

### KF SERIES ■ LOW IMPEDANCE 105°C TYPE

#### KEY FEATURES



- ALUMINUM ELECTROLYTIC CAPACITOR ■ THT type
- Endurance: 105°C ■ 2 000 hours up to 5 000 hours
- Low impedance and high ripple current
- High reliability
- Wide voltage range



#### SPECIFICATIONS

Items		Performance Characteristics										
Operating Temperature Range		-40 ~ +105°C					-25 ~ +105°C					
Rated Voltage Range	$V_R$	6.3 ~ 100V DC					160 ~ 450V DC					
Surge Voltage	$V_S$	$(V_R \leq 315V): V_S = 1.15 \cdot V_R$					$(V_R > 315V): V_S = 1.10 \cdot V_R$					
Capacitance Range	$C_R$	0.47 ~ 15000 $\mu$ F					0.47 ~ 330 $\mu$ F					
Cap. Tolerance	$\Delta C$	$\pm 20\%$ (120Hz ■ 20°C)										
Leakage Current (20°C ■ $V_R$ applied)	$I_{LEAK}$	$\leq 0.01 \cdot C_R \cdot V_R$ or 3 $\mu$ A ■ After 2 minutes					$\leq 0.03 \cdot C_R \cdot V_R$ ■ After 2 minutes					
		[ $I_{LEAK}$ ( $\mu$ A) ; $C_R$ ( $\mu$ F) ; $V_R$ (V) ]										
Dissipation Factor % (20°C ■ 120Hz)	$\tan \delta$	$V_R$ (V DC)	6.3	10	16	25	35	50	63	80	100	
		$\tan \delta$ (%)	18	16	14	12	10	9	8	8	8	
		$V_R$ (V DC)	160	200	250	350	400	420	450			
		$\tan \delta$ (%)	12	12	12	15	15	17	17			
		For $C_R \geq 1000\mu$ F, add 2% per every multiple 1000 $\mu$ F of rated capacitance value										
		For $C_R \geq 1000\mu$ F, add 2% per every multiple 1000 $\mu$ F of rated capacitance value										
Low Temperature Characteristics at 120Hz	Z ratio max.	$V_R$ (V DC)	6.3	10	16	25	35	50	63	80	100	
		Z-25°C/Z+20°C	4	3	3	3	3	3	2	2	2	
		Z-40°C/Z+20°C	8	6	4	3	3	3	3	3	3	
		$V_R$ (V DC)	160	200	250	350	400	450				
		Z-25°C/Z+20°C	2	2	3	5	5	6				
		Z-40°C/Z+20°C	For $C_R \geq 1000\mu$ F		Add 0.5 for every multiple 1000 $\mu$ F of $C_R$ value							
				Add 1 for every multiple 1000 $\mu$ F of $C_R$ value								
Lifetime Test												
Endurance 105°C ( $V_R$ & $I_R$ applied)	Test	2 000 hours		$\phi$ D 5 ~ 6.3 mm ■ $\leq 100V$								
		3 000 hours		$\phi$ D 8 mm ■ $\leq 100V$								
		5 000 hours		$\phi$ D $\geq 10$ mm ■ $\leq 100V$								
		2 000 hours		All $\phi$ D ■ $\geq 160V$								
	$\Delta C/C_R$		$\leq \pm 20\%$ of initial measured value									
	$\tan \delta$		$\leq 200\%$ of initial specified value									
$I_{Leak}$		$\leq$ the initial specified value										
Shelf Life 105°C ( $V_R = 0$ )	Test	1 000 hours										
		$\Delta C/C_R$		$\leq \pm 20\%$ of initial measured value								
		$\tan \delta$		$\leq 200\%$ of initial specified value								
		$I_{Leak}$		$\leq$ the initial specified value								
Before measurement: Restore capacitor to 20°C, apply $V_R$ for 30 min according JIS-C-5101-4												

