

PMB/ RMB

Polypropylene Film Capacitors for Power Semiconductor Circuits



APPLICATION

■ Snubber
■ IGBT Modules

■ Energy Conversion
■ Power Semiconductor Circuits

FEATURES

■ High Current
■ High Voltage

■ Multiple Lead Styles
■ High Pulse

SPECIFICATIONS

Operating Temperature Range		PMB: -40°C to +85°C (+100°C observing voltage and current de-rating) RMB: -40°C to +85°C							
Capacitance Tolerance		±10% at 1kHz, 25°C ±5% optional							
Super/AC Voltage (RMB)	WVDC	700	850	1000	1200	1500	2000	2500	3000
	SVDC	1100	1300 (1200)	1550 (1300)	1750 (1600)	2200	2600 (2400)	3300	4000 (3500)
	VAC	420	500	575	630	650	700	725	750
		For T>+85°C the rated voltage must be de-rated by 1.25%/°C							
Dissipation Factor (tan δ) @1kHz, 25°C		C≤1.0μF	C>1.0μF						
		.05%	.06%						
Insulation Resistance @20°C (<70% RH)for 1 minute at 100VDC applied		30000MΩ x μF (Not to exceed 30GΩ)							
Self Inductance		<1 nano-Henry per mm of lead spacing and lead length							
Dielectric Strength		Terminal to Terminal				Terminal to Case			
		160% of VDC applied for 10 Seconds and 25°C 200% of VDC applied for 2 Seconds and 25°C				3KVAC @ 50/60Hz applied for 60 Seconds at 25°C			
Peak Current		1.5xCxdv/dt							
Life Expectancy		≥100000 hours for WVDC, ≥30000 hours for VAC at 70°C							
Failure Quota		300/1x10 ⁹ component hours							
Long Term Stability		<1% after 2 years at standard environmental conditions							
Construction		Double Metallized film with polypropylene film and internal series connections							
Coating		Flame retardant plastic box with epoxy end fill (UL94V-0)							
Lead Terminations		Lead free tinned copper leads (RoHS compliant)							



ILLINOIS CAPACITOR, INC.

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

PHYSICAL DIMENSIONS

WVDC (VAC) (μ F)	700 (420)	850 (500)	1000 (575)	1200 (630)	1500 (650)	2000 (700)	2500 (725)	3000 (750)
0.047								42.5x27.5x24.5
0.068								42.5x27.5x24.5
0.1						42.5x27.5x24.5	42.5x27.5x24.5	42.5x35.5x33.5
0.15						42.5x27.5x24.5	42.5x27.5x24.5	42.5x35.5x33.5
0.22						42.5x27.5x24.5	42.5x35.5x33.5	42.5x35.5x33.5 42.5x45x33
0.33				42.5x27.5x24.5	42.5x27.5x24.5	42.5x27.5x24.5 42.5x35.5x33.5	42.5x35.5x33.5	42.5x35.5x33.5 57.5x45x30
0.39				42.5x27.5x24.5	42.5x27.5x24.5	42.5x35.5x33.5		
0.47				42.5x27.5x24.5	42.5x35.5x33.5	42.5x35.5x33.5 42.5x37x28 42.5x45x33	42.5x45x33	42.5x45x33 57.5x50x35
0.56				42.5x27.5x24.5		42.5x45x33	57.5x45x30	
0.68			42.5x27.5x24.5	42.5x35.5x33.5	42.5x35.5x33.5	42.5x35.5x33.5 57.5x45x30	57.5x50x35	57.5x50x35
0.75			42.5x27.5x24.5		42.5x35.5x33.5			
0.82		42.5x27.5x24.5		42.5x35.5x33.5		42.5x45x33 57.5x45x30	57.5x50x35	57.5x50x35
1		42.5x27.5x24.5		42.5x35.5x33.5	42.5x45x33	42.5x45x33 57.5x50x35		
1.2	42.5x27.5x24.5		42.5x35.5x33.5	42.5x35.5x33.5 42.5x45x33	57.5x45x30	57.5x45x30	57.5x50x35	
1.5		42.5x35.5x33.5	42.5x35.5x33.5	42.5x35.5x33.5 42.5x45x33	57.5x50x35	57.5x50x35		
1.75		42.5x35.5x33.5	42.5x45x33					
1.8					57.5x50x35			
2	42.5x35.5x33.5	42.5x45x33	42.5x45x33	42.5x45x33 57.5x45x30				
2.2	42.5x35.5x33.5	42.5x45x33	42.5x45x33 57.5x45x30	57.5x45x30 57.5x50x35				
2.5	42.5x35.5x33.5	42.5x45x33 57.5x50x35	42.5x45x33	57.5x45x30				
3	42.5x45x33	57.5x45x30	57.5x45x30 57.5x50x35	57.5x50x35				
3.3	42.5x45x33	57.5x45x30	57.5x45x30 57.5x50x35	57.5x45x30 57.5x50x35				
3.5	42.5x45x33							
4	57.5x45x30	57.5x50x35	57.5x50x35					
4.7	57.5x50x35							
5	57.5x50x35	57.5x45x30						
5.6	57.5x50x35							

