



## Radial Lead Aluminum Electrolytic Capacitors

Very Long Life

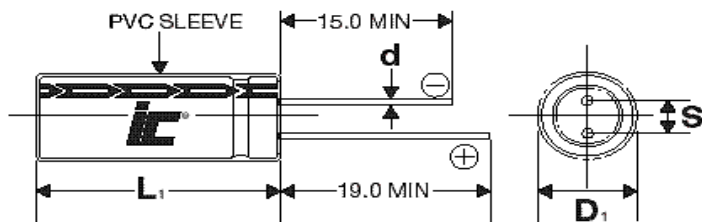
### FEATURES

High Temperature - High Voltage – Long Life (10k Hrs)

### APPLICATIONS

Switching Power Supplies – Electronic Ballasts

|   |  |                                  |            |                   |             |            |            |
|---|--|----------------------------------|------------|-------------------|-------------|------------|------------|
| <b>Operating Temperature Range</b>                                |  | <b>-40°C to +105°C</b>           |            |                   |             |            |            |
| <b>Capacitance Tolerance</b>                                      |  | <b>+20% at 120 Hz, 20°C</b>      |            |                   |             |            |            |
| <b>Surge Voltage</b>  | <b>WVDC</b>  | <b>160</b>                       | <b>200</b> | <b>250</b>        | <b>350</b>  | <b>400</b> | <b>450</b> |
|   | <b>SVDC</b>  | 200                              | 250        | 300               | 400         | 450        | 500        |
| <b>Dissipation Factor<br/>120 Hz, 20°C</b>                        | <b>WVDC</b>  | <b>160</b>                       | <b>200</b> | <b>250</b>        | <b>350</b>  | <b>400</b> | <b>450</b> |
|   | <b>tan δ</b>   | .15                              | .15        | .15               | .2          | .2         | .2         |
| <b>Leakage Current</b>  |  | 2 Minutes<br>.02CV+10uA          |            |                   |             |            |            |
| <b>Low Temperature Stability<br/>Impedance Ratio<br/>(120 Hz)</b> | <b>Rated WVDC</b>                                      | <b>160 to 250</b>                |            | <b>350 to 400</b> |             | <b>450</b> |            |
|   | <b>-25°C to +20°C</b>                                  | 6                                |            | 7                 |             | 9          |            |
| <b>Load Life</b>  | <b>10000 hours with rated voltage applied at 105°C</b> |                                  |            |                   |             |            |            |
|   | <b>Capacitance Change</b>                              | ≤20% of initial measured value   |            |                   |             |            |            |
|   | <b>Dissipation Factor</b>                              | ≤200% of maximum specified value |            |                   |             |            |            |
|   | <b>Leakage Current</b>                                 | ≤100% of maximum specified value |            |                   |             |            |            |
| <b>Shelf Life</b>   | <b>1000 hours at 105°C with no voltage applied</b>     |                                  |            |                   |             |            |            |
|   | <b>Capacitance Change</b>                              | ≤20% of initial measured value   |            |                   |             |            |            |
|   | <b>Dissipation Factor</b>                              | ≤200% of maximum specified value |            |                   |             |            |            |
|   | <b>Leakage Current</b>                                 | ≤100% of maximum specified value |            |                   |             |            |            |
| <b>Ripple Current Multipliers</b>                                 | <b>Frequency (Hz)</b>                                  |                                  |            |                   |             |            |            |
|   | <b>50</b>  | <b>120</b>                       | <b>1k</b>  | <b>10k</b>        | <b>100k</b> |            |            |
|   | 0.4  | 0.5                              | 0.8        | 0.9               | 1.0         |            |            |



Lead spacing VS. Case diameter

| D | 10  | 12.5 | 16  |
|---|-----|------|-----|
| S | 5.0 | 5.0  | 7.5 |
| d | 0.6 | 0.6  | 0.8 |
| B | 1.5 | 1.5  | 1.5 |

