

# KMS Series Upgrade!

- The lower temperature range of the category temperature range has been expanded.
- For solar power generation
- Endurance with ripple current : 105°C 3,000 hours
- Rated voltage range : 160 to 600V
- Capacitance range : 47 to 3,300μF
- Non solvent resistant type
- RoHS2 Compliant



**600V  
Lineup!**

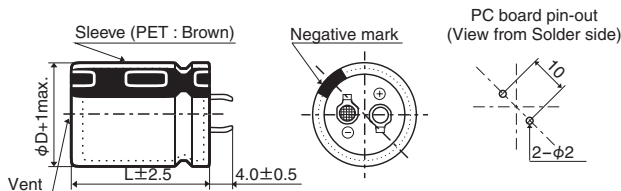


## ◆ SPECIFICATIONS

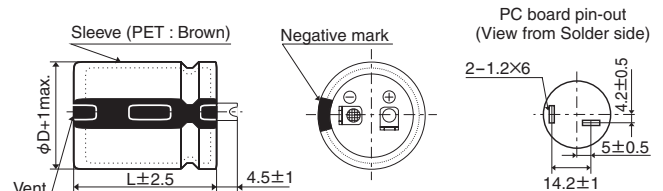
| Items   | Characteristics   |   |             |
|---|---|---|-------------|
| <b>Category Temperature Range</b>                             | -40 to +105°C(160 to 500V <sub>dc</sub> )    -25 to +105°C(550 to 600V <sub>dc</sub> )  |   |             |
| <b>Rated Voltage Range</b>                                    | 160 to 600V <sub>dc</sub>   |   |             |
| <b>Capacitance Tolerance</b>                                  | ±20% (M) (at 20°C, 120Hz)   |   |             |
| <b>Leakage Current</b>  | I ≤ 3√CV<br>Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)   |   |             |
| <b>Dissipation Factor (tan δ)</b>                             | Rated voltage (V <sub>dc</sub> )  | 160 to 400V   | 420 to 600V |
|   | tan δ (Max.)  | 0.15  | 0.20        |
| <b>Low Temperature Characteristics (Max. Impedance Ratio)</b> | Rated voltage (V <sub>dc</sub> )  | 160 to 400V   | 420 to 600V |
|   | Z(-25°C)/Z(+20°C)   | 4   | 8           |
| <b>Endurance</b>  | 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 (600V <sub>dc</sub> : ≤ 300%) |             |
|   | Leakage current   | ≤ The initial specified value                                       |             |
| <b>Shelf Life</b>   | 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)



The standard design has no plastic disc.

## ◆ PART NUMBERING SYSTEM



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

### ◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/105°C, 120Hz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF)  | Case size φD×L(mm) | tan δ     | Rated ripple current (Arms/105°C, 120Hz) | Part No.           |                    |
|-----------------------|----------|--------------------|-------|--|--------------------|-----------------------|-----------|--------------------|-----------|--|--------------------|--------------------|
|                       |          |                    |       |  |                    |                       |           |                    |           |  |                    |                    |
| 160                   | 470      | 22 × 25            | 0.15  | 1.47                                     | EKMS161VSN471MP25S | 200                   | 1,800     | 30 × 45            | 0.15      | 3.66                                     | EKMS201VSN182MR45S |                    |
|                       | 680      | 22 × 30            | 0.15  | 1.86                                     | EKMS161VSN681MP30S |                       | 1,800     | 30 × 50            | 0.15      | 3.72                                     | EKMS201VSN182MR50S |                    |
|                       | 680      | 25.4 × 25          | 0.15  | 1.84                                     | EKMS161VSN681MQ25S |                       | 1,800     | 35 × 40            | 0.15      | 3.81                                     | EKMS201VSN182MA40S |                    |
|                       | 820      | 22 × 35            | 0.15  | 2.09                                     | EKMS161VSN821MP35S |                       | 2,200     | 35 × 45            | 0.15      | 4.32                                     | EKMS201VSN222MA45S |                    |
|                       | 820      | 25.4 × 30          | 0.15  | 2.08                                     | EKMS161VSN821MQ30S |                       | 2,700     | 35 × 50            | 0.15      | 4.88                                     | EKMS201VSN272MA50S |                    |
|                       | 1,000    | 22 × 40            | 0.15  | 2.35                                     | EKMS161VSN102MP40S |                       | 250       | 270                | 22 × 25   | 0.15                                     | 1.11               | EKMS251VSN271MP25S |
|                       | 1,000    | 22 × 45            | 0.15  | 2.40                                     | EKMS161VSN102MP45S |                       |           | 330                | 22 × 30   | 0.15                                     | 1.29               | EKMS251VSN331MP30S |
|                       | 1,000    | 25.4 × 35          | 0.15  | 2.40                                     | EKMS161VSN102MQ35S |                       |           | 390                | 22 × 35   | 0.15                                     | 1.44               | EKMS251VSN391MP35S |
