

**SZ Series**

**+105°C, High Ripple Current (高纹波), Low Impedance(低阻抗品)**

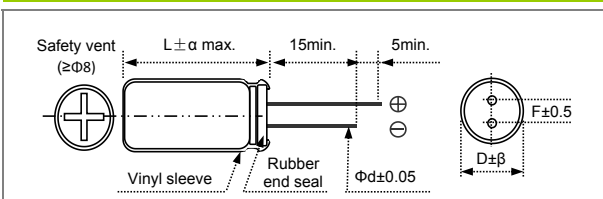
**FEATURES 特点**

- 1、Low Impedance for high frequency.
- 2、Life time: 2000 hours at 105°C.

**SPECIFICATIONS 规格表**

| Item 项目  | Performance Characteristics 特性参数   |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
|--|--|--|------|------|------|------|-----|------|--|---------------------|---|------|------|------|------|--|--|--|
| Operation Temperature Range 工作温度范围   | -40 to +105°C  |  |      |      |      |      |     |      | -25 to +105°C  |                     |   |      |      |      |      |  |  |  |
| Rated Working Voltage Range 额定电压范围   | 6.3 to 100 VDC   |  |      |      |      |      |     |      | 160 to 450 VDC   |                     |   |      |      |      |      |  |  |  |
| Nominal Capacitance Range 静电容量范围   | 0.47 to 4700µF   |  |      |      |      |      |     |      | 1 to 100µF   |                     |   |      |      |      |      |  |  |  |
| Capacitance Tolerance 静电容量允许偏差   | ±20%(120Hz, +20°C)   |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
| Leakage Current 漏电流  | LC≤0.01CV or 3(µA) Whichever is greater measured after 2 minutes application of rated working voltage at +20 °C 施加额定工作电压充电2分钟后读数, 二者取大值。 |  |      |      |      |      |     |      | LC≤0.03CV (µA) after 2 minutes application of rated working voltage at +20 °C 施加额定工作电压充电2分钟后读数 [C: 静电容量(uF), V: 额定电压(V)] |                     |   |      |      |      |      |  |  |  |
| Dissipaion Factor (tan δ) 损失角正切值 (120Hz, +20°C)  | Working Voltage(V)   | 6.3  | 10   | 16   | 25   | 35   | 50  | 63   | 80   | 100                 | 160   | 200  | 250  | 400  | 450  |  |  |  |
|  | tan δ(max)   | 0.22   | 0.19 | 0.16 | 0.14 | 0.12 | 0.1 | 0.09 | 0.08   | 0.08                | 0.15  | 0.15 | 0.15 | 0.20 | 0.20 |  |  |  |
| For capacitance value > 1000µF, add 0.02 per another 1000µF 标称容量值超过1000uF, 则每增加1000uF, 损失角正切值增加0.02  |  |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
| Low Temperature characteristics 温度特性(阻抗比)  | Impedance ratio max. at 120 Hz 阻抗比最大值  |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
|  | Working Voltage(V)   | 6.3  | 10   | 16   | 25   | 35   | 50  | 63   | 80   | 100                 | 160   | 200  | 250  | 400  | 450  |  |  |  |
|  | Z(-25°C)/ Z(+20°C)   | 4  | 3    | 2    | 2    | 2    | 2   | 2    | 2  | 2                   | 2   | 3    | 3    | 5    | 6    |  |  |  |
| Z(-40°C)/ Z(+20°C)   |  |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
| High Temperature Loading (Endurance) 高温负荷寿命(耐久性)   | Test conditions 试验条件   |  |      |      |      |      |     |      | Post test requirements at +20°C 试验后特性应满足如下要求   |                     |   |      |      |      |      |  |  |  |
|  | Duration 持续时间  | 2,000 hours (L≤10mm 1,000hours)  |      |      |      |      |     |      |  | Leakage current 漏电流 | ≤Initial specified value 初始规格值                    |      |      |      |      |  |  |  |
|  | Ambient temp. 环境温度   | +105°C   |      |      |      |      |     |      |  | Cap. Change 静电容量变化率 | within ±20% of initial measured value 初始测试值的±20%内 |      |      |      |      |  |  |  |
|  | Applied voltage 施加电压   | DC voltage with maximum permissible ripple current specified at +105°C 施加直流电压与额定纹波电流(所加电压峰值[DC+AC]不超过额定工作电压) |      |      |      |      |     |      |  | D.F.(tan δ) 损失角正切值  | ≤200% of initial specified value 2倍初始规格值          |      |      |      |      |  |  |  |
| Before test requirement: Resumed 16 hours at normal temperature 测试前将电容在常温中放置16小时   |  |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
| Shelf Life 高温储存寿命  | Test conditions 试验条件   |  |      |      |      |      |     |      | Post test requirements at +20°C 试验后特性应满足如下要求   |                     |   |      |      |      |      |  |  |  |
|  | Duration 持续时间  | 1,000 hours  |      |      |      |      |     |      |  | Leakage current 漏电流 | ≤Initial specified value 初始规格值                    |      |      |      |      |  |  |  |
|  | Ambient temp. 环境温度   | +105°C   |      |      |      |      |     |      |  | Cap. Change 静电容量变化率 | within ±20% of initial measured value 初始测试值的±20%内 |      |      |      |      |  |  |  |
|  | Applied voltage 施加电压   | (None) 无   |      |      |      |      |     |      |  | D.F.(tan δ) 损失角正切值  | ≤200% of initial specified value 2倍初始规格值          |      |      |      |      |  |  |  |
| ◆(Before the measurements, the capacitor shall be pretreated by applying DC working voltage for 30min, after discharged and then stored under standard atmospheric conditions for 24-48 hours) 测试前应将电容在常温中施加工作电压30分钟, 放电后在标准气压下放置24~48小时 |  |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |
| Other 其他   | JIS C-5101 (IEC 60384)   |  |      |      |      |      |     |      |  |                     |   |      |      |      |      |  |  |  |

