

通过丰富的产品系列, 支持各种数字AV机器系列。



检测

滑动

按动

旋转

电源

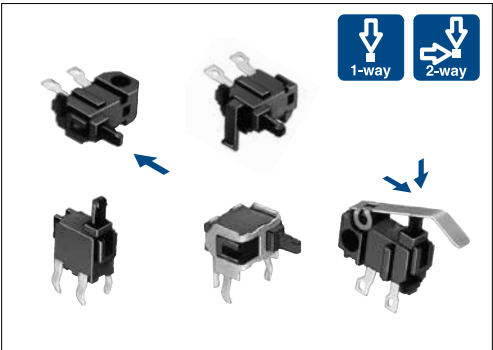
切换式

通用型

防水型

急速切换型

主要规格



| 项目              |     | 规格                          |
|-----------------|-----|-----------------------------|
| 最大额定/最小额定(电阻负载) |     | 0.1A 30V DC / 50μA 3V DC    |
| 接触电阻 (初期/寿命后)   |     | 1Ω max. / 2Ω max.           |
| 动作力             |     | 0.35N max.                  |
| 操作寿命            | 无负载 | 50,000 cycles               |
|                 | 负载  | 50,000 cycles (0.1A 30V DC) |

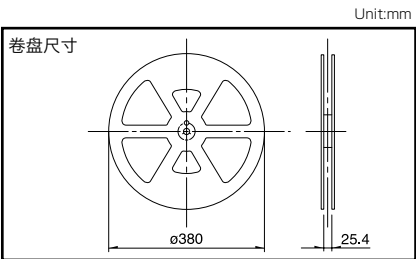
产品一览

| 电路数 | 接点数 | 操作部形状      | 操作方向       | 端子形状                     | 包装状态   | 最小订货单位( pcs.) |            | 产品编号       | 图号         |    |
|-----|-----|------------|------------|--------------------------|--------|---------------|------------|------------|------------|----|
|     |     |            |            |                          |        | 日本            | 出口         |            |            |    |
| 1   | 1   | Push       | Horizontal | For Lead                 | Bulk   | 2,000         | 10,000     | SPPB110300 | 1          |    |
|     |     |            |            |                          |        |               |            | SPPB120200 | 2          |    |
|     |     |            |            |                          |        |               |            | SPPB310400 | 7          |    |
|     |     |            |            |                          |        |               |            | SPPB320100 | 8          |    |
|     |     | Actuator A |            |                          |        | 1,000         | 5,000      | SPPB1A0100 | 3          |    |
|     |     |            |            |                          |        |               |            | SPPB1A0101 | 4          |    |
|     |     | Actuator C |            |                          |        |               |            | SPPB2A0100 | 5          |    |
|     |     |            |            |                          |        |               |            | SPPB2A0101 | 6          |    |
|     |     | Push       | Vertical   | For PC board<br>(Dip)    | 4,000  |               |            | 20,000     | SPPB512300 | 9  |
|     |     |            | Horizontal |                          | 2,000  |               |            | 10,000     | SPPB610400 | 13 |
|     |     | Actuator A | Vertical   |                          | 1,000  | 5,000         | SPPB620300 | 14         |            |    |
|     |     |            | Horizontal |                          |        |               | SPPB5A0100 | 10         |            |    |
|     |     | Push       | Horizontal | For PC board<br>(Reflow) | Taping | 1,500         | 6,000      | SPPB6A0100 | 15         |    |
|     |     |            |            |                          |        |               |            | SPPB6A0400 | 16         |    |
|     |     |            | Vertical   | 600                      |        | 2,400         | SPPB530701 | 11         |            |    |
|     |     |            |            |                          |        |               | SPPB530601 | 12         |            |    |
|     |     |            | Horizontal | 1,300                    |        | 5,200         | SPPB630101 | 17         |            |    |
|     |     |            |            |                          |        |               | SPPB640201 | 18         |            |    |

