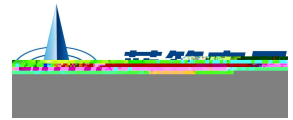


| F | 2017-4     |     |                                                                          |  |  |
|---|------------|-----|--------------------------------------------------------------------------|--|--|
| G | 2019-5-29  | 2 6 | I <sub>I</sub> Input Voltage<br>Input Current                            |  |  |
| H | 2021-10-21 | 1   |                                                                          |  |  |
| A | 2022-8-2   | all | BR/Q<br>AEC-Q101<br>, H Q<br>245±5°C<br>5±0.5sec<br>255±5°C 5±<br>0.5sec |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |
|   |            |     |                                                                          |  |  |



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SOT-23

NPN

Silicon NPN Digital transistor in a SOT-23 Plastic Package.

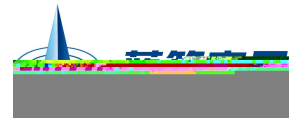
AEC-Q101

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing

Proce

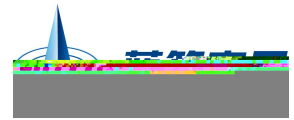
i

7 h er

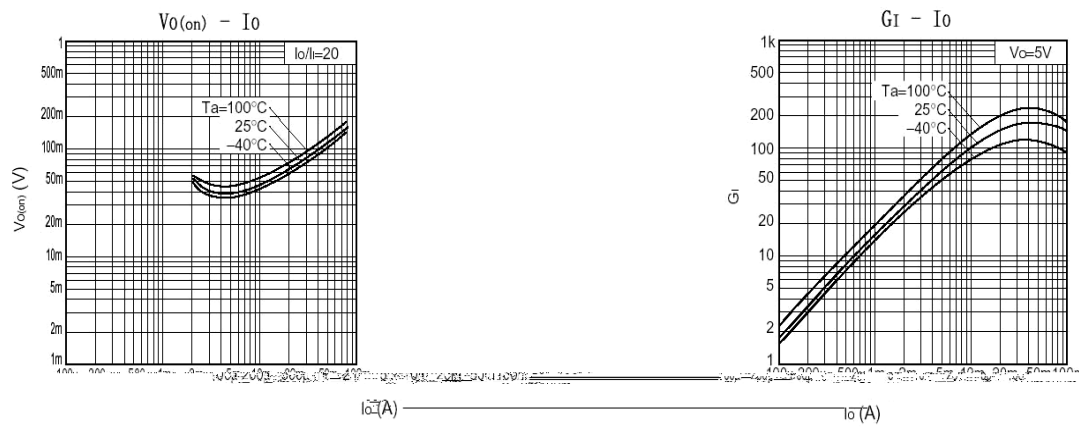
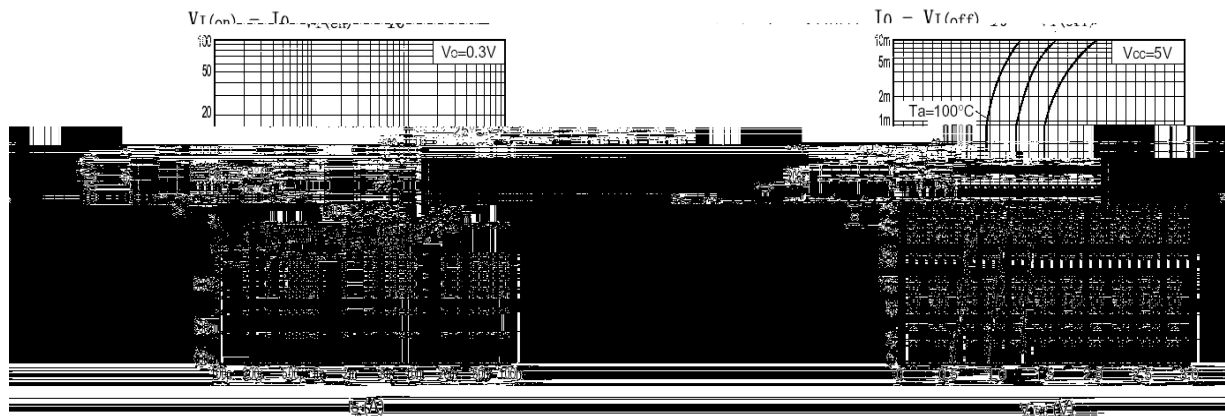


