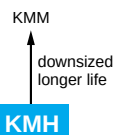


# KMH Series

- Endurance with ripple current : 105°C 2000 hours
- Non solvent-proof type

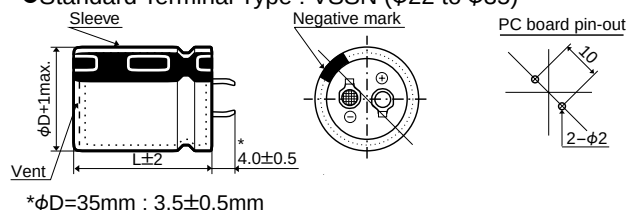


## SPECIFICATIONS

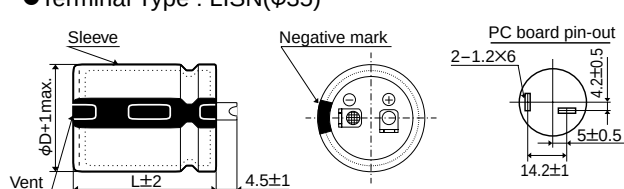
| Items                                                        | Characteristics                                                                                                                                                                          |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------|------|------|------|------|------|------|------|-------------|-------------|------|------------|
| Category                                                     | Standard snap-ins, 105°C                                                                                                                                                                 |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Temperature Range                                            | -40 to +105°C (6.3 to 100V <sub>dc</sub> )   -25 to +105°C (160 to 450V <sub>dc</sub> )                                                                                                  |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Rated Voltage Range                                          | 6.3 to 450V <sub>dc</sub>                                                                                                                                                                |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Capacitance Tolerance                                        | ±20% (M) (at 20°C, 120Hz)                                                                                                                                                                |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Leakage Current                                              | I=0.02CV (0.03CV for L=20mm) or 3mA, whichever is smaller<br>Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V) (at 20°C after 5 minutes)         |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Dissipation Factor<br>(tanδ)                                 | Rated voltage (V <sub>dc</sub> )                                                                                                                                                         | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  | 63V  | 80V  | 100V | 160 to 250V | 315 to 400V | 450V |            |
|                                                              | tanδ (Max.)                                                                                                                                                                              | 0.60                                 | 0.50 | 0.40 | 0.30 | 0.25 | 0.20 | 0.15 | 0.15 | 0.15 | 0.10*       | 0.15        | 0.15 |            |
|                                                              | * : 0.15 for D=35mm or L=20mm (at 20°C, 120Hz)                                                                                                                                           |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
| Low Temperature<br>Characteristics<br>(Max. Impedance Ratio) | Rated voltage (V <sub>dc</sub> )                                                                                                                                                         | 6.3V                                 | 10V  | 16V  | 25V  | 35V  | 50V  | 63V  | 80V  | 100V | 160 to 250V | 315 to 400V | 450V |            |
|                                                              | Z(-25°C)/Z(+20°C)                                                                                                                                                                        | 4                                    | 4    | 4    | 3    | 3    | 2    | 2    | 2    | 2    | 4           | 4           | 8    |            |
|                                                              | Z(-40°C)/Z(+20°C)                                                                                                                                                                        | 15                                   | 15   | 15   | 10   | 8    | 6    | 6    | 5    | 5    | —           | —           | —    | (at 120Hz) |
| 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 for 2000 hours at 105°C. |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
|                                                              | Capacitance change                                                                                                                                                                       | ≤±20% of the initial value           |      |      |      |      |      |      |      |      |             |             |      |            |
|                                                              | D.F. (tanδ)                                                                                                                                                                              | ≤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 1000 hours at 105°C without voltage applied.                            |                                      |      |      |      |      |      |      |      |      |             |             |      |            |
|                                                              | Capacitance change                                                                                                                                                                       | ≤±20% of the initial value           |      |      |      |      |      |      |      |      |             |             |      |            |
|                                                              | D.F. (tanδ)                                                                                                                                                                              | ≤150% of the initial specified value |      |      |      |      |      |      |      |      |             |             |      |            |
|                                                              | Leakage current                                                                                                                                                                          | ≤The initial specified value         |      |      |      |      |      |      |      |      |             |             |      |            |

