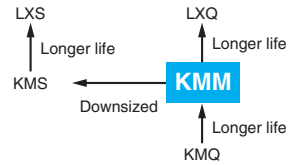


KMM Series

- Longer life from KMQ series
- Endurance with ripple current : 2,000 to 3,000 hours at 105°C
- Non solvent resistant type
- RoHS2 Compliant

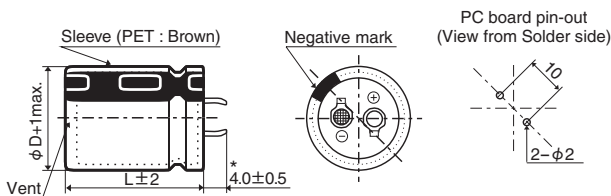


SPECIFICATIONS

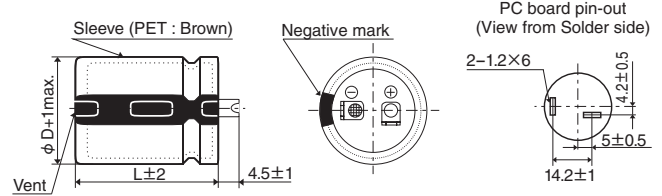
| Items | Characteristics | | |
|--|---|---------------------------------------|------------|
| Category | | | |
| Temperature Range | -25 to +105°C | | |
| Rated Voltage Range | 160 to 450V _{dc} | | |
| Capacitance Tolerance | ±20% (M) (at 20°C, 120Hz) | | |
| Leakage Current | I ≤ 3/√CV Where, I : 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 3,000 hours at 105°C. | | |
| | Capacitance change | ≤ ±20% of the initial value | |
| | D.F. (tan δ) | ≤ 200% 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



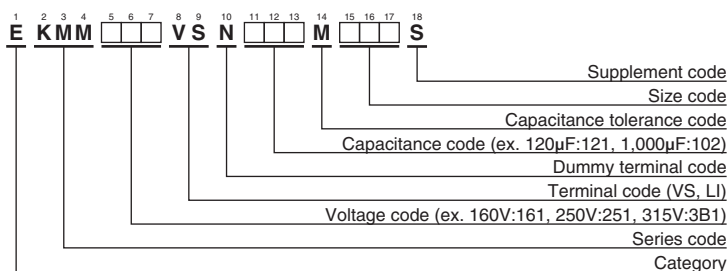
- Terminal Code : LI (φ35)



* 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)"

KMM Series

◆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. | |
|--------------------------|-------------|-----------------------|-------|--|--------------------|--------------------------|-------------|-----------------------|--------------------|--|--------------------|--------------------|
| | | | | | | | | | | | | |
| 160 | 220 | 22 × 20 | 0.15 | 0.81 | EKMM161VSN221MP20S | 180 | 1,200 | 25.4 × 50 | 0.15 | 2.55 | EKMM181VSN122MQ50S | |
| | 270 | 25.4 × 20 | 0.15 | 0.98 | EKMM161VSN271MQ20S | | 1,200 | 30 × 40 | 0.15 | 2.55 | EKMM181VSN122MR40S | |
| | 330 | 22 × 25 | 0.15 | 1.20 | EKMM161VSN331MP25S | | 1,200 | 35 × 30 | 0.15 | 2.55 | EKMM181VSN122MA30S | |
| | 330 | 25.4 × 20 | 0.15 | 1.02 | EKMM161VSN331MQ20S | | 1,500 | 30 × 45 | 0.15 | 2.90 | EKMM181VSN152MR45S | |
| | 390 | 22 × 25 | 0.15 | 1.30 | EKMM161VSN391MP25S | | 1,500 | 35 × 35 | 0.15 | 2.90 | EKMM181VSN152MA35S | |
| | 390 | 25.4 × 25 | 0.15 | 1.26 | EKMM161VSN391MQ25S | | 1,800 | 30 × 60 | 0.15 | 3.49 | EKMM181VSN182MR60S | |
| | 390 | 30 × 20 | 0.15 | 1.25 | EKMM161VSN391MR20S | | 1,800 | 35 × 40 | 0.15 | 3.30 | EKMM181VSN182MA40S | |
| | 470 | 22 × 30 | 0.15 | 1.55 | EKMM161VSN471MP30S | | 2,200 | 35 × 50 | 0.15 | 3.65 | EKMM181VSN222MA50S | |
| | 470 | 25.4 × 25 | 0.15 | 1.55 | EKMM161VSN471MQ25S | | 2,700 | 35 × 60 | 0.15 | 4.19 | EKMM181VSN272MA60S | |
| | 470 | 30 × 20 | 0.15 | 1.30 | EKMM161VSN471MR20S | | 200 | 150 | 22 × 20 | 0.15 | 0.73 | EKMM201VSN151MP20S |
| | 560 | 22 × 35 | 0.15 | 1.67 | EKMM161VSN561MP35S | | | 180 | 22 × 20 | 0.15 | 0.80 | EKMM201VSN181MP20S |
| | 560 | 25.4 × 30 | 0.15 | 1.67 | EKMM161VSN561MQ30S | | | 220 | 25.4 × 20 | 0.15 | 0.85 | EKMM201VSN221MQ20S |
| | 560 | 30 × 25 | 0.15 | 1.67 | EKMM161VSN561MR25S | | | 270 | 22 × 25 | 0.15 | 1.10 | EKMM201VSN271MP25S |
