

DC FILTERING

FFLR 600Vdc to 3800Vdc* RoHS Compliant



The FFLR series is specifically designed for DC filtering applications such as DC link. This range offers solutions for voltage from 600V up to 3800V.

The Self Healing Technology, essential to ensure a safe and reliable behavior, is achieved using a fully dry solution with polypropylene metalized film. Standard designs proposed in this catalogue are covering a wide range of voltage and capacitance values.

In case of specific requirements about shape and performances, please feel free to contact your local KYOCERA AVX representative.

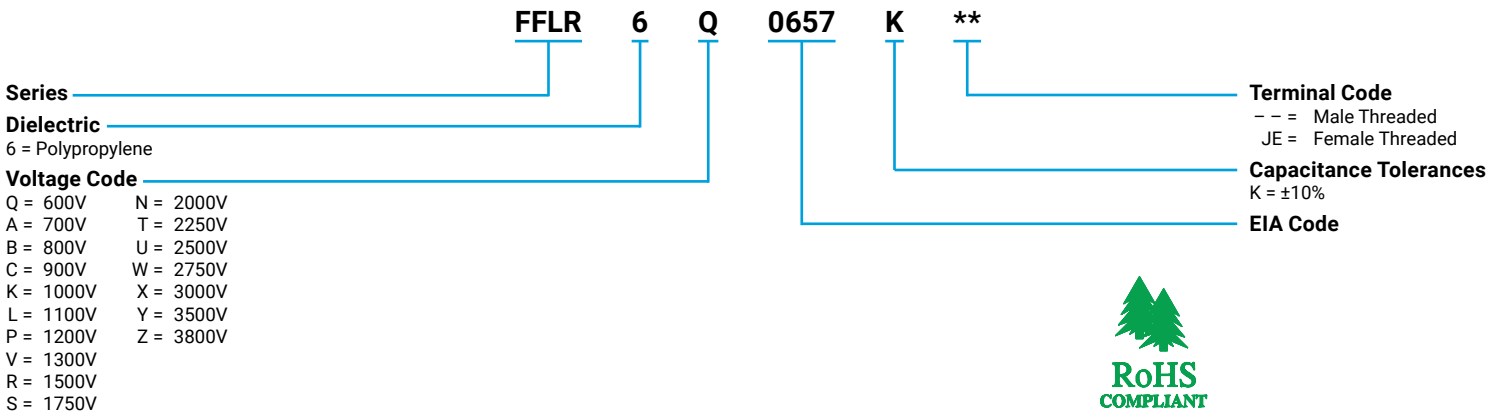
STANDARDS

- IEC 61071: Power electronic capacitors
- IEC 60068-2: Environmental testing
- IEC 61373: Shock and vibrations
- UL 94: Fire requirements
- UL810: CZDS2.E514026

PACKAGING MATERIAL

- Aluminum cylindrical case filled polyurethane resin.
- Self extinguishing polyurethane resin (V0 : in accordance with UL94)
- Self extinguishing plastic cover (V0 : in accordance with UL94)
- RoHS components
- M6/10 Female connections or M8/20 Male connections

HOW TO ORDER



DEFINITIONS

C_n (μF)	capacitance	nominal value of the capacitance measured at $\theta_{amb} = 25 \pm 10^{\circ}\text{C}$
U_r (V)	rated DC voltage	maximum operating peak voltage of either polarity (non-reversing type waveform), for which the capacitor has been designed for continuous operation
U_w (V)	working voltage	value of the maximum operating recurrent voltage for a given hot spot temperature and an expected lifetime
U_p (V)	ripple voltage	peak-to-peak alternating component of the unidirectional voltage
L_s (nH)	parasitic inductance	capacitor series self-inductance
R_s (mΩ)	series resistance	capacitor series resistance due to galvanic circuit
I_{rms} (A)	RMS current	RMS current value for continuous operation under natural convection generating 40°C overheating
θ_{amb} (°C)	cooling air temperature	Temperature of the cooling air measured at the hottest position of the capacitor, under steady-state conditions, midway between two units Note If only one unit is involved, it is the temperature measured at a point approximately 0.1 m away from the capacitor container and at two-thirds of the height from its base
θ_{HS} (°C)	hot spot temperature	highest temperature obtained inside the case of the capacitor in thermal equilibrium
I²t (A²s)	integral of action	maximum repetitive integral of action that galvanic circuit is able to withstand