**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
6.3	100	5	11	1000	170	KF101M6R3C110A
	120	5	11	920	175	KF121M6R3C110A
	150	5	11	900	185	KF151M6R3C110A
	150	6.3	11	810	220	KF151M6R3E110A
	180	6.3	11	760	240	KF181M6R3E110A
	220	6.3	11	650	310	KF221M6R3E110A
	270	6.3	11	540	340	KF271M6R3E110A
	330	8	11.5	420	390	KF331M6R3F115A
	470	8	11.5	250	450	KF471M6R3F115A
	560	8	11.5	230	490	KF561M6R3F115A
	680	8	11.5	210	550	KF681M6R3F115A
	820	8	16	200	620	KF821M6R3F160A
	1000	8	16	180	750	KF102M6R3F160A
	1000	10	12.5	170	770	KF102M6R3G125A
	1200	10	16	160	860	KF122M6R3G160A
	1500	10	16	140	1100	KF152M6R3G160A
	1800	10	20	110	1250	KF182M6R3G200A
	2200	10	20	90	1380	KF222M6R3G200A
	2200	10	25	95	1470	KF222M6R3G250A
	2700	10	25	75	1490	KF272M6R3G250A
	2700	13	20	75	1550	KF272M6R3I200A
	3300	13	20	36	1650	KF332M6R3I200A
	4700	13	30	36	2100	KF472M6R3I300A
4700	13	25	40	1900	KF472M6R3I250A	
5600	13	30	34	2160	KF562M6R3I300A	
6800	16	25	32	2350	KF682M6R3I250A	
8200	16	31.5	27	2550	KF822M6R3I315A	
10000	16	35.5	24	2700	KF103M6R3I355A	
15000	18	35.5	23	2950	KF153M6R3K355A	
10	22	5	11	2700	98	KF220M010C110A
	33	5	11	2600	100	KF330M010C110A
	47	5	11	1340	150	KF470M010C110A
	56	5	11	1230	160	KF560M010C110A
	68	5	11	1050	170	KF680M010C110A
	100	5	11	800	210	KF101M010C110A
	120	6.3	11	750	250	KF121M010E110A
	150	6.3	11	610	290	KF151M010E110A
	180	6.3	11	460	320	KF181M010E110A
	220	6.3	11	350	340	KF221M010E110A
	270	8	11.5	300	400	KF271M010F115A
	330	8	11.5	270	460	KF331M010F115A
	470	8	11.5	250	580	KF471M010F115A
	560	8	11.5	170	550	KF561M010F115A

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$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
10	560	10	12.5	160	635	KF561M010G125A
	680	10	12.5	110	765	KF681M010G125A
	820	10	16	100	890	KF821M010G160A
	1000	10	16	76	1040	KF102M010G160A
	1200	10	16	67	1200	KF122M010G160A
	1500	10	20	62	1400	KF152M010G200A
	1800	10	25	58	1550	KF182M010G250A
	2200	10	25	52	1650	KF222M010G250A
	2200	13	20	41	1750	KF222M010I200A
	2700	13	20	35	1900	KF272M010I200A
	3300	13	25	31	2000	KF332M010I250A
	4700	16	25	30	2100	KF472M010J250A
	5600	16	25	28	2290	KF562M010J250A
	6800	16	31.5	26	2650	KF682M010J315A
	8200	16	35.5	26	2770	KF822M010J355A
10000	18	35.5	24	2850	KF103M010K355A	
16	10	5	11	4700	74	KF100M016C110A
	22	5	11	2600	100	KF220M016C110A
	33	5	11	2000	114	KF330M016C110A
	47	5	11	1100	155	KF470M016C110A
	56	5	11	820	180	KF560M016C110A
	68	5	11	690	195	KF680M016C110A
	100	6.3	11	500	265	KF101M016E110A
	120	6.3	11	470	270	KF121M016E110A
	150	6.3	11	410	290	KF151M016E110A
	180	6.3	11	380	315	KF181M016E110A
	180	8	11.5	340	370	KF181M016F115A
	220	8	11.5	250	480	KF221M016F115A
	270	8	11.5	210	520	KF271M016F115A
	330	8	11.5	156	590	KF331M016F115A
	470	10	12.5	124	750	KF471M016G125A
	560	10	12.5	105	785	KF561M016G125A
	680	10	16	92	1100	KF681M016G160A
	820	10	16	78	1180	KF821M016G160A
	1000	10	20	65	1350	KF102M016G200A
	1200	10	25	61	1500	KF122M016G250A
	1500	10	30	56	1600	KF152M016G300A
	1500	13	20	60	1380	KF152M016I200A
	1800	10	25	50	1730	KF182M016G250A
	1800	13	20	47	1800	KF182M016I200A
2200	13	25	38	2000	KF222M016I250A	
2200	13	20	40	1880	KF222M016I200A	
2700	13	25	33	2450	KF272M016I250A	

