

FA Series for Large Backup Current Capacitors

The FA series is suitable for supplying a large current in a short time.

These capacitors are ideal for momentarily backing up a high-current, short-time load in an electronic system (in the event of momentary power failure).

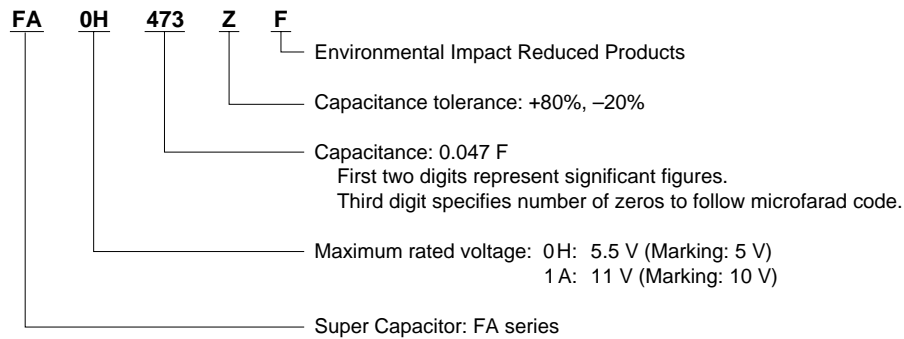
Features

- Extremely low equivalent series resistance (ESR) ideal for supplying backup current of 10 mA to 1 A for a short time
- High breakdown voltage (maximum operating voltage: 11 V) that can drive microcomputers and actuators

Applications

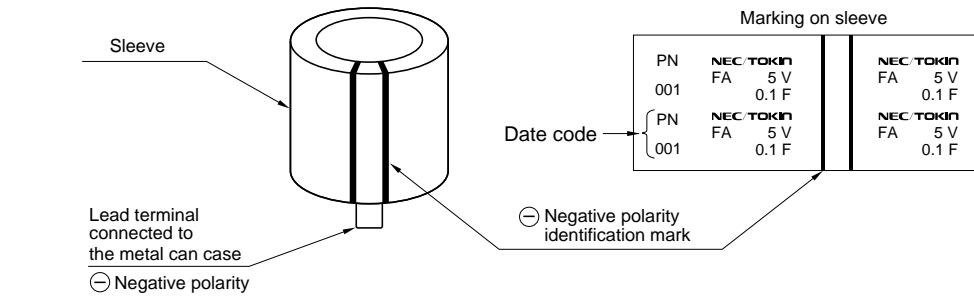
Momentary backup of microcomputers and DRAMs and auxiliary power supply of mechanical systems (motors, relays, electromagnetic valves)

Part Number System

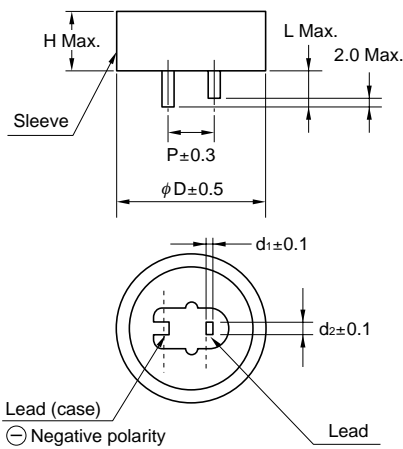


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Markings



Dimensions



Part No.	Dimensions mm (inch)						Weight
	D	H	P	d ₁	d ₂	L	g (oz)
FA0H473ZF	16.0 (0.630)	15.5 (0.610)	5.1 (0.2)	0.4 (0.016)	1.2 (0.047)	5.0 (0.197)	6.2 (0.219)
FA0H104ZF	21.5 (0.846)	15.5 (0.610)	7.6 (0.3)	0.6 (0.024)	1.2 (0.047)	5.5 (0.217)	12 (0.423)
FA0H224ZF	28.5 (1.122)	16.5 (0.650)	10.2 (0.4)	0.6 (0.024)	1.4 (0.055)	9.5 (0.374)	25 (0.882)
FA0H474ZF	36.5 (1.437)	16.5 (0.650)	15 (0.591)	0.6 (0.024)	1.7 (0.067)	9.5 (0.374)	42 (1.482)
FA0H105ZF	44.5 (1.752)	18.5 (0.728)	20 (0.787)	1.0 (0.039)	1.4 (0.055)	9.5 (0.374)	65 (2.293)
FA1A223ZF	16.0 (0.630)	25.0 (0.984)	5.1 (0.2)	0.4 (0.016)	1.2 (0.047)	5.0 (0.197)	7.5 (0.265)
FA1A104ZF	28.5 (1.122)	25.5 (1.004)	10.2 (0.4)	0.6 (0.024)	1.4 (0.055)	9.5 (0.374)	32 (1.129)
FA1A224ZF	36.5 (1.437)	27.5 (1.083)	15 (0.591)	1.0 (0.039)	1.4 (0.055)	9.5 (0.374)	55 (1.940)
FA1A474ZF	44.5 (1.752)	28.5 (1.122)	20 (0.787)	1.0 (0.039)	1.4 (0.055)	9.5 (0.374)	83 (2.928)

Note: Weight values are typical.

