

# Type AFK $-55\text{ }^{\circ}\text{C}$ to $105\text{ }^{\circ}\text{C}$

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., $105\text{ }^{\circ}\text{C}$

### Low Impedance and Long-Life for Filtering, Bypassing and Power Supply Decoupling



Type AFK Capacitors are the best and by a wide margin. With 40% to 60% lower impedance, 30% to 50% smaller case size and more than twice the life compared to low-ESR type AFC, the Type AFK also excels at cold performance down to  $-55\text{ }^{\circ}\text{C}$ . In addition, this terrific low-impedance performance, approaching low-ESR tantalum capacitors, is at a significant cost savings compared to tantalum. The vertical cylindrical cases facilitate automatic mounting and reflow soldering into the same footprint of like-rated tantalum capacitors except without the need for voltage derating.

#### Highlights

- $+105\text{ }^{\circ}\text{C}$ , Up to 5000 Hour Load Life
- Capacitance Range:  $3.3\text{ }\mu\text{F}$  to  $6800\text{ }\mu\text{F}$
- Voltage Range: 6.3 Vdc to 100 Vdc

#### Specifications

- Operating Temperature:**  $-55\text{ }^{\circ}\text{C}$  to  $+105\text{ }^{\circ}\text{C}$   
**Rated Voltage:** 6.3, 10, 16, 25, 35, 50, 63, 80 & 100 Vdc  
**Capacitance:**  $3.3\text{ }\mu\text{F}$  to  $6800\text{ }\mu\text{F}$   
**Capacitance Tolerance:**  $\pm 20\%$  @ 120 Hz and  $+20\text{ }^{\circ}\text{C}$   
**Leakage Current:** 0.01 CV or  $3\text{ }\mu\text{A}$  @  $+20\text{ }^{\circ}\text{C}$ , after two minutes (whichever is greater)

#### Ripple Current Multiplier:

| Frequency | 50/60 Hz | 120 Hz | 1 kHz | 10 kHz | 100 kHz |
|-----------|----------|--------|-------|--------|---------|
|           | 0.70     | .075   | 0.90  | 0.95   | 1.00    |

#### Dissipation Factor:

| 6.3V | 10 V | 16 V | 25 V | 35 V | 50 V | 63 V | 80 V | 100 V |
|------|------|------|------|------|------|------|------|-------|
| 0.26 | 0.19 | 0.16 | 0.14 | 0.12 | 0.1  | 0.08 | 0.08 | 0.07  |

Add 0.02 per 1000  $\mu\text{F}$  for values greater than 1000

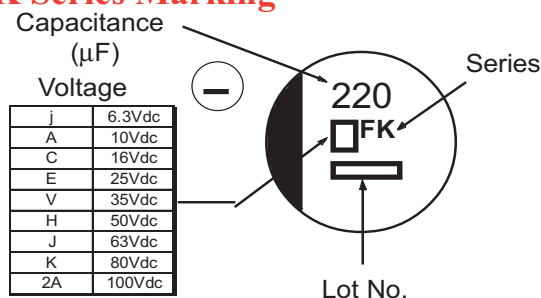
**Life Test:** 2000 h @  $105\text{ }^{\circ}\text{C}$ , 4.0 — 10.0 mm dia.  
 5000 h @  $105\text{ }^{\circ}\text{C}$ , 12.5 — 18.0 mm dia.

- $\Delta$  Capacitance  $\pm 30\%$   
 DF:  $\leq 200\%$  of limit  
 DCL:  $\leq 100\%$  of limit

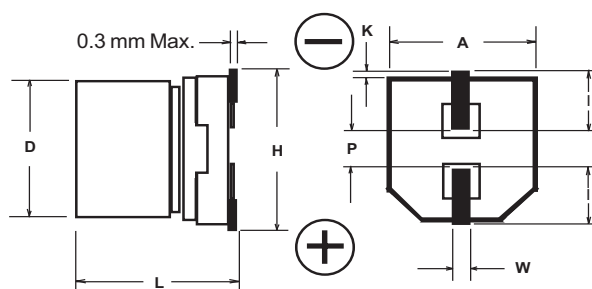
**Shelf Test:** 1000 h @  $105\text{ }^{\circ}\text{C}$

- $\Delta$  Capacitance  $\pm 30\%$   
 DF:  $\leq 200\%$  of limit  
 DCL:  $\leq 100\%$  of limit