## DIMENSIONS [mm]

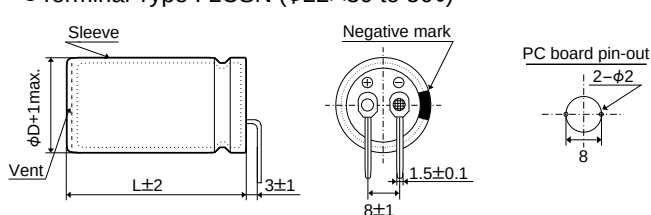
### Standard Terminal Type : VSSN (φ22 to φ35)



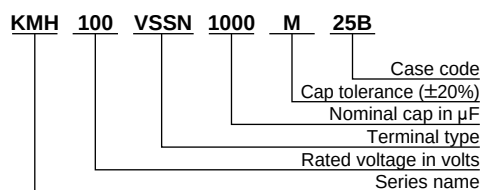
### Terminal Type : LISN(φ35)



### Terminal Type : LCSN (φ22×30 to 50φ)



## PART NUMBERING SYSTEM



### ◆STANDARD RATINGS

| μF     | V <sub>dc</sub><br>φD | 6.3           |                 |               |               | 10                                                                                     |                 |               |               | 16            |                 |               |               |
|--------|-----------------------|---------------|-----------------|---------------|---------------|----------------------------------------------------------------------------------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|
|        |                       | 22            | 25.4            | 30            | 35            | 22                                                                                     | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            |
| 6,800  |                       |               |                 |               |               |                                                                                        |                 |               |               | 22×25<br>1.57 |                 |               |               |
| 10,000 |                       |               |                 |               |               | 22×25<br>1.55                                                                          |                 |               |               | 22×30<br>1.97 | 25.4×25<br>1.97 |               |               |
| 12,000 |                       | 22×25<br>1.54 |                 |               |               | 22×30<br>1.77                                                                          |                 |               |               | 22×35<br>2.22 | 25.4×30<br>2.24 | 30×25<br>2.45 |               |
| 15,000 |                       | 22×25<br>1.72 |                 |               |               | 22×30<br>1.97                                                                          | 25.4×25<br>1.96 |               |               | 22×40<br>2.55 | 25.4×35<br>2.58 | 30×25<br>2.52 |               |
| 18,000 |                       | 22×30<br>1.95 | 25.4×25<br>1.96 |               |               | 22×35<br>2.21                                                                          | 25.4×30<br>2.23 |               |               | 22×45<br>2.87 | 25.4×40<br>2.92 | 30×30<br>2.88 | 35×25<br>2.92 |
| 22,000 |                       | 22×35<br>2.23 | 25.4×30<br>2.25 | 30×25<br>2.28 |               | 22×40<br>2.51                                                                          | 25.4×35<br>2.54 | 30×25<br>2.40 |               |               | 25.4×45<br>3.32 | 30×35<br>3.29 | 35×25<br>3.23 |
| 27,000 |                       | 22×40<br>2.54 | 25.4×35<br>2.57 | 30×25<br>2.52 |               | 22×50<br>2.93                                                                          | 25.4×40<br>2.90 | 30×30<br>2.87 | 35×25<br>2.73 |               | 25.4×50<br>3.78 | 30×40<br>3.77 | 35×30<br>3.45 |
| 33,000 |                       | 22×45<br>2.88 | 25.4×40<br>2.93 | 30×30<br>2.89 | 35×25<br>2.93 |                                                                                        | 25.4×45<br>3.30 | 30×35<br>3.28 | 35×30<br>3.16 |               |                 | 30×45<br>4.30 | 35×35<br>4.26 |
| 39,000 |                       |               | 25.4×40<br>3.18 | 30×35<br>3.26 | 35×30<br>3.40 |                                                                                        | 25.4×50<br>3.68 | 30×40<br>3.69 | 35×30<br>3.43 |               |                 | 30×50<br>4.81 | 35×40<br>4.79 |
| 47,000 |                       |               | 25.4×50<br>3.69 | 30×40<br>3.69 | 35×30<br>3.73 |                                                                                        |                 | 30×45<br>4.17 | 35×35<br>3.76 |               |                 |               | 35×45<br>5.43 |
| 56,000 |                       |               |                 | 30×45<br>4.16 | 35×35<br>4.12 |                                                                                        |                 | 30×50<br>4.68 | 35×40<br>4.67 |               |                 |               |               |
| 68,000 |                       |               |                 | 30×50<br>4.71 | 35×40<br>4.69 |                                                                                        |                 |               | 35×50<br>5.46 |               |                 |               |               |
| 82,000 |                       |               |                 |               | 35×45<br>5.32 | ← Upper : Case size φD×L (mm)<br>← Lower : Rated ripple current (Arms) at 105°C, 120Hz |                 |               |               |               |                 |               |               |

