

### 表面贴装型

系列: **FK** 类型: **V**



#### 特点

- 保证时间: 105 °C 2000 ~ 5000 小时
- 低阻抗 (FC系列降低 40 % ~ 60 %)
- 小形化产品 (FC系列缩小 30 % ~ 50 %)
- 可满足耐振要求 (30G保证) ( $\phi 6.3 \leq$ )
- 已应对RoHS指令

#### 规格

|                        |   |                                    |    |    |    |    |    |    |    |     |                |
|------------------------|---|------------------------------------|----|----|----|----|----|----|----|-----|----------------|
| 类别温度范围                 | -55 °C ~ +105 °C  |                                    |    |    |    |    |    |    |    |     |                |
| 额定电压范围                 | 6.3 V.DC ~ 100 V.DC   |                                    |    |    |    |    |    |    |    |     |                |
| 静电容量范围                 | 3.3 $\mu$ F ~ 6800 $\mu$ F  |                                    |    |    |    |    |    |    |    |     |                |
| 静电容量许容差                | $\pm 20\%$ (120 Hz / +20 °C)  |                                    |    |    |    |    |    |    |    |     |                |
| 漏电流                    | $I \leq 0.01 CV$ 或 3 ( $\mu$ A) 2 分值 (任一大值以下)   |                                    |    |    |    |    |    |    |    |     |                |
| 损耗角的正切 (tan $\delta$ ) | 请参照特性一览表  |                                    |    |    |    |    |    |    |    |     |                |
| 温度特性                   | 额定电压 (V.DC)   | 6.3                                | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (120 Hz 时的阻抗比) |
|                        | Z (-25 °C) / Z (+20 °C)   | 2                                  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2   |                |
|                        | Z (-40 °C) / Z (+20 °C)   | 3                                  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3   |                |
|                        | Z (-55 °C) / Z (+20 °C)   | 4                                  | 4  | 4  | 3  | 3  | 3  | 3  | 3  | 3   |                |
| 耐久性                    | 在+105 °C $\pm 2$ °C 的条件下, 对电容施加额定工作电压2000 小时后, 恢复至标准气候测量, 并满足下列条件。<br>(但是, $\phi 8 \times 10.2$ , $\phi 10 \times 10.2$ 的尾号为 G 时, 额定电压施加时间须5000 小时) |                                    |    |    |    |    |    |    |    |     |                |
|                        | 静电容量变化  | 初始值 $\pm 30\%$ 以内 (尾号 G 为 35 % 以下) |    |    |    |    |    |    |    |     |                |
|                        | 损耗角的正切 (tan $\delta$ )  | 不大于初始标准值的200 % (尾号 G 不大于 300 %)    |    |    |    |    |    |    |    |     |                |
|                        | 漏电流   | 不大于初始标准值                           |    |    |    |    |    |    |    |     |                |
| 高温无负载特性                | 将电容无负载放置于+105 °C $\pm 2$ °C 条件下1000 小时后, 恢复至标准气候测量, 并满足上述耐久性条件。<br>(但须电压处理)   |                                    |    |    |    |    |    |    |    |     |                |
| 焊接耐热性                  | 经回流焊接, 恢复至标准气候测量, 并满足下列条件。  |                                    |    |    |    |    |    |    |    |     |                |
|                        | 静电容量变化  | 初始值 $\pm 10\%$ 以内                  |    |    |    |    |    |    |    |     |                |
|                        | 损耗角的正切 (tan $\delta$ )  | 不大于初始标准值                           |    |    |    |    |    |    |    |     |                |
|                        | 漏电流   | 不大于初始标准值                           |    |    |    |    |    |    |    |     |                |
| AEC-Q200               | 符号AEC-Q200  |                                    |    |    |    |    |    |    |    |     |                |

#### 额定纹波电流 频率补正系数

|         |        |      |      |      |         |
|---------|--------|------|------|------|---------|
| 频率 (Hz) | 50, 60 | 120  | 1 k  | 10 k | 100 k ~ |
| 系数      | 0.70   | 0.75 | 0.90 | 0.95 | 1.00    |

#### 标示

例: 6.3 V.DC 22  $\mu$ F  
标示颜色: BLACK

$\leq \phi 10$

极性标示(-) 静电容量 ( $\mu$ F)

系列符号

无铅适用产品  
标记 (黑点)

额定电压编号

批号

$\geq \phi 12.5$

极性标示(-) 静电容量 ( $\mu$ F)

系列符号

额定电压编号

批号

单位: V.DC

|   |     |    |     |
|---|-----|----|-----|
| J | 6.3 | H  | 50  |
| A | 10  | J  | 63  |
| C | 16  | K  | 80  |
| E | 25  | 2A | 100 |
| V | 35  |    |     |

#### 外观尺寸

压力阀( $\phi 10 \leq$ )