包装规格

载带

| 产品编号                     | 包装数 (pcs.) |          |            | 胶带宽度 (mm) | 出口包装箱尺寸 (mm) |
|--------------------------|------------|----------|------------|-----------|--------------|
|                          | 1 卷        | 1 箱 / 日本 | 1 箱 / 出口包装 |           |              |
| SPPB530701               | 1,500      | 3,000    | 6,000      | 24        | 406×406×160  |
| SPPB530601               | 600        | 1,200    | 2,400      |           |              |
| SPPB630101<br>SPPB640201 | 1,300      | 2,600    | 5,200      |           |              |

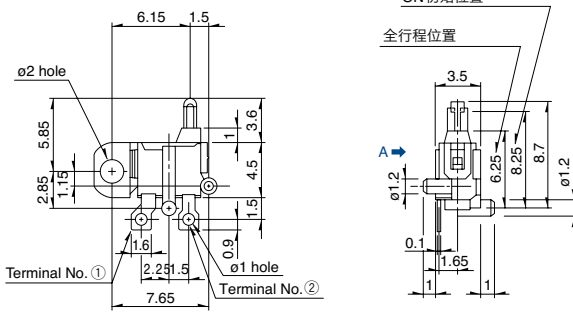
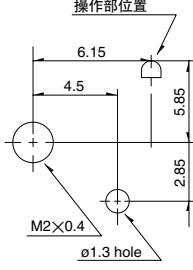
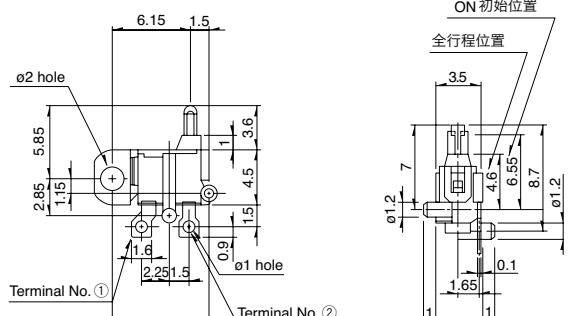
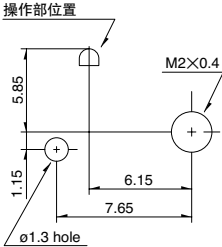
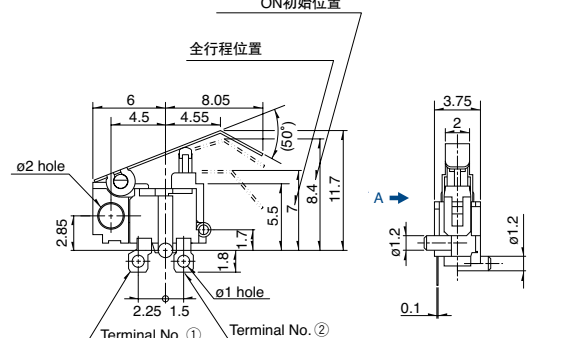
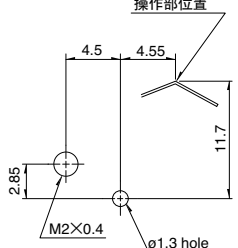
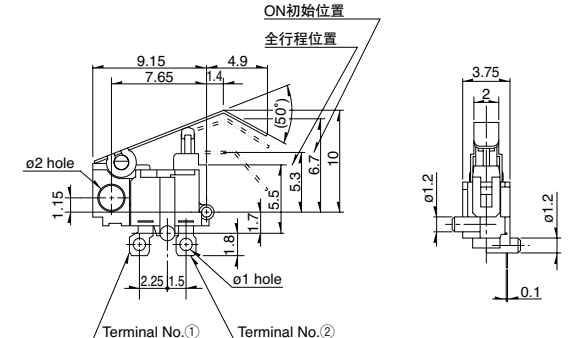
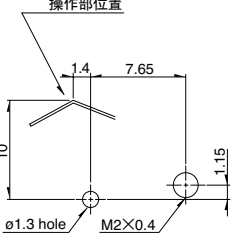