| | 560 | 35 × 20 | 0.15 | 1.46 | EKMM161VSN561MA20S | | | 270 | 30 × 20 | 0.15 | 1.05 | EKMM201VSN271MR20S |
| | 680 | 22 × 40 | 0.15 | 1.82 | EKMM161VSN681MP40S | | | 330 | 22 × 30 | 0.15 | 1.25 | EKMM201VSN331MP30S |
| | 680 | 25.4 × 30 | 0.15 | 1.82 | EKMM161VSN681MQ30S | 330 | | 25.4 × 25 | 0.15 | 1.25 | EKMM201VSN331MQ25S | |
| | 680 | 30 × 25 | 0.15 | 1.82 | EKMM161VSN681MR25S | 330 | | 30 × 20 | 0.15 | 1.10 | EKMM201VSN331MR20S | |
| | 680 | 35 × 20 | 0.15 | 1.51 | EKMM161VSN681MA20S | 390 | | 22 × 30 | 0.15 | 1.35 | EKMM201VSN391MP30S | |
| | 820 | 22 × 45 | 0.15 | 2.04 | EKMM161VSN821MP45S | 390 | | 25.4 × 25 | 0.15 | 1.35 | EKMM201VSN391MQ25S | |
| | 820 | 25.4 × 35 | 0.15 | 2.04 | EKMM161VSN821MQ35S | 390 | | 35 × 20 | 0.15 | 1.30 | EKMM201VSN391MA20S | |
| | 820 | 30 × 30 | 0.15 | 2.04 | EKMM161VSN821MR30S | 470 | | 22 × 35 | 0.15 | 1.50 | EKMM201VSN471MP35S | |
| | 820 | 35 × 25 | 0.15 | 2.04 | EKMM161VSN821MA25S | 470 | | 25.4 × 30 | 0.15 | 1.50 | EKMM201VSN471MQ30S | |
| | 1,000 | 22 × 50 | 0.15 | 2.25 | EKMM161VSN102MP50S | 470 | | 30 × 25 | 0.15 | 1.50 | EKMM201VSN471MR25S | |
| | 1,000 | 25.4 × 40 | 0.15 | 2.25 | EKMM161VSN102MQ40S | 470 | | 35 × 20 | 0.15 | 1.41 | EKMM201VSN471MA20S | |
| | 1,000 | 30 × 30 | 0.15 | 2.25 | EKMM161VSN102MR30S | 560 | | 22 × 40 | 0.15 | 1.67 | EKMM201VSN561MP40S | |
| | 1,000 | 35 × 25 | 0.15 | 2.25 | EKMM161VSN102MA25S | 560 | | 25.4 × 30 | 0.15 | 1.67 | EKMM201VSN561MQ30S | |
| | 1,200 | 25.4 × 45 | 0.15 | 2.49 | EKMM161VSN122MQ45S | 560 | | 30 × 25 | 0.15 | 1.67 | EKMM201VSN561MR25S | |
| | 1,200 | 30 × 35 | 0.15 | 2.49 | EKMM161VSN122MR35S | 680 | 22 × 45 | 0.15 | 1.78 | EKMM201VSN681MP45S | | |
| | 1,200 | 35 × 30 | 0.15 | 2.49 | EKMM161VSN122MA30S | 680 | 25.4 × 35 | 0.15 | 1.78 | EKMM201VSN681MQ35S | | |
| | 1,500 | 25.4 × 60 | 0.15 | 2.97 | EKMM161VSN152MQ60S | 680 | 30 × 30 | 0.15 | 1.78 | EKMM201VSN681MR30S | | |
| | 1,500 | 30 × 40 | 0.15 | 2.84 | EKMM161VSN152MR40S | 680 | 35 × 25 | 0.15 | 1.78 | EKMM201VSN681MA25S | | |
| | 1,500 | 35 × 30 | 0.15 | 2.84 | EKMM161VSN152MA30S | 820 | 25.4 × 45 | 0.15 | 2.04 | EKMM201VSN821MQ45S | | |
| | 1,800 | 30 × 45 | 0.15 | 3.32 | EKMM161VSN182MR45S | 820 | 30 × 30 | 0.15 | 2.04 | EKMM201VSN821MR30S | | |
| 1,800 | 35 × 35 | 0.15 | 3.00 | EKMM161VSN182MA35S | 820 | 35 × 25 | 0.15 | 2.04 | EKMM201VSN821MA25S | | | |
| 2,200 | 30 × 60 | 0.15 | 3.86 | EKMM161VSN222MR60S | 1,000 | 25.4 × 50 | 0.15 | 2.30 | EKMM201VSN102MQ50S | | | |
| 2,200 | 35 × 45 | 0.15 | 3.50 | EKMM161VSN222MA45S | 1,000 | 30 × 35 | 0.15 | 2.30 | EKMM201VSN102MR35S | | | |
| 2,700 | 35 × 50 | 0.15 | 4.00 | EKMM161VSN272MA50S | 1,000 | 35 × 30 | 0.15 | 2.30 | EKMM201VSN102MA30S | | | |
| 3,300 | 35 × 60 | 0.15 | 4.63 | EKMM161VSN332MA60S | 1,200 | 25.4 × 60 | 0.15 | 2.66 | EKMM201VSN122MQ60S | | | |
