

FX

HIGH VOLTAGE DC CAPACITORS

AL FOIL ULTRA CURRENT CAPACITOR
CUSTOM DESIGNS AVAILABLE



MAIN FEATURES:

- TAPE WRAP CASE
- EPOXY RESIN FILLING

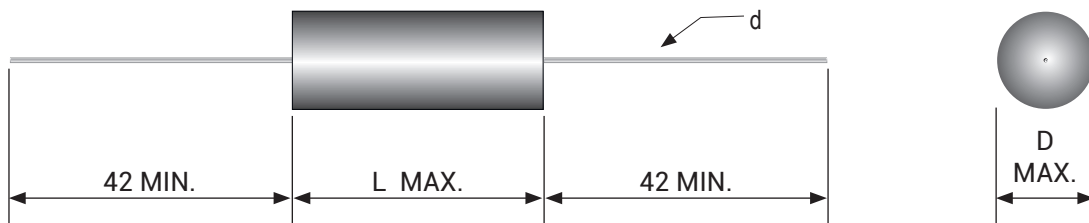


MAIN APPLICATIONS:

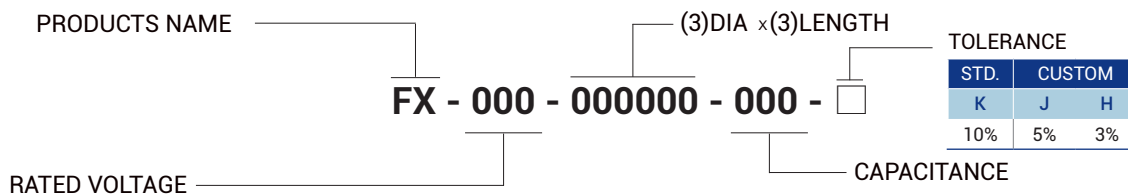
- MEDIUM VOLTAGE, HIGH CURRENT, HIGH PULSE APPLICATIONS
- ENERGY CONVERSION AND CONTROL IN POWER SEMICONDUCTOR CIRCUITS
- SMPS, MOTOR SPEED CONTROLS



DIMENSIONS [mm]



ORDERING INFORMATION



ALL SPECIFICATIONS MAY CHANGE WITHOUT NOTICE

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SPECIFICATIONS

DC VOLTAGE RANGE	600~10000 VDC
CAPACITANCE RANGE	UP TO 6 μ F
CAPACITANCE TOLERANCE (AT 1kHz)	STANDARD: \pm 10% ON REQUEST \pm 3, 5%
EQUIVALENT SERIES RESISTANCE (ESR)	< 3 m Ω
MAXIMUM VOLTAGE RATE OF RISE(dV/dT)	\leq 2800 V/ μ s
TERMINALS	TIN COPPER WIRE
VOLTAGE TEST	RATED VOLTAGE X 1.5 TIMES FOR 10 SECS
WORKING & STORAGE TEMPERATURE	-55 / +85 $^{\circ}$ C
CYLINDRICAL CASE AND FILLING	FLAME RETARDANT EPOXY RESIN FILLER AND TAPE WRAP
LIFE EXPECTANCY	100,000 HOURS TYP.
SOLDERING HEAT TEST	TEMPERATURE = 260 \pm 5 $^{\circ}$ C FOR 10 SECS
DISSIPATION FACTOR	DF VALUE \leq 0.05 %, MEASURED AT 25 \pm 5 $^{\circ}$ C, 1 kHz
INSULATION RESISTANCE (RINS)	C \leq 0.33 μ F \geq 100,000M Ω , C > 0.33 μ F \geq 30,000 SEC (M Ω X μ F) AT 25 \pm 5 $^{\circ}$ C, AFTER 1 MINUTE OF ELECTRIFICATION AT 500VDC