散装

| 产品编号                                                                               | 包装数 (pcs.) |            | 出口包装箱尺寸 (mm) |
|------------------------------------------------------------------------------------|------------|------------|--------------|
|                                                                                    | 1 箱 / 日本   | 1 箱 / 出口包装 |              |
| SPPB512300                                                                         | 4,000      | 20,000     | 400×270×290  |
| SPPB1A0100, SPPB1A0101, SPPB2A0100, SPPB2A0101, SPPB5A0100, SPPB6A0100, SPPB6A0400 | 1,000      | 5,000      |              |
| SPPB310400, SPPB320100, SPPB610400, SPPB620300, SPPB110300, SPPB120200             | 2,000      | 10,000     |              |

外形图

Unit:mm

| No. | 照片                                                                                  | 形状                                                                                   | 印刷电路板安装孔尺寸图<br>(自A方向看)                                                                |
|-----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1   |    |    |    |
| 2   |   |   |   |
| 3   |  |  |  |
| 4   |  |  |  |

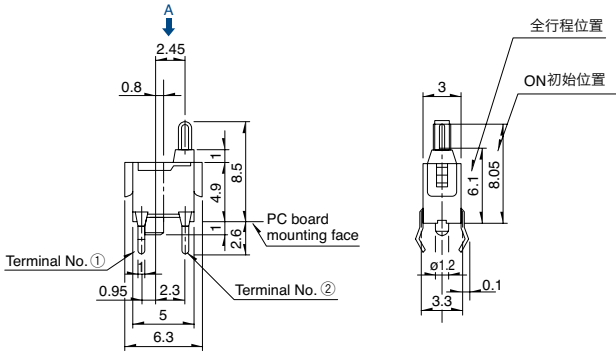
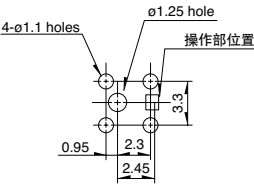
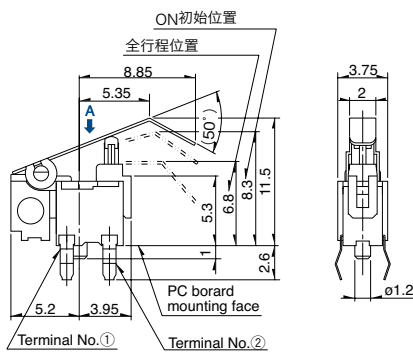
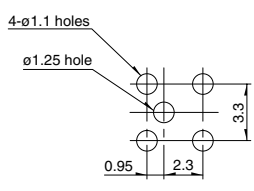
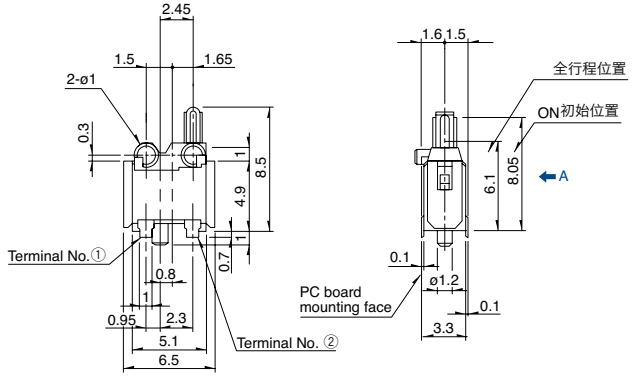
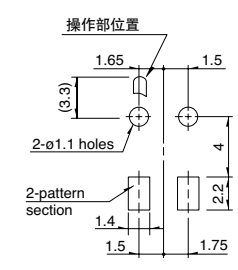
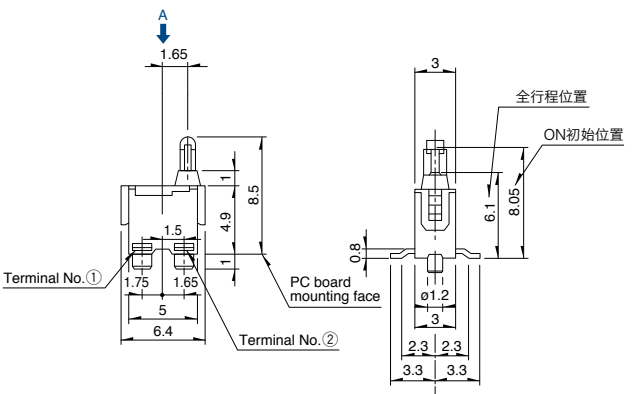
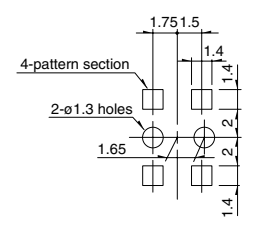
外形图

