

Type AFC -55°C to 105°C

SMT Aluminum Electrolytic Capacitors - Low Impedance, 105°C

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



Type AFC Capacitors are the choice for high-frequency filtering. At 100 kHz, most ratings can handle more than twice the ripple current of type AHA. With solid performance at temperatures down to -55°C , Type AFC has more than 90% capacitance retention at -20°C and 1 kHz. With low impedance to beyond 100 kHz, it is ideal for higher power DC/DC converters. The vertical cylindrical cases make for easy automatic mounting and reflow soldering, and offer big savings and higher capacitance compared to tantalum capacitors.

Highlights

- $+105^{\circ}\text{C}$, Up to 1000 Hour Load Life
- Capacitance Range: 1 μF to 1500 μF
- Voltage Range: 6.3 Vdc to 50 Vdc

Specifications

Operating Temperature: -55°C to $+105^{\circ}\text{C}$

Rated Voltage: 6.3, 10, 16, 25 & 50 Vdc

Capacitance: 1.0 μF to 1500 μF

Capacitance Tolerance: $\pm 20\%$ @ 120 Hz and $+20^{\circ}\text{C}$

Leakage Current: 0.01 CV or 3 μA @ $+20^{\circ}\text{C}$, after two minutes (whichever is greater)

Dissipation Factor: See ratings table

Ripple Current Multiplier: Frequency

50/60 Hz	120 Hz	1 kHz	10 kHz	100 kHz
0.70	.0.75	0.90	0.95	1.00

Load Life: 1000 h @ $+105^{\circ}\text{C}$

Δ Capacitance $\pm 20\%$

DF: $\leq 200\%$ of limit

DCL: $\leq 100\%$ of limit

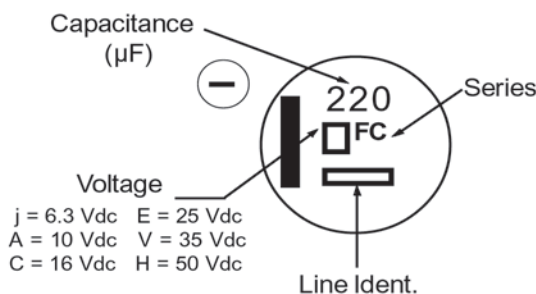
Shelf Life: 1000 h @ $+105^{\circ}\text{C}$

Δ Capacitance $\pm 20\%$

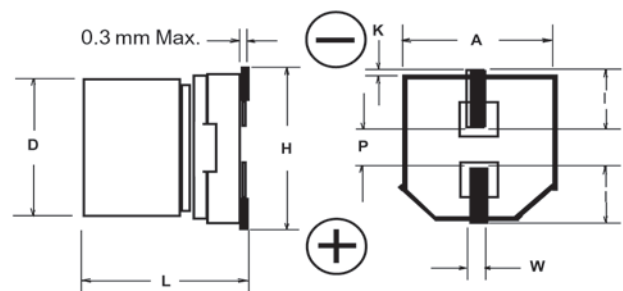
DF: $\leq 200\%$ of limit

DCL: $\leq 100\%$ of limit

AFC Series Marking



Outline Drawing



Case Dimensions

Case	Dimensions in (mm)							
Code	D ± 0.5	L	A ± 0.2	H (max)	I (ref)	W	P (ref)	K
B	4.0	5.4 $+1, -2$	4.3	5.5	1.8	0.65 ± 0.1	1.0	0.35 $+0.15/-0.20$
C	5.0	5.4 $+1, -2$	5.3	6.5	2.2	0.65 ± 0.1	1.5	0.35 $+0.15/-0.20$
D	6.3	5.4 $+1, -2$	6.6	7.8	2.4	0.65 ± 0.1	1.8	0.35 $+0.15/-0.20$
E	8.0	6.2 ± 3	8.3	9.5	3.4	0.65 ± 0.1	2.2	0.35 $+0.15/-0.20$
F	8.0	10.2 ± 3	8.3	10.0	3.4	0.90 ± 0.2	3.2	0.70 ± 0.20
G	10.0	10.2 ± 3	10.3	12.0	3.5	0.90 ± 0.2	4.6	0.70 ± 0.20