括弧内为参考尺寸

单位: mm

| 尺寸代码 | $\phi D$ | L              | A, B | H         | I   | W              | P   | K                                      |
|------|----------|----------------|------|-----------|-----|----------------|-----|--|
| B    | 4.0      | 5.8 $\pm 0.3$  | 4.3  | 5.5 max.  | 1.8 | 0.65 $\pm 0.1$ | 1.0 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> |
| C    | 5.0      | 5.8 $\pm 0.3$  | 5.3  | 6.5 max.  | 2.2 | 0.65 $\pm 0.1$ | 1.5 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> |
| D    | 6.3      | 5.8 $\pm 0.3$  | 6.6  | 7.8 max.  | 2.6 | 0.65 $\pm 0.1$ | 1.8 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> |
| D8   | 6.3      | 7.7 $\pm 0.3$  | 6.6  | 7.8 max.  | 2.6 | 0.65 $\pm 0.1$ | 1.8 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> |
| E    | 8.0      | 6.2 $\pm 0.3$  | 8.3  | 9.5 max.  | 3.4 | 0.65 $\pm 0.1$ | 2.2 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> |
| F    | 8.0      | 10.2 $\pm 0.3$ | 8.3  | 10.0 max. | 3.4 | 0.90 $\pm 0.2$ | 3.1 | 0.70 $\pm 0.2$                         |
| G    | 10.0     | 10.2 $\pm 0.3$ | 10.3 | 12.0 max. | 3.5 | 0.90 $\pm 0.2$ | 4.6 | 0.70 $\pm 0.2$                         |
| H13  | 12.5     | 13.5 $\pm 0.5$ | 13.5 | 15.0 max. | 4.7 | 0.90 $\pm 0.3$ | 4.4 | 0.70 $\pm 0.3$                         |
| J16  | 16.0     | 16.5 $\pm 0.5$ | 17.0 | 19.0 max. | 5.5 | 1.20 $\pm 0.3$ | 6.7 | 0.70 $\pm 0.3$                         |
| K16  | 18.0     | 16.5 $\pm 0.5$ | 19.0 | 21.0 max. | 6.7 | 1.20 $\pm 0.3$ | 6.7 | 0.70 $\pm 0.3$                         |

\*对于耐震规格产品的形状尺寸请参考封装规格部分

## 关于耐振规格商品的外观尺寸

\* 和标准产品尺寸, 形状均不相同。详细情况请务必垂询本公司。

< 尺寸代码: D, D8 >



< 尺寸代码: E, F, G, H13, J16, K16, K21 >



单位: mm

| 尺寸代码 | φD   | L    | A, B | H max. | F            | I   | W        | P   | K                                      | R        | S        | T        |
|------|------|------|------|--------|--------------|-----|----------|-----|--|----------|----------|----------|
| D    | 6.3  | 6.1  | 6.6  | 7.8    | 0 ~ +0.15    | 2.4 | 0.65±0.1 | 2.2 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> | 1.1±0.2  | 3.3±0.2  | 1.05±0.2 |
| D8   | 6.3  | 8    | 6.6  | 7.8    | 0 ~ +0.15    | 2.4 | 0.65±0.1 | 2.2 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> | 1.1±0.2  | 3.3±0.2  | 1.05±0.2 |
| E    | 8    | 6.5  | 8.3  | 9.5    | 0 ~ +0.15    | 3.4 | 0.7±0.1  | 2.2 | 0.35 <sup>+0.15</sup> <sub>-0.20</sub> | 0.70±0.2 | 5.3±0.2  | 1.7±0.2  |
| F    | 8    | 10.5 | 8.3  | 10     | 0 ~ +0.15    | 3.4 | 1.2±0.2  | 3.1 | 0.70±0.2                               | 0.70±0.2 | 5.3±0.2  | 1.3±0.2  |
| G    | 10   | 10.5 | 10.3 | 12     | 0 ~ +0.15    | 3.5 | 1.2±0.2  | 4.6 | 0.70±0.2                               | 0.70±0.2 | 6.9±0.2  | 1.3±0.2  |
| H13  | 12.5 | 13.8 | 13.5 | 15     | -0.1 ~ +0.15 | 4.7 | 1.2±0.2  | 4.4 | 0.70±0.3                               | 2.2±0.2  | 7.1±0.2  | 2.4±0.2  |
| J16  | 16   | 16.8 | 17   | 19     | -0.1 ~ +0.15 | 5.5 | 1.4±0.2  | 6.7 | 0.70±0.3                               | 3.0±0.2  | 9.0±0.2  | 1.9±0.2  |
| K16  | 18   | 16.8 | 19   | 21     | -0.1 ~ +0.15 | 6.7 | 1.4±0.2  | 6.7 | 0.70±0.3                               | 3.0±0.2  | 11.0±0.2 | 1.9±0.2  |
| K21  | 18   | 21.8 | 19   | 21     | -0.1 ~ +0.15 | 6.7 | 1.4±0.2  | 6.7 | 0.70±0.3                               | 3.0±0.2  | 11.0±0.2 | 1.9±0.2  |

## 焊盘图案

用于片式电容器的电路板的焊盘图案请参考下述焊盘尺寸, 进行电路设计。特别是由于焊盘间距会影响安装强度, 因此, 请务必仔细确认。

### ● 标准产品



(推荐电路板焊盘尺寸)

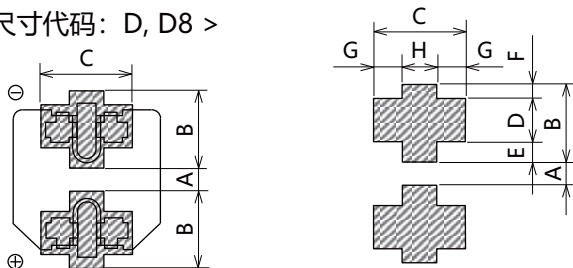
单位: mm

| 尺寸代码           | a   | b   | c   |
|----------------|-----|-----|-----|
| B (φ4)         | 1.0 | 2.5 | 1.6 |
| C (φ5)         | 1.5 | 2.8 | 1.6 |
| D (φ6.3)       | 1.8 | 3.2 | 1.6 |
| D8 (φ6.3x7.7L) | 1.8 | 3.2 | 1.6 |
| E (φ8x6.2L)    | 2.2 | 4.0 | 1.6 |
| F (φ8x10.2L)   | 3.1 | 4.0 | 2.0 |
| G (φ10x10.2L)  | 4.6 | 4.1 | 2.0 |
| H (φ12.5)      | 4.0 | 5.7 | 2.0 |
| J (φ16)        | 6.0 | 6.5 | 2.5 |
| K (φ18)        | 6.0 | 7.5 | 2.5 |