|                       | 1,000    | 30 × 25            | 0.15  | 2.50                                     | EKMS161VSN102MR25S |                       |           | 390                | 25.4 × 25 | 0.15                                     | 1.40               | EKMS251VSN391MQ25S |
|                       | 1,200    | 22 × 50            | 0.15  | 2.69                                     | EKMS161VSN122MP50S |                       |           | 470                | 22 × 40   | 0.15                                     | 1.61               | EKMS251VSN471MP40S |
|                       | 1,200    | 25.4 × 40          | 0.15  | 2.68                                     | EKMS161VSN122MQ40S |                       |           | 470                | 25.4 × 30 | 0.15                                     | 1.57               | EKMS251VSN471MQ30S |
|                       | 1,200    | 30 × 30            | 0.15  | 2.77                                     | EKMS161VSN122MR30S |                       |           | 560                | 22 × 45   | 0.15                                     | 1.79               | EKMS251VSN561MP45S |
|                       | 1,200    | 35 × 25            | 0.15  | 2.91                                     | EKMS161VSN122MA25S | 560                   |           | 25.4 × 35          | 0.15      | 1.79                                     | EKMS251VSN561MQ35S |                    |
|                       | 1,500    | 25.4 × 45          | 0.15  | 3.05                                     | EKMS161VSN152MQ45S | 560                   |           | 30 × 25            | 0.15      | 1.87                                     | EKMS251VSN561MR25S |                    |
|                       | 1,500    | 30 × 35            | 0.15  | 3.17                                     | EKMS161VSN152MR35S | 680                   |           | 22 × 50            | 0.15      | 2.02                                     | EKMS251VSN681MP50S |                    |
|                       | 1,800    | 25.4 × 50          | 0.15  | 3.40                                     | EKMS161VSN182MQ50S | 680                   |           | 25.4 × 40          | 0.15      | 2.02                                     | EKMS251VSN681MQ40S |                    |
|                       | 1,800    | 30 × 40            | 0.15  | 3.57                                     | EKMS161VSN182MR40S | 680                   |           | 30 × 30            | 0.15      | 2.08                                     | EKMS251VSN681MR30S |                    |
|                       | 1,800    | 35 × 30            | 0.15  | 3.62                                     | EKMS161VSN182MA30S | 680                   | 35 × 25   | 0.15               | 2.19      | EKMS251VSN681MA25S                       |                    |                    |
|                       | 2,200    | 30 × 45            | 0.15  | 4.05                                     | EKMS161VSN222MQ45S | 820                   | 25.4 × 45 | 0.15               | 2.26      | EKMS251VSN821MQ45S                       |                    |                    |
|                       | 2,200    | 35 × 35            | 0.15  | 4.07                                     | EKMS161VSN222MA35S | 820                   | 30 × 35   | 0.15               | 2.34      | EKMS251VSN821MR35S                       |                    |                    |
|                       | 2,700    | 30 × 50            | 0.15  | 4.56                                     | EKMS161VSN272MR50S | 1,000                 | 25.4 × 50 | 0.15               | 2.53      | EKMS251VSN102MQ50S                       |                    |                    |
|                       | 2,700    | 35 × 40            | 0.15  | 4.67                                     | EKMS161VSN272MA40S | 1,000                 | 30 × 40   | 0.15               | 2.66      | EKMS251VSN102MR40S                       |                    |                    |
|                       | 2,700    | 35 × 45            | 0.15  | 4.78                                     | EKMS161VSN272MA45S | 1,000                 | 35 × 30   | 0.15               | 2.70      | EKMS251VSN102MA30S                       |                    |                    |
|                       | 3,300    | 35 × 50            | 0.15  | 5.40                                     | EKMS161VSN332MA50S | 1,200                 | 30 × 45   | 0.15               | 2.99      | EKMS251VSN122MR45S                       |                    |                    |
| 180                   | 390      | 22 × 25            | 0.15  | 1.34                                     | EKMS181VSN391MP25S | 1,200                 | 30 × 50   | 0.15               | 3.04      | EKMS251VSN122MR50S                       |                    |                    |
