

# 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≤1uF		C>1uF					
	1	.05%		.06%					
Insulation Resistance @20°C(<70% RH) for 1 minute at 100VDC	> 30,000MΩ x uF. 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 <small>Capacitance change (typical) -3%</small>	≥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
0.0068								12.5x29
0.01							11.5x29	12x34
0.01							13.5x29	14.5x29
0.015						11x29	13.5x29	14x34
0.015								16.5x29
0.022						11x34	13x34	16x34
0.022						12.5x29	15.5x29	
0.033					12.5x29	13x34	15x34	19x34
0.033						14.5x29	18x29	
0.047					14x29		17x34	18x46
0.047				10.5x34		15x34		22.5x34
0.047			12x29			16.5x29		
0.068		11.5x29	12.5x29	12x34	13.5x34		20.5x34	21x46
0.068				13.5x29	16x29	17x34		
0.1	12x29	11x34	12.5x34	16x29	16x34	16.5x46	19.5x46	25x46
0.1		13x29	14.5x29	14x34		20x34	24.5x34	
0.15	13.5x29	13x34	14.5x34		19.5x34	19.5x46	23.5x46	30x46
0.15		15x29	17x29	17x34		24x34		
0.22	13.5x34		17.5x34		19x46	23x46	27.5x46	29x59
0.22	15.5x29	15x34		19.5x34	23x34			30.5x55
0.22		17.5x29						36x46
0.33	15.5x34		17x46	19x46	23x46	27.5x46	27.5x59	35x59
0.33	17.5x29	18x34	20.5x34	23x34			28.5x55	37x55
0.33							33.5x46	
0.39								37.5x59
0.39								40x55
0.47	18x34	18x46	20x46	22x46	27x46	26x59	32x59	41x59
0.47		21.5x34	24x34			27x55	33.5x55	
0.47						32.5x46		
0.56						28.5x59	34.5x59	
0.56						29.5x55	36.5x55	
0.56						35x46		
0.68	18x46	21x46	23.5x46	26.5x46	31.5x46	31x59	38x59	
0.68	21.5x34	25.5x34				32x55	40x55	
0.82							41.5x59	
1	21x46	25x46	28x46	25.5x59	31.5x55	37x59		
1	26x34			27x55	30.5x59	39x55		
1				32x46	37x46			
1.2				28x59	33.5x59	40.5x59		
1.2				29.5x55	35.5x55			
1.2				34.5x46				
1.5	25.5x46	29.5x46	28x59	31x59	37x59			
1.5			29.5x55	33x55	40x55			
1.5			33.5x46	37x46				

Convert to inches, divide by 25.4

DxL (mm)



# PPA

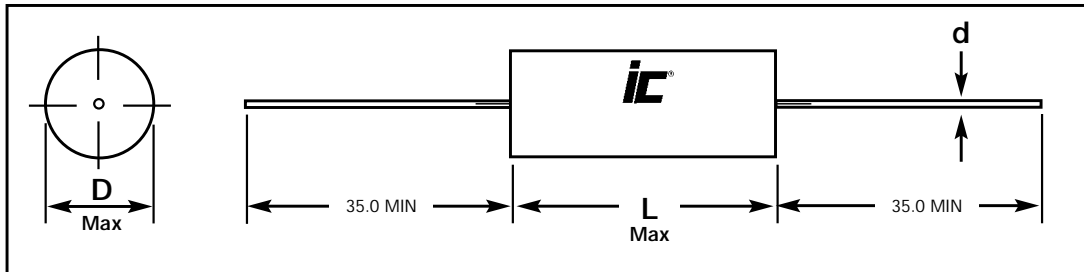
+ 85°C Metallized Polypropylene Capacitor

## PHYSICAL DIMENSIONS

WVDC (VAC) μF	700 (380)	850 (450)	1000 (480)	1,200 (500)	1,500 (575)	2,000 (630)	2,500 (700)	3,000 (750)
2	29x46	28x59	31.5x59	35.5x59	42x59			
2	→	29x55	33.5x55					
2	→	33.5x46	→	39x55				
2.2	25.5x59	29.5x59	33x59	37x59				
2.2	27x55	30.5x55	35x55	39x55				
2.2	30x46	35x46						
2.5	27.5x59	31x59	→	39x59				
2.5	29x55	32x55	→	41x55				
2.5	32x46	36.5x46						
3	29.5x59	34x59	38x59	42x59				
3	31x55	36x55	40.5x55					
3	35x46							
3.3	30.5x59	35x59	40x59					
3.3	32x55	37x55						
3.3	36x46							
4	33x59	38.5x59						
4	34.5x55	40.5x55						
4.7	35.5x59	41.5x59						
4.7	37.5x55							
5.6	38.5x59							
5.6	41x55							
6.8	42x59							

Convert to inches, divide by 25.4

DxL (mm)