#### AFK Series Marking



#### Outline Drawing



#### Case Dimensions

| Case Code | D $\pm .05$ | L              | A $\pm 0.2$ | H (max) | I (ref) | W              | P (ref) | K (mm)                |
|-----------|-------------|----------------|-------------|---------|---------|----------------|---------|-----------------------|
| B         | 4.0         | $5.8 \pm 0.3$  | 4.3         | 5.5     | 1.8     | $0.65 \pm 0.1$ | 1.0     | $0.35 + 0.15 / -0.20$ |
| C         | 5.0         | $5.8 \pm 0.3$  | 5.3         | 6.5     | 2.2     | $0.65 \pm 0.1$ | 1.5     | $0.35 + 0.15 / -0.20$ |
| D         | 6.3         | $5.8 \pm 0.3$  | 6.6         | 7.8     | 2.6     | $0.65 \pm 0.1$ | 1.8     | $0.35 + 0.15 / -0.20$ |
| X         | 6.3         | $7.9 \pm 0.3$  | 6.6         | 7.8     | 2.6     | $0.65 \pm 0.1$ | 1.8     | $0.35 + 0.15 / -0.20$ |
| E         | 8.0         | $6.2 \pm 0.3$  | 8.3         | 9.5     | 3.4     | $0.65 \pm 0.1$ | 2.2     | $0.35 + 0.15 / -0.20$ |
| F         | 8.0         | $10.2 \pm 0.3$ | 8.3         | 10.0    | 3.4     | $0.90 \pm 0.2$ | 3.1     | $0.70 \pm 0.20$       |
| G         | 10.0        | $10.2 \pm 0.3$ | 10.3        | 12.0    | 3.5     | $0.90 \pm 0.2$ | 4.6     | $0.70 \pm 0.20$       |
| H         | 12.5        | $13.5 \pm 0.5$ | 13.5        | 15.0    | 4.7     | $0.90 \pm 0.3$ | 4.4     | $0.70 \pm 0.30$       |
| P         | 16.0        | $16.5 \pm 0.5$ | 17.0        | 19.0    | 5.5     | $1.2 \pm 0.3$  | 6.7     | $0.70 \pm 0.30$       |
| R         | 18.0        | $16.5 \pm 0.5$ | 19.0        | 21.0    | 6.7     | $1.2 \pm 0.3$  | 6.7     | $0.70 \pm 0.30$       |

