

PPA

Polypropylene Film Capacitors for Power Semiconductor Circuits



- Snubber Capacitor for Energy Conversion in Power semiconductor Circuits
- SMPS
- Induction heaters
- High Voltage
- High current
- High Pulse Current Applications

Operating Temperature Range		-40°C to +85°C							
Capacitance Tolerance		+/- 10% at 1kHz, 20°C							
Rated Voltage	VDC	700	850	1000	1200	1500	2000	2500	3000
	SVDC	1000	1200	1400	1600	2000	2400	3000	3500
	VAC	380	450	480	500	575	630	700	750
Dissipation Factor (max) at 20°C.		Freq (kHz)		C≤1μF		C>1μF			
		1		.05%		.06%			
Insulation Resistance @20°C(<70% RH) for 1 minute at 100VDC		> 30,000MΩ x μF. Not to exceed 30,000MΩ							
Dielectric Strength		200% of rated VDC for 10 seconds at 20°C between leads 3KV at 60Hz for 60 seconds between leads and case.							
Self inductance		<1nH/mm of body length and lead wire length.							
Capacitance drift		<1.0% up to 40°C after 2 years							
Temperature Coefficient		-200ppm/°C +/- 100ppm/°C							
Life Expectancy Capacitance change (typical) -3%		≥30000 hours @VAC at 70°C ≥100,000 hours @WVDC at 70°C							
Failure rate		300/billion component hours							
Dielectric		Polypropylene							
Electrodes		Vacuum deposited metal layers							
Construction		Extended double metallized carrier film with internal series connections and metallized film							
Leads		Tinned copper leads.							
Coating		Flame retardant polyester tape wrap (UL510) with epoxy end seals (UL94 V-0)							

PPA

+ 85°C Metallized
Polypropylene
Capacitor

PHYSICAL DIMENSIONS

WVDC (VAC) μF	700 (380)	850 (450)	1000 (480)	1,200 (500)	1,500 (575)	2,000 (630)	2500 (700)	3,000 (750)
0.0047								11x29
0.0068								10.5x34 12.5x29
0.01							11.5x29 13.5x29	12x34 14.5x29
0.015						11x29	13.5x29	14x34 16.5x29
0.022						11x34 12.5x29	13x34 15.5x29	16x34
0.033					12.5x29	13x34 14.5x29	15x34 18x29	19x34
0.047			12x29	10.5x34	14x29	15x34 16.5x29	17x34	18x46 22.5x34
0.068		11.5x29	12.5x29	12x34 13.5x29	13.5x34 16x29	17x34	20.5x34	21x46
0.1	12x29	11x34 13x29	12.5x34 14.5x29	16x29 14x34	16x34	16.5x46 20x34	19.5x46 24.5x34	25x46
0.15	13.5x29	13x34 15x29	14.5x34 17x29	17x34	19.5x34	19.5x46 24x34	23.5x46	30x46
0.22	13.5x34 15.5x29	15x34 17.5x29	17.5x34	19.5x34	19x46 23x34	23x46	27.5x46	29x59 30.5x55 36x46
0.33	15.5x34 17.5x29	18x34	17x46 20.5x34	19x46 23x34	23x46	27.5x46	27.5x59 28.5x55 33.5x46	35x59 37x55
0.39								37.5x59 40x55
0.47	18x34	18x46 21.5x34	20x46 24x34	22x46	27x46	26x59 27x55 32.5x46	32x59 33.5x55	41x59
0.56						28.5x59 29.5x55 35x46	34.5x59 36.5x55	
0.68	18x46 21.5x34	21x46 25.5x34	23.5x46	26.5x46	31.5x46	31x59 32x55	38x59 40x55	
0.82							41.5x59	
1	21x46 26x34	25x46	28x46	25.5x59 27x55 32x46	31.5x55 30.5x59 37x46	37x59 39x55		
1.2				28x59 29.5x55 34.5x46	33.5x59 35.5x55	40.5x59		
1.5	25.5x46	29.5x46	28x59 29.5x55 33.5x46	31x59 33x55 37x46	37x59 40x55			
2	29x46	28x59 29x55 33.5x46	31.5x59 33.5x55	35.5x59 37.5x55 39x55	42x59			
2.2	25.5x59 27x55 30x46	29.5x59 30.5x55 35x46	33x59 35x55	37x59 39x55				
2.5	27.5x59 29x55 32x46	31x59 32x55 36.5x46		39x59 41x55				