Standard Ratings

Part Number	Max. Rated Voltage (VDC)	Nominal Capacitance		Max. Current at 30 minutes (mA)	Max. ESR (at 1 kHz) (Ω)
		Charge System (F)	Discharge System (F)		
FA0H473ZF	5.5	0.047	0.075	0.071	20
FA0H104ZF	5.5	0.1	0.16	0.15	8
FA0H224ZF	5.5	0.22	0.35	0.33	5
FA0H474ZF	5.5	0.47	0.75	0.71	3.5
FA0H105ZF	5.5	1.0	1.6	1.5	2.5
FA1A223ZF	11	0.022	0.035	0.066	20
FA1A104ZF	11	0.1	0.16	0.30	8
FA1A224ZF	11	0.22	0.35	0.66	6
FA1A474ZF	11	0.47	0.75	1.41	4



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Specifications: FA Series

Item		Specifications		Test Conditions Conforming to JIS C 5102 ¹⁹⁹⁴	
Operating Temperature Range		-25°C to 70°C			
Maximun Rated Voltage		5.5 VDC, 11.0 VDC			
Nominal Capacitance Range		Refer to standard ratings			
Capacitance Allowance		+80 %, -20 %		Refer to characteristics measuring conditions	
Equivalent Series Resistance		Refer to standard ratings		Refer to characteristics measuring conditions	
Current (30-minute value)		Refer to standard ratings		Refer to characteristics measuring conditions	
Temperature Variation of Characteristics	At min. temp. (-25°C) Step 2	Capacitance	More than 70 % of initial value	Conforms to 7.14	
		Equivalent Series Resistance	Not to exceed 3 times initial value	Phase 1 : +25±2.0°C Phase 2 : -25±2.0°C	
	At max. temp. (+70°C) Step 4	Capacitance	Not to exceed 150 % of initial value	Phase 3 : +25±2.0°C	
		Equivalent Series Resistance	Not to exceed initial requirement	Phase 4 : +70±2.0°C	
		Current at 30 minutes	Not to exceed 1.5 CV (mA)	Phase 5 : +25±2.0°C	
	At room temp. (+25°C) Step 5	Capacitance	Not to change more than ±20 % from initial value		
		Equivalent Series Resistance	Not to exceed initial requirement		
		Current at 30 minutes	Not to exceed initial requirement		
	Lead Strength (Tensile)		No loosening nor permanent damage of the leads		Conforms to 8.1.2 (1)
5.5 VDC					0.047 F to 0.22 F: 1 kg 10 sec 0.47 F to 1.0 F: 2.5 kg 10 sec
					11 VDC
Vibration Resistance		Capacitance	Meet initial requirement	Conforms to 8.2.3	
		Equivalent Series Resistance	Meet initial requirement	Frequency: 10 to 55 Hz	
		Current at 30 minutes	Meet initial requirement	Test duration: 6 hours	
Solderability		3/4 or more of the pin surface should be covered with new solder		Conforms to 8.4 245 ± 5°C, 5 ± 0.5 sec. Immersion depth: 2.5 mm from body	
Soldering Heat Resistance		Capacitance	Meet initial requirement	Conforms to 8.5	
		Equivalent Series Resistance	Meet initial requirement	260 ± 10°C, 10 ± 1 sec.	
		Current at 30 minutes	Meet initial requirement	Immersion depth: 2.5 mm from body	
Temperature Cycle		Capacitance	Meet initial requirement	Conforms to 9.3	
		Equivalent Series Resistance	Meet initial requirement	Temperature conition: -25°C → normal temperature → +70°C normal temperature	
		Current at 30 minutes	Meet initial requirement	Number of cycles : 5 cycles	
Humidity Resistance		Capacitance	More than 90 % of initial requirement	Conforms to 9.5	
		Equivalent Series Resistance	Not to exceed 120 % of initial requirement	40 ± 2°C, 90 to 95 % RH	
		Current at 30 minutes	Not to exceed 120 % of initial requirement	240 ± 8 hours	
High Temperature Load		Capacitance	More than 85 % of initial requirement	Conforms to 9.10	
		Equivalent Series Resistance	Not to exceed 120 % of initial requirement	70 ± 2°C	
		Current at 30 minutes	Not to exceed 200 % of initial requirement	5.5 V applied for 5 V type 11 V applied for 10 V type 1 000 ⁺⁴⁸ ₋₀ hours	



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