

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)



Overview

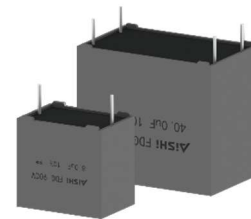
The FDQ capacitor is constructed of metallized polypropylene film encapsulated with epoxy resin in a plastic box, with 2 or 4 tinned copper wire. These FDQ series is suitable for harsh environment and qualify in accordance to AEC-Q200D requirement.

Applications

Widely used in high performance DC Link, DC filtering, frequency converter, industrial power supply, solar inverter, energy storage and automotive.

Features

- Self-healing
- High capacitance density
- High ripple current and low loss
- High contact reliability
- Suitable for high frequency applications
- Suitable for harsh environmental conditions
- Automotive Grade (AEC-Q200D)
- Maximum Operation Temperature 125°C (Case)

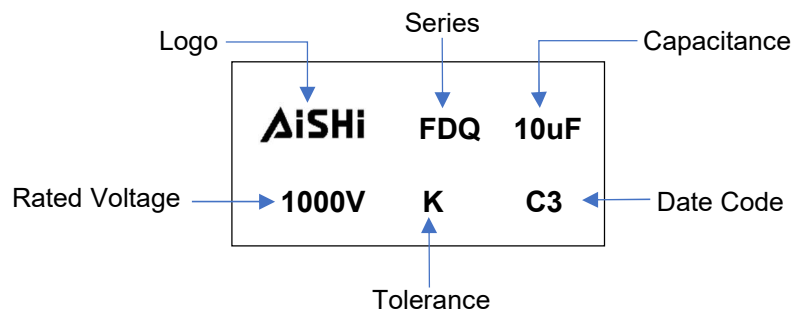


Qualification

Reference Standard	IEC 61071, EN 61071, AEC-Q200D
Climate Category	40/105/56 IEC 60068-1



Marking



Manufacturing Date Code

Year	Code	Month	Code
2018	A	Jan	1
2019	B	Feb	2
2020	C	Mar	3
2021	D	Apr	4
2022	E	May	5
2023	F	Jun	6

Year	Code	Month	Code
2024	G	Jul	7
2025	H	Aug	8
2026	J	Sep	9
2027	K	Oct	A
2028	L	Nov	N
2029	M	Dec	D

Part Number System

F	DQ	3K	J	106	M52	4MD	5
Capacitor Type	Series	Voltage (VDC)	Tolerance	Capacitance (pF)	Size Code	Terminal Code	Lead Length Code
F = Film	DC Link, AEC-Q200 Type, Metallized PP Film	450=2W 500=2H 550=2J 600=2K 700=2M 800=2N 900=2Q 1000=3K 1100=3M 1200=3B	J = ±5% K = ±10% M = ±20%	First two digits = significant figures. Third digit = Number of zeros.	Refer to Size Code Table	Refer to Terminal Code Table	Refer to Lead Length Code Table

Terminal Code

Digit One (Lead/Terminal Type)		Digit Two (Lead Space)		Digit Three (Lead Ipsilateral)	
2 leads for long	L	27.5mm	G	10.2mm	B
2 leads for straight cut	2	37.5mm	K	12.7mm	G
2 leads for forming cut	E	57.5mm	M	20.3mm	D
4 leads for straight cut	4	N/A	N	N/A	L
6 leads for straight cut	6				

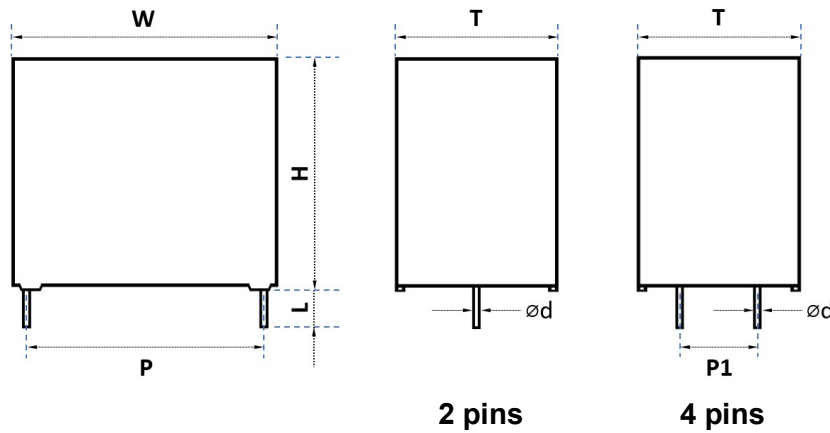
Lead Length Code

Lead Length	
3.0mm	3
4.0mm	4
5.0mm	5
7.0mm	7
20.0mm min	L

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Dimension (mm)



Size Code Table (mm)

Size Code	Dimension						Pitch				Lead Wire	
	W	Tolerance	H	Tolerance	T	Tolerance	P	Tolerance	P1	Tolerance	ϕd	Tolerance
G15	32.0	0.8	18.0	0.8	9.0	0.8	27.5	0.5	\	\	0.8	0.05
G18	32.0	0.8	20.0	0.8	11.0	0.8	27.5	0.5	\	\	0.8	0.05
G21	32.0	0.8	22.0	0.8	13.0	0.8	27.5	0.5	\	\	0.8	0.05
G27	32.0	0.8	24.5	0.8	15.0	0.8	27.5	0.5	\	\	0.8	0.05
G33	32.0	0.8	28.0	0.8	18.0	0.8	27.5	0.5	\	\	0.8	0.05
G34	32.0	0.8	33.0	0.8	18.0	0.8	27.5	0.5	\	\	0.8	0.05
G37	32.0	0.8	31.0	0.8	21.0	0.8	27.5	0.5	\	\	0.8	0.05
G57	32.0	0.8	35.0	0.8	20.0	0.8	27.5	0.5	\	\	0.8	0.05
G40	32.0	0.8	37.0	0.8	22.0	0.8	27.5	0.5	10.2	0.5	1.2	0.05
K22	42.5	0.8	36.0	0.8	19.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K23	42.5	0.8	38.0	0.8	20.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K24	42.5	0.8	40.0	0.8	20.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K26	42.5	0.8	33.5	0.8	22.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K27	42.5	0.8	37.0	0.8	22.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K30	42.5	0.8	18.0	0.8	24.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K32	42.5	0.8	44.0	0.8	24.0	0.8	37.5	0.5	10.2	0.5	1.2	0.05
K42	42.5	0.8	45.0	0.8	30.0	0.8	37.5	0.5	20.3	0.5	1.2	0.05
K47	42.5	0.8	50.0	0.8	35.0	0.8	37.5	0.5	20.3	0.5	1.2	0.05
M10	57.5	1.0	45.0	1.0	25.0	1.0	52.5	0.5	10.2	0.5	1.2	0.05
M16	57.5	1.0	45.0	1.0	30.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M20	57.5	1.0	50.0	1.0	35.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M30	57.5	1.0	22.0	1.0	43.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M31	57.5	1.0	45.0	1.0	45.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M32	57.5	1.0	55.0	1.0	45.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M43	57.5	1.0	65.0	1.0	70.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05
M54	57.5	1.0	65.0	1.0	130.0	1.0	52.5	0.5	20.3	0.5	1.2	0.05

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)



