

# ULXA Series (85°C 15000H)

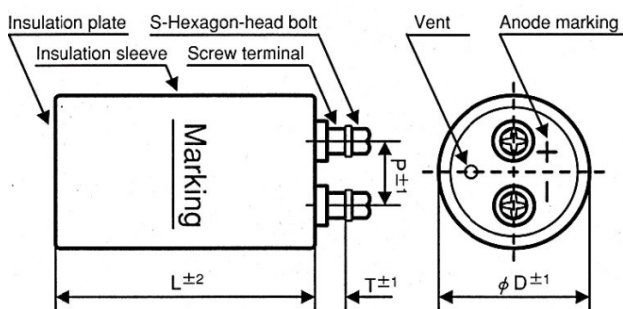
- Compliant to the RoHS directive
- High ripple current & Long life design
- 85°C 15000H for Industrial Automation、Telecommunication Power Station、Medical Power Supply、Large Power Servo Driver...



## ◆ Specification

| Item                            | Performance Characteristics  |  |
|---------------------------------|--|--|
| Operating range                 | -25°C ~ +85°C  |  |
| Rated voltage range             | 160V ~ 450V  |  |
| Capacitance tolerance           | ±20% (20°C, 120Hz)   |  |
| Leakage current                 | $I \leq 0.01CV(\mu A)$ or 5mA (Whichever is smaller) (20°C, after 5 minutes)<br>C=Nominal capacitance( $\mu F$ ), V=Rated voltage(V)   |  |
| Dissipation factor (20°C,120Hz) | Shall not exceed the values shown in the STANDARD RATINGS  |  |
| Load Life                       | After applying rated voltage with specified ripple current for 15000 hours at 85°C(the peak voltage shall not exceed the rated voltage), and then restored for 24 hours, capacitor shall meet the following requirement: |  |
|                                 | Capacitance change   | Within ±20% of the initial value.                  |
|                                 | Dissipation factor   | Not more than 200% of the initial specified value. |
| Shelf Life                      | After storing for 500 hours at 85°C,UR to be applied for 30 minutes and then restored for 24 hours, capacitor shall meet the following requirement:  |  |
|                                 | Capacitance change   | Within ±20% of the initial value.                  |
|                                 | Dissipation factor   | Not more than 150% of the initial specified value. |
| Standard                        | JIS C 5101-4   |  |

## ◆ Dimensions(Screw-mount)



| ΦD  | P    | S     | T    | Cap material |
|-----|------|-------|------|--------------|
| 36  | 12.7 | M5×10 | 6.4  | Epoxy Resin  |
| 51  | 22.0 | M5×10 | 6.4  | Epoxy Resin  |
| 64  | 28.6 | M5×10 | 6.4  | Epoxy Resin  |
| 77  | 32.0 | M5×10 | 6.4  | Epoxy Resin  |
| 90  | 32.0 | M6×17 | 6.4  | Epoxy Resin  |
| 101 | 41.5 | M8×17 | 11.3 | Epoxy Resin  |

## ◆ Dimensions(Screw-mount)

|               |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|
| Frequency(Hz) | 50  | 120 | 300 | 1k  | 3k  |
| Coefficient   | 0.8 | 1.0 | 1.1 | 1.3 | 1.4 |