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Ratings Table

Cap (µF)	Catalog Part Number	Max. DCL 2 min (mA)	Max. Dissipation Factor @ 120 Hz 20 °C	Max. ESR @ 120 Hz 20 °C (Ω)	Impedance @ 100 kHz 20 °C (Ω)	Max. Ripple Current @ 105 °C 100 kHz (mA)	Case Code	Size (mm) D x L	Quantity per Reel
6.3 Vdc (8 Vdc Surge)									
22.0	AFC226M06B12T	3.0	0.26	19.60	3.00	60	B	4 x 5.4	2000
47.0	AFC476M06C12T	3.0	0.26	9.20	1.80	95	C	5 x 5.4	1000
100.0	AFC107M06D16T	6.3	0.26	4.30	1.00	140	D	6.3 x 5.4	1000
220.0	AFC227M06E16T	13.9	0.26	2.00	0.40	230	E	8 x 6.2	1000
330.0	AFC337M06F24T	20.8	0.26	1.30	0.30	450	F	8 x 10.2	500
1000.0	AFC108M06G24T	63.0	0.26	0.43	0.15	670	G	10 x 10.2	500
1500.0	AFC158M06G24T	94.5	0.26	0.29	0.15	670	G	10 x 10.2	500
10 Vdc (13 Vdc Surge)									
33.0	AFC336M10C12T	3.3	0.19	9.60	1.80	95	C	5 x 5.4	1000
100.0	AFC107M10E16T	10.0	0.19	3.20	0.40	230	E	8 x 6.2	1000
150.0	AFC157M10E16T	15.0	0.19	2.10	0.40	230	E	8 x 6.2	1000
220.0	AFC227M10F24T	22.0	0.19	1.40	0.30	450	F	8 x 10.2	500
470.0	AFC477M10G24T	47.0	0.19	0.67	0.15	670	G	10 x 10.2	500
1000.0	AFC108M10G24T	100.0	0.22	0.36	0.15	670	G	10 x 10.2	500
16 Vdc (20 Vdc Surge)									
10.0	AFC106M16B12T	3.0	0.16	26.50	3.00	60	B	4 x 5.4	2000
22.0	AFC226M16C12T	3.5	0.16	12.10	1.80	95	C	5 x 5.4	1000
47.0	AFC476M16D16T	7.5	0.16	5.70	1.00	140	D	6.3 x 5.4	1000
68.0	AFC686M16E16T	10.9	0.16	3.90	0.40	230	E	8 x 6.2	1000
100.0	AFC107M16E16T	16.0	0.16	2.70	0.40	230	E	8 x 6.2	1000
220.0	AFC227M16G24T	35.2	0.16	1.20	0.15	670	G	10 x 10.2	500
330.0	AFC337M16G24T	52.8	0.16	0.80	0.15	670	G	10 x 10.2	500
470.0	AFC477M16G24T	75.2	0.16	0.60	0.15	670	G	10 x 10.2	500
680.0	AFC687M16G24T	108.8	0.16	0.40	0.15	670	G	10 x 10.2	500
25 Vdc (31 Vdc Surge)									
6.8	AFC685M25B12T	3.0	0.14	34.10	3.00	60	B	4 x 5.4	2000
22.0	AFC226M25D16T	5.5	0.14	10.60	1.00	140	D	6.3 x 5.4	1000
33.0	AFC336M25D16T	8.3	0.14	7.00	1.00	140	D	6.3 x 5.4	1000
47.0	AFC476M25E16T	11.8	0.14	4.90	0.40	230	E	8 x 6.2	1000
68.0	AFC686M25F24T	17.0	0.14	3.40	0.30	450	F	8 x 10.2	500
100.0	AFC107M25F24T	25.0	0.14	2.30	0.30	450	F	8 x 10.2	500
220.0	AFC227M25G24T	55.0	0.14	1.10	0.15	670	G	10 x 10.2	500
330.0	AFC337M25G24T	82.5	0.14	0.70	0.15	670	G	10 x 10.2	500
470.0	AFC477M25G24T	117.5	0.14	0.50	0.15	670	G	10 x 10.2	500
35 Vdc (44 Vdc Surge)									
1.0	AFC105M35B12T	3.0	0.12	199.00	3.00	60	B	4 x 5.4	2000
2.2	AFC225M35B12T	3.0	0.12	90.40	3.00	60	B	4 x 5.4	2000
3.3	AFC335M35B12T	3.0	0.12	60.30	3.00	60	B	4 x 5.4	2000
4.7	AFC475M35B12T	3.0	0.12	42.40	3.00	60	B	4 x 5.4	2000
6.8	AFC685M35C12T	3.0	0.12	29.30	1.80	95	C	5 x 5.4	1000
10.0	AFC106M35C12T	3.5	0.12	19.90	1.80	95	C	5 x 5.4	1000
22.0	AFC226M35D16T	7.7	0.12	9.10	1.00	140	D	6.3 x 5.4	1000
33.0	AFC336M35E16T	11.6	0.12	6.00	0.40	230	E	8 x 6.2	1000
47.0	AFC476M35E16T	16.5	0.12	4.20	0.40	230	E	8 x 6.2	1000
100.0	AFC107M35G24T	35.0	0.12	2.00	0.20	670	G	10 x 10.2	500
220.0	AFC227M35G24T	77.0	0.12	0.90	0.15	670	G	10 x 10.2	500
330.0	AFC337M35G24T	115.5	0.12	0.60	0.15	670	G	10 x 10.2	500
50 Vdc (63 Vdc Surge)									
1.0	AFC105M50B12T	3.0	0.12	199.00	5.00	30	B	4 x 5.4	2000
2.2	AFC225M50B12T	3.0	0.12	90.50	5.00	30	B	4 x 5.4	2000
3.3	AFC335M50B12T	3.0	0.12	60.30	5.00	30	B	4 x 5.4	2000
4.7	AFC475M50C12T	3.0	0.12	42.40	3.00	50	C	5 x 5.4	1000
10.0	AFC106M50D16T	5.0	0.12	19.90	2.00	70	D	6.3 x 5.4	1000
22.0	AFC226M50E16T	11.0	0.12	9.10	0.70	120	E	8 x 6.2	1000
33.0	AFC336M50F24T	16.5	0.12	6.00	0.60	300	F	8 x 10.2	500
47.0	AFC476M50G24T	23.5	0.12	4.20	0.30	500	G	10 x 10.2	500
100.0	AFC107M50G24T	50.0	0.12	2.00	0.30	500	G	10 x 10.2	500
220.0	AFC227M50G24T	110.0	0.12	0.90	0.30	500	G	10 x 10.2	500