| μF     | V <sub>dc</sub><br>φD | 25            |                 |               |               | 35                                                                                     |                 |               |               | 50            |                 |               |               |
|--------|-----------------------|---------------|-----------------|---------------|---------------|----------------------------------------------------------------------------------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|
|        |                       | 22            | 25.4            | 30            | 35            | 22                                                                                     | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            |
| 1,800  |                       |               |                 |               |               |                                                                                        |                 |               |               | 22×25<br>1.33 |                 |               |               |
| 2,700  |                       |               |                 |               |               |                                                                                        |                 |               |               | 22×30<br>1.69 | 25.4×25<br>1.70 |               |               |
| 3,300  |                       |               |                 |               |               | 22×25<br>1.40                                                                          |                 |               |               | 22×35<br>1.93 | 25.4×30<br>1.85 |               |               |
| 3,900  |                       |               |                 |               |               | 22×30<br>1.57                                                                          |                 |               |               | 22×40<br>2.16 | 25.4×35<br>2.18 | 30×25<br>1.95 |               |
| 4,700  |                       | 22×25<br>1.50 |                 |               |               | 22×30<br>1.72                                                                          | 25.4×25<br>1.80 |               |               | 22×45<br>2.43 | 25.4×35<br>2.39 | 30×30<br>2.25 | 35×25<br>2.48 |
| 5,600  |                       | 22×25<br>1.63 |                 |               |               | 22×35<br>1.95                                                                          | 25.4×30<br>1.96 | 30×25<br>1.99 |               | 22×50<br>2.75 | 25.4×40<br>2.70 | 30×35<br>2.76 | 35×25<br>2.70 |
| 6,800  |                       | 22×30<br>1.86 | 25.4×25<br>1.87 |               |               | 22×40<br>2.20                                                                          | 25.4×35<br>2.23 | 30×25<br>2.19 |               |               | 25.4×50<br>3.30 | 30×40<br>3.30 | 35×30<br>3.25 |
| 8,200  |                       | 22×35<br>2.11 | 25.4×30<br>2.12 | 30×25<br>2.15 |               | 22×50<br>2.55                                                                          | 25.4×40<br>2.53 | 30×30<br>2.75 | 35×25<br>2.75 |               |                 | 30×45<br>3.60 | 35×35<br>3.55 |
| 10,000 |                       | 22×40<br>2.39 | 25.4×35<br>2.42 | 30×25<br>2.37 |               |                                                                                        | 25.4×45<br>2.87 | 30×35<br>2.90 | 35×30<br>2.91 |               |                 | 30×50<br>4.04 | 35×40<br>4.03 |
| 12,000 |                       | 22×45<br>2.69 | 25.4×40<br>2.74 | 30×30<br>2.70 | 35×25<br>2.74 |                                                                                        | 25.4×50<br>3.24 | 30×40<br>3.23 | 35×30<br>2.99 |               |                 |               | 35×45<br>4.55 |
| 15,000 |                       |               | 25.4×45<br>3.15 | 30×35<br>3.13 | 35×30<br>3.27 |                                                                                        |                 | 30×45<br>3.72 | 35×35<br>3.67 |               |                 |               |               |
| 18,000 |                       |               | 25.4×50<br>3.54 | 30×40<br>3.54 | 35×30<br>3.58 |                                                                                        |                 |               | 35×40<br>4.37 |               |                 |               |               |
| 22,000 |                       |               |                 | 30×45<br>4.04 | 35×35<br>3.64 |                                                                                        |                 |               | 35×50<br>4.92 |               |                 |               |               |
| 27,000 |                       |               |                 |               | 35×45<br>4.73 | ← Upper : Case size φD×L (mm)<br>← Lower : Rated ripple current (Arms) at 105°C, 120Hz |                 |               |               |               |                 |               |               |
| 33,000 |                       |               |                 |               | 35×50<br>5.39 |                                                                                        |                 |               |               |               |                 |               |               |

