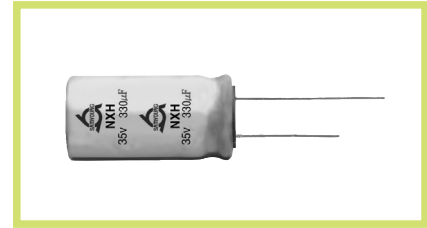


NXH Series

• 105°C 6,000~10,000Hrs assured.

- Non-solvent proof.
- Low Impedance.
- Long Life.
- For LED TV BLU Inverter, SMPS, IP-Board, Adaptor.
- RoHS compliant.
- Halogen-free capacitors are also available.



SPECIFICATIONS

| Item | Characteristics | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------------------|----------|-------------------|--------------------|---------------------------|---------------------------|---------------------------|--------------------------------------|----------|-----------------|------------------------------|--------------------------------------|------|------|-------------|-----------------|------------------------------|------|------|--------------|
| Rated Voltage Range | 6.3 ~ 100 V _{DC} | | | | | | | | | | | | | | | | | | | | |
| Operating Temperature Range | -40 ~ +105°C | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20%(M) (at 20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | I = 0.01CV(μA) or 3μA, whichever is greater. Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(V _{DC}) (at 20°C, 2 minutes) | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor(Tanδ) | <table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> </tr> <tr> <td>Tanδ(Max.)</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> </tr> </table> <p>When the capacitance exceeds 1,000μF, 0.02 shall be added every 1,000μF increase. (at 20°C, 120Hz)</p> | Rated voltage(V _{DC}) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | Tanδ(Max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 |
| Rated voltage(V _{DC}) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | | | | | | | | | | | | |
| Tanδ(Max.) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 | | | | | | | | | | | | |
| Temperature Characteristics (Max. Impedance ratio) | <table border="1"> <tr> <td>Z(-25°C)/Z(+20°C)</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(+20°C)</td> <td>3</td> </tr> </table> <p>(at 120Hz)</p> | Z(-25°C)/Z(+20°C) | 2 | Z(-40°C)/Z(+20°C) | 3 | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(+20°C) | 2 | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(+20°C) | 3 | | | | | | | | | | | | | | | | | | | | |
| Load Life | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) at 105°C for the specified period of time.</p> <table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>6.3~10</td> <td>16~100</td> <td>∅D</td> <td>Life Time</td> </tr> <tr> <td>Capacitance change</td> <td>±30% of the initial value</td> <td>±25% of the initial value</td> <td>∅5~ ∅6.3</td> <td>6,000 hours</td> </tr> <tr> <td>Tan δ</td> <td colspan="2">≤200% of the initial specified value</td> <td>∅8</td> <td>8,000 hours</td> </tr> <tr> <td>Leakage current</td> <td colspan="2">≤The initial specified value</td> <td>∅10~</td> <td>10,000 hours</td> </tr> </table> | Rated voltage(V _{DC}) | 6.3~10 | 16~100 | ∅D | Life Time | Capacitance change | ±30% of the initial value | ±25% of the initial value | ∅5~ ∅6.3 | 6,000 hours | Tan δ | ≤200% of the initial specified value | | ∅8 | 8,000 hours | Leakage current | ≤The initial specified value | | ∅10~ | 10,000 hours |
| Rated voltage(V _{DC}) | 6.3~10 | 16~100 | ∅D | Life Time | | | | | | | | | | | | | | | | | |
| Capacitance change | ±30% of the initial value | ±25% of the initial value | ∅5~ ∅6.3 | 6,000 hours | | | | | | | | | | | | | | | | | |
| Tan δ | ≤200% of the initial specified value | | ∅8 | 8,000 hours | | | | | | | | | | | | | | | | | |
| Leakage current | ≤The initial specified value | | ∅10~ | 10,000 hours | | | | | | | | | | | | | | | | | |
| Shelf Life | <p>The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes, at least 24 hours and not more than 48 hours before the measurements.</p> <table border="1"> <tr> <td>Rated voltage(V_{DC})</td> <td>6.3~10</td> <td>16~100</td> </tr> <tr> <td>Capacitance change</td> <td>±30% of the initial value</td> <td>±25% of the initial value</td> </tr> <tr> <td>Tan δ</td> <td colspan="2">≤200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td colspan="2">≤The initial specified value</td> </tr> </table> | Rated voltage(V _{DC}) | 6.3~10 | 16~100 | Capacitance change | ±30% of the initial value | ±25% of the initial value | Tan δ | ≤200% of the initial specified value | | Leakage current | ≤The initial specified value | | | | | | | | | |
| Rated voltage(V _{DC}) | 6.3~10 | 16~100 | | | | | | | | | | | | | | | | | | | |
| Capacitance change | ±30% of the initial value | ±25% of the initial value | | | | | | | | | | | | | | | | | | | |
| Tan δ | ≤200% of the initial specified value | | | | | | | | | | | | | | | | | | | | |
| Leakage current | ≤The initial specified value | | | | | | | | | | | | | | | | | | | | |
| Others | Satisfied characteristics KS C IEC 60384-4 | | | | | | | | | | | | | | | | | | | | |