# Type AFK **-55 °C to 105 °C**

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., 105 °C

### Ratings Table

| Cap<br>( $\mu$ F)              | Catalog<br>Part Number | Max.<br>DCL<br>2 min<br>( $\mu$ A) | Max.<br>Dissipation<br>Factor<br>@120 Hz/20 °C | Max.<br>ESR<br>@100 kHz/20 °C<br>( $\Omega$ ) | Impedance<br>@ 100 kHz/20 °C<br>( $\Omega$ ) | Max.<br>Ripple Current<br>@ 100 kHz/105 °C<br>(mA) | Case<br>Code | Size<br>D x L<br>(mm) | Quantity<br>per Reel |
|--------------------------------|------------------------|------------------------------------|--|---|--|--|--------------|-----------------------|----------------------|
| <b>6.3 Vdc ( 8 Vdc Surge )</b> |                        |                                    |  |   |  |  |              |                       |                      |
| 22                             | AFK226M06B12T          | 3.0                                | 0.26   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 47                             | AFK476M06B12T          | 3.0                                | 0.26   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 47                             | AFK476M06C12T          | 3.0                                | 0.26   | 0.700   | 0.700  | 160  | C            | 5 x 5.8               | 1000                 |
| 100                            | AFK107M06C12T          | 6.3                                | 0.26   | 0.700   | 0.700  | 160  | C            | 5 x 5.8               | 1000                 |
| 100                            | AFK107M06D16T          | 6.3                                | 0.26   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 220                            | AFK227M06D16T          | 13.9                               | 0.26   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 330                            | AFK337M06X16T          | 20.8                               | 0.26   | 0.340   | 0.340  | 280  | X            | 6.3 x 7.7             | 900                  |
| 330                            | AFK337M06E16T          | 20.8                               | 0.26   | 0.260   | 0.260  | 300  | E            | 8 x 6.2               | 1000                 |
| 470                            | AFK477M06F24T          | 29.6                               | 0.26   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 1000                           | AFK108M06F24T          | 63.0                               | 0.26   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 1500                           | AFK158M06G24T          | 94.5                               | 0.26   | 0.080   | 0.080  | 850  | G            | 10 x 10.2             | 500                  |
| 3300                           | AFK338M06H32T          | 207.9                              | 0.30   | 0.060   | 0.060  | 1100   | H            | 12.5 x 13.5           | 200                  |
| 6800                           | AFK688M06P44T          | 428.4                              | 0.36   | 0.035   | 0.035  | 1800   | P            | 16 x 16.5             | 125                  |
| <b>10 Vdc ( 13 Vdc Surge )</b> |                        |                                    |  |   |  |  |              |                       |                      |
| 22                             | AFK226M10B12T          | 3.0                                | 0.19   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 33                             | AFK336M10B12T          | 3.3                                | 0.19   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 33                             | AFK336M10C12T          | 3.3                                | 0.19   | 0.700   | 0.700  | 160  | C            | 5 x 5.8               | 1000                 |
| 150                            | AFK157M10D16T          | 15.0                               | 0.19   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 220                            | AFK227M10X16T          | 22.0                               | 0.19   | 0.340   | 0.340  | 280  | X            | 6.3 x 7.7             | 900                  |
| 220                            | AFK227M10E16T          | 22.0                               | 0.19   | 0.260   | 0.260  | 300  | E            | 8 x 6.2               | 1000                 |
| 330                            | AFK337M10F24T          | 33.0                               | 0.19   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 470                            | AFK477M10F24T          | 47.0                               | 0.19   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 680                            | AFK687M10F24T          | 68.0                               | 0.19   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 1000                           | AFK108M10G24T          | 100.0                              | 0.19   | 0.080   | 0.080  | 850  | G            | 10 x 10.2             | 500                  |
| 2200                           | AFK228M10H32T          | 220.0                              | 0.21   | 0.060   | 0.060  | 1100   | H            | 12.5 x 13.5           | 200                  |
| 4700                           | AFK478M10P44T          | 470.0                              | 0.25   | 0.035   | 0.035  | 1800   | P            | 16 x 16.5             | 125                  |
| 6800                           | AFK688M10R44T          | 680.0                              | 0.29   | 0.033   | 0.033  | 2060   | R            | 18 x 16.5             | 125                  |
| <b>16 Vdc ( 20 Vdc Surge )</b> |                        |                                    |  |   |  |  |              |                       |                      |
| 10                             | AFK106M16B12T          | 3.0                                | 0.16   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 22                             | AFK226M16B12T          | 3.5                                | 0.16   | 1.350   | 1.350  | 90   | B            | 4 x 5.8               | 2000                 |
| 22                             | AFK226M16C12T          | 3.5                                | 0.16   | 0.700   | 0.700  | 160  | C            | 5 x 5.8               | 1000                 |
| 47                             | AFK476M16C12T          | 7.5                                | 0.16   | 0.700   | 0.700  | 160  | C            | 5 x 5.8               | 1000                 |
| 47                             | AFK476M16D16T          | 7.5                                | 0.16   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 68                             | AFK686M16D16T          | 10.9                               | 0.19   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 100                            | AFK107M16D16T          | 16.0                               | 0.16   | 0.360   | 0.360  | 240  | D            | 6.3 x 5.8             | 1000                 |
| 150                            | AFK157M16X16T          | 24.0                               | 0.16   | 0.340   | 0.340  | 280  | X            | 6.3 x 7.7             | 900                  |
| 220                            | AFK227M16X16T          | 35.2                               | 0.16   | 0.340   | 0.340  | 280  | X            | 6.3 x 7.7             | 900                  |
| 220                            | AFK227M16E16T          | 35.2                               | 0.16   | 0.260   | 0.260  | 300  | E            | 8 x 6.2               | 1000                 |
| 330                            | AFK337M16F24T          | 52.8                               | 0.16   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 470                            | AFK477M16F24T          | 75.2                               | 0.16   | 0.160   | 0.160  | 600  | F            | 8 x 10.2              | 500                  |
| 680                            | AFK687M16G24T          | 108.8                              | 0.16   | 0.080   | 0.080  | 850  | G            | 10 x 10.2             | 500                  |
| 1500                           | AFK158M16H32T          | 240.0                              | 0.16   | 0.060   | 0.060  | 1100   | H            | 12.5 x 13.5           | 200                  |
| 3300                           | AFK338M16P44T          | 528.0                              | 0.20   | 0.035   | 0.035  | 1800   | P            | 16 x 16.5             | 125                  |
| 4700                           | AFK478M16R44T          | 752.0                              | 0.22   | 0.033   | 0.033  | 2060   | R            | 18 x 16.5             | 125                  |