Convert to inches, divide by 25.4

DxL (mm)



PPA

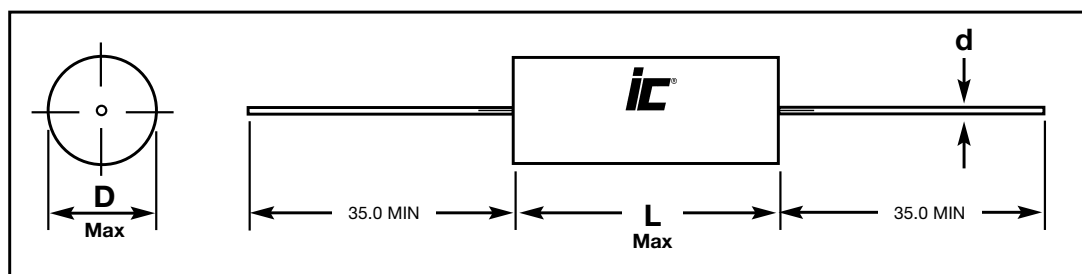
+ 85°C Metallized
Polypropylene
Capacitor

PHYSICAL DIMENSIONS

WVDC μF (VAC)	700 (380)	850 (450)	1000 (480)	1,200 (500)	1,500 (575)	2,000 (630)	2500 (700)	3,000 (750)
3	29.5x59 31x55 35x46	34x59 36x55	38x59 40.5x55	42x59				
3.3	30.5x59 32x55 36x46	35x59 37x55	40x59					
4	33x59 34.5x55	38.5x59 40.5x55						
4.7	35.5x59 37.5x55	41.5x59						
5.6	38.5x59 41x55							
6.8	42x59							

Convert to inches, divide by 25.4

DxL (mm)



D	d
≤18	0.8
18<D≤24	1.0
>24	1.2

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+ 85°C Metallized
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STANDARD PART LISTING

CAPACITANCE (μF)	WVDC	ic [®] PART NUMBER	dv/dt (V/μs)	MAXIMUM RMS CURRENT @100kHz, 70°C in Amps	TYPICAL ESR @100 kHz, +25°C in mΩ	Dimensions DxL (mm)
0.0047	3000	472PPA302KG	3400	1	88.0	11x29
0.0068	3000	682PPA302K	2750	1.5	77.0	10.5x34
0.0068	3000	682PPA302KG	3400	1.5	65.0	12.5x29
0.01	2500	103PPA252KG	2650	1.5	52.0	11.5x29
0.01	3000	103PPA302K	2750	2	54.5	12x34
0.01	3000	103PPA302KG	3400	2	46.0	14.5x29
0.015	2000	153PPA202KG	2150	2	37.5	11x29
0.015	2500	153PPA252KG	2650	2.5	37.0	13.5x29
0.015	3000	153PPA302K	2750	3	38.5	14x34
0.015	3000	153PPA302KG	3400	3	33.5	16.5x29
0.022	2000	223PPA202K	1750	2.5	33.5	11x34
0.022	2000	223PPA202KG	2150	2.5	27.5	12.5x29
0.022	2500	223PPA252KG	2650	3	27.0	15.5x29
0.022	2500	223PPA252KJ	2150	2.5	31.0	13x34
0.022	3000	223PPA302K	2750	4	27.0	16x34
0.033	1500	333PPA152KG	1500	3	22.0	12.5x29
0.033	2000	333PPA202K	1750	3.5	23.8	13x34
0.033	2000	333PPA202KG	2150	3.5	20.7	14.5x29
0.033	2500	333PPA252K	2150	4	23.0	15x34
0.033	2500	333PPA252KG	2650	4	20.0	18x29
0.033	3000	333PPA302K	2750	5	19.0	19x34
0.047	1200	473PPA122K	1300	3	16.9	12x29
0.047	1200	473PPA122KD11	1100	3	19.0	10.5x34
0.047	1500	473PPA152KG	1500	3.5	16.5	14x29
0.047	2000	473PPA202K	1750	4.5	16.8	15x34
0.047	2000	473PPA202KG	2150	4.5	15	16.5x29
0.047	2500	473PPA252K	2150	5	16.5	17x34
0.047	3000	473PPA302K	1600	6	17.8	18x46
0.047	3000	473PPA302KD23	2750	6.5	13.8	22.5x34
0.068	850	683PPA850KG	850	3	13.9	11.5x29
0.068	1000	683PPA102KG	1000	3.5	13.5	12.5x29
0.068	1200	683PPA122K	1300	3.5	12.8	13.5x29
0.068	1200	683PPA122KD12	1100	3.5	14.3	12x34
0.068	1500	683PPA152K	1225	4	13.8	13.5x34
0.068	1500	683PPA152KG	1500	4	12.4	16x29
0.068	2000	683PPA202K	1750	5.5	11.8	17x34
0.068	2500	683PPA252K	2150	6.5	11.5	20.5x34
0.068	3000	683PPA302K	1600	8	12.8	21x46
0.1	700	104PPA700KG	600	3	13	12x29
0.1	850	104PPA850K	850	4	10.4	13x29
0.1	850	104PPA850KD11	700	4	11.5	11x34
0.1	1000	104PPA102KG	1000	4.5	9.9	14.5x29
0.1	1000	104PPA102KJ	850	4.5	11	12.5x34
0.1	1200	104PPA122K	1100	5	10.7	14x34
0.1	1200	104PPA122KG	1300	5	9.7	16x29
0.1	1500	104PPA152K	1225	5.5	9.6	16x34
0.1	2000	104PPA202KD16	1000	7	12.4	16.5x46
0.1	2000	104PPA202K	1750	7.5	8.4	20x34
0.1	2500	104PPA252K	2150	8.5	8	24.5x34
0.1	2500	104PPA252KD20	1350	8.5	12	19.5x46
0.1	3000	104PPA302K	1600	11	9.4	25x46
0.15	700	154PPA700KG	600	4.5	9.4	13.5x29
0.15	850	154PPA850K	700	5.5	8.6	13x34