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600VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
600	950	0.1	12	40	0.8	20	50	FX-006-012040-104-K
600	950	0.15	14	40	0.8	20	75	FX-006-014040-154-K
600	950	0.22	16	40	0.8	20	110	FX-006-016040-224-K
600	950	0.33	18	40	0.8	20	165	FX-006-018040-334-K
600	950	0.47	21	40	0.8	20	235	FX-006-021040-474-K
600	950	0.68	24	40	1	18	340	FX-006-024040-684-K
600	950	1	29	40	1	18	500	FX-006-029040-105-K
600	950	1.2	24	60	1	18	360	FX-006-024060-125-K
600	950	1.5	26	60	1	18	450	FX-006-026060-155-K
600	950	2	29	60	1.2	16	600	FX-006-029060-205-K
600	950	2.2	30	60	1.2	16	660	FX-006-030060-225-K
600	950	2.5	32	60	1.2	16	750	FX-006-032060-255-K
600	950	3	35	60	1.2	16	900	FX-006-035060-305-K
600	950	3.3	36	60	1.2	16	990	FX-006-036060-335-K
600	950	3.7	38	60	1.2	16	1110	FX-006-038060-375-K
600	950	4	39	60	1.2	16	1200	FX-006-039060-405-K
600	950	4.7	43	60	1.2	16	1410	FX-006-043060-475-K
600	950	5	44	60	1.2	16	1500	FX-006-044060-505-K
600	950	5.6	47	60	1.2	16	1680	FX-006-047060-565-K
600	950	6	48	60	1.2	16	1800	FX-006-048060-605-K

**CAPACITANCE AND THREADS TERMINAL AVAILABLE AS CUSTOM.
 (1) NON-REPETITIVE PEAK VOLTAGE LESS THAN 00μs TYP.
 (2) NON-REPETITIVE PEAK CURRENT LESS THAN 00μs TYP.
 (3) MEASURED AT 1kHz ±20Hz AT 25°C



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800VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
800	1250	0.1	14	40	0.8	20	65	FX-008-014040-104-K
800	1250	0.15	15	40	0.8	20	98	FX-008-015040-154-K
800	1250	0.22	18	40	0.8	20	143	FX-008-018040-224-K
800	1250	0.33	20	40	0.8	20	215	FX-008-020040-334-K
800	1250	0.47	23	40	1	18	306	FX-008-023040-474-K
800	1250	0.68	27	40	1	18	442	FX-008-027040-684-K
800	1250	1	24	60	1	18	400	FX-008-024060-105-K
800	1250	1.2	26	60	1	18	480	FX-008-026060-125-K
800	1250	1.5	29	60	1.2	16	600	FX-008-029060-155-K
800	1250	2	33	60	1.2	16	800	FX-008-033060-205-K
800	1250	2.2	35	60	1.2	16	880	FX-008-035060-225-K
800	1250	2.5	37	60	1.2	16	1000	FX-008-037060-255-K
800	1250	3	40	60	1.2	16	1200	FX-008-040060-305-K
800	1250	3.3	42	60	1.2	16	1320	FX-008-042060-335-K
800	1250	3.7	44	60	1.2	16	1480	FX-008-044060-375-K
800	1250	4	45	60	1.2	16	1600	FX-008-045060-405-K

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- (2) NON-REPETITIVE PEAK CURRENT LESS THAN 00μs TYP.
- (3) MEASURED AT 1kHz ±20Hz AT 25°C



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1000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
1000	1550	0.1	14	40	0.8	20	82	FX-010-014040-104-K
1000	1550	0.15	17	40	0.8	20	123	FX-010-017040-154-K
1000	1550	0.22	19	40	0.8	20	180	FX-010-019040-224-K
1000	1550	0.33	22	40	0.8	20	271	FX-010-022040-334-K
1000	1550	0.47	26	40	1	18	385	FX-010-026040-474-K
1000	1550	0.68	23	60	1	18	340	FX-010-023060-684-K
1000	1550	1	27	60	1.2	16	500	FX-010-027060-105-K
1000	1550	1.2	29	60	1.2	16	600	FX-010-029060-125-K
1000	1550	1.5	32	60	1.2	16	750	FX-010-032060-155-K
1000	1550	2	36	60	1.2	16	1000	FX-010-036060-205-K
1000	1550	2.2	41	60	1.2	16	1100	FX-010-041060-225-K
1000	1550	2.5	42	60	1.2	16	1250	FX-010-042060-255-K