# Type AFK **-55 °C to 105 °C**

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., 105 °C

| Cap<br>(µF)                    | Catalog<br>Part Number | Max.<br>DCL<br>2 min<br>(µA) | Max.<br>Dissipation<br>Factor<br>@120 Hz/20 °C | Max.<br>ESR<br>@100 kHz/20 °C<br>(Ω) | Impedance<br>@ 100 kHz/20 °C<br>(Ω) | Max.<br>Ripple Current<br>@ 100 kHz/105 °C<br>(mA) | Case<br>Code | Size<br>D x L<br>(mm) | Quantity<br>per Reel |
|--------------------------------|------------------------|------------------------------|--|--------------------------------------|-------------------------------------|--|--------------|-----------------------|----------------------|
| <b>25 Vdc ( 31 Vdc Surge )</b> |                        |                              |  |                                      |                                     |  |              |                       |                      |
| 10                             | AFK106M25B12T          | 3.0                          | 0.14   | 1.350                                | 1.350                               | 90   | B            | 4 x 5.8               | 2000                 |
| 22                             | AFK226M25C12T          | 5.5                          | 0.14   | 0.700                                | 0.700                               | 160  | C            | 5 x 5.8               | 1000                 |
| 33                             | AFK336M25C12T          | 8.3                          | 0.14   | 0.700                                | 0.700                               | 160  | C            | 5 x 5.8               | 1000                 |
| 33                             | AFK336M25D16T          | 8.3                          | 0.14   | 0.360                                | 0.360                               | 240  | D            | 6.3 x 5.8             | 1000                 |
| 47                             | AFK476M25D16T          | 11.8                         | 0.14   | 0.360                                | 0.360                               | 240  | D            | 6.3 x 5.8             | 1000                 |
| 68                             | AFK686M25D16T          | 17.0                         | 0.14   | 0.360                                | 0.360                               | 240  | D            | 6.3 x 5.8             | 1000                 |
| 100                            | AFK107M25X16T          | 25.0                         | 0.14   | 0.340                                | 0.340                               | 280  | X            | 6.3 x 7.7             | 900                  |
| 100                            | AFK107M25E16T          | 25.0                         | 0.14   | 0.260                                | 0.260                               | 300  | E            | 8 x 6.2               | 1000                 |
| 150                            | AFK157M25F24T          | 37.5                         | 0.14   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 220                            | AFK227M25F24T          | 55.0                         | 0.14   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 330                            | AFK337M25F24T          | 82.5                         | 0.14   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 470                            | AFK477M25G24T          | 117.5                        | 0.14   | 0.080                                | 0.080                               | 850  | G            | 10 x 10.2             | 500                  |
| 1000                           | AFK108M25H32T          | 250.0                        | 0.14   | 0.060                                | 0.060                               | 1100   | H            | 12.5 x 13.5           | 200                  |
| 1500                           | AFK158M25P44T          | 375.0                        | 0.14   | 0.035                                | 0.035                               | 1800   | P            | 16 x 16.5             | 125                  |
| 2200                           | AFK228M25P44T          | 550.0                        | 0.16   | 0.035                                | 0.035                               | 1800   | P            | 16 x 16.5             | 125                  |
| 3300                           | AFK338M25R44T          | 825.0                        | 0.18   | 0.033                                | 0.033                               | 2060   | R            | 18 x 16.5             | 125                  |
| <b>35 Vdc ( 44 Vdc Surge )</b> |                        |                              |  |                                      |                                     |  |              |                       |                      |
| 4.7                            | AFK475M35B12T          | 3.0                          | 0.12   | 1.350                                | 1.350                               | 90   | B            | 4 x 5.8               | 2000                 |
| 10                             | AFK106M35B12T          | 3.5                          | 0.12   | 1.350                                | 1.350                               | 90   | B            | 4 x 5.8               | 2000                 |
| 10                             | AFK106M35C12T          | 3.5                          | 0.12   | 0.700                                | 0.700                               | 160  | C            | 5 x 5.8               | 1000                 |
| 22                             | AFK226M35C12T          | 7.7                          | 0.12   | 0.700                                | 0.700                               | 160  | C            | 5 x 5.8               | 1000                 |
| 33                             | AFK336M35D16T          | 11.6                         | 0.12   | 0.360                                | 0.360                               | 240  | D            | 6.3 x 5.8             | 1000                 |
| 47                             | AFK476M35D16T          | 16.5                         | 0.12   | 0.360                                | 0.360                               | 240  | D            | 6.3 x 5.8             | 1000                 |
| 68                             | AFK686M35X16T          | 23.8                         | 0.12   | 0.340                                | 0.340                               | 280  | X            | 6.3 x 7.7             | 900                  |
| 100                            | AFK107M35X16T          | 35.0                         | 0.12   | 0.340                                | 0.340                               | 280  | X            | 6.3 x 7.7             | 900                  |
| 100                            | AFK107M35F24T          | 35.0                         | 0.12   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 150                            | AFK157M35F24T          | 52.5                         | 0.12   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 220                            | AFK227M35F24T          | 77.0                         | 0.12   | 0.160                                | 0.160                               | 600  | F            | 8 x 10.2              | 500                  |
| 330                            | AFK337M35G24T          | 115.5                        | 0.12   | 0.080                                | 0.080                               | 850  | G            | 10 x 10.2             | 500                  |
| 470                            | AFK477M35H32T          | 164.5                        | 0.12   | 0.060                                | 0.060                               | 1100   | H            | 12.5 x 13.5           | 200                  |
| 680                            | AFK687M35H32T          | 238.0                        | 0.12   | 0.060                                | 0.060                               | 1100   | H            | 12.5 x 13.5           | 200                  |
| 1000                           | AFK108M35P44T          | 350.0                        | 0.12   | 0.035                                | 0.035                               | 1800   | P            | 16 x 16.5             | 125                  |
| 1500                           | AFK158M35P44T          | 525.0                        | 0.12   | 0.035                                | 0.035                               | 1800   | P            | 16 x 16.5             | 125                  |
| <b>50 Vdc ( 63 Vdc Surge )</b> |                        |                              |  |                                      |                                     |  |              |                       |                      |
| 4.7                            | AFK475M50B12T          | 3.0                          | 0.10   | 2.900                                | 2.900                               | 60   | B            | 4 x 5.8               | 2000                 |
| 10                             | AFK106M50C12T          | 5.0                          | 0.10   | 1.520                                | 1.520                               | 85   | C            | 5 x 5.8               | 1000                 |
| 10                             | AFK106M50D16T          | 5.0                          | 0.10   | 0.880                                | 0.880                               | 165  | D            | 6.3 x 5.8             | 1000                 |
| 22                             | AFK226M50D16T          | 11.0                         | 0.10   | 0.880                                | 0.880                               | 165  | D            | 6.3 x 5.8             | 1000                 |
| 33                             | AFK336M50X16T          | 16.5                         | 0.10   | 0.680                                | 0.680                               | 195  | X            | 6.3 x 7.7             | 900                  |
| 33                             | AFK336M50E16T          | 16.5                         | 0.10   | 0.680                                | 0.680                               | 195  | E            | 8 x 6.2               | 1000                 |
| 47                             | AFK476M50X16T          | 23.5                         | 0.10   | 0.680                                | 0.680                               | 195  | X            | 6.3 x 7.7             | 900                  |
| 47                             | AFK476M50E16T          | 23.5                         | 0.10   | 0.680                                | 0.680                               | 195  | E            | 8 x 6.2               | 1000                 |
| 100                            | AFK107M50F24T          | 50.0                         | 0.10   | 0.340                                | 0.340                               | 350  | F            | 8 x 10.2              | 500                  |