CAPACITANCE (μF)	WVDC	ic [®] PART NUMBER	dv/dt (V/μs)	MAXIMUM RMS CURRENT @100kHz, 70°C in Amps	TYPICAL ESR @100 kHz, +25°C in mΩ	Dimensions DxL (mm)
0.15	850	154PPA850KD15	850	5.5	7.6	15x29
0.15	1000	154PPA102K	850	6	8.2	14.5x34
0.15	1000	154PPA102KG	1000	6	7.3	17x29
0.15	1200	154PPA122K	1100	6	7.7	17x34
0.15	1500	154PPA152K	1225	7	7.2	19.5x34
0.15	2000	154PPA202K	1000	9	8.3	19.5x46
0.15	2000	154PPA202KD24	1750	9	6.6	24x34
0.15	2500	154PPA252K	1350	9	8.1	23.5x46
0.15	3000	154PPA302K	1600	12	6.8	30x46
0.22	700	224PPA700KG	600	5	7.1	15.5x29
0.22	700	224PPA700KJ	485	5	8.0	13.5x34
0.22	850	224PPA850K	700	6.5	6.6	15x34
0.22	850	224PPA850KG	850	6.5	6.1	17.5x29
0.22	1000	224PPA102K	850	7	5.9	17.5x34
0.22	1200	224PPA122K	1100	9	5.4	19.5x34
0.22	1500	224PPA152K	1225	9	5.3	23x34
0.22	1500	224PPA152KD19	800	9	7.0	19x46
0.22	2000	224PPA202K	1000	9	6.0	23x46
0.22	2500	224PPA252K	1350	11	5.9	27.5x46
0.22	3000	224PPA302K	1600	12	5.2	36x46
0.22	3000	224PPA302KD31	1000	12	5.9	30.5x55
0.22	3000	224PPA302KS	875	12	6.5	29x59
0.33	700	334PPA700K	485	6.5	6.0	15.5x34
0.33	700	334PPA700KG	600	6.5	5.4	17.5x29
0.33	850	334PPA850K	700	8	4.8	18x34
0.33	1000	334PPA102K	850	9	4.5	20.5x34
0.33	1000	334PPA102KD17	570	9	5.9	17x46
0.33	1200	334PPA122K	650	9	5.4	19x46
0.33	1200	334PPA122KD23	1100	9	4.5	23x34
0.33	1500	334PPA152K	800	9	5.3	23x46
0.33	2000	334PPA202K	1000	12	4.7	27.5x46
0.33	2500	334PPA252K	1350	12	4.5	33.5x46
0.33	2500	334PPA252KD29	900	12	5.4	28.5x55
0.33	2500	334PPA252KS	750	12	6.0	27.5x59
0.33	3000	334PPA302K	1000	12	4.9	37x55
0.33	3000	334PPA302KS	875	12	5.4	35x59
0.39	3000	394PPA302K	1000	12	4.4	40x55
0.39	3000	394PPA302KS	875	12	4.9	37.5x59
0.47	700	474PPA700K	485	8	4.7	18x34
0.47	850	474PPA850K	700	9	4.0	21.5x34
0.47	850	474PPA850KD18	400	9	5.0	18x46
0.47	1000	474PPA102K	850	9	3.8	24x34
0.47	1000	474PPA102KD20	570	9	4.7	20x46
0.47	1200	474PPA122K	650	9	4.8	22x46
0.47	1500	474PPA152K	800	11	4.3	27x46
0.47	2000	474PPA202K	1000	12	3.9	32.5x46
0.47	2000	474PPA202KR	650	12	5.4	27x55
0.47	2000	474PPA2102KS	580	12	6.0	26x59
0.47	2500	474PPA252K	900	12	4.4	33.5x55
0.47	2500	474PPA252KS	750	12	4.9	32x59
0.47	3000	474PPA302KS	875	12	4.5	41x59
0.56	2000	564PPA202K	650	12	4.5	29.5x55
0.56	2000	564PPA202KD35	560	12	3.6	35x46