CHARACTERISTICS

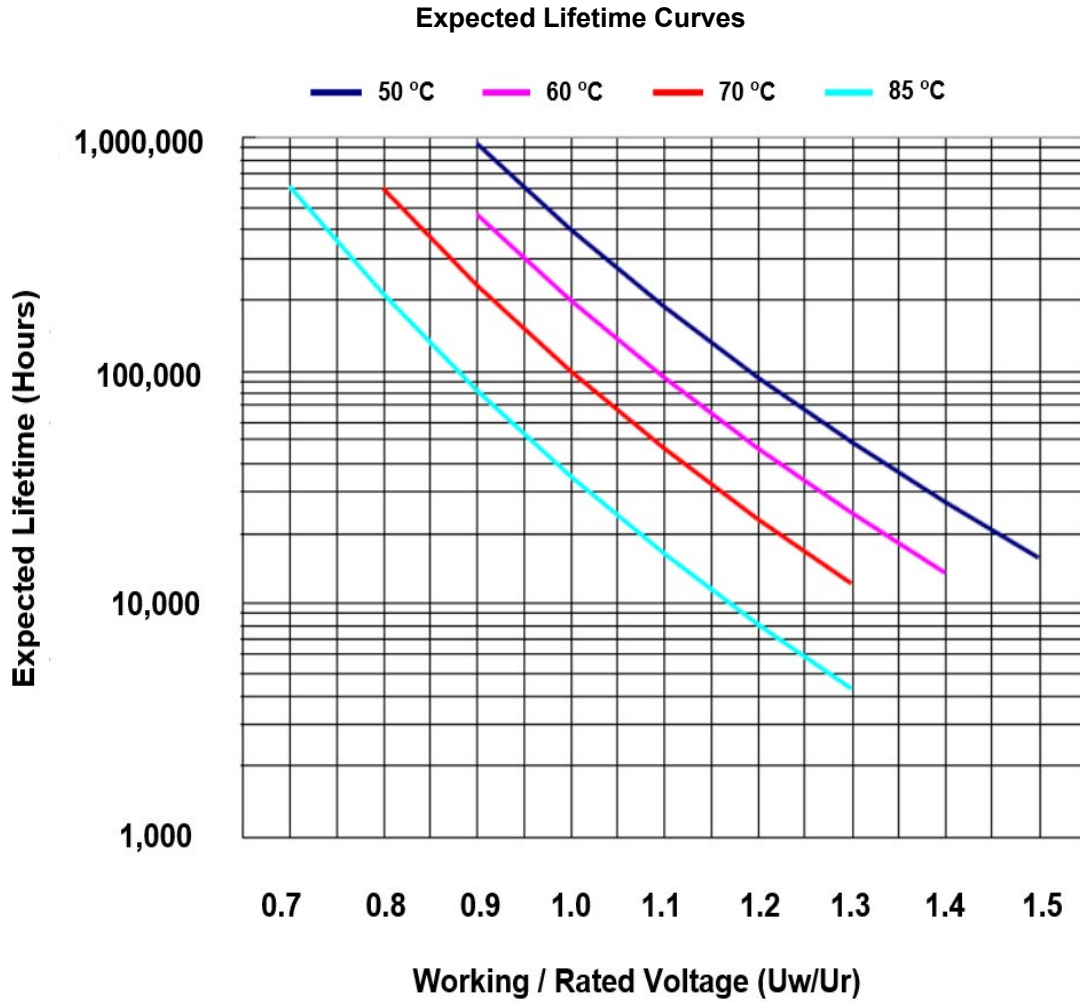
Capacitance range C_n	105μF to 3000μF
Tolerance on C_n	±10%
Rated DC voltage U_n	600 to 3800V
Lifetime at U_n and 65°C hot-spot temperature and ΔC / C < 2%	100,000h
Parasitic inductance L_s	35 to 60nH
Maximum rms current I_{rms}	up to 112A _{rms}
Test voltage between terminals @ 25°C	1.5 x U _n for 10s
Test voltage between terminals and Case @ 25°C	4kV _{rms} @ 50Hz for 10s
Dielectric	polypropylene
Climatic Category	40 / 85 / 56 (IEC 60068)
Working temperature	-40°C / +85°C (according to the power dissipated)
Storage temperature	-40°C / +85°C
Calorific value	40 MJ/kg