| 180 | 180 | 22 × 20 | 0.15 | 0.80 | EKMM181VSN181MP20S | 1,200 | 30 × 40 | 0.15 | 2.65 | EKMM201VSN122MR40S | | |
| | 220 | 25.4 × 20 | 0.15 | 0.90 | EKMM181VSN221MQ20S | 1,200 | 35 × 35 | 0.15 | 2.65 | EKMM201VSN122MA35S | | |
| | 270 | 22 × 25 | 0.15 | 1.00 | EKMM181VSN271MP25S | 1,500 | 30 × 50 | 0.15 | 3.08 | EKMM201VSN152MR50S | | |
| | 270 | 25.4 × 20 | 0.15 | 0.95 | EKMM181VSN271MQ20S | 1,500 | 35 × 40 | 0.15 | 3.08 | EKMM201VSN152MA40S | | |
| | 330 | 22 × 25 | 0.15 | 1.20 | EKMM181VSN331MP25S | 1,800 | 30 × 60 | 0.15 | 3.49 | EKMM201VSN182MR60S | | |
| | 330 | 25.4 × 25 | 0.15 | 1.16 | EKMM181VSN331MQ25S | 1,800 | 35 × 45 | 0.15 | 3.48 | EKMM201VSN182MA45S | | |
| | 330 | 30 × 20 | 0.15 | 1.15 | EKMM181VSN331MR20S | 2,200 | 35 × 50 | 0.15 | 3.78 | EKMM201VSN222MA50S | | |
| | 390 | 22 × 30 | 0.15 | 1.35 | EKMM181VSN391MP30S | 220 | 150 | 22 × 20 | 0.15 | 0.67 | EKMM221VSN151MP20S | |
| | 390 | 25.4 × 25 | 0.15 | 1.35 | EKMM181VSN391MQ25S | | 180 | 25.4 × 20 | 0.15 | 0.76 | EKMM221VSN181MP20S | |
| | 390 | 30 × 20 | 0.15 | 1.20 | EKMM181VSN391MR20S | | 220 | 22 × 25 | 0.15 | 1.00 | EKMM221VSN221MP25S | |
| | 470 | 22 × 35 | 0.15 | 1.50 | EKMM181VSN471MP35S | | 220 | 25.4 × 20 | 0.15 | 0.84 | EKMM221VSN221MQ20S | |
| | 470 | 25.4 × 30 | 0.15 | 1.50 | EKMM181VSN471MQ30S | | 270 | 22 × 30 | 0.15 | 1.15 | EKMM221VSN271MP30S | |
| | 470 | 30 × 25 | 0.15 | 1.50 | EKMM181VSN471MR25S | | 270 | 25.4 × 25 | 0.15 | 1.08 | EKMM221VSN271MQ25S | |
| | 470 | 35 × 20 | 0.15 | 1.36 | EKMM181VSN471MA20S | | 270 | 30 × 20 | 0.15 | 0.98 | EKMM221VSN271MR20S | |
| | 560 | 22 × 40 | 0.15 | 1.67 | EKMM181VSN561MP40S | | 330 | 22 × 35 | 0.15 | 1.25 | EKMM221VSN331MP35S | |
| | 560 | 25.4 × 30 | 0.15 | 1.67 | EKMM181VSN561MQ30S | | 330 | 25.4 × 25 | 0.15 | 1.25 | EKMM221VSN331MQ25S | |
| | 560 | 30 × 25 | 0.15 | 1.67 | EKMM181VSN561MR25S | | 330 | 35 × 20 | 0.15 | 1.13 | EKMM221VSN331MA20S | |
| | 560 | 35 × 20 | 0.15 | 1.43 | EKMM181VSN561MA20S | | 390 | 22 × 35 | 0.15 | 1.40 | EKMM221VSN391MP35S | |
| | 680 | 22 × 45 | 0.15 | 1.78 | EKMM181VSN681MP45S | | 390 | 25.4 × 30 | 0.15 | 1.40 | EKMM221VSN391MQ30S | |
| | 680 | 25.4 × 35 | 0.15 | 1.78 | EKMM181VSN681MQ35S | | 390 | 30 × 25 | 0.15 | 1.36 | EKMM221VSN391MR25S | |
| | 680 | 30 × 30 | 0.15 | 1.78 | EKMM181VSN681MR30S | | 390 | 35 × 20 | 0.15 | 1.23 | EKMM221VSN391MA20S | |
| | 680 | 35 × 25 | 0.15 | 1.83 | EKMM181VSN681MA25S | | 470 | 22 × 40 | 0.15 | 1.51 | EKMM221VSN471MP40S | |
| | 820 | 22 × 50 | 0.15 | 2.04 | EKMM181VSN821MP50S | | 470 | 25.4 × 35 | 0.15 | 1.54 | EKMM221VSN471MQ35S | |
| | 820 | 25.4 × 40 | 0.15 | 2.04 | EKMM181VSN821MQ40S | | 470 | 30 × 25 | 0.15 | 1.50 | EKMM221VSN471MR25S | |
| | 820 | 30 × 30 | 0.15 | 2.04 | EKMM181VSN821MR30S | | 560 | 22 × 45 | 0.15 | 1.70 | EKMM221VSN561MP45S | |