Rating and Part Number

Vdc	Cap Value µF	Dimensions					I _{rms} 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
450	1	32.0	18.0	9.0	27.5	\	2.5	75	225	54.0	25	44.4	75	0.8	FDQ2WK105G152GL5
450	2	32.0	18.0	9.0	27.5	\	3.0	150	450	34.5	25	48.3	75	0.8	FDQ2WK205G152GL5
450	3	32.0	20.0	11.0	27.5	\	4.0	225	675	23.0	25	40.8	75	0.8	FDQ2WK305G182GL5
450	4	32.0	20.0	11.0	27.5	\	4.0	300	900	20.5	25	45.7	75	0.8	FDQ2WK405G182GL5
450	5	32.0	22.0	13.0	27.5	\	5.0	375	1125	16.5	25	36.4	75	0.8	FDQ2WK505G212GL5
450	6	32.0	24.5	15.0	27.5	\	6.0	450	1350	13.5	25	30.9	75	0.8	FDQ2WK605G272GL5
450	7	32.0	24.5	15.0	27.5	\	6.5	525	1575	11.5	25	30.9	75	0.8	FDQ2WK705G272GL5
450	8	32.0	28.0	18.0	27.5	\	8.5	600	1800	8.5	25	24.4	75	0.8	FDQ2WK805G332GL5
450	9	32.0	28.0	18.0	27.5	\	8.5	675	2025	9.0	25	23.1	75	0.8	FDQ2WK905G332GL5
450	10	32.0	28.0	18.0	27.5	\	9.0	750	2250	8.0	25	23.1	75	0.8	FDQ2WK106G332GL5
450	10	42.5	36.0	19.0	37.5	10.2	8.0	400	1200	12.0	30	19.5	40	1.2	FDQ2WK106K224KB5
450	12	32.0	31.0	21.0	27.5	\	10.0	900	2700	7.0	25	21.4	75	0.8	FDQ2WK126G372GL5
450	12	32.0	33.0	18.0	27.5	\	10.0	720	2160	7.0	25	20.5	60	0.8	FDQ2WK126G342GL5
450	12	42.5	36.0	19.0	37.5	10.2	8.5	480	1440	10.0	30	20.8	40	1.2	FDQ2WK126K224KB5
450	15	32.0	35.0	20.0	27.5	\	11.5	1125	3375	6.0	25	18.9	75	0.8	FDQ2WK156G572GL5
450	15	32.0	37.0	22.0	27.5	10.2	11.5	900	2700	6.0	25	14.5	60	1.2	FDQ2WK156G404GB5
450	15	42.5	36.0	19.0	37.5	10.2	10.0	600	1800	8.0	30	18.8	40	1.2	FDQ2WK156K224KB5
450	15	42.5	18.0	24.0	37.5	10.2	9.5	450	1350	8.5	25	15.5	30	1.2	FDQ2WK156K304KB5
450	18	32.0	37.0	22.0	27.5	10.2	10.0	1080	3240	6.0	28	13.8	60	1.2	FDQ2WK186G404GB5
450	20	32.0	37.0	22.0	27.5	10.2	11.0	1200	3600	5.0	28	12.8	60	1.2	FDQ2WK206G404GB5
450	20	42.5	38.0	20.0	37.5	10.2	12.0	800	2400	6.0	30	17.4	40	1.2	FDQ2WK206K234KB5
450	22	32.0	37.0	22.0	27.5	10.2	12.5	1320	3960	5.0	28	12.8	60	1.2	FDQ2WK226G404GB5
450	22	42.5	38.0	20.0	37.5	10.2	11.5	880	2640	6.5	30	17.4	40	1.2	FDQ2WK226K234KB5
450	25	42.5	38.0	20.0	37.5	10.2	12.5	1000	3000	5.5	30	17.5	40	1.2	FDQ2WK256K234KB5
450	25	42.5	37.0	22.0	37.5	10.2	12.5	875	2625	5.5	30	12.3	35	1.2	FDQ2WK256K274KB5
450	30	42.5	44.0	24.0	37.5	10.2	15.0	1200	3600	4.5	30	14.8	40	1.2	FDQ2WK306K324KB5
450	30	42.5	40.0	20.0	37.5	10.2	12.0	1050	3150	6.0	30	11.6	35	1.2	FDQ2WK306K244KB5
450	35	42.5	45.0	30.0	37.5	20.3	18.5	1400	4200	3.5	30	12.5	40	1.2	FDQ2WK356K424KD5
450	40	42.5	45.0	30.0	37.5	20.3	18.5	1600	4800	3.5	30	12.5	40	1.2	FDQ2WK406K424KD5
450	40	42.5	44.0	24.0	37.5	10.2	15.0	1400	4200	5.2	30	9.0	35	1.2	FDQ2WK406K324KB5
450	40	57.5	45.0	25.0	52.5	10.2	13.5	800	2400	6.0	35	13.7	20	1.2	FDQ2WK406M104MB5
450	45	57.5	45.0	25.0	52.5	10.2	13.5	900	2700	6.0	35	13.7	20	1.2	FDQ2WK456M104MB5
450	50	42.5	45.0	30.0	37.5	20.3	15.0	1750	5250	4.0	30	11.1	35	1.2	FDQ2WK506K424KD5
450	50	57.5	45.0	30.0	52.5	20.3	15.5	1000	3000	5.0	35	12.5	20	1.2	FDQ2WK506M164MD5
450	55	57.5	45.0	30.0	52.5	20.3	15.5	1100	3300	5.0	35	12.5	20	1.2	FDQ2WK556M164MD5
450	60	42.5	45.0	30.0	37.5	20.3	16.5	2100	6300	4.0	30	8.6	35	1.2	FDQ2WK606K424KD5
450	60	57.5	45.0	30.0	52.5	20.3	16.5	1200	3600	4.5	35	12.2	20	1.2	FDQ2WK606M164MD5
450	65	57.5	50.0	35.0	52.5	20.3	20.5	1300	3900	3.5	35	10.2	20	1.2	FDQ2WK656M204MD5
450	70	57.5	50.0	35.0	52.5	20.3	19.0	1400	4200	4.0	35	10.4	20	1.2	FDQ2WK706M204MD5
450	75	57.5	50.0	35.0	52.5	20.3	20.5	1500	4500	3.5	35	10.2	20	1.2	FDQ2WK756M204MD5
450	80	57.5	50.0	35.0	52.5	20.3	20.5	1600	4800	3.5	35	10.2	20	1.2	FDQ2WK806M204MD5
450	80	57.5	45.0	30.0	52.5	20.3	16.0	1600	4800	4.0	35	7.4	20	1.2	FDQ2WK806M164MD5
450	90	57.5	45.0	45.0	52.5	20.3	21.5	1800	5400	3.0	35	10.8	20	1.2	FDQ2WK906M314MD5
450	95	57.5	45.0	45.0	52.5	20.3	21.5	1900	5700	3.0	35	10.8	20	1.2	FDQ2WK956M314MD5
450	100	57.5	45.0	45.0	52.5	20.3	23.5	2000	6000	2.5	35	10.9	20	1.2	FDQ2WK107M314MD5
450	100	57.5	50.0	35.0	52.5	20.3	18.0	2000	6000	3.8	35	6.2	20	1.2	FDQ2WK107M204MD5
450	200	57.5	65.0	70.0	52.5	20.3	30.5	4000	12000	2.0	35	8.1	20	1.2	FDQ2WK207M436MD5
450	400	57.5	65.0	130.0	52.5	20.3	50.5	8000	24000	1.5	35	3.9	20	1.2	FDQ2WK407M54EMD5