DC FILTERING

FFLR 600Vdc to 3800Vdc* RoHS Compliant



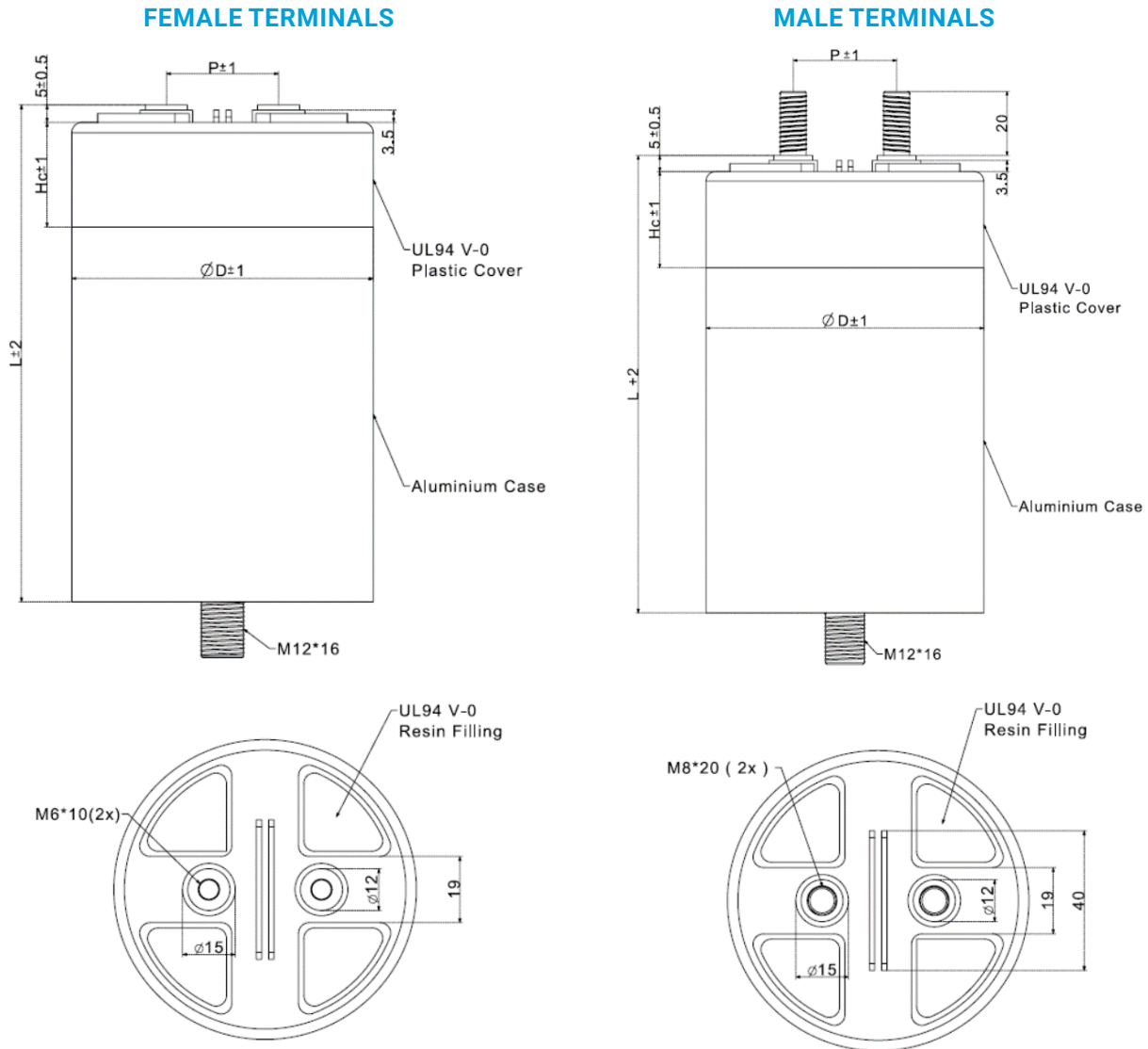
LIFETIME EXPECTANCY VS HOT SPOT TEMPERATURE AND VOLTAGE



DC FILTERING

FFLR 600Vdc to 3800Vdc* RoHS Compliant

DIMENSIONS



D (mm)	75	86	100	116	136
P (mm)	32	32	32	50	50
Dt (mm)	12	12	12	15	15
Hc (mm)	30	30	40	40	40