# Type AFK **-55 °C to 105 °C**

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., 105 °C

| Cap (µF)                         | Catalog Part Number | Max. DCL 2 min (µA) | Max. Dissipation Factor @120 Hz/20 °C | Max. ESR @100 kHz/20 °C (Ω) | Impedance @ 100 kHz/20 °C (Ω) | Max. Ripple Current @ 100 kHz/105 °C (mA) | Case Code | Size D x L (mm) | Quantity per Reel |
|----------------------------------|---------------------|---------------------|---------------------------------------|-----------------------------|-------------------------------|---|-----------|-----------------|-------------------|
| <b>50 Vdc ( 63 Vdc Surge )</b>   |                     |                     |                                       |                             |                               |   |           |                 |                   |
| 150                              | AFK157M50G24T       | 75.0                | 0.10                                  | 0.180                       | 0.180                         | 670                                       | G         | 10 x 10.2       | 500               |
| 220                              | AFK227M50G24T       | 110.0               | 0.10                                  | 0.180                       | 0.180                         | 670                                       | G         | 10 x 10.2       | 500               |
| 330                              | AFK337M50H32T       | 165.0               | 0.10                                  | 0.120                       | 0.120                         | 900                                       | H         | 12.5 x 13.5     | 200               |
| 390                              | AFK397M50H32T       | 195.0               | 0.10                                  | 0.120                       | 0.120                         | 900                                       | H         | 12.5 x 13.6     | 200               |
| 470                              | AFK477M50P44T       | 235.0               | 0.10                                  | 0.073                       | 0.073                         | 1610                                      | P         | 16 x 16.5       | 125               |
| 560                              | AFK567M50P44T       | 280.0               | 0.10                                  | 0.073                       | 0.073                         | 1610                                      | P         | 16 x 16.5       | 125               |
| 680                              | AFK687M50P44T       | 340.0               | 0.10                                  | 0.073                       | 0.073                         | 1610                                      | P         | 16 x 16.5       | 125               |
| 1000                             | AFK108M50P44T       | 500.0               | 0.10                                  | 0.073                       | 0.073                         | 1610                                      | P         | 16 x 16.5       | 125               |
| <b>63 Vdc ( 75 Vdc Surge )</b>   |                     |                     |                                       |                             |                               |   |           |                 |                   |
| 4.7                              | AFK475M63C12T       | 3.0                 | 0.08                                  | 3.000                       | 3.000                         | 50  | C         | 5 x 5.8         | 1000              |
| 10                               | AFK106M63D16T       | 6.3                 | 0.08                                  | 1.500                       | 1.500                         | 80  | D         | 6.3 x 5.8       | 1000              |
| 22                               | AFK226M63X16T       | 13.9                | 0.08                                  | 1.200                       | 1.200                         | 120                                       | X         | 6.3 x 7.7       | 900               |
| 22                               | AFK226M63E16T       | 13.9                | 0.08                                  | 1.200                       | 1.200                         | 120                                       | E         | 8 x 6.2         | 1000              |
| 33                               | AFK336M63F24T       | 20.8                | 0.08                                  | 0.650                       | 0.650                         | 250                                       | F         | 8 x 10.2        | 500               |
| 47                               | AFK476M63F24T       | 29.6                | 0.08                                  | 0.650                       | 0.650                         | 250                                       | F         | 8 x 10.2        | 500               |
| 68                               | AFK686M63G24T       | 42.8                | 0.08                                  | 0.350                       | 0.350                         | 400                                       | G         | 10 x 10.2       | 500               |
| 100                              | AFK107M63G24T       | 63.0                | 0.08                                  | 0.350                       | 0.350                         | 400                                       | G         | 10 x 10.2       | 500               |
| 150                              | AFK157M63H32T       | 94.5                | 0.08                                  | 0.160                       | 0.160                         | 800                                       | H         | 12.5 x 13.5     | 200               |
| 220                              | AFK227M63H32T       | 138.6               | 0.08                                  | 0.160                       | 0.160                         | 800                                       | H         | 12.5 x 13.5     | 200               |
| 470                              | AFK477M63P44T       | 296.1               | 0.08                                  | 0.082                       | 0.082                         | 1410                                      | P         | 16 x 16.5       | 125               |