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Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu F$ )	$\phi D$ (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
16	3300	13	30	30	2640	KF332M016I300A
	3300	16	25	30	2790	KF332M016J250A
	4700	16	31.5	26	2880	KF472M016J315A
	5600	16	35.5	25	2990	KF562M016J355A
	6800	18	35.5	24	3200	KF682M016K355A
	8200	18	35.5	24	3320	KF822M016K355A
	10000	18	40	24	3550	KF103M016K400A
25	4.7	5	11	3950	68	KF4R7M025C110A
	5.6	5	11	3250	75	KF5R6M025C110A
	6.8	5	11	2980	80	KF6R8M025C110A
	10	5	11	2560	85	KF100M025C110A
	22	5	11	1950	125	KF220M025C110A
	33	5	11	1420	155	KF330M025C110A
	47	5	11	1100	190	KF470M025C110A
	47	6.3	11	1000	220	KF470M025E110A
	56	6.3	11	790	250	KF560M025E110A
	68	6.3	11	650	280	KF680M025E110A
	100	6.3	11	350	370	KF101M025E110A
	120	6.3	11	330	380	KF121M025E110A
	150	8	11.5	310	410	KF151M025F115A
	180	8	11.5	250	455	KF181M025F115A
	220	8	11.5	150	550	KF221M025F115A
	270	10	12.5	125	720	KF271M025G125A
	330	10	12.5	114	820	KF331M025G125A
	470	10	16	76	1200	KF471M025G160A
	560	10	16	72	1250	KF561M025G160A
	680	10	20	65	1320	KF681M025G200A
	820	10	20	52	1400	KF821M025G200A
	820	10	25	52	1530	KF821M025G250A
	1000	13	20	45	1650	KF102M025I200A
	1200	13	25	41	1980	KF122M025I250A
	1500	13	25	38	2210	KF152M025I250A
	1800	16	25	36	2510	KF182M025J250A
	2200	16	25	35	2650	KF222M025J250A
2700	16	25	31	2820	KF272M025J250A	
3300	16	31.5	26	3240	KF332M025J315A	
4700	16	35.5	24	3650	KF472M025J355A	
5600	18	35.5	24	3720	KF562M025K355A	
6800	18	40	24	3850	KF682M025K400A	
35	4.7	5	11	3650	85	KF4R7M035C110A
	5.6	5	11	3090	92	KF5R6M035C110A
	6.8	5	11	2820	97	KF6R8M035C110A
	10	5	11	2370	105	KF100M035C110A

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35	22	5	11	1500	150	KF220M035C110A
	33	5	11	1210	180	KF330M035C110A
	47	6.3	11	800	280	KF470M035E110A
	56	6.3	11	640	310	KF560M035E110A
	68	8	11.5	520	350	KF680M035F115A
	100	8	11.5	250	450	KF101M035F115A
	120	8	11.5	220	510	KF121M035F115A
	150	8	11.5	191	540	KF151M035F115A
	180	10	12.5	172	650	KF181M035G125A
	220	10	12.5	114	750	KF221M035G125A
	270	10	16	95	910	KF271M035G160A
	330	10	16	79	1050	KF331M035G160A
	470	10	20	65	1200	KF471M035G200A
	560	10	25	61	1500	KF561M035G250A
	680	13	20	56	1570	KF681M035I200A
	820	13	20	48	1700	KF821M035I200A
	1000	13	25	42	1900	KF102M035I250A
	1200	13	30	39	2130	KF122M035I300A
	1500	16	25	36	2270	KF152M035J250A
	1800	16	31.5	35	2700	KF182M035J315A
2200	16	31.5	34	2780	KF222M035J315A	
2700	16	35.5	29	2850	KF272M035J355A	
3300	18	35.5	26	3100	KF332M035K355A	
4700	18	40	24	3500	KF472M035K400A	
50	0.47	5	11	5400	25	KFR47M050C110A
	1	5	11	4000	40	KF010M050C110A
	2.2	5	11	2800	55	KF2R2M050C110A
	3.3	5	11	2200	60	KF3R3M050C110A
	4.7	5	11	2000	90	KF4R7M050C110A
	5.6	5	11	1930	105	KF5R6M050C110A
	6.8	5	11	1890	110	KF6R8M050C110A
	10	5	11	1820	120	KF100M050C110A
	22	6.3	11	1250	150	KF220M050E110A
	33	6.3	11	800	250	KF330M050E110A
	47	6.3	11	650	290	KF470M050E110A
	56	8	11.5	490	310	KF560M050F115A
	68	8	11.5	330	375	KF680M050F115A
	100	10	12.5	170	480	KF101M050G125A
	120	10	12.5	156	530	KF121M050G125A
	150	10	12.5	132	590	KF151M050G125A
	180	10	16	114	860	KF181M050G160A
	220	10	16	96	930	KF221M050G160A
270	10	20	78	1060	KF271M050G200A	