DIMENSIONS OF NXH Series

Unit(mm)

Marking : YELLOW SLEEVE, BLACK INK

| | | | | | | | |
|-----|---------------|-----|-----|--------------|------|-----|-----|
| ∅D | 5 | 6.3 | 8 | 10 | 12.5 | 16 | 18 |
| ∅d | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 |
| F | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 |
| ∅D' | ∅D + 0.5 max. | | | | | | |
| L' | L + 1.5 max. | | | L + 2.0 max. | | | |

※ ∅10 x 12L, L' ≤ L+1.5

NXH Series

RATINGS OF NXH Series

| V _{dc} ∅D×L(mm) | 6.3 | | | | 10 | | | | 16 | | | |
|-----------------------------|--------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|
| | μF | IMP. | | Ripple | μF | IMP. | | Ripple | μF | IMP. | | Ripple |
| | | 20°C | -10°C | | | 20°C | -10°C | | | 20°C | -10°C | |
| 5×11 | 220 | 0.22 | 0.80 | 345 | 150 | 0.22 | 0.80 | 345 | 100 | 0.22 | 0.80 | 345 |
| 5×15 | 470 | 0.13 | 0.47 | 480 | 330 | 0.13 | 0.47 | 480 | 220 | 0.13 | 0.47 | 480 |
| 6.3×11 | 470 | 0.094 | 0.35 | 540 | 330 | 0.094 | 0.35 | 540 | 220 | 0.094 | 0.35 | 540 |
| 6.3×15 | 560 | 0.084 | 0.31 | 620 | 470 | 0.084 | 0.31 | 620 | 330 | 0.084 | 0.31 | 620 |
| 8×11.5 | 820 | 0.056 | 0.19 | 945 | 680 | 0.056 | 0.19 | 945 | 470 | 0.056 | 0.19 | 945 |
| 8×15 | 1,200 | 0.045 | 0.15 | 1,250 | 1,000 | 0.045 | 0.15 | 1,250 | 680 | 0.045 | 0.15 | 1,250 |
| 8×20 | 1,500 | 0.029 | 0.11 | 1,500 | 1,500 | 0.029 | 0.11 | 1,500 | 1,000 | 0.029 | 0.11 | 1,500 |
| 10×12 | 1,200 | 0.039 | 0.14 | 1,330 | 1,000 | 0.039 | 0.14 | 1,330 | 680 | 0.039 | 0.14 | 1,330 |
| 10×12.5 | 1,200 | 0.039 | 0.14 | 1,330 | 1,000 | 0.039 | 0.14 | 1,330 | 680 | 0.039 | 0.14 | 1,330 |
| 10×16 | 1,800 | 0.028 | 0.10 | 1,760 | 1,500 | 0.028 | 0.10 | 1,760 | 1,000 | 0.028 | 0.10 | 1,760 |
| 10×20 | 2,200 | 0.020 | 0.060 | 1,960 | 1,800 | 0.020 | 0.060 | 1,960 | 1,500 | 0.020 | 0.060 | 1,960 |
| 10×25 | 2,700 | 0.018 | 0.054 | 2,250 | 2,200 | 0.018 | 0.054 | 2,250 | 1,800 | 0.018 | 0.054 | 2,250 |
| 10×33 | 3,300 | 0.015 | 0.045 | 2,550 | 2,700 | 0.015 | 0.045 | 2,550 | 2,200 | 0.015 | 0.045 | 2,550 |
| 12.5×20 | 3,900 | 0.017 | 0.043 | 2,480 | 3,300 | 0.017 | 0.043 | 2,480 | 2,200 | 0.017 | 0.043 | 2,480 |
| 12.5×25 | 4,700 | 0.015 | 0.038 | 2,900 | 3,900 | 0.015 | 0.038 | 2,900 | 2,700 | 0.015 | 0.038 | 2,900 |
| 12.5×30 | 5,600 | 0.013 | 0.033 | 3,450 | 4,700 | 0.013 | 0.033 | 3,450 | 3,300 | 0.013 | 0.033 | 3,450 |
| 12.5×35 | 6,800 | 0.012 | 0.031 | 3,570 | 5,600 | 0.012 | 0.031 | 3,570 | 3,900 | 0.012 | 0.031 | 3,570 |
| 16×20 | 6,800 | 0.015 | 0.038 | 3,250 | 4,700 | 0.015 | 0.038 | 3,250 | 3,300 | 0.015 | 0.038 | 3,250 |
| 16×25 | 8,200 | 0.013 | 0.035 | 3,630 | 6,800 | 0.013 | 0.035 | 3,630 | 4,700 | 0.013 | 0.035 | 3,630 |
| 18×25 | 10,000 | 0.012 | 0.031 | 3,650 | 8,200 | 0.012 | 0.031 | 3,650 | 5,600 | 0.012 | 0.031 | 3,650 |