## ◆ STANDARD RATING

| Rated Voltage code (V.DC) | Capacitance (μF) | Case size ΦD×L(mm) | tanδ<br>20°C, 120Hz | Ripple current<br>85°C, 120Hz (Arms) | ESR(typ.)<br>20°C, 100Hz<br>(mΩ) | Z max<br>20°C, 10KHz<br>(mΩ) | Part number     |
|---------------------------|------------------|--------------------|---------------------|--------------------------------------|----------------------------------|------------------------------|-----------------|
| 160<br>2C<br>(200)        | 3300             | 51×80              | 0.25                | 10.6                                 | 35                               | 35                           | ULXA2C332YC080M |
|                           | 3900             | 51×80              | 0.25                | 12.2                                 | 30                               | 28                           | ULXA2C392YC080M |
|                           | 4700             | 51×100             | 0.25                | 14.8                                 | 25                               | 25                           | ULXA2C472YC100M |
|                           | 5600             | 51×100             | 0.25                | 15.3                                 | 23                               | 23                           | ULXA2C562YC100M |
|                           | 6800             | 64×100             | 0.25                | 16.2                                 | 20                               | 22                           | ULXA2C682YD100M |
|                           | 8200             | 64×100             | 0.25                | 19.7                                 | 18                               | 19                           | ULXA2C822YD100M |
|                           | 10000            | 64×100             | 0.25                | 24.2                                 | 15                               | 16                           | ULXA2C103YD100M |
|                           | 12000            | 64×130             | 0.25                | 24.6                                 | 12                               | 15                           | ULXA2C123YD130M |
|                           | 15000            | 64×130             | 0.25                | 26.2                                 | 11                               | 12                           | ULXA2C153YD130M |
|                           |                  | 77×100             | 0.25                | 26.2                                 | 11                               | 12                           | ULXA2C153YE100M |
|                           | 18000            | 77×115             | 0.25                | 29.2                                 | 9                                | 11                           | ULXA2C183YE115M |
|                           | 22000            | 77×130             | 0.25                | 33.1                                 | 8                                | 8                            | ULXA2C223YE130M |
|                           | 27000            | 77×155             | 0.25                | 37.9                                 | 7                                | 8                            | ULXA2C273YE155M |
|                           | 33000            | 90×130             | 0.25                | 42.6                                 | 6                                | 7                            | ULXA2C333YF130M |
| 39000                     | 90×157           | 0.25               | 52.4                | 5                                    | 7                                | ULXA2C393YF157M              |                 |
| 200<br>2D<br>(250)        | 2200             | 51×80              | 0.25                | 9.7                                  | 43                               | 60                           | ULXA2D222YC080M |
|                           | 2700             | 51×80              | 0.25                | 11.4                                 | 31                               | 39                           | ULXA2D272YC080M |
|                           | 3300             | 51×80              | 0.25                | 13.0                                 | 29                               | 35                           | ULXA2D332YC080M |
|                           | 3900             | 51×100             | 0.25                | 13.5                                 | 26                               | 30                           | ULXA2D392YC100M |
|                           | 4700             | 51×100             | 0.25                | 14.0                                 | 25                               | 27                           | ULXA2D472YC100M |
|                           | 5600             | 64×100             | 0.25                | 15.1                                 | 23                               | 25                           | ULXA2D562YD100M |
|                           | 6800             | 64×100             | 0.25                | 18.0                                 | 19                               | 20                           | ULXA2D682YD100M |
|                           | 8200             | 77×100             | 0.25                | 18.5                                 | 15                               | 18                           | ULXA2D822YE100M |
|                           | 10000            | 77×100             | 0.25                | 23.3                                 | 14                               | 14                           | ULXA2D103YE100M |
|                           | 12000            | 77×115             | 0.25                | 25.3                                 | 12                               | 14                           | ULXA2D123YE115M |
|                           | 15000            | 77×115             | 0.25                | 26.9                                 | 10                               | 13                           | ULXA2D153YE115M |
|                           | 18000            | 77×130             | 0.25                | 30.7                                 | 8                                | 12                           | ULXA2D183YE130M |