D	d
$\leq 18$	0.8
$18 < D \leq 24$	1.0
$> 24$	1.2

## STANDARD PART LISTING

CAPACITANCE (μF)	VVDC	IC <sup>®</sup> 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	15.0	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	13.0	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	11.0	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	104PPA202K	1000	7	12.4	16.5x46
0.1	2000	104PPA202KD20	1750	7.5	8.4	20x34
0.1	2500	104PPA252K	2150	8.5	8.0	24.5x34
0.1	2500	104PPA252KD20	1350	8.5	12.0	19.5x46
0.1	3000	104PPA302K	1600	11.0	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)	VVDC	IC <sup>®</sup> 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	6.0	8.2	14.5x34
0.15	1000	154PPA102KG	1000	6.0	7.3	17x29
0.15	1200	154PPA122K	1100	6.0	7.7	17x34
0.15	1500	154PPA152K	1225	7.0	7.2	19.5x34
0.15	2000	154PPA202K	1000	9.0	8.3	19.5x46
0.15	2000	154PPA202KD24	1750	9.0	6.6	24x34
0.15	2500	154PPA252K	1350	9.0	8.1	23.5x46
0.15	3000	154PPA302K	1600	12.0	6.8	30x46
0.22	700	224PPA700KG	600	5.0	7.1	15.5x29
0.22	700	224PPA700KJ	485	5.0	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	7.0	5.9	17.5x34
0.22	1200	224PPA122K	1100	9.0	5.4	19.5x34
0.22	1500	224PPA152K	1225	9.0	5.3	23x34
0.22	1500	224PPA152KD19	800	9.0	7.0	19x46
0.22	2000	224PPA202K	1000	9.0	6.0	23x46
0.22	2500	224PPA252K	1350	11.0	5.9	27.5x46
0.22	3000	224PPA302K	1600	12.0	5.2	36x46
0.22	3000	224PPA302KD31	1000	12.0	5.9	30.5x55
0.22	3000	224PPA302KS	875	12.0	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	8.0	4.8	18x34
0.33	1000	334PPA102K	850	9.0	4.5	20.5x34
0.33	1000	334PPA102KD17	570	9.0	5.9	17x46
0.33	1200	334PPA122K	650	9.0	5.4	19x46
0.33	1200	334PPA122KD23	1100	9.0	4.5	23x34
0.33	1500	334PPA152K	800	9.0	5.3	23x46
0.33	2000	334PPA202K	1000	12.0	4.7	27.5x46
0.33	2500	334PPA252K	1350	12.0	4.5	33.5x46
0.33	2500	334PPA252KD29	900	12.0	5.4	28.5x55
0.33	2500	334PPA252KS	750	12.0	6.0	27.5x59
0.33	3000	334PPA302K	1000	12.0	4.9	37x55
0.33	3000	334PPA302KS	875	12.0	5.4	35x59
0.39	3000	394PPA302K	1000	12.0	4.4	40x55
0.39	3000	394PPA302KS	875	12.0	4.9	37.5x59
0.47	700	474PPA700K	485	8.0	4.7	18x34
0.47	850	474PPA850K	700	9.0	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

## STANDARD PART LISTING

CAPACITANCE (µF)	WVDC	ic <sup>®</sup> 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	12.0	3.6	28x59
1.5	1200	155PPA122K	400	12.0	3.0	33x55
1.5	1200	155PPA122KD37	650	12.0	2.7	37x46
1.5	1200	155PPA122KS	350	12.0	3.4	31x59
1.5	1500	155PPA152K	575	12.0	2.9	40x55
1.5	1500	155PPA152KS	500	12.0	3.2	37x59
2	700	205PPA700KN	325	12.0	3.0	29x46
2	850	205PPA850K	300	12.0	3.0	29x55
2	850	205PPA850KD34	400	12.0	2.4	33.5x46
2	850	205PPA850KS	275	12.0	3.4	28x59

CAPACITANCE (µF)	WVDC	ic <sup>®</sup> 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	12.0	2.9	33.5x55
2	1000	205PPA102KS	320	12.0	3.2	31.5x59
2	1200	205PPA122K	400	12.0	2.9	39x55
2	1200	205PPA122KS	350	12.0	2.9	35.5x59
2	1500	205PPA152KS	500	12.0	2.8	42x59
2.2	700	225PPA700K	325	12.0	2.9	30x46
2.2	700	225PPA700KD27	245	12.0	3.8	27x55
2.2	700	225PPA700KS	200	12.0	4.2	25.5x59
2.2	850	225PPA850K	300	12.0	2.8	30.5x55
2.2	850	225PPA850KD35	400	12.0	2.3	35x46
2.2	850	225PPA850KS	275	12.0	3.2	29.5x59
2.2	1000	225PPA102K	350	12.0	2.7	35x55
2.2	1000	225PPA102KS	320	12.0	3.0	33x59
2.2	1200	225PPA122K	400	12.0	2.5	39x55
2.2	1200	225PPA122KS	350	12.0	2.8	37x59
2.5	700	255PPA700KN	325	12.0	2.8	32x46
2.5	700	255PPA700KR	245	12.0	3.5	29x55
2.5	700	255PPA700KS	200	12.0	3.9	27.5x59
2.5	850	255PPA850K	300	12.0	2.2	32x55
2.5	850	255PPA850KN	400	12.0	2.6	36.5x46
2.5	850	255PPA850KS	275	12.0	2.5	31x59
2.5	1200	255PPA122KR	400	12.0	2.3	41x55
2.5	1200	255PPA122KS	350	12.0	2.6	39x59
3	700	305PPA700KN	325	12.0	2.6	35x46
3	700	305PPA700KR	245	12.0	3.2	31x55
3	700	305PPA700KS	200	12.0	3.6	29.5x59
3	850	305PPA850KR	300	12.0	2.5	36x55
3	850	305PPA850KS	275	12.0	2.8	34x59
3	1000	305PPA102K	350	12.0	2.4	40.5x55
3	1000	305PPA102KS	320	12.0	2.6	38x59
3	1200	305PPA122KS	350	12.0	2.4	42x59
3.3	700	335PPA700K	325	12.0	2.5	36x46
3.3	700	335PPA700KD32	245	12.0	3.1	32x55
3.3	700	335PPA700KS	200	12.0	3.5	30.5x59
3.3	850	335PPA850K	300	12.0	2.4	37x55
3.3	850	335PPA850KS	275	12.0	2.7	35x59
3.3	1000	335PPA102KS	320	12.0	2.5	40x59
4	700	405PPA700KR	245	12.0	2.8	34.5x59
4	700	405PPA700KS	200	12.0	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