Unit:mm

| No. | 照片 | 形状 | 印刷电路板安装孔尺寸图<br>(自A方向看) |
|-----|----|----|------------------------|
| 5   |    |    |                        |
| 6   |    |    |                        |
| 7   |    |    |                        |
| 8   |    |    |                        |

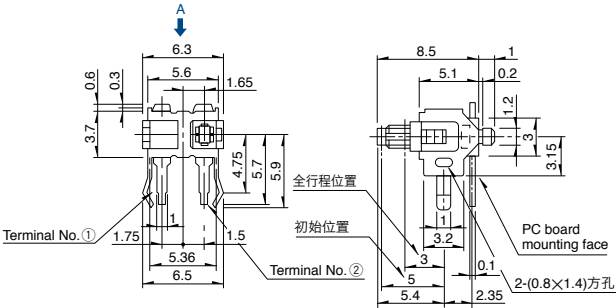
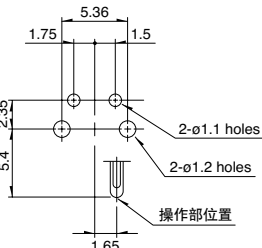
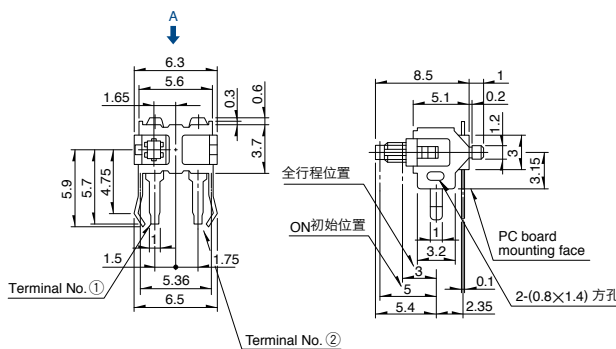
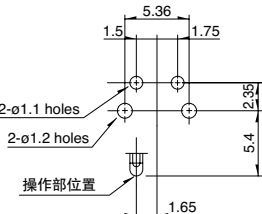
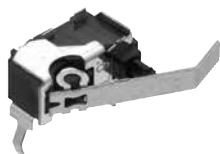
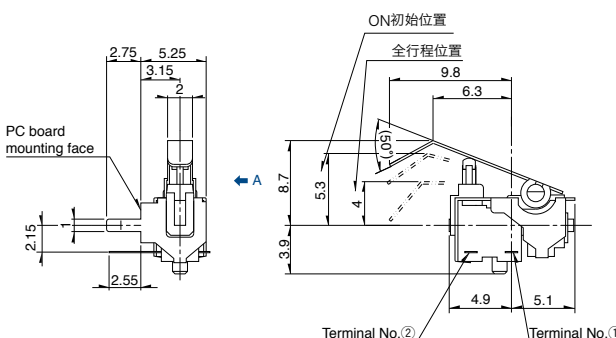
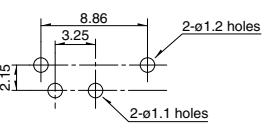
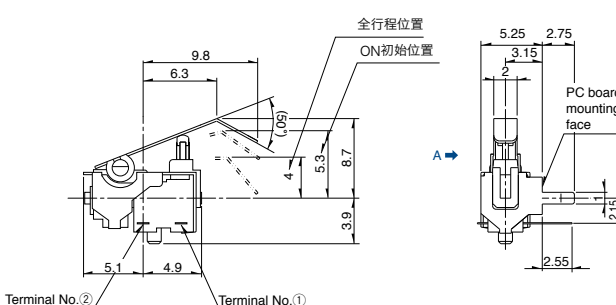
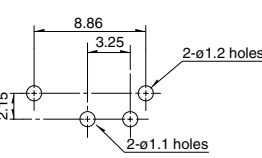
外形图

