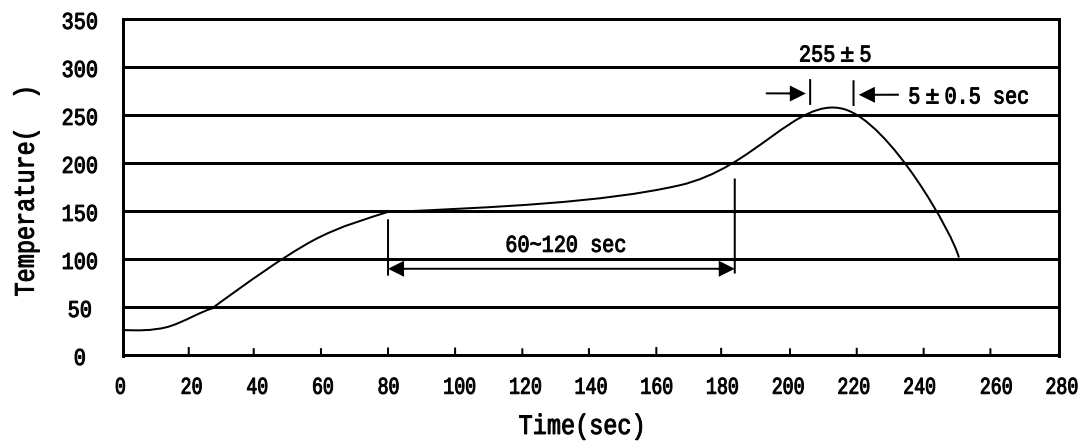


**/ Marking Instructions**



Q  
A4

( ) / 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.

/ REEL

| Package Type | Units |    |        |   |        | Dimension (unit mm <sup>3</sup> ) |             |             |
|--------------|-------|----|--------|---|--------|-----------------------------------|-------------|-------------|
|              |       |    |        |   |        |                                   |             |             |
| SOT-23       | 3,000 | 10 | 30,000 | 6 | 180000 | 7 ×8                              | 180×120×180 | 390×385×205 |

/ Notices