特别是当a尺寸过大, 由于横倾整流片不能形成, 因此安装强度会下降。

### ● 耐振产品

< 尺寸代码: D, D8 >



(推荐电路板焊盘尺寸)

单位: mm

| 尺寸代码           | A   | B   | C   | D   | E    | F    | G   | H   |
|----------------|-----|-----|-----|-----|------|------|-----|-----|
| D (φ6.3xL6.1)  | 1.2 | 3.6 | 3.2 | 2.0 | 0.95 | 0.65 | 1.0 | 1.2 |
| D8 (φ6.3xL8.0) | 1.2 | 3.6 | 3.2 | 2.0 | 0.95 | 0.65 | 1.0 | 1.2 |
| E (φ8x6.5L)    | 1.8 | 4.2 | 5.0 | 1.3 | 1.5  | 1.4  | 1.5 | 2.0 |
| F (φ8x10.5L)   | 2.7 | 4.0 | 4.7 | 1.3 | 1.0  | 1.7  | 1.1 | 2.5 |
| G (φ10)        | 3.9 | 4.4 | 4.7 | 1.3 | 1.2  | 1.9  | 1.1 | 2.5 |
| H (φ12.5)      | 3.9 | 6.0 | 6.9 | 2.8 | 1.3  | 1.9  | 2.2 | 2.5 |
| J (φ16)        | 5.8 | 6.8 | 6.2 | 3.6 | 1.3  | 1.9  | 1.7 | 2.8 |
| K (φ18)        | 5.8 | 7.3 | 6.2 | 3.6 | 1.8  | 1.9  | 1.7 | 2.8 |

特别是当A尺寸过大, 由于横倾整流片不能形成, 因此安装强度会下降。

< 尺寸代码: E, F, G, H, J, K >



\* 请务必根据贵公司的设计标准, 考虑其贴装性能, 焊接性能, 安装强度等后再行决定。

\* φ6.3耐震品采用辅助端子覆盖到座板侧面的构造。如果要用图像识别确认辅助端子侧面焊角的形成, 须事先研讨能充分形成焊脚的焊锡条件。

## 特性一览表

耐久性: 105 °C 2000 小时 (≥ φ12.5 : 5000 小时)