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50	330	10	25	65	1150	KF331M050G250A
	470	13	20	55	1590	KF471M050I200A
	560	13	20	50	1740	KF561M050I200A
	680	13	25	44	1930	KF681M050I250A
	820	13	30	39	2100	KF821M050I300A
	1000	16	25	36	2300	KF102M050J250A
	1200	16	31.5	36	2650	KF122M050J315A
	1500	16	35.5	34	2750	KF152M050J355A
	1800	16	35.5	34	2850	KF182M050J355A
	2200	18	35.5	32	3040	KF222M050K355A
	2700	18	40	27	3070	KF272M050K400A
3300	18	40	25	3100	KF332M050K400A	
63	0.47	5	11	5400	25	KFR47M063C110A
	1	5	11	4000	33	KF010M063C110A
	2.2	5	11	2800	45	KF2R2M063C110A
	3.3	5	11	2200	58	KF3R3M063C110A
	4.7	5	11	2000	65	KF4R7M063C110A
	5.6	5	11	1900	95	KF5R6M063C110A
	6.8	5	11	1820	100	KF6R8M063C110A
	10	5	11	1750	110	KF100M063C110A
	22	6.3	11	800	180	KF220M063E110A
	33	8	11.5	610	270	KF330M063F115A
	47	8	11.5	560	300	KF470M063F115A
	56	8	11.5	380	330	KF560M063F115A
	68	10	12.5	210	480	KF680M063G125A
	100	10	16	140	610	KF101M063G160A
	120	10	16	130	620	KF121M063G160A
	150	10	16	110	700	KF151M063G160A
	180	10	20	100	800	KF181M063G200A
	220	10	20	80	920	KF221M063G200A
	270	13	20	65	1150	KF271M063I200A
	330	13	20	55	1250	KF331M063I200A
	470	13	25	53	1620	KF471M063I250A
	560	13	25	49	1680	KF561M063I250A
	680	13	30	43	1950	KF681M063I300A
	820	16	25	38	2150	KF821M063J250A
1000	16	31.5	34	2350	KF102M063J315A	
1200	16	35.5	32	2550	KF122M063J355A	
1500	18	35.5	31	2710	KF152M063K355A	
1800	18	40	27	3000	KF182M063K400A	
80	0.47	5	11	5850	18	KFR47M080C110A
	1	5	11	4300	24	KF010M080C110A
	2.2	5	11	3200	36	KF2R2M080C110A

