

- Low ESR, high ripple current
- Load life of 2000 hours at 105°C
- RoHS Compliant

#### ◆ 规格表 Specifications

| 项目 Items   | 特性参数 Characteristics   |                               |   |     |     |     |          |    |    |    |    |                  |
|--|--|-------------------------------|---|-----|-----|-----|----------|----|----|----|----|------------------|
| 使用温度范围<br>Category<br>Temperature Range                              | -55 ~ +105°C   |                               |   |     |     |     |          |    |    |    |    |                  |
| 额定工作电压范围<br>Rated Voltage Range                                      | 2.5 ~ 25V  |                               |   |     |     |     |          |    |    |    |    |                  |
| 静电容量允许偏差<br>Capacitance tolerance                                    | ±20%(M) (at 20°C, 120Hz)   |                               |   |     |     |     |          |    |    |    |    |                  |
| 漏电流<br>Leakage Current   | 施加额定工作电压2分钟后读数, 小于或等于规格值 (at 20°C)<br>I ≤ 0.2CV 或 500μA (取大值)<br>Less than or equal to the specified value. After 2 minutes application of rated Voltage at 20°C   |                               |   |     |     |     |          |    |    |    |    |                  |
| 损耗角正切值 tanδ<br>Dissipation Factor                                    | Rated voltage (V)  | 2.5                           | 4 | 6.3 | 6.8 | 7.5 | 10       | 12 | 16 | 20 | 25 | (at 20°C, 120Hz) |
|  | tanδ (Max.)  | 0.08                          |   |     |     |     | 0.12     |    |    |    |    |                  |
| 温度特性<br>Low Temperature<br>Characteristics<br>(Max. Impedance Ratio) | Z(-25°C)/Z(+20°C)  | ≤ 1.25                        |   |     |     |     | (100KHz) |    |    |    |    |                  |
|  | Z(-55°C)/Z(+20°C)  | ≤ 1.25                        |   |     |     |     |          |    |    |    |    |                  |
| 耐久性<br>Endurance   | 105°C 施加额定工作电压2000小时, 恢复到20°C后, 产品性能应满足以下要求<br>The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 2000 hours at 105°C.   |                               |   |     |     |     |          |    |    |    |    |                  |
|  | Appearance   | No significant damage         |   |     |     |     |          |    |    |    |    |                  |
|  | Capacitance change   | ≤ ±20% of the initial value   |   |     |     |     |          |    |    |    |    |                  |
|  | D.F.(tanδ)   | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
|  | ESR  | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
| 耐湿负荷特性<br>Damp Heat<br>(Steady State)                                | 在60°C 温度, 湿度90%~95%RH的环境中, 施加额定电压1000小时后, 恢复到20°C后, 产品性能应满足以下要求<br>The specifications listed below shall be satisfied when the capacitors are restored to 20°C after application of rated voltage for 1000 hours at 60°C, 90%~95% RH.  |                               |   |     |     |     |          |    |    |    |    |                  |
|  | Appearance   | No significant damage         |   |     |     |     |          |    |    |    |    |                  |
|  | Capacitance change   | ≤ ±20% of the initial value   |   |     |     |     |          |    |    |    |    |                  |
|  | D.F.(tanδ)   | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
|  | ESR  | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
| 浪涌电压特性<br>(Surge Voltage)  | 浪涌电压=额定电压×1.15(V)<br>Surge Voltage=Rated voltage × 1.15(V)<br>在105°C环境中, 按充电30秒; 放电5分30秒, 连续施加浪涌电压1000次(Rc=1kΩ), 待恢复后测试, 应满足以下要求<br>The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages specified at 105°C for 30 seconds through a protective resistor (Rc=1kΩ) and discharge for 5 minutes 30 seconds |                               |   |     |     |     |          |    |    |    |    |                  |
|  | Appearance   | No significant damage         |   |     |     |     |          |    |    |    |    |                  |
|  | Capacitance change   | ≤ ±20% of the initial value   |   |     |     |     |          |    |    |    |    |                  |
|  | D.F.(tanδ)   | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
|  | ESR  | ≤ 150% of the specified value |   |     |     |     |          |    |    |    |    |                  |
|  | Leakage current  | ≤ The specified value         |   |     |     |     |          |    |    |    |    |                  |