Max Torque (Nm)	
M6	4.5
M8	8.5
M12	15

D (mm)	Distance terminal to terminal (mm)		Distance terminal to case (mm)	
	Creepage	Clearance	Creepage	Clearance
75	35	20	48	46
86	35	20	52	50
100	35	20	67	65
116	50	35	67	65
136	50	35	77	75

MECHANICAL MOUNTING

Capacitors enclosure presents a M12 x 16 bolt in order to fix the capacitor. Over height (H) more than 1.5 x D (diameter of tube), we recommend to clamp (constraint < 35daN), just below the plastic cover, the capacitor in order to limit oscillations in case of potential Shock&Vibration stress.

DC FILTERING

FFLR 600Vdc to 3800Vdc* RoHS Compliant



RATINGS AND PART NUMBER REFERENCE

C (µF)	Un (V)	PN	Voltage Code	Dimensions			Irms	Peak	ESR	ESL	Thermal	dv/dt
				D	L	P	10KHz 50°C	Current	1KHz		Res	
				mm	mm	mm	A	A	mΩ		*C/W	
650	600	FFLR6Q0657K**	Q	86.0	100.0	32.0	70.0	3,900	1.2	60	5.0	6
800	600	FFLR6Q0807K**	Q	86.0	126.0	32.0	75.0	6,400	1.5	60	3.6	8
900	600	FFLR6Q0907K**	Q	86.0	126.0	32.0	75.0	7,200	1.4	60	3.6	8
1000	600	FFLR6Q0108K**	Q	86.0	161.0	32.0	60.0	7,500	1.0	65	3.7	8
1150	600	FFLR6Q1157K**	Q	86.0	161.0	32.0	65.0	8,625	0.9	65	3.7	8
220	700	FFLR6A0227K**	A	75.0	80.0	32.0	50.0	3,080	2.6	40	7.2	14
270	700	FFLR6A0277K**	A	75.0	80.0	32.0	50.0	3,780	2.5	40	7.2	14
300	700	FFLR6A0307K**	A	86.0	80.0	32.0	55.0	4,200	2.4	40	6.5	14
360	700	FFLR6A0367K**	A	86.0	80.0	32.0	56.0	5,040	2.2	40	6.5	14
420	700	FFLR6A0427K**	A	86.0	100.0	32.0	58.0	2,940	2.5	50	4.2	7
450	700	FFLR6A0457K**	A	86.0	100.0	32.0	65.0	3,150	2.3	50	4.6	7
500	700	FFLR6A0507K**	A	86.0	100.0	32.0	65.0	3,500	2.2	50	4.6	7
550	700	FFLR6A0557K**	A	86.0	126.0	32.0	65.0	3,300	2.5	60	4.1	6
680	700	FFLR6A0687K**	A	86.0	126.0	32.0	70.0	3,400	2.1	60	4.1	5
290	800	FFLR6B0297K**	B	75.0	100.0	32.0	50.0	3,045	4.0	60	4.0	11
300	800	FFLR6B0307K**	B	86.0	100.0	32.0	60.0	2,550	2.5	60	3.8	9
390	800	FFLR6B0397K**	B	86.0	100.0	32.0	62.0	3,315	2.9	60	3.6	9
450	800	FFLR6B0457K**	B	86.0	126.0	32.0	65.0	3,600	2.4	60	3.2	8
520	800	FFLR6B0527K**	B	86.0	126.0	32.0	65.0	3,900	2.2	60	3.2	8
850	800	FFLR6B0857K**	B	86.0	200.0	32.0	60.0	4,250	1.8	50	3.6	5
1000	800	FFLR6B0108K**	B	116.0	126.0	50.0	65.0	7,000	1.8	60	2.6	7
1600	800	FFLR6B0168K**	B	116.0	180.0	50.0	75.0	9,600	3.0	65	3.4	6
480	900	FFLR6C0487K**	C	86.0	142.5	32.0	65.0	4,080	2.0	50	4.2	9
1000	900	FFLR6C0108K**	C	116.0	142.5	50.0	68.0	7,000	1.6	80	3.0	7
1500	900	FFLR6C0158K**	C	116.0	180.0	50.0	60.0	12,000	2.0	65	4.8	8
1800	900	FFLR6C0188K**	C	116.0	230.0	50.0	100.0	14,400	0.8	60	2.4	8
900	1000	FFLR6K0907K**	K	116.0	142.0	50.0	72.0	10,800	2.9	85	2.6	12
