

PPB

Polypropylene Film Capacitors for Power Semiconductor Circuits



- Snubber Capacitor for Energy Conversion
- Power Semiconductor Circuits
- SCR Communication
- TV Deflection ckt.
- High Voltage
- High Current
- High Pulse Current Applications

Operating Temperature Range		-55°C to +105°C						
Capacitance Tolerance		+/- 10% at 1kHz, 20°C						
Rated Voltage	WVDC	250	400	630	1000	1600	2000	
	VAC	160	250	400	600	650	700	
		For T>85°C voltage must be rated by 1.25% for every °C above 85°C						
Dissipation Factor (max) at 20°C.		Freq (kHz)	C≤0.1µF	0.1uF>C≤1µF		C>1µF		
		1	.03%	.03%		.04%		
		10	.05%	.06%		-		
		100	.16%	-		-		
Insulation Resistance @20°C(<70% RH) for 1 minute at 100VDC		C≤0.33µF	≥100,000MΩ					
		C>0.33µF	≥30,000MΩ x µF					
Dielectric Strength		160% of rated VDC for 2 seconds at 20°C between leads						
Load Life		2000 hours at 85°C±2°C with 125% of rated voltage						
		Capacitance change		≤2% change from initial value				
		Dissipation Factor		≤0.1% at 10kHz and 25°C for C≤1µF ≤0.1% at 1kHz and 25°C for C>1µF				
		Insulation Resistance		≥50% of initial specified value				
Self inductance		<1nH/mm of capacitor lead spacing						
Capacitance drift		<0.5% up to 40°C after 2 years						
Temperature Coefficient		-200ppm/°C +/- 100ppm/°C						
Reliability fit=1x10 ⁹ Failures/component hours. Applied Voltage=0.5xVDC Temperature=+40°C±2°C		≤2FIT for WVDC≤400VDC ≤1FIT for WVDC>400VDC						
		Capacitance change		≤10% change from initial value				
		Dissipation Factor		>2x initial specified value.				
		Insulation Resistance		<0.005x initial specified value.				
Dielectric		Polypropylene						
Electrodes		Vacuum deposited metal layers						
Construction		Extended double metallized carrier film, internal series connections and metallized film for VDC≥630Vdc.						
Leads		Tinned copper wire.						
Coating		Solvent resistant plastic box (UL94V-1) with epoxy end seals (UL 94V-0)						



ILLINOIS CAPACITOR, INC.

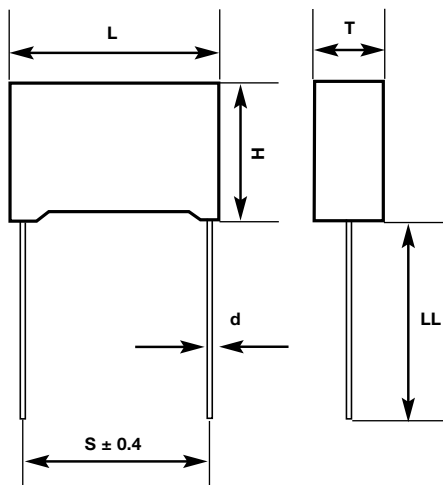
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PHYSICAL DIMENSIONS

