



湖南艾华集团股份有限公司

HUNAN AIHUA GROUP CO.,LTD

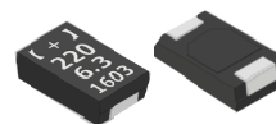
# **POLYMER ALUMINUM SOLID ELECTROLYTIC CAPACITORS**

**CATEGORY: MULTI-LAYER TYPE**

**SERIES: A1**

**EDITION: Rev.A (2019)**

# A1 Series

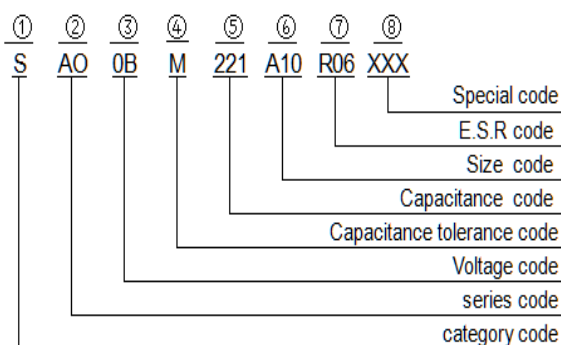


- ▶ Endurance :2000 hours at 105 °C
- ▶ Low ESR
- ▶ Recommended Applications: System Board ,Display Card, Small Changer
- ▶ RoHS Compliance and lead-free

## ◆ Specifications

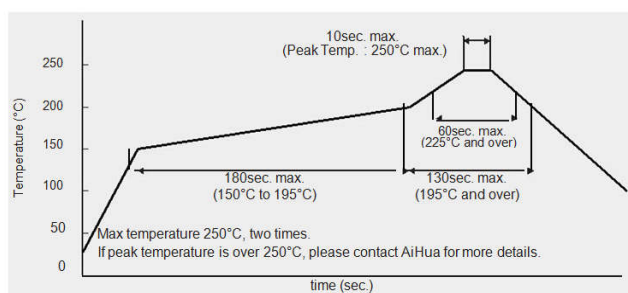
| Items   | Performance Characteristics  |  |
|---|--|--|
| Operating Temperature Range                                       | - 55°C ~ 105°C   |  |
| Rated Working Voltage Range                                       | 2V ~35V.DC   |  |
| Nominal Capacitance Range   | 2.2μF~560μF  |  |
| Capacitance Tolerance   | ±20%(M) (at 20°C,120Hz)  |  |
| DC Leakage Current  | I ≤0.06CV ( μA ) 2 minutes (2V ~ 10V.DC)<br>I ≤0.1CV ( μA ) 2 minutes (12.5V ~ 35V.DC) |  |
| tan δ   | ≤0.06~0.1 (120HZ,20°C)   |  |
| Surge Voltage   | Rated voltage x 1.25 (2V.DC to 16V.DC) ,x1.15(20V.DC to 25V.DC) (15°C ~ 35°C)          |  |
| Endurance<br>(+105°C, 2,000 hours, rated voltage applied)         | ΔC/C   | Within ±20% of the initial measured value  |
|   | tan δ  | ≤150% of the initial specified value   |
|   | LC   | ≤The initial specified value   |
|   | ESR  | ≤200% of the initial specified value   |
| Moisture Resistance<br>After storing for 500 hours at 60°C, 90%RH | ΔC/C   | +70, -20% (2V~2.5V.DC) +60, -20% (4V.DC)<br>+50, -20% (6.3V~7.5V.DC) +40, -20%(8V~35V) |
|   | tan δ  | ≤200% of the initial specified value   |
|   | LC   | ≤The initial specified value   |

## ◆ Part Numbering

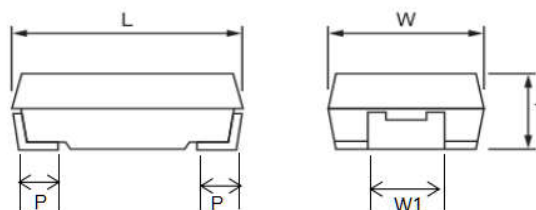
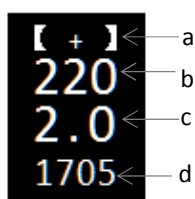


## ◆ Reflow Soldering Conditions

### Recommended Reflow Profile



## ◆ Mark & Dimension



- a): Polarity code
- b): Capacitance code
- c): Rated voltage code
- d): Date code

| Series Code | L(±0.3) | W(±0.2) | T(±0.2) | P(±0.2) | W1 (±0.2) |
|-------------|---------|---------|---------|---------|-----------|
| A1          | 7.3     | 4.3     | 1.9     | 1.3     | 2.4       |