|                       | 560      | 22 × 30            | 0.15  | 1.68                                     | EKMS181VSN561MP30S | 1,200                 | 35 × 35   | 0.15               | 3.00      | EKMS251VSN122MA35S                       |                    |                    |
|                       | 560      | 25.4 × 25          | 0.15  | 1.67                                     | EKMS181VSN561MQ25S | 1,500                 | 35 × 40   | 0.15               | 3.48      | EKMS251VSN152MA40S                       |                    |                    |
|                       | 680      | 22 × 35            | 0.15  | 1.90                                     | EKMS181VSN681MP35S | 1,500                 | 35 × 45   | 0.15               | 3.56      | EKMS251VSN152MA45S                       |                    |                    |
|                       | 820      | 22 × 40            | 0.15  | 2.13                                     | EKMS181VSN821MP40S | 1,800                 | 35 × 50   | 0.15               | 3.98      | EKMS251VSN182MA50S                       |                    |                    |
|                       | 820      | 25.4 × 30          | 0.15  | 2.08                                     | EKMS181VSN821MQ30S | 315                   | 180       | 22 × 25            | 0.15      | 0.95                                     | EKMS3B1VSN181MP25S |                    |
|                       | 820      | 30 × 25            | 0.15  | 2.26                                     | EKMS181VSN821MR25S |                       | 220       | 22 × 30            | 0.15      | 1.10                                     | EKMS3B1VSN221MP30S |                    |
|                       | 1,000    | 22 × 45            | 0.15  | 2.40                                     | EKMS181VSN102MP45S |                       | 220       | 25.4 × 25          | 0.15      | 1.10                                     | EKMS3B1VSN221MQ25S |                    |
|                       | 1,000    | 22 × 50            | 0.15  | 2.45                                     | EKMS181VSN102MP50S |                       | 270       | 22 × 35            | 0.15      | 1.24                                     | EKMS3B1VSN271MP35S |                    |
|                       | 1,000    | 25.4 × 35          | 0.15  | 2.40                                     | EKMS181VSN102MQ35S |                       | 330       | 22 × 40            | 0.15      | 1.40                                     | EKMS3B1VSN331MP40S |                    |
|                       | 1,000    | 25.4 × 40          | 0.15  | 2.45                                     | EKMS181VSN102MQ40S |                       | 330       | 25.4 × 30          | 0.15      | 1.38                                     | EKMS3B1VSN331MQ30S |                    |
|                       | 1,000    | 30 × 30            | 0.15  | 2.52                                     | EKMS181VSN102MR30S |                       | 330       | 30 × 25            | 0.15      | 1.43                                     | EKMS3B1VSN331MR25S |                    |
|                       | 1,200    | 25.4 × 45          | 0.15  | 2.73                                     | EKMS181VSN122MQ45S |                       | 390       | 22 × 45            | 0.15      | 1.56                                     | EKMS3B1VSN391MP45S |                    |
|                       | 1,200    | 30 × 35            | 0.15  | 2.83                                     | EKMS181VSN122MR35S |                       | 390       | 22 × 50            | 0.15      | 1.59                                     | EKMS3B1VSN391MP50S |                    |
|                       | 1,200    | 35 × 25            | 0.15  | 2.91                                     | EKMS181VSN122MA25S |                       | 390       | 25.4 × 35          | 0.15      | 1.57                                     | EKMS3B1VSN391MQ35S |                    |
|                       | 1,500    | 25.4 × 50          | 0.15  | 3.10                                     | EKMS181VSN152MQ50S |                       | 470       | 25.4 × 40          | 0.15      | 1.76                                     | EKMS3B1VSN471MQ40S |                    |
|                       | 1,500    | 30 × 40            | 0.15  | 3.26                                     | EKMS181VSN152MR40S |                       | 470       | 30 × 30            | 0.15      | 1.73                                     | EKMS3B1VSN471MR30S |                    |