| 额定电压<br>(V.DC) | 静电容量<br>(±20 %)<br>(μF) | 产品尺寸<br>(mm) |      |            | 尺寸<br>代码<br>*1 | 特 性                             |                          |                     | 型 号          |              | 回流          | 最少包装<br>数量 |
|----------------|-------------------------|--------------|------|------------|----------------|---------------------------------|--------------------------|---------------------|--------------|--------------|-------------|------------|
|                |                         | φD           | L    |            |                | 额定<br>纹波电流<br>*2<br>(mA r.m.s.) | ESR <sup>*3</sup><br>(Ω) | tan δ <sup>*4</sup> | 标准品          | 耐震动规格品       |             |            |
|                |                         |              | 标准品  | 耐震动<br>规格品 |                |                                 |                          |                     |              |              |             |            |
| 6.3            | 22                      | 4            | 5.8  | -          | B              | 90                              | 1.35                     | 0.26                | EEEFK0J220R  | -            | (1)         | 2000       |
|                | 47                      | 4            | 5.8  | -          | (B)            | 90                              | 1.35                     | 0.26                | EEEFK0J470UR | -            | (1)         | 2000       |
|                |                         | 5            | 5.8  | -          | C              | 160                             | 0.70                     | 0.26                | EEEFK0J470R  | -            | (1)         | 1000       |
|                | 100                     | 5            | 5.8  | -          | (C)            | 160                             | 0.70                     | 0.26                | EEEFK0J101UR | -            | (1)         | 1000       |
|                |                         | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.26                | EEEFK0J101P  | EEEFK0J101V  | (1)         | 1000       |
|                | 220                     | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.26                | EEEFK0J221P  | EEEFK0J221V  | (1)         | 1000       |
|                | 330                     | 6.3          | 7.7  | 8.0        | D8             | 280                             | 0.34                     | 0.26                | EEEFK0J331XP | EEEFK0J331XV | (1)         | 900        |
|                |                         | 8            | 6.2  | 6.5        | E              | 300                             | 0.26                     | 0.26                | EEEFK0J331P  | EEEFK0J331V  | (2)         | 1000       |
|                | 470                     | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.26                | EEEFK0J471P  | EEEFK0J471V  | (2)         | 500        |
|                | 1000                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.26                | EEEFK0J102P  | EEEFK0J102V  | (2)         | 500        |
| 1500           | 10                      | 10.2         | 10.5 | G          | 850            | 0.08                            | 0.26                     | EEEFK0J152P         | EEEFK0J152V  | (2)          | 500         |            |
| 3300           | 12.5                    | 13.5         | 13.8 | H13        | 1100           | 0.06                            | 0.30                     | EEVFK0J332Q         | EEVFK0J332V  | (3)          | 200         |            |
| 6800           | 16                      | 16.5         | 16.8 | J16        | 1800           | 0.035                           | 0.36                     | EEVFK0J682M         | EEVFK0J682V  | (3)          | 125         |            |
| 10             | 22                      | 4            | 5.8  | -          | B              | 90                              | 1.35                     | 0.19                | EEEFK1A220R  | -            | (1)         | 2000       |
|                | 33                      | 4            | 5.8  | -          | (B)            | 90                              | 1.35                     | 0.19                | EEEFK1A330UR | -            | (1)         | 2000       |
|                |                         | 5            | 5.8  | -          | C              | 160                             | 0.70                     | 0.19                | EEEFK1A330R  | -            | (1)         | 1000       |
|                | 150                     | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.19                | EEEFK1A151P  | EEEFK1A151V  | (1)         | 1000       |
|                |                         | 6.3          | 7.7  | 8.0        | D8             | 280                             | 0.34                     | 0.19                | EEEFK1A221XP | EEEFK1A221XV | (1)         | 900        |
|                | 220                     | 8            | 6.2  | 6.5        | E              | 300                             | 0.26                     | 0.19                | EEEFK1A221P  | EEEFK1A221V  | (2)         | 1000       |
|                |                         | 330          | 8    | 10.2       | 10.5           | F                               | 600                      | 0.16                | 0.19         | EEEFK1A331P  | EEEFK1A331V | (2)        |
|                | 470                     | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.19                | EEEFK1A471P  | EEEFK1A471V  | (2)         | 500        |
|                | 680                     | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.19                | EEEFK1A681P  | EEEFK1A681V  | (2)         | 500        |
|                | 1000                    | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.19                | EEEFK1A102P  | EEEFK1A102V  | (2)         | 500        |
| 2200           | 12.5                    | 13.5         | 13.8 | H13        | 1100           | 0.06                            | 0.21                     | EEVFK1A222Q         | EEVFK1A222V  | (3)          | 200         |            |
| 4700           | 16                      | 16.5         | 16.8 | J16        | 1800           | 0.035                           | 0.25                     | EEVFK1A472M         | EEVFK1A472V  | (3)          | 125         |            |
| 6800           | 18                      | 16.5         | 16.8 | K16        | 2060           | 0.033                           | 0.29                     | EEVFK1A682M         | EEVFK1A682V  | (3)          | 125         |            |
| 16             | 10                      | 4            | 5.8  | -          | B              | 90                              | 1.35                     | 0.16                | EEEFK1C100R  | -            | (1)         | 2000       |
|                | 22                      | 4            | 5.8  | -          | (B)            | 90                              | 1.35                     | 0.16                | EEEFK1C220UR | -            | (1)         | 2000       |
|                |                         | 5            | 5.8  | -          | C              | 160                             | 0.70                     | 0.16                | EEEFK1C220R  | -            | (1)         | 1000       |
|                | 47                      | 5            | 5.8  | -          | (C)            | 160                             | 0.70                     | 0.16                | EEEFK1C470UR | -            | (1)         | 1000       |
|                |                         | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.16                | EEEFK1C470P  | EEEFK1C470V  | (1)         | 1000       |
|                | 68                      | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.16                | EEEFK1C680P  | EEEFK1C680V  | (1)         | 1000       |
|                | 100                     | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.16                | EEEFK1C101P  | EEEFK1C101V  | (1)         | 1000       |
|                | 150                     | 6.3          | 7.7  | 8.0        | D8             | 280                             | 0.34                     | 0.16                | EEEFK1C151XP | EEEFK1C151XV | (1)         | 900        |
|                |                         | 6.3          | 7.7  | 8.0        | D8             | 280                             | 0.34                     | 0.16                | EEEFK1C221XP | EEEFK1C221XV | (1)         | 900        |
|                | 220                     | 8            | 6.2  | 6.5        | E              | 300                             | 0.26                     | 0.16                | EEEFK1C221P  | EEEFK1C221V  | (2)         | 1000       |
| 330            |                         | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.16                | EEEFK1C331P  | EEEFK1C331V  | (2)         | 500        |
| 470            | 8                       | 10.2         | 10.5 | F          | 600            | 0.16                            | 0.16                     | EEEFK1C471P         | EEEFK1C471V  | (2)          | 500         |            |
| 680            | 10                      | 10.2         | 10.5 | G          | 850            | 0.08                            | 0.16                     | EEEFK1C681P         | EEEFK1C681V  | (2)          | 500         |            |
| 1500           | 12.5                    | 13.5         | 13.8 | H13        | 1100           | 0.06                            | 0.16                     | EEVFK1C152Q         | EEVFK1C152V  | (3)          | 200         |            |
| 3300           | 16                      | 16.5         | 16.8 | J16        | 1800           | 0.035                           | 0.20                     | EEVFK1C332M         | EEVFK1C332V  | (3)          | 125         |            |
| 4700           | 18                      | 16.5         | 16.8 | K16        | 2060           | 0.033                           | 0.22                     | EEVFK1C472M         | EEVFK1C472V  | (3)          | 125         |            |
| 25             | 10                      | 4            | 5.8  | -          | B              | 90                              | 1.35                     | 0.14                | EEEFK1E100R  | -            | (1)         | 2000       |
|                | 22                      | 5            | 5.8  | -          | C              | 160                             | 0.70                     | 0.14                | EEEFK1E220R  | -            | (1)         | 1000       |
|                |                         | 5            | 5.8  | -          | (C)            | 160                             | 0.70                     | 0.14                | EEEFK1E330UR | -            | (1)         | 1000       |
|                | 33                      | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.14                | EEEFK1E330P  | EEEFK1E330V  | (1)         | 1000       |
|                |                         | 47           | 6.3  | 5.8        | 6.1            | D                               | 240                      | 0.36                | 0.14         | EEEFK1E470P  | EEEFK1E470V | (1)        |
|                | 68                      | 6.3          | 5.8  | 6.1        | D              | 240                             | 0.36                     | 0.14                | EEEFK1E680P  | EEEFK1E680V  | (1)         | 1000       |
|                | 100                     | 6.3          | 7.7  | 8.0        | D8             | 280                             | 0.34                     | 0.14                | EEEFK1E101XP | EEEFK1E101XV | (1)         | 900        |
|                |                         | 8            | 6.2  | 6.5        | E              | 300                             | 0.26                     | 0.14                | EEEFK1E101P  | EEEFK1E101V  | (2)         | 1000       |
|                | 150                     | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.14                | EEEFK1E151P  | EEEFK1E151V  | (2)         | 500        |
|                | 220                     | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.14                | EEEFK1E221P  | EEEFK1E221V  | (2)         | 500        |
| 330            | 8                       | 10.2         | 10.5 | F          | 600            | 0.16                            | 0.14                     | EEEFK1E331P         | EEEFK1E331V  | (2)          | 500         |            |
| 470            | 10                      | 10.2         | 10.5 | G          | 850            | 0.08                            | 0.14                     | EEEFK1E471P         | EEEFK1E471V  | (2)          | 500         |            |
| 1000           | 12.5                    | 13.5         | 13.8 | H13        | 1100           | 0.06                            | 0.14                     | EEVFK1E102Q         | EEVFK1E102V  | (3)          | 200         |            |
| 1500           | 16                      | 16.5         | 16.8 | J16        | 1800           | 0.035                           | 0.14                     | EEVFK1E152M         | EEVFK1E152V  | (3)          | 125         |            |
| 2200           | 16                      | 16.5         | 16.8 | J16        | 1800           | 0.035                           | 0.16                     | EEVFK1E222M         | EEVFK1E222V  | (3)          | 125         |            |
| 3300           | 18                      | 16.5         | 16.8 | K16        | 2060           | 0.033                           | 0.18                     | EEVFK1E332M         | EEVFK1E332V  | (3)          | 125         |            |