$L_1 = L + 1.5\text{mm Max (} L < 20\text{mm)}$

$L_1 = L + 2\text{mm Max (} L \geq 20\text{mm)}$

$D_1 = D + 0.5\text{mm Max.}$

$S_1 = S + 0.5\text{ mm}$

# KFM

**+105°C, High Frequency Low Impedance/ESR, 8000 to 10000 hours**

| Capacitance (µF) | WVDC | IC PART NUMBER | Maximum ESR (Ω)<br>120 Hz,<br>+20°C | Maximum Impedance (Ω)<br>100 kHz,<br>20°C | Maximum RMS Ripple Current (mA)<br>100 kHz,<br>+105°C | Dims DxL (mm) |
|------------------|------|----------------|-------------------------------------|---|---|---------------|
| 1                | 450  | 105KFM450MEBB  | 331.573                             | 33  | 50  | 6.3x11        |
| 1.5              | 400  | 155KFM400MEBB  | 221.048                             | 25  | 75  | 6.3x11        |
| 1.5              | 450  | 155KFM450MFH   | 221.048                             | 25  | 80  | 8x11.5        |
| 1.8              | 400  | 185KFM400MEBB  | 184.207                             | 25  | 85  | 6.3x11        |
| 1.8              | 450  | 185KFM450MFH   | 184.207                             | 20  | 85  | 8x11.5        |
| 2.2              | 350  | 225KFM350MEBB  | 150.715                             | 11.5                                      | 70  | 6.3x11        |
| 2.2              | 400  | 225KFM400MFH   | 150.715                             | 20  | 90  | 8x11.5        |
| 2.2              | 450  | 225KFM450FBW   | 150.715                             | 15.72                                     | 95  | 8x16          |
| 2.7              | 250  | 275KFM250MEBB  | 1.13                                | 10.15                                     | 90  | 6.3x11        |
| 2.7              | 400  | 275KFM400MFH   | 122.805                             | 15.72                                     | 95  | 8x11.5        |
| 2.7              | 450  | 275KFM450FBW   | 122.805                             | 15.72                                     | 100   | 8x16          |
| 3.3              | 400  | 335KFM400MFH   | 100.477                             | 15.72                                     | 100   | 8x11.5        |
| 3.3              | 450  | 335KFM450FBW   | 100.477                             | 15.72                                     | 110   | 8x16          |
| 3.9              | 200  | 395KFM200MFH   | 63.764                              | 10.15                                     | 105   | 8x11.5        |
| 3.9              | 400  | 395KFM400MFH   | 85.0187                             | 15.72                                     | 105   | 8x11.5        |
| 3.9              | 450  | 395KFM450FBW   | 85.0187                             | 15.72                                     | 120   | 8x16          |
| 4.7              | 400  | 475KFM400FBW   | 70.5474                             | 12  | 115   | 8x16          |
| 4.7              | 400  | 475KFM400MFH   | 70.5474                             | 12  | 110   | 8x11.5        |
| 4.7              | 450  | 475KFM450MFJG  | 70.5474                             | 10.51                                     | 150   | 8x20          |
| 4.8              | 450  | 475KFM450MGBW  | 70.5474                             | 10.51                                     | 150   | 10x16         |
| 5.6              | 250  | 565KFM250MFH   | 44.4071                             | 4   | 150   | 8x11.5        |
| 5.6              | 400  | 565KFM400FBW   | 59.2094                             | 10.51                                     | 160   | 8x16          |
| 5.6              | 400  | 565KFM400MGU   | 59.2094                             | 10.5                                      | 180   | 10x12.5       |
| 5.6              | 450  | 565KFM450MFJG  | 59.2094                             | 7.5                                       | 180   | 8x20          |
| 5.6              | 450  | 565KFM450MGBW  | 59.2094                             | 7.5                                       | 180   | 10x16         |
| 6.8              | 250  | 685KFM250MFH   | 36.5705                             | 6.7                                       | 160   | 8x11.5        |
| 6.8              | 350  | 685KFM350MGU   | 48.7607                             | 10.51                                     | 170   | 10x12.5       |
| 6.8              | 400  | 685KFM400MFJG  | 48.7607                             | 8.7                                       | 180   | 8x30          |