**CASE SIZE TABLE 尺寸图 (Unit : mm)**



|    |            |                   |     |                          |            |     |     |     |     |
|----|------------|-------------------|-----|--------------------------|------------|-----|-----|-----|-----|
| ΦD | 4          | 5                 | 6.3 | 8(L<20)                  | 8(L≥20)    | 10  | 13  | 16  |     |
| F  | 1.5        | 2.0               | 2.5 | 3.5                      |            | 5.0 | 5.0 | 7.5 |     |
| Φd | 0.45       | 0.5<br>L=7mm 0.45 |     | 0.5 or 0.6<br>L=7mm 0.45 |            | 0.6 | 0.6 | 0.6 | 0.8 |
| α  | (L<20) 1.5 |                   |     |                          | (L≥20) 2.0 |     |     |     |     |
| β  | (D<20) 0.5 |                   |     |                          | (D≥20) 1.0 |     |     |     |     |

**Multiplier for Ripple Current vs. Frequency 纹波电流频率修正系数**

| Frequency Coefficient 频率系数 | Cap(µF) | 120Hz | 1k Hz | 10k Hz | 100k Hz |
|----------------------------|---------|-------|-------|--------|---------|
| ~180                       |         | 0.40  | 0.75  | 0.90   | 1.00    |
| 220~560                    |         | 0.50  | 0.85  | 0.94   | 1.00    |
| 680~1800                   |         | 0.60  | 0.87  | 0.95   | 1.00    |
| 2200~3900                  |         | 0.75  | 0.90  | 0.95   | 1.00    |
| 4700                       |         | 0.85  | 0.95  | 0.98   | 1.00    |

**Multiplier for Ripple Current vs. Temperature 纹波电流温度修正系数**

| Temperature Coefficient 温度系数 | Temperature | 45°C | 60°C | 70°C | 85°C | 95°C | 105°C |
|------------------------------|-------------|------|------|------|------|------|-------|
| Multiplier                   |             | 2.1  | 1.9  | 1.65 | 1.4  | 1.25 | 1.00  |