1300	1000	FFLR6K0138K**	K	116.0	230.0	50.0	100.0	9,750	1.5	100	2.4	8
1600	1000	FFLR6K0168K**	K	116.0	230.0	50.0	100.0	8,000	1.5	75	2.1	5
170	1100	FFLR6L0177K**	L	75.0	100.0	32.0	50.0	1,700	3.2	60	3.8	10
240	1100	FFLR6L0247K**	L	86.0	100.0	32.0	55.0	3,000	1.7	50	3.8	13
300	1100	FFLR6L0307K**	L	86.0	142.5	32.0	58.0	2,550	2.0	60	2.7	9
330	1100	FFLR6L0337K**	L	86.0	142.5	32.0	60.0	2,805	3.0	60	3.3	9
400	1100	FFLR6L0407K**	L	86.0	142.5	32.0	60.0	3,400	2.8	60	3.3	9
420	1100	FFLR6L0427K**	L	86.0	142.5	32.0	58.0	3,570	2.3	85	3.0	9
500	1100	FFLR6L0507K**	L	86.0	180.0	32.0	72.0	6,000	1.5	80	3.0	12
600	1100	FFLR6L0607K**	L	86.0	230.0	32.0	65.0	6,300	2.5	60	2.0	11
720	1100	FFLR6L0727K**	L	116.0	155.0	50.0	69.0	9,360	3.2	85	2.6	13
800	1100	FFLR6L0807K**	L	116.0	160.0	50.0	80.0	8,800	1.5	55	2.4	11
1000	1100	FFLR6L0108K**	L	116.0	180.0	50.0	85.0	10,000	2.2	50	2.5	10
1100	1100	FFLR6L0118K**	L	116.0	230.0	50.0	90.0	9,900	1.3	60	2.1	9
1600	1100	FFLR6L0168K**	L	116.0	340.0	50.0	100.0	12,000	2.3	100	2.4	8
1700	1100	FFLR6L0178K**	L	136.0	230.0	50.0	110.0	10,200	1.5	60	1.7	6
2000	1100	FFLR6L0208K**	L	136.0	260.0	50.0	120.0	12,000	1.2	60	1.3	6
2200	1100	FFLR6L0228K**	L	136.0	340.0	50.0	120.0	13,200	1.2	60	1.0	6
420	1200	FFLR6P0427K**	P	86.0	180.0	32.0	60.0	4,200	3.0	70	3.2	10
540	1200	FFLR6P0547K**	P	86.0	230.0	32.0	60.0	5,400	2.5	85	3.3	10
950	1200	FFLR6P0957K**	P	116.0	230.0	50.0	90.0	9,500	1.5	75	2.1	10
1000	1200	FFLR6P0108K**	P	116.0	230.0	50.0	90.0	10,000	1.5	75	2.1	10
1200	1200	FFLR6P0128K**	P	116.0	260.0	50.0	70.0	12,000	0.8	50	1.5	10
250	1300	FFLR6V0257K**	V	86.0	142.5	32.0	40.0	2,000	4.0	85	5.4	8
330	1300	FFLR6V0337K**	V	86.0	180.0	32.0	55.0	4,950	2.6	80	3.4	15
420	1300	FFLR6V0427K**	V	116.0	126.0	50.0	50.0	6,300	2.3	40	2.1	15
470	1300	FFLR6V0477K**	V	116.0	161.0	50.0	65.0	5,640	1.5	80	7.1	12
570	1300	FFLR6V0577K**	V	116.0	161.0	50.0	70.0	6,270	1.3	80	7.1	11
1100	1300	FFLR6V0118K**	V	116.0	340.0	50.0	85.0	9,900	2.7	200	2.1	9
185	1750	FFLR6S1856K**	S	86.0	160.0	32.0	48	2,775	3.7	50	3.6	15
225	1750	FFLR6S2256K**	S	86.0	180.0	32.0	46	3,375	4.4	60	3.3	15
270	1750	FFLR6S0277K**	S	100.0	160.0	32.0	58	4,050	2.6	50	3.3	15
330	1750	FFLR6S0337K**	S	100.0	180.0	32.0	56	4,950	3.1	60	3.1	15
370	1750	FFLR6S0377K**	S	116.0	160.0	50.0	69	5,550	2	50	3.1	15
450	1750	FFLR6S0457K**	S	116.0	180.0	50.0	65	5,850	2.4	60	2.9	13
520	1750	FFLR6S0527K**	S	116.0	230.0	50.0	89	5,720	1.2	40	3.2	11
670	1750	FFLR6S0677K**	S	116.0	270.0	50.0	86	6,030	1.4	50	2.9	9
820	1750	FFLR6S0827K**	S	116.0	340.0	50.0	85	6,560	1.7	60	2.5	8