| 6.8              | 400  | 685KFM400M     | 48.7607                             | 8.7                                       | 220   | 10x16         |
| 6.8              | 450  | 685KFM450MGBW  | 48.7607                             | 7.5                                       | 220   | 10x16         |
| 6.8              | 450  | 685KFM450M     | 48.7607                             | 8.7                                       | 150   | 10x20         |
| 8.2              | 350  | 825KFM400MGBW  | 40.4357                             | 7.5                                       | 252   | 10x16         |
| 8.2              | 400  | 825KFM450MGJG  | 40.4357                             | 6.2                                       | 265   | 10x20         |
| 8.2              | 450  | 825KFM350MFJG  | 40.4357                             | 7.5                                       | 240   | 8x20          |
| 10               | 200  | 106KFM200M     | 24.868                              | 3.65                                      | 250   | 10x16         |
| 10               | 200  | 106KFM200FBJ   | 24.868                              | 3.65                                      | 175   | 8x12          |
| 10               | 200  | 106KFM250FBW   | 24.868                              | 3.65                                      | 250   | 8x16          |
| 10               | 250  | 106KFM250MGU   | 24.868                              | 3.65                                      | 250   | 10x12.5       |
| 10               | 350  | 106KFM350MGBW  | 33.1573                             | 7.5                                       | 250   | 10x16         |
| 10               | 400  | 106KFM400M     | 33.1573                             | 4.9                                       | 288   | 10x20         |
| 10               | 450  | 106KFM450MGJD  | 33.1573                             | 6.2                                       | 305   | 10x25         |
| 10               | 450  | 106KFM450M     | 33.1573                             | 5.2                                       | 305   | 12.5x20       |
| 12               | 200  | 126KFM200FBW   | 20.7233                             | 3.65                                      | 190   | 8x16          |
| 15               | 160  | 156KFM160MGU   | 16.5786                             | 4.27                                      | 290   | 10x12.5       |
| 15               | 200  | 156KFM200FBW   | 16.5786                             | 3.65                                      | 360   | 8x16          |
| 15               | 250  | 156KFM250MFJG  | 16.5786                             | 3.24                                      | 380   | 8x20          |
| 15               | 250  | 156KFM250MGBW  | 16.5786                             | 3.24                                      | 390   | 10x16         |
| 15               | 350  | 156KFM350MGJD  | 22.1049                             | 6.2                                       | 340   | 10x25         |
| 15               | 350  | 156KFM350MTBD  | 22.1049                             | 6.2                                       | 340   | 12.5x15       |
| 15               | 450  | 156KFM450MFDG  | 22.1049                             | 5.2                                       | 400   | 8x50          |
| 15               | 450  | 156KFM450MTJG  | 22.1049                             | 5.2                                       | 400   | 12.5x20       |
| 18               | 160  | 186KFM160FBW   | 13.8155                             | 4.27                                      | 310   | 8x16          |
| 18               | 250  | 186KFM250MGBW  | 13.8155                             | 3.24                                      | 410   | 10x16         |
| 18               | 350  | 186KFM350MGJD  | 18.4207                             | 6.2                                       | 430   | 10x25         |
| 18               | 400  | 186KFM400MTJG  | 18.4207                             | 4.2                                       | 470   | 12.5x20       |
| 18               | 450  | 186KFM450MTJD  | 18.4207                             | 3.6                                       | 470   | 12.5x25       |
| 22               | 160  | 226KFM160MFJG  | 11.304                              | 2.25                                      | 390   | 8x20          |
| 22               | 200  | 226KFM200MGBW  | 11.304                              | 3.24                                      | 390   | 10x16         |