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1200VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
1200	1800	0.047	12	40	0.8	20	47	FX-012-012040-473-K
1200	1800	0.068	14	40	0.8	20	68	FX-012-014040-683-K
1200	1800	0.1	16	40	0.8	20	100	FX-012-016040-104-K
1200	1800	0.15	18	40	0.8	20	150	FX-012-018040-154-K
1200	1800	0.22	21	40	0.8	20	220	FX-012-021040-224-K
1200	1800	0.33	25	40	1	18	330	FX-012-025040-334-K
1200	1800	0.47	22	60	1	18	282	FX-012-022060-474-K
1200	1800	0.68	26	60	1	18	408	FX-012-026060-684-K
1200	1800	1	30	60	1.2	16	600	FX-012-030060-105-K
1200	1800	1.2	32	60	1.2	16	720	FX-012-032060-125-K
1200	1800	1.5	36	60	1.2	16	900	FX-012-036060-155-K
1200	1800	2	41	60	1.2	16	1200	FX-012-041060-205-K
1200	1800	2.2	44	60	1.2	16	1320	FX-012-044060-225-K

**CAPACITANCE AND THREADS TERMINAL AVAILABLE AS CUSTOM.

(1) NON-REPETITIVE PEAK VOLTAGE LESS THAN 00μs TYP.

(2) NON-REPETITIVE PEAK CURRENT LESS THAN 00μs TYP.

(3) MEASURED AT 1kHz ±20Hz AT 25°C



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1600VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
1600	2400	0.033	12	40	0.8	20	45	FX-016-012040-333-K
1600	2400	0.047	14	40	0.8	20	63	FX-016-014040-473-K
1600	2400	0.068	16	40	0.8	20	92	FX-016-016040-683-K
1600	2400	0.1	18	40	0.8	20	135	FX-016-018040-104-K
1600	2400	0.15	22	40	0.8	20	203	FX-016-022040-154-K
1600	2400	0.22	25	40	1	18	297	FX-016-025040-224-K
1600	2400	0.33	23	60	1	18	264	FX-016-023060-334-K
1600	2400	0.47	26	60	1	18	376	FX-016-026060-474-K
1600	2400	0.68	31	60	1.2	16	544	FX-016-031060-684-K
1600	2400	1	37	60	1.2	16	800	FX-016-037060-105-K
1600	2400	1.2	40	60	1.2	16	960	FX-016-040060-125-K
1600	2400	1.5	45	60	1.2	16	1200	FX-016-045060-155-K

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(2) NON-REPETITIVE PEAK CURRENT LESS THAN 00μs TYP.

(3) MEASURED AT 1kHz ±20Hz AT 25°C



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2000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	µF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
2000	3000	0.01	12	40	0.8	20	17	FX-020-012040-103-K
2000	3000	0.015	12	40	0.8	20	25	FX-020-012040-153-K
2000	3000	0.022	13	40	0.8	20	37	FX-020-013040-223-K
2000	3000	0.033	15	40	0.8	20	55	FX-020-015040-333-K
2000	3000	0.047	17	40	0.8	20	79	FX-020-017040-473-K
2000	3000	0.068	19	40	0.8	20	114	FX-020-019040-683-K
2000	3000	0.1	23	40	1	18	168	FX-020-023040-104-K
2000	3000	0.15	27	40	1	18	252	FX-020-027040-154-K
2000	3000	0.22	32	40	1	18	370	FX-020-032040-224-K
2000	3000	0.33	26	62	1.2	16	330	FX-020-026062-334-K
2000	3000	0.47	30	62	1.2	16	470	FX-020-030062-474-K
2000	3000	0.68	35	62	1.2	16	680	FX-020-035062-684-K
2000	3000	1	42	62	1.2	16	1000	FX-020-042062-105-K
2000	3000	1.2	45	62	1.2	16	1200	FX-020-045062-125-K

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(1) NON-REPETITIVE PEAK VOLTAGE LESS THAN 00µs TYP.

(2) NON-REPETITIVE PEAK CURRENT LESS THAN 00µs TYP.

