

LXM Series

- Endurance with ripple current : 7,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

LXM

Longer life

LXQ



SPECIFICATIONS

| Items | Characteristics | | |
|--|---|---------------------------------------|------------|
| Category | -25 to +105°C | | |
| Temperature Range | -25 to +105°C | | |
| Rated Voltage Range | 160 to 450V _{dc} | | |
| Capacitance Tolerance | ±20% (M) (at 20°C, 120Hz) | | |
| Leakage Current | I ≤ 3√CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes) | | |
| Dissipation Factor (tan δ) | Rated voltage (V _{dc}) | 160 to 400V | 420 & 450V |
| | tan δ (Max.) | 0.15 | 0.20 |
| Low Temperature Characteristics (Max. Impedance Ratio) | Rated voltage (V _{dc}) | 160 to 400V | 420 & 450V |
| | Z (-25°C)/Z (+20°C) | 4 | 8 |
| Endurance | The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 7,000 hours at 105°C. | | |
| | Capacitance change | ≤ ±20% of the initial value | |
| | D.F. (tan δ) | ≤ 250% of the initial specified value | |
| | Leakage current | ≤ The initial specified value | |
| Shelf Life | 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. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. | | |
| | Capacitance change | ≤ ±15% of the initial value | |
| | D.F. (tan δ) | ≤ 150% of the initial specified value | |
| | Leakage current | ≤ The initial specified value | |

DIMENSIONS [mm]

Terminal Code : VS (φ22 to φ35) : Standard

Terminal Code : LI (φ35)



* φD=35mm : 3.5±0.5mm

The standard design has no plastic disc.

PART NUMBERING SYSTEM



Please refer to "Product code guide (snap-in type)"