|                       | 1,500    | 35 × 30            | 0.15  | 3.31                                     | EKMS181VSN152MA30S | 470                   | 35 × 25   | 0.15               | 1.82      | EKMS3B1VSN471MA25S                       |                    |                    |
|                       | 1,800    | 30 × 45            | 0.15  | 3.66                                     | EKMS181VSN182MR45S | 560                   | 25.4 × 45 | 0.15               | 1.96      | EKMS3B1VSN561MQ45S                       |                    |                    |
|                       | 1,800    | 35 × 35            | 0.15  | 3.68                                     | EKMS181VSN182MA35S | 560                   | 25.4 × 50 | 0.15               | 1.99      | EKMS3B1VSN561MQ50S                       |                    |                    |
|                       | 2,200    | 30 × 50            | 0.15  | 4.11                                     | EKMS181VSN222MR50S | 560                   | 30 × 35   | 0.15               | 1.93      | EKMS3B1VSN561MR35S                       |                    |                    |
|                       | 2,200    | 35 × 40            | 0.15  | 4.22                                     | EKMS181VSN222MA40S | 560                   | 35 × 30   | 0.15               | 2.02      | EKMS3B1VSN561MA30S                       |                    |                    |
|                       | 2,700    | 35 × 45            | 0.15  | 4.78                                     | EKMS181VSN272MA45S | 680                   | 30 × 40   | 0.15               | 2.19      | EKMS3B1VSN681MR40S                       |                    |                    |
|                       | 2,700    | 35 × 50            | 0.15  | 4.88                                     | EKMS181VSN272MA50S | 680                   | 35 × 35   | 0.15               | 2.26      | EKMS3B1VSN681MA35S                       |                    |                    |
| 200                   | 390      | 22 × 25            | 0.15  | 1.34                                     | EKMS201VSN391MP25S | 820                   | 30 × 45   | 0.15               | 2.47      | EKMS3B1VSN821MR45S                       |                    |                    |
|                       | 470      | 22 × 30            | 0.15  | 1.54                                     | EKMS201VSN471MP30S | 820                   | 30 × 50   | 0.15               | 2.51      | EKMS3B1VSN821MR50S                       |                    |                    |
|                       | 560      | 22 × 35            | 0.15  | 1.72                                     | EKMS201VSN561MP35S | 820                   | 35 × 40   | 0.15               | 2.57      | EKMS3B1VSN821MA40S                       |                    |                    |
|                       | 560      | 25.4 × 25          | 0.15  | 1.67                                     | EKMS201VSN561MQ25S | 1,000                 | 35 × 45   | 0.15               | 2.91      | EKMS3B1VSN102MA45S                       |                    |                    |
|                       | 680      | 22 × 40            | 0.15  | 1.94                                     | EKMS201VSN681MP40S | 1,200                 | 35 × 50   | 0.15               | 3.25      | EKMS3B1VSN122MA50S                       |                    |                    |
|                       | 680      | 25.4 × 30          | 0.15  | 1.89                                     | EKMS201VSN681MQ30S | 400                   | 120       | 22 × 25            | 0.15      | 0.77                                     | EKMS401VSN121MP25S |                    |
|                       | 820      | 22 × 45            | 0.15  | 2.17                                     | EKMS201VSN821MP45S |                       | 150       | 22 × 30            | 0.15      | 0.90                                     | EKMS401VSN151MP30S |                    |
|                       | 820      | 25.4 × 35          | 0.15  | 2.17                                     | EKMS201VSN821MQ35S |                       | 180       | 22 × 35            | 0.15      | 1.02                                     | EKMS401VSN181MP35S |                    |
|                       | 820      | 30 × 25            | 0.15  | 2.26                                     | EKMS201VSN821MR25S |                       | 180       | 25.4 × 25          | 0.15      | 0.99                                     | EKMS401VSN181MQ25S |                    |
|                       | 1,000    | 22 × 50            | 0.15  | 2.45                                     | EKMS201VSN102MP50S |                       | 220       | 22 × 40            | 0.15      | 1.15                                     | EKMS401VSN221MP40S |                    |