Unit:mm

| No. | 照片                                                                                                      | 形状                                                                                   | 印刷电路板安装孔以及焊接处尺寸图<br>(自A方向看)                                                           |
|-----|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 9   | <b>Push</b><br>        |    |    |
| 10  | <b>Actuator A</b><br> |   |   |
| 11  | <b>Push</b><br>      |  |  |
| 12  | <b>Push</b><br>      |  |  |

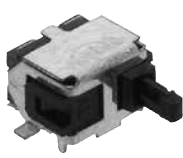
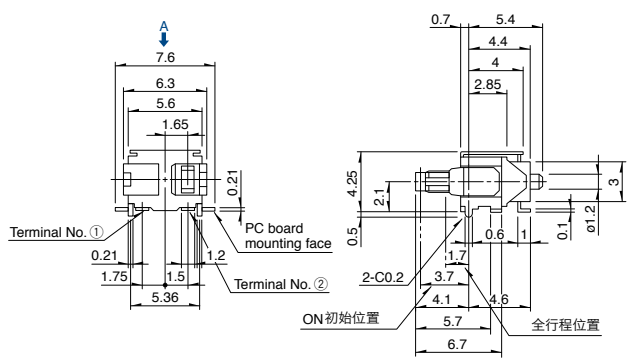
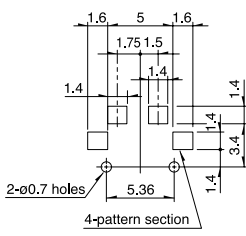
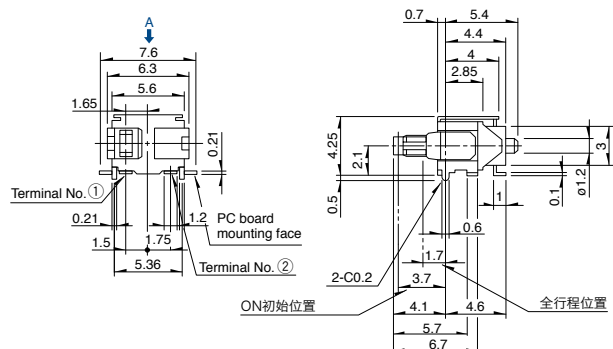
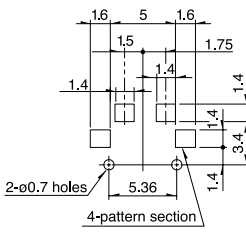
## 外形图

Unit:mm

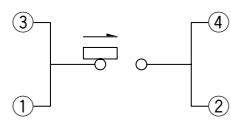
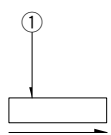
| No. | 照片                                                                                  | 形状                                                                                   | 印刷电路板安装孔以及焊接处尺寸图<br>(自A方向看)                                                           |
|-----|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 13  |    |    |    |
| 14  |   |   |   |
| 15  |  |  |  |
| 16  |  |  |  |

## 外形图

Unit:mm

| No. | 照片                                                                                         | 形状                                                                                  | 印刷电路板安装孔以及焊接处尺寸图<br>(自A方向看)                                                          |
|-----|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| 17  | Push<br>  |   |   |
| 18  | Push<br> |  |  |