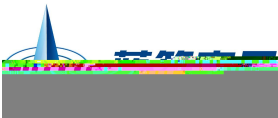
| Parameter                 | Symbol    | Rating  | Unit |
|---------------------------|-----------|---------|------|
| Output Voltage            | $V_{CC}$  | 50      | V    |
| Input Voltage             | $V_{IN}$  | 40      | V    |
|                           |           | -10     | V    |
| Output Current            | $I_{CM}$  | 100     | mA   |
|                           | $I_O$     | 50      | mA   |
| Collector Dissipation     | $P_C$     | 200     | mW   |
| Junction Temperature      | $T_j$     | 150     | °C   |
| Storage Temperature Range | $T_{stg}$ | -55~150 | °C   |

| Parameter              | Symbol       | Test Conditions                        | Min | Typ | Max  | Unit       |
|------------------------|--------------|----------------------------------------|-----|-----|------|------------|
| Input Voltage          | $V_{I(off)}$ | $V_{CC}=5.0V$ $I_O=100\mu A$           |     |     | 0.5  | V          |
| Input Voltage          | $V_{I(on)}$  | $V_O=0.3V$ $I_O=10mA$                  | 3   |     |      | V          |
| Output Voltage         | $V_{O(on)}$  | $I_O=10mA$ $I_I=0.5mA$                 |     |     | 0.3  | V          |
| Input Current          | $I_I$        | $V_I=5.0V$                             |     |     | 0.88 | mA         |
| Output Cut-off Current | $I_{O(off)}$ | $V_{CC}=50V$ $V_I=0V$                  |     |     | 0.5  | $\mu A$    |
| DC Current Gain        | $G_I$        | $V_O=5.0V$ $I_O=5.0mA$                 | 30  |     |      |            |
| Transition Frequency   | $f_T$        | $V_{CE}=10V$ $I_C=5.0mA$<br>$f=100MHz$ |     | 250 |      | MHz        |
| Resistance1            | $R_1$        |                                        | 7   | 10  | 13   | K $\Omega$ |
| Resistance Ratio       | $R_2/R_1$    |                                        | 0.8 | 1   | 1.2  |            |