\*1: 尺寸代码 ( ) 为小型化品

\*2: 额定纹波电流 (100 kHz / +105 °C)

\*3: ESR (100 kHz / +20 °C)

\*4: tan δ (120 Hz / +20 °C)

· 关于回流焊保证条件, 编带包装规格, 请参照那个项目的页

## 特性一览表

耐久性: 105 °C 2000 小时 (≥ φ12.5 : 5000 小时)

| 额定电压 (V.DC) | 静电容量 (±20%) (μF) | 产品尺寸 (mm) |      |        | 尺寸代码 *1 | 特性                    |            |             | 型号           |              | 回流  | 最少包装数量 |
|-------------|------------------|-----------|------|--------|---------|-----------------------|------------|-------------|--------------|--------------|-----|--------|
|             |                  | φD        | L    |        |         | 额定纹波电流 *2 (mA r.m.s.) | ESR *3 (Ω) | tan δ *4    | 标准品          | 耐震动规格品       |     |        |
|             |                  |           | 标准品  | 耐震动规格品 |         |                       |            |             |              |              |     |        |
| 35          | 4.7              | 4         | 5.8  | -      | B       | 90                    | 1.35       | 0.12        | EEEFK1V4R7R  | -            | (1) | 2000   |
|             | 10               | 4         | 5.8  | -      | (B)     | 90                    | 1.35       | 0.12        | EEEFK1V100UR | -            | (1) | 2000   |
|             |                  | 5         | 5.8  | -      | C       | 160                   | 0.70       | 0.12        | EEEFK1V100R  | -            | (1) | 1000   |
|             | 22               | 5         | 5.8  | -      | C       | 160                   | 0.70       | 0.12        | EEEFK1V220R  | -            | (1) | 1000   |
|             | 33               | 6.3       | 5.8  | 6.1    | D       | 240                   | 0.36       | 0.12        | EEEFK1V330P  | EEEFK1V330V  | (1) | 1000   |
|             | 47               | 6.3       | 5.8  | 6.1    | D       | 240                   | 0.36       | 0.12        | EEEFK1V470P  | EEEFK1V470V  | (1) | 1000   |
|             | 68               | 6.3       | 7.7  | 8      | D8      | 280                   | 0.34       | 0.12        | EEEFK1V680XP | EEEFK1V680XV | (1) | 900    |
|             | 100              | 6.3       | 7.7  | 8      | D8      | 280                   | 0.34       | 0.12        | EEEFK1V101XP | EEEFK1V101XV | (1) | 900    |
|             |                  | 8         | 10.2 | 10.5   | F       | 600                   | 0.16       | 0.12        | EEEFK1V101P  | EEEFK1V101V  | (2) | 500    |
|             | 150              | 8         | 10.2 | 10.5   | F       | 600                   | 0.16       | 0.12        | EEEFK1V151P  | EEEFK1V151V  | (2) | 500    |
|             | 220              | 8         | 10.2 | 10.5   | F       | 600                   | 0.16       | 0.12        | EEEFK1V221P  | EEEFK1V221V  | (2) | 500    |
|             | 330              | 10        | 10.2 | 10.5   | G       | 850                   | 0.08       | 0.12        | EEEFK1V331P  | EEEFK1V331V  | (2) | 500    |
|             | 470              | 12.5      | 13.5 | 13.8   | H13     | 1100                  | 0.06       | 0.12        | EEVFK1V471Q  | EEVFK1V471V  | (3) | 200    |
|             | 680              | 12.5      | 13.5 | 13.8   | H13     | 1100                  | 0.06       | 0.12        | EEVFK1V681Q  | EEVFK1V681V  | (3) | 200    |
|             | 1000             | 16        | 16.5 | 16.8   | J16     | 1800                  | 0.035      | 0.12        | EEVFK1V102M  | EEVFK1V102V  | (3) | 125    |
| 1500        | 16               | 16.5      | 16.8 | J16    | 1800    | 0.035                 | 0.12       | EEVFK1V152M | EEVFK1V152V  | (3)          | 125 |        |
| 50          | 4.7              | 4         | 5.8  | -      | B       | 60                    | 2.90       | 0.10        | EEEFK1H4R7R  | -            | (1) | 2000   |
|             | 10               | 5         | 5.8  | -      | (C)     | 85                    | 1.52       | 0.10        | EEEFK1H100UR | -            | (1) | 1000   |
|             |                  | 6.3       | 5.8  | 6.1    | D       | 165                   | 0.88       | 0.10        | EEEFK1H100P  | EEEFK1H100V  | (1) | 1000   |
|             | 22               | 6.3       | 5.8  | 6.1    | D       | 165                   | 0.88       | 0.10        | EEEFK1H220P  | EEEFK1H220V  | (1) | 1000   |
|             | 33               | 6.3       | 7.7  | 8      | D8      | 195                   | 0.68       | 0.10        | EEEFK1H330XP | EEEFK1H330XV | (1) | 900    |
|             |                  | 8         | 6.2  | 6.5    | E       | 195                   | 0.68       | 0.10        | EEEFK1H330P  | EEEFK1H330V  | (2) | 1000   |
|             | 47               | 6.3       | 7.7  | 8      | D8      | 195                   | 0.68       | 0.10        | EEEFK1H470XP | EEEFK1H470XV | (1) | 900    |
|             |                  | 8         | 6.2  | 6.5    | E       | 195                   | 0.68       | 0.10        | EEEFK1H470P  | EEEFK1H470V  | (2) | 1000   |
|             | 100              | 8         | 10.2 | 10.5   | F       | 350                   | 0.34       | 0.10        | EEEFK1H101P  | EEEFK1H101V  | (2) | 500    |
|             | 150              | 10        | 10.2 | 10.5   | G       | 670                   | 0.18       | 0.10        | EEEFK1H151P  | EEEFK1H151V  | (2) | 500    |