# KFM

**+105°C, High Frequency Low Impedance/ESR, 8000 to 10000 hours**

| Capacitance (µF) | WVDC | IC PART NUMBER                | Maximum ESR (Ω)<br>120 Hz,<br>+20°C | Maximum Impedance (Ω)<br>100 kHz,<br>20°C | Maximum RMS Ripple Current (mA)<br>100 kHz,<br>+105°C | Dims DxL (mm) |
|------------------|------|-------------------------------|-------------------------------------|---|---|---------------|
| 22               | 200  | <a href="#">226KFM200M</a>    | 11.304                              | 2.38                                      | 410   | 10x20         |
| 22               | 250  | <a href="#">226KFM250MGJG</a> | 11.304                              | 3.24                                      | 475   | 10x20         |
| 22               | 350  | <a href="#">226KFM350M</a>    | 15.0715                             | 3.1                                       | 475   | 12.5x20       |
| 22               | 400  | <a href="#">226KFM400M</a>    | 15.0715                             | 2.25                                      | 475   | 12.5x25       |
| 22               | 400  | <a href="#">226KFM400MQU</a>  | 15.0715                             | 2.25                                      | 430   | 16x20         |
| 22               | 400  | <a href="#">226KFM400MFDG</a> | 15.0715                             | 2.25                                      | 475   | 8x50          |
| 22               | 450  | <a href="#">226KFM450MGCG</a> | 15.0715                             | 2.02                                      | 550   | 10x40         |
| 22               | 450  | <a href="#">226KFM450MKJG</a> | 15.0715                             | 2.02                                      | 550   | 16x20         |
| 22               | 450  | <a href="#">226KFM450M</a>    | 15.0715                             | 2.02                                      | 560   | 16x25         |
| 22               | 450  | <a href="#">226KFM450MRU</a>  | 15.0715                             | 2.02                                      | 560   | 18x20         |
| 27               | 160  | <a href="#">276KFM160MGBW</a> | 9.2104                              | 2.25                                      | 410   | 10x16         |
| 27               | 200  | <a href="#">276KFM200MGJG</a> | 9.2104                              | 2.38                                      | 410   | 10x20         |
| 33               | 160  | <a href="#">336KFM160MTBD</a> | 7.5357                              | 1.87                                      | 570   | 12.5x30       |
| 33               | 160  | <a href="#">336KFM160M</a>    | 7.5357                              | 1.87                                      | 530   | 10x20         |
| 33               | 200  | <a href="#">336KFM200MGJD</a> | 7.5357                              | 1.65                                      | 530   | 10x25         |
| 33               | 250  | <a href="#">336KFM250MFDG</a> | 7.5357                              | 1.38                                      | 570   | 8x50          |
| 33               | 250  | <a href="#">336KFM250M</a>    | 7.5357                              | 1.38                                      | 570   | 12.5x20       |
| 33               | 350  | <a href="#">336KFM350M</a>    | 10.0477                             | 2.25                                      | 500   | 16x20         |
| 33               | 350  | <a href="#">336KFM350MTJD</a> | 10.0477                             | 2.25                                      | 570   | 12.5x25       |
| 33               | 400  | <a href="#">336KFM400M</a>    | 10.0477                             | 1.7                                       | 610   | 16x25         |
| 33               | 400  | <a href="#">336KFM400MRU</a>  | 10.0477                             | 1.7                                       | 640   | 18x20         |
| 33               | 450  | <a href="#">336KFM450MGDG</a> | 10.0477                             | 1.82                                      | 665   | 10x50         |
| 33               | 450  | <a href="#">336KFM450MKJD</a> | 10.0477                             | 1.82                                      | 665   | 16x25         |
| 33               | 450  | <a href="#">336KFM450M</a>    | 10.0477                             | 1.82                                      | 700   | 16x31.5       |
| 33               | 450  | <a href="#">336KFM450MRV</a>  | 10.0477                             | 1.82                                      | 700   | 18x25         |
| 39               | 160  | <a href="#">396KFM160MGJD</a> | 52.91                               | 1.87                                      | 590   | 10x25         |
| 39               | 160  | <a href="#">396KFM160MTBD</a> | 52.91                               | 1.87                                      | 590   | 12.5x15       |
| 39               | 200  | <a href="#">396KFM200MTJG</a> | 52.91                               | 1.38                                      | 620   | 12.5x30       |