Convert to inches divide by 25.4

LxHxT (mm)

STANDARD PARTS 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 LxHxT (mm)
0.047	3000	473PMB302K#P2	2500	7.5	16.5	42.5x27.5x24.5
0.068	3000	683PMB302K#P2	2500	9	11.5	42.5x27.5x24.5
0.1	2000	104PMB202K#P2	1600	8.5	12.5	42.5x27.5x24.5
0.1	2500	104PMB252K#P2	2050	9	11	42.5x27.5x24.5
0.1	3000	104PMB302K#P1	2500	12.5	8.5	42.5x35.5x33.5
0.15	2000	154PMB202K#P2	1600	11	7.5	42.5x27.5x24.5
0.15	2500	154PMB252K#P2	2050	11.5	7.2	42.5x27.5x24.5
0.15	3000	154PMB302K#P1	2500	15	6	42.5x35.5x33.5
0.22	2000	224PMB202K#P2	1600	13.5	5.1	42.5x27.5x24.5
0.22	2500	224PMB252K#P1	2050	16	5.2	42.5x35.5x33.5
0.22	3000	224PMB302K#P0	2500	19	4.3	42.5x45x33
0.22	3000	224RMB302K#	2050	14.5	8.2	42.5x35.5x33.5
0.33	1200	334PMB122K#P2	1000	12.5	5.1	42.5x27.5x24.5
0.33	1500	334PMB152K#P2	1220	14	4.6	42.5x27.5x24.5
0.33	2000	334PMB202K#P1	1600	18	4.1	42.5x35.5x33.5
0.33	2000	334RMB202K#	1220	12.5	7.4	42.5x27.5x24.5
0.33	2500	334PMB252K#P1	2050	19	3.8	42.5x35.5x33.5
0.33	3000	334PMB302K#	1400	21	4.3	57.5x45x30
0.33	3000	334RMB302K#	2050	16.5	6.1	42.5x35.5x33.5
0.39	1200	394PMB122K#P2	1000	14	4.6	42.5x27.5x24.5
0.39	1500	394PMB152K#P2	1220	14.5	4.3	42.5x27.5x24.5
0.39	2000	394PMB202K#P1	1000	17.5	3.6	42.5x35.5x33.5
0.47	1200	474PMB122K#P2	1000	15	4.1	42.5x27.5x24.5
0.47	1500	474PMB152K#P1	1220	19	3.7	42.5x35.5x33.5
0.47	2000	474PMB202K#P0	1600	22	3.2	42.5x45x33
0.47	2000	474PMB202KJS	1000	19	3.1	42.5x37x28
0.47	2000	474RMB202K#	1220	16.5	6	42.5x35.5x33.5
0.47	2500	474PMB252K#P0	2050	23	3	42.5x45x33
0.47	3000	474PMB302K#	1400	24	3.8	57.5x50x35
0.47	3000	474RMB302K#	2050	19.5	5	42.5x45x33
0.56	1200	564PMB122K#P2	1000	16	3.7	42.5x27.5x24.5
0.56	2000	564PMB202K#P0	1600	23	3	42.5x45x33
0.56	2500	564PMB252K#	1150	23	3.5	57.5x45x30
0.68	1000	684PMB102K#P2	870	16.5	3.3	42.5x27.5x24.5
0.68	1200	684PMB122K#P1	1000	20	3.3	42.5x35.5x33.5
0.68	1500	684PMB152K#P1	1220	21	3.1	42.5x35.5x33.5
0.68	2000	684PMB202K#	930	23	3.5	57.5x45x30
0.68	2000	684RMB202K#	1220	18	5	42.5x35.5x33.5
0.68	2500	684PMB252K#	1150	26	3.2	57.5x50x35
0.68	3000	684RMB302K#	1150	22	5.2	57.5x50x35
0.75	1000	754PMB102K#P2	870	17.5	3.1	42.5x27.5x24.5
0.75	1500	754PMB152K#P1	1220	22	2.8	42.5x35.5x33.5
0.82	850	824PMB850K#P2	750	16.5	3.1	42.5x27.5x24.5
0.82	1200	824PMB122K#P1	1000	21	3	42.5x35.5x33.5
0.82	2000	824PMB202K#	930	24.5	3.1	57.5x45x30
0.82	2000	824RMB202K#	1220	20	4.6	42.5x45x33
0.82	2500	824PMB252K#	1150	27.5	2.9	57.5x50x35
0.82	3000	824RMB302K#	1150	24	4.7	57.5x50x35
1	850	105PMB850K#P2	750	18.5	2.7	42.5x27.5x24.5
1	1200	105PMB122K#P1	1000	22.5	2.7	42.5x35.5x33.5
1	1500	105PMB152K#P0	1220	23	2.5	42.5x45x33
1	2000	105PMB202K#	930	28	2.8	57.5x50x35