|                       | 1,000    | 25.4 × 40          | 0.15  | 2.45                                     | EKMS201VSN102MQ40S |                       | 220       | 25.4 × 30          | 0.15      | 1.13                                     | EKMS401VSN221MQ30S |                    |
|                       | 1,000    | 30 × 30            | 0.15  | 2.52                                     | EKMS201VSN102MR30S |                       | 270       | 22 × 45            | 0.15      | 1.29                                     | EKMS401VSN271MP45S |                    |
|                       | 1,000    | 35 × 25            | 0.15  | 2.66                                     | EKMS201VSN102MA25S |                       | 270       | 25.4 × 35          | 0.15      | 1.30                                     | EKMS401VSN271MQ35S |                    |
|                       | 1,200    | 25.4 × 45          | 0.15  | 2.73                                     | EKMS201VSN122MQ45S |                       | 270       | 30 × 25            | 0.15      | 1.29                                     | EKMS401VSN271MR25S |                    |
|                       | 1,200    | 25.4 × 50          | 0.15  | 2.78                                     | EKMS201VSN122MQ50S |                       | 330       | 22 × 50            | 0.15      | 1.47                                     | EKMS401VSN331MP50S |                    |
|                       | 1,200    | 30 × 35            | 0.15  | 2.83                                     | EKMS201VSN122MR35S |                       | 330       | 25.4 × 40          | 0.15      | 1.47                                     | EKMS401VSN331MQ40S |                    |
|                       | 1,200    | 35 × 30            | 0.15  | 2.96                                     | EKMS201VSN122MA30S |                       | 330       | 30 × 30            | 0.15      | 1.45                                     | EKMS401VSN331MR30S |                    |
|                       | 1,500    | 30 × 40            | 0.15  | 3.26                                     | EKMS201VSN152MR40S | 330                   | 35 × 25   | 0.15               | 1.52      | EKMS401VSN331MA25S                       |                    |                    |
|                       | 1,500    | 35 × 35            | 0.15  | 3.36                                     | EKMS201VSN152MA35S | 390                   | 25.4 × 45 | 0.15               | 1.63      | EKMS401VSN391MQ45S                       |                    |                    |

◆STANDARD RATINGS

| WV (V <sub>dc</sub> ) | Cap (μF) | Case size φD×L(mm) | tan δ | Rated ripple current (Arms/105°C, 120Hz) | Part No.           | WV (V <sub>dc</sub> ) | Cap (μF)  | Case size φD×L(mm) | tan δ              | Rated ripple current (Arms/105°C, 120Hz) | Part No.           |
|-----------------------|----------|--------------------|-------|--|--------------------|-----------------------|-----------|--------------------|--------------------|--|--------------------|
| 400                   | 390      | 25.4 × 50          | 0.15  | 1.66                                     | EKMS401VSN391MQ50S | 500                   | 47        | 22 × 25            | 0.20               | 0.51                                     | EKMS501VSN470MP25S |
|                       | 390      | 30 × 35            | 0.15  | 1.61                                     | EKMS401VSN391MR35S |                       | 56        | 22 × 30            | 0.20               | 0.58                                     | EKMS501VSN560MP30S |
|                       | 470      | 30 × 40            | 0.15  | 1.82                                     | EKMS401VSN471MR40S |                       | 68        | 25.4 × 25          | 0.20               | 0.65                                     | EKMS501VSN680MQ25S |
|                       | 470      | 35 × 30            | 0.15  | 1.85                                     | EKMS401VSN471MA30S |                       | 82        | 22 × 35            | 0.20               | 0.72                                     | EKMS501VSN820MP35S |
|                       | 560      | 30 × 45            | 0.15  | 2.04                                     | EKMS401VSN561MR45S |                       | 82        | 25.4 × 30          | 0.20               | 0.74                                     | EKMS501VSN820MQ30S |
|                       | 560      | 30 × 50            | 0.15  | 2.07                                     | EKMS401VSN561MR50S |                       | 100       | 22 × 45            | 0.20               | 0.83                                     | EKMS501VSN101MP45S |
|                       | 560      | 35 × 35            | 0.15  | 2.05                                     | EKMS401VSN561MA35S |                       | 100       | 30 × 25            | 0.20               | 0.82                                     | EKMS501VSN101MR25S |