Part Numbering System

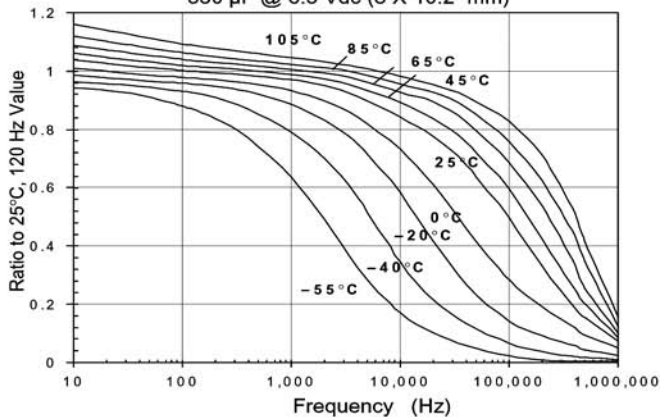
AFC	106	M	16	B	12T	-F
I	I	I	I	I	I	I
Type	Capacitance	Capacitance	Voltage	Case Code	Packaging Information	RoHS Compliant
	105 = 1.0 µF	Tolerance	06 = 6.3 Vdc	25 = 25 Vdc		
	106 = 10.0 µF	M = ±20%	10 = 10 Vdc	35 = 35 Vdc	12 = Carrier tape	
	107 = 100.0 µF		16 = 16 Vdc	50 = 50 Vdc	Width (mm)	
	108 = 1000 µF				T = Tape & Reel	
					B = bulk	

Type AFC -55°C to 105°C

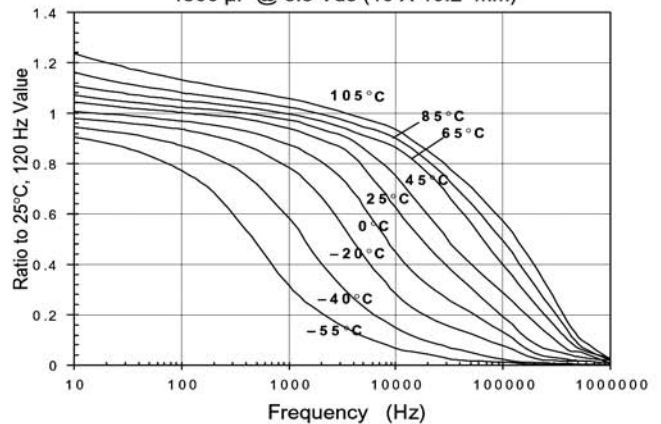
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Typical Performance Curves