**SZ Series**

**+105°C, High Ripple Current (高纹波), Low Impedance(低阻抗品)**

**STANDARD RATINGS 标准品一览表**

| Voltage(Code) |      | 6.3V(0J)  |           |      | 10V(1A)   |           |        | 16V(1C)   |           |      |
|---------------|------|-----------|-----------|------|-----------|-----------|--------|-----------|-----------|------|
| Cap.(μF)      | Code | Case Size | Impedance | R.C  | Case Size | Impedance | R.C    | Case Size | Impedance | R.C  |
| 22            | 022  |           |           |      | 4×7       | 3.3       | 70     | 5×7       | 1.7       | 110  |
| 33            | 033  | 5×7       | 1.7       | 90   | 5×7       | 1.7       | 110    | 6.3×7     | 0.8       | 130  |
| 47            | 047  | 5×7       | 1.7       | 110  | 4×7       | 1.5       | 110    | 5×11      | 0.7       | 140  |
|               |      |           |           |      | 5×11      | 1.2       | 120    |           |           |      |
|               |      |           |           |      | 6.3×7     | 0.8       | 140    | 6.3×7     | 0.8       | 150  |
| 68            | 068  | 6.3×7     | 0.8       | 130  | 6.3×7     | 0.8       | 150    | 8×7       | 0.5       | 170  |
| 100           | 101  | 6.3×7     | 0.8       | 140  | 5×7       | 0.75      | 130    | 5×11      | 0.69      | 195  |
|               |      |           |           |      | 8×7       | 0.5       | 170    | 6.3×12    | 0.500     | 265  |
|               |      |           |           |      | 5×11      | 0.8       | 210    | 8×7       | 0.500     | 200  |
|               |      |           |           |      | 6.3×12    | 0.75      | 230    |           |           |      |
| 120           | 121  |           |           |      |           |           | 6.3×12 | 0.470     | 270       |      |
| 150           | 151  | 5×11      | 0.9       | 185  | 8×7       | 0.500     | 200    |           |           |      |
|               |      | 6.3×7     | 0.8       | 160  |           |           |        |           |           |      |
|               |      | 6.3×12    | 0.81      | 220  |           |           |        |           |           |      |
| 220           | 221  | 5×11      | 0.75      | 190  | 6.3×7     | 0.450     | 230    | 6.3×7     | 0.420     | 300  |
|               |      | 8×7       | 0.500     | 200  | 5×11      | 0.430     | 200    | 6.3×12    | 0.380     | 340  |
|               |      | 6.3×12    | 0.650     | 310  | 6.3×12    | 0.350     | 340    | 8×12      | 0.250     | 480  |
| 330           | 331  | 6.3×7     | 0.600     | 270  | 6.3×7     | 0.330     | 360    | 6.3×12    | 0.200     | 500  |
|               |      | 5×11      | 0.680     | 240  |           |           |        |           |           |      |
|               |      | 6.3×12    | 0.550     | 330  | 6.3×12    | 0.300     | 400    |           |           |      |
|               |      | 8×12      | 0.420     | 390  | 8×12      | 0.270     | 460    | 8×12      | 0.156     | 590  |
| 470           | 471  | 6.3×7     | 0.400     | 300  | 6.3×7     | 0.400     | 290    | 6.3×12    | 0.153     | 520  |
|               |      | 6.3×12    | 0.350     | 400  | 6.3×12    | 0.260     | 500    | 8×10      | 0.145     | 600  |
|               |      | 8×12      | 0.250     | 450  | 8×10      | 0.255     | 530    | 8×12      | 0.140     | 680  |
|               |      |           |           |      | 8×12      | 0.250     | 580    | 8×14      | 0.140     | 700  |
|               |      |           |           |      |           |           |        | 8×16      | 0.130     | 710  |
| 560           | 561  | 8×12      | 0.230     | 490  | 8×12      | 0.170     | 550    | 8×14      | 0.115     | 760  |
|               |      |           |           |      | 10×13     | 0.160     | 635    | 10×13     | 0.105     | 785  |