ILLINOIS CAPACITOR, INC.

3757 W. Touhy Ave., Lincolnwood, IL 60712 • (847) 675-1760 • Fax (847) 673-2850 • www.illcap.com

PPA

+ 85°C Metallized
Polypropylene
Capacitor

STANDARD PART LISTING

CAPACITANCE (μF)	WVDC	ic [®] PART NUMBER	dv/dt (V/μs)	MAXIMUM RMS CURRENT @100kHz, 70°C in Amps	TYPICAL ESR @100 kHz, +25°C in mΩ	Dimensions DxL (mm)
0.56	2000	564PPA202KS	580	12	5.0	28.5x59
0.56	2500	564PPA252K	900	12	4.0	36.5x55
0.56	2500	564PPA252KS	750	12	4.5	34.5x59
0.68	700	684PPA700K	325	9	4.4	18x46
0.68	700	684PPA700KD22	485	9	3.9	21.5x34
0.68	850	684PPA850K	400	9	4.1	21x46
0.68	850	684PPA850KD26	700	9	3.2	25.5x34
0.68	1000	684PPA102K	570	9	4.0	23.5x46
0.68	1200	684PPA122K	650	12	3.9	26.5x46
0.68	1500	684PPA152K	800	12	3.7	31.5x46
0.68	2000	684PPA202K	650	12	4.0	32x55
0.68	2000	684PPA202KS	580	12	4.5	31x59
0.68	2500	684PPA252K	900	12	3.7	40x55
0.68	2500	684PPA252KS	750	12	4.1	38x59
0.82	2500	824PPA252KS	750	12	3.8	41.5x59
1	700	105PPA700K	325	9	3.9	21x46
1	700	105PPA700KD26	485	12	3.2	26x34
1	850	105PPA850K	400	12	3.3	25x46
1	1000	105PPA102K	570	12	3.2	28x46
1	1200	105PPA122K	650	12	3.4	32x46
1	1200	105PPA122KR	400	12	4.0	27x55
1	1200	105PPA122KS	350	12	4.5	25.5x59
1	1500	105PPA152K	575	12	3.7	31.5x55
1	1500	105PPA152KD37	800	12	3.2	37x46
1	1500	105PPA152KS	500	12	4.2	30.5x59
1	2000	105PPA202K	650	12	3.3	39x55
1	2000	105PPA202KS	580	12	3.7	37x59
1.2	1200	125PPA122K	400	12	3.4	29.5x55
1.2	1200	125PPA122KD35	650	12	3.0	34.5x46
1.2	1200	125PPA122KS	350	12	3.8	28x59
1.2	1500	125PPA152K	575	12	3.4	31.5x55
1.2	1500	125PPA152KS	500	12	3.7	33.5x59
1.2	2000	125PPA202KS	580	12	3.4	40.5x59
1.5	700	155PPA700K	325	12	3.3	25.5x46
1.5	850	155PPA850K	400	12	2.8	29.5x46
1.5	1000	155PPA102K	350	12	3.2	29.5x55
1.5	1000	155PPA102KD34	570	12	2.6	33.5x46
1.5	1000	155PPA102KS	320	12	3.6	28x59
1.5	1200	155PPA122K	400	12	3.0	33x55
1.5	1200	155PPA122KD37	650	12	2.7	37x46
1.5	1200	155PPA122KS	350	12	3.4	31x59
1.5	1500	155PPA152K	575	12	2.9	40x55
1.5	1500	155PPA152KS	500	12	3.2	37x59
2	700	205PPA700KN	325	12	3.0	29x46
2	850	205PPA850K	300	12	3.0	29x55
2	850	205PPA850KD34	400	12	2.4	33.5x46
2	850	205PPA850KS	275	12	3.4	28x59