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Rating and Part Number

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
550	10	32.0	33.0	18.0	27.5	\	10.0	600	1800	8.0	25	12.5	60	0.8	FDQ2JK106G342GL5
550	15	32.0	37.0	22.0	27.5	10.2	12.0	900	2700	6.5	28	9.1	60	1.2	FDQ2JK156G404GB5
550	15	42.5	18.0	24.0	37.5	10.2	10.5	900	2700	6.5	28	8.3	60	1.2	FDQ2JK156K304KB5
550	20	42.5	40.0	20.0	37.5	10.2	12.5	700	2100	6.5	30	9.8	35	1.2	FDQ2JK206K244KB5
550	22	42.5	40.0	20.0	37.5	10.2	13.5	770	2310	6.5	30	8.4	35	1.2	FDQ2JK226K244KB5
550	25	42.5	40.0	20.0	37.5	10.2	14.5	875	2625	6.5	30	7.3	35	1.2	FDQ2JK256K244KB5
550	30	42.5	44.0	24.0	37.5	10.2	16.0	1050	3150	6.0	30	6.5	35	1.2	FDQ2JK306K324KB5
550	35	42.5	45.0	30.0	37.5	20.3	18.0	1225	3675	6.0	30	5.1	35	1.2	FDQ2JK356K424KD5
550	40	42.5	45.0	30.0	37.5	20.3	18.0	1400	4200	5.5	30	5.1	35	1.2	FDQ2JK406K424KD5
550	50	42.5	50.0	35.0	37.5	20.3	20.0	1750	5250	5.0	30	5.0	35	1.2	FDQ2JK506K474KD5
550	60	57.5	45.0	30.0	52.5	20.3	18.0	1200	3600	4.8	35	6.2	20	1.2	FDQ2JK606M164MD5
550	75	57.5	50.0	35.0	52.5	20.3	20.0	1500	4500	5.0	35	5.0	20	1.2	FDQ2JK756M204MD5
550	100	57.5	55.0	45.0	52.5	20.3	24.0	2000	6000	4.5	35	3.9	20	1.2	FDQ2JK107M324MD5
550	110	57.5	55.0	45.0	52.5	20.3	26.0	2200	6600	4.0	35	3.7	20	1.2	FDQ2JK117M324MD5
600	10	32.0	33.0	18.0	27.5	\	8.5	600	1800	7.5	25	19.8	60	0.8	FDQ2KK106G342GL5
600	12	32.0	33.0	18.0	27.5	\	9.5	720	2160	7.5	25	15.8	60	0.8	FDQ2KK126G342GL5
600	12	42.5	18.0	24.0	37.5	10.2	8.0	420	1260	9.5	25	16.8	35	1.2	FDQ2KK126K304KB5
600	15	32.0	37.0	22.0	27.5	10.2	10.5	900	2700	7.5	28	12.1	60	1.2	FDQ2KK156G404GB5
600	15	42.5	18.0	24.0	37.5	10.2	12.0	525	1575	6.0	28	16.2	35	1.2	FDQ2KK156K304KB5
600	20	42.5	40.0	20.0	37.5	10.2	11.0	700	2100	6.0	30	13.8	35	1.2	FDQ2KK206K244KB5
600	35	42.5	44.0	24.0	37.5	10.2	16.5	1225	3675	5.0	30	8.5	35	1.2	FDQ2KK356K324KB5
600	40	42.5	45.0	30.0	37.5	20.3	18.0	1400	4200	4.0	30	7.7	35	1.2	FDQ2KK406K424KD5
600	50	57.5	50.0	35.0	52.5	20.3	14.0	1000	3000	6.5	35	7.8	20	1.2	FDQ2KK506M204MD5
600	60	57.5	50.0	35.0	52.5	20.3	16.0	1200	3600	5.0	35	7.8	20	1.2	FDQ2KK606M204MD5
600	70	57.5	50.0	35.0	52.5	20.3	18.0	1400	4200	5.0	35	6.2	20	1.2	FDQ2KK706M204MD5
600	80	57.5	55.0	45.0	52.5	20.3	20.0	1600	4800	4.0	35	6.3	20	1.2	FDQ2KK806M324MD5
600	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	5400	4.0	35	4.3	20	1.2	FDQ2KK906M324MD5
700	1	32.0	18.0	9.0	27.5	\	2.5	75	225	54.0	25	44.4	75	0.8	FDQ2MK105G152GL5
700	2	32.0	18.0	9.0	27.5	\	3.0	150	450	34.5	25	48.3	75	0.8	FDQ2MK205G152GL5
700	3	32.0	20.0	11.0	27.5	\	4.0	225	675	23.0	25	40.8	75	0.8	FDQ2MK305G182GL5
700	4	32.0	22.0	13.0	27.5	\	5.0	300	900	17.0	25	35.3	75	0.8	FDQ2MK405G212GL5
700	5	32.0	24.5	15.0	27.5	\	6.0	375	1125	14.0	25	29.8	75	0.8	FDQ2MK505G272GL5
700	6	32.0	28.0	18.0	27.5	\	7.5	450	1350	11.5	25	23.2	75	0.8	FDQ2MK605G332GL5
700	7	32.0	28.0	18.0	27.5	\	8.0	525	1575	10.0	25	23.4	75	0.8	FDQ2MK705G332GL5
700	8	32.0	28.0	18.0	27.5	\	8.5	600	1800	8.5	25	24.4	75	0.8	FDQ2MK805G332GL5
700	8	32.0	33.0	18.0	27.5	\	9.0	480	1440	10.0	25	12.3	60	0.8	FDQ2MK805G342GL5
700	9	32.0	31.0	21.0	27.5	\	10.0	675	2025	7.5	25	20.0	75	0.8	FDQ2MK905G372GL5
700	10	32.0	31.0	21.0	27.5	\	10.0	750	2250	7.0	25	21.4	75	0.8	FDQ2MK106G372GL5
700	10	32.0	33.0	18.0	27.5	\	10.0	600	1800	7.0	25	14.3	60	0.8	FDQ2MK106G342GL5
700	10	32.0	37.0	22.0	27.5	10.2	12.0	600	1800	6.5	28	10.7	60	1.2	FDQ2MK106G404GB5
700	10	42.5	36.0	19.0	37.5	10.2	8.0	400	1200	12.0	30	19.5	40	1.2	FDQ2MK106K224KB5
700	10	42.5	18.0	24.0	37.5	10.2	11.5	350	1050	7.5	30	10.1	35	1.2	FDQ2MK106K304KB5
700	12	32.0	35.0	20.0	27.5	\	11.5	900	2700	6.0	25	18.9	75	0.8	FDQ2MK126G572GL5
700	12	32.0	37.0	22.0	27.5	10.2	12.5	720	2160	6.0	28	9.2	60	1.2	FDQ2MK126G404GB5
700	12	42.5	36.0	19.0	37.5	10.2	8.5	480	1440	10.0	30	20.8	40	1.2	FDQ2MK126K224KB5
700	12	42.5	18.0	24.0	37.5	10.2	12.0	420	1260	7.0	30	9.8	35	1.2	FDQ2MK126K304KB5
700	15	42.5	36.0	19.0	37.5	10.2	10.0	600	1800	8.0	30	18.8	40	1.2	FDQ2MK156K224KB5
700	15	42.5	33.5	22.0	37.5	10.2	10.0	525	1575	8.0	30	12.5	35	1.2	FDQ2MK156K264KB5

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)