|             | 220              | 10        | 10.2 | 10.5   | G       | 670                   | 0.18       | 0.10        | EEEFK1H221P  | EEEFK1H221V  | (2) | 500    |
|             | 330              | 12.5      | 13.5 | 13.8   | H13     | 900                   | 0.12       | 0.10        | EEVFK1H331Q  | EEVFK1H331V  | (3) | 200    |
|             | 390              | 12.5      | 13.5 | 13.8   | H13     | 900                   | 0.12       | 0.10        | EEVFK1H391Q  | EEVFK1H391V  | (3) | 200    |
|             | 470              | 16        | 16.5 | 16.8   | J16     | 1610                  | 0.073      | 0.10        | EEVFK1H471M  | EEVFK1H471V  | (3) | 125    |
|             | 560              | 16        | 16.5 | 16.8   | J16     | 1610                  | 0.073      | 0.10        | EEVFK1H561M  | EEVFK1H561V  | (3) | 125    |
| 680         | 16               | 16.5      | 16.8 | J16    | 1610    | 0.073                 | 0.10       | EEVFK1H681M | EEVFK1H681V  | (3)          | 125 |        |
| 1000        | 16               | 16.5      | 16.8 | J16    | 1610    | 0.073                 | 0.10       | EEVFK1H102M | EEVFK1H102V  | (3)          | 125 |        |
| 63          | 4.7              | 5         | 5.8  | -      | C       | 50                    | 3.00       | 0.08        | EEEFK1J4R7R  | -            | (1) | 1000   |
|             | 10               | 6.3       | 5.8  | 6.1    | D       | 80                    | 1.50       | 0.08        | EEEFK1J100P  | EEEFK1J100V  | (1) | 1000   |
|             |                  | 6.3       | 7.7  | 8      | D8      | 120                   | 1.20       | 0.08        | EEEFK1J220XP | EEEFK1J220XV | (1) | 900    |
|             | 22               | 8         | 6.2  | 6.5    | E       | 120                   | 1.20       | 0.08        | EEEFK1J220P  | EEEFK1J220V  | (2) | 1000   |
|             | 33               | 8         | 10.2 | 10.5   | F       | 250                   | 0.65       | 0.08        | EEEFK1J330P  | EEEFK1J330V  | (2) | 500    |
|             | 47               | 8         | 10.2 | 10.5   | F       | 250                   | 0.65       | 0.08        | EEEFK1J470P  | EEEFK1J470V  | (2) | 500    |
|             | 68               | 8         | 10.2 | 10.5   | (F)     | 250                   | 0.65       | 0.08        | EEEFK1J680UP | EEEFK1J680UV | (2) | 500    |
|             | 100              | 10        | 10.2 | 10.5   | G       | 400                   | 0.35       | 0.08        | EEEFK1J101P  | EEEFK1J101V  | (2) | 500    |
|             | 150              | 12.5      | 13.5 | 13.8   | H13     | 800                   | 0.16       | 0.08        | EEVFK1J151Q  | EEVFK1J151V  | (3) | 200    |
|             | 220              | 12.5      | 13.5 | 13.8   | H13     | 800                   | 0.16       | 0.08        | EEVFK1J221Q  | EEVFK1J221V  | (3) | 200    |
| 80          | 470              | 16        | 16.5 | 16.8   | J16     | 1410                  | 0.082      | 0.08        | EEVFK1J471M  | EEVFK1J471V  | (3) | 125    |
|             | 680              | 18        | 16.5 | 16.8   | K16     | 1690                  | 0.08       | 0.08        | EEVFK1J681M  | EEVFK1J681V  | (3) | 125    |
|             | 3.3              | 5         | 5.8  | -      | C       | 25                    | 5.00       | 0.08        | EEEFK1K3R3R  | -            | (1) | 1000   |
|             | 4.7              | 6.3       | 5.8  | 6.1    | D       | 40                    | 3.00       | 0.08        | EEEFK1K4R7P  | EEEFK1K4R7V  | (1) | 1000   |
|             | 10               | 6.3       | 7.7  | 8      | D8      | 60                    | 2.40       | 0.08        | EEEFK1K100XP | EEEFK1K100XV | (1) | 900    |
|             |                  | 8         | 6.2  | 6.5    | E       | 60                    | 2.40       | 0.08        | EEEFK1K100P  | EEEFK1K100V  | (2) | 1000   |
|             | 22               | 8         | 10.2 | 10.5   | F       | 130                   | 1.30       | 0.08        | EEEFK1K220P  | EEEFK1K220V  | (2) | 500    |
|             | 33               | 8         | 10.2 | 10.5   | F       | 130                   | 1.30       | 0.08        | EEEFK1K330P  | EEEFK1K330V  | (2) | 500    |
| 47          | 10               | 10.2      | 10.5 | G      | 200     | 0.70                  | 0.08       | EEEFK1K470P | EEEFK1K470V  | (2)          | 500 |        |
| 68          | 12.5             | 13.5      | 13.8 | H13    | 500     | 0.32                  | 0.08       | EEVFK1K680Q | EEVFK1K680V  | (3)          | 200 |        |
| 100         | 12.5             | 13.5      | 13.8 | H13    | 500     | 0.32                  | 0.08       | EEVFK1K101Q | EEVFK1K101V  | (3)          | 200 |        |
| 150         | 12.5             | 13.5      | 13.8 | H13    | 500     | 0.32                  | 0.08       | EEVFK1K151Q | EEVFK1K151V  | (3)          | 200 |        |
| 330         | 16               | 16.5      | 16.8 | J16    | 793     | 0.17                  | 0.08       | EEVFK1K331M | EEVFK1K331V  | (3)          | 125 |        |
| 470         | 18               | 16.5      | 16.8 | K16    | 917     | 0.153                 | 0.08       | EEVFK1K471M | EEVFK1K471V  | (3)          | 125 |        |