|               |      |           |           |      |           |           |        |           |           |      |
| 680           | 681  | 6.3×12    | 0.220     | 500  | 6.3×12    | 0.17      | 500    | 8×14      | 0.095     | 610  |
|               |      | 8×9       | 0.215     | 490  | 8×9       | 0.150     | 550    | 8×16      | 0.087     | 640  |
|               |      | 8×12      | 0.210     | 550  | 8×12      | 0.140     | 710    | 10×13     | 0.095     | 700  |
|               |      |           |           |      | 10×13     | 0.110     | 765    | 10×16     | 0.092     | 1100 |
| 820           | 821  | 8×16      | 0.200     | 620  | 8×12      | 0.095     | 810    | 8×14      | 0.090     | 1110 |
|               |      |           |           |      |           |           |        | 8×16      | 0.085     | 1130 |
|               |      |           |           |      |           |           |        | 8×20      | 0.080     | 1150 |
|               |      |           |           |      | 10×16     | 0.080     | 890    | 10×16     | 0.078     | 1180 |
| 1000          | 102  | 6.3×14    | 0.200     | 630  | 8×12      | 0.090     | 820    | 8×16      | 0.085     | 1180 |
|               |      | 8×12      | 0.180     | 690  | 8×14      | 0.085     | 830    | 8×20      | 0.080     | 1230 |
|               |      | 8×16      | 0.150     | 750  | 8×16      | 0.080     | 890    | 10×13     | 0.078     | 1180 |
|               |      | 10×13     | 0.170     | 770  | 8×20      | 0.078     | 910    | 10×16     | 0.075     | 1250 |
|               |      |           |           |      | 10×13     | 0.076     | 1000   | 10×20     | 0.065     | 1350 |
| 1200          | 122  | 8×16      | 0.165     | 800  | 8×16      | 0.073     | 1100   | 10×16     | 0.055     | 1380 |
|               |      | 10×13     | 0.160     | 830  | 10×16     | 0.068     | 1200   | 10×20     | 0.046     | 1400 |
|               |      |           |           |      |           |           |        |           |           |      |
| 1500          | 152  | 8×16      | 0.150     | 910  | 8×20      | 0.063     | 1150   | 10×16     | 0.065     | 1250 |
|               |      | 10×13     | 0.160     | 950  | 10×16     | 0.055     | 1300   | 10×20     | 0.063     | 1300 |
|               |      | 10×16     | 0.140     | 1100 | 10×20     | 0.054     | 1380   | 13×21     | 0.060     | 1380 |
| 2200          | 222  | 10×15     | 0.110     | 1200 | 10×17     | 0.055     | 1200   | 10×20     | 0.055     | 1650 |
|               |      | 10×20     | 0.090     | 1380 | 10×20     | 0.053     | 1600   | 10×25     | 0.053     | 1680 |
|               |      |           |           |      | 10×25     | 0.050     | 1700   | 10×30     | 0.050     | 1700 |
|               |      |           |           |      | 13×21     | 0.041     | 1750   | 13×21     | 0.058     | 1880 |
| 3300          | 332  | 10×20     | 0.075     | 1410 | 10×30     | 0.045     | 1800   | 10×35     | 0.038     | 1900 |
|               |      | 10×25     | 0.055     | 1550 | 13×17     | 0.040     | 1850   | 13×25     | 0.035     | 2000 |
|               |      | 13×21     | 0.036     | 1650 | 13×25     | 0.031     | 2000   | 13×30     | 0.032     | 2200 |
| 4700          | 472  | 13×25     | 0.040     | 1900 | 13×25     | 0.030     | 2050   | 16×25     | 0.030     | 2790 |
| 5600          | 562  |           |           |      | 16×25     | 0.030     | 2100   | 16×31     | 0.029     | 2850 |
| 10000         | 103  |           |           |      |           |           |        | 16×31     | 0.028     | 2900 |
|               |      |           |           |      |           |           |        | 18×35     | 0.027     | 3200 |