Rating and Part Number

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
700	15	42.5	40.0	20.0	37.5	10.2	10.0	525	1575	8.0	30	12.5	35	1.2	FDQ2MK156K244KB5
700	20	42.5	38.0	20.0	37.5	10.2	12.0	800	2400	6.0	30	17.4	40	1.2	FDQ2MK206K234KB5
700	22	42.5	44.0	24.0	37.5	10.2	13.5	880	2640	5.5	30	15.0	40	1.2	FDQ2MK226K324KB5
700	25	42.5	44.0	24.0	37.5	10.2	14.5	1000	3000	5.0	30	14.3	40	1.2	FDQ2MK256K324KB5
700	30	42.5	45.0	30.0	37.5	20.3	17.0	1200	3600	4.0	30	13.0	40	1.2	FDQ2MK306K424KD5
700	30	57.5	45.0	25.0	52.5	10.2	12.0	600	1800	8.0	35	13.0	20	1.2	FDQ2MK306M104MB5
700	35	42.5	45.0	30.0	37.5	20.3	18.5	1400	4200	3.5	30	12.5	40	1.2	FDQ2MK356K424KD5
700	35	42.5	50.0	35.0	37.5	20.3	20.0	1225	3675	5.5	30	6.3	35	1.2	FDQ2MK356K474KD5
700	35	57.5	45.0	25.0	52.5	10.2	12.5	700	2100	7.0	35	13.7	20	1.2	FDQ2MK356M104MB5
700	40	57.5	45.0	25.0	52.5	10.2	13.5	800	2400	6.0	35	13.7	20	1.2	FDQ2MK406M104MB5
700	40	57.5	45.0	30.0	52.5	20.3	14.0	800	2400	5.0	35	8.5	20	1.2	FDQ2MK406M164MD5
700	45	57.5	45.0	30.0	52.5	20.3	15.0	900	2700	5.5	35	12.1	20	1.2	FDQ2MK456M164MD5
700	50	57.5	45.0	30.0	52.5	20.3	15.5	1000	3000	5.0	35	12.5	20	1.2	FDQ2MK506M164MD5
700	55	57.5	50.0	35.0	52.5	20.3	18.0	1100	3300	4.5	35	10.3	20	1.2	FDQ2MK556M204MD5
700	60	57.5	50.0	35.0	52.5	20.3	19.0	1200	3600	4.0	35	10.4	20	1.2	FDQ2MK606M204MD5
700	65	57.5	50.0	35.0	52.5	20.3	20.5	1300	3900	3.5	35	10.2	20	1.2	FDQ2MK656M204MD5
700	70	57.5	45.0	45.0	52.5	20.3	20.0	1400	4200	3.5	35	10.7	20	1.2	FDQ2MK706M314MD5
700	75	57.5	45.0	45.0	52.5	20.3	21.5	1500	4500	3.0	35	10.8	20	1.2	FDQ2MK756M314MD5
700	80	57.5	45.0	45.0	52.5	20.3	21.5	1600	4800	3.0	35	10.8	20	1.2	FDQ2MK806M314MD5
700	80	57.5	55.0	45.0	52.5	20.3	22.0	1600	4800	3.5	35	5.9	20	1.2	FDQ2MK806M324MD5
700	90	57.5	55.0	45.0	52.5	20.3	24.0	1800	5400	3.5	35	5.0	20	1.2	FDQ2MK906M324MD5
700	160	57.5	65.0	70.0	52.5	20.3	30.5	3200	9600	2.5	35	6.4	20	1.2	FDQ2MK167M436MD5
700	320	57.5	65.0	130.0	52.5	20.3	54.0	6400	19200	1.3	35	4.0	20	1.2	FDQ2MK327M54EMD5
800	1	32.0	18.0	9.0	27.5	\	2.0	75	225	62.5	25	60.0	75	0.8	FDQ2NK105G152GL5
800	2	32.0	20.0	11.0	27.5	\	3.5	150	450	31.0	25	39.5	75	0.8	FDQ2NK205G182GL5
800	3	32.0	22.0	13.0	27.5	\	4.5	225	675	21.0	25	35.3	75	0.8	FDQ2NK305G212GL5
800	4	32.0	24.5	15.0	27.5	\	5.5	300	900	15.5	25	32.0	75	0.8	FDQ2NK405G272GL5
800	5	32.0	28.0	18.0	27.5	\	7.0	375	1125	12.5	25	24.5	75	0.8	FDQ2NK505G332GL5
800	6	32.0	28.0	18.0	27.5	\	7.5	450	1350	10.5	25	25.4	75	0.8	FDQ2NK605G332GL5
800	7	32.0	31.0	21.0	27.5	\	9.0	525	1575	9.0	25	20.6	75	0.8	FDQ2NK705G372GL5
800	8	32.0	31.0	21.0	27.5	\	9.5	600	1800	8.0	25	20.8	75	0.8	FDQ2NK805G372GL5
800	8	32.0	33.0	18.0	27.5	\	9.5	480	1440	9.5	25	14.3	60	0.8	FDQ2NK805G342GL5
800	9	32.0	35.0	20.0	27.5	\	10.0	675	2025	8.0	25	18.8	75	0.8	FDQ2NK905G572GL5
800	9	32.0	33.0	18.0	27.5	\	10.0	540	1620	8.5	25	9.1	60	0.8	FDQ2NK905G342GL5
800	10	32.0	37.0	22.0	27.5	10.2	11.5	600	1800	9.5	28	8.0	60	1.2	FDQ2NK106G404GB5
800	10	42.5	36.0	19.0	37.5	10.2	8.5	400	1200	11.0	30	18.9	40	1.2	FDQ2NK106K224KB5
800	12	42.5	36.0	19.0	37.5	10.2	9.0	480	1440	9.0	30	20.6	40	1.2	FDQ2NK126K224KB5
800	15	42.5	38.0	20.0	37.5	10.2	11.0	600	1800	7.5	30	16.5	40	1.2	FDQ2NK156K234KB5
800	15	42.5	40.0	20.0	37.5	10.2	10.0	525	1575	8.0	30	12.5	35	1.2	FDQ2NK156K244KB5
800	20	42.5	44.0	24.0	37.5	10.2	13.5	800	2400	5.5	30	15.0	40	1.2	FDQ2NK206K324KB5
800	22	42.5	45.0	30.0	37.5	20.3	15.5	880	2640	5.0	30	12.5	40	1.2	FDQ2NK226K424KD5
800	22	42.5	44.0	24.0	37.5	10.2	14.0	770	2310	6.0	30	9.3	35	1.2	FDQ2NK226K324KB5
800	25	42.5	45.0	30.0	37.5	20.3	16.0	1000	3000	4.5	30	13.0	40	1.2	FDQ2NK256K424KD5
800	30	42.5	45.0	30.0	37.5	20.3	16.0	1050	3150	4.5	30	8.7	35	1.2	FDQ2NK306K424KD5
800	30	57.5	45.0	25.0	52.5	10.2	12.0	600	1800	7.5	35	13.9	20	1.2	FDQ2NK306M104MB5
800	35	57.5	45.0	30.0	52.5	20.3	14.5	700	2100	6.0	35	11.9	20	1.2	FDQ2NK356M164MD5
800	40	57.5	45.0	30.0	52.5	20.3	15.0	800	2400	5.5	35	12.1	20	1.2	FDQ2NK406M164MD5
800	45	57.5	50.0	35.0	52.5	20.3	17.0	900	2700	5.0	35	10.4	20	1.2	FDQ2NK456M204MD5

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)