| | 820 | 35 × 25 | 0.15 | 2.04 | EKMM181VSN821MA25S | 560 | 25.4 × 40 | 0.15 | 1.72 | EKMM221VSN561MQ40S | | |
| | 1,000 | 25.4 × 45 | 0.15 | 2.30 | EKMM181VSN102MQ45S | 560 | 30 × 30 | 0.15 | 1.70 | EKMM221VSN561MR30S | | |
| | 1,000 | 30 × 35 | 0.15 | 2.30 | EKMM181VSN102MR35S | 560 | 35 × 25 | 0.15 | 1.71 | EKMM221VSN561MA25S | | |
| | 1,000 | 35 × 30 | 0.15 | 2.30 | EKMM181VSN102MA30S | 680 | 25.4 × 45 | 0.15 | 1.94 | EKMM221VSN681MQ45S | | |

◆ 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. |
|-----------------------|-----------|--------------------|-------|--|--------------------|-----------------------|-----------|--------------------|-------|--|--------------------|
| 220 | 680 | 30 × 35 | 0.15 | 1.93 | EKMM221VSN681MR35S | 315 | 220 | 25.4 × 30 | 0.15 | 1.04 | EKMM3B1VSN221MQ30S |
| | 680 | 35 × 25 | 0.15 | 1.89 | EKMM221VSN681MA25S | | 220 | 30 × 25 | 0.15 | 1.04 | EKMM3B1VSN221MR25S |
| | 820 | 25.4 × 50 | 0.15 | 2.18 | EKMM221VSN821MQ50S | | 220 | 35 × 20 | 0.15 | 0.90 | EKMM3B1VSN221MA20S |
| | 820 | 30 × 40 | 0.15 | 2.19 | EKMM221VSN821MR40S | | 270 | 22 × 45 | 0.15 | 1.16 | EKMM3B1VSN271MP45S |
| | 820 | 35 × 30 | 0.15 | 2.16 | EKMM221VSN821MA30S | | 270 | 25.4 × 35 | 0.15 | 1.16 | EKMM3B1VSN271MQ35S |
| | 1,000 | 25.4 × 60 | 0.15 | 2.54 | EKMM221VSN102MQ60S | | 270 | 30 × 25 | 0.15 | 1.16 | EKMM3B1VSN271MR25S |
| | 1,000 | 30 × 45 | 0.15 | 2.50 | EKMM221VSN102MR45S | | 270 | 35 × 25 | 0.15 | 1.15 | EKMM3B1VSN271MA25S |
| | 1,000 | 35 × 35 | 0.15 | 2.44 | EKMM221VSN102MA35S | | 330 | 22 × 50 | 0.15 | 1.33 | EKMM3B1VSN331MP50S |
| | 1,200 | 30 × 50 | 0.15 | 2.81 | EKMM221VSN122MR50S | | 330 | 25.4 × 40 | 0.15 | 1.33 | EKMM3B1VSN331MQ40S |
| | 1,200 | 35 × 40 | 0.15 | 2.79 | EKMM221VSN122MA40S | | 330 | 30 × 30 | 0.15 | 1.33 | EKMM3B1VSN331MR30S |
| | 1,500 | 30 × 60 | 0.15 | 3.30 | EKMM221VSN152MR60S | | 330 | 35 × 25 | 0.15 | 1.33 | EKMM3B1VSN331MA25S |
| | 1,500 | 35 × 45 | 0.15 | 3.22 | EKMM221VSN152MA45S | | 390 | 25.4 × 45 | 0.15 | 1.47 | EKMM3B1VSN391MQ45S |
| | 1,800 | 35 × 50 | 0.15 | 3.63 | EKMM221VSN182MA50S | | 390 | 30 × 35 | 0.15 | 1.47 | EKMM3B1VSN391MR35S |
| | 2,200 | 35 × 60 | 0.15 | 4.23 | EKMM221VSN222MA60S | | 390 | 35 × 30 | 0.15 | 1.47 | EKMM3B1VSN391MA30S |
| 250 | 120 | 22 × 20 | 0.15 | 0.60 | EKMM251VSN121MP20S | 470 | 25.4 × 50 | 0.15 | 1.70 | EKMM3B1VSN471MQ50S | |
| | 150 | 25.4 × 20 | 0.15 | 0.74 | EKMM251VSN151MQ20S | 470 | 30 × 40 | 0.15 | 1.70 | EKMM3B1VSN471MR40S | |
| | 180 | 22 × 25 | 0.15 | 0.78 | EKMM251VSN181MP25S | 470 | 35 × 30 | 0.15 | 1.70 | EKMM3B1VSN471MA30S | |
| | 180 | 25.4 × 20 | 0.15 | 0.75 | EKMM251VSN181MQ20S | 560 | 30 × 45 | 0.15 | 2.05 | EKMM3B1VSN561MR45S | |
| | 220 | 22 × 25 | 0.15 | 1.00 | EKMM251VSN221MP25S | 560 | 35 × 35 | 0.15 | 2.05 | EKMM3B1VSN561MA35S | |