| 680                              | AFK687M63R44T       | 428.4               | 0.08                                  | 0.080                       | 0.080                         | 1690                                      | R         | 18 x 16.5       | 125               |
| <b>80 Vdc ( 100 Vdc Surge )</b>  |                     |                     |                                       |                             |                               |   |           |                 |                   |
| 3.3                              | AFK335M80C12T       | 3.0                 | 0.08                                  | 5.00                        | 5.00                          | 25  | C         | 5 x 5.8         | 1000              |
| 4.7                              | AFK475M80D16T       | 3.8                 | 0.08                                  | 3.00                        | 3.00                          | 40  | D         | 6.3 x 5.8       | 1000              |
| 10.0                             | AFK106M80X16T       | 8.0                 | 0.08                                  | 2.40                        | 2.40                          | 60  | X         | 6.3 x 7.7       | 900               |
| 10.0                             | AFK106M80E16T       | 8.0                 | 0.08                                  | 2.40                        | 2.40                          | 60  | E         | 8 x 6.2         | 1000              |
| 22.0                             | AFK226M80F24T       | 17.6                | 0.08                                  | 1.30                        | 1.30                          | 130                                       | F         | 8 x 10.2        | 500               |
| 33.0                             | AFK336M80F24T       | 26.4                | 0.08                                  | 1.30                        | 1.30                          | 130                                       | F         | 8 x 10.2        | 500               |
| 47.0                             | AFK476M80G24T       | 37.6                | 0.08                                  | 0.70                        | 0.70                          | 200                                       | G         | 10 x 10.2       | 500               |
| 68.0                             | AFK686M80H32T       | 54.4                | 0.08                                  | 0.32                        | 0.32                          | 500                                       | H         | 12.5 x 13.5     | 200               |
| 100.0                            | AFK107M80H32T       | 80.0                | 0.08                                  | 0.32                        | 0.32                          | 500                                       | H         | 12.5 x 13.5     | 200               |
| 150.0                            | AFK157M80H32T       | 120.0               | 0.08                                  | 0.32                        | 0.32                          | 500                                       | H         | 12.5 x 13.5     | 200               |
| 330.0                            | AFK337M80P44T       | 264.0               | 0.08                                  | 0.17                        | 0.17                          | 793                                       | P         | 16 x 16.5       | 125               |
| 470.0                            | AFK477M80R44T       | 376.0               | 0.08                                  | 0.15                        | 0.15                          | 917                                       | R         | 18 x 16.5       | 125               |
| <b>100 Vdc ( 125 Vdc Surge )</b> |                     |                     |                                       |                             |                               |   |           |                 |                   |
| 22.0                             | AFK226M2AF24T       | 22.0                | 0.07                                  | 1.30                        | 1.30                          | 130                                       | F         | 8 x 10.2        | 500               |
| 33.0                             | AFK336M2AG24T       | 33.0                | 0.07                                  | 0.70                        | 0.70                          | 200                                       | G         | 10 x 10.2       | 500               |
| 47.0                             | AFK476M2AH32T       | 47.0                | 0.07                                  | 0.32                        | 0.32                          | 500                                       | H         | 12.5 x 13.5     | 200               |
| 68.0                             | AFK686M2AH32T       | 68.0                | 0.07                                  | 0.32                        | 0.32                          | 500                                       | H         | 12.5 x 13.5     | 200               |
| 100.0                            | AFK107M2AP44T       | 100.0               | 0.07                                  | 0.17                        | 0.17                          | 793                                       | P         | 16 x 16.5       | 125               |
| 150.0                            | AFK157M2AP44T       | 150.0               | 0.07                                  | 0.17                        | 0.17                          | 793                                       | P         | 16 x 16.5       | 125               |
| 220.0                            | AFK227M2AR44T       | 220.0               | 0.07                                  | 0.15                        | 0.15                          | 917                                       | R         | 18 x 16.5       | 125               |
| 330.0                            | AFK337M2AR44T       | 330.0               | 0.07                                  | 0.15                        | 0.15                          | 917                                       | R         | 18 x 16.5       | 125               |