Rating and Part Number

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
800	45	57.5	45.0	30.0	52.5	20.3	15.5	900	2700	5.5	35	7.6	20	1.2	FDQ2NK456M164MD5
800	50	57.5	50.0	35.0	52.5	20.3	18.0	1000	3000	4.5	35	10.3	20	1.2	FDQ2NK506M204MD5
800	55	57.5	45.0	45.0	52.5	20.3	18.5	1100	3300	4.0	35	11.0	20	1.2	FDQ2NK556M314MD5
800	55	57.5	50.0	35.0	52.5	20.3	17.0	1100	3300	4.6	35	6.9	20	1.2	FDQ2NK556M204MD5
800	60	57.5	45.0	45.0	52.5	20.3	20.0	1200	3600	3.5	35	10.7	20	1.2	FDQ2NK606M314MD5
800	65	57.5	55.0	45.0	52.5	20.3	20.0	1300	3900	4.0	35	6.3	20	1.2	FDQ2NK656M324MD5
800	70	57.5	55.0	45.0	52.5	20.3	20.0	1400	4200	3.8	35	6.3	20	1.2	FDQ2NK706M324MD5
800	75	57.5	55.0	45.0	52.5	20.3	22.0	1500	4500	3.8	35	6.0	20	1.2	FDQ2NK756M324MD5
800	120	57.5	65.0	70.0	52.5	20.3	27.0	2400	7200	3.2	35	6.4	20	1.2	FDQ2NK127M436MD5
800	240	57.5	65.0	130.0	52.5	20.3	48.5	4800	14400	1.6	35	4.0	20	1.2	FDQ2NK247M54EMD5
900	1	32.0	18.0	9.0	27.5	\	2.0	80	240	63.0	25	59.5	80	0.8	FDQ2QK105G152GL5
900	2	32.0	22.0	13.0	27.5	\	3.5	160	480	32.0	25	38.3	80	0.8	FDQ2QK205G212GL5
900	3	32.0	24.5	15.0	27.5	\	5.0	240	720	21.0	25	28.6	80	0.8	FDQ2QK305G272GL5
900	4	32.0	28.0	18.0	27.5	\	6.0	320	960	16.0	25	26.0	80	0.8	FDQ2QK405G332GL5
900	5	32.0	31.0	21.0	27.5	\	7.5	400	1200	13.0	25	20.5	80	0.8	FDQ2QK505G372GL5
900	5	42.5	36.0	19.0	37.5	10.2	6.5	200	600	19.0	30	18.7	40	1.2	FDQ2QK505K224KB5
900	6	32.0	31.0	21.0	27.5	\	8.5	480	1440	10.0	25	20.8	80	0.8	FDQ2QK605G372GL5
900	6	32.0	33.0	18.0	27.5	\	8.0	360	1080	11.0	25	14.2	60	0.8	FDQ2QK605G342GL5
900	6	42.5	36.0	19.0	37.5	10.2	7.0	240	720	16.0	30	19.1	40	1.2	FDQ2QK605K224KB5
900	7	32.0	35.0	20.0	27.5	\	9.0	560	1680	9.0	25	20.6	80	0.8	FDQ2QK705G572GL5
900	7	42.5	36.0	19.0	37.5	10.2	7.0	280	840	16.0	30	19.1	40	1.2	FDQ2QK705K224KB5
900	8	32.0	37.0	22.0	27.5	10.2	10.5	480	1440	10.0	28	9.1	60	1.2	FDQ2QK805G404GB5
900	8	42.5	36.0	19.0	37.5	10.2	7.5	320	960	14.0	30	19.0	40	1.2	FDQ2QK805K224KB5
900	9	42.5	36.0	19.0	37.5	10.2	8.0	360	1080	12.0	30	19.5	40	1.2	FDQ2QK905K224KB5
900	10	32.0	37.0	22.0	27.5	10.2	12.0	600	1800	10.0	28	6.9	60	1.2	FDQ2QK106G404GB5
900	10	42.5	38.0	20.0	37.5	10.2	9.0	400	1200	11.0	30	16.8	40	1.2	FDQ2QK106K234KB5
900	10	42.5	40.0	20.0	37.5	10.2	9.5	350	1050	11.5	30	9.6	35	1.2	FDQ2QK106K244KB5
900	12	42.5	38.0	20.0	37.5	10.2	10.0	480	1440	9.0	30	16.7	40	1.2	FDQ2QK126K234KB5
900	15	42.5	44.0	24.0	37.5	10.2	12.0	600	1800	7.0	30	14.9	40	1.2	FDQ2QK156K324KB5
900	15	57.5	45.0	25.0	52.5	10.2	9.5	300	900	12.0	35	13.9	20	1.2	FDQ2QK156M104MB5
900	16	42.5	44.0	24.0	37.5	10.2	12.0	640	1920	7.0	30	14.9	40	1.2	FDQ2QK166K324KB5
900	18	42.5	44.0	24.0	37.5	10.2	12.0	630	1890	7.5	30	9.3	35	1.2	FDQ2QK186K324KB5
900	20	42.5	45.0	30.0	37.5	20.3	15.5	800	2400	5.0	30	12.5	40	1.2	FDQ2QK206K424KD5
900	20	57.5	45.0	25.0	52.5	10.2	10.0	400	1200	11.0	35	13.6	20	1.2	FDQ2QK206M104MB5
900	22	57.5	45.0	25.0	52.5	10.2	10.5	440	1320	10.0	35	13.6	20	1.2	FDQ2QK226M104MB5
900	25	57.5	45.0	30.0	52.5	20.3	11.5	500	1500	9.0	35	12.6	20	1.2	FDQ2QK256M164MD5
900	30	42.5	50.0	35.0	37.5	20.3	19.0	1200	3600	5.0	30	5.5	40	1.2	FDQ2QK306K474KD5
900	30	57.5	45.0	30.0	52.5	20.3	13.0	600	1800	7.0	35	12.7	20	1.2	FDQ2QK306M164MD5
900	35	57.5	50.0	35.0	52.5	20.3	15.5	700	2100	6.0	35	10.4	20	1.2	FDQ2QK356M204MD5
900	40	57.5	50.0	35.0	52.5	20.3	17.0	800	2400	5.0	35	10.4	20	1.2	FDQ2QK406M204MD5
900	45	57.5	45.0	45.0	52.5	20.3	16.5	900	2700	5.0	35	11.0	20	1.2	FDQ2QK456M314MD5
900	50	57.5	45.0	45.0	52.5	20.3	18.5	1000	3000	4.0	35	11.0	20	1.2	FDQ2QK506M314MD5
900	50	57.5	50.0	35.0	52.5	20.3	18.0	1000	3000	3.6	35	8.6	20	1.2	FDQ2QK506M204MD5
900	55	57.5	55.0	45.0	52.5	20.3	20.0	1100	3300	3.4	35	7.4	20	1.2	FDQ2QK556M324MD5
900	60	57.5	55.0	45.0	52.5	20.3	20.0	1200	3600	3.4	35	7.4	20	1.2	FDQ2QK606M324MD5
900	70	57.5	55.0	45.0	52.5	20.3	24.0	1400	4200	3.2	35	6.8	20	1.2	FDQ2QK706M324MD5
900	100	57.5	65.0	70.0	52.5	20.3	26.5	2000	6000	3.3	35	6.5	20	1.2	FDQ2QK107M436MD5
900	200	57.5	65.0	130.0	52.5	20.3	48.5	4000	12000	1.6	35	4.0	20	1.2	FDQ2QK207M54EMD5

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)