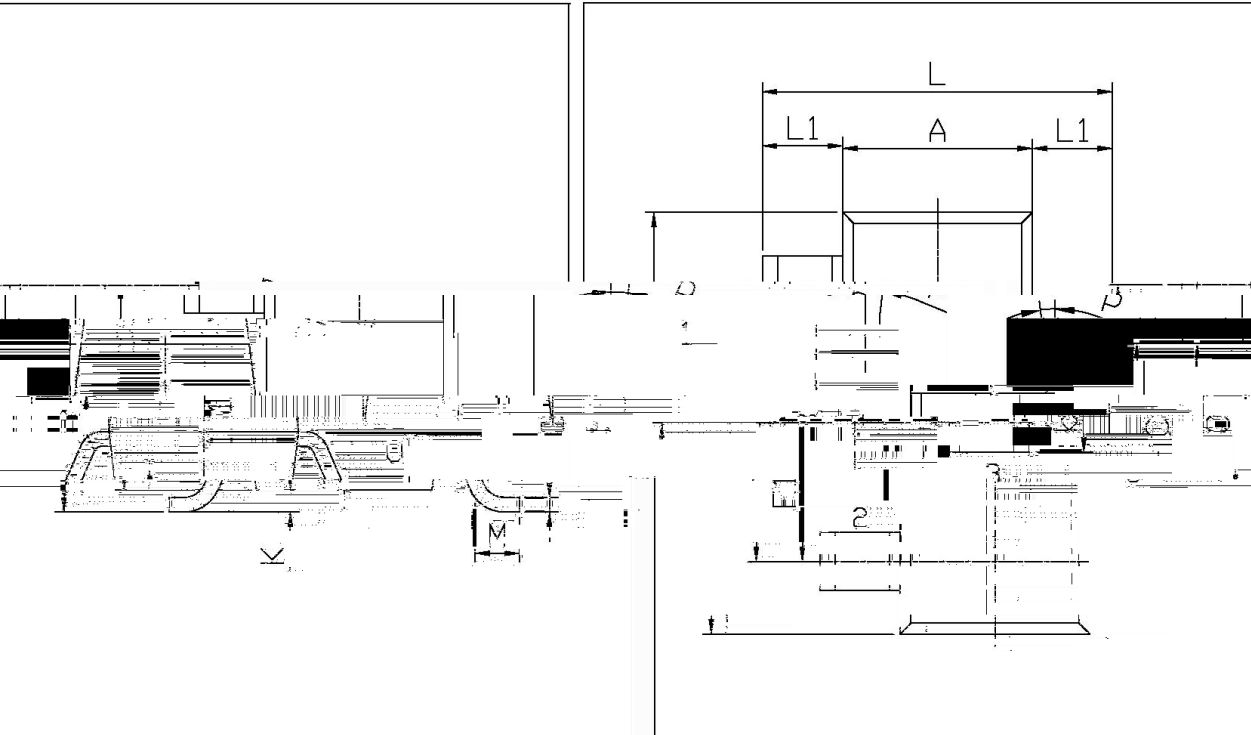


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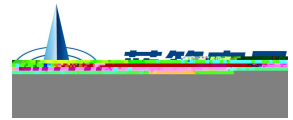




半V型密封垫规格图



| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |     |
|--------|---------------------------|------|--------|---------------------------|-----|
|        | Min                       | Max  |        | Min                       | Max |
| L      | 2.2                       | 2.7  | C      | 1.30Max                   |     |
| E      | 0.45                      | 0.65 | C1     | 0.90                      | 1   |
| A      | 0.15                      | 1.50 | c      | 0.05                      | 0   |
| B      | 2.70                      | 3.10 | K      | 0                         | 0   |
| P      | 0.35                      | 0.85 |        |                           |     |
|        | 0.35                      | 0.35 |        |                           |     |



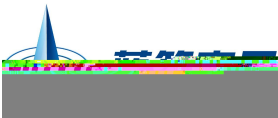
Q

24

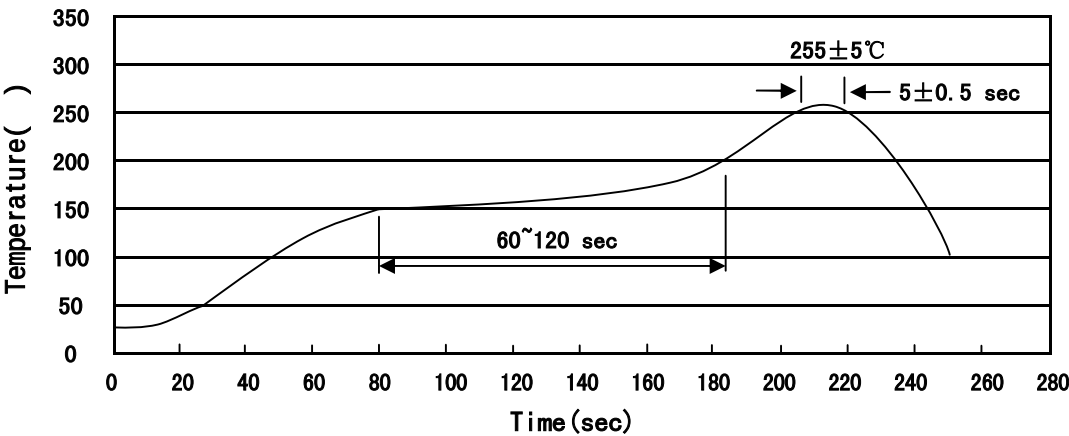
Note:

Q: Automobile halogen-free product Code

24 Product Type



Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

- |   |       |     |           |           |                                          |
|---|-------|-----|-----------|-----------|------------------------------------------|
| 1 | 150   | 200 | 60        | 120sec;   | 1.Preheating:150~200°C, Time:60~120sec.  |
| 2 | 255±5 |     |           | 5±0.5sec; | 2.Peak Temp.:255±5°C, Duration:5±0.5sec. |
| 3 |       | 2   | 10°C/sec. |           | 3. Cooling Speed: 2~10°C/sec.            |

260±5°C                      10±1 sec.                      Temp.:260±5°C                      Time:10±1 sec

/ REEL

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|-----------------------------------------|-------------|-------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒 | Outer Box 箱 |
| SOT-23               | 3,000              | 10                      | 30,000                 | 6                            | 180,000                | 7" ×8                                   | 180×120×180 | 390×385×205 |