CAPACITANCE (μF)	WVDC	ic [®] PART NUMBER	dv/dt (V/μs)	MAXIMUM RMS CURRENT @100kHz, 70°C in Amps	TYPICAL ESR @100 kHz, +25°C in mΩ	Dimensions DxL (mm)
2	1000	205PPA102KR	350	12	2.9	33.5x55
2	1000	205PPA102KS	320	12	3.2	31.5x59
2	1200	205PPA122K	400	12	2.9	39x55
2	1200	205PPA122KS	350	12	2.9	35.5x59
2	1500	205PPA152KS	500	12	2.8	42x59
2.2	700	225PPA700K	325	12	2.9	30x46
2.2	700	225PPA700KD27	245	12	3.8	27x55
2.2	700	225PPA700KS	200	12	4.2	25.5x59
2.2	850	225PPA850K	300	12	2.8	30.5x55
2.2	850	225PPA850KD35	400	12	2.3	35x46
2.2	850	225PPA850KS	275	12	3.2	29.5x59
2.2	1000	225PPA102K	350	12	2.7	35x55
2.2	1000	225PPA102KS	320	12	3.0	33x59
2.2	1200	225PPA122K	400	12	2.5	39x55
2.2	1200	225PPA122KS	350	12	2.8	37x59
2.5	700	255PPA700KN	325	12	2.8	32x46
2.5	700	255PPA700KR	245	12	3.5	29x55
2.5	700	255PPA700KS	200	12	3.9	27.5x59
2.5	850	255PPA850K	300	12	2.2	32x55
2.5	850	255PPA850KN	400	12	2.6	36.5x46
2.5	850	255PPA850KS	275	12	2.5	31x59
2.5	1200	255PPA122KR	400	12	2.3	41x55
2.5	1200	255PPA122KS	350	12	2.6	39x59
3	700	305PPA700KN	325	12	2.6	35x46
3	700	305PPA700KR	245	12	3.2	31x55
3	700	305PPA700KS	200	12	3.6	29.5x59
3	850	305PPA850KR	300	12	2.5	36x55
3	850	305PPA850KS	275	12	2.8	34x59
3	1000	305PPA102K	350	12	2.4	40.5x55
3	1000	305PPA102KS	320	12	2.6	38x59
3	1200	305PPA122KS	350	12	2.4	42x59
3.3	700	335PPA700K	325	12	2.5	36x46
3.3	700	335PPA700KD32	245	12	3.1	32x55
3.3	700	335PPA700KS	200	12	3.5	30.5x59
3.3	850	335PPA850K	300	12	2.4	37x55
3.3	850	335PPA850KS	275	12	2.7	35x59
3.3	1000	335PPA102KS	320	12	2.5	40x59
4	700	405PPA700KR	245	12	2.8	34.5x59
4	700	405PPA700KS	200	12	3.1	33x59
4	850	405PPA850KR	300	12	2.3	40.5x55
4	850	405PPA850KS	275	12	2.6	38.5x59
4.7	700	475PPA700K	245	12	2.6	37.5x55
4.7	700	475PPA700KS	200	12	2.9	35.5x59
4.7	850	475PPA850KS	275	12	2.4	41.5x59
5.6	700	565PPA700KS	200	12	2.6	38.5x59
5.6	700	565PPA700K	245	12	2.3	41x55
6.8	700	685PPA700KS	200	12	2.4	42x59



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