(3) MEASURED AT 1kHz ±20Hz AT 25°C



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3000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
3000	4500	0.01	13	40	0.8	20	21	FX-030-013040-103-K
3000	4500	0.015	15	40	0.8	20	32	FX-030-015040-153-K
3000	4500	0.022	17	40	0.8	20	46	FX-030-017040-223-K
3000	4500	0.033	20	40	0.8	20	69	FX-030-020040-333-K
3000	4500	0.047	23	40	0.8	20	99	FX-030-023040-473-K
3000	4500	0.068	26	40	1	18	143	FX-030-026040-683-K
3000	4500	0.1	21	62	1	18	125	FX-030-021062-104-K
3000	4500	0.15	25	62	1	18	188	FX-030-025062-154-K
3000	4500	0.22	29	62	1.2	16	275	FX-030-029062-224-K
3000	4500	0.33	35	62	1.2	16	413	FX-030-035062-334-K
3000	4500	0.47	41	62	1.2	16	588	FX-030-041062-474-K

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4000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
4000	6000	0.0047	12	40	0.8	20	12	FX-040-012040-472-K
4000	6000	0.0068	14	40	0.8	20	18	FX-040-014040-682-K
4000	6000	0.01	16	40	0.8	20	26	FX-040-016040-103-K
4000	6000	0.015	18	40	0.8	20	39	FX-040-018040-153-K
4000	6000	0.022	21	40	0.8	20	57	FX-040-021040-223-K
4000	6000	0.033	18	61	1	18	51	FX-040-018061-333-K
4000	6000	0.047	19	61	1	18	73	FX-040-019061-473-K
4000	6000	0.068	22	61	1	18	105	FX-040-022061-683-K
4000	6000	0.1	26	61	1.2	16	155	FX-040-026061-104-K
4000	6000	0.15	31	61	1.2	16	233	FX-040-031061-154-K
4000	6000	0.22	36	61	1.2	16	341	FX-040-036061-224-K
4000	6000	0.33	45	61	1.2	16	512	FX-040-045061-334-K

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6000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	μF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
6000	9000	0.0047	13	62	1	18	9	FX-060-013062-472-K
6000	9000	0.0068	15	62	1	18	14	FX-060-015062-682-K
6000	9000	0.01	17	62	1	18	20	FX-060-017062-103-K
6000	9000	0.015	20	62	1	18	30	FX-060-020062-153-K
6000	9000	0.022	23	62	1	18	44	FX-060-023062-223-K
6000	9000	0.033	27	62	1	18	66	FX-060-027062-333-K
6000	9000	0.047	31	62	1	18	94	FX-060-031062-473-K
6000	9000	0.068	36	62	1	18	136	FX-060-036062-683-K
6000	9000	0.1	31	94	1	18	200	FX-060-031094-104-K
6000	9000	0.15	37	94	1.2	16	146	FX-060-037094-154-K
6000	9000	0.22	44	94	1.2	16	215	FX-060-044094-224-K

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10000VDC, RATED VOLTAGE								
VOLTAGE [V]		CAP ⁽³⁾	DIMENSIONS [mm]			LEAD	CURRENT	ORDERING CODE
VDC	V-PEAK ⁽¹⁾	µF	D MAX.	L	d	AWG	I-PEAK ⁽²⁾ [A]	
10000	15000	0.001	12	62	1	18	4	FX-100-012062-102-K
10000	15000	0.0015	13	62	1	18	6	FX-100-013062-152-K
10000	15000	0.0022	14	62	1	18	6	FX-100-014062-222-K
10000	15000	0.0033	16	62	1	18	9	FX-100-016062-332-K
10000	15000	0.0047	18	62	1	18	13	FX-100-018062-472-K
10000	15000	0.0068	21	62	1	18	19	FX-100-021062-682-K
10000	15000	0.01	25	62	1	18	28	FX-100-025062-103-K
10000	15000	0.015	29	62	1	18	42	FX-100-029062-153-K
10000	15000	0.022	24	62	1	18	62	FX-100-024062-223-K
10000	15000	0.033	42	62	1	18	92	FX-100-042062-333-K
10000	15000	0.047	33	94	1.2	16	63	FX-100-033094-473-K
10000	15000	0.068	39	94	1.2	16	92	FX-100-039094-683-K
10000	15000	0.1	47	94	1.2	16	135	FX-100-047094-104-K

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