# Type AFK $-55^{\circ}\text{C}$ to $105^{\circ}\text{C}$

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., $105^{\circ}\text{C}$

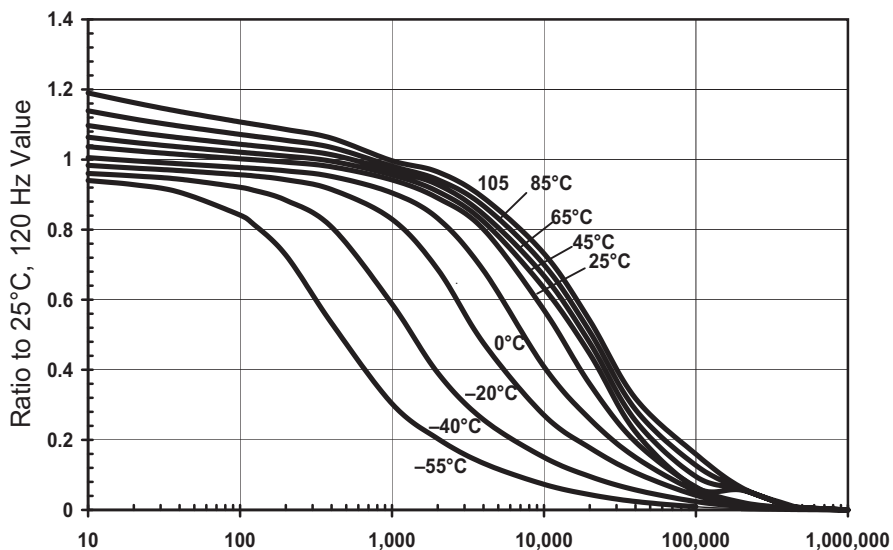
### Part Numbering System

| AFK  | 106                        | M                | 16           | B            | 12T               | -F             |
|------|----------------------------|------------------|--------------|--------------|-------------------|----------------|
| Type | Capacitance                | Capacitance      | Voltage Code | Case Code    | Packaging Code    | RoHS Compliant |
|      | 105 = 1.0 $\mu\text{F}$    | <b>Tolerance</b> | 06 = 6.3 Vdc | 35 = 35 Vdc  | 12 = Carrier tape |                |
|      | 106 = 10.0 $\mu\text{F}$   | M = $\pm 20\%$   | 10 = 10 Vdc  | 50 = 50 Vdc  | Width (mm)        |                |
|      | 107 = 100.0 $\mu\text{F}$  |                  | 16 = 16 Vdc  | 63 = 63 Vdc  | T = Tape & Reel   |                |
|      | 108 = 1000.0 $\mu\text{F}$ |                  | 25 = 25 Vdc  | 80 = 80 Vdc  | B = Bulk          |                |
|      |                            |                  |              | 2A = 100 Vdc |                   |                |

### Typical Performance Curves

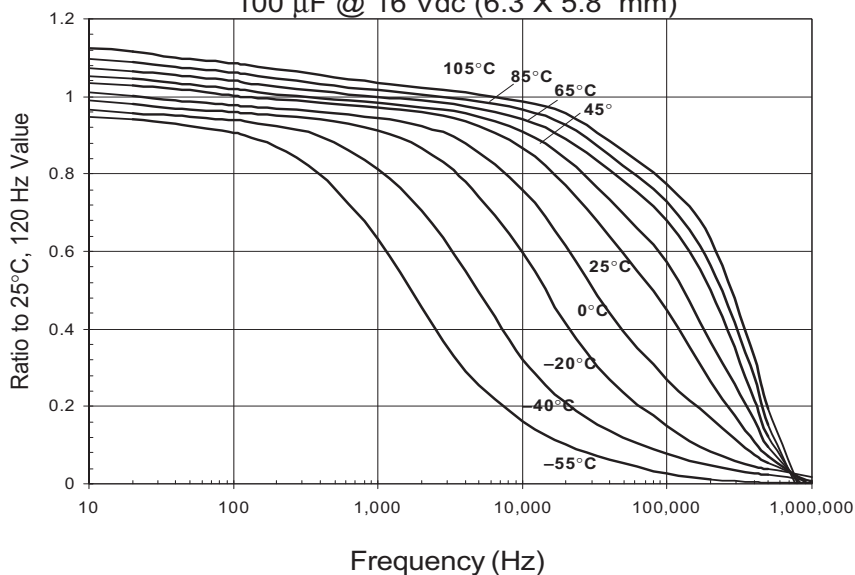
Capacitance vs. Temperature and Frequency