**Insert -- for male terminals or JE for female terminals



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.

DC FILTERING

FFLR 600Vdc to 3800Vdc* RoHS Compliant



RATINGS AND PART NUMBER REFERENCE

C (µF)	Un (V)	PN	Voltage Code	Dimensions			Irms 10KHz 50°C	Peak Current	ESR 1KHz	ESL	Thermal Res *C/W	dv/dt V/us
				D	L	P						
				mm	mm	mm	A	A	mΩ	nH	V/us	
140	2000	FFLR6N0147K**	N	86.0	155.0	32.0	45	2,520	4.2	50	3.6	18
170	2000	FFLR6N0177K**	N	86.0	180.0	32.0	43	3,060	5	60	3.3	18
205	2000	FFLR6N2056K**	N	100.0	155.0	32.0	55	3,690	3	50	3.3	18
250	2000	FFLR6N0257K**	N	100.0	180.0	32.0	52	4,000	3.5	60	3.1	16
280	2000	FFLR6N0287K**	N	116.0	155.0	50.0	65	4,480	2.3	50	3.1	16
350	2000	FFLR6N0357K**	N	116.0	180.0	50.0	62	5,250	2.6	60	2.9	15
400	2000	FFLR6N0407K**	N	116.0	240.0	50.0	85	5,600	1.3	40	3.2	14
510	2000	FFLR6N0517K**	N	116.0	290.0	50.0	82	6,630	1.5	50	2.9	13
620	2000	FFLR6N0627K**	N	116.0	340.0	50.0	81	7,440	1.8	60	2.5	12
110	2250	FFLR6T0117K**	T	86.0	155.0	32.0	43	1,760	4.7	50	3.6	16
135	2250	FFLR6T1356K**	T	86.0	180.0	32.0	41	2,160	5.5	60	3.3	16
160	2250	FFLR6T0167K**	T	100.0	155.0	32.0	52	2,560	3.3	50	3.3	16
195	2250	FFLR6T1956K**	T	100.0	180.0	32.0	49	2,925	4	60	3.1	15
220	2250	FFLR6T0227K**	T	116.0	155.0	50.0	62	3,300	2.5	50	3.1	15
270	2250	FFLR6T0277K**	T	116.0	180.0	50.0	59	4,050	3	60	2.9	15
310	2250	FFLR6T0317K**	T	116.0	240.0	50.0	81	4,340	1.4	40	3.2	14
400	2250	FFLR6T0407K**	T	116.0	290.0	50.0	79	5,200	1.7	50	2.9	13
490	2250	FFLR6T0497K**	T	116.0	340.0	50.0	78	6,125	2	60	2.5	12.5
85	2500	FFLR6U0856K**	U	86.0	160.0	32.0	40	1,530	5.2	50	3.6	18
105	2500	FFLR6U1056K**	U	86.0	180.0	32.0	39	1,890	6.1	60	3.3	18
120	2500	FFLR6U0127K**	U	100.0	160.0	32.0	49	2,160	3.8	50	3.3	18
150	2500	FFLR6U0157K**	U	100.0	180.0	32.0	47	2,700	4.4	60	3.1	18
170	2500	FFLR6U0177K**	U	116.0	160.0	50.0	59	3,400	2.8	50	3.1	20
210	2500	FFLR6U0217K**	U	116.0	180.0	50.0	56	4,200	3.3	60	2.9	20
230	2500	FFLR6U0237K**	U	116.0	240.0	50.0	77	4,600	1.6	40	3.2	20
300	2500	FFLR6U0307K**	U	116.0	290.0	50.0	75	5,400	1.9	50	2.9	18
380	2500	FFLR6U0387K**	U	116.0	340.0	50.0	75	6,460	2.2	60	2.5	17
70	2750	FFLR6W0706K**	W	86.0	160.0	32.0	39	1,400	5.7	50	3.6	20
85	2750	FFLR6W0856K**	W	86.0	180.0	32.0	37	1,700	6.8	60	3.3	20