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<b>80</b>	3.3	5	11	2700	47	KF3R3M080C110A
	4.7	5	11	2500	63	KF4R7M080C110A
	5.6	5	11	2300	85	KF5R6M080C110A
	6.8	5	11	1850	92	KF6R8M080C110A
	10	5	11	1700	105	KF100M080C110A
	22	6.3	11	830	175	KF220M080E110A
	33	8	11.5	610	280	KF330M080F115A
	47	8	11.5	550	310	KF470M080F115A
	56	8	11.5	410	360	KF560M080F115A
	68	8	16	280	400	KF680M080F160A
	100	8	20	220	500	KF101M080F200A
	120	10	16	180	580	KF121M080G160A
	150	10	20	150	680	KF151M080G200A
	180	10	20	112	800	KF181M080G200A
	220	13	20	90	900	KF221M080I200A
	270	13	20	95	1080	KF271M080I200A
	330	13	25	85	1210	KF331M080I250A
	470	16	25	70	1500	KF471M080J250A
	560	16	25	62	1640	KF561M080J250A
	680	18	25	59	1680	KF681M080K250A
820	18	31.5	56	1780	KF821M080K315A	
1000	18	31.5	45	1850	KF102M080K315A	
1200	18	35.5	42	1960	KF122M080K355A	
1500	18	40	36	2160	KF152M080K400A	
<b>100</b>	0.47	5	11	5900	20	KFR47M100C110A
	1	5	11	4400	30	KF010M100C110A
	2.2	5	11	3300	42	KF2R2M100C110A
	3.3	5	11	2800	55	KF3R3M100C110A
	4.7	5	11	2600	72	KF4R7M100C110A
	5.6	5	11	2330	100	KF5R6M100C110A
	6.8	6.3	11	1950	115	KF6R8M100E110A
	10	6.3	11	1770	130	KF100M100E110A
	22	8	11.5	850	220	KF220M100F115A
	33	10	12.5	690	320	KF330M100G125A
	47	10	12.5	580	370	KF470M100G125A
	56	10	12.5	430	400	KF560M100G125A
	56	10	16	420	440	KF560M100G160A
	68	10	16	350	470	KF680M100G160A
	100	10	25	300	560	KF101M100G250A
	120	10	25	220	660	KF121M100G250A
	150	13	20	174	780	KF151M100I200A
	180	13	20	142	820	KF181M100I200A
220	13	25	130	950	KF221M100I250A	

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<b>100</b>	270	13	30	110	1120	KF271M100I300A
	330	16	25	100	1440	KF331M100J250A
	470	16	31.5	90	1650	KF471M100J315A
	560	16	35.5	85	1720	KF561M100J355A
	680	18	35.5	80	1790	KF681M100K355A
	820	18	35.5	71	1840	KF821M100K355A
	1000	18	40	66	1930	KF102M100K400A
<b>160</b>	0.47	5	11	18500	36	KFR47M160C110A
	1	6.3	11	12000	45	KF010M160E110A
	2.2	6.3	11	9900	55	KF2R2M160E110A
	3.3	8	11.5	4310	70	KF3R3M160F115A
	4.7	8	11.5	4160	80	KF4R7M160F115A
	5.6	10	12.5	3610	91	KF5R6M160G125A
	6.8	10	16	3120	100	KF6R8M160G160A
	10	10	12.5	3000	126	KF100M160G125A
	10	10	16	2690	140	KF100M160G160A
	22	10	16	1300	205	KF220M160G160A
	33	10	20	1100	260	KF330M160G200A
	47	10	20	1650	276	KF470M160G200A
	47	13	20	910	320	KF470M160I200A
	56	13	20	670	340	KF560M160I200A
	56	13	25	660	370	KF560M160I250A
	68	13	25	560	450	KF680M160I250A
	100	16	25	470	540	KF101M160J250A
	120	16	25	350	560	KF121M160J250A
	150	16	31.5	260	710	KF151M160J315A
	180	16	35.5	220	760	KF181M160J355A
220	16	35.5	190	820	KF221M160J355A	
270	18	35.5	180	990	KF271M160K355A	
330	18	40	160	1180	KF331M160K400A	
<b>200</b>	0.47	5	11	16500	36	KFR47M200C110A
	0.47	6.3	11	16500	41	KFR47M200E110A
	1	6.3	11	7760	45	KF010M200E110A
	2.2	6.3	11	5180	55	KF2R2M200E110A
	3.3	8	11.5	4250	71	KF3R3M200F115A
	4.7	8	11.5	5000	78	KF4R7M200F115A
	4.7	10	12.5	4120	85	KF4R7M200G125A
	5.6	8	11.5	4500	90	KF5R6M200F115A
	5.6	10	12.5	3550	95	KF5R6M200G125A
	6.8	8	16	3250	115	KF6R8M200F160A
	6.8	10	16	2710	140	KF6R8M200G160A
	10	8	11.5	3750	115	KF100M200F115A
	10	10	16	2020	150	KF100M200G160A

See "PACKAGING INFORMATION" to taped or formed products.