| V _{dc} ∅D×L(mm) | 25 | | | | 35 | | | | 50 | | | |
|-----------------------------|-------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|--------|
| | μF | IMP. | | Ripple | μF | IMP. | | Ripple | μF | IMP. | | Ripple |
| | | 20°C | -10°C | | | 20°C | -10°C | | | 20°C | -10°C | |
| 5×11 | 68 | 0.22 | 0.80 | 345 | 47 | 0.22 | 0.80 | 345 | 2.2 | 2.5 | 8.68 | 120 |
| | | | | | | | | | 4.7 | 2.5 | 8.68 | 120 |
| | | | | | | | | | 10 | 1.0 | 3.47 | 145 |
| | | | | | | | | | 22 | 0.40 | 1.39 | 195 |
| | | | | | | | | | 27 | 0.34 | 1.18 | 238 |
| 5×15 | 150 | 0.13 | 0.47 | 480 | 100 | 0.13 | 0.47 | 480 | 56 | 0.16 | 0.56 | 350 |
| | | | | | | | | | 33 | 0.20 | 0.71 | 320 |
| 6.3×11 | 150 | 0.094 | 0.35 | 540 | 100 | 0.094 | 0.35 | 540 | 47 | 0.14 | 0.50 | 450 |
| | | | | | | | | | 56 | 0.14 | 0.50 | 450 |
| | | | | | | | | | 100 | 0.12 | 0.43 | 586 |
| 6.3×15 | 220 | 0.084 | 0.31 | 620 | 150 | 0.084 | 0.31 | 620 | 100 | 0.12 | 0.43 | 586 |
| 8×11.5 | 330 | 0.056 | 0.19 | 945 | 220 | 0.056 | 0.19 | 945 | 100 | 0.074 | 0.22 | 724 |
| 8×15 | 390 | 0.045 | 0.15 | 1,250 | 270 | 0.045 | 0.15 | 1,250 | 120 | 0.061 | 0.18 | 950 |
| | 470 | 0.045 | 0.15 | 1,330 | | | | | | | | |
| 8×20 | 560 | 0.029 | 0.11 | 1,500 | 390 | 0.029 | 0.11 | 1,500 | 180 | 0.046 | 0.14 | 1,190 |
| | | | | | 470 | 0.029 | | 1,600 | | | | |
| 10×12 | 470 | 0.039 | 0.14 | 1,330 | 330 | 0.039 | 0.14 | 1,330 | 68 | 0.070 | 0.21 | 750 |
| | | | | | | | | | 150 | 0.061 | 0.18 | 979 |
| 10×12.5 | 470 | 0.039 | 0.14 | 1,330 | 330 | 0.039 | 0.14 | 1,330 | 68 | 0.070 | 0.21 | 750 |
| | | | | | | | | | 150 | 0.061 | 0.18 | 979 |
| 10×16 | 680 | 0.028 | 0.10 | 1,760 | 470 | 0.028 | 0.10 | 1,760 | 220 | 0.042 | 0.12 | 1,370 |
| 10×20 | 820 | 0.020 | 0.060 | 1,960 | 560 | 0.020 | 0.060 | 1,960 | 270 | 0.030 | 0.090 | 1,580 |
| | 1,000 | 0.020 | 0.060 | 1,960 | 680 | 0.025 | 0.075 | 1,850 | | | | |
| 10×25 | 1,000 | 0.018 | 0.054 | 2,250 | 680 | 0.018 | 0.054 | 2,250 | 330 | 0.028 | 0.085 | 1,870 |
| 10×33 | 1,200 | 0.015 | 0.045 | 2,550 | 1,000 | 0.015 | 0.045 | 2,550 | 470 | 0.025 | 0.076 | 2,110 |
| 12.5×20 | 1,000 | 0.018 | 0.045 | 2,500 | 1,000 | 0.017 | 0.043 | 2,480 | 470 | 0.027 | 0.068 | 2,050 |
| | 1,500 | 0.017 | 0.043 | 2,550 | | | | | | | | |
| 12.5×25 | 1,800 | 0.015 | 0.038 | 2,900 | 1,200 | 0.015 | 0.038 | 2,900 | 560 | 0.023 | 0.059 | 2,410 |
| 12.5×30 | 2,200 | 0.013 | 0.033 | 3,450 | 1,500 | 0.013 | 0.033 | 3,450 | 680 | 0.021 | 0.052 | 2,860 |
| 12.5×35 | 2,700 | 0.012 | 0.031 | 3,570 | 1,800 | 0.012 | 0.031 | 3,570 | 820 | 0.019 | 0.051 | 2,960 |
| 16×20 | 2,200 | 0.015 | 0.038 | 3,250 | 1,500 | 0.015 | 0.038 | 3,250 | 820 | 0.023 | 0.059 | 2,730 |
| | 2,700 | 0.015 | 0.038 | 3,250 | | | | | 1,000 | 0.023 | 0.059 | 2,730 |
| 16×25 | 3,300 | 0.013 | 0.035 | 3,630 | 2,200 | 0.013 | 0.035 | 3,630 | 1,000 | 0.021 | 0.056 | 3,010 |
| 18×25 | 3,900 | 0.012 | 0.031 | 3,650 | 2,700 | 0.012 | 0.031 | 3,650 | 1,500 | 0.019 | 0.051 | 3,290 |