100	2750	FFLR6W0107K**	W	100.0	160.0	32.0	47	2,000	4.1	50	3.3	20
125	2750	FFLR6W1256K**	W	100.0	180.0	32.0	45	2,500	4.8	60	3.1	20
140	2750	FFLR6W0147K**	W	116.0	160.0	50.0	56	2,800	3	50	3.1	20
170	2750	FFLR6W0177K**	W	116.0	180.0	50.0	53	3,060	3.6	60	2.9	18
190	2750	FFLR6W0197K**	W	116.0	240.0	50.0	74	3,230	1.7	40	3.2	17
250	2750	FFLR6W0257K**	W	116.0	290.0	50.0	73	4,000	2	50	2.9	16
310	2750	FFLR6W0317K**	W	116.0	340.0	50.0	72	4,960	2.4	60	2.5	16
58	3000	FFLR6X0586K**	X	86.0	160.0	32.0	37	1,276	6.3	50	3.6	22
70	3000	FFLR6X0706K**	X	86.0	180.0	32.0	35	1,540	7.6	60	3.3	22
85	3000	FFLR6X0856K**	X	100.0	160.0	32.0	45	2,040	4.4	50	3.3	24
105	3000	FFLR6X1056K**	X	100.0	180.0	32.0	43	2,520	5.2	60	3.1	24
115	3000	FFLR6X1156K**	X	116.0	160.0	50.0	54	2,760	3.3	50	3.1	24
145	3000	FFLR6X1456K**	X	116.0	180.0	50.0	51	3,480	3.9	60	2.9	24
160	3000	FFLR6X0167K**	X	116.0	240.0	50.0	72	3,520	1.8	40	3.2	22
210	3000	FFLR6X0217K**	X	116.0	290.0	50.0	70	4,620	2.1	50	2.9	22
260	3000	FFLR6X0267K**	X	116.0	340.0	50.0	69	5,460	2.5	60	2.5	21
60	3500	FFLI6Y0606K**	Y	100.0	160.0	32.0	60	1,500	2.5	50	3.3	25
75	3500	FFLI6Y0756K**	Y	100.0	180.0	32.0	58	1,875	2.9	60	3.1	25
85	3500	FFLI6Y0856K**	Y	116.0	160.0	50.0	72	2,210	1.9	50	3.1	26
105	3500	FFLI6Y1056K**	Y	116.0	180.0	50.0	68	2,730	2.2	60	3	26
115	3500	FFLI6Y1156K**	Y	116.0	240.0	50.0	89	2,875	1.2	40	3.3	25
150	3500	FFLI6Y0157K**	Y	116.0	290.0	50.0	88	3,750	1.3	50	2.9	25
190	3500	FFLI6Y0197K**	Y	116.0	340.0	50.0	88	4,560	1.6	60	2.5	24
53	3800	FFLI6Z0536K**	Z	100.0	160.0	32.0	59	1,484	2.6	50	3.3	28
66	3800	FFLI6Z0666K**	Z	100.0	180.0	32.0	56	1,848	3	60	3.1	28
72	3800	FFLI6Z0726K**	Z	116.0	160.0	50.0	69	2,160	2	50	3.1	30
90	3800	FFLI6Z0906K**	Z	116.0	180.0	50.0	66	2,700	2.3	60	3	30
100	3800	FFLI6Z0107K**	Z	116.0	240.0	50.0	88	2,700	1.2	40	3.3	27
130	3800	FFLI6Z0137K**	Z	116.0	290.0	50.0	86	3,380	1.4	50	2.9	26
165	3800	FFLI6Z1656K**	Z	116.0	340.0	50.0	87	4,125	1.6	60	2.5	25

**Insert -- for male terminals or JE for female terminals



The Important Information/Disclaimer is incorporated in the catalog where these specifications came from or available online at www.kyocera-avx.com/disclaimer/ by reference and should be reviewed in full before placing any order.