### ◆CASE CODE [mm]

| Case code | Case size φD×L | Case code | Case size φD×L | Case code | Case size φD×L | Case code | Case size φD×L |
|-----------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|
| 22S       | 22×20          | 25S       | 25.4×20        | 30S       | 30×20          | 35S       | 35×20          |
| 22A       | 22×25          | 25A       | 25.4×25        | 30A       | 30×25          | 35A       | 35×25          |
| 22B       | 22×30          | 25B       | 25.4×30        | 30B       | 30×30          | 35B       | 35×30          |
| 22C       | 22×35          | 25C       | 25.4×35        | 30C       | 30×35          | 35C       | 35×35          |
| 22D       | 22×40          | 25D       | 25.4×40        | 30D       | 30×40          | 35D       | 35×40          |
| 22E       | 22×45          | 25E       | 25.4×45        | 30E       | 30×45          | 35E       | 35×45          |
| 22F       | 22×50          | 25F       | 25.4×50        | 30F       | 30×50          | 35F       | 35×50          |

### ◆RATED RIPPLE CURRENT MULTIPLIERS

#### ●Frequency Multipliers

| Frequency (Hz)            | 50   | 120  | 300  | 1k   | 10k  | 50k  |
|---------------------------|------|------|------|------|------|------|
| 6.3 to 50V <sub>dc</sub>  | 0.95 | 1.00 | 1.03 | 1.05 | 1.08 | 1.08 |
| 63 to 100V <sub>dc</sub>  | 0.92 | 1.00 | 1.07 | 1.13 | 1.19 | 1.20 |
| 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 |

### ◆STANDARD RATINGS

| μF     | V <sub>dc</sub><br>φD | 63            |                 |               |               | 80                                                                                     |                 |               |               | 100           |                 |               |               |
|--------|-----------------------|---------------|-----------------|---------------|---------------|----------------------------------------------------------------------------------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|
|        |                       | 22            | 25.4            | 30            | 35            | 22                                                                                     | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            |
| 560    |                       |               |                 |               |               |                                                                                        |                 |               |               | 22×25<br>1.05 |                 |               |               |
| 820    |                       |               |                 |               |               | 22×25<br>1.11                                                                          |                 |               |               | 22×30<br>1.32 | 25.4×25<br>1.33 |               |               |
| 1,000  |                       |               |                 |               |               | 22×25<br>1.22                                                                          |                 |               |               | 22×35<br>1.50 | 25.4×30<br>1.51 |               |               |
| 1,200  |                       | 22×25<br>1.19 |                 |               |               | 22×30<br>1.38                                                                          | 25.4×25<br>1.39 |               |               | 22×40<br>1.69 | 25.4×35<br>1.71 | 30×25<br>1.68 |               |
| 1,500  |                       | 22×25<br>1.33 |                 |               |               | 22×35<br>1.59                                                                          | 25.4×30<br>1.61 |               |               | 22×45<br>1.94 | 25.4×40<br>1.98 | 30×30<br>1.95 | 35×25<br>1.98 |
| 1,800  |                       | 22×30<br>1.51 | 25.4×25<br>1.52 |               |               | 22×40<br>1.80                                                                          | 25.4×30<br>1.76 | 30×25<br>1.65 |               |               | 25.4×45<br>2.23 | 30×35<br>2.50 | 35×25<br>2.17 |
| 2,200  |                       | 22×35<br>1.73 | 25.4×30<br>1.74 |               |               | 22×45<br>2.04                                                                          | 25.4×35<br>2.01 | 30×30<br>2.05 | 35×25<br>2.07 |               | 25.4×50<br>2.53 | 30×40<br>2.70 | 35×30<br>2.50 |
| 2,700  |                       | 22×40<br>1.97 | 25.4×35<br>1.99 | 30×25<br>1.76 |               |                                                                                        | 25.4×45<br>2.36 | 30×35<br>2.35 | 35×25<br>2.29 |               |                 | 30×45<br>2.88 | 35×35<br>2.86 |
| 3,300  |                       | 22×50<br>2.29 | 25.4×40<br>2.27 | 30×30<br>2.24 | 35×25<br>2.06 |                                                                                        | 25.4×50<br>2.68 | 30×40<br>2.68 | 35×30<br>2.45 |               |                 | 30×50<br>3.28 | 35×40<br>3.27 |
| 3,900  |                       |               | 25.4×45<br>2.54 | 30×35<br>2.55 | 35×25<br>2.24 |                                                                                        |                 | 30×45<br>3.00 | 35×35<br>2.98 |               |                 |               | 35×45<br>3.67 |
| 4,700  |                       |               | 25.4×50<br>2.86 | 30×40<br>2.86 | 35×30<br>2.79 |                                                                                        |                 | 30×50<br>3.39 | 35×40<br>3.38 |               |                 |               | 35×50<br>3.80 |
| 5,600  |                       |               |                 | 30×45<br>3.22 | 35×35<br>3.19 |                                                                                        |                 |               | 35×45<br>3.80 |               |                 |               |               |
| 6,800  |                       |               |                 | 30×50<br>3.65 | 35×40<br>3.64 |                                                                                        |                 |               | 35×50<br>3.90 |               |                 |               |               |
| 8,200  |                       |               |                 |               | 35×45<br>3.90 | ← Upper : Case size φD×L (mm)<br>← Lower : Rated ripple current (Arms) at 105°C, 120Hz |                 |               |               |               |                 |               |               |
| 10,000 |                       |               |                 |               | 35×50<br>4.40 |                                                                                        |                 |               |               |               |                 |               |               |