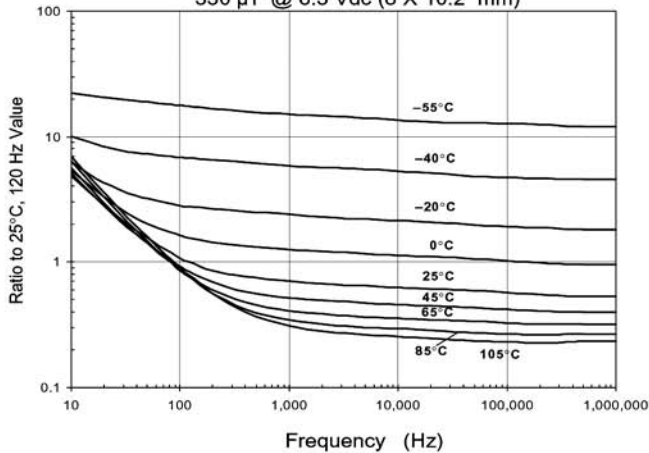
Capacitance vs. Temperature & Frequency
330 μF @ 6.3 Vdc (8 X 10.2 mm)



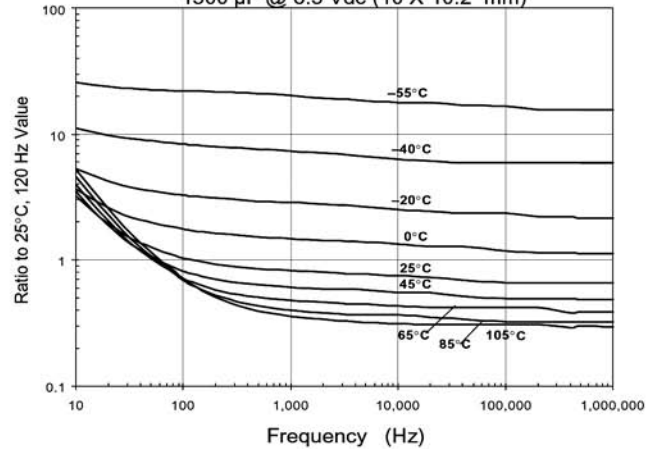
Capacitance vs. Temperature & Frequency
1500 μF @ 6.3 Vdc (10 X 10.2 mm)



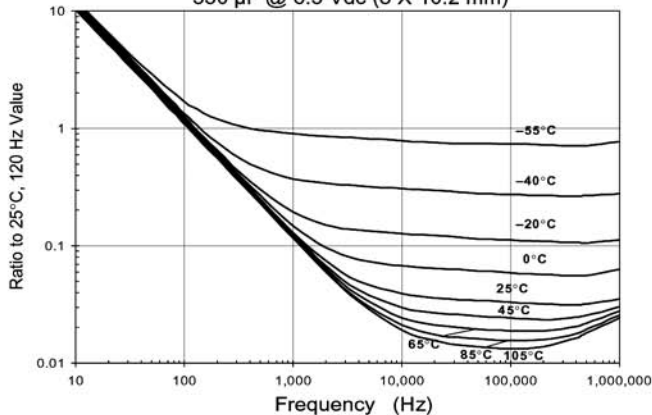
ESR vs. Temperature and Frequency
330 μF @ 6.3 Vdc (8 X 10.2 mm)



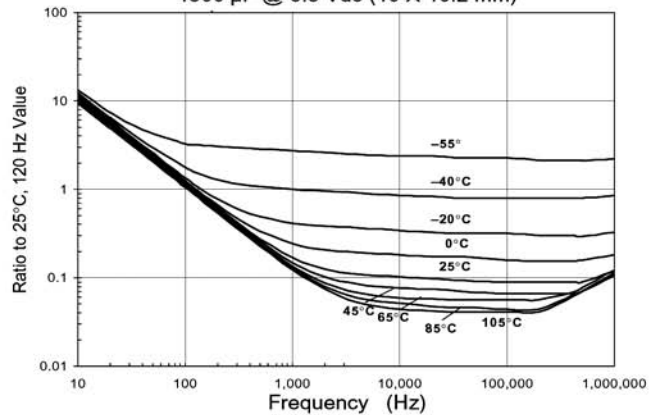
ESR vs. Temperature and Frequency
1500 μF @ 6.3 Vdc (10 X 10.2 mm)