Maximum Allowable Ripple Current (mA rms) at 105°C 100kHz

Case Size ΦD x L(mm)

Maximum Impedance (Ω) at 20°C 100kHz

Specifications are subject to change without notice. Should a safety or technical concern arise regarding the product, please be sure to contact our sales offices or agents immediately

**SZ Series**

**+105°C, High Ripple Current (高纹波), Low Impedance(低阻抗品)**

**STANDARD RATINGS 标准品一览表**

| Voltage(Code) |      | 25V(1E)   |           |      | 35V(1V)   |           |      | 50V(1H)   |           |      |
|---------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|
| Cap.(μF)      | Code | Case Size | Impedance | R.C  | Case Size | Impedance | R.C  | Case Size | Impedance | R.C  |
| 0.47          | P47  |           |           |      |           |           |      | 5×11      | 5.400     | 25   |
| 1             | 001  |           |           |      |           |           |      | 5×11      | 4.000     | 40   |
| 2.2           | 2P2  |           |           |      |           |           |      | 5×11      | 2.800     | 55   |
| 3.3           | 3P3  |           |           |      |           |           |      | 5×11      | 2.200     | 60   |
| 4.7           | 4P7  |           |           |      |           |           |      | 4×7       | 3.300     | 70   |
|               |      |           |           |      |           |           |      | 5×11      | 2.000     | 90   |
| 6.8           | 6P8  |           |           |      |           |           |      | 5×11      | 1.890     | 110  |
| 10            | 010  | 5×11      | 2.56      | 85   | 5×11      | 2.37      | 105  | 5×7       | 2.35      | 80   |
|               |      | 4×7       | 3.3       | 70   | 5×7       | 1.7       | 90   | 5×11      | 1.820     | 120  |
| 15            | 015  |           |           |      |           |           |      | 5×11      | 1.370     | 125  |
| 22            | 022  | 5×11      | 1.95      | 125  | 5×11      | 1.5       | 150  | 6.3×7     | 1.800     | 128  |
|               |      | 4×7       | 3.3       | 70   | 5×7       | 1.7       | 70   | 5×11      | 1.350     | 130  |
| 33            | 033  | 5×11      | 1.42      | 155  | 5×11      | 1.21      | 180  | 5×11      | 1.200     | 180  |
|               |      |           |           |      |           |           |      | 6.3×7     | 1.300     | 150  |
|               |      | 6.3×7     | 0.8       | 160  | 8×7       | 0.5       | 190  | 6.3×12    | 1.100     | 190  |
| 47            | 047  | 5×11      | 1.1       | 190  | 5×11      | 0.900     | 250  | 6.3×12    | 0.650     | 290  |
|               |      | 8×7       | 0.5       | 200  | 6.3×7     | 0.920     | 160  |           |           |      |
|               |      |           |           |      | 6.3×12    | 0.800     | 280  |           |           |      |
| 56            | 056  | 6.3×12    | 0.79      | 250  | 6.3×12    | 0.640     | 310  | 8×12      | 0.490     | 310  |
| 68            | 068  | 6.3×12    | 0.650     | 280  | 6.3×12    | 0.520     | 350  | 6.3×12    | 0.470     | 320  |
|               |      |           |           |      |           |           |      | 8×12      | 0.330     | 375  |
| 100           | 101  | 6.3×7     | 0.600     | 300  | 6.3×7     | 0.450     | 300  | 8×12      | 0.200     | 430  |
|               |      | 6.3×12    | 0.350     | 370  | 6.3×12    | 0.350     | 400  | 10×13     | 0.170     | 480  |
|               |      |           |           |      | 8×12      | 0.250     | 450  |           |           |      |
| 120           | 121  | 6.3×12    | 0.330     | 380  | 8×12      | 0.220     | 510  | 8×16      | 0.160     | 500  |
|               |      |           |           |      |           |           |      | 10×13     | 0.156     | 530  |
| 150           | 151  | 6.3×12    | 0.320     | 390  | 8×12      | 0.191     | 540  | 10×16     | 0.132     | 590  |
|               |      | 8×12      | 0.310     | 410  |           |           |      |           |           |      |
| 220           | 221  | 6.3×12    | 0.250     | 500  | 8×10      | 0.175     | 580  | 8×16      | 0.125     | 700  |
|               |      |           |           |      | 8×12      | 0.165     | 600  | 8×20      | 0.123     | 730  |