| μF    | V <sub>dc</sub><br>φD | 160           |                 |               |               | 180           |                 |               |               | 200                                                                                    |                 |               |               |
|-------|-----------------------|---------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|----------------------------------------------------------------------------------------|-----------------|---------------|---------------|
|       |                       | 22            | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            | 22                                                                                     | 25.4            | 30            | 35            |
| 150   |                       |               |                 |               |               |               |                 |               |               | 22×20<br>0.66                                                                          |                 |               |               |
| 180   |                       |               |                 |               |               | 22×20<br>0.73 |                 |               |               | 22×20<br>0.72                                                                          |                 |               |               |
| 220   |                       | 22×20<br>0.80 |                 |               |               | 22×20<br>0.80 |                 |               |               | 22×25<br>0.79                                                                          | 25.4×20<br>0.83 |               |               |
| 270   |                       | 22×25<br>1.09 |                 |               |               | 22×25<br>0.96 | 25.4×20<br>0.92 |               |               | 22×25<br>0.87                                                                          | 25.4×25<br>1.09 |               |               |
| 330   |                       | 22×25<br>1.20 | 25.4×20<br>1.02 |               |               | 22×25<br>1.06 | 25.4×25<br>1.20 |               |               | 22×30<br>1.20                                                                          | 25.4×25<br>1.21 | 30×20<br>1.08 |               |
| 390   |                       | 22×30<br>1.30 | 25.4×25<br>1.28 | 30×20<br>1.17 |               | 22×30<br>1.30 | 25.4×25<br>1.30 | 30×20<br>1.17 |               | 22×35<br>1.31                                                                          | 25.4×25<br>1.31 | 30×25<br>1.37 |               |
| 470   |                       | 22×35<br>1.40 | 25.4×25<br>1.41 | 30×20<br>1.28 |               | 22×35<br>1.35 | 25.4×30<br>1.40 | 30×25<br>1.38 | 35×20<br>1.41 | 22×40<br>1.40                                                                          | 25.4×30<br>1.41 | 30×25<br>1.50 | 35×20<br>1.41 |
| 560   |                       | 22×40<br>1.50 | 25.4×30<br>1.51 | 30×25<br>1.56 | 35×20<br>1.54 | 22×40<br>1.51 | 25.4×35<br>1.53 | 30×25<br>1.51 | 35×20<br>1.53 | 22×45<br>1.56                                                                          | 25.4×35<br>1.53 | 30×25<br>1.63 | 35×25<br>1.56 |
| 680   |                       | 22×45<br>1.71 | 25.4×35<br>1.70 | 30×25<br>1.72 | 35×20<br>1.70 | 22×45<br>1.71 | 25.4×40<br>1.74 | 30×30<br>1.72 | 35×25<br>1.74 | 22×50<br>1.74                                                                          | 25.4×40<br>1.74 | 30×30<br>1.74 | 35×25<br>1.72 |
| 820   |                       | 22×50<br>1.93 | 25.4×40<br>2.01 | 30×30<br>2.00 | 35×25<br>1.91 | 22×50<br>1.97 | 25.4×45<br>1.97 | 30×35<br>2.00 | 35×25<br>1.91 |                                                                                        | 25.4×50<br>2.04 | 30×35<br>2.00 | 35×30<br>2.04 |
| 1,000 |                       |               | 25.4×45<br>2.20 | 30×35<br>2.22 | 35×25<br>2.11 |               | 25.4×50<br>2.23 | 30×40<br>2.24 | 35×30<br>2.26 |                                                                                        |                 | 30×45<br>2.30 | 35×35<br>2.30 |
| 1,200 |                       |               | 25.4×50<br>2.45 | 30×40<br>2.44 | 35×30<br>2.44 |               |                 | 30×45<br>2.52 | 35×35<br>2.50 |                                                                                        |                 | 30×50<br>2.60 | 35×40<br>2.65 |
| 1,500 |                       |               |                 | 30×45<br>2.82 | 35×35<br>2.50 |               |                 | 30×50<br>2.89 | 35×40<br>2.89 |                                                                                        |                 |               | 35×45<br>3.08 |
| 1,800 |                       |               |                 | 30×50<br>3.31 | 35×45<br>3.31 |               |                 |               | 35×40<br>3.17 |                                                                                        |                 |               | 35×50<br>3.47 |
| 2,200 |                       |               |                 |               | 35×50<br>3.77 |               |                 |               | 35×50<br>3.60 | ← Upper : Case size φD×L (mm)<br>← Lower : Rated ripple current (Arms) at 105°C, 120Hz |                 |               |               |