Rating and Part Number

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
1000	3	32.0	24.5	15.0	27.5	\	5.0	240	720	25.0	25	16.0	80	0.8	FDQ3KK305G272GL5
1000	5	32.0	33.0	18.0	27.5	\	8.0	400	1200	14.0	25	11.2	80	0.8	FDQ3KK505G342GL5
1000	8	32.0	37.0	22.0	27.5	10.2	10.0	640	1920	12.0	28	8.3	80	1.2	FDQ3KK805G404GB5
1000	10	42.5	40.0	20.0	37.5	10.2	9.5	400	1200	11.5	30	9.6	40	1.2	FDQ3KK106K244KB5
1000	12	42.5	44.0	24.0	37.5	10.2	10.5	480	1440	9.0	30	10.1	40	1.2	FDQ3KK126K324KB5
1000	15	42.5	44.0	24.0	37.5	10.2	12.0	600	1800	7.5	30	9.3	40	1.2	FDQ3KK156K324KB5
1000	15	42.5	45.0	30.0	37.5	20.3	14.0	600	1800	7.5	30	6.8	40	1.2	FDQ3KK156K424KD5
1000	15	57.5	22.0	43.0	52.5	20.3	12.0	600	1800	8.5	30	7.9	40	1.2	FDQ3KK156M304MD5
1000	20	42.5	45.0	30.0	37.5	20.3	15.0	800	2400	6.5	30	6.8	40	1.2	FDQ3KK206K424KD5
1000	25	42.5	50.0	35.0	37.5	20.3	18.0	1000	3000	5.5	30	5.6	40	1.2	FDQ3KK256K474KD5
1000	30	57.5	45.0	30.0	52.5	20.3	15.0	750	2250	5.5	35	8.1	25	1.2	FDQ3KK306M164MD5
1000	35	57.5	50.0	35.0	52.5	20.3	16.0	875	2625	5.5	35	7.1	25	1.2	FDQ3KK356M204MD5
1000	40	57.5	50.0	35.0	52.5	20.3	16.0	1000	3000	5.0	35	7.8	25	1.2	FDQ3KK406M204MD5
1000	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	3000	5.0	35	7.6	25	1.2	FDQ3KK406M324MD5
1000	50	57.5	55.0	45.0	52.5	20.3	19.0	1250	3750	4.5	35	6.2	25	1.2	FDQ3KK506M324MD5
1100	1	32.0	20.0	11.0	27.5	\	3.0	95	285	45.5	25	36.6	95	0.8	FDQ3MK105G182GL5
1100	2	32.0	24.5	15.0	27.5	\	4.5	190	570	23.0	25	32.2	95	0.8	FDQ3MK205G272GL5
1100	3	32.0	28.0	18.0	27.5	\	6.0	285	855	15.5	25	26.9	95	0.8	FDQ3MK305G332GL5
1100	4	32.0	31.0	21.0	27.5	\	8.0	380	1140	11.5	25	20.4	95	0.8	FDQ3MK405G372GL5
1100	4	32.0	33.0	18.0	27.5	\	8.0	320	960	10.5	25	14.9	80	0.8	FDQ3MK405G342GL5
1100	5	32.0	35.0	20.0	27.5	\	9.0	475	1425	9.5	25	19.5	95	0.8	FDQ3MK505G572GL5
1100	5	32.0	37.0	22.0	27.5	10.2	8.5	400	1200	9.5	28	14.6	80	1.2	FDQ3MK505G404GB5
1100	5	42.5	36.0	19.0	37.5	10.2	7.0	225	675	16.0	30	19.1	45	1.2	FDQ3MK505K224KB5
1100	6	42.5	36.0	19.0	37.5	10.2	7.5	270	810	13.5	30	19.8	45	1.2	FDQ3MK605K224KB5
1100	7	42.5	33.5	22.0	37.5	10.2	12.0	272	816	13.5	30	5.1	40	1.2	FDQ3MK685K264KB5
1100	7	42.5	38.0	20.0	37.5	10.2	8.5	315	945	11.5	30	18.1	45	1.2	FDQ3MK705K234KB5
1100	8	42.5	38.0	20.0	37.5	10.2	9.5	360	1080	10.0	30	16.6	45	1.2	FDQ3MK805K234KB5
1100	8	42.5	40.0	20.0	37.5	10.2	12.5	320	960	12.5	30	5.1	40	1.2	FDQ3MK805K244KB5
1100	8	42.5	37.0	22.0	37.5	10.2	12.5	320	960	12.5	30	5.1	40	1.2	FDQ3MK805K274KB5
1100	9	42.5	44.0	24.0	37.5	10.2	10.5	405	1215	9.0	30	15.1	45	1.2	FDQ3MK905K324KB5
1100	9	42.5	37.0	22.0	37.5	10.2	12.8	360	1080	12.2	30	5.0	40	1.2	FDQ3MK905K274KB5
1100	10	42.5	44.0	24.0	37.5	10.2	11.0	450	1350	8.0	30	15.5	45	1.2	FDQ3MK106K324KB5
1100	10	57.5	45.0	25.0	52.5	10.2	8.5	230	690	16.0	35	13.0	23	1.2	FDQ3MK106M104MB5
1100	12	42.5	45.0	30.0	37.5	20.3	13.5	540	1620	6.5	30	12.7	45	1.2	FDQ3MK126K424KD5
1100	12	57.5	45.0	25.0	52.5	10.2	9.0	276	828	13.0	35	14.2	23	1.2	FDQ3MK126M104MB5
1100	15	42.5	45.0	30.0	37.5	20.3	16.0	600	1800	7.0	30	5.4	40	1.2	FDQ3MK156K424KD5
1100	15	57.5	45.0	25.0	52.5	10.2	10.5	345	1035	10.5	35	13.0	23	1.2	FDQ3MK156M104MB5
1100	18	42.5	50.0	35.0	37.5	20.3	15.5	720	2160	7.5	30	5.5	40	1.2	FDQ3MK186K474KD5
1100	20	42.5	50.0	35.0	37.5	20.3	16.5	800	2400	7.2	35	5.5	40	1.2	FDQ3MK206K474KD5
1100	20	57.5	45.0	30.0	52.5	20.3	12.5	460	1380	8.0	35	12.0	23	1.2	FDQ3MK206M164MD5
1100	22	57.5	50.0	35.0	52.5	20.3	14.5	506	1518	7.0	35	10.2	23	1.2	FDQ3MK226M204MD5
1100	25	57.5	50.0	35.0	52.5	20.3	15.0	575	1725	6.5	35	10.3	23	1.2	FDQ3MK256M204MD5
1100	30	57.5	45.0	45.0	52.5	20.3	16.5	690	2070	5.0	35	11.0	23	1.2	FDQ3MK306M314MD5
1100	30	57.5	50.0	35.0	52.5	20.3	15.0	750	2250	5.0	35	8.9	25	1.2	FDQ3MK306M204MD5
1100	40	57.5	55.0	45.0	52.5	20.3	17.0	1000	3000	5.5	35	6.3	25	1.2	FDQ3MK406M324MD5
1100	60	57.5	65.0	70.0	52.5	20.3	40.0	1380	4140	2.5	35	3.8	23	1.2	FDQ3MK606M436MD5
1100	70	57.5	65.0	70.0	52.5	20.3	34.5	1610	4830	2.0	35	6.3	23	1.2	FDQ3MK706M436MD5
1100	120	57.5	65.0	130.0	52.5	20.3	39.5	2760	8280	2.4	35	4.0	23	1.2	FDQ3MK127M54EMD5

Metallized Polypropylene Film DC-Link Capacitors

FDQ Series - 450 ~ 1200VDC (Automotive Grade)




Rating and Part Number

Vdc	Cap Value μF	Dimensions					Irms 10KHz 70°C A	Peak Current A	Surge Current A	ESR 10KHz mΩ	ESL nH	Thermal Res °C/W	dv/dt V/us	Lead Wire mm	Part Number
		W	H	T	P	P1									
		mm	mm	mm	mm	mm									
1100	140	57.5	65.0	130.0	52.5	20.3	43.5	3220	9660	2.0	35	4.0	23	1.2	FDQ3MK147M54EMD5
1200	1	32.0	20.0	11.0	27.5	\	3.0	100	300	43.0	25	38.8	100	0.8	FDQ3BK105G182GL5
1200	2	32.0	24.5	15.0	27.5	\	5.0	200	600	21.5	25	27.9	100	0.8	FDQ3BK205G272GL5
1200	3	32.0	28.0	18.0	27.5	\	6.5	300	900	14.5	25	24.5	100	0.8	FDQ3BK305G332GL5
1200	3	32.0	33.0	18.0	27.5	\	8.0	297	891	13.5	25	11.6	90	0.8	FDQ3BK335G342GL5
1200	4	32.0	31.0	21.0	27.5	\	8.0	400	1200	11.0	25	21.3	100	0.8	FDQ3BK405G372GL5
1200	5	32.0	37.0	22.0	27.5	10.2	10.0	450	1350	12.0	28	8.3	90	1.2	FDQ3BK505G404GB5
1200	5	42.5	36.0	19.0	37.5	10.2	7.0	240	720	15.0	30	20.4	48	1.2	FDQ3BK505K224KB5
1200	5	42.5	33.5	22.0	37.5	10.2	7.5	225	675	15.5	30	11.5	45	1.2	FDQ3BK505K264KB5
1200	6	42.5	36.0	19.0	37.5	10.2	8.0	288	864	12.5	30	18.8	48	1.2	FDQ3BK605K224KB5
1200	6	42.5	40.0	20.0	37.5	10.2	7.5	270	810	15.5	30	11.5	45	1.2	FDQ3BK605K244KB5
1200	7	42.5	38.0	20.0	37.5	10.2	9.0	336	1008	11.0	30	16.8	48	1.2	FDQ3BK705K234KB5
1200	7	42.5	37.0	22.0	37.5	10.2	8.0	315	945	15.2	30	11.0	45	1.2	FDQ3BK705K274KB5
1200	8	42.5	38.0	20.0	37.5	10.2	9.5	384	1152	9.5	30	17.5	48	1.2	FDQ3BK805K234KB5
1200	8	42.5	44.0	24.0	37.5	10.2	9.0	360	1080	12.5	30	9.9	45	1.2	FDQ3BK805K324KB5
1200	9	42.5	44.0	24.0	37.5	10.2	11.0	432	1296	8.5	30	14.6	48	1.2	FDQ3BK905K324KB5
1200	10	42.5	44.0	24.0	37.5	10.2	11.5	480	1440	7.5	30	15.1	48	1.2	FDQ3BK106K324KB5
1200	10	42.5	45.0	30.0	37.5	20.3	12.0	450	1350	8.0	30	8.7	45	1.2	FDQ3BK106K424KD5
1200	10	57.5	45.0	25.0	52.5	10.2	8.5	240	720	15.0	35	13.8	24	1.2	FDQ3BK106M104MB5
1200	12	42.5	45.0	30.0	37.5	20.3	13.5	576	1728	6.5	30	12.7	48	1.2	FDQ3BK126K424KD5
1200	12	57.5	45.0	25.0	52.5	10.2	9.5	288	864	12.5	35	13.3	24	1.2	FDQ3BK126M104MB5
1200	15	42.5	50.0	35.0	37.5	20.3	15.0	675	2025	6.5	30	6.8	45	1.2	FDQ3BK156K474KD5
1200	15	57.5	45.0	25.0	52.5	10.2	10.5	360	1080	10.0	35	13.6	24	1.2	FDQ3BK156M104MB5
1200	20	57.5	50.0	35.0	52.5	20.3	14.0	480	1440	7.5	35	10.2	24	1.2	FDQ3BK206M204MD5
1200	20	57.5	45.0	30.0	52.5	20.3	13.0	600	1800	8.5	35	9.7	30	1.2	FDQ3BK206M164MD5
1200	22	57.5	50.0	35.0	52.5	20.3	14.5	528	1584	7.0	35	10.2	24	1.2	FDQ3BK226M204MD5
1200	25	57.5	50.0	35.0	52.5	20.3	15.5	600	1800	6.0	35	10.4	24	1.2	FDQ3BK256M204MD5
1200	30	57.5	45.0	45.0	52.5	20.3	16.5	720	2160	5.0	35	11.0	24	1.2	FDQ3BK306M314MD5
1200	30	57.5	55.0	45.0	52.5	20.3	17.0	900	2700	5.5	35	8.1	30	1.2	FDQ3BK306M324MD5
1200	35	57.5	55.0	45.0	52.5	20.3	18.0	1050	3150	5.0	35	6.9	30	1.2	FDQ3BK356M324MD5
1200	60	57.5	65.0	70.0	52.5	20.3	23.0	1440	4320	4.5	35	6.3	24	1.2	FDQ3BK606M436MD5
1200	120	57.5	65.0	130.0	52.5	20.3	40.5	2880	8640	2.3	35	4.0	24	1.2	FDQ3BK127M54EMD5