**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
200	22	10	16	1800	186	KF220M200G160A
	22	10	20	1400	205	KF220M200G200A
	33	10	20	1000	280	KF330M200G200A
	33	13	20	800	330	KF330M200I200A
	47	10	20	720	311	KF470M200G200A
	47	13	20	650	360	KF470M200I200A
	47	13	25	620	400	KF470M200I250A
	56	13	20	450	430	KF560M200I200A
	68	13	25	420	480	KF680M200I250A
	68	16	25	350	540	KF680M200J250A
	100	16	25	300	780	KF101M200J250A
	100	16	31.5	280	820	KF101M200J315A
	120	16	25	280	740	KF121M200J250A
	120	16	31.5	260	830	KF121M200J315A
	150	16	31.5	250	840	KF151M200J315A
	150	16	35.5	230	860	KF151M200J355A
	180	18	31.5	200	920	KF181M200K315A
220	18	35.5	190	1050	KF221M200K355A	
220	18	40	160	1090	KF221M200K400A	
250	0.47	5	11	8850	40	KFR47M250C110A
	1	6.3	11	6540	50	KF010M250E110A
	2.2	8	11.5	4120	72	KF2R2M250F115A
	3.3	8	11.5	3850	75	KF3R3M250F115A
	4.7	8	11.5	3500	85	KF4R7M250F115A
	4.7	10	12.5	2950	100	KF4R7M250G125A
	5.6	8	11.5	2930	95	KF5R6M250F115A
	5.6	10	12.5	2900	105	KF5R6M250G125A
	6.8	8	16	2800	124	KF6R8M250F160A
	6.8	10	12.5	2800	126	KF6R8M250G125A
	6.8	10	16	1860	140	KF6R8M250G160A
	10	8	16	1800	141	KF100M250F160A
	10	10	12.5	1750	144	KF100M250G125A
	10	10	16	1600	160	KF100M250G160A
	22	10	16	1400	190	KF220M250G160A
	22	10	20	1300	210	KF220M250G200A
	33	10	20	1400	224	KF330M250G200A
	33	10	25	1250	248	KF330M250G250A
	33	13	20	900	310	KF330M250I200A
	47	13	20	600	375	KF470M250I200A
	47	13	25	450	405	KF470M250I250A
	56	13	25	420	420	KF560M250I250A
	68	16	25	380	490	KF680M250J250A
100	16	31.5	270	675	KF101M250J315A	

See "PACKAGING INFORMATION" to taped or formed products.

**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
250	120	16	31.5	260	692	KF121M250J315A
	120	16	35.5	250	730	KF121M250J355A
	150	16	35.5	240	750	KF151M250J355A
	150	18	31.5	230	750	KF151M250K315A
	180	18	35.5	210	830	KF181M250K355A
	220	18	31.5	200	850	KF221M250K315A
	220	18	40	190	910	KF221M250K400A
350	0.47	6.3	11	8820	40	KFR47M350E110A
	1	6.3	11	7900	50	KF010M350E110A
	1	8	11.5	6350	58	KF010M350F115A
	2.2	8	11.5	5300	75	KF2R2M350F115A
	2.2	10	12.5	4020	86	KF2R2M350G125A
	3.3	10	12.5	3800	90	KF3R3M350G125A
	3.3	10	16	3520	100	KF3R3M350G160A
	4.7	10	16	3130	118	KF4R7M350G160A
	4.7	10	20	2770	130	KF4R7M350G200A
	5.6	10	16	2760	120	KF5R6M350G160A
	5.6	10	20	2580	132	KF5R6M350G200A
	6.8	10	16	2430	148	KF6R8M350G160A
	6.8	10	25	1650	180	KF6R8M350G250A
	10	10	16	1640	165	KF100M350G160A
	10	10	25	1350	200	KF100M350G250A
	22	13	20	1220	220	KF220M350I200A
	33	13	20	1020	263	KF330M350I200A
	33	13	25	860	290	KF330M350I250A
	47	16	25	760	389	KF470M350J250A
	47	16	31.5	620	430	KF470M350J315A
	56	16	35.5	600	460	KF560M350J355A
	68	16	31.5	570	475	KF680M350J315A
	100	16	35.5	560	481	KF101M350J355A
100	18	31.5	560	487	KF101M350K315A	
100	18	35.5	550	513	KF101M350K355A	
120	18	35.5	540	525	KF121M350K355A	
120	18	40	520	560	KF121M350K400A	
150	18	40	500	590	KF151M350K400A	
400	0.47	6.3	11	33000	26	KFR47M400E110A
	1	8	11.5	16500	36	KF010M400F115A
	2.2	8	11.5	13000	65	KF2R2M400F115A
	2.2	10	12.5	13000	76	KF2R2M400G125A
	3.3	8	9	14000	78	KF3R3M400F090A
	3.3	8	11.5	12000	86	KF3R3M400F115A
	4.7	8	11.5	11000	89	KF4R7M400F115A
	4.7	10	12.5	10000	105	KF4R7M400G125A