## 电路图 (自A方向看)

|                                                                                                                              |                                                                                           |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| SPPB512300, SPPB530601,<br>SPPB5A0100<br> | 其他<br> |
|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|

# 检测开关

## 产品系列一览

检测

滑动

按动

旋转

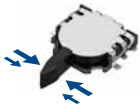
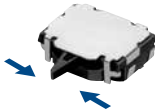
电源

切换式

通用型

防水型

急速切换型

| 系列           |                        | 通用型                                                                               |                                                                                   |                                                                                     |                                                                                     |
|--------------|------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|              |                        | SSCQ                                                                              | SSCM                                                                              | SPVL                                                                                | SPPB                                                                                |
| 照片           |                        |  |  |   |  |
| 动作形式         |                        | 2 方向<br>单侧2段                                                                      | 2 方向                                                                              | 3 方向                                                                                | 1 方向<br>2 方向                                                                        |
| 外形尺寸<br>(mm) | W                      | 3.8                                                                               | 5                                                                                 | 5.55                                                                                | 6.3                                                                                 |
|              | D                      | 3.6                                                                               | 4                                                                                 | 6.6                                                                                 | 3                                                                                   |
|              | H                      | 0.9                                                                               | 1.5                                                                               | 1                                                                                   | 4.9                                                                                 |
| 使用温度范围       |                        | -10℃ to +60℃                                                                      |                                                                                   | -40℃ to +85℃                                                                        |                                                                                     |
| 车用产品         |                        | —                                                                                 | —                                                                                 |  |  |
| 生命周期         |                        |  |  |  |  |
| 电路数 / 接点数    |                        | 1 / Two-direction type:<br>2-position each side                                   | 1/2                                                                               | 1/1                                                                                 |                                                                                     |
| 最大额定（电阻负载）   |                        | 1mA 5V DC                                                                         |                                                                                   |                                                                                     | 0.1A 30V DC                                                                         |
| 最小额定（电阻负载）   |                        | 50μA 3V DC                                                                        |                                                                                   |                                                                                     |                                                                                     |
| 耐久性能         | 无负载寿命                  | 50,000cycles 5Ω max.                                                              |                                                                                   |                                                                                     | 50,000cycles<br>2Ω max.                                                             |
|              | 负载寿命<br>最大额定<br>(电阻负载) | 50,000cycles 5Ω max                                                               |                                                                                   |                                                                                     | 50,000cycles<br>2Ω max.                                                             |
| 电性能          | 初期接触电阻                 | 2Ω max.                                                                           |                                                                                   |                                                                                     | 1Ω max.                                                                             |
|              | 绝缘电阻                   | 100MΩ min. 100V DC                                                                |                                                                                   |                                                                                     |                                                                                     |
|              | 耐电压                    | 100V AC for 1 minute                                                              |                                                                                   |                                                                                     |                                                                                     |
| 机械性能         | 端子强度                   | 0.5N for 1minute                                                                  |                                                                                   | 1N for 1minute                                                                      | 3N for 1minute                                                                      |
|              | 操作部强度                  | 1N                                                                                | 2N                                                                                | 5N                                                                                  | 10N                                                                                 |
| 耐环境性能        | 耐寒性能                   | -20℃ 96h                                                                          |                                                                                   | -40℃ 500h                                                                           |                                                                                     |
|              | 耐热性能                   | 85℃ 96h                                                                           |                                                                                   | 85℃ 500h                                                                            |                                                                                     |
|              | 耐湿性能                   | 40℃, 90 to 95%RH 96h                                                              |                                                                                   | 60℃, 90 to 95%RH 500h                                                               |                                                                                     |
| 动作力          |                        | 0.35N max.                                                                        |                                                                                   |                                                                                     |                                                                                     |
| 页            |                        | 29                                                                                | 30                                                                                | 31                                                                                  | 32                                                                                  |