RATINGS OF NXH Series

| V _{DC} #DxL(mm) | 63 | | | |
|-----------------------------|-----|-------|-------|--------|
| | μF | IMP. | | Ripple |
| | | 20°C | -10°C | |
| 5 × 11 | 18 | 0.45 | 1.8 | 173 |
| 6.3 × 11 | 47 | 0.30 | 1.2 | 278 |
| 8 × 11.5 | 82 | 0.20 | 0.80 | 525 |
| 8 × 15 | 100 | 0.18 | 0.72 | 688 |
| 8 × 20 | 150 | 0.16 | 0.64 | 861 |
| 10 × 12 | 120 | 0.16 | 0.64 | 725 |
| 10 × 12.5 | 120 | 0.16 | 0.64 | 725 |
| 10 × 16 | 180 | 0.10 | 0.40 | 998 |
| 10 × 20 | 270 | 0.080 | 0.32 | 1,200 |
| 10 × 25 | 330 | 0.070 | 0.28 | 1,410 |
| 12.5 × 20 | 390 | 0.050 | 0.20 | 1,570 |
| 12.5 × 25 | 470 | 0.037 | 0.15 | 1,990 |
| 12.5 × 30 | 560 | 0.032 | 0.13 | 2,410 |
| 12.5 × 35 | 680 | 0.030 | 0.12 | 2,620 |
| 16 × 20 | 560 | 0.035 | 0.14 | 2,100 |
| 16 × 25 | 820 | 0.030 | 0.12 | 2,430 |