◆ STANDARD RATINGS

| Rated Voltage VDC | Cap. (uF)120HZ, 20°C | Size (LxWxT mm) | Cap Tolerance(%) | ESR (mΩ),20°C 100kHz (max.) | Rated ripple current(mArms) 100kHz, 20°C -105°C | Leakage Current (uA max) 20°C | Min. Packaging Quantity (PCS) | Part Number        |
|-------------------|----------------------|-----------------|------------------|-----------------------------|---|-------------------------------|-------------------------------|--------------------|
| 2                 | 68                   | 7.3*4.3*1.9     | M                | 40                          | 1800  | 13.6                          | 3500                          | SA10BM680A19R40XXX |
| 2                 | 100                  | 7.3*4.3*1.9     | M                | 16                          | 2000  | 20.0                          | 3500                          | SA10BM101A19R16XXX |
| 2                 | 150                  | 7.3*4.3*1.9     | M                | 9                           | 3000  | 30.0                          | 3500                          | SA10BM151A19R09XXX |
| 2                 | 220                  | 7.3*4.3*1.9     | M                | 9                           | 3000  | 44.0                          | 3500                          | SA10BM221A19R09XXX |
| 2                 | 220                  | 7.3*4.3*1.9     | L                | 9                           | 3000  | 44.0                          | 3500                          | SA10BL221A19R09XXX |
| 2                 | 270                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 54.0                          | 3500                          | SA10BM271A19R09XXX |
| 2                 | 300                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 60.0                          | 3500                          | SA10BM301A19R09XXX |
| 2                 | 330                  | 7.3*4.3*1.9     | M                | 6                           | 3500  | 66.0                          | 3500                          | SA10BM331A19R06XXX |
| 2                 | 330                  | 7.3*4.3*1.9     | M                | 7                           | 3500  | 66.0                          | 3500                          | SA10BM331A19R07XXX |
| 2                 | 330                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 66                            | 3500                          | SA10BM331A19R09XXX |
| 2                 | 330                  | 7.3*4.3*1.9     | L                | 7                           | 3500  | 66                            | 3500                          | SA10BL331A19R07XXX |
| 2                 | 330                  | 7.3*4.3*1.9     | L                | 9                           | 3500  | 66.0                          | 3500                          | SA10BL331A19R0935X |
| 2                 | 330                  | 7.3*4.3*1.9     | L                | 9                           | 5400  | 66.0                          | 3500                          | SA10BL331A19R0954X |
| 2                 | 330                  | 7.3*4.3*1.9     | L                | 9                           | 3500  | 66                            | 3500                          | SA10BL331A19R09XXX |
| 2                 | 470                  | 7.3*4.3*1.9     | M                | 4.5                         | 3500  | 94.0                          | 3500                          | SA10BM471A19R04XXX |
| 2                 | 470                  | 7.3*4.3*1.9     | M                | 6                           | 3500  | 94.0                          | 3500                          | SA10BM471A19R06XXX |
| 2                 | 470                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 94.0                          | 3500                          | SA10BM471A19R09XXX |
| 2.5               | 47                   | 7.3*4.3*1.9     | M                | 40                          | 1800  | 11.8                          | 3500                          | SA10EM470A19R40XXX |
| 2.5               | 100                  | 7.3*4.3*1.9     | M                | 16                          | 2000  | 25.0                          | 3500                          | SA10EM101A19R16XXX |
| 2.5               | 150                  | 7.3*4.3*1.9     | M                | 9                           | 3000  | 37.5                          | 3500                          | SA10EM151A19R09XXX |
| 2.5               | 180                  | 7.3*4.3*1.9     | M                | 9                           | 3000  | 45.0                          | 3500                          | SA10EM181A19R09XXX |
| 2.5               | 220                  | 7.3*4.3*1.9     | M                | 9                           | 3000  | 55.0                          | 3500                          | SA10EM221A19R09XXX |
| 2.5               | 220                  | 7.3*4.3*1.9     | L                | 9                           | 3000  | 55.0                          | 3500                          | SA10EL221A19R0930X |
| 2.5               | 220                  | 7.3*4.3*1.9     | L                | 9                           | 3000  | 55.0                          | 3500                          | SA10EL221A19R09XXX |
| 2.5               | 270                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 67.5                          | 3500                          | SA10EM271A19R09XXX |
| 2.5               | 330                  | 7.3*4.3*1.9     | M                | 7                           | 3500  | 82.5                          | 3500                          | SA10EM331A19R07XXX |
| 2.5               | 330                  | 7.3*4.3*1.9     | M                | 4.5                         | 3500  | 82.5                          | 3500                          | SA10EM331A19R04XXX |