| | 220 | 25.4 × 25 | 0.15 | 0.95 | EKMM251VSN221MQ25S | 680 | 30 × 50 | 0.15 | 2.17 | EKMM3B1VSN681MR50S | |
| | 220 | 30 × 20 | 0.15 | 0.95 | EKMM251VSN221MR20S | 680 | 35 × 40 | 0.15 | 2.17 | EKMM3B1VSN681MA40S | |
| | 270 | 22 × 30 | 0.15 | 1.18 | EKMM251VSN271MP30S | 820 | 35 × 45 | 0.15 | 2.20 | EKMM3B1VSN821MA45S | |
| | 270 | 25.4 × 25 | 0.15 | 1.18 | EKMM251VSN271MQ25S | 1,000 | 35 × 60 | 0.15 | 2.55 | EKMM3B1VSN102MA60S | |
| | 270 | 30 × 20 | 0.15 | 1.00 | EKMM251VSN271MR20S | 350 | 56 | 22 × 20 | 0.15 | 0.41 | EKMM351VSN560MP20S |
| | 330 | 22 × 35 | 0.15 | 1.30 | EKMM251VSN331MP35S | | 68 | 25.4 × 20 | 0.15 | 0.46 | EKMM351VSN680MQ20S |
| | 330 | 25.4 × 30 | 0.15 | 1.30 | EKMM251VSN331MQ30S | | 82 | 22 × 25 | 0.15 | 0.55 | EKMM351VSN820MP25S |
| | 330 | 30 × 25 | 0.15 | 1.30 | EKMM251VSN331MR25S | | 82 | 25.4 × 20 | 0.15 | 0.51 | EKMM351VSN820MQ20S |
| | 330 | 35 × 20 | 0.15 | 1.16 | EKMM251VSN331MA20S | | 100 | 22 × 25 | 0.15 | 0.69 | EKMM351VSN101MP25S |
| | 390 | 22 × 40 | 0.15 | 1.49 | EKMM251VSN391MP40S | | 100 | 30 × 20 | 0.15 | 0.60 | EKMM351VSN101MR20S |
| | 390 | 25.4 × 35 | 0.15 | 1.49 | EKMM251VSN391MQ35S | | 120 | 22 × 30 | 0.15 | 0.75 | EKMM351VSN121MP30S |
| | 390 | 30 × 25 | 0.15 | 1.49 | EKMM251VSN391MR25S | | 120 | 25.4 × 25 | 0.15 | 0.75 | EKMM351VSN121MQ25S |
| | 470 | 22 × 45 | 0.15 | 1.65 | EKMM251VSN471MP45S | | 120 | 30 × 20 | 0.15 | 0.65 | EKMM351VSN121MR20S |
| | 470 | 25.4 × 35 | 0.15 | 1.65 | EKMM251VSN471MQ35S | | 150 | 22 × 35 | 0.15 | 0.82 | EKMM351VSN151MP35S |
| | 470 | 30 × 30 | 0.15 | 1.65 | EKMM251VSN471MR30S | | 150 | 25.4 × 30 | 0.15 | 0.83 | EKMM351VSN151MQ30S |
| | 470 | 35 × 25 | 0.15 | 1.65 | EKMM251VSN471MA25S | | 150 | 30 × 25 | 0.15 | 0.82 | EKMM351VSN151MR25S |
| | 560 | 22 × 50 | 0.15 | 1.67 | EKMM251VSN561MP50S | | 150 | 35 × 20 | 0.15 | 0.76 | EKMM351VSN151MA20S |
| | 560 | 25.4 × 40 | 0.15 | 1.80 | EKMM251VSN561MQ40S | | 180 | 22 × 40 | 0.15 | 0.92 | EKMM351VSN181MP40S |
| | 560 | 30 × 30 | 0.15 | 1.80 | EKMM251VSN561MR30S | | 180 | 25.4 × 30 | 0.15 | 0.92 | EKMM351VSN181MQ30S |
| | 560 | 35 × 25 | 0.15 | 1.80 | EKMM251VSN561MA25S | | 180 | 30 × 25 | 0.15 | 0.90 | EKMM351VSN181MR25S |
| | 680 | 25.4 × 50 | 0.15 | 2.00 | EKMM251VSN681MQ50S | | 220 | 22 × 45 | 0.15 | 1.05 | EKMM351VSN221MP45S |
| | 680 | 30 × 35 | 0.15 | 2.00 | EKMM251VSN681MR35S | | 220 | 25.4 × 35 | 0.15 | 1.04 | EKMM351VSN221MQ35S |
| | 680 | 35 × 30 | 0.15 | 2.00 | EKMM251VSN681MA30S | | 220 | 30 × 30 | 0.15 | 1.02 | EKMM351VSN221MR30S |
| 820 | 25.4 × 60 | 0.15 | 2.20 | EKMM251VSN821MQ60S | 220 | | 35 × 25 | 0.15 | 1.04 | EKMM351VSN221MA25S | |
| 820 | 30 × 40 | 0.15 | 2.30 | EKMM251VSN821MR40S | 270 | | 22 × 50 | 0.15 | 1.16 | EKMM351VSN271MP50S | |
| 820 | 35 × 35 | 0.15 | 2.30 | EKMM251VSN821MA35S | 270 | | 25.4 × 40 | 0.15 | 1.18 | EKMM351VSN271MQ40S | |