See "PACKAGING INFORMATION" to taped or formed products.

**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu$ F)	$\phi$ D (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
400	5.6	8	16	8000	105	KF5R6M400F160A
	5.6	10	12.5	9000	120	KF5R6M400G125A
	6.8	10	12.5	7700	144	KF6R8M400G125A
	6.8	10	16	7500	160	KF6R8M400G160A
	10	10	14	5000	201	KF100M400G140A
	10	10	16	3800	213	KF100M400G160A
	10	10	20	3600	235	KF100M400G200A
	15	10	20	3000	240	KF150M400G200A
	22	13	16	2800	268	KF220M400I160A
	22	13	20	2650	295	KF220M400I200A
	33	13	20	1800	399	KF330M400I200A
	33	13	25	1600	440	KF330M400I250A
	33	16	20	1900	459	KF330M400J200A
	47	16	20	1600	539	KF470M400J200A
	47	16	25	1400	580	KF470M400J250A
	56	16	25	1030	587	KF560M400J250A
	56	16	31.5	850	650	KF560M400J315A
	68	16	31.5	800	800	KF680M400J315A
	68	18	25	760	774	KF680M400K250A
	100	18	31.5	700	854	KF101M400K315A
100	18	35.5	680	900	KF101M400K355A	
120	18	35.5	580	930	KF121M400K355A	
420	0.47	6.3	11	34000	28	KFR47M420E110A
	1	8	11.5	17000	38	KF010M420F115A
	2.2	10	12.5	12100	58	KF2R2M420G125A
	3.3	10	12.5	11000	87	KF3R3M420G125A
	4.7	10	16	8500	102	KF4R7M420G160A
	5.6	10	16	6800	109	KF5R6M420G160A
	6.8	10	16	6000	160	KF6R8M420G160A
	10	10	20	3700	180	KF100M420G200A
	22	13	25	2700	330	KF220M420I250A
	33	16	25	1800	480	KF330M420J250A
	47	16	31.5	1100	620	KF470M420J315A
	56	16	35.5	900	670	KF560M420J355A
	68	18	31.5	800	750	KF680M420K315A
	100	18	35.5	700	820	KF101M420K355A
450	0.47	8	11.5	34000	30	KFR47M450F115A
	1	8	11.5	17350	45	KF010M450F115A
	2.2	10	16	10250	65	KF2R2M450G160A
	3.3	10	16	10000	89	KF3R3M450G160A
	4.7	10	20	5000	105	KF4R7M450G200A
	5.6	10	20	4750	110	KF5R6M450G200A
	6.8	10	20	4050	135	KF6R8M450G200A

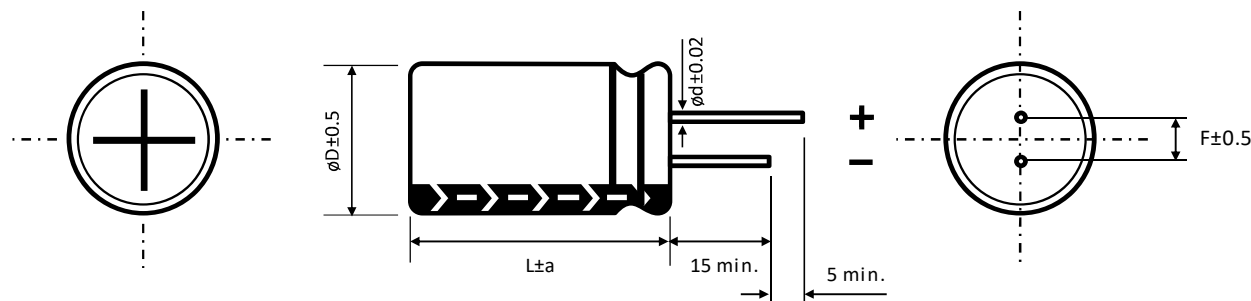
See "PACKAGING INFORMATION" to taped or formed products.