### ◆STANDARD RATINGS

| μF    | V <sub>dc</sub><br>φD | 250           |                 |               |               | 315                                                                                |                 |               |               | 350           |                 |               |               |
|-------|-----------------------|---------------|-----------------|---------------|---------------|------------------------------------------------------------------------------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|
|       |                       | 22            | 25.4            | 30            | 35            | 22                                                                                 | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            |
| 56    |                       |               |                 |               |               |                                                                                    |                 |               |               | 22×20<br>0.40 |                 |               |               |
| 68    |                       |               |                 |               |               | 22×20<br>0.44                                                                      |                 |               |               | 22×25<br>0.51 |                 |               |               |
| 82    |                       |               |                 |               |               | 22×25<br>0.64                                                                      |                 |               |               | 22×25<br>0.56 | 25.4×20<br>0.51 |               |               |
| 100   |                       |               |                 |               |               | 22×30<br>0.68                                                                      | 25.4×20<br>0.56 |               |               | 22×30<br>0.69 | 25.4×25<br>0.69 | 30×20<br>0.59 |               |
| 120   |                       | 22×20<br>0.59 |                 |               |               | 22×30<br>0.75                                                                      | 25.4×25<br>0.76 | 30×20<br>0.65 |               | 22×35<br>0.75 | 25.4×25<br>0.75 | 30×20<br>0.64 |               |
| 150   |                       | 22×25<br>0.71 |                 |               |               | 22×35<br>0.82                                                                      | 25.4×30<br>0.80 | 30×25<br>0.82 |               | 22×40<br>0.82 | 25.4×30<br>0.83 | 30×25<br>0.83 | 35×20<br>0.76 |
| 180   |                       | 22×25<br>0.78 | 25.4×20<br>0.75 |               |               | 22×40<br>0.91                                                                      | 25.4×30<br>0.88 | 30×25<br>0.90 | 35×20<br>0.83 | 22×45<br>0.92 | 25.4×35<br>0.92 | 30×25<br>0.91 | 35×25<br>0.94 |
| 220   |                       | 22×30<br>0.95 | 25.4×25<br>0.95 | 30×20<br>0.88 |               | 22×45<br>1.02                                                                      | 25.4×35<br>1.02 | 30×30<br>1.02 | 35×25<br>1.03 | 22×50<br>1.05 | 25.4×40<br>1.04 | 30×30<br>1.02 | 35×25<br>1.04 |
| 270   |                       | 22×35<br>1.14 | 25.4×25<br>1.05 | 30×20<br>0.97 |               | 22×50<br>1.16                                                                      | 25.4×40<br>1.15 | 30×35<br>1.17 | 35×25<br>1.15 |               | 25.4×45<br>1.18 | 30×35<br>1.17 | 35×30<br>1.20 |
| 330   |                       | 22×40<br>1.26 | 25.4×30<br>1.20 | 30×25<br>1.26 | 35×20<br>1.18 |                                                                                    | 25.4×50<br>1.33 | 30×35<br>1.30 | 35×30<br>1.32 |               |                 | 30×40<br>1.34 | 35×30<br>1.33 |
| 390   |                       | 22×45<br>1.49 | 25.4×35<br>1.49 | 30×25<br>1.37 | 35×25<br>1.43 |                                                                                    |                 | 30×40<br>1.46 | 35×35<br>1.47 |               |                 | 30×45<br>1.51 | 35×35<br>1.47 |
| 470   |                       | 22×50<br>1.57 | 25.4×40<br>1.57 | 30×30<br>1.57 | 35×25<br>1.57 |                                                                                    |                 | 30×50<br>1.70 | 35×40<br>1.69 |               |                 |               | 35×40<br>1.69 |
| 560   |                       |               | 25.4×45<br>1.79 | 30×35<br>1.79 | 35×30<br>1.79 |                                                                                    |                 |               | 35×45<br>1.90 |               |                 |               | 35×45<br>1.90 |
| 680   |                       |               | 25.4×50<br>1.84 | 30×40<br>2.00 | 35×30<br>1.97 |                                                                                    |                 |               | 35×50<br>2.15 |               |                 |               |               |
| 820   |                       |               |                 | 30×45<br>2.16 | 35×35<br>1.98 |                                                                                    |                 |               |               |               |                 |               |               |
| 1,000 |                       |               |                 |               | 35×40<br>2.30 | Upper : Case size φD×L (mm)<br>Lower : Rated ripple current (Arms) at 105°C, 120Hz |                 |               |               |               |                 |               |               |
| 1,200 |                       |               |                 |               | 35×45<br>2.43 |                                                                                    |                 |               |               |               |                 |               |               |