General Technical Data

Applications	DC Link / DC Filtering
Dielectric	Metallized Polypropylene Film
Reference Standard	IEC 61071/EN 61071/AEC-Q200D
Climatic Category	40/105/56 IEC 60068-1
Rated Temperature T_R	+85°C
Operating Temperature Range T_{OP} (Case) <small>T_{OP} (Case) = Ambient Temperature + self-heating</small>	Maximum Operating Temperature ($T_{OP MAX}$) = 125°C Maximum Upper Temperature (T_{MAX}) = +105°C Minimum Lower Temperature (T_{MIN}) = -40°C
Protection	Solvent resistant plastic case UL94 V-0 Thermosetting resin sealing UL 94 V-0 compliant
Installation	Any position
Packaging	Packed in cardboard boxes with protection for the terminals
Storage Conditions	Storage time: ≤24months from the date marked on the label package Average relative humidity per year ≤70% RH≤85% for 30 days randomly distributed throughout the year Dew is absent Temperature: -40°C ~ +85°C
Storage Life	Product that passed less than 2 years from production, No need reconfirmation
RoHS Compliance	Compliant with the restricted substance requirement of Directive 2011/65/EU
Flame Retardant Grade	Flame retardant performance accords with horizontal combustion grade HB and vertical combustion grade V-0.
Application note and limiting conditions	These capacitors are designed only for DC voltage so should not be used for AC line. The continuous peak voltage shall not exceed the rated DC voltage rating

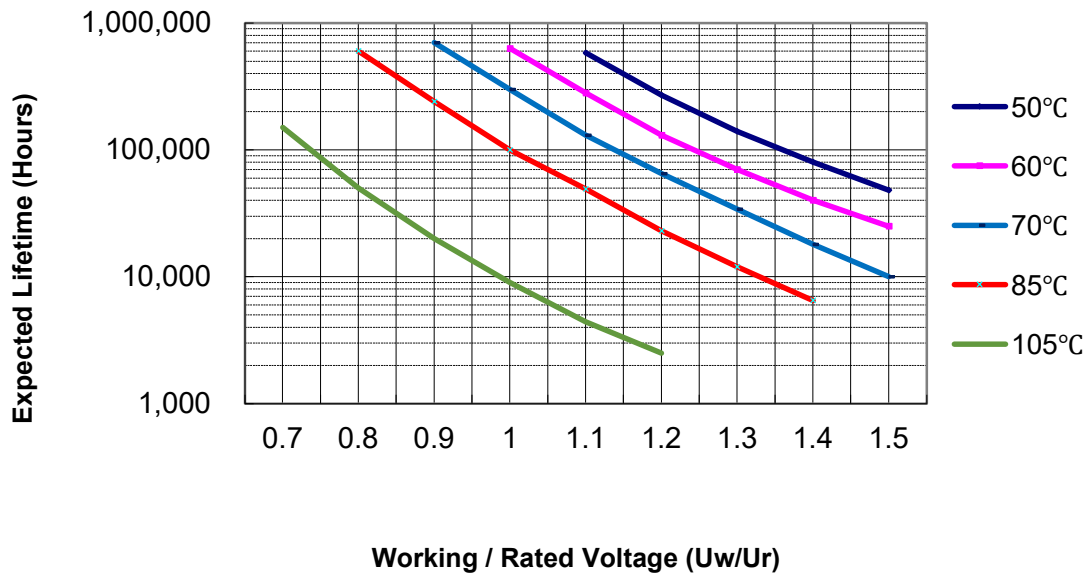
Construction

Metallized Film	OPP & Al/Zn
Metal Sprayed	Sn/Zn Alloy
Connection Electrode	Tinned copper wires
Case	Plastic Case (UL94V-0)
Filling	Epoxy Resin (UL94V-0)
Film Construction	<p>Mono Structure</p> 