| V _{DC} #DxL(mm) | 80 | | | | 100 | | | |
|-----------------------------|-------|-------|-------|--------|-----|-------|-------|--------|
| | μF | IMP. | | Ripple | μF | IMP. | | Ripple |
| | | 20°C | -10°C | | | 20°C | -10°C | |
| 5 × 11 | 12 | 1.2 | 5.33 | 163 | 8.2 | 1.2 | 5.33 | 163 |
| 6.3 × 11 | 33 | 0.46 | 2.03 | 267 | 18 | 0.46 | 2.03 | 267 |
| 8 × 11.5 | 56 | 0.29 | 1.31 | 462 | 33 | 0.29 | 1.31 | 462 |
| 8 × 15 | 68 | 0.20 | 0.90 | 585 | 47 | 0.20 | 0.90 | 585 |
| 8 × 20 | 100 | 0.16 | 0.72 | 735 | 68 | 0.16 | 0.72 | 735 |
| 10 × 12 | 82 | 0.17 | 0.68 | 624 | 47 | 0.17 | 0.68 | 624 |
| 10 × 12.5 | 82 | 0.17 | 0.68 | 624 | 47 | 0.17 | 0.68 | 624 |
| 10 × 16 | 120 | 0.11 | 0.44 | 780 | 68 | 0.11 | 0.44 | 780 |
| 10 × 20 | 180 | 0.084 | 0.35 | 1,040 | 100 | 0.084 | 0.35 | 1,040 |
| 10 × 25 | 220 | 0.069 | 0.28 | 1,170 | 120 | 0.069 | 0.28 | 1,170 |
| 12.5 × 16 | 180 | 0.11 | 0.33 | 975 | 100 | 0.11 | 0.33 | 975 |
| 12.5 × 20 | 270 | 0.062 | 0.19 | 1,430 | 150 | 0.062 | 0.19 | 1,430 |
| 12.5 × 25 | 330 | 0.047 | 0.15 | 1,620 | 220 | 0.047 | 0.15 | 1,620 |
| 12.5 × 30 | 390 | 0.042 | 0.14 | 1,950 | 270 | 0.042 | 0.14 | 1,950 |
| 12.5 × 35 | 470 | 0.036 | 0.11 | 2,140 | 330 | 0.036 | 0.11 | 2,140 |
| 12.5 x 40 | 560 | 0.032 | 0.096 | 2,340 | 390 | 0.032 | 0.096 | 2,340 |
| 16 × 20 | 390 | 0.048 | 0.16 | 1,750 | 270 | 0.048 | 0.16 | 1,750 |
| 16 × 25 | 560 | 0.038 | 0.11 | 2,210 | 390 | 0.038 | 0.11 | 2,210 |
| 16 × 31.5 | 680 | 0.032 | 0.096 | 2,400 | 470 | 0.032 | 0.096 | 2,400 |
| 16 × 35.5 | 820 | 0.029 | 0.087 | 2,600 | 560 | 0.029 | 0.087 | 2,600 |
| 16 × 40 | 1,000 | 0.027 | 0.081 | 2,860 | 680 | 0.027 | 0.081 | 2,860 |
| 18 × 20 | 560 | 0.045 | 0.14 | 1,950 | 390 | 0.045 | 0.14 | 1,950 |
| 18 × 25 | 820 | 0.036 | 0.11 | 2,270 | 470 | 0.036 | 0.11 | 2,270 |
| 18 × 31.5 | 1,000 | 0.030 | 0.090 | 2,470 | 560 | 0.030 | 0.090 | 2,470 |
| 18 × 35.5 | 1,200 | 0.027 | 0.081 | 2,860 | 680 | 0.027 | 0.081 | 2,860 |
| 18 × 40 | 1,500 | 0.026 | 0.078 | 3,510 | 820 | 0.026 | 0.078 | 3,510 |



RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

| Cap.(μF) | Freq.(Hz) | 120 | 1k | 10k | 50k | 100k |
|----------------|-----------|------|------|------|------|------|
| 2.2 ~ 22 | | 0.40 | 0.66 | 0.85 | 0.90 | 1.00 |
| 27 ~ 33 | | 0.42 | 0.70 | 0.90 | 0.93 | 1.00 |
| 39 ~ 270 | | 0.50 | 0.73 | 0.92 | 0.95 | 1.00 |
| 330 ~ 680 | | 0.55 | 0.77 | 0.94 | 0.96 | 1.00 |
| 820 ~ 1,800 | | 0.60 | 0.80 | 0.96 | 0.97 | 1.00 |
| 2,200 ~ 10,000 | | 0.70 | 0.85 | 0.98 | 0.99 | 1.00 |

NXH Series