WVDC μF (VAC)	250 (160)	400 (200)	630 (400)	1,000 (630)	1,600 (650)	2,000 (700)
0.001						26.5x15x6, 18x11x5
0.0015						26.5x15x6, 18x11x5
0.0022					18x11x5	26.5x15x6, 18x12x6
0.0033				18x11x5	18x12x6	18x13.5x7.5 26.5x15x6
0.0047			18x11x5	18x11x5	18x13.5x7.5	18x14.5x8.5 26.5x15x6
0.0068			18x11x5	18x11x5	18x14.5x8.5	18x16x10 26.5x15x6
0.01			18x11x5	26.5x15x6 18x12x6	18x12x6 26.5x15x6	26.5x17x8.5
0.015			18x11x5	18x13.5x7.5 26.5x15x6	26.5x16x7	26.5x18.5x10
0.022			18x12x6	18x14.5x8.5 26.5x15x6	26.5x17x8.5	26.5x22x13 32x20x11
0.033		18x11x5	18x13.5x7.5	26.5x16x7	26.5x18.5x10	32x22x13
0.047	18x11x5	18x12x6	18x16x10 26.5x15x6	26.5x17x8.5	26.5x22x13 32x20x11	32x24.5x15
0.068	18x12x6	18x13.5x7.5	26.5x16x7	26.5x18.5x10	32x22x13	32x28x14
0.1	18x13.5x7.5	18x14.5x8.5	26.5x17x8.5	26.5x22x13 32x20x11	32x28x14	32x33x18 42.5x28x17
0.15	18x14.5x8.5	18x16x10 26.5x16x7	26.5x20x11 32x20x11	32x22x13	32x33x18 42.5x28x17	42.5x30x22
0.22	18x16x10 26.5x15x6	26.5x18.5x10	32x22x13	32x28x14	42.5x28x17	42.5x37x28
0.33	26.5x17x8.5	26.5x20x11 32x17x9	32x24.5x15	32x33x18 42.5x28x17	42.5x30x22	
0.47	26.5x18.5x10	26.5x22x13 32x22x13	32x33x18 42.5x28x17	42.5x30x22	42.5x37x28	
0.68	26.5x20x11 32x20x11	32x24.5x15	42.5x28x17	42.5x37x28		
1	32x20x11 26.5x22x13	32x33x18 42.5x28x17	42.5x30x22	42.5x37x28		
1.5	32x24.5x15	42.5x28x17	42.5x37x28			
2.2	32x28x14 42.5x28x17	42.5x30x22				
3.3	42.5x30x22	42.5x37x28				
4.7	42.5x30x22					
6.8	42.5x37x28					

Convert to inches, divide by 25.4

LxHxT (mm)



L	18	26.5	32	42.5
S	15	22.5	27.5	37.5
d	0.8	0.8	0.8	1.0
LL	5.0±1.0	5.0±1.0	30±5.0	30±5.0

STANDARD PART LISTING

Capacitance (μ F)	WVDC	ic PART NUMBER	dv/dt (V/ μ s)	Dimensions L x H x T (mm)
0.001	2000	102PPB202K	6200	26.5x15x6
0.001	2000	102PPB202KE	9000	18x11x5
0.0015	2000	152PPB202K	6200	26.5x15x6
0.0015	2000	152PPB202KE	9000	18x11x5
0.0022	1600	222PPB162K	7500	18x11x5
0.0022	2000	222PPB202K	6200	26.5x15x6
0.0022	2000	222PPB202KE	9000	18x12x6
0.0033	1000	332PPB102K	5500	18x11x5
0.0033	1600	332PPB162K	7500	18x12x6
0.0033	2000	332PPB202K	6200	26.5x15x6
0.0033	2000	332PPB202KB	9000	18x13.5x7.5
0.0047	630	472PPB630K	3300	18x11x5
0.0047	1000	472PPB102K	5500	18x11x5
0.0047	1600	472PPB162K	7500	18x13.5x7.5
0.0047	2000	472PPB202K	6200	26.5x15x6
0.0047	2000	472PPB202KB	9000	18x14.5x8.5
0.0068	630	682PPB630K	3300	18x11x5
0.0068	1000	682PPB102K	5500	18x11x5
0.0068	1600	682PPB162K	7500	18x14.5x8.5
0.0068	2000	682PPB202K	6200	26.5x15x6
0.0068	2000	682PPB202KB	9000	18x16x10
0.01	630	103PPB630K	3300	18x11x5
0.01	1000	103PPB102K	2600	26.5x15x6
0.01	1000	103PPB102KE	5500	18x12x6
0.01	1600	103PPB162K	3800	26.5x15x6
0.01	1600	103PPB162KB	7500	18x12x6
0.01	2000	103PPB202K	6200	26.5x17x8.5
0.015	630	153PPB630K	3300	18x11x5
0.015	1000	153PPB102K	2600	26.5x15x6
0.015	1000	153PPB102KB	5500	18x13.5x7.5
0.015	1600	153PPB162K	3800	26.5x16x7
0.015	2000	153PPB202K	6200	26.5x18.5x10
0.022	630	223PPB630K	3300	18x12x6
0.022	1000	223PPB102K	2600	26.5x15x6
0.022	1000	223PPB102KB	5500	18x14.5x8.5
0.022	1600	223PPB162K	3800	26.5x17x8.5
0.022	2000	223PPB202K	4200	32x20x11
0.022	2000	223PPB202KG	6200	26.5x22x13
0.033	400	333PPB400K	910	18x11x5
0.033	630	333PPB630K	3300	18x13.5x7.5
0.033	1000	333PPB102K	2600	26.5x16x7
0.033	1600	333PPB162K	3800	26.5x18.5x10
0.033	2000	333PPB202K	4200	32x22x13
0.047	250	473PPB250K	560	18x11x5
0.047	400	473PPB400K	910	18x12x6
0.047	630	473PPB630K	2050	26.5x15x6
0.047	630	473PPB630KB	3300	18x16x10
0.047	1000	473PPB102K	2600	26.5x17x8.5
0.047	1600	473PPB162K	2700	32x20x11
0.047	1600	473PPB162KG	3800	26.5x22x13
0.047	2000	473PPB202K	4200	32x24.5x15
0.068	250	683PPB250K	560	18x12x6
0.068	400	683PPB400K	910	18x13.5x7.5
0.068	630	683PPB630K	2050	26.5x16x7
0.068	1000	683PPB102K	2600	26.5x18.5x10
0.068	1600	683PPB162K	2700	32x22x13
0.068	2000	683PPB202K	4200	32x28x14
0.1	250	104PPB250K	560	18x13.5x7.5