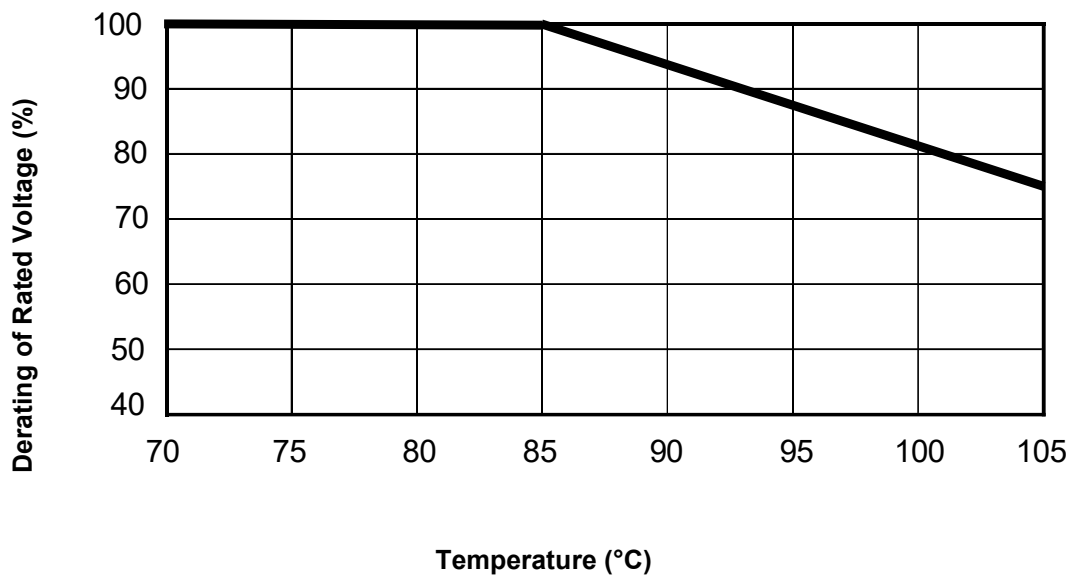
Electrical Characteristics

Voltage Range	450Vdc ~ 1200Vdc
Capacitance Range	1.0 μ F ~ 400 μ F
Capacitance Tolerance	\pm 5% or \pm 10% at +25°C
Capacitance	Measuring Frequency at 1kHz Measuring Voltage: 1 ± 0.2 V
Standard Atmospheric Conditions for Static Test	<p>Ambient temperature 15°C to 35°C (If there is any doubt on the results, the measurements shall be made at +20 +/- 5°C)</p> <p>Relative humidity 45% to 75% (If there is any doubt on the results, the measurements shall be made at 60% to 70 %.)</p> <p>Air pressure 86 kPa to 106 kPa.</p>
Voltage Between Terminals U_{TT}	$1.5 \times V_R$ VDC for 10 seconds (between terminations) @ +25°C \pm 5°C
Voltage Between Terminals and Case U_{TC}	3000V _{AC} , 50/60Hz 60s (at +25 +/-5°C)
Dielectric Dissipation Factor $Tg\delta 0$	$\leq 2 \times 10^{-4}$
Dissipation factor	≤ 0.002 (0.2%) at 1KHz; C $\leq 20\mu$ F at 25°C ≤ 0.003 (0.3%) at 1KHz; C $> 20\mu$ F at 25°C
Insulation Resistance	RC between leads, IR $\times C \geq 30,000$ s at 100vdc 1minute at +25°C
Self-Inductance	<1nH per mm of lead spacing
Hot-Spot	$\leq 85^\circ$ C
Life Expectancy	100,000 hours (UR, $\Theta_{hotspot}=85^\circ$ C)
Failure Rate	100 Fit
Max. Altitude	2000 m
Overvoltage	Maximum duration within one day
Apply 110% of rated voltage	30% of on-load duration
Apply 115% of rated voltage	30 mins
Apply 120% of rated voltage	5 mins
Apply 130% of rated voltage	1 min

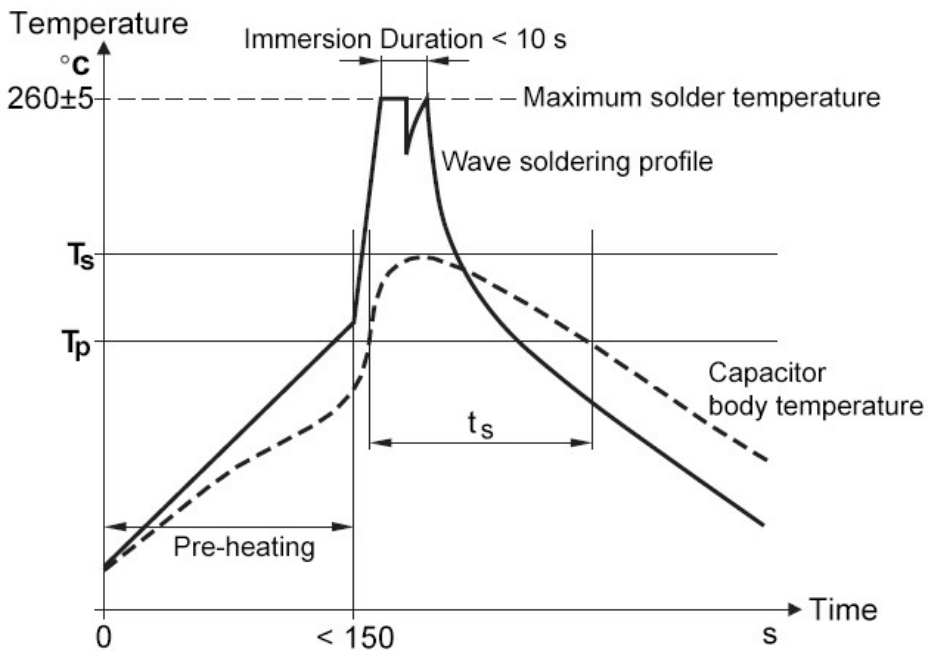
Expected Life Curve



Derating of Rated Voltage Vs Temperature



Wave Soldering Recommendations

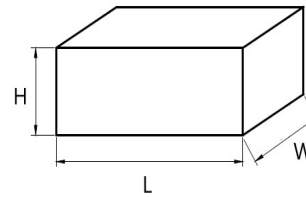


T_s : Capacitor body maximum temperature at wave soldering
 T_p : Capacitor body maximum temperature at pre-heating

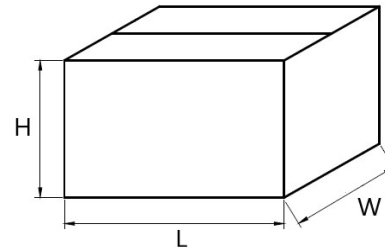
Polypropylene Capacitors	Polyester Capacitors
During pre-heating: $T_p \leq 110^\circ\text{C}$ During soldering: $T_s \leq 120^\circ\text{C}$, $t_s \leq 60$	During pre-heating: $T_p \leq 130^\circ\text{C}$ During soldering: $T_s \leq 160^\circ\text{C}$, $t_s \leq 60\text{s}$

Packaging Information

Inner Box Specifications (Dimensions)			
Box #	L ±3mm	W±3mm	H ±3mm
# 1	331	331	25
# 2	331	331	35
# 3	331	331	50
# 4	331	331	80
# 5	350	170	35
# 6	350	170	50
# 7	350	170	80



Outer Box Specifications (Dimensions)			
Box #	L ±5mm	W±5mm	H ±5mm
# 1	350	340	265
# 2	370	360	350



Packaging Quantity

Pitch	Code	W	H	T	Long Leads	Short Leads
27.5	G15	32.0	18.0	9.0	200	306
	G18	32.0	20.0	11.0	200	252
	G21	32.0	22.0	13.0	200	207
	G27	32.0	24.5	15.0	200	180
	G33	32.0	28.0	18.0	100	153
	G34	32.0	33.0	18.0	100	153
	G37	32.0	31.0	21.0	100	126
	G57	32.0	35.0	20.0	100	144
37.5	K22	42.5	36.0	19.0	-	112
	K23	42.5	38.0	20.0	-	105
	K24	42.5	40.0	20.0	-	105
	K26	42.5	33.5	22.0	-	98
	K27	42.5	37.0	22.0	-	98
	K30	42.5	18.0	24.0	-	91
	K32	42.5	44.0	24.0	-	91
	K42	42.5	45.0	30.0	-	70
52.5	K47	42.5	50.0	35.0	-	63
	M10	57.5	45.0	25.0	-	60
	M16	57.5	45.0	30.0	-	50
	M20	57.5	50.0	35.0	-	45
	M30	57.5	22.0	43.0	-	35
	M31	57.5	45.0	45.0	-	35
	M32	57.5	55.0	45.0	-	35
	M43	57.5	65.0	70.0	-	20
M54	57.5	65.0	130.0	-	10	

Cautions and Warnings

- Don't exceed the upper category temperature.
- For longtime storage, maximum relative humidity 80%, no dew allowed on the capacitor.
- Do not use or store capacitor in corrosive atmosphere, in the dusty environment's regular maintenance and cleaning especially of the terminals is required to avoid conductive path between terminal / or terminal and ground.
- Don't apply any mechanical stress to the capacitor terminals, and avoid any compressive, tensile or flexural stress.
- Don't move the capacitor after fixed to the PC board, and don't pick up the PC board by the fixed capacitor.
- Don't place the capacitor on a PC board whose holes pitch differs from the specified space.
- Avoid overload of the capacitors
- Do not have unlimited service life expectancy, the max service life expectancy may vary depending on the application the capacitor is used in.

Disclaimer

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