| 47               | 160  | <a href="#">476KFM160MGJD</a> | 5.2911                              | 1.87                                      | 610   | 10x25         |
| 47               | 200  | <a href="#">476KFM200MFDG</a> | 5.2911                              | 1.38                                      | 650   | 8x50          |
| 47               | 200  | <a href="#">476KFM200M</a>    | 5.2911                              | 1.38                                      | 630   | 12.5x20       |
| 47               | 250  | <a href="#">476KFM250M</a>    | 5.2911                              | 1.38                                      | 650   | 12.5x25       |
| 47               | 250  | <a href="#">476KFM250MQU</a>  | 5.2911                              | 1.38                                      | 720   | 16x20         |
| 47               | 250  | <a href="#">476KFM250MTJD</a> | 5.2911                              | 1.38                                      | 650   | 12.5x25       |
| 47               | 350  | <a href="#">476KFM350M</a>    | 7.0547                              | 2.25                                      | 800   | 16x25         |
| 47               | 350  | <a href="#">476KFM350MRU</a>  | 7.0547                              | 2.25                                      | 660   | 18x20         |
| 47               | 400  | <a href="#">476KFM400M</a>    | 7.0547                              | 1.7                                       | 840   | 16x31.5       |
| 47               | 400  | <a href="#">476KFM400MRV</a>  | 7.0547                              | 1.7                                       | 795   | 18x25         |
| 47               | 450  | <a href="#">476KFM450M</a>    | 7.0547                              | 1.38                                      | 880   | 18x31.5       |
| 47               | 450  | <a href="#">476KFM450MKAD</a> | 7.0547                              | 1.38                                      | 730   | 16x35         |
| 47               | 450  | <a href="#">476KFM450MTDG</a> | 7.0547                              | 1.38                                      | 730   | 12.5x50       |
| 56               | 160  | <a href="#">566KFM160MFDG</a> | 4.4407                              | 1.55                                      | 740   | 8x50          |
| 56               | 160  | <a href="#">566KFM160MTJG</a> | 4.4407                              | 1.55                                      | 740   | 12.5x20       |
| 56               | 200  | <a href="#">566KFM200MGDG</a> | 4.4407                              | 1.25                                      | 670   | 10x50         |
| 56               | 200  | <a href="#">566KFM200MTJD</a> | 4.4407                              | 1.25                                      | 670   | 12.5x25       |
| 56               | 250  | <a href="#">566KFM250MTAG</a> | 4.4407                              | 1.25                                      | 750   | 12.5x30       |
| 56               | 400  | <a href="#">566KFM400MKAG</a> | 5.9209                              | 1.7                                       | 820   | 16x30         |
| 56               | 400  | <a href="#">566KFM400MTDG</a> | 5.9209                              | 1.7                                       | 820   | 12.5x50       |
| 56               | 450  | <a href="#">566KFM450MKAD</a> | 5.9209                              | 1.38                                      | 750   | 16x35         |
| 68               | 160  | <a href="#">686KFM160MTJG</a> | 3.657                               | 1.1                                       | 800   | 12.5x20       |
| 68               | 200  | <a href="#">686KFM200M</a>    | 3.657                               | 1.25                                      | 760   | 12.5x25       |
| 68               | 200  | <a href="#">686KFM200MQU</a>  | 3.657                               | 1.25                                      | 760   | 16x20         |
| 68               | 250  | <a href="#">686KFM250M</a>    | 3.657                               | 1.25                                      | 920   | 16x25         |
| 68               | 250  | <a href="#">686KFM250MRU</a>  | 3.657                               | 1.25                                      | 920   | 18x20         |
| 68               | 250  | <a href="#">686KFM250MGDG</a> | 3.657                               | 1.25                                      | 870   | 10x50         |
| 68               | 250  | <a href="#">686KFM250MTAG</a> | 3.657                               | 1.25                                      | 870   | 12.5x30       |
| 68               | 350  | <a href="#">686KFM350MTDG</a> | 4.8761                              | 1.38                                      | 880   | 12.5x50       |
| 68               | 350  | <a href="#">686KFM350M</a>    | 4.8761                              | 1.38                                      | 850   | 16x31.5       |