| 1,000 | 30 × 50 | 0.15 | 2.47 | EKMM251VSN102MR50S | 270 | | 30 × 30 | 0.15 | 1.17 | EKMM351VSN271MR30S | |
| 1,000 | 35 × 40 | 0.15 | 2.47 | EKMM251VSN102MA40S | 270 | | 35 × 25 | 0.15 | 1.20 | EKMM351VSN271MA25S | |
| 1,200 | 30 × 60 | 0.15 | 2.85 | EKMM251VSN122MR60S | 330 | | 25.4 × 45 | 0.15 | 1.29 | EKMM351VSN331MQ45S | |
| 1,200 | 35 × 45 | 0.15 | 2.60 | EKMM251VSN122MA45S | 330 | | 30 × 35 | 0.15 | 1.34 | EKMM351VSN331MR35S | |
| 1,500 | 35 × 50 | 0.15 | 3.00 | EKMM251VSN152MA50S | 330 | | 35 × 30 | 0.15 | 1.22 | EKMM351VSN331MA30S | |
| 1,800 | 35 × 60 | 0.15 | 3.42 | EKMM251VSN182MA60S | 390 | | 25.4 × 50 | 0.15 | 1.51 | EKMM351VSN391MQ50S | |
| 315 | 68 | 22 × 20 | 0.15 | 0.45 | EKMM3B1VSN680MP20S | 390 | 30 × 40 | 0.15 | 1.51 | EKMM351VSN391MR40S | |
| | 82 | 22 × 20 | 0.15 | 0.47 | EKMM3B1VSN820MP20S | 390 | 35 × 35 | 0.15 | 1.47 | EKMM351VSN391MA35S | |
| | 100 | 22 × 25 | 0.15 | 0.61 | EKMM3B1VSN101MP25S | 470 | 25.4 × 60 | 0.15 | 1.66 | EKMM351VSN471MQ60S | |
| | 100 | 25.4 × 20 | 0.15 | 0.56 | EKMM3B1VSN101MQ20S | 470 | 30 × 45 | 0.15 | 1.65 | EKMM351VSN471MR45S | |
| | 120 | 22 × 25 | 0.15 | 0.75 | EKMM3B1VSN121MP25S | 470 | 35 × 35 | 0.15 | 1.69 | EKMM351VSN471MA35S | |
| | 120 | 25.4 × 20 | 0.15 | 0.62 | EKMM3B1VSN121MQ20S | 560 | 30 × 50 | 0.15 | 1.85 | EKMM351VSN561MR50S | |
| | 120 | 30 × 20 | 0.15 | 0.65 | EKMM3B1VSN121MR20S | 560 | 35 × 40 | 0.15 | 1.90 | EKMM351VSN561MA40S | |
| | 150 | 22 × 30 | 0.15 | 0.82 | EKMM3B1VSN151MP30S | 680 | 30 × 60 | 0.15 | 2.15 | EKMM351VSN681MR60S | |
| | 150 | 25.4 × 25 | 0.15 | 0.82 | EKMM3B1VSN151MQ25S | 680 | 35 × 50 | 0.15 | 1.99 | EKMM351VSN681MA50S | |
| | 150 | 30 × 20 | 0.15 | 0.70 | EKMM3B1VSN151MR20S | 820 | 35 × 60 | 0.15 | 2.31 | EKMM351VSN821MA60S | |
| | 150 | 35 × 20 | 0.15 | 0.76 | EKMM3B1VSN151MA20S | 400 | 47 | 22 × 20 | 0.15 | 0.37 | EKMM401VSN470MP20S |
| | 180 | 22 × 35 | 0.15 | 0.92 | EKMM3B1VSN181MP35S | | 56 | 25.4 × 20 | 0.15 | 0.42 | EKMM401VSN560MQ20S |
| | 180 | 25.4 × 25 | 0.15 | 0.92 | EKMM3B1VSN181MQ25S | | 68 | 22 × 25 | 0.15 | 0.50 | EKMM401VSN680MP25S |
| | 180 | 30 × 25 | 0.15 | 0.90 | EKMM3B1VSN181MR25S | | 68 | 25.4 × 20 | 0.15 | 0.46 | EKMM401VSN680MQ20S |
| 180 | 35 × 20 | 0.15 | 0.85 | EKMM3B1VSN181MA20S | 82 | | 22 × 25 | 0.15 | 0.64 | EKMM401VSN820MP25S | |
| 220 | 22 × 40 | 0.15 | 1.04 | EKMM3B1VSN221MP40S | 82 | | 30 × 20 | 0.15 | 0.55 | EKMM401VSN820MR20S | |

KMM Series

◆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. | |
|-----------------------|-----------|--------------------|-------|--|--------------------|-----------------------|----------|--------------------|--------------------|--|--------------------|--------------------|
| 400 | 100 | 22 × 30 | 0.15 | 0.70 | EKMM401VSN101MP30S | 420 | 180 | 25.4 × 35 | 0.20 | 0.95 | EKMM421VSN181MQ35S | |