Impedance vs. Temperature and Frequency
330 μF @ 6.3 Vdc (8 X 10.2 mm)



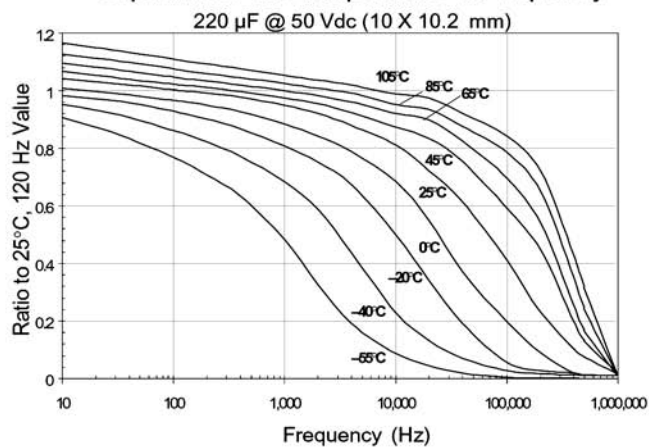
Impedance vs. Temperature and Frequency
1500 μF @ 6.3 Vdc (10 X 10.2 mm)



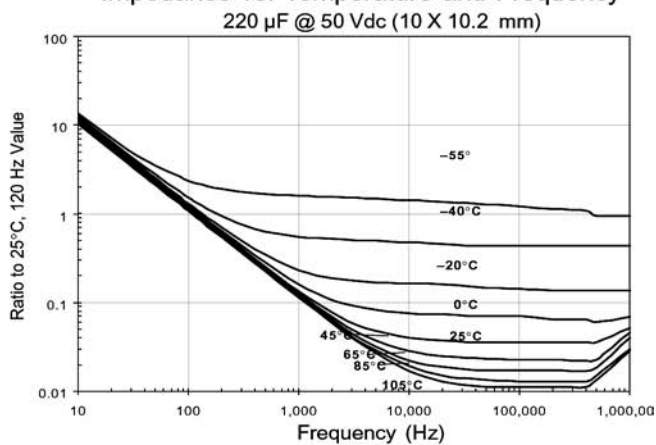
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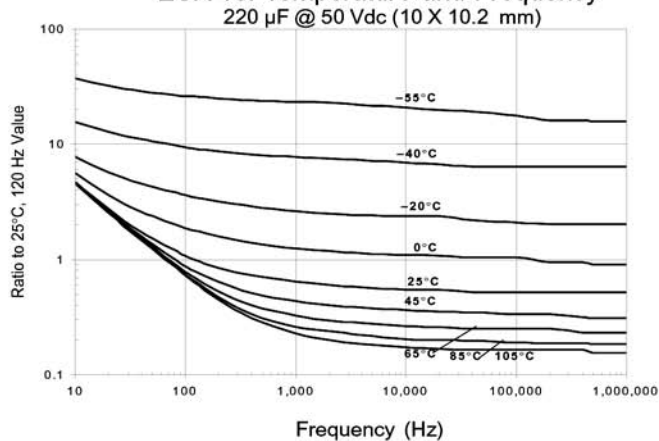
Capacitance vs. Temperature & Frequency



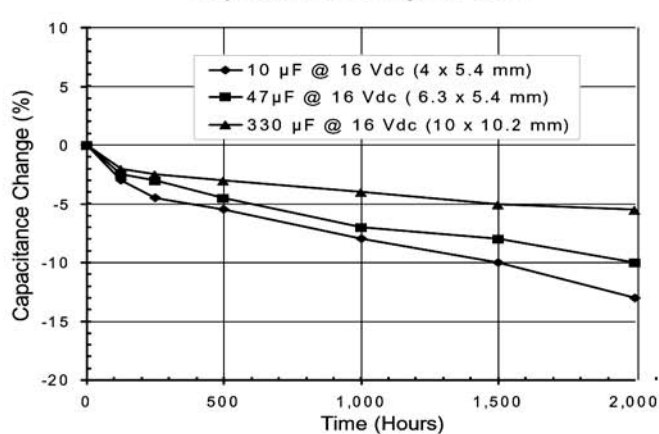
Impedance vs. Temperature and Frequency



ESR vs. Temperature and Frequency



Capacitance Change vs Time





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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