|                       | 680      | 35 × 40            | 0.15  | 2.34                                     | EKMS401VSN681MA40S |                       | 120       | 22 × 50            | 0.20               | 0.93                                     | EKMS501VSN121MP50S |
|                       | 680      | 35 × 45            | 0.15  | 2.40                                     | EKMS401VSN681MA45S |                       | 120       | 25.4 × 35          | 0.20               | 0.93                                     | EKMS501VSN121MQ35S |
|                       | 820      | 35 × 50            | 0.15  | 2.69                                     | EKMS401VSN821MA50S |                       | 120       | 30 × 30            | 0.20               | 0.91                                     | EKMS501VSN121MR30S |
| 420                   | 100      | 22 × 25            | 0.20  | 0.70                                     | EKMS421VSN121MP25S | 150                   | 25.4 × 45 | 0.20               | 1.08               | EKMS501VSN151MR45S                       |                    |
|                       | 120      | 22 × 30            | 0.20  | 0.81                                     | EKMS421VSN121MP30S | 150                   | 30 × 35   | 0.20               | 1.04               | EKMS501VSN151MR35S                       |                    |
|                       | 120      | 25.4 × 25          | 0.20  | 0.81                                     | EKMS421VSN121MQ25S | 150                   | 35 × 25   | 0.20               | 0.99               | EKMS501VSN151MA25S                       |                    |
|                       | 150      | 22 × 35            | 0.20  | 0.93                                     | EKMS421VSN151MP35S | 180                   | 25.4 × 50 | 0.20               | 1.20               | EKMS501VSN181MQ50S                       |                    |
|                       | 180      | 22 × 40            | 0.20  | 1.04                                     | EKMS421VSN181MP40S | 180                   | 30 × 40   | 0.20               | 1.17               | EKMS501VSN181MR40S                       |                    |
|                       | 180      | 25.4 × 30          | 0.20  | 1.02                                     | EKMS421VSN181MQ30S | 180                   | 35 × 30   | 0.20               | 1.10               | EKMS501VSN181MA30S                       |                    |
|                       | 180      | 30 × 25            | 0.20  | 1.06                                     | EKMS421VSN181MR25S | 220                   | 30 × 45   | 0.20               | 1.33               | EKMS501VSN221MR45S                       |                    |
|                       | 220      | 22 × 45            | 0.20  | 1.17                                     | EKMS421VSN221MP45S | 220                   | 35 × 35   | 0.20               | 1.23               | EKMS501VSN221MA35S                       |                    |
|                       | 220      | 22 × 50            | 0.20  | 1.20                                     | EKMS421VSN221MP50S | 270                   | 30 × 50   | 0.20               | 1.50               | EKMS501VSN271MR50S                       |                    |
|                       | 220      | 25.4 × 35          | 0.20  | 1.18                                     | EKMS421VSN221MQ35S | 270                   | 35 × 40   | 0.20               | 1.42               | EKMS501VSN271MA40S                       |                    |
|                       | 220      | 30 × 30            | 0.20  | 1.18                                     | EKMS421VSN221MR30S | 330                   | 35 × 45   | 0.20               | 1.60               | EKMS501VSN331MA45S                       |                    |
|                       | 270      | 25.4 × 40          | 0.20  | 1.33                                     | EKMS421VSN271MQ40S | 390                   | 35 × 50   | 0.20               | 1.78               | EKMS501VSN391MA50S                       |                    |
|                       | 270      | 25.4 × 45          | 0.20  | 1.36                                     | EKMS421VSN271MQ45S | 470                   | 35 × 60   | 0.20               | 2.03               | EKMS501VSN471MA60S                       |                    |
|                       | 270      | 35 × 25            | 0.20  | 1.38                                     | EKMS421VSN271MA25S | 550                   | 82        | 22 × 35            | 0.20               | 0.72                                     | EKMS551VSN820MP35S |