#### ◆ 外形图 Dimensions (mm)

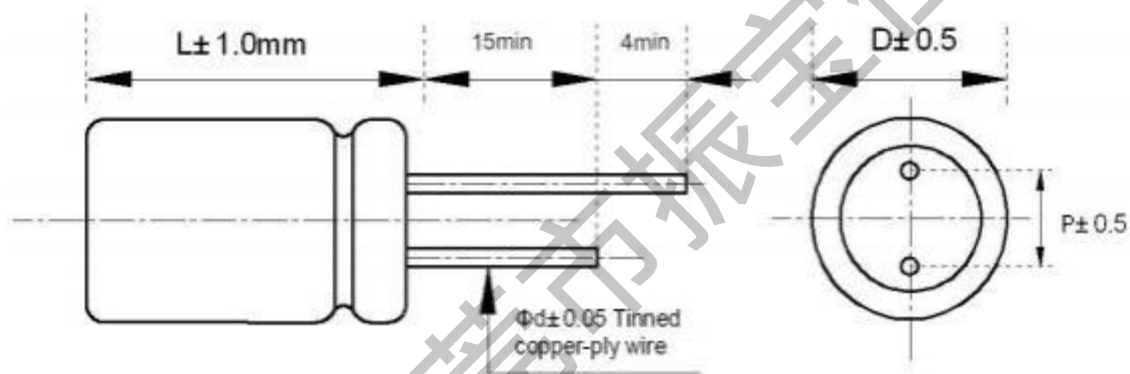


|    |     |     |     |     |
|----|-----|-----|-----|-----|
| ΦD | 5   | 6.3 | 8   | 10  |
| P  | 2.0 | 2.5 | 3.5 | 5.0 |
| Φd | 0.5 | 0.6 | 0.6 | 0.6 |

|   |                   |
|---|-------------------|
| α | (L < 16) 1.0      |
|   | (16 ≤ L < 22) 1.5 |
|   | (L ≥ 22) 2.0      |

## 基本特性参数表 Characteristics

| Part No/ Ruilong   | Capacitance.<br>(uF)<br>120Hz/+20°C | Capacitance<br>Tolerance.<br>(%)<br>120Hz/+20°C | Rated<br>Voltage<br>(VDC) | Surge<br>Voltage<br>(VDC) | tanδ<br>120Hz/+<br>20°C | Leakage<br>Current<br>2 min( uA)<br>+20°C | ESR<br>100KHz<br>+20°C<br>(mΩ ) | Ripple<br>Current.<br>100KHz<br>( mArms) | Load<br>Life<br>(Hrs) | Category<br>Temperature<br>Range | Dimensions( mm) |    | Colour |
|--------------------|-------------------------------------|---|---------------------------|---------------------------|-------------------------|---|---------------------------------|--|-----------------------|----------------------------------|-----------------|----|--------|
|                    |                                     |   |                           |                           |                         |   |                                 |  |                       |                                  | ΦD              | L  |        |
| JBLE2221M035D110RL | 220                                 | ±20   | 35                        | 40.3                      | 0.12                    | 200                                       | 18                              | 3200                                     | 2000                  | -55~+105°C                       | 8               | 11 | 红色     |



### ◆ 纹波电流修正系数 Rated Ripple Current Coefficient

| 频率 Frequency(Hz) | $120\text{Hz} \leq F < 1\text{KHz}$ | $1\text{KHz} \leq F < 10\text{KHz}$ | $10\text{KHz} \leq F < 100\text{KHz}$ | $100\text{KHz} \leq F < 500\text{KHz}$ |
|------------------|-------------------------------------|-------------------------------------|---------------------------------------|--|
| 系数 Case code     | 0.05                                | 0.30                                | 0.70                                  | 1.00                                   |