Capacitance (μ F)	WVDC	ic PART NUMBER	dv/dt (V/ μ s)	Dimensions L x H x T (mm)
0.1	400	104PPB400K	910	18x14.5x8.5
0.1	630	104PPB630K	2050	26.5x17x8.5
0.1	1000	104PPB102K	1850	32x20x11
0.1	1000	104PPB102KG	2600	26.5x22x13
0.1	1600	104PPB162K	2700	32x28x14
0.1	2000	104PPB202K	2600	42.5x28x17
0.1	2000	104PPB202KB	4200	32x33x18
0.15	250	154PPB250K	560	18x14.5x8.5
0.15	400	154PPB400K	520	26.5x16x7
0.15	400	154PPB400KH	910	18x16x10
0.15	630	154PPB630K	1500	32x20x11
0.15	630	154PPB630KG	1500	26.5x20x11
0.15	1000	154PPB102K	1850	32x22x13
0.15	1600	154PPB162K	1700	42.5x28x17
0.15	1600	154PPB162KB	2700	32x33x18
0.15	2000	154PPB202K	2600	42.5x30x22
0.22	250	224PPB250K	320	26.5x15x6
0.22	250	224PPB250KB	560	18x16x10
0.22	400	224PPB400K	520	26.5x18.5x10
0.22	630	224PPB630K	1500	32x22x13
0.22	1000	224PPB102K	1850	32x28x14
0.22	1600	224PPB162K	1700	42.5x28x17
0.22	2000	224PPB202K	2600	42.5x37x28
0.33	250	334PPB250K	320	26.5x17x8.5
0.33	400	334PPB400K	520	26.5x20x11
0.33	400	334PPB400KH	400	32x17x9
0.33	630	334PPB630K	1500	32x24.5x15
0.33	1000	334PPB102K	1200	42.5x28x17
0.33	1000	334PPB102KB	1850	32x33x18
0.33	1600	334PPB162K	1700	42.5x30x22
0.47	250	474PPB250K	320	26.5x18.5x10
0.47	400	474PPB400K	400	32x22x13
0.47	400	474PPB400KG	520	26.5x22x13
0.47	630	474PPB630K	950	42.5x28x17
0.47	630	474PPB630KB	1500	32x33x18
0.47	1000	474PPB102K	1200	42.5x30x22
0.47	1600	474PPB162K	1700	42.5x37x28
0.68	250	684PPB250K	240	32x20x11
0.68	250	684PPB250KB	320	26.5x20x11
0.68	400	684PPB400K	400	32x24.5x15
0.68	630	684PPB630K	950	42.5x28x17
0.68	1000	684PPB102K	1200	42.5x37x28
1	250	105PPB250K	240	32x20x11
1	250	105PPB250KG	320	26.5x22x13
1	400	105PPB400K	280	42.5x28x17
1	400	105PPB400KB	400	32x33x18
1	630	105PPB630K	950	42.5x30x22
1	1000	105PPB102K	1200	42.5x37x28
1.5	250	155PPB250K	240	32x24.5x15
1.5	400	155PPB400K	280	42.5x28x17
1.5	630	155PPB630K	950	42.5x37x28
2.2	250	225PPB250K	240	32x28x14
2.2	250	225PPB250KB	170	42.5x28x17
2.2	400	225PPB400K	280	42.5x30x22
3.3	250	335PPB250K	170	42.5x30x22
3.3	400	335PPB400K	280	42.5x37x28
4.7	250	475PPB250K	170	42.5x30x22
6.8	250	685PPB250K	170	42.5x37x28

PERMISSIBLE AC VOLTAGE VS. FREQUENCY