◆STANDARD RATINGS

| WV (V _{dc}) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/105°C, 120Hz) | Part No. | WV (V _{dc}) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/105°C, 120Hz) | Part No. |
|-----------------------|----------|--------------------|-------|--|--------------------|-----------------------|-----------|--------------------|--------------------|--|--------------------|
| 350 | 100 | 22 × 25 | 0.15 | 0.67 | ELXM351VSN101MP25S | 420 | 56 | 22 × 25 | 0.20 | 0.50 | ELXM421VSN560MP25S |
| | 120 | 22 × 30 | 0.15 | 0.77 | ELXM351VSN121MP30S | | 68 | 22 × 30 | 0.20 | 0.58 | ELXM421VSN680MP30S |
| | 120 | 25.4 × 25 | 0.15 | 0.76 | ELXM351VSN121MQ25S | | 82 | 22 × 30 | 0.20 | 0.63 | ELXM421VSN820MP30S |
| | 150 | 22 × 35 | 0.15 | 0.88 | ELXM351VSN151MP35S | | 82 | 25.4 × 25 | 0.20 | 0.63 | ELXM421VSN820MQ25S |
| | 150 | 25.4 × 30 | 0.15 | 0.88 | ELXM351VSN151MQ30S | | 100 | 22 × 35 | 0.20 | 0.72 | ELXM421VSN101MP35S |
| | 180 | 22 × 40 | 0.15 | 0.99 | ELXM351VSN181MP40S | | 100 | 25.4 × 30 | 0.20 | 0.72 | ELXM421VSN101MQ30S |
| | 180 | 25.4 × 30 | 0.15 | 0.96 | ELXM351VSN181MQ30S | | 120 | 22 × 40 | 0.20 | 0.81 | ELXM421VSN121MP40S |
| | 180 | 30 × 25 | 0.15 | 0.98 | ELXM351VSN181MR25S | | 120 | 25.4 × 30 | 0.20 | 0.79 | ELXM421VSN121MQ30S |
| | 220 | 22 × 45 | 0.15 | 1.12 | ELXM351VSN221MP45S | | 120 | 30 × 25 | 0.20 | 0.80 | ELXM421VSN121MR25S |
| | 220 | 25.4 × 35 | 0.15 | 1.11 | ELXM351VSN221MQ35S | | 150 | 22 × 45 | 0.20 | 0.92 | ELXM421VSN151MP45S |
| | 220 | 30 × 30 | 0.15 | 1.11 | ELXM351VSN221MR30S | | 150 | 25.4 × 35 | 0.20 | 0.92 | ELXM421VSN151MQ35S |
| | 270 | 25.4 × 40 | 0.15 | 1.26 | ELXM351VSN271MQ40S | | 150 | 30 × 30 | 0.20 | 0.92 | ELXM421VSN151MR30S |
| | 270 | 30 × 35 | 0.15 | 1.28 | ELXM351VSN271MR35S | | 180 | 25.4 × 40 | 0.20 | 1.03 | ELXM421VSN181MQ40S |
| | 330 | 25.4 × 45 | 0.15 | 1.40 | ELXM351VSN331MQ45S | | 180 | 30 × 35 | 0.20 | 1.05 | ELXM421VSN181MR35S |
| | 330 | 30 × 35 | 0.15 | 1.42 | ELXM351VSN331MR35S | | 220 | 25.4 × 50 | 0.20 | 1.19 | ELXM421VSN221MQ50S |
| | 330 | 35 × 30 | 0.15 | 1.45 | ELXM351VSN331MA30S | | 220 | 30 × 35 | 0.20 | 1.16 | ELXM421VSN221MR35S |
| | 390 | 30 × 40 | 0.15 | 1.60 | ELXM351VSN391MR40S | | 220 | 35 × 30 | 0.20 | 1.18 | ELXM421VSN221MA30S |
| | 390 | 35 × 35 | 0.15 | 1.61 | ELXM351VSN391MA35S | | 270 | 30 × 45 | 0.20 | 1.38 | ELXM421VSN271MR45S |
| | 470 | 30 × 50 | 0.15 | 1.86 | ELXM351VSN471MR50S | | 270 | 35 × 35 | 0.20 | 1.34 | ELXM421VSN271MA35S |
| | 470 | 35 × 40 | 0.15 | 1.85 | ELXM351VSN471MA40S | | 330 | 30 × 50 | 0.20 | 1.56 | ELXM421VSN331MR50S |
| 560 | 35 × 40 | 0.15 | 2.02 | ELXM351VSN561MA40S | 330 | 35 × 40 | 0.20 | 1.55 | ELXM421VSN331MA40S | | |
| 680 | 35 × 50 | 0.15 | 2.36 | ELXM351VSN681MA50S | 390 | 35 × 45 | 0.20 | 1.74 | ELXM421VSN391MA45S | | |
| 400 | 68 | 22 × 25 | 0.15 | 0.55 | ELXM401VSN680MP25S | 470 | 35 × 50 | 0.20 | 1.96 | ELXM421VSN471MA50S | |