\*1: 尺寸代码 ( ) 为小型化品

\*2: 额定纹波电流 (100 kHz / +105 °C)

\*3: ESR (100 kHz / +20 °C)

\*4: tan δ (120 Hz / +20 °C)

· 关于回流焊保证条件, 编带包装规格, 请参照那个项目的页

## 特性一览表

耐久性: 105 °C 2000 小时 (≥ φ12.5 : 5000 小时)

| 额定电压<br>(V.DC) | 静电容量<br>(±20%)<br>(μF) | 产品尺寸<br>(mm) |      |            | 尺寸<br>代码<br>*1 | 特 性                             |                          |                     | 型 号          |              | 回流  | 最少包装<br>数量 |
|----------------|------------------------|--------------|------|------------|----------------|---------------------------------|--------------------------|---------------------|--------------|--------------|-----|------------|
|                |                        | φD           | L    |            |                | 额定<br>纹波电流<br>*2<br>(mA r.m.s.) | ESR* <sup>3</sup><br>(Ω) | tan δ* <sup>4</sup> | 标准品          | 耐震动规格品       |     |            |
|                |                        |              | 标准品  | 耐震动<br>规格品 |                |                                 |                          |                     |              |              |     |            |
| 100            | 22                     | 8            | 10.2 | 10.5       | F              | 130                             | 1.30                     | 0.07                | EEEFK2A220P  | EEEFK2A220V  | (2) | 500        |
|                | 33                     | 10           | 10.2 | 10.5       | G              | 200                             | 0.70                     | 0.07                | EEEFK2A330P  | EEEFK2A330V  | (2) | 500        |
|                | 47                     | 12.5         | 13.5 | 13.8       | H13            | 500                             | 0.32                     | 0.07                | E EVFK2A470Q | E EVFK2A470V | (3) | 200        |
|                | 68                     | 12.5         | 13.5 | 13.8       | H13            | 500                             | 0.32                     | 0.07                | E EVFK2A680Q | E EVFK2A680V | (3) | 200        |
|                | 100                    | 16           | 16.5 | 16.8       | J16            | 793                             | 0.17                     | 0.07                | E EVFK2A101M | E EVFK2A101V | (3) | 125        |
|                | 150                    | 16           | 16.5 | 16.8       | J16            | 793                             | 0.17                     | 0.07                | E EVFK2A151M | E EVFK2A151V | (3) | 125        |
|                | 220                    | 18           | 16.5 | 16.8       | K16            | 917                             | 0.153                    | 0.07                | E EVFK2A221M | E EVFK2A221V | (3) | 125        |
|                | 330                    | 18           | 16.5 | 16.8       | K16            | 917                             | 0.153                    | 0.07                | E EVFK2A331M | E EVFK2A331V | (3) | 125        |