|                       | 330      | 25.4 × 50          | 0.20  | 1.52                                     | EKMS421VSN331MQ50S |                       | 82        | 25.4 × 30          | 0.20               | 0.74                                     | EKMS551VSN820MQ30S |
|                       | 330      | 30 × 35            | 0.20  | 1.48                                     | EKMS421VSN331MR35S |                       | 100       | 22 × 45            | 0.20               | 0.83                                     | EKMS551VSN101MP45S |
|                       | 330      | 30 × 40            | 0.20  | 1.52                                     | EKMS421VSN331MR40S |                       | 100       | 25.4 × 35          | 0.20               | 0.85                                     | EKMS551VSN101MQ35S |
|                       | 330      | 35 × 30            | 0.20  | 1.55                                     | EKMS421VSN331MA30S |                       | 100       | 30 × 25            | 0.20               | 0.82                                     | EKMS551VSN101MR25S |
|                       | 390      | 30 × 45            | 0.20  | 1.70                                     | EKMS421VSN391MR45S |                       | 120       | 22 × 50            | 0.20               | 0.93                                     | EKMS551VSN121MP50S |
|                       | 390      | 35 × 35            | 0.20  | 1.71                                     | EKMS421VSN391MA35S |                       | 120       | 25.4 × 40          | 0.20               | 0.95                                     | EKMS551VSN121MQ40S |
| 470                   | 30 × 50  | 0.20               | 1.90  | EKMS421VSN471MR50S                       | 120                |                       | 30 × 30   | 0.20               | 0.91               | EKMS551VSN121MR30S                       |                    |
| 470                   | 35 × 40  | 0.20               | 1.95  | EKMS421VSN471MA40S                       | 120                |                       | 35 × 25   | 0.20               | 0.88               | EKMS551VSN121MA25S                       |                    |
| 560                   | 35 × 45  | 0.20               | 2.17  | EKMS421VSN561MA45S                       | 150                |                       | 25.4 × 45 | 0.20               | 1.08               | EKMS551VSN151MQ45S                       |                    |
| 680                   | 35 × 50  | 0.20               | 2.45  | EKMS421VSN681MA50S                       | 150                |                       | 30 × 35   | 0.20               | 1.04               | EKMS551VSN151MR35S                       |                    |
| 450                   | 82       | 22 × 25            | 0.20  | 0.64                                     | EKMS451VSN820MP25S |                       | 180       | 25.4 × 50          | 0.20               | 1.20                                     | EKMS551VSN181MQ50S |
|                       | 120      | 22 × 30            | 0.20  | 0.81                                     | EKMS451VSN121MP30S |                       | 180       | 30 × 40            | 0.20               | 1.17                                     | EKMS551VSN181MR40S |
|                       | 120      | 22 × 35            | 0.20  | 0.83                                     | EKMS451VSN121MP35S |                       | 180       | 35 × 30            | 0.20               | 1.10                                     | EKMS551VSN181MA30S |
|                       | 120      | 25.4 × 25          | 0.20  | 0.81                                     | EKMS451VSN121MQ25S |                       | 220       | 30 × 45            | 0.20               | 1.33                                     | EKMS551VSN221MR45S |
|                       | 150      | 22 × 40            | 0.20  | 0.94                                     | EKMS451VSN151MP40S |                       | 220       | 35 × 35            | 0.20               | 1.23                                     | EKMS551VSN221MA35S |
|                       | 150      | 25.4 × 30          | 0.20  | 0.93                                     | EKMS451VSN151MQ30S |                       | 270       | 30 × 50            | 0.20               | 1.50                                     | EKMS551VSN271MR50S |
|                       | 180      | 22 × 45            | 0.20  | 1.06                                     | EKMS451VSN181MP45S |                       | 270       | 35 × 40            | 0.20               | 1.42                                     | EKMS551VSN271MA40S |
|                       | 180      | 25.4 × 35          | 0.20  | 1.06                                     | EKMS451VSN181MQ35S |                       | 330       | 35 × 45            | 0.20               | 1.60                                     | EKMS551VSN331MA45S |