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 LxHxT (mm)
1	2000	105RMB202K#	1220	21.5	4.1	42.5x45x33
1.2	700	125PMB700K#P2	600	17.5	3.1	42.5x27.5x24.5
1.2	1000	125PMB102K#P1	870	23.5	2.5	42.5x35.5x33.5
1.2	1200	125PMB122K#P0	1200	25	2.4	42.5x45x33
1.2	1200	125RMB122K#	1000	25	2.4	42.5x35.5x33.5
1.2	1500	125PMB152K#	870	26	2.8	57.5x45x30
1.2	2000	125PMB202K#	930	29.5	2.4	57.5x50x35
1.2	2000	125RMB202K#	725	22.5	4.5	57.5x45x30
1.5	850	155PMB850K#P1	750	24.5	2.2	42.5x35.5x33.5
1.5	1000	155PMB102K#P1	870	25	2.2	42.5x35.5x33.5
1.5	1200	155PMB122K#P0	1000	27.5	2.1	42.5x45x33
1.5	1200	155RMB122K#	870	21	3.6	42.5x35.5x33.5
1.5	1500	155PMB152K#	725	29.5	2.5	57.5x50x35
1.5	2000	155RMB202K#	725	26	4	57.5x50x35
1.75	850	175PMB850K#P1	750	25.5	2.1	42.5x35.5x33.5
1.75	1000	175PMB102K#P0	870	27	2.1	42.5x45x33
1.8	1500	185PMB152K#	725	30.5	2.3	57.5x50x35
2	700	205PMB700K#P1	600	23.5	2.5	42.5x35.5x33.5
2	850	205PMB850K#P0	750	28	2	42.5x45x33
2	1000	205PMB102K#P0	870	28	2	42.5x45x33
2	1200	205PMB122K#	575	28	2.4	57.5x45x30
2	1200	205RMB122K#	870	24.5	3.3	42.5x45x33
2.2	700	225PMB700K#	600	24	2.4	42.5x35.5x33.5
2.2	850	225PMB850K#P0	750	28.5	2	42.5x45x33
2.2	1000	225PMB102K#	500	27.5	2.5	57.5x45x30
2.2	1000	225RMB102K#	750	24	3.3	42.5x45x33
2.2	1200	225PMB122K#	575	31	2.3	57.5x50x35
2.2	1200	225RMB122K#	500	23.5	4.1	57.5x45x30
2.5	700	255PMB700K#P1	600	24.5	2.2	42.5x35.5x33.5
2.5	850	255PMB850K#P0	750	29	1.9	42.5x45x33
2.5	1000	255PMB102K#	750	24.5	3.1	42.5x45x33
2.5	1200	255RMB122K#	575	32.5	2.1	57.5x50x35
2.5	1200	255PMB122K#	500	24.5	3.8	57.5x45x30
3	700	305PMB700K#P0	600	27.5	2.1	42.5x45x33
3	850	305PMB850K#	450	29.5	2.2	57.5x45x30
3	1000	305PMB102K#	500	32	2.1	57.5x50x35
3	1000	305RMB102K#	450	24.5	3.7	57.5x45x30
3	1200	305RMB122K#	500	28	3.4	57.5x50x35
3.3	700	335PMB700K#	600	28	2.1	42.5x45x33
3.3	850	335PMB850K#	450	30	2.1	57.5x45x30
3.3	1000	335PMB102K#	1650	32.5	2	57.5x50x35
3.3	1000	335RMB102K#	450	25.5	3.5	57.5x45x30
3.3	1200	335RMB122K#	500	28.5	3.2	57.5x50x35
3.5	700	355PMB700K#P0	600	28.5	2	42.5x45x33
4	700	405PMB700K#	360	29	2.3	57.5x45x30
4	850	405PMB850K#	450	33.5	1.9	57.5x50x35
4	1000	405RMB102K#	450	29.5	3.1	57.5x50x35
4.7	700	475PMB700K#	360	32	2.1	57.5x50x35
5	700	505PMB700K#	360	32	2.1	57.5x50x35
5	850	505PMB850KS	110	28	2.2	57.5x45x30
5.6	700	565PMB700K#	360	33.5	2	57.5x50x35

Note: Replace # in part number with style letter



ILLINOIS CAPACITOR, INC.

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