|               |      |           |           |      | 8×14      | 0.160     | 650  | 10×13     | 0.120     | 780  |
|               |      | 8×7       | 0.290     | 450  | 8×16      | 0.150     | 700  | 10×17     | 0.096     | 930  |
|               |      | 8×12      | 0.200     | 550  | 10×13     | 0.114     | 750  | 10×20     | 0.090     | 950  |
| 270           | 271  |           |           |      |           |           |      | 13×17     | 0.070     | 980  |
| 330           | 331  | 8×12      | 0.185     | 700  | 8×14      | 0.095     | 800  | 10×17     | 0.075     | 1000 |
|               |      | 8×16      | 0.165     | 800  | 8×16      | 0.085     | 990  | 10×20     | 0.070     | 1050 |
|               |      | 10×13     | 0.114     | 820  | 10×13     | 0.082     | 1000 |           |           |      |
|               |      |           |           |      | 10×16     | 0.079     | 1050 |           |           |      |
| 470           | 471  | 8×12      | 0.110     | 840  | 8×20      | 0.075     | 1000 | 10×20     | 0.065     | 1350 |
|               |      | 8×14      | 0.095     | 900  | 10×15     | 0.072     | 1050 | 10×25     | 0.063     | 1420 |
|               |      | 8×16      | 0.090     | 950  | 10×16     | 0.070     | 1100 | 13×21     | 0.055     | 1590 |
|               |      | 10×13     | 0.085     | 1000 | 10×20     | 0.065     | 1200 |           |           |      |
|               |      | 10×16     | 0.076     | 1200 |           |           |      |           |           |      |
| 560           | 561  | 10×16     | 0.072     | 1250 | 10×20     | 0.063     | 1300 | 13×17     | 0.053     | 1600 |
|               |      |           |           |      |           |           |      | 13×21     | 0.050     | 1740 |
| 680           | 681  | 8×16      | 0.080     | 1150 | 10×17     | 0.062     | 1200 | 13×21     | 0.065     | 1850 |
|               |      | 8×20      | 0.075     | 1200 |           |           |      |           |           |      |
|               |      | 10×13     | 0.073     | 1100 | 10×20     | 0.06      | 1400 |           |           |      |
|               |      | 10×17     | 0.070     | 1280 | 13×21     | 0.056     | 1570 | 13×25     | 0.044     | 1930 |
|               |      | 10×20     | 0.065     | 1320 |           |           |      |           |           |      |
| 820           | 821  | 10×15     | 0.063     | 1290 | 10×25     | 0.050     | 1550 | 16×21     | 0.040     | 2000 |
|               |      | 10×17     | 0.060     | 1310 |           |           |      |           |           |      |
|               |      | 10×20     | 0.052     | 1400 | 13×21     | 0.048     | 1700 |           |           |      |
| 1000          | 102  | 10×17     | 0.050     | 1500 | 10×25     | 0.047     | 1600 | 13×25     | 0.038     | 2100 |
|               |      | 10×20     | 0.045     | 1590 | 13×21     | 0.046     | 1750 | 16×25     | 0.036     | 2300 |
|               |      |           |           |      | 13×25     | 0.042     | 1900 |           |           |      |
| 1500          | 152  | 10×25     | 0.042     | 1650 | 10×30     | 0.040     | 2000 |           |           |      |
|               |      | 13×21     | 0.040     | 1700 | 13×21     | 0.042     | 1900 |           |           |      |
|               |      | 13×25     | 0.038     | 2124 | 16×25     | 0.036     | 2270 |           |           |      |
| 1800          | 182  |           |           |      | 13×25     | 0.049     | 2200 |           |           |      |
| 2200          | 222  | 13×21     | 0.050     | 2000 | 13×30     | 0.038     | 2400 | 16×31     | 0.035     | 2600 |
|               |      | 13×25     | 0.036     | 2300 | 16×25     | 0.038     | 2480 |           |           |      |
|               |      | 16×25     | 0.035     | 2650 | 16×32     | 0.035     | 2780 |           |           |      |
| 2700          | 272  |           |           |      | 16×31     | 0.033     | 2850 |           |           |      |
| 3300          | 332  | 16×31     | 0.085     | 2700 |           |           |      |           |           |      |
| 4700          | 472  |           |           |      | 18×40     | 0.034     | 2950 |           |           |      |