3300 $\mu\text{F}$ /6.3Vdc (12.5 x 13.5 mm)



Capacitance vs. Temperature & Frequency

100  $\mu\text{F}$  @ 16 Vdc (6.3 X 5.8 mm)



# Type AFK -55 °C to 105 °C

## SMT Aluminum Electrolytic Capacitors - Lowest E.S.R., 105 °C

### Typical Performance Curves

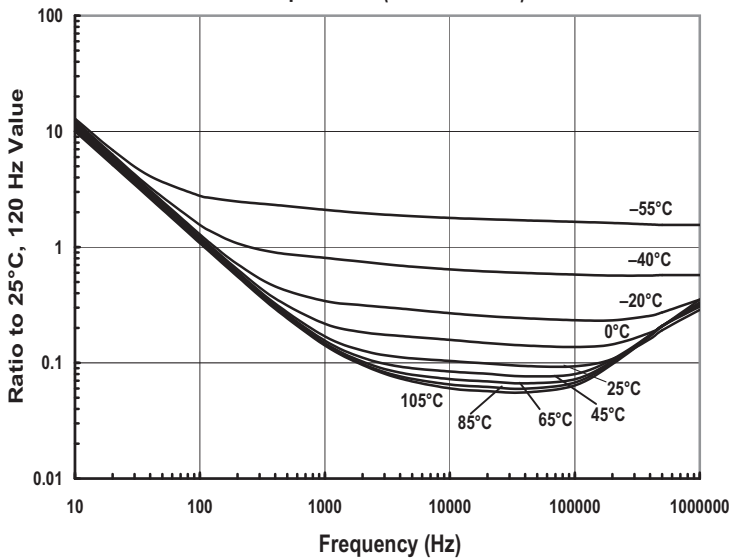
ESR vs. Temperature and Frequency  
3300  $\mu$ F @ 6.3 Vdc (12.5 X 13.5 mm)



ESR vs. Temperature and Frequency  
100  $\mu$ F @ 16 Vdc (6.3 X 5.8 mm)



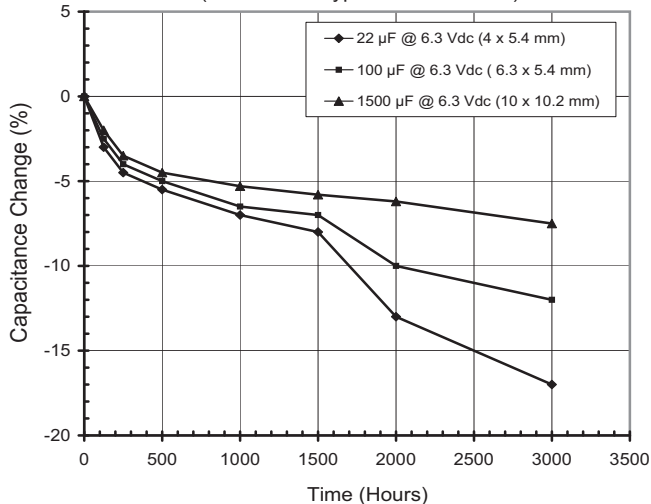
Impedance vs Temperature and Frequency  
3300  $\mu$ F / 6.3 V (12.5 x13.5mm)



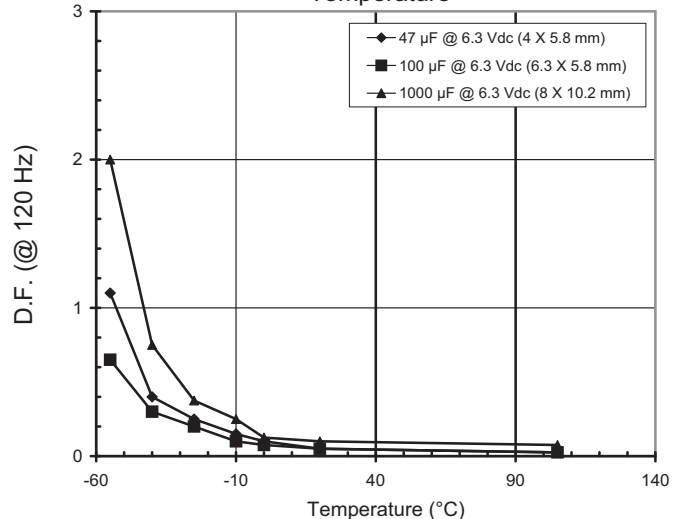
Impedance vs. Temperature and Frequency  
100  $\mu$ F @ 16 Vdc (6.3 X 5.8 mm)



Capacitance Change vs. Time  
(AFK Series Typical Performance)



Dissipation Factor vs. Temperature





Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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