|                           | 22000            | 77×143             | 0.25                | 36.2                                 | 7                                | 7                            | ULXA2D223YE143M |
|                           | 27000            | 90×130             | 0.25                | 39.8                                 | 6                                | 7                            | ULXA2D273YF130M |
| 33000                     | 90×157           | 0.25               | 45.2                | 5                                    | 7                                | ULXA2D333YF157M              |                 |
| 250<br>2E<br>(300)        | 1500             | 51×80              | 0.25                | 6.4                                  | 53                               | 50                           | ULXA2E152YC080M |
|                           | 1800             | 51×80              | 0.25                | 8.0                                  | 46                               | 44                           | ULXA2E182YC080M |
|                           | 2200             | 51×100             | 0.25                | 9.4                                  | 38                               | 40                           | ULXA2E222YC100M |
|                           | 2700             | 51×100             | 0.25                | 12.4                                 | 33                               | 36                           | ULXA2E272YC100M |
|                           | 3300             | 51×100             | 0.25                | 13.8                                 | 28                               | 35                           | ULXA2E332YC100M |
|                           | 3900             | 64×100             | 0.25                | 15.2                                 | 25                               | 30                           | ULXA2E392YD100M |
|                           | 4700             | 64×100             | 0.25                | 16.6                                 | 21                               | 23                           | ULXA2E472YD100M |
|                           | 5600             | 64×100             | 0.25                | 17.3                                 | 19                               | 21                           | ULXA2E562YD100M |
|                           | 6800             | 64×115             | 0.25                | 18.4                                 | 15                               | 18                           | ULXA2E682YD115M |
|                           | 8200             | 64×115             | 0.25                | 20.1                                 | 13                               | 16                           | ULXA2E822YD115M |
|                           | 10000            | 64×130             | 0.25                | 24.7                                 | 12                               | 14                           | ULXA2E103YD130M |
|                           |                  | 77×130             | 0.25                | 24.7                                 | 12                               | 14                           | ULXA2E103YE130M |
|                           | 12000            | 77×115             | 0.25                | 25.9                                 | 10                               | 11                           | ULXA2E123YE115M |
|                           | 15000            | 77×130             | 0.25                | 27.5                                 | 8                                | 11                           | ULXA2E153YE130M |
| 18000                     | 77×155           | 0.25               | 35.1                | 7                                    | 10                               | ULXA2E183YE155M              |                 |
| 22000                     | 90×157           | 0.25               | 42.8                | 6                                    | 8                                | ULXA2E223YF157M              |                 |
| 350<br>2V<br>(400)        | 560              | 36×80              | 0.20                | 4.5                                  | 194                              | 222                          | ULXA2V561YA080M |
|                           | 680              | 36×80              | 0.20                | 5.1                                  | 156                              | 197                          | ULXA2V681YA080M |
|                           | 820              | 36×80              | 0.20                | 6.0                                  | 130                              | 174                          | ULXA2V821YA080M |
|                           | 1000             | 51×80              | 0.20                | 6.9                                  | 109                              | 135                          | ULXA2V102YC080M |
|                           | 1200             | 51×75              | 0.20                | 8.2                                  | 90                               | 120                          | ULXA2V122YC080M |
|                           | 1500             | 51×80              | 0.20                | 9.3                                  | 77                               | 100                          | ULXA2V152YC080M |
|                           | 1800             | 51×100             | 0.20                | 11.0                                 | 62                               | 80                           | ULXA2V182YC100M |
|                           | 2200             | 51×100             | 0.20                | 11.9                                 | 51                               | 70                           | ULXA2V222YC100M |
|                           | 2700             | 64×100             | 0.20                | 14.0                                 | 41                               | 58                           | ULXA2V272YD100M |
|                           | 3300             | 64×100             | 0.20                | 16.0                                 | 35                               | 51                           | ULXA2V332YD100M |