Maximum Allowable Ripple Current (mA rms) at 105°C 100kHz

Case Size ΦD x L(mm)

Maximum Impedance (Ω) at 20°C 100kHz

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**SZ Series**

**+105℃,High Ripple Current (高纹波), Low Impedance(低阻抗品)**

**STANDARD RATINGS 标准品一览表**

| Voltage(Code) |      | 63V(1J)   |           |      | 80V(1K)   |           |      | 100V(2A)  |           |      | 200V(2C)  |           |      |
|---------------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|-----------|-----------|------|
| Cap.(μF)      | Code | Case Size | Impedance | R.C  | Case Size | Impedance | R.C  | Case Size | Impedance | R.C  | Case Size | Impedance | R.C  |
| 1             | 001  | 5×11      | 3.5       |      |           |           |      |           |           |      |           |           |      |
| 10            | 010  | 5×11      | 1.75      | 110  |           |           |      | 6.3×12    | 1.77      | 130  | 8×12      | 4.50      | 120  |
| 12            | 012  |           |           |      |           |           |      | 8×12      | 1.60      | 140  | 10×16     | 2.69      | 150  |
| 22            | 022  | 6.3×12    | 0.80      | 180  |           |           |      | 8×12      | 1.50      | 160  |           |           |      |
| 33            | 033  | 6.3×12    | 0.78      | 200  |           |           |      | 8×12      | 0.85      | 220  | 10×16     | 1.80      | 186  |
|               |      | 8×12      | 0.61      | 270  |           |           |      | 10×13     | 0.80      | 230  | 10×20     | 1.40      | 205  |
| 39            | 039  |           |           |      |           |           |      | 8×12      | 0.75      | 290  | 10×20     | 1.30      | 260  |
| 47            | 047  | 6.3×12    | 0.60      | 280  |           |           |      | 10×13     | 0.69      | 320  | 13×21     | 1.00      | 300  |
|               |      | 8×14      | 0.56      | 300  |           |           |      | 8×16      | 0.68      | 330  |           |           |      |
| 56            | 056  | 8×16      | 0.38      | 330  |           |           |      | 8×14      | 0.27      | 360  | 13×21     | 0.65      | 360  |
|               |      |           |           |      |           |           |      | 10×13     | 0.58      | 370  |           |           |      |
| 68            | 068  | 10×13     | 0.21      | 480  |           |           |      | 10×13     | 0.43      | 400  | 13×21     | 0.60      | 400  |
|               |      |           |           |      |           |           |      | 10×16     | 0.42      | 440  | 13×25     | 0.56      | 430  |
| 82            | 082  |           |           |      |           |           |      | 10×16     | 0.35      | 470  | 13×25     | 0.45      | 480  |
| 100           | 101  | 10×13     | 0.21      | 480  |           |           |      | 10×20     | 0.34      | 480  |           |           |      |
|               |      | 8×16      | 0.20      | 570  |           |           |      | 10×20     | 0.34      | 500  | 16×25     | 0.40      | 750  |
|               |      | 10×13     | 0.14      | 610  |           |           |      | 10×20     | 0.33      | 530  |           |           |      |
| 120           | 121  | 10×13     | 0.14      | 630  |           |           |      | 10×25     | 0.30      | 560  |           |           |      |
|               |      | 10×16     | 0.13      | 620  |           |           |      | 10×20     | 0.28      | 600  |           |           |      |
| 150           | 151  | 10×16     | 0.11      | 700  |           |           |      | 10×20     | 0.26      | 630  | 16×32     | 0.26      | 800  |
|               |      |           |           |      |           |           |      | 13×21     | 0.174     | 780  |           |           |      |
| 220           | 221  | 8×20      | 0.10      | 820  | 13×21     | 0.35      | 810  | 13×21     | 0.17      | 820  | 16×36     | 0.19      | 1000 |
|               |      | 10×16     | 0.09      | 850  |           |           |      | 13×25     | 0.13      | 950  |           |           |      |
|               |      | 10×20     | 0.08      | 920  |           |           |      |           |           |      |           |           |      |
| 330           | 331  | 10×20     | 0.075     | 980  | 16×25     | 0.15      | 1000 | 16×25     | 0.10      | 1440 | 18×40     | 0.16      | 1180 |
|               |      | 13×21     | 0.055     | 1250 |           |           |      |           |           |      |           |           |      |
| 470           | 471  | 13×21     | 0.07      | 1350 | 16×25     | 0.13      | 1200 | 16×32     | 0.09      | 1650 |           |           |      |
|               |      | 13×25     | 0.053     | 1620 |           |           |      |           |           |      |           |           |      |
| 560           | 561  |           |           |      |           |           |      | 16×25     | 0.085     | 1700 |           |           |      |
| 680           | 681  | 13×21     | 0.095     | 1600 |           |           |      | 18×36     | 0.08      | 1790 |           |           |      |
|               |      | 13×25     | 0.052     | 1700 |           |           |      |           |           |      |           |           |      |
| 1000          | 102  | 16×21     | 0.045     | 1750 |           |           |      |           |           |      |           |           |      |
|               |      | 16×25     | 0.04      | 2100 |           |           |      | 18×40     | 0.066     | 1930 |           |           |      |
|               |      | 16×32     | 0.034     | 2350 |           |           |      | 22×32     | 0.075     | 1850 |           |           |      |
| 1200          | 122  | 16×36     | 0.030     | 2420 |           |           |      |           |           |      |           |           |      |
| 2200          | 222  | 18×35     | 0.024     | 2700 |           |           |      |           |           |      |           |           |      |
|               |      | 18×40     | 0.023     | 2750 |           |           |      |           |           |      |           |           |      |