检测开关焊接条件 . . . . . 66

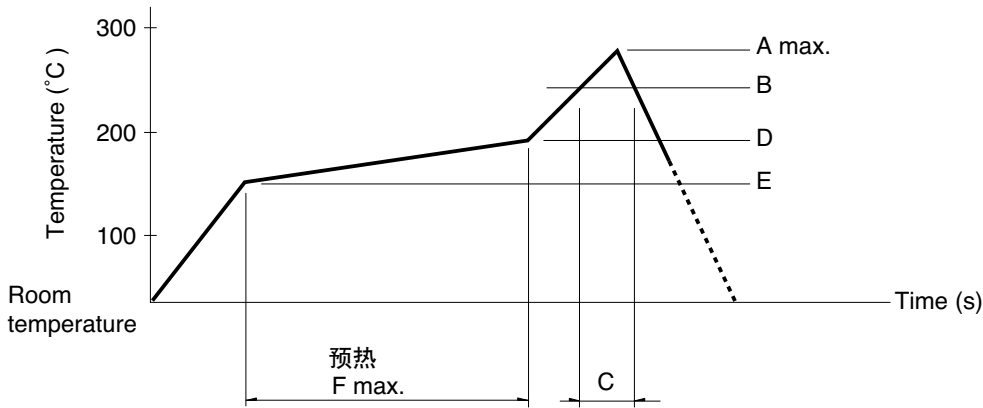
使用检测开关时的注意事项 . . . . . 67

### 注

表中的 ● 符号表示适用于系列内的全部产品。

回流方式的参考举例

1. 加热方式远红外线加热的上下加热方式。
2. 温度测量方式用 $\phi 0.1 \sim \phi 0.2$ 的CA (K) 或CC (T) 进行测量。在焊接的连接部位置 (铜箔面) 测量, 固定方式使用耐热载带。
3. 温度分布



| 系列 (回流型) | A (℃) 3s max. | B (℃) | C (s) | D (℃) | E (℃) | F (s) |
|----------|---------------|-------|-------|-------|-------|-------|
| SPPB     | 250           | 230   | 40    | 180   | 150   | 120   |
| SPVE     | 260           |       |       |       |       |       |
| SPVL     |               |       |       |       |       |       |
| SPVM     |               |       |       |       |       |       |
| SPVN     |               |       |       |       |       |       |
| SPVR     |               |       |       |       |       |       |
| SPVS     |               |       |       |       |       |       |
| SPVT     |               |       |       |       |       |       |
| SSCM     |               |       |       |       |       |       |
| SSCQ     |               |       |       |       |       |       |
| SPVQC    | 250           |       |       |       |       |       |

注

1. 上述条件, 为印刷电路板的零部件表面的温度。根据电路板的材质, 大小, 厚度等, 电路板温度和开关表面温度会有很大的不同, 关于开关表面温度, 也请在上述条件内使用。
2. 根据贴面焊槽的种类, 条件不同结果不同, 请事先充分进行确认之后使用。

手工焊接方式的参考举例

| 项目                                                                 | 焊接温度     | 焊接时间    |
|--------------------------------------------------------------------|----------|---------|
| SPVS, SPVN, SSPVT, SPVM, SPVR, SPVE, SSCQ, SSCM, SPVL, SSCT, SPVQC | 350±5°C  | 3s max. |
| SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SSCN, SPVQA              | 300±10°C | 3+1/0s  |
| SPPB (Reflow)                                                      | 350±5°C  | 5s max. |
| SSCF, SPPB (For Lead, Dip)                                         | 350±10°C | 3+1/0s  |

浸焊方式的参考举例

适用于 For PC board 端子型

| 项目                                                    | 项目          |          | 浸焊      |        |
|-------------------------------------------------------|-------------|----------|---------|--------|
|                                                       | 预热温度        | 预热温度时间   | 焊接温度    | 焊接浸渍时间 |
| SSCT, SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SPVQA | 100±10°C    | 60s max. | 260±5°C | 5±1s   |
| SPPW8, SPPB                                           | 100 °C max. | 60s max. | 255±5°C | 5±1s   |
| SSCF                                                  | —           |          | 260±5°C | 5±1s   |