**STANDARD RATINGS**

Part number shows bulk version with straight leads

$V_R$ (V)	$C_R$ ( $\mu F$ )	$\phi D$ (mm)	L (mm)	Z = Max. Impedance +20°C = 100kHz (m $\Omega$ )	$I_R$ = Max. Ripple Current +105°C = 100kHz (mA rms)	CapXon Part Number
450	10	10	20	7000	163	KF100M450G200A
	10	10	25	3750	180	KF100M450G250A
	10	13	20	6800	189	KF100M450I200A
	22	13	25	2800	320	KF220M450I250A
	33	16	25	2200	460	KF330M450J250A
	33	18	20	2700	458	KF330M450K200A
	47	16	35.5	1050	650	KF470M450J355A
	47	18	25	1650	596	KF470M450K250A
	56	18	31.5	950	730	KF560M450K315A
	68	18	31.5	800	721	KF680M450K315A
	68	18	35.5	750	760	KF680M450K355A
	100	18	35.5	1100	825	KF101M450K355A
	100	18	40	740	880	KF101M450K400A
120	18	40	1000	980	KF121M450K400A	

See "PACKAGING INFORMATION" to taped or formed products.

**DIMENSIONS** - All dimensions in mm


$\phi D$	5	6.3	8		10	13	16	18
F	2	2.5	3.5		5	5	7.5	7.5
$\phi d$	0.5		L < 20	L $\geq$ 20	0.6		0.8	
			0.5	0.6				

a	$\phi D < 16$	$\phi D = 16$		$\phi D = 18$	
	1.5		L = 25 to 35.5	L < 25 and L $\geq$ 40	L = 25 to 31.5
		1.5	2	1.5	2

**MULTIPLIER  $K_f$  for RIPPLE CURRENT vs. FREQUENCY**

$C_R$ ( $\mu F$ ) / Frequency (Hz)	50/60	100/120	400	1k	10k	100k
$C_R \leq 10$	0.47	0.59	0.76	0.85	0.97	1
$10 < C_R \leq 100$	0.52	0.62	0.8	0.89	0.97	1
$100 < C_R \leq 1000$	0.58	0.72	0.84	0.9	0.98	1
$1000 \leq C_R$	0.63	0.78	0.87	0.91	0.98	1

**PRECAUTIONS, GUIDELINES AND PACKAGING INFORMATION**

Unless otherwise agreed in individual specifications, all products are subject to our “General Precautions and Guidelines” as well as our “Packaging Information”. Please refer to the following links in the table.

General Precautions and Guidelines	Packaging Information Liquid Radial
Page 836	Page 336

**DISCLAIMER**

All product related data (e.g. specification, statements and general information) are subject to change without any notice. It is necessary that the customer observes all product related technical / application information and handling instructions.

CapXon products are designed and manufactured according to severe quality and safety standards. Under no circumstance, CapXon warrants that any CapXon product is suitable for the purposes intended for your application, even CapXon knows the application. It is customer's duty and obligation to check and make sure that CapXon products are suitable for the purposes intended and select the correct and proper CapXon product. Customers are requested to perform a sufficient validation and reliability evaluation to assure needed safety level and reliability performance by suitable designs and to apply proper safeguards (e.g. redundancies, protective circuits).

Particular operating conditions (ambient temperature, ripple current, voltage, thermal resistance, etc.) as well as storage, production or assembly may affect the performance and the lifetime of the capacitor. Please consult CapXon for lifetime estimation, failure mode considerations or worst-case scenarios according to the product technology, product tolerances / deviations or change of the characteristics of the capacitor due to shipment, storage, handling, production and usage.

For aerospace or military application, life-saving, life-sustaining, safety critical applications or any application where failure may cause severe personal injury or death, please consult us before design-in the capacitor in your application.

Except for the written expressed warranties, CapXon does not impliedly, by assumption or whatever else, warrant, undertake, promise any other warranty or guaranty for any CapXon product.

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