| | 100 | 25.4 × 25 | 0.15 | 0.70 | EKMM401VSN101MQ25S | | 180 | 30 × 30 | 0.20 | 0.95 | EKMM421VSN181MR30S | |
| | 100 | 30 × 20 | 0.15 | 0.60 | EKMM401VSN101MR20S | | 180 | 35 × 25 | 0.20 | 0.94 | EKMM421VSN181MA25S | |
| | 120 | 22 × 35 | 0.15 | 0.75 | EKMM401VSN121MP35S | | 220 | 22 × 50 | 0.20 | 1.10 | EKMM421VSN221MP50S | |
| | 120 | 25.4 × 25 | 0.15 | 0.75 | EKMM401VSN121MQ25S | | 220 | 25.4 × 45 | 0.20 | 1.10 | EKMM421VSN221MQ45S | |
| | 120 | 30 × 25 | 0.15 | 0.73 | EKMM401VSN121MR25S | | 220 | 30 × 35 | 0.20 | 1.10 | EKMM421VSN221MR35S | |
| | 120 | 35 × 20 | 0.15 | 0.75 | EKMM401VSN121MA20S | | 220 | 35 × 25 | 0.20 | 1.10 | EKMM421VSN221MA25S | |
| | 150 | 22 × 40 | 0.15 | 0.88 | EKMM401VSN151MP40S | | 270 | 25.4 × 50 | 0.20 | 1.22 | EKMM421VSN271MQ50S | |
| | 150 | 25.4 × 30 | 0.15 | 0.88 | EKMM401VSN151MQ30S | | 270 | 30 × 40 | 0.20 | 1.22 | EKMM421VSN271MR40S | |
| | 150 | 30 × 25 | 0.15 | 0.88 | EKMM401VSN151MR25S | | 270 | 35 × 30 | 0.20 | 1.22 | EKMM421VSN271MA30S | |
| | 150 | 35 × 20 | 0.15 | 0.80 | EKMM401VSN151MA20S | | 330 | 25.4 × 60 | 0.20 | 1.41 | EKMM421VSN331MQ60S | |
| | 180 | 22 × 45 | 0.15 | 0.98 | EKMM401VSN181MP45S | | 330 | 30 × 45 | 0.20 | 1.45 | EKMM421VSN331MR45S | |
| | 180 | 25.4 × 35 | 0.15 | 0.98 | EKMM401VSN181MQ35S | | 330 | 35 × 35 | 0.20 | 1.45 | EKMM421VSN331MA35S | |
| | 180 | 30 × 30 | 0.15 | 0.98 | EKMM401VSN181MR30S | | 390 | 30 × 50 | 0.20 | 1.55 | EKMM421VSN391MR50S | |
| | 180 | 35 × 25 | 0.15 | 0.98 | EKMM401VSN181MA25S | | 390 | 35 × 40 | 0.20 | 1.55 | EKMM421VSN391MA40S | |
| | 220 | 22 × 50 | 0.15 | 1.10 | EKMM401VSN221MP50S | | 470 | 30 × 60 | 0.20 | 1.79 | EKMM421VSN471MR60S | |
| | 220 | 25.4 × 40 | 0.15 | 1.10 | EKMM401VSN221MQ40S | | 470 | 35 × 45 | 0.20 | 1.90 | EKMM421VSN471MA45S | |
| | 220 | 30 × 30 | 0.15 | 1.10 | EKMM401VSN221MR30S | | 560 | 35 × 50 | 0.20 | 2.15 | EKMM421VSN561MA50S | |
| | 220 | 35 × 25 | 0.15 | 1.10 | EKMM401VSN221MA25S | | 680 | 35 × 60 | 0.20 | 2.27 | EKMM421VSN681MA60S | |
| | 270 | 25.4 × 45 | 0.15 | 1.22 | EKMM401VSN271MQ45S | | 450 | 56 | 22 × 25 | 0.20 | 0.40 | EKMM451VSN560MP25S |
| | 270 | 30 × 35 | 0.15 | 1.22 | EKMM401VSN271MR35S | | | 68 | 22 × 30 | 0.20 | 0.53 | EKMM451VSN680MP30S |
| | 270 | 35 × 30 | 0.15 | 1.22 | EKMM401VSN271MA30S | | | 68 | 25.4 × 25 | 0.20 | 0.50 | EKMM451VSN680MQ25S |
| | 330 | 25.4 × 50 | 0.15 | 1.44 | EKMM401VSN331MQ50S | | | 82 | 22 × 30 | 0.20 | 0.64 | EKMM451VSN820MP30S |
| | 330 | 30 × 40 | 0.15 | 1.44 | EKMM401VSN331MR40S | | | 82 | 25.4 × 25 | 0.20 | 0.64 | EKMM451VSN820MQ25S |
| | 330 | 35 × 30 | 0.15 | 1.44 | EKMM401VSN331MA30S | | | 100 | 22 × 35 | 0.20 | 0.69 | EKMM451VSN101MP35S |
| | 390 | 25.4 × 60 | 0.15 | 1.51 | EKMM401VSN391MQ60S | | | 100 | 25.4 × 30 | 0.20 | 0.69 | EKMM451VSN101MQ30S |