| 2.5               | 330                  | 7.3*4.3*1.9     | M                | 9                           | 3500  | 82.5                          | 3500                          | SA10EM331A19R09XXX |
| 2.5               | 470                  | 7.3*4.3*1.9     | M                | 4.5                         | 3500  | 117.5                         | 3500                          | SA10EM471A19R04XXX |
| 2.5               | 470                  | 7.3*4.3*1.9     | M                | 6                           | 3500  | 117.5                         | 3500                          | SA10EM471A19R06XXX |
| 4                 | 68                   | 7.3*4.3*1.9     | M                | 20                          | 1900  | 27.2                          | 3500                          | SA10GM680A19R20XXX |
| 4                 | 82                   | 7.3*4.3*1.9     | M                | 16                          | 2100  | 32.8                          | 3500                          | SA10GM820A19R16XXX |
| 4                 | 120                  | 7.3*4.3*1.9     | M                | 16                          | 2100  | 48.0                          | 3500                          | SA10GM121A19R16XXX |
| 4                 | 150                  | 7.3*4.3*1.9     | M                | 16                          | 2100  | 60.0                          | 3500                          | SA10GM151A19R16XXX |
| 4                 | 220                  | 7.3*4.3*1.9     | M                | 15                          | 3000  | 88.0                          | 3500                          | SA10GM221A19R15XXX |
| 6.3               | 4.7                  | 7.3*4.3*1.9     | M                | 120                         | 1000  | 3.0                           | 3500                          | SA10JM47A19RA2XXX  |
| 6.3               | 10                   | 7.3*4.3*1.9     | M                | 55                          | 1000  | 6.3                           | 3500                          | SA10JM100A19R55XXX |
| 6.3               | 22                   | 7.3*4.3*1.9     | M                | 45                          | 1000  | 13.9                          | 3500                          | SA10JM220A19R45XXX |
| 6.3               | 22                   | 7.3*4.3*1.9     | M                | 80                          | 1000  | 13.9                          | 3500                          | SA10JM220A19R80XXX |
| 6.3               | 33                   | 7.3*4.3*1.9     | M                | 80                          | 1800  | 20.8                          | 3500                          | SA10JM330A19R80XXX |
| 6.3               | 47                   | 7.3*4.3*1.9     | M                | 25                          | 1800  | 29.6                          | 3500                          | SA10JM470A19R25XXX |
| 6.3               | 47                   | 7.3*4.3*1.9     | M                | 35                          | 1800  | 29.6                          | 3500                          | SA10JM470A19R35XXX |
| 6.3               | 47                   | 7.3*4.3*1.9     | M                | 40                          | 1800  | 29.6                          | 3500                          | SA10JM470A19R40XXX |
| 6.3               | 68                   | 7.3*4.3*1.9     | M                | 15                          | 2000  | 42.8                          | 3500                          | SA10JM680A19R15XXX |
| 6.3               | 100                  | 7.3*4.3*1.9     | M                | 15                          | 2000  | 63.0                          | 3500                          | SA10JM101A19R15XXX |
| 6.3               | 100                  | 7.3*4.3*1.9     | M                | 20                          | 1900  | 63.0                          | 3500                          | SA10JM101A19R20XXX |
| 6.3               | 120                  | 7.3*4.3*1.9     | M                | 10                          | 3000  | 75.6                          | 3500                          | SA10JM121A19R10XXX |
| 6.3               | 150                  | 7.3*4.3*1.9     | M                | 10                          | 3000  | 94.5                          | 3500                          | SA10JM151A19R10XXX |
| 6.3               | 150                  | 7.3*4.3*1.9     | M                | 15                          | 3000  | 94.5                          | 3500                          | SA10JM151A19R15XXX |
| 6.3               | 180                  | 7.3*4.3*1.9     | M                | 15                          | 3000  | 113.4                         | 3500                          | SA10JM181A19R15XXX |
| 6.3               | 220                  | 7.3*4.3*1.9     | M                | 10                          | 3000  | 138.6                         | 3500                          | SA10JM221A19R10XXX |
| 6.3               | 220                  | 7.3*4.3*1.9     | M                | 15                          | 3000  | 138.6                         | 3500                          | SA10JM221A19R1530X |
| 6.3               | 220                  | 7.3*4.3*1.9     | L                | 15                          | 3000  | 138.6                         | 3500                          | SA10JL221A19R15XXX |
| 6.3               | 220                  | 7.3*4.3*1.9     | M                | 15                          | 3000  | 138.6                         | 3500                          | SA10JM221A19R15XXX |
| 7.5               | 150                  | 7.3*4.3*1.9     | M                | 10                          | 3000  | 112.5                         | 3500                          | SA10AM151A19R10XXX |
| 7.5               | 200                  | 7.3*4.3*1.9     | M                | 12                          | 3000  | 150.0                         | 3500                          | SA10AM201A19R12XXX |



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