耐久性: 105 °C 5000 小时

| 额定电压<br>(V.DC) | 静电容量<br>(±20%)<br>(μF) | 产品尺寸<br>(mm) |      |            | 尺寸<br>代码<br>*1 | 特 性                             |                          |                     | 型 号          |              | 回流  | 最少包装<br>数量 |
|----------------|------------------------|--------------|------|------------|----------------|---------------------------------|--------------------------|---------------------|--------------|--------------|-----|------------|
|                |                        | φD           | L    |            |                | 额定<br>纹波电流<br>*2<br>(mA r.m.s.) | ESR* <sup>3</sup><br>(Ω) | tan δ* <sup>4</sup> | 标准品          | 耐震动规格品       |     |            |
|                |                        |              | 标准品  | 耐震动<br>规格品 |                |                                 |                          |                     |              |              |     |            |
| 6.3            | 470                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.26                | EEEFK0J471GP | EEEFK0J471GV | (2) | 500        |
|                | 1000                   | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.26                | EEEFK0J102GP | EEEFK0J102GV | (2) | 500        |
|                | 1500                   | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.26                | EEEFK0J152GP | EEEFK0J152GV | (2) | 500        |
| 10             | 330                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.19                | EEEFK1A331GP | EEEFK1A331GV | (2) | 500        |
|                | 470                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.19                | EEEFK1A471GP | EEEFK1A471GV | (2) | 500        |
|                | 680                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.19                | EEEFK1A681GP | EEEFK1A681GV | (2) | 500        |
|                | 1000                   | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.19                | EEEFK1A102GP | EEEFK1A102GV | (2) | 500        |
| 16             | 330                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.16                | EEEFK1C331GP | EEEFK1C331GV | (2) | 500        |
|                | 470                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.16                | EEEFK1C471GP | EEEFK1C471GV | (2) | 500        |
|                | 680                    | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.16                | EEEFK1C681GP | EEEFK1C681GV | (2) | 500        |
| 25             | 150                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.14                | EEEFK1E151GP | EEEFK1E151GV | (2) | 500        |
|                | 220                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.14                | EEEFK1E221GP | EEEFK1E221GV | (2) | 500        |
|                | 330                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.14                | EEEFK1E331GP | EEEFK1E331GV | (2) | 500        |
|                | 470                    | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.14                | EEEFK1E471GP | EEEFK1E471GV | (2) | 500        |
| 35             | 100                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.12                | EEEFK1V101GP | EEEFK1V101GV | (2) | 500        |
|                | 150                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.12                | EEEFK1V151GP | EEEFK1V151GV | (2) | 500        |
|                | 220                    | 8            | 10.2 | 10.5       | F              | 600                             | 0.16                     | 0.12                | EEEFK1V221GP | EEEFK1V221GV | (2) | 500        |
|                | 330                    | 10           | 10.2 | 10.5       | G              | 850                             | 0.08                     | 0.12                | EEEFK1V331GP | EEEFK1V331GV | (2) | 500        |
| 50             | 100                    | 8            | 10.2 | 10.5       | F              | 350                             | 0.34                     | 0.10                | EEEFK1H101GP | EEEFK1H101GV | (2) | 500        |
|                | 150                    | 10           | 10.2 | 10.5       | G              | 670                             | 0.18                     | 0.10                | EEEFK1H151GP | EEEFK1H151GV | (2) | 500        |
|                | 220                    | 10           | 10.2 | 10.5       | G              | 670                             | 0.18                     | 0.10                | EEEFK1H221GP | EEEFK1H221GV | (2) | 500        |

\*1: 尺寸代码 ( ) 为小型化品

\*2: 额定纹波电流 (100 kHz / +105 °C)

\*3: ESR (100 kHz / +20 °C)

\*4: tan δ (120 Hz / +20 °C)

· 关于回流焊保证条件, 编带包装规格, 请参照那个项目的页

## 本网站中记载的本公司商品及技术信息等用户使用时的 要求及注意事项

- 如将本规格书刊上的产品用于特殊质量以及有可靠性要求, 因其故障或误动作有可能会直接威胁生命或对人体造成危害等用途时 (例: 宇宙/航天设备, 运输/交通设备, 燃烧设备, 医疗设备, 防灾/防范设备, 安全装置等), 需要针对该用途进行规格确认, 请务必向弊司担当垂询。
- 本规格书记载了单个零部件的品质和性能。在使用时, 请务必在贴装在贵司产品上并在实际的使用环境下进行评估和确认。
- 无论任何用途, 如需用于高可靠性要求的设备时, 建议在采用保护电路及冗长电路等措施, 保护设备安全的同时, 请顾客进行安全性测试。
- 本规格书刊登的产品及其规格, 为了得到进一步的改进, 完善, 将会在没有预告的情况下进行更改, 请予以谅解。为此, 在最终设计, 购买或使用, 无论任何用途, 请事先申请并确认最新, 最详细的产品规格书。
- 本规格书刊登的技术信息中的产品典型动作, 应用电路等示例并不保证没有侵犯本公司或第三方的知识产权, 同时也不意味是对实施权的认可。
- 在出口或向非日本居住者提供本规格书刊登的产品, 产品规格, 技术信息时, 请遵守该国家的相关法律, 尤其是应遵守有关安全保障出口管理方面的法律法规。

## 关于EU RoHS指令 / REACH规定符合确认书

- 对应RoHS指令 / REACH规定的产品切换时期因产品而异。
- 如果使用库存品不确定是否对应RoHS指令 / REACH规定的话, 请通过「咨询表格」选择「业务咨询」向弊司垂询。

**如果脱离本规格书擅自使用弊司产品的话, 弊司不承担任何责任。**