| μF  | V <sub>dc</sub><br>φD | 400           |                 |               |               | 450           |                 |               |               |
|-----|-----------------------|---------------|-----------------|---------------|---------------|---------------|-----------------|---------------|---------------|
|     |                       | 22            | 25.4            | 30            | 35            | 22            | 25.4            | 30            | 35            |
| 47  |                       | 22×20<br>0.37 |                 |               |               |               |                 |               |               |
| 56  |                       | 22×20<br>0.40 |                 |               |               | 22×25<br>0.40 |                 |               |               |
| 68  |                       | 22×25<br>0.51 | 25.4×20<br>0.46 |               |               | 22×30<br>0.50 | 25.4×25<br>0.50 |               |               |
| 82  |                       | 22×30<br>0.58 | 25.4×25<br>0.64 |               |               | 22×35<br>0.56 | 25.4×25<br>0.55 |               |               |
| 100 |                       | 22×30<br>0.64 | 25.4×25<br>0.67 | 30×20<br>0.59 |               | 22×40<br>0.64 | 25.4×30<br>0.57 | 30×25<br>0.64 |               |
| 120 |                       | 22×35<br>0.72 | 25.4×30<br>0.72 | 30×25<br>0.76 |               | 22×45<br>0.72 | 25.4×35<br>0.71 | 30×25<br>0.70 |               |
| 150 |                       | 22×40<br>0.82 | 25.4×35<br>0.84 | 30×25<br>0.84 | 35×20<br>0.76 | 22×50<br>0.79 | 25.4×40<br>0.75 | 30×30<br>0.74 | 35×25<br>0.75 |
| 180 |                       | 22×50<br>0.95 | 25.4×40<br>0.94 | 30×30<br>0.92 | 35×25<br>0.94 |               | 25.4×45<br>0.84 | 30×35<br>0.87 | 35×30<br>0.90 |
| 220 |                       |               | 25.4×45<br>1.07 | 30×35<br>1.06 | 35×30<br>1.08 |               | 25.4×50<br>0.98 | 30×40<br>0.98 | 35×30<br>1.00 |
| 270 |                       |               | 25.4×50<br>1.21 | 30×40<br>1.21 | 35×30<br>1.20 |               |                 | 30×45<br>1.15 | 35×35<br>1.17 |
| 330 |                       |               |                 | 30×45<br>1.39 | 35×35<br>1.35 |               |                 | 30×50<br>1.38 | 35×40<br>1.38 |
| 390 |                       |               |                 | 30×50<br>1.55 | 35×40<br>1.54 |               |                 |               | 35×45<br>1.55 |
| 470 |                       |               |                 |               | 35×45<br>1.74 |               |                 |               | 35×50<br>1.72 |