# KFM

**+105°C, High Frequency Low Impedance/ESR, 8000 to 10000 hours**

| Capacitance (µF) | WVDC | IC PART NUMBER | Maximum ESR (Ω)<br>120 Hz,<br>+20°C | Maximum Impedance (Ω)<br>100 kHz,<br>20°C | Maximum RMS Ripple Current (mA)<br>100 kHz,<br>+105°C | Dims DxL (mm) |
|------------------|------|----------------|-------------------------------------|---|---|---------------|
| 68               | 350  | 686KFM350MRV   | 4.8761                              | 1.38                                      | 880   | 18x25         |
| 68               | 400  | 686KFM400M     | 4.8761                              | 1.38                                      | 910   | 18x31.5       |
| 68               | 450  | 686KFM450M     | 4.8761                              | 1.25                                      | 1120  | 18x35.5       |
| 82               | 160  | 826KFM160MTJD  | 3.0327                              | 1.1                                       | 830   | 12.5x25       |
| 82               | 200  | 826KFM200MKJD  | 3.0327                              | 1.15                                      | 860   | 16x25         |
| 82               | 250  | 826KFM250MFBG  | 3.0327                              | 1.15                                      | 910   | 8x10          |
| 82               | 350  | 826KFM350MLAG  | 4.0436                              | 1.38                                      | 940   | 18x30         |
| 82               | 400  | 826KFM400MKCG  | 4.0436                              | 1.25                                      | 980   | 16x40         |
| 82               | 400  | 826KFM400MLAD  | 4.0436                              | 1.28                                      | 980   | 18x35         |
| 82               | 450  | 826KFM450MLCG  | 4.0436                              | 0.97                                      | 1030  | 18x40         |
| 100              | 160  | 107KFM160MGDG  | 2.4868                              | 1.1                                       | 1210  | 10x50         |
| 100              | 160  | 107KFM160MKJG  | 2.4868                              | 1.1                                       | 1120  | 16x20         |
| 100              | 200  | 107KFM200M     | 2.487                               | 1.15                                      | 930   | 16x25         |
| 100              | 250  | 107KFM250M     | 2.487                               | 1.18                                      | 960   | 16x31.5       |
| 100              | 250  | 107KFM250MRV   | 2.487                               | 1.18                                      | 1200  | 18x25         |
| 100              | 250  | 107KFM250MTDG  | 2.487                               | 1.18                                      | 980   | 12.5x50       |
| 100              | 350  | 107KFM350MLAD  | 3.3157                              | 1.25                                      | 1120  | 18x35         |
| 100              | 400  | 107KFM400MLCG  | 3.3157                              | 0.97                                      | 1100  | 18x40         |
| 120              | 160  | 127KFM160MKJD  | 2.0723                              | 0.91                                      | 1240  | 16x25         |
| 120              | 200  | 127KFM200MKAG  | 2.487                               | 1.03                                      | 1090  | 16x35         |
| 120              | 250  | 127KFM250MLAG  | 2.0723                              | 1.02                                      | 1210  | 18x30         |
| 120              | 350  | 127KFM350MLAD  | 2.7631                              | 1.25                                      | 1200  | 18x35         |
| 150              | 160  | 157KFM160MKAG  | 1.658                               | 0.91                                      | 1280  | 16x30         |
| 150              | 160  | 157KFM160MTDG  | 1.658                               | 0.91                                      | 1280  | 12.5x50       |
| 150              | 200  | 157KFM200MKAD  | 1.658                               | 1.03                                      | 1125  | 16x35         |
| 150              | 200  | 157KFM200M     | 1.658                               | 1.03                                      | 1360  | 16x31.5       |
| 150              | 200  | 157KFM200MRV   | 1.658                               | 1.03                                      | 1360  | 18x25         |
| 150              | 250  | 157KFM250M     | 1.658                               | 0.98                                      | 1400  | 18x31.5       |
| 180              | 160  | 187KFM160MKAG  | 1.3816                              | 0.81                                      | 1360  | 16x30         |
| 180              | 200  | 187KFM200MLAG  | 1.3816                              | 0.8                                       | 1340  | 18x30         |
| 180              | 250  | 187KFM250MLAD  | 1.3816                              | 0.74                                      | 1540  | 18x35         |
| 220              | 160  | 227KFM160MLAG  | 1.13                                | 0.81                                      | 1410  | 18x30         |
| 220              | 160  | 227KFM160M     | 1.13                                | 0.81                                      | 1410  | 16x31.5       |
| 220              | 160  | 227KFM160MRV   | 1.13                                | 0.81                                      | 1400  | 18x25         |
| 220              | 200  | 227KFM200M     | 1.13                                | 0.81                                      | 1700  | 18x31.5       |
| 220              | 200  | 227KFM200MLAD  | 1.13                                | 0.74                                      | 1420  | 18x35         |
| 220              | 250  | 227KFM250MLCG  | 1.13                                | 0.61                                      | 1620  | 18x40         |
| 270              | 160  | 277KFM160MLAD  | 0.92104                             | 0.67                                      | 1500  | 18x35         |
| 330              | 160  | 337KFM160MLCG  | 0.7536                              | 0.87                                      | 1590  | 18x40         |