| Voltage(Code) |      | 250V(2E)  |           |        | 400V(2G)  |           |        | 450V(2W)  |           |        |  |  |  |
|---------------|------|-----------|-----------|--------|-----------|-----------|--------|-----------|-----------|--------|--|--|--|
| Cap.(μF)      | Code | Case Size | Impedance | Ripple | Case Size | Impedance | Ripple | Case Size | Impedance | Ripple |  |  |  |
| 1             | 001  | 6.3×12    | 6.54      | 50     | 8×12      | 16.5      | 36     | 8×12      | 17.35     | 45     |  |  |  |
| 2.2           | 2P2  | 8×12      | 4.12      | 72     | 8×12      | 13        | 65     | 10×13     | 17.00     | 55     |  |  |  |
| 3.3           | 3P3  | 8×12      | 3.85      | 75     | 8×12      | 12        | 86     | 10×15     | 10.00     | 89     |  |  |  |
| 4.7           | 4P7  | 8×12      | 3.50      | 85     | 8×12      | 11        | 93     | 10×17     | 7.00      | 95     |  |  |  |
|               |      | 10×13     | 2.95      | 100    | 10×13     | 10        | 105    | 10×20     | 5.00      | 105    |  |  |  |
| 6.8           | 6P8  | 8×16      | 2.50      | 124    | 8×14      | 9.0       | 130    |           |           |        |  |  |  |
|               |      | 10×13     | 2.20      | 126    | 8×16      | 8.5       | 140    | 10×20     | 4.05      | 135    |  |  |  |
|               |      | 10×16     | 1.86      | 140    | 10×13     | 8.0       | 150    |           |           |        |  |  |  |
| 8.2           | 8P2  |           |           |        | 8×14      | 7.5       | 160    | 10×16     | 4.50      | 150    |  |  |  |
| 10            | 010  | 8×16      | 1.80      | 141    | 8×16      | 7.0       | 180    | 10×25     | 3.75      | 180    |  |  |  |
|               |      | 10×13     | 1.75      | 144    | 10×13     | 6.5       | 185    | 13×17     | 4.00      | 170    |  |  |  |
|               |      | 10×16     | 1.40      | 160    | 10×17     | 6.0       | 200    | 13×21     | 3.40      | 190    |  |  |  |
|               |      |           |           |        | 10×20     | 4.6       | 235    |           |           |        |  |  |  |
| 15            | 015  |           |           |        | 10×16     | 4.3       | 240    | 13×17     | 3.35      | 200    |  |  |  |
|               |      |           |           |        | 10×20     | 4.0       | 250    |           |           |        |  |  |  |
| 22            | 022  | 10×20     | 1.30      | 210    | 13×18     | 3.5       | 270    | 13×21     | 3.10      | 300    |  |  |  |
|               |      |           |           |        | 13×21     | 2.65      | 295    | 13×25     | 2.80      | 320    |  |  |  |
| 33            | 033  | 10×25     | 1.25      | 248    | 13×21     | 2.3       | 400    | 13×21     | 3.20      | 340    |  |  |  |
|               |      | 13×21     | 0.90      | 310    | 16×21     | 2.0       | 440    | 16×25     | 2.20      | 460    |  |  |  |
| 39            | 039  |           |           |        | 13×25     | 1.9       | 450    |           |           |        |  |  |  |
| 47            | 047  | 13×21     | 0.60      | 375    | 13×30     | 1.80      | 460    | 16×36     | 1.05      | 650    |  |  |  |
|               |      | 13×25     | 0.45      | 405    | 16×25     | 1.4       | 580    |           |           |        |  |  |  |
| 56            | 056  |           |           |        | 18×21     | 1.3       | 610    |           |           |        |  |  |  |
|               |      |           |           |        | 16×25     | 1.2       | 650    |           |           |        |  |  |  |
| 68            | 068  | 16×25     | 0.38      | 490    | 16×32     | 0.8       | 800    | 18×36     | 0.75      | 760    |  |  |  |
|               |      |           |           |        | 18×25     | 0.7       | 830    |           |           |        |  |  |  |
| 100           | 101  | 16×32     | 0.27      | 675    | 18×32     | 0.65      | 900    | 18×40     | 0.74      | 880    |  |  |  |
| 120           | 121  |           |           |        | 18×32     | 0.55      | 930    |           |           |        |  |  |  |

Maximum Allowable Ripple Current (mA rms) at 105℃ 100kHz

Case Size ΦD x L(mm)

Maximum Impedance (Ω) at 20℃ 100kHz

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