| | 390 | 30 × 45 | 0.15 | 1.60 | EKMM401VSN391MR45S | | | 100 | 30 × 25 | 0.20 | 0.64 | EKMM451VSN101MR25S |
| | 390 | 35 × 35 | 0.15 | 1.60 | EKMM401VSN391MA35S | | | 120 | 22 × 40 | 0.20 | 0.80 | EKMM451VSN121MP40S |
| 470 | 30 × 50 | 0.15 | 1.90 | EKMM401VSN471MR50S | 120 | 25.4 × 30 | | 0.20 | 0.80 | EKMM451VSN121MQ30S | | |
| 470 | 35 × 40 | 0.15 | 1.90 | EKMM401VSN471MA40S | 120 | 30 × 25 | | 0.20 | 0.80 | EKMM451VSN121MR25S | | |
| 560 | 30 × 60 | 0.15 | 2.10 | EKMM401VSN561MR60S | 120 | 35 × 25 | | 0.20 | 0.73 | EKMM451VSN121MA25S | | |
| 560 | 35 × 45 | 0.15 | 2.12 | EKMM401VSN561MA45S | 150 | 22 × 45 | | 0.20 | 0.88 | EKMM451VSN151MP45S | | |
| 680 | 35 × 60 | 0.15 | 2.27 | EKMM401VSN681MA60S | 150 | 25.4 × 35 | | 0.20 | 0.88 | EKMM451VSN151MQ35S | | |
| 47 | 22 × 20 | 0.20 | 0.37 | EKMM421VSN470MP20S | 150 | 30 × 30 | | 0.20 | 0.88 | EKMM451VSN151MR30S | | |
| 56 | 25.4 × 20 | 0.20 | 0.42 | EKMM421VSN560MQ20S | 150 | 35 × 25 | | 0.20 | 0.75 | EKMM451VSN151MA25S | | |
| 68 | 22 × 25 | 0.20 | 0.50 | EKMM421VSN680MP25S | 180 | 22 × 50 | | 0.20 | 1.00 | EKMM451VSN181MP50S | | |
| 68 | 25.4 × 20 | 0.20 | 0.46 | EKMM421VSN680MQ20S | 180 | 25.4 × 40 | | 0.20 | 1.00 | EKMM451VSN181MQ40S | | |
| 82 | 22 × 25 | 0.20 | 0.64 | EKMM421VSN820MP25S | 180 | 30 × 30 | | 0.20 | 1.00 | EKMM451VSN181MR30S | | |
| 82 | 25.4 × 25 | 0.20 | 0.58 | EKMM421VSN820MQ25S | 220 | 25.4 × 45 | | 0.20 | 1.12 | EKMM451VSN221MQ45S | | |
| 82 | 30 × 20 | 0.20 | 0.53 | EKMM421VSN820MR20S | 220 | 30 × 35 | | 0.20 | 1.12 | EKMM451VSN221MR35S | | |
| 100 | 22 × 30 | 0.20 | 0.70 | EKMM421VSN101MP30S | 220 | 35 × 30 | | 0.20 | 1.12 | EKMM451VSN221MA30S | | |
| 100 | 25.4 × 25 | 0.20 | 0.70 | EKMM421VSN101MQ25S | 270 | 25.4 × 60 | | 0.20 | 1.18 | EKMM451VSN271MQ60S | | |
| 100 | 30 × 20 | 0.20 | 0.59 | EKMM421VSN101MR20S | 270 | 30 × 40 | | 0.20 | 1.28 | EKMM451VSN271MR40S | | |
| 120 | 22 × 35 | 0.20 | 0.75 | EKMM421VSN121MP35S | 270 | 35 × 35 | | 0.20 | 1.28 | EKMM451VSN271MA35S | | |
| 120 | 25.4 × 30 | 0.20 | 0.75 | EKMM421VSN121MQ30S | 330 | 30 × 50 | | 0.20 | 1.45 | EKMM451VSN331MR50S | | |
| 120 | 30 × 25 | 0.20 | 0.73 | EKMM421VSN121MR25S | 330 | 35 × 40 | | 0.20 | 1.45 | EKMM451VSN331MA40S | | |
| 120 | 35 × 20 | 0.20 | 0.67 | EKMM421VSN121MA20S | 390 | 30 × 60 | | 0.20 | 1.51 | EKMM451VSN391MR60S | | |
| 150 | 22 × 40 | 0.20 | 0.88 | EKMM421VSN151MP40S | 390 | 35 × 40 | 0.20 | 1.55 | EKMM451VSN391MA40S | | | |
| 150 | 25.4 × 35 | 0.20 | 0.88 | EKMM421VSN151MQ35S | 470 | 35 × 50 | 0.20 | 1.85 | EKMM451VSN471MA50S | | | |
| 150 | 30 × 25 | 0.20 | 0.88 | EKMM421VSN151MR25S | 560 | 35 × 60 | 0.20 | 1.91 | EKMM451VSN561MA60S | | | |
| 180 | 22 × 45 | 0.20 | 0.95 | EKMM421VSN181MP45S | | | | | | | | |

◆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.