## ◆ STANDARD RATING

| Rated Voltage code (V.DC) | Capacitance (μF) | Case size ΦD×L(mm) | tanδ<br>20°C, 120Hz | Ripple current<br>85°C, 120Hz (Arms) | ESR(typ.)<br>20°C, 100Hz (mΩ) | Z max<br>20°C, 10KHz (mΩ) | Part number     |
|---------------------------|------------------|--------------------|---------------------|--------------------------------------|-------------------------------|---------------------------|-----------------|
| 350<br>2V<br>(400)        | 3900             | 64×100             | 0.20                | 19.3                                 | 30                            | 47                        | ULXA2V392YD100M |
|                           | 4700             | 64×115             | 0.20                | 21.9                                 | 28                            | 40                        | ULXA2V472YD115M |
|                           | 5600             | 77×115             | 0.20                | 23.7                                 | 25                            | 35                        | ULXA2V562YE115M |
|                           | 6800             | 77×130             | 0.20                | 24.5                                 | 20                            | 29                        | ULXA2V682YE130M |
|                           | 8200             | 77×155             | 0.20                | 26.4                                 | 17                            | 25                        | ULXA2V822YE155M |
|                           | 10000            | 77×155             | 0.20                | 32.6                                 | 15                            | 23                        | ULXA2V103YE155M |
|                           |                  | 90×157             | 0.20                | 32.6                                 | 15                            | 23                        | ULXA2V103YF157M |
|                           | 12000            | 90×157             | 0.20                | 35.1                                 | 13                            | 21                        | ULXA2V123YF157M |
|                           | 15000            | 90×196             | 0.20                | 42.0                                 | 10                            | 20                        | ULXA2V153YF196M |
|                           | 18000            | 90×220             | 0.20                | 43.5                                 | 8                             | 20                        | ULXA2V183YF220M |
| 22000                     | 90×236           | 0.20               | 46.1                | 8                                    | 20                            | ULXA2V223YF236M           |                 |
| 400<br>2G<br>(450)        | 680              | 51×80              | 0.20                | 6.5                                  | 122                           | 214                       | ULXA2G681YC080M |
|                           | 820              | 36×100             | 0.20                | 7.1                                  | 101                           | 177                       | ULXA2G821YC080M |
|                           | 1000             | 51×80              | 0.20                | 8.0                                  | 85                            | 150                       | ULXA2G102YC080M |
|                           | 1200             | 51×80              | 0.20                | 8.6                                  | 75                            | 125                       | ULXA2G122YC080M |
|                           | 1500             | 51×100             | 0.20                | 9.9                                  | 62                            | 108                       | ULXA2G152YC100M |
|                           | 1800             | 51×100             | 0.20                | 11.4                                 | 51                            | 90                        | ULXA2G182YC100M |
|                           | 2200             | 64×100             | 0.20                | 13.4                                 | 39                            | 75                        | ULXA2G222YD100M |
|                           | 2700             | 64×100             | 0.20                | 15.4                                 | 36                            | 66                        | ULXA2G272YD100M |
|                           | 3300             | 64×115             | 0.20                | 17.8                                 | 35                            | 53                        | ULXA2G332YD115M |
|                           | 3900             | 64×130             | 0.20                | 19.5                                 | 29                            | 48                        | ULXA2G392YD130M |
|                           | 4700             | 77×115             | 0.20                | 21.1                                 | 26                            | 41                        | ULXA2G472YE115M |
|                           | 5600             | 77×130             | 0.20                | 24.1                                 | 21                            | 37                        | ULXA2G562YE130M |
|                           | 6800             | 77×155             | 0.20                | 25.2                                 | 18                            | 30                        | ULXA2G682YE155M |
|                           | 8200             | 90×157             | 0.20                | 30.0                                 | 16                            | 26                        | ULXA2G822YF157M |
|                           | 10000            | 90×157             | 0.20                | 33.3                                 | 13                            | 23                        | ULXA2G103YF157M |
|                           | 12000            | 90×157             | 0.20                | 37.4                                 | 12                            | 21                        | ULXA2G123YF157M |
| 15000                     | 90×220           | 0.20               | 42.7                | 10                                   | 21                            | ULXA2G153YF220M           |                 |
| 450<br>2W<br>(500)        | 680              | 51×80              | 0.20                | 6.3                                  | 142                           | 196                       | ULXA2W681YC080M |
|                           | 820              | 51×80              | 0.20                | 7.2                                  | 99                            | 187                       | ULXA2W821YC080M |
|                           | 1000             | 51×80              | 0.20                | 8.2                                  | 84                            | 154                       | ULXA2W102YC080M |
|                           | 1200             | 51×100             | 0.20                | 9.1                                  | 73                            | 129                       | ULXA2W122YC100M |
|                           | 1500             | 51×115             | 0.20                | 10.2                                 | 60                            | 108                       | ULXA2W152YC115M |
|                           | 1800             | 51×130             | 0.20                | 13.4                                 | 48                            | 100                       | ULXA2W182YC130M |
|                           | 2200             | 64×100             | 0.20                | 15.6                                 | 35                            | 84                        | ULXA2W222YD100M |
|                           | 2700             | 64×115             | 0.20                | 16.0                                 | 35                            | 69                        | ULXA2W272YD115M |
|                           | 3300             | 64×130             | 0.20                | 16.4                                 | 32                            | 61                        | ULXA2W332YD130M |
|                           | 3900             | 77×115             | 0.20                | 18.4                                 | 32                            | 51                        | ULXA2W392YE115M |
|                           | 4700             | 77×130             | 0.20                | 21.0                                 | 26                            | 43                        | ULXA2W472YE130M |
|                           | 5600             | 77×155             | 0.20                | 23.4                                 | 18                            | 37                        | ULXA2W562YE155M |
|                           | 6800             | 90×157             | 0.20                | 27.7                                 | 16                            | 33                        | ULXA2W682YF157M |
|                           | 8200             | 90×157             | 0.20                | 29.3                                 | 14                            | 30                        | ULXA2W822YF157M |
|                           | 10000            | 90×196             | 0.20                | 34.8                                 | 12                            | 25                        | ULXA2W103YF196M |
|                           | 12000            | 90×236             | 0.20                | 38.2                                 | 10                            | 22                        | ULXA2W123YF236M |

- The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 10°C rise.
- When long life performance is required in actual use, the rms ripple current has to be reduced.