| | 82 | 22 × 30 | 0.15 | 0.63 | ELXM401VSN820MP30S | 47 | 22 × 25 | 0.20 | 0.46 | ELXM451VSN470MP25S | |
| | 100 | 22 × 30 | 0.15 | 0.70 | ELXM401VSN101MP30S | 56 | 22 × 30 | 0.20 | 0.52 | ELXM451VSN560MP30S | |
| | 100 | 25.4 × 25 | 0.15 | 0.70 | ELXM401VSN101MQ25S | 68 | 22 × 30 | 0.20 | 0.58 | ELXM451VSN680MP30S | |
| | 120 | 22 × 35 | 0.15 | 0.79 | ELXM401VSN121MP35S | 68 | 25.4 × 25 | 0.20 | 0.58 | ELXM451VSN680MQ25S | |
| | 120 | 25.4 × 30 | 0.15 | 0.79 | ELXM401VSN121MQ30S | 82 | 22 × 35 | 0.20 | 0.65 | ELXM451VSN820MP35S | |
| | 150 | 22 × 40 | 0.15 | 0.90 | ELXM401VSN151MP40S | 82 | 25.4 × 30 | 0.20 | 0.65 | ELXM451VSN820MQ30S | |
| | 150 | 25.4 × 30 | 0.15 | 0.88 | ELXM401VSN151MQ30S | 100 | 22 × 40 | 0.20 | 0.74 | ELXM451VSN101MP40S | |
| | 150 | 30 × 25 | 0.15 | 0.90 | ELXM401VSN151MR25S | 100 | 25.4 × 30 | 0.20 | 0.72 | ELXM451VSN101MQ30S | |
| | 180 | 22 × 45 | 0.15 | 0.99 | ELXM401VSN181MP45S | 100 | 30 × 25 | 0.20 | 0.73 | ELXM451VSN101MR25S | |
| | 180 | 25.4 × 35 | 0.15 | 1.01 | ELXM401VSN181MQ35S | 120 | 22 × 45 | 0.20 | 0.83 | ELXM451VSN121MP45S | |
| | 180 | 30 × 30 | 0.15 | 1.01 | ELXM401VSN181MR30S | 120 | 25.4 × 35 | 0.20 | 0.82 | ELXM451VSN121MQ35S | |
| | 220 | 25.4 × 40 | 0.15 | 1.14 | ELXM401VSN221MQ40S | 120 | 30 × 30 | 0.20 | 0.82 | ELXM451VSN121MR30S | |
| | 220 | 30 × 35 | 0.15 | 1.16 | ELXM401VSN221MR35S | 150 | 25.4 × 40 | 0.20 | 0.94 | ELXM451VSN151MQ40S | |
| | 270 | 25.4 × 50 | 0.15 | 1.32 | ELXM401VSN271MQ50S | 150 | 30 × 35 | 0.20 | 0.96 | ELXM451VSN151MR35S | |
| | 270 | 30 × 40 | 0.15 | 1.33 | ELXM401VSN271MR40S | 180 | 25.4 × 45 | 0.20 | 1.06 | ELXM451VSN181MQ45S | |
| | 270 | 35 × 30 | 0.15 | 1.31 | ELXM401VSN271MA30S | 180 | 30 × 35 | 0.20 | 1.05 | ELXM451VSN181MR35S | |
| | 330 | 30 × 45 | 0.15 | 1.52 | ELXM401VSN331MR45S | 180 | 35 × 30 | 0.20 | 1.07 | ELXM451VSN181MA30S | |
| | 330 | 35 × 35 | 0.15 | 1.48 | ELXM401VSN331MA35S | 220 | 30 × 40 | 0.20 | 1.20 | ELXM451VSN221MR40S | |
| | 390 | 30 × 50 | 0.15 | 1.69 | ELXM401VSN391MR50S | 220 | 35 × 35 | 0.20 | 1.21 | ELXM451VSN221MA35S | |
| 390 | 35 × 40 | 0.15 | 1.68 | ELXM401VSN391MA40S | 270 | 30 × 50 | 0.20 | 1.41 | ELXM451VSN271MR50S | | |
| 470 | 35 × 45 | 0.15 | 1.91 | ELXM401VSN471MA45S | 270 | 35 × 40 | 0.20 | 1.40 | ELXM451VSN271MA40S | | |
| 560 | 35 × 50 | 0.15 | 2.14 | ELXM401VSN561MA50S | 330 | 35 × 45 | 0.20 | 1.60 | ELXM451VSN331MA45S | | |
| | | | | | 390 | 35 × 50 | 0.20 | 1.79 | ELXM451VSN391MA50S | | |

◆RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

| Frequency(Hz) | 50 | 120 | 300 | 1k | 10k | 50k |
|---------------------------|------|------|------|------|------|------|
| 160 to 250V _{dc} | 0.81 | 1.00 | 1.17 | 1.32 | 1.45 | 1.50 |
| 315 to 450V _{dc} | 0.77 | 1.00 | 1.16 | 1.30 | 1.41 | 1.43 |

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.