|                       | 180      | 30 × 25            | 0.20  | 1.06                                     | EKMS451VSN181MR25S |                       | 330       | 35 × 50            | 0.20               | 1.64                                     | EKMS551VSN331MA50S |
|                       | 220      | 22 × 50            | 0.20  | 1.20                                     | EKMS451VSN221MP50S | 470                   | 35 × 60   | 0.20               | 2.03               | EKMS551VSN471MA60S                       |                    |
|                       | 220      | 25.4 × 40          | 0.20  | 1.20                                     | EKMS451VSN221MQ40S | 600                   | 100       | 30 × 30            | 0.20               | 0.83                                     | EKMS601VSN101MR30S |
|                       | 220      | 30 × 30            | 0.20  | 1.18                                     | EKMS451VSN221MR30S |                       | 100       | 35 × 25            | 0.20               | 0.85                                     | EKMS601VSN101MA25S |
|                       | 220      | 35 × 25            | 0.20  | 1.24                                     | EKMS451VSN221MA25S |                       | 120       | 30 × 35            | 0.20               | 0.93                                     | EKMS601VSN121MR35S |
|                       | 270      | 25.4 × 45          | 0.20  | 1.36                                     | EKMS451VSN271MQ45S |                       | 150       | 30 × 40            | 0.20               | 1.07                                     | EKMS601VSN151MR40S |
|                       | 270      | 25.4 × 50          | 0.20  | 1.38                                     | EKMS451VSN271MQ50S |                       | 150       | 35 × 30            | 0.20               | 1.06                                     | EKMS601VSN151MA30S |
|                       | 270      | 30 × 35            | 0.20  | 1.34                                     | EKMS451VSN271MR35S |                       | 180       | 30 × 45            | 0.20               | 1.20                                     | EKMS601VSN181MR45S |
|                       | 270      | 35 × 30            | 0.20  | 1.40                                     | EKMS451VSN271MA30S |                       | 180       | 30 × 50            | 0.20               | 1.22                                     | EKMS601VSN181MR50S |
|                       | 330      | 30 × 40            | 0.20  | 1.52                                     | EKMS451VSN331MR40S |                       | 180       | 35 × 35            | 0.20               | 1.18                                     | EKMS601VSN181MA35S |
|                       | 390      | 30 × 45            | 0.20  | 1.70                                     | EKMS451VSN391MR45S |                       | 220       | 30 × 60            | 0.20               | 1.40                                     | EKMS601VSN221MR60S |
|                       | 390      | 30 × 50            | 0.20  | 1.73                                     | EKMS451VSN391MR50S |                       | 220       | 35 × 40            | 0.20               | 1.35                                     | EKMS601VSN221MA40S |
| 390                   | 35 × 35  | 0.20               | 1.71  | EKMS451VSN391MA35S                       | 220                | 35 × 45               | 0.20      | 1.38               | EKMS601VSN221MA45S |  |                    |
| 470                   | 35 × 40  | 0.20               | 1.95  | EKMS451VSN471MA40S                       | 270                | 35 × 50               | 0.20      | 1.56               | EKMS601VSN271MA50S |  |                    |
| 470                   | 35 × 45  | 0.20               | 1.99  | EKMS451VSN471MA45S                       | 330                | 35 × 60               | 0.20      | 1.79               | EKMS601VSN331MA60S |  |                    |
| 560                   | 35 × 50  | 0.20               | 2.22  | EKMS451VSN561MA50S                       |                    |                       |           |                    |                    |  |                    |

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

| Frequency(Hz)             | 50   | 120  | 300  | 1k   | 10k  | 50k  |
|---------------------------|------|------|------|------|------|------|
| 160 to 250V <sub>dc</sub> | 0.81 | 1.00 | 1.17 | 1.32 | 1.45 | 1.50 |
| 315 to 450V <sub>dc</sub> | 0.77 | 1.00 | 1.16 | 1.30 | 1.41 | 1.43 |
| 500 to 600